



BID NUMBER: LDPWRI-B/20424

**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF NEW MAKHUVA
LIBRARY IN VHEMBE DISTRICT THROUGH THE FRAMEWORK CONTRACT CATEGORY B**

for

THE DEPARTMENT OF SPORTS, ARTS AND CULTURE,

LIMPOPO PROVINCE

FRAMEWORK CATEGORY B (6GB AND ABOVE)

Issued by:

Limpopo Department of Public Works, Roads and Infrastructure
Works Towers Building
43 Church Street
Polokwane
0700

Contact Person: General Queries

Name : Mr NJ Motsopye,
Tel No. : 015 284 7126
Email : motsopyen@dpw.limpopo.gov.za

Technical: Technical Queries

Name : Mr K Modjadji
Tel No. : 083 673 5436
Email : ModjadjiM@dpw.limpopo.gov.za

Name of the Bidder :



CONTENTS

THE TENDER

Part T1: Tendering procedures

T1.1 Tender notice and invitation to tender

T1.2 Tender data

Part T2: Returnable documents

T2.1 List of returnable documents

- A – Mandatory Requirements
- B – Non- Mandatory Requirements
- C – Special Conditions and Departmental Rights

T2.2 Returnable schedules

THE CONTRACT

Part C1: Agreements and Contract data

C1.1 Form of offer and acceptance

C1.2 Contract data

Joint Venture Agreement (If Applicable)

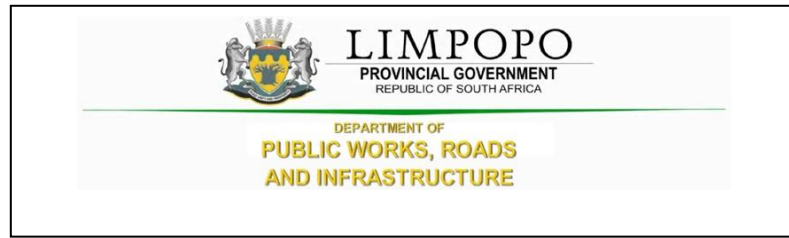
Part C2: Pricing data

C2.1 Part 1 - Pricing Instructions

C2.2 Part 2 - Bills of Quantities

Part C3: Scope of Works
C3.1 Special Notes to Bidders
C3.2 OHS Specifications

Part C4 Drawings



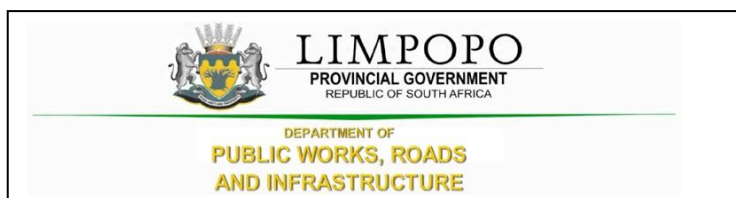
PART T1: TENDERING PROCEDURE

T1.1 Tender Notice and Invitation to Tender

The Limpopo Department of Public Works, Roads and Infrastructure invites tenderers from contractors appointed on the framework agreement on category B for **APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF NEW MAKHUYA LIBRARY IN VHEMBE DISTRICT FOR LIMPOPO DEPARTMENT OF SPORT, ARTS AND CULTURE** for a period of 14 months. It is estimated that tenderers must have a CIDB contractor grading designation of **6 GB** or higher.

The conditions of the CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts **Gazette Notice No. 36190 of 25 February 2013** will be applicable on this project

Project Name	APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF NEW MAKHUYA LIBRARY IN VHEMBE DISTRICT FOR LIMPOPO DEPARTMENT OF SPORTS, ARTS AND CULTURE FOR A PERIOD OF 14 MONTHS	
Tender Number	LDPWRI- B/20424	
Tender documents availability	Limpopo Department of Public Works, Roads and Infrastructure website	
Address for submission of tenders	DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE. Physical address: Corner River and Blaauwberg Streets, Ladanna, 0699.	
Closing date of the tender	As per Tender invite	
Closing time of the tender	As per Tender invite	
Compulsory briefing meeting (<i>Tenderers must sign the attendance register in the name of the tendering entity. Addenda (if any) will be issued only to those tendering entities appearing on the attendance register</i>)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
	Meeting venue	As per Tender invite
	Date	As per Tender invite
	Time:	As per Tender invite
Evaluation criteria	<ol style="list-style-type: none"> 1. Compliance with mandatory or compulsory requirements 2. Risk assessment on current projects 3. Price 4. Preference 	
Mandatory or Compulsory Requirements (<i>failure to submit or comply with these requirements will lead to automatic disqualification</i>)	Only tenderers who are appointed on category B registered with the Construction Industry Development Board (CIDB) with designation of 6 GB 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 are eligible to have their tenders evaluated	
	Completed and signed Form of Offer	
	Priced Bills of Quantities	
	Record of addenda to tender documents	
	Proposed amendments and qualifications	
	Declaration on the status of Administration compliance	
	CIDB grading certificate (Valid CIDB)	
	Declaration of current projects	



T1.2 Tender Data

Clause number	Tender Data
	<p>The conditions of tender are the Standard Conditions of Tender as contained in Annex C of Board Notice 423 of 2019 in Government Gazette No. 42622 of 08 August 2019, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (See www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of tenderers as an Annexure to this Tender Data.</p> <p>The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. 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.</p> <p>The contractor shall achieve in the performance of the contract the Contract Participation Goals (CPG) relating to the engagement of targeted enterprises as established in the CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts Gazette Notice No. 36190 of 25 February 2013. In this case, contractor shall provide a minimum Contract Participation Goal (CPG) of 5% of the total project value and develop targeted enterprises stated under C3 of this document.</p> <p>The following variations, amendments and additions to the Standard Conditions of Tender as set out in the Tender Data below shall apply to this tender. Add the following to clauses in Standard Conditions of Tender:</p>
C.1.1	The Employer is the Department of Public Works, Roads and Infrastructure

C.1.2	<p>The Tender</p> <p>Part T1: Tendering procedures T1.1 Tender notice and invitation to tender T1.2 Tender data</p> <p>Part T2: Returnable documents T2.1 List of returnable documents T2.2 Returnable schedules</p> <p>The Contract Part C1: Agreements and contract data C1.1 Form of offer and acceptance C1.2 Contract data C1.3 Joint Venture Agreement (If Applicable)</p> <p>The Contract Part C2: Pricing data C2.1 Pricing instructions C2.2 Bills of Quantities</p> <p>Part 3: Scope of work C3.1 Special Notes to Bidders C3.2 OHS Specifications</p> <p>Part 4: Site information C4 Drawings</p>
C.1.4	<p>The employer's representative is:</p> <p>Name : Mr K Modjadji Tel No. : 083 673 5436 Email : ModjadjiM@dpw.limpopo.gov.za</p> <p>However, all communications related to this bid should be directed to the persons indicated under Enquires on this tender document.</p> <p>Attention is also drawn to the fact that verbal information, given by the Employer's agent during site visits/clarification meetings or at any other time prior to the award of the Contract, will not be regarded as binding on the Employer. Only information issued formally by the Employer in writing to Tenderers will be regarded as amending the Tender Documents.</p>
C.1.5	The employer reserve to cancel the tender prior to the award of the tender.
C1.6.2	A competitive negotiation procedure will not be followed.
C1.6.3	A two-stage system will not be followed.
C.2.1	<p>Eligibility in respect of CIDB grading</p> <p>Only tenderers who are appointed on framework agreement category B and registered with the Construction Industry Development Board (CIDB) with designation of 6 GB 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, are eligible to have their tenders evaluated.</p>
C2.2	<p>Cost of tendering</p> <p>The tenderer 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.</p>

C.2.7	<p>Compulsory site briefing</p> <p>A compulsory briefing meeting will be held as per Tender invite</p> <p>Failure to attend the site briefing will result in the bidders not being considered for the project</p> <p>Tenderers must sign the attendance list in the name of the tendering entity. Addenda (if any) will be issued only to those tendering entities appearing on the attendance list.</p>
C.2.11	<p>Alterations to the documents</p> <p>Bidders are required to 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</p>
C.2.12	<p>Alternative tender offer</p> <p>No alternative tender offer is permitted in this tender.</p>
C.2.13.2	<p>Replace sub-clause C.2.13.2 with the following; Return all returnable documents to the employer after completing them in by writing in non-erasable black ink (Black pen)</p>
C.2.13.3	<p>Parts of each tender offer communicated on paper shall be submitted as an original</p>
C.2.13.4	<p>The tender shall be signed by a person duly authorized to do so.</p>
C.2.13.5	<p>The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are:</p> <p>Location of tender box: DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE. Physical address: Corner River and Blaauwberg Streets, Ladanna, 0699 Identification details: Sealed Tender with Tender reference number, Title of Tender and the closing date and time of the tender.</p>
C.2.15.1	<p>The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender. Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.</p>
C.2.16.1	<p>The tender offer validity period is 120 days.</p>
C.2.16.2	<p>The tender accepts 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 C.2.16.1 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).</p>
C.3.1	<p>The tenderer is required to indicate how they claim points for each preference point system and attached relevant supporting documents. The specific goals for claiming of preference points include the following:</p> <ul style="list-style-type: none"> - Persons who had no franchise in national elections prior to 1983 and 1993 - Women - Disabled persons - Promotion of SMMEs - Enterprises located in Limpopo Province - Promotion of youth - South African owned enterprises

	<p>CIDB Grading Certificate</p> <p>Tenders are required to provide proof of registration with the CIDB register of contractors indicating the category of registration, grading as well as the CRS number of the tenderer.</p> <p>Letter of Good Standing</p> <p>Tenderer's are required to submit, bound with the tender submission, a letter of good standing from the compensation commissioner indicating that the bidder is in good standing.</p>
C3.2	<p>Notwithstanding any requests for confirmation of receipt of Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.</p>
C.3.4.1	<p>Tenders will not be opened immediately after the closing time for tenders.</p>
C.3.11	<p>The tenderers will be evaluated in four stages</p> <ul style="list-style-type: none"> (i) Stage 1: Compliance with mandatory requirements as stated in Part T1.1 (ii) Stage 2: Risk assessment on current projects (iii) Stage 3: Price (iv) Stage 4: Preference <p>The technical capacity (functionality) of the contractors will not be evaluated any further during evaluation of the RFQ. However, the contractors will be required to declare the status of their key staff and any administrative compliance. In cases where there are changes in the key staff, the contractor should provide CVs and qualifications of the new staff to LDPWR&I. The new staff should have similar skills, qualifications and experience as the staff submitted during tender. Similarly, the contractors will be expected to provide an update on any changes in their administrative compliances – and should submit the required SBD document/forms in such cases.</p> <p>The award will only be issued to contractors with valid Tax Clearance certificates, active CIDB grading and the contractor who meets all the legislative requirement – this shall be verified by SCM in line with the departmental SCM Policy.</p> <p>The total value of current projects for a contractor under consideration cannot exceed twice the maximum value of their relevant CIDB grade.¹</p> <ul style="list-style-type: none"> a) Stage 1: Administrative Compliance: The Compliance or compulsory documents and returnables are detailed in Section T.2.1 of this tender document. Failure to submit, complete or comply with these requirements will lead to automatic disqualification. b) Stage 2: Risk assessment on current projects <p>The total value of current projects for a contractor under consideration cannot exceed twice the maximum value of their relevant CIDB grade. Should it exceed, the bidder will therefore not be appointed.</p>

Stage 3 and 4:

The procedure for final evaluation of responsive tenders is Method 2 (Financial offer and preference). The total number of tender evaluation points (T_{EV}) shall be determined in accordance with the following formula.

$$T_{EV} = N_{FO} + N_P$$

- a) N_{FO} is the number of tender evaluation points awarded for the financial offer made. The score for financial offer is calculated using the following formula:

$$P = A * \left(1 - \frac{(P_o - P_m)}{P_m}\right)$$

Where:

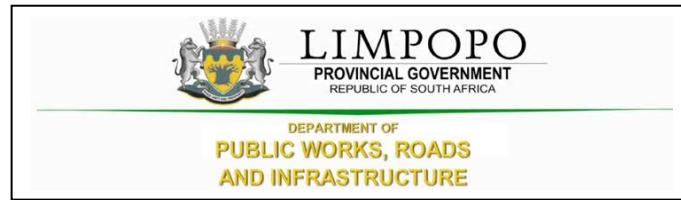
A is 80 since the estimated financial value of works inclusive of VAT is equals or is less than R 50,000,000.00.

P is the points awarded to the bid under consideration

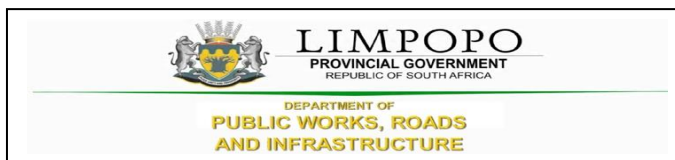
P_m is the lowest Comparative bid price

P_o is the comparative price under consideration

- b) N_P is the number of tender evaluation points awarded for preferences claimed in accordance with the Preferencing Schedule in 3.18



PART T2: RETURNABLE DOCUMENTS



T2.1 : LIST OF RETURNABLE DOCUMENTS

The following documents will form part of the documents submitted to the Contractors as part of the Request for Proposals:

A -- MANDATORY REQUIREMENTS

- 2.1 Fully completed Form of Offer (Fully Completed and Signed Form of Offer)
- 2.2 Bills of Quantities (P&Gs are allowed to have a lump sum total in the P&Gs Summary Page and the rest of the Bill of Quantities trades must be completed in full (Rates and Amounts))
- 2.3 Record of Addenda to tender documents (Records of addendum must be captured in full, whether applicable or not)
- 2.5 Declaration on the status of Administration compliance (Fully completed, circled and signed)
- 2.6 CIDB grading certificate (Valid CIDB)
- 2.7 Declaration of current projects (Fully completed, circled and signed)

B – NON- MANDATORY REQUIREMENTS

- 2.8 SBD 1 (Fully Completed and Signed)
- 2.9 SBD 4 (Fully Completed and Signed). False declaration by the bidder will render the proposal non-responsive and will not be considered
- 2.9 SBD 6.1 (Failure on the part of a bidder to complete and submit proof or documentation required in terms of this tender to claim points for specific goals with tender, will be interpreted to mean that preference points for specific goals are not claimed)

SPECIFIC GOALS	REQUIRED ATTACHMENT
Persons who had no franchise in national elections prior to 1983 and 1993	Attach certified copy of South African ID as proof
Women	Attach Director's certified copy of South African ID as proof + company registration documents
Disabled Persons	Bidder with disability must attach medical certificate completed by registered medical practitioner which is registered with Health Professions Council of South Africa (HPCSA) as proof
Promotion of SMMEs	Attach latest financial statement as proof
Enterprises located in Limpopo Province	N.B: The physical address given in the SBD 1 will be used and it should be consistent or the same as the preferred address in the Central Supplier Database Report a) A Title deed, Letter from a Traditional Authority or Municipal Statement which must not be older than three (3) months; or b) A Formal Lease Agreement together with Lessor's Municipal Account or Letter from Traditional Authority
Promotion of Youth	Attach Director's certified copy of South African ID as proof
South African owned enterprises	Attach Director's certified copy of South African ID as proof + company registration documents

2.10 Attach full CSD Report (For verification of the required attachments above)

2.11 Proposed amendments and qualifications (Proposed amendments and qualifications must be captured in full, whether applicable or not)

Failure by the service provider to submit or complete item 2.1, 2.2, 2.3, 2.5, 2.6, and 2.7 will render their proposal not responsive and will not be considered.

The bidder should also not appear on the National Treasury's list of black listed entities.

C -- SPECIAL NOTES TO BIDDERS AND DEPARTMENTAL RIGHTS

The following special conditions are for compliance and attention to bidders:

I.1 LDPWR&I reserve the right to call interviews with short-listed bidders before final selection.

I.2 LDPWR&I reserve the right to conduct supplier due diligence prior to final award or at any time during the contract period. This may include surprise site visits.

I.3 LDPWR&I reserves the right to appoint the bidder that proves to be fully capable and qualifies to handle and execute the job.

I.4 The proposals submitted must be in line with the detailed specification.

I.5 LDPWR&I reserve the right to cancel or withdraw this bid if:

- i. Due to changed circumstances, there is no longer a need for these services; or
- ii. Funds are no longer available to cover the total envisaged expenditure; or
- iii. No acceptable bids are received; or
- iv. There is a material irregularity in the Bid process.

1.6 In the case of sub-contracting or joint venture agreement, LDPWR&I will enter into a single contract with the principal bidder.

1.7 Bidders who are not registered on Central Supplier Database (CSD) must register before submission of bids.

1.8 Any completion of the bid document in pencil or erasable ink will not be acceptable and will automatically disqualify the submitted bid.

1.9 Successful bidder will be required to sign and enter into a formal contract upon the award.

1.10 Notwithstanding shortcomings and/or inconsistencies, if any, in this specification, which is only a minimum specification, a bidder shall make provision for a complete solution that will deliver the required service efficiently and cost-effectively.

1.11 Bid documents must be submitted physically to the closing address as reflected on the Request for Quotation/Tender.

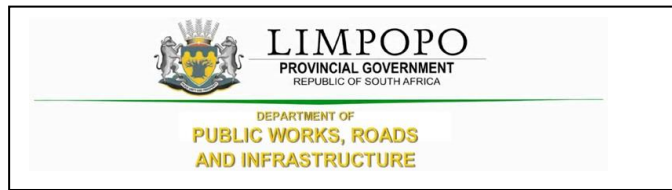
1.12 Quotations/Tenders received after the closing date and time will not be accepted for consideration.

1.13 This request for bid document contains confidential information about LDPWR&I, which has been provided to supply potential bidders with the data necessary to provide a holistic response.

1.14 No part of the contents may be used, copied, disclosed or conveyed in whole or in part to any party, in any manner whatsoever without the prior written permission of LDPWR&I.

1.15 Any reproduction or transmission of information contained in this document except for the sole purpose of responding to this bid is strictly prohibited.

1.16 References to LDPWR&I must not be made in any literature, promotional material, and brochures or sales presentations without the express written consent of LDPWR&I



T 2.2: RETURNABLE SCHEDULE

	Document Name	Returnable document
1.	Fully completed Form of Offer	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.	Priced Bills of Quantities	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.	Record of Addenda to tender documents	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.	Proposed amendments and qualifications	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.	Proof of specific goals for award of the preference points	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.	SBD 1. Invitation to Tender	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.	SBD 6.1: Reference Points claim form in terms of the Preferential Procurement Regulations 2022 or amended	<input type="checkbox"/> Yes <input type="checkbox"/> No
8.	Declaration on the status of Administration compliance.	<input type="checkbox"/> Yes <input type="checkbox"/> No
9.	Proof of CIDB class grading: 7GB or higher.	<input type="checkbox"/> Yes <input type="checkbox"/> No
10.	Full CSD Report	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.	Declaration of current projects	<input type="checkbox"/> Yes <input type="checkbox"/> No



Declaration on the status of administrative compliance

Please indicate, by circling either **Yes** or **No**, whether the administrative information submitted with the original framework tender documents have changed or not. If yes, kindly provide the particulars below with any supporting documents.

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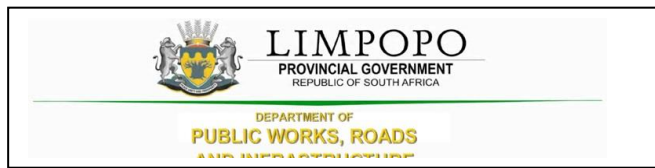
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Signed Date _____

Name Position _____

Enterprise
.....



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.

Signed Date

Name Position

Tenderer



Proposed amendments and qualifications

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule.

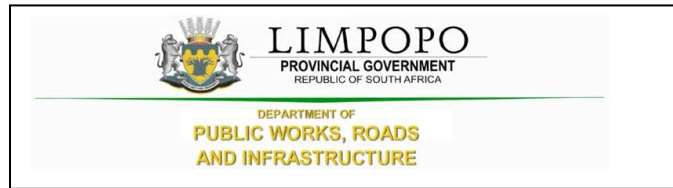
The Tenderer's attention is drawn to clause 5.8 of SANS 10845-3 regarding the employer's handling of material deviations and qualifications.

Page	Clause or item	Proposal

Signed _____ Date _____

Name _____ Position _____

Tenderer _____



SBD 1
PART A: INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE LIMPOPO DEPARTMENT OF PUBLIC WORKS, ROADS AND INFRASTRUCTURE

BID NUMBER:	LDPWRI-B/20424	CLOSING DATE	As per Tender Advert	CLOSING TIME:	As per Tender Advert
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DESCRIPTION **CONSTRUCTION OF NEW MAKHUYA LIBRARY IN VHEMBE DISTRICT**

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)

DEPARTMENT OF PUBLIC WORKS, ROADS & INFRASTRUCTURE.
Physical address: Corner River and Blaauwberg Streets, Ladanna, 0699.

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO

CONTACT PERSON	Mr. NJ Motsopye				
TELEPHONE NUMBER	0152847126	E-MAIL ADDRESS	motsopyen@dpw.limpopo.gov.za		
CONTACT PERSON (TECHNICAL)	Mr. K Modjadji				
TELEPHONE NUMBER	083 673 5436	E-MAIL ADDRESS	ModjadjiM@dpw.limpopo.gov.za		

SUPPLIER INFORMATION

NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]
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QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DOES THE ENTITY HAVE A BRANCH IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?	<input type="checkbox"/> YES <input type="checkbox"/> NO
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	<input type="checkbox"/> YES <input type="checkbox"/> NO

IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.

PART B: TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED–(NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM.
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:
(Proof of authority must be submitted e.g. company resolution)

DATE:

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest² in the enterprise,

employed by the state?

YES/NO

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

.....

² the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

2.3.1 If so, furnish particulars:

.....
.....

3 DECLARATION

I, the undersigned, (name)..... in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 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.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 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

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

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.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature Date

.....
Position Name of bidder



SBD 6.1

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

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

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

1. GENERAL CONDITIONS

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

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

1.2 To be completed by the organ of state

(delete whichever is not applicable for this tender).

- a) ~~The applicable preference point system for this tender is the 90/10 preference point system.~~
- b) The applicable preference point system for this tender is the 80/20 preference point system.
- c) Either the 90/10 or 80/20 preference point system will be applicable in this tender. The lowest/highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

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

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ \\ \mathbf{Ps} = \mathbf{80} \left(\mathbf{1} - \frac{\mathbf{Pt} - \mathbf{P min}}{\mathbf{P min}} \right) & \mathbf{or} & \mathbf{Ps} = \mathbf{90} \left(\mathbf{1} - \frac{\mathbf{Pt} - \mathbf{P min}}{\mathbf{P min}} \right) \end{array}$$

Where

- Ps = Points scored for price of tender under consideration
Pt = Price of tender under consideration
Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

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

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ \\ \mathbf{Ps} = \mathbf{80} \left(\mathbf{1} + \frac{\mathbf{Pt} - \mathbf{P max}}{\mathbf{P max}} \right) & \mathbf{or} & \mathbf{Ps} = \mathbf{90} \left(\mathbf{1} + \frac{\mathbf{Pt} - \mathbf{P max}}{\mathbf{P max}} \right) \end{array}$$

Where

- Ps = Points scored for price of tender under consideration
Pt = Price of tender under consideration
Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

4.3. (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or

(b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,
 then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Persons who had no franchise in national elections prior to 1983 and 1993	6	
Women	3	
Disabled persons	2	
Promotion of SMMEs	2	
Enterprises located in Limpopo Province	4	
Promotion of youth	1	
South African owned enterprises	2	

DECLARATION WITH REGARD TO COMPANY/FIRM

4.4. Name of company/firm.....

4.5. Company registration number:

4.6. TYPE OF COMPANY/ FIRM

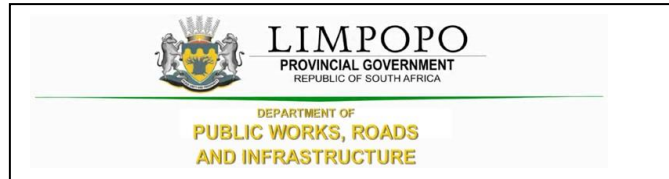
- Partnership/Joint Venture / Consortium
- One-person business/sole propriety
- Close corporation
- Public Company
- Personal Liability Company
- (Pty) Limited
- Non-Profit Company
- State Owned Company

[TICK APPLICABLE BOX]

4.7. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

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

..... SIGNATURE(S) OF TENDERER(S)	
SURNAME AND NAME:
DATE:
ADDRESS:



DECLARATION OF CURRENT PROJECTS

Current value refers to current value of projects for both General Building (GB) and Civil Engineering (CE).

Please list the current projects which your company is busy executing in the table below.

If no projects at the moment the bidder must indicate/write on this table.

Misrepresentation of facts will render your bid non-responsive.

Table 1 List of current projects executed by the bidder

1. Do you have the current projects being executed Yes/No? (circle the correct answer)
2. Please note that it is compulsory to answer the question above and if the answer is yes, complete the table below. Failure by the service provider/bidder to answer the question above or complete the table below will render their proposal not responsive and will not be considered.

Project Description	Project Value	Start date	Planned end date	Client Name	Contact Person number

Signed _____ Date _____

Name _____ Position _____

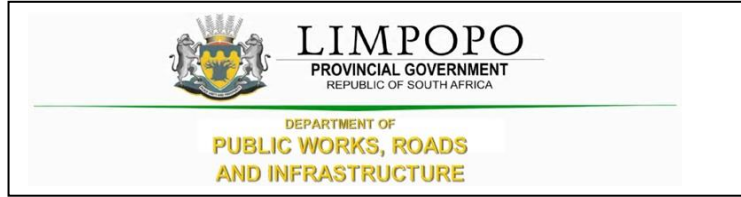
Enterprise _____



THE CONTRACT



PART C1: AGREEMENT AND CONTRACT DATA



C1.1. FORM OF OFFER AND ACCEPTANCE

Offer

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

CONSTRUCTION OF NEW MAKHUYA LIBRARY IN VHEMBE DISTRICT.

The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the tender schedules, and by submitting this offer has accepted the conditions of tender.

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

THE OFFERED TOTAL OF THE PRICE INCLUSIVE OF VALUE ADDED TAX IS (CONTRACT PRICE)

Rand (in words); R.....

.....

(in figures) R.....

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature(s)

Name(s)

Capacity

For the tenderer:

Name & signature of witness

Date

Acceptance (To be completed by the employer – not the bidder)

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

The terms of the contract, are contained in:

Part C1	Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
Part C2	Pricing Data
Part C3	Scope of Work

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

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

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

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the tenderer (now *Consultant*) within five working days of the date of such receipt notifies the *Employer* in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

For the Employer

Signature

Name

Capacity

Name and address of organization

Signature and Name of Witness

Signature

Name

Capacity

Schedule of Deviations

1 Subject
Details
.....
.....
.....

2 Subject
Details
.....
.....
.....

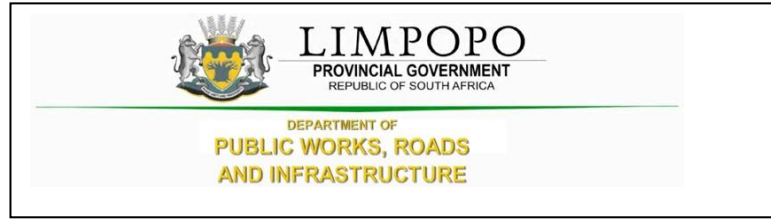
3 Subject
Details
.....
.....
.....

4 Subject
Details
.....
.....
.....

By the duly authorised representatives signing this agreement, the *Employer* and the Tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the returnable schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the *Employer* during this process of offer and acceptance.

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

.....



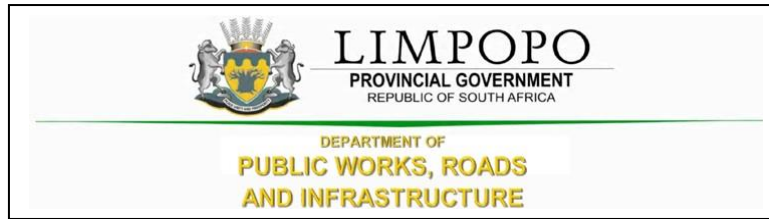
C2.1 CONTRACT DATA

The Conditions of Contract are clauses 1 to 41 of the **JBCC Series 2000 Principal Building Agreement (Edition 4.1 of March 2005)** published by the Joint Building Contracts Committee.

Copies of these conditions of contract may be obtained from the Association of South African Quantity Surveyors (011-3154140), Master Builders Association (011-205-9000; 057- 3526269) South African Association of Consulting Engineers (011-4632022) or South African Institute of Architects (051-4474909; 011-4860684; 053-8312003;)

The JBCC Principal Building Agreement makes several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities, and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the JBCC Principal Building Agreement.

The contractor shall achieve in the performance of the contract the Contract Participation Goals (CPG) relating to the engagement of targeted enterprises as established in the **CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts Gazette Notice No. 36190 of 25 February 2013.**"



PART C2: PRICING DATA

C2.1 Pricing instruction

- The Bills of Quantities have been drawn up in accordance with the Standard System of Measuring Building Work in accordance with the provisions of the Model Bills of Quantities or Electrical Work, published by the South African Association of Quantity Surveyors, (July, 2005).
- The agreement is under the JBCC N/S Subcontractor Agreement for use with the JBCC PBA (Edition 4.1 code 2101 March 2005) form of contract with Preliminaries (Code 2103 May 2005) incorporating the State Provisions of cl 41.0.
- It will be assumed that prices included in the Bills of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders.
- The prices and rates in these Bills of Quantities are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.
- An item against which no price is entered will be considered to be covered by the other prices or rates in the Bills of Quantities. A single lump sum will apply should a number of items be grouped together for pricing purposes.
- The Contract Data and the standard form of contract referenced therein must be studied for the full extent and meaning of each and every clause set out in Section 1 (Preliminaries) of the Bills of Quantities.
- The Bills of Quantities is not intended for the ordering of materials. Any ordering of materials, based on the Bills of Quantities, is at the Contractor's risk.
- The bidder shall set aside a minimum of 5 % of the project value for sub-contractor/s and determine the amount to be paid for the Contract Participation Goal (CPG).



PART C2.2: BILLS OF QUANTITIES

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<u>SECTION NO 1</u>			
<u>BILL NO. 1</u>			
<u>PRELIMINARIES</u>			
<u>PRELIMINARIES</u>			
All prices/rates to be net, excluding Value Added Tax			
<u>General</u>			
i) The agreement is to be the JBCC Series 2000 Principal Building Agreement (Edition 4.1) prepared by the Joint Building Contracts Committee, March 2005			
ii) The preliminaries are to be the JBCC Series 2000 Preliminaries prepared by the Joint Building Contracts Committee, March 2005 edition and shall be deemed to be incorporated herein			
iv) Where standard clauses or alternatives are not entirely applicable to this contract such modifications, corrections or supplements as will apply are given under each relevant clause heading			
iii) Tenderers are referred to the abovementioned documents for the full intent and meaning of each clause thereof (hereinafter referred to by heading and clause number only) for which such allowance must be made as may be considered necessary			
v) Where any item is not relevant to this specific contract such item is marked N/A (signifying "not applicable")			
Carried to Collection			
Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424			R

- vi) If Alternative A as set out in clause B10.3 hereinafter is to be used for the adjustment of the preliminaries each item priced is to be allocated to one or more of the three categories, where "F" denotes a fixed amount (amount not to be varied), "V" denotes an amount variable in proportion to value and "T" denotes an amount in proportion to time
- vii) Any reference to the words "Tender" or "Tenderer" herein and/or in any other documentation shall be construed to have the same meaning as the words "Bid" or "Bidder"

SECTION A: JBCC PRINCIPAL BUILDING AGREEMENT

Definitions (A1)

1 Definitions and interpretation (clause 1)

Clause 1.1 Definition of "**Agreement**" is amended by replacing it with the following:

Agreement means the agreement arising from the signing of the Form of Offer and Acceptance by the parties.

Clause 1.1 Definition of "**Bills of Quantities**" is amended by adding the following:

"...and the Pricing Instructions contained in the Pricing Data" after the word measuring system.

Clause 1.1 Definition of "**Contract Documents**" is amended by adding the following:

".....this Agreement and all other documents referenced therein.." after the word this document"

Clause 1.1 Definition of "**Contract Drawings**" is amended by replacing it with the following:

Contract Drawings means the drawings upon which the tender was accepted and used in preparing the bills of quantities and are available for viewing at the offices of the Principal Agent at the time of tender

Carried to Collection

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Clause 1.1 Definition of "**Contract Sum**" is amended by replacing it with the following:

Contract Sum means the total of prices in the Form of Offer and Acceptance.

Clause 1.1 Definition of "**Schedule**" is amended by adding the following:

".....and in the **Contract Data**". at the end on the sentence ending with **agreement**

Clause 1.1 Definition of "**Commencement Date**" is added:

"Commencement date" means the date that the **agreement**, made in terms of the Form of Offer and Acceptance, comes into effect

Clause 1.1 Definition of "**Construction Guarantee**" is amended by replacing it with the following:

"Construction guarantee" means guarantee at call obtained by the **contractor** from an institution approved by the **employer** in terms of the **employer's** construction guarantee form as selected in the **schedule**

Clause 1.1 Definition of "**Construction Period**" is amended by replacing it with the following:

"Construction period" means the period commencing on the commencement date and ending on the date of practical completion

Clause 1.1 Definition of "**Corrupt Practice**" is added:

"Corrupt Practice" means the offering , giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution

Clause 1.1 Definition of "**Fraudulent Practice**" is added:

"Fraudulent Practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any tenderer and includes collusive practice among tenderers (prior

Carried to Collection

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

to or after the tender submission) designed to establish tender prices at artificial non-competitive levels and to deprive the tenderer of the benefits of free and open competition.

Clause 1.1 Definition of "**Interest**" is amended by replacing it with the following:

"**Interest**" means the interest rates applicable on this contract, whether specifically indicated in the relevant clauses or not, will be the rate as determined by the Minister of Finance, from time to time, in terms of section 80(1)(b) of the Public Finance Management Act, 1999 (Act No. 1 of 1999).

Clause 1.1 Definition of "**Principal Agent**" is amended by replacing it with the following:

"**Principal Agent**" means the person or entity appointed by the **employer** and named in the **schedule**. In the event of a **principal agent** not being appointed, then all the duties and obligations of a **principal agent** as detailed in the **agreement** shall be fulfilled by a representative of the **employer** as named in the **schedule**.

Clause 1.1 Definition of "**Security**" is amended by replacing it with the following:

Security" means the form of security provided by the **employer** or **contractor**, as stated in the **schedule**, from which the **contractor** or **employer** may recover expense or loss

		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
	<u>Objective and Preparation (A2 - A14)</u>			
2	Offer, acceptance and performance (clause 2)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
	Carried to Collection			R
	Section No. 1			
	Bill No 1 - Preliminaries			
	LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

3 Documents (clause 3)

Clause 3.2.1 is amended by replacing "14.1" with "14.0"

Clause 3.7 is amended by the addition of the following:

The contractor shall supply and keep a copy of the JBCC Series 2000 Principal Building Agreement and Preliminaries applicable to this contract **on the site**, to which **the employer, principal agent and agents** shall have access at all times.

Clause 3.10 is amended by replacing the second reference to "**principal agent**" with the word "**employer**"

Fixed

Item

Value Related

Item

Time Related

Item

4 Design responsibility (clause 4)

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

5	Employer's agents (clause 5)				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
6	Contractor's site representative (clause 6)				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
7	Compliance with laws and regulations (clause 7)				
	<p>Note: A separate clause has been included in Section C: Specific Preliminaries of the bills of quantities for the contractor to have the opportunity to price for all the requirements of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification</p>				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
8	Works risk (clause 8)				
		Fixed	Item		
		Value Related	Item		
		Time Related	Item		
Carried to Collection				R	
Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424					

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

9 Indemnities (clause 9)

Clause 9.0 is amended by adding Clause 9.1.4:

The **contractor** indemnifies and holds harmless the **employer** against all liability, losses, claims, damages, penalties, actions, proceedings or judgements (collectively referred to as "Losses") arising from any infringement of letters, patent design, trademark, name, copyright or other protected rights in respect of any machine, plant, work, materials, thing, system or method of using, fixing, working or arrangement used or fixed or supplied by the **contractor**, but such indemnity shall not cover any use of the equipment of part thereof otherwise than in accordance with the provisions of the specification. All payments and royalties payable in one sum or by instalments or otherwise shall be included by the **contractor** in the price and shall be paid by him to those to whom they may be payable. The **contractor** shall reimburse the **employer** for all legal and other costs and expenses, including without limitation attorney's fees on attorney-client scale incurred by the **employer** in connection with investigation, defending or settling any Losses in connection with pending or threatening litigation in which the **employer** is a party.

Fixed

Item

Value Related

Item

Time Related

Item

10 Works insurances (clause 10)

Clause 10.0 is amended by the addition of the following clauses

10.5 Damage to the Works

- (a) Without in any way limiting the **contractor's** obligations in terms of the contract, the **contractor** shall bear the full risk of damage to and/or destruction of the **works** by whatever cause during construction of the **works** and hereby indemnifies and holds harmless the **employer** against any such damage. The **contractor** shall take such precautions and security measures and other steps for the

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

protection and security of the **works** as the **contractor** may deem necessary

- b) The **contractor** shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the **works** and to rebuild, restore, replace and/or repair the **works**
- (c) The **employer** shall carry the risk of damage to or destruction of the **works** and material paid for by the **employer** that is the result of the excepted risks as set out in 10.6
- (d) Where the **employer** bears the risk in terms of this contract, the **contractor** shall, if requested to do so, reinstate any damage or destroyed portions of the **works** and the costs of such reinstatement shall be measured and valued in terms of 32.0 hereof

10.6 Injury to Persons or loss of or damage to Properties

- (a) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever arising out of or in the course of or caused by the execution of the **works** unless due to any act or neglect of any person for whose actions the **employer** is legally liable
- (b) The **contractor** shall be liable for and hereby indemnifies the **employer** against any liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person, arising out of or in the course of or by reason of the execution of the **works** unless due to any act or neglect of any person for whose actions the **employer** is legally liable
- c) The **contractor** shall, upon receiving a **contract instruction** from the **principal agent**, cause the same to be made good in a perfect and

Carried to Collection

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

R

workmanlike manner at his own cost and in default thereof the **employer** shall be entitled to cause it to be made good and to recover the cost thereof from the **contractor** or to deduct the same from amounts due to the **contractor**

- (d) The **contractor** shall be responsible for the protection and safety of such portions of the premises placed under his control by the **employer** for the purpose of executing the **works** until the issue of the **certificate of practical completion**
- (e) Where the execution of the **works** involves the risk of removal of or interference with support to adjoining properties including land or structures or any structures to be altered or added to, the **contractor** shall obtain adequate insurance and will remain adequately insured or insured to the specific limit stated in the contract against the death of or injury to persons or damage to such property consequent on such removal or interference with the support until such portion of the **works** has been completed
- (f) The **contractor** shall at all times proceed immediately at his own cost to remove or dispose of any debris and to rebuild, restore, replace and/or repair such property and to execute the **works**

10.7 High risk insurance

In the event of the project being executed in a geological area classified as a "High Risk Area", that is an area which is subject to highly unstable subsurface conditions that might result in catastrophic ground movement evident by sink-holes or doline formation the following will apply:

10.7.1 Damage to the works

The **contractor** shall, from the commencement **date** of the **works** until the date of the **certificate of practical completion** bear the full risk of and hereby indemnifies and holds harmless the **employer** against any damage to and/or destruction of the **works** consequent upon a catastrophic ground movement as mentioned above. The **contractor** shall take such precautions and security

Carried to Collection

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

measures and other steps for the protection of the **works** as he may deem necessary

When so instructed to do so by the principal agent, the contractor shall proceed immediately to remove and/or dispose of any debris arising from damage to or destruction of the works and to rebuild, restore, replace and/or repair the works, at the contractor

10.7.2 Injury to persons or loss of or damage to property

The **contractor** shall be liable for and hereby indemnifies and holds harmless the **employer** against any liability, loss, claim or proceeding arising at any time during the period of the contract whether arising in common law or by statute, consequent upon personal injuries to or the death of any person whomsoever resulting from, arising out of or caused by a catastrophic ground movement as mentioned above

The **contractor** shall be liable for and hereby indemnifies the **employer** against any and all liability, loss, claim or proceeding consequent upon loss of or damage to any moveable or immovable or personal property or property contiguous to the **site**, whether belonging to or under the control of the **employer** or any other body or person whomsoever arising out of or caused by a catastrophic ground movement, as mentioned above, which occurred during the period of the contract

10.7.3 It is the responsibility of the **contractor** to ensure that he has adequate insurance to cover his risk and liability as mentioned in 10.7.1 and 10.7.2. Without limiting the **contractor's** obligations in terms of the contract, the **contractor** shall, within twenty-one (21) **calendar days** of the **commencement date** but before commencement of the **works**, submit to the **employer** proof of such insurance policy, if requested to do so

10.7.4 The **employer** shall be entitled to recover any and all losses and/or damages of whatever nature suffered or incurred consequent upon the **contractor's** default of his obligations as set out in 10.7.1; 10.7.2 and 10.7.3. Such losses or damages may be recovered from the **contractor** or by deducting the same from any amounts still due under this contract or under any other contract presently or hereafter existing between the

Carried to Collection

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

employer and the **contractor** and for this purpose all these contracts shall be considered one indivisible whole

		Fixed	Item
		Value Related	Item
		Time Related	Item
11	Liability insurances (clause 11)		
		Fixed	Item
		Value Related	Item
		Time Related	Item
12	Effecting insurances (clause 12)		
		Fixed	Item
		Value Related	Item
		Time Related	Item
13	No clause (clause 13)		Item
14	Security (clause 14)		
	Clause 14.0 is amended by:-		
	i) The addition of the following clauses:-		
	Clause 14.7.3		
	"Hand the site over to the contractor subject to agreement that shall be made between the employer and the contractor "		
		Fixed	Item
		Value Related	Item
		Time Related	Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Execution (A15 - A23)

15 Preparation for and execution of the works (clause 15)

Clause 15.1.1 is amended by replacing it with:

No clause

Clause 15.1.2 is amended by replacing it with:

The **security** selected in terms of 14.0

Clause 15.1 is amended by the addition of the following clause:

15.1.4 An acceptable health and safety plan, required in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) or latest edition, revision and amendments, within twenty-one (21) **calendar days of commencement date**

Clause 15.2.1 is amended by replacing it with the following clause:

Give the **contractor** possession of the **site** within ten (10) **working days** of the **contractor** complying with the terms of 15.1

Fixed

Item

Value Related

Item

Time Related

Item

16 Access to the works (clause 16)

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

17	Contract instructions (clause 17)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
18	Setting out of the works (clause 18)			
	<i>The contractor shall notify the principal agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc. exist in order that the necessary arrangements may be made for the rectification of any such encroachments</i>			
	<i>The contractor shall perform tolerance control checks regularly throughout the contract period and report on this at regular interval to the Principal Agent in the approved format. Should the contractor fail to comply with this requirement to the satisfaction of the Principal Agent, progressively as the structure is being constructed, the Employer will commission a Registered Land Surveyor to do so on the Contractor's behalf and at the Contractor's Expense.</i>			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
19	Assignment (clause 19)			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
Carried to Collection				R
Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

20	Nominated sub-contractors (clause 20)			
	Clause 20.0			
	Clause 20.1.3 is amended by replacing it with the following:			
	No Clause	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
21	Selected sub-contractors (clause 21)			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
22	Employer's direct contractors (clause 22)			
	<i>The Contractor shall allow the direct contractors and employers agents access to the work, allocate reasonable space in the building for storage of their materials, tools and equipment, all to the satisfaction of the Principal Agent. The contractor shall also allow the direct contractors, etc. free of charge, use of their ablution facilities and water and power supply to the and shall in no way hinder or prevent the execution of their works. Attendance may be priced against the relevant specified items in the bills of quantities.</i>			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

23	Contractor's domestic sub-contractors (Clause 23)	Fixed	Item
		Value Related	Item
		Time Related	Item
<u>COMPLETION</u>			
<u>Completion (A24-A30)</u>			
24	Practical completion (clause 24)	Fixed	Item
		Value Related	Item
		Time Related	Item
25	Works completion (clause 25)	Fixed	Item
		Value Related	Item
		Time Related	Item
26	Final completion (clause 26)	Fixed	Item
		Value Related	Item
		Time Related	Item
27	Latent defects liability period (clause 27)	Fixed	Item
		Value Related	Item
		Time Related	Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

28	Sectional completion (clause 28)	Fixed Value Related Time Related	Item Item Item	
29	Revision of date of practical completion (clause 29) Clause 29.1.1 shall be deemed to be omitted and replaced by the following: Inclement weather shall be defined as weather in excess of the average rainfall (volume and period) for each calendar month over the past ten (10) years as recorded by the nearest commonly recognised weather bureau in the region of the project It shall be deemed that the contractor has adequately allowed in his programme and tendered rates for expenses which might result from delays due to average or below rainfall as described above Add Clause 29.9 as follows: 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 Clause 29.10 as follows: Clause 29.10 - Acceleration Clause 29.10.1 Irrespective of whether or not the principal agent rules that the contractor is entitled to an extension of time or a revision of the date for practical completion , the principal agent shall nevertheless, at any time, be entitled to instruct the contractor in writing to accelerate the progress of the remaining works to ensure that the works are completed by the original date for practical completion or revised date as the case may be. Clause 29.10.2 Upon receipt of such instruction, the contractor			
	Carried to Collection			R
	Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

shall take all necessary steps to ensure that the **works** are completed timeously including the provision by him of additional resources, plant, manpower, etc and the working overtime or additional overtime beyond that contemplated at the time of tender (at all times adhering to the regulations and requirements of all authorities) and by all other adequate and proper means and methods. The **contractor** shall prove that such steps are being taken if called upon to do so.

Clause 29.10.3
The **contractor's** entitlement to compensation arising out of or in respect of any revision to the date for **practical completion** that may have been granted by the **principal agent** or alternatively where the **principal agent** has instructed the **contractor** to accelerate, shall be adjudicated strictly in terms of clause 32.

30

Penalty for non-completion (clause 30)

Clause 30 is amended by replacing reference to 36.3 at end of sentence with 36.0

Fixed	Item
Value Related	Item
Time Related	Item
Fixed	Item
Value Related	Item
Time Related	Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Payment (A31 - A35)

31	<p>Interim payment to the contractor (clause 31)</p> <p>Clause 31.9 is amended by replacing "seven (7) calender days" with "thirty (30) calender days" and by deleting the words "subject to the contractor giving the employer a tax invoice for the amount due</p> <p>Clause 31.12 is amended by deleting the following</p> <p>Payment shall be subject to the employer giving the contractor a tax invoice for the amount due</p> <p align="right">Fixed</p> <p align="right">Value Related</p> <p align="right">Time Related</p>						
32	<p>Adjustment to the contract value (clause 32)</p> <p>Clause 32.0</p> <p>Clauses 32.5.1, 32.5.4 and 32.5.7 are amended by the addition of the following at the end of the sentence:</p> <p>"due to no fault of the contractor"</p> <p align="right">Fixed</p> <p align="right">Value Related</p> <p align="right">Time Related</p>						
33	<p>Recovery of expense and loss (clause 33)</p> <p align="right">Fixed</p> <p align="right">Value Related</p> <p align="right">Time Related</p>						

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

34	Final account and final payment (clause 34)			
	Clause 34.0			
	Clause 34.2 is amended by inserting # next to 34.2			
	Clause 34.13 is amended by replacing "seven (7) calendar days " with "thirty (30) calendar days " and deleting the words "subject to the employer giving the contractor a tax invoice for the amount due"			
	Fixed		Item	
	Value Related		Item	
	Time Related		Item	
35	Payment to other parties (clause 35)			
	Fixed		Item	
	Value Related		Item	
	Time Related		Item	

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Cancellation (A36-A39)

36 Cancellation by employer - contractor's default (clause 36)

Clause 36.1 is amended by the additions of the following clauses:

36.1.3 refuses or neglects to comply strictly with any of the conditions of contract

36.1.4 estate being sequestrated, liquidated or surrendered in terms of the insolvency laws in force within the Republic of South Africa

36.1.5 in the judgement of the **employer**, has engaged in **corrupt** or **fraudulent practices** in competing for or in executing the contract

Clause 36.3 is amended by removing the reference to "No clause" and replacing the words "**principal agent**" with "**employer**"

Clause 36.0 is amended by the addition of the following clause:

36.7 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

37 Cancellation by employer - loss and damage (clause 37)

Clause 37.3.5 is amended by replacing "ninety (90)" with "one-hundred and twenty (120)"

Clause 37.0 is amended by the addition of the following clause:

37.5 Notwithstanding any clause to the contrary, on cancellation of this **agreement** either by the **employer** or the **contractor**; or for any reason whatsoever, the **contractor** shall on written instruction, discontinue with the **works** on a date stated and withdraw himself from the **site**. The **contractor** shall not be entitled to refuse to withdraw from the **works** on the grounds of any lien or right of retention or on the grounds of any other right whatsoever

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

38	<p>Cancellation by contractor - employer's default (clause 38)</p> <p>Clause 38.5.4 is amended by replacing "ninety (90) with "one-hundred and twenty (120)"</p> <p>Clause 38.0 is amended by the addition of the following clause:</p> <p>38.7 Notwithstanding any clause to the contrary, on cancellation of this agreement either by the employer or the contractor; or for any reason whatsoever, the contractor shall on written instruction, discontinue with the works on a date stated and withdraw himself from the site. The contractor shall not be entitled to refuse to withdraw from the works on the grounds of any lien or right of retention or on the grounds of any other right whatsoever</p> <p align="right">Fixed</p> <p align="right">Value Related</p> <p align="right">Time Related</p>			
39	<p>Cancellation - cessation of the works (clause 39)</p> <p>Clause 39.3.5 is amended by the addition of the following at the end of the sentence: "within one-hundred and twenty (120) working days of completion of such report"</p> <p align="right">Fixed</p> <p align="right">Value Related</p> <p align="right">Time Related</p>			
Carried to Collection				
<p>Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424</p>				<p align="center">R</p>

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Dispute Settlement (A40)

40 Disputes Settlement (clause 40)

Clause 40.2.2 is amended by replacing "one (1) year" with "three (3) years"

Clause 40.6 is amended by removing the reference to:

No clause

Clause 40.7.1 is amended by replacing "(10)" with "(15)" and by the addition of the following:

Whether or not mediation resolves the dispute, the parties shall bear their own cost concerning the mediation and equally share the costs of the mediator and related costs.

Fixed

Item

Value Related

Item

Time Related

Item

State Provision (A41)

41 State Substitutions (clause 41)

Delete in the Substitute Provisions (41.0 State Clauses) clauses 40.2.1, 40.2.2, 40.3, 40.4, 40.5 and 40.6 and replace with the following:

40.1 Should any dispute between the **employer**, his **agents** or **principal agent** on the one hand and the contractors on the other arise out of this **agreement**, such dispute shall be referred to adjudication.

40.2 Adjudication shall be conducted in accordance with the edition of the JBCC Rules for Adjudication current at the time when the dispute is declared. The party, which raises the dispute, shall select three adjudicators from the panel of adjudicators published by the South African Institution of Civil Engineering or Association of Arbitrators (Southern Africa), determine their hourly fees and confirm that these adjudicators are available to adjudicate the dispute in

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

question. The other party shall then select within 7 days one of the three nominated adjudicators, failing which the chairman for the time being of the Association of Arbitrators (Southern Africa) shall nominate an adjudicator. The **adjudicator** shall be appointed in terms of the Adjudicators Agreement set out in C1.4 .

40.3 If provided in the **schedule**, a dispute shall be finally settled by a single Arbitrator to be agreed on between the parties or, failing such agreement within 28 days after referring the dispute to Arbitration, an Arbitrator nominated by the chairman for the time being of the Association of Arbitrators (Southern Africa). Any such reference shall be deemed to be a submission to the arbitration of a single arbitrator in terms of the Arbitration Act (Act No 42 of 1965, as amended), or any legislation passed in substitution therefore. In the absence of any other agreed procedure, the arbitration shall take place in accordance with the Rules for the Conduct of Arbitrations issued by the Association of Arbitrators (Southern Africa) which are current at the time of the referral to arbitration. The Arbitrator shall, in his award, set out the facts and the provisions of the contract on which his award is based.

40.4 If the **schedule** provides for court proceedings to finally resolve disputes, disputes shall be determined by court proceedings.

Fixed

Item

Value Related

Item

Time Related

Item

Contract Variables (A41)

42 The Schedule (clause 42)

Tenderers are referred to the Contract Data and Notes to Tenderers for variable pertaining to this contract

Fixed

Item

Value Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

	Time Related		Item	
	<u>SECTION B: PRELIMINARIES</u>			
	<u>Definition and interpretation (B1)</u>			
43	Definition and interpretation			
	See also clause A1.0 of Section A for additional and/or amended definitions which shall apply equally to this Section			
	Fixed		Item	
	Value Related		Item	
	Time Related		Item	
	<u>Documents (B2)</u>			
44	Checking of documents (B2.1)			
	<i>These bills of quantities:</i>			
	<i>(1) contain pages and annexes as indexed, and;</i>			
	<i>(2) are in multiple procurement format, i.e. all trades are fully measured with minor budgetary allowances</i>			
	<i>Items in these bills of quantities are to be read and priced in conjunction with and the descriptions regarded as amplified by the Model Preambles for Trades, 2008 edition, as recommended and published by the Association of South African Quantity Surveyors and no claim arising from brevity of description of items fully described in the said Model Preambles for Trades will be entertained</i>			
	Fixed		Item	
	Value Related		Item	
	Time Related		Item	
45	Provisional bills of quantities (B2.2)			
	Fixed		Item	
	Carried to Collection			R
	Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Value Related	Item		
Time Related	Item		
Carried to Collection			R
	Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424		

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

46	Availability of construction documentation (B2.3) <i>The minor budgetary allowances included in this document will be separately procured, based on multiple procurement of selected sub-contractors during the construction period</i>	Fixed	Item
		Value Related	Item
		Time Related	Item
47	Interests of agents (B2.4)	Fixed	Item
		Value Related	Item
		Time Related	Item
48	Priced documents (B2.5)	Fixed	Item
		Value Related	Item
		Time Related	Item
49	Tender submission (B2.6) <i>Notwithstanding anything contained in this clause tenders shall be valid for a period of ninety (90) days from the closing date of tenders</i> <i>Clause 2.6 is amended by replacing "JBCC Form of Tender" with "Form of Offer and Acceptance C1.1"</i>	Fixed	Item
		Value Related	Item
		Time Related	Item
	<u>The site (B3)</u>		
50	Defined works area (B3.1)	Fixed	Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

		Value Related	Item	
		Time Related	Item	
51	Geotechnical investigation (B3.2)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
52	Inspection of the site (B3.3)			
	<i>Tenderers are instructed to familiarise themselves before submission of their tender with regard to the relevant local site conditions, site accessibility, the nature of operations required, availability of labour and any conditions pertaining thereto, together with conditions relating to unloading, carting and storage of materials, equipment and tools required for the works.</i>			
	<i>No claims for extras arising from the contractor having failed to comply with this clause will be entertained</i>			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
53	Existing premises occupied (B3.4)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
54	Previous work - dimensional accuracy (B3.5)			
	<i>Work executed under a previous contract and the extent thereof will be pointed out to the contractor by the principal agent on handing over of the site</i>			
		Fixed	Item	
	Carried to Collection			R
	Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424			

***NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT***

55	Previous work - defects (B3.6)	Value Related	Item	
		Time Related	Item	
		Fixed	Item	
56	Services - known (B3.7)	Value Related	Item	
		Time Related	Item	
		Fixed	Item	
57	Services - unknown (B3.8)	Value Related	Item	
		Time Related	Item	
		Fixed	Item	
58	Protection of trees, etc (B3.9)	Value Related	Item	
		Time Related	Item	
		Fixed	Item	
		Carried to Collection		R
	Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

59	Articles of value (B3.10)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
60	Inspection of adjoining properties, etc (B3.11)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
	<u>Management of contract (B4)</u>			
61	Management of the works (B4.1)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
62	Programming for the works (B4.2)			
	Clause B4.2 is hereby amended by the addition of the following:			
	Programme:			
	The contractor and the principal agent shall agree to a Contract Programme for the control of the Works.			
	The contractor shall submit a draft of the Contract Programme and method statement to the principal agent for approval together with the tender.			
	The contractor shall ensure that the contract programme:			
	<ol style="list-style-type: none"> 1. Shall be prepared and drawn up to comply in all respects with the requirements of this Agreement. 2. shall be drawn up using logic developed during the tender period and complies with the planning requirements of the Client. 3. shall be in accordance with the dates given 			
	Carried to Collection			R
	Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

- herein for possession and practical completion;
and
4. shall be in sufficient and approved detail to ensure effective control of the work, including all items necessary to enable calculations to be made for the distribution of finance during the cash flow analysis.
 5. shall be accompanied by a full written method statement

The principal agent shall examine and comment on the contract programme and method statement within two weeks of its submission.

Following on these comments the contractor shall amend the contract programme and method statement as may be necessary and submit the final contract programme and method statement to the principal agent for approval within a further two weeks thereafter.

The contract programme shall be processed by computer and be presented to the principal agent in the form of logic charts and bar charts in such a way as to determine the critical path and the float on non-critical activities. All supporting printouts must be available to the principal agent on demand.

The acceptance by the principal agent of the contract programme, or any revision thereof, does not necessarily sanction the accuracy of validity of the network logic, the correctness of individual activities in terms of description or duration, the comprehensiveness of networks or the discrepancies between drawings and any other documents presented by the contractor, and in no way relieves the responsibility of the contractor to comply with the requirements of the Agreement.

No policy decisions other than the planning requirements, procedures and policies provided, will be enforced on the contractor regarding construction of the project and the contractor shall be responsible at all times for ensuring the accuracy, validity and reasonableness of programming information.

Documentation will not be available in complete detail at the date of award of the contract. Non-availability of information will not be deemed an excuse for non-presentation of programmes. In the event of inadequate information, the contractor shall estimate the predicted

Carried to Collection

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

time applications on available information and quality the submission accordingly.

Development of the contract programme and method statement

Within two weeks of award of the contract, the contractor shall submit an updated contract programme and written method statement which shall include the latest information in sufficient detail to permit comprehensive monitoring.

Progress of the works will be monitored by the principal agent. The contractor shall liaise with the principal agent in order to provide whatever information is required to facilitate such monitoring.

Revisions to the contract programme

Revisions to the contract programme may be introduced periodically by the contractor subject to compliance with the contract completion and handover dates.

Providing the required consultation between the relevant parties has highlighted the implications of the required changes, the programming strategy on the project may be changed and the changes noted and specified on logic charts delivered to the principal agent. The changes to the programme will be recorded as firm and binding once the principal agent has sanctioned the said changes.

A revision to the programme will not invalidate the contractual completion dates and applications for extensions of time will be processed by the principal agent in accordance with the conditions of contract.

Should the contractor fail to submit a request for revision to the construction programme , progress monitoring shall be based on the latest revised programme sanctioned by the principal agent.

The contractor shall make all his necessary revisions on the approved network sheets clearly marking, inter-alia, the logic changes and duration changes. These will then be processed by the necessary parties and then approved in the normal manner

Progress Monitoring

Carried to Collection

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

The contractor shall provide regular progress reports showing actual and expected progress against the latest contract programme. Progress reports shall be submitted at each site progress meeting and shall outline the progress against key target dates and deviation which has occurred against the most recently updated control programme due to the progress reflected in the as-built construction programme.

The status of each activity must also be reported as follows:

Target - If the activity is not complete, the latest predicted completion date shall be supplied.

Start - If the activity has commenced, the actual date shall be supplied.

Finish - If the activity is complete, the actual completion date shall be supplied.

Problems which may occur during execution of the contract must be specifically identified in progress reports under a separate section of the contractor's report.

Should problems occur during the execution of the contract or the scope of work be increased or decreased, the contractor may be requested to increase the extent or the detail of the programme.

The principal agent may recommend action to be taken by the contractor, including the revision of resource levels, but this information will not be binding on the contractor unless the recommendations are enforced in terms of the conditions of contract by the principal agent and will in no way relieve the contractor's responsibility to comply with the requirements of the Agreement.

Extension of time

Any extension of time which is granted by the principal agent will be annotated to affect selected activities in the programme and the associated activities will be incorporated by revisions to the programme by the contractor. Should the additional activities or the extension of time on existing activities fall on a non-critical area of the programme, extension will be limited

Carried to Collection

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

to the activities affected by the said additional activities or extensions and the contract dates shall not be affected. If, however, the additional activities fall on the critical path, the principal agent shall take this into account when granting any extension of time in terms of the conditions of contract.

The contractor agrees that the contract completion date (i.e. the date for practical completion) has been stipulated in the contract for the benefit of the employer, so that, without derogating from the generality of the afore going principle it is provide that:

1. The contractor shall not be entitled to deliver the site and the works to the employer prior to the contract completion date and
2. Should there for any reason be any float period indicated in the contract programme prior to the contractual completion date then this float period shall be utilized to absorb any delays or extensions of time without affecting the contract completion date.
3. The contractor shall, at all times, ensure that, notwithstanding the approval or sanctioning, reviewing or inspection of a programme or any revision of a programme by the principal agent in the afore going terms, practical completion and completion of the works shall take place strictly in accordance with this Agreement.

A defective or faulty programme, even if so sanctioned, approved, reviewed or inspected by the principal agent, shall therefore not constitute a cause for granting an extension of time for completion of the works or for entitling the contractor to the payment by the employer in terms of the contract of any loss, compensation or damage whatsoever.

The contractor acknowledges that the principal agent's afore going participation in the approval of development of, revisions to and updating of the Contract Programme shall take place in consultation with the principal agent. The contractor shall therefore provide the principal agent with such co-operation and/or information and/or access as they may reasonably require for such purposes.

Fixed

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

		Value Related	Item		
		Time Related	Item		
63	Progress meetings (B4.3)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
64	Technical meetings (B4.4)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
65	Labour and plant records (B4.5)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
	<u>Samples, shop drawings and manufacturer's instructions (B5)</u>				
66	Samples of materials (B5.1)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
67	Workmanship samples (B5.2)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
	Carried to Collection				
				R	

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

68	Shop drawings (B5.3)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
69	Compliance with manufacturer's instructions (B5.4)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
<u>Temporary works and plant (B6)</u>				
70	Deposits and fees (B6.1)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
Carried to Collection				R
Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

71	Enclosure of the works (B6.2)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
72	Advertising (B6.3)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
73	Plant, equipment, sheds and offices (B6.4)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
74	Main notice board (B6.5)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
75	Subcontractors notice board (B6.6)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
Carried to Collection				R	
Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424					

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

<u>Temporary services (B7)</u>					
76	Location (B7.1)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
77	Water (B7.2)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
78	Electricity (B7.3)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
79	Telecommunication facilities (B7.4)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
80	Ablution facilities (B7.5)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
Carried to Collection				R	

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

	<u>Prime cost amounts (B8)</u>			
81	Responsibility for prime cost amounts (B8.1)		Item	
	Fixed			
	Value Related		Item	
	Time Related		Item	
	<u>Attendance on nominated and selected subcontractors (B9)</u>			
82	General attendance (B9.1)			
	The schedule rates providing for attendance on nominated subcontractors and other contractors , will be adjusted only if the scope of the work has changed			
	Fixed		Item	
	Value Related		Item	
	Time Related		Item	
83	Special attendance (B9.2)			
	Fixed		Item	
	Value Related		Item	
	Time Related		Item	
84	Commissioning - Fuel, water and electricity (B9.3)			
	Fixed		Item	
	Value Related		Item	
	Time Related		Item	
	<u>Financial aspects (B10)</u>			
85	Statutory taxes, duties and levies (B10.1)			
	<i>Provision is made in the summary of these bills of quantities for the inclusion of Value Added Tax (VAT)</i>			
	Fixed		Item	
	Carried to Collection			R
	Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

		Value Related	Item	
		Time Related	Item	
86	Payment of preliminaries (B10.2)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
87	Adjustment of preliminaries (B10.3)			
	Clauses B10.3.1 and B10.3.2 are amended by replacing "within fifteen (15) working days of taking possession of the site " with "when submitting his priced bills of quantities "			
		Fixed	Item	
		Value Related	Item	
		Time Related	Item	
88	Payment certificate cash flow (B10.4)	Fixed	Item	
		Value Related	Item	
		Time Related	Item	
Carried to Collection				R
Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

General (B11)					
89	Protection of works (B11.1)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
90	Protection/isolation of existing/sectionally occupied works(B11.2)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
91	Site security (B11.3)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
92	Notice before covering work (B11.4)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
93	Disturbance (B11.5)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
Carried to Collection					
				R	

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

94	Environmental disturbance (B11.6)	Fixed	Item		
		Time Related	Item		
		Value Related	Item		
95	Works cleaning and clearing (B11.7)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
96	Vermin (B11.8)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
97	Overhand work (B11.9)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
98	Instruction manuals and guarantees (B11.10)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
99	As built information (B11.11)	Fixed	Item		
		Value Related	Item		
		Time Related	Item		
100	Tenant installations (B11.12)	Fixed	Item		
Carried to Collection				R	
Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424					

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

	Value Related	Item	
	Time Related	Item	
	<u>Schedule of variables (B12)</u>		
101	Pre-tender information (B12.1)		
	This schedule contains all variables referred to in this document and is divided into pretender and post-tender categories. The pre-tender category must be completed in full and included in the tender documents. Both the pre-tender and post-tender categories form part of these Preliminaries .		
	Fixed	Item	
	Value Related	Item	
	Time Related	Item	
	12.1.1 Provisional bills of quantities (B12.1.1)		
	The quantities are provisional:		
		Yes	
	12.1.2 Availability of construction documentation (B12.1.2)		
	Construction documentation is complete:		
		Yes	
	Carried to Collection		
			R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

12.1.3.1	<p>Employer: <i>Department of Public Works - Limpopo Provincial Government</i> 43 Church Street, Polokwane, 0700 Private Bag X9490, Polokwane, 0700 Tel: (015) 284 7219 Fax: (015) 284 7030 Email: malulekev@dpw.limpopo.gov.za</p>			
12.1.3.2	<p>Principal Agent/Architect: <i>Department of Public Works - Limpopo Provincial Government</i> 43 Church Street, Polokwane, 0700 Private Bag X9490, Polokwane, 0700 Tel: (015) 284 7219 Fax: (015) 284 7030 Email: malulekev@dpw.limpopo.gov.za</p>			
12.1.3.3	<p>Quantity Surveyor: <i>Department of Public Works - Limpopo Provincial Government</i> 43 Church Street, Polokwane, 0700 Private Bag X9490, Polokwane, 0700 Tel: (015) 284 7219 Fax: (015) 284 7030 Email: malulekev@dpw.limpopo.gov.za</p>			
12.1.3.4	<p>Civil Engineers: <i>Department of Public Works - Limpopo Provincial Government</i> 43 Church Street, Polokwane, 0700 Private Bag X9490, Polokwane, 0700 Tel: (015) 284 7219 Fax: (015) 284 7030 Email: malulekev@dpw.limpopo.gov.za</p>			
12.1.3.5	<p>Structural Engineers: <i>Department of Public Works - Limpopo Provincial Government</i> 43 Church Street, Polokwane, 0700 Private Bag X9490, Polokwane, 0700 Tel: (015) 284 7219 Fax: (015) 284 7030 Email: malulekev@dpw.limpopo.gov.za</p>			
12.1.3.6	<p>Mechanical Engineers: <i>Department of Public Works - Limpopo</i></p>			
Carried to Collection				R
<p>Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424</p>				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Provincial Government
43 Church Street, Polokwane, 0700
Private Bag X9490, Polokwane, 0700
Tel: (015) 284 7219 Fax: (015) 284 7030
Email: malulekev@dpw.limpopo.gov.za

12.1.4 Defined works area (B12.1.4)

The works described in these Bills of Quantities comprises the Construction of New Library Building at Tshaulu In the Vhembe District.

The buildings are single storey with bricks, face brick walls externally plastered and painted walls internally, ceilings and roof sheeting on steel trusses.

The works also includes Electrical Installations, Mechanical Installation and Civil Works that includes Roadworks, water reticulation and sewer reticulation.

12.1.5 Geotechnical investigation (B12.1.5)

The geotechnical report is available for viewing at the offices of the Principal Agent

Yes

12.1.6 Existing premises occupied (B12.1.6)

[3.4] Specific requirements:
The contractor shall execute the works with as little noise and disturbance as possible

12.1.7 Previous work - Dimensional accuracy (B12.1.7)

[3.5] Details:
No additional details

No

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

12.1.8 **Previous work - defects**

[3.6] Details:
No additional details

12.1.9 Services - known (B12.1.9)

**Existing services and points of connection
are shown on the site plan and/or will be
pointed out on site by the principal agent**

12.1.10 **Protection of trees**

[3.9] Specific requirements:
No trees to be damaged or removed except
those specifically designated in writing by the
Architect

12.1.11 **Inspection of adjoining properties**

[3.11] Specific requirements:
None

12.1.12 **Enclosure of the works**

[6.2] Specific requirements:
Areas where work is taking place shall at all
times be blocked off by appropriate means

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

12.1.13 Offices

[6.4.3] Specific requirements:
The contractor shall provide, maintain and remove on completion of the works an office for the exclusive use of the principal agent, minimum size 4m x 3m x 3m high internally, suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times.
The contractor to also provide a board room suitable for 15 people seated and his office site office(s) with suitably insulated and ventilated, provided with electric lighting and fitted with boarded floor, desk, chair, drawing stool, drawing board and lock-up drawers for drawings. The office shall be kept clean and fit for use at all times.

12.1.14 Main notice board

[6.5] Specific requirements:
The contractor shall provide, erect where directed, maintain and remove on completion of the works a notice board size 3m x 3m constructed of suitable boarding with flat smooth surface and with edging bead 19mm thick round outer edges and projecting 12mm from face of boarding and rounded on front edge. The board shall be securely fixed to hoarding, where hoarding is provided, or fixed to and including a suitable supporting structure of timber or tubular posts and braces. The board is to be painted ivory white and the bead and 12mm wide dividing lines dark green. All wording shall be inscribed in dark green as per the coat of arms for SA. All wording shall be inscribed in dark green painted sans serif lettering.

12.1.15 Subcontractors' notice board

[6.6] A notice board is required (yes/no)
NO
Specific requirements:

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

<p>12.1.16 Water</p> <p>[7.2] Option A (by contractor) (yes/no) YES</p>			
<p>12.1.17 Electricity</p> <p>[7.3] Option A (by contractor) (yes/no) YES</p>			
<p>12.1.18 Telecommunications</p> <p>[7.4] Telephone (yes/no) YES</p> <p>Facsimile (yes/no) YES</p> <p>E-mail (yes/no) YES</p>			
<p>12.1.19 Ablution facilities</p> <p>[7.5] Option A (by contractor) (yes/no) YES</p> <p>Option B (by employer) (yes/no) NO</p>			
<p>12.1.20 Protection of existing/sectionally occupied works</p> <p>[11.2] Protection is required (yes/no) YES</p>			
<p align="center">Carried to Collection</p> <p>Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424</p>			<p align="center">R</p>

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

12.1.21 **Special attendance**

The contractor must obtain information from all subcontractors at tender stage regarding special attendance that might be required and make allowance for each and every subcontract that requires special attendance

[9.2] **Subcontractor (1) Details:**

Subcontractor (2) Details:

Subcontractor (3) Details:

12.1.22 **Protection of the works**

[11.1] Specific requirements:
All work that requires protection during construction must be adequately protected up to practical completion by the **contractor**

12.1.23 **Disturbance**

[11.5] Specific requirements:
The **contractor** shall keep the site, structures, etc., well watered during operations to prevent dust and shall provide and erect and remove on completion of the **works** all necessary temporary dust screens all to the satisfaction of the **principal agent**

12.1.24 **Environmental disturbance**

[11.6] Specific requirements:
None

102 Post-tender information (B12.2)

All post-tender information for this section will be determined once tender is awarded

Fixed

Item

Value Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

		Time Related		Item	
	12.2.1	Payment of preliminaries			
	[10.2]	Option A (prorated)	(yes/no)		
		YES			
		Option B (calculated)	(yes/no)		
		NO			
	12.2.2	Adjustment of preliminaries			
	[10.3]	Option A (three categories)	(yes/no)		
		YES			
		Option B (detailed breakdown)	(yes/no)		
		NO			
	12.2.3	Additional agreed preliminaries items			
		Details:			
		None			
103	Other post tender information (B12.3)				
	All post-tender information for this section will be determined once tender is awarded				
			Fixed	Item	
			Value Related	Item	
			Time Related	Item	
	<u>SECTION C: SPECIFIC PRELIMINARIES</u>				
	Section C contains specific preliminary items which apply to this contract except where N/A (Not Applicable) appears against an item				
		Carried to Collection			R
	Section No. 1				
	Bill No 1 - Preliminaries				
	LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

104 **Clause C1 - Contract drawings**

The drawings issued with the tender documents do not comprise the complete set but serve as a guide only for tendering purposes and for indicating the scope of the work to enable the tenderer to acquaint himself with the nature and extent of the **works** and the manner in which they are to be executed

Should any part of the drawings not be clearly understood by the tenderer he shall, before submitting his tender, obtain clarification in writing from the **principal agent**

Fixed

Item

Value Related

Item

Time Related

Item

105 **Clause C2 - General Preambles**

The "Model Preambles for Trades (2008 Edition)" and Supplementary preambles as specified in the trades is deemed to be included herein and shall be read in conjunction with the bills of quantities and be referred to for the full descriptions of work to be done and materials to be used.

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

106 **Clause C3 - Site instructions**

All site instructions issued on site shall be recorded in writing within seven (7) calendar days in site instruction book (A4 size and triplicate carbon format), which is to be provided and maintained by the contractor. The said site instruction book shall be kept on site at all times for the exclusive use of recording site instructions only

Site instructions may be issued by the architect or any of the consultants only. Copies of the site instructions are to be submitted to the architect and quantity surveyor within seven (7) calendar days of such recording in the site instruction book

Fixed

Item

Value Related

Item

Time Related

Item

107 **Clause C4 - Trade Names**

Wherever a trade name for any product has been described in the **bills of quantities**, the tenderer's attention is drawn to the fact that any other product of equal quality may be used subject to the written approval of the **principal agent** being obtained prior to the closing date for submission of tenders

If prior written approval for an alternative product is not obtained, the product described shall be deemed to have been tendered for

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

108

Clause C5 - Overtime

Should overtime be required to be worked for any reason whatsoever, the costs of such overtime are to be borne by the contractor unless the principal agent has specifically authorized and indicated in writing, prior to the execution thereof, that costs for such overtime will to be borne by the employer

Fixed	Item
Value Related	Item
Time Related	Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

109 **Clause C6 - As-built drawings**

The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the principal agent and the structural engineer for their records

Fixed

Item

Value Related

Item

Time Related

Item

110 **Clause C5 - Labour record**

At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all subcontractors on the works each day

Labourers on site should have been properly appointed by the contractor and an **appointment letter signed by both parties, Certified ID copies, Signed Payment Register** should accompany Progress Payment Certificate each month. **EPWP Data Tool Form** must be signed by both the Community Liaising Officer (CLO) and Project Manager before submission for payment.

Fixed

Item

Value Related

Item

Time Related

Item

111 **Clause C6 - Plant record**

At the end of each calendar week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works

Fixed

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

112	Value Related	Item	
	Time Related	Item	
	Clause C7 - Non-cession of monies		
	The contractor shall not cede nor assign his rights or claims to any monies due or to become due to him under this contract		
	Fixed	Item	
	Value Related	Item	
	Time Related	Item	
	Carried to Collection		R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

113 **Clause C8 - Occupational Health and Safety Act**

The **contractor** shall comply with all the requirements set out in the Construction Regulations, 2003 issued under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993).

It is required of the **contractor** to thoroughly study the **latest** Health and Safety Specification that must be read together with and is deemed to be incorporated under this Section of the **bills of quantities / lump sum document**.

The **contractor** must take note that compliance with the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is compulsory. In the event of partial or total non-compliance, the **principal agent**, notwithstanding the provisions of clause A31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress **payment certificate** until the **contractor** provides satisfactory proof of compliance. The **contractor** shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment.

Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this clause and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

114 **Clause C9 - Viewing of the Schoemansdal Museum areas**

The **site** is situated in a Schoemansdal Museum area and the tenderer must arrange with the Principal or other responsible Schoemansdal Museum staff to obtain permission to enter the **site** for tendering purposes

Fixed

Item

Value Related

Item

Time Related

Item

115 **Clause C10 - Commencement of Works in Museum Areas**

As the **works** falls within a museum area the **contractor** must give the Principal or other responsible staff member notice before commencement of the **works**. Should the **contractor** fail to make such arrangements, admission to the **site** may be refused and any additional costs will be for the **contractor's** account

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

116 **Clause C11 - Entrance Permits to Schoemansdal Museum Areas**

As the **works** falls within a museum area the **contractor** shall obtain entrance permits for his personnel and workmen entering the area and shall comply with all regulations and instructions which may be issued from time to time regarding the protection of persons and property under the control of the Principal, or chief security officer

Fixed

Item

Value Related

Item

Time Related

Item

117 **Clause C12 - Security Check of Personnel**

The **principal agent** may require the **contractor** to have his personnel and workmen, or a certain number of them, security classified

In the event of the **principal agent** requesting the removal of a person or persons from the **works** for security reasons, the **contractor** shall do so forthwith and shall thereafter ensure that such person or persons are denied access to the **works** and the **site** and/or to any document or information relating to the **works**

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

118 **Clause C13 - HIV/Aids Awareness**

It is required of the **contractor** to thoroughly study the HIV/AIDS Specification (PW 1544) of the Department that must be read together with and is deemed to be incorporated under this Section of the **bills of quantities**. Provision for pricing of HIV/AIDS awareness is made under items C10.1 to C10.5 hereafter and it is explicitly pointed out that all requirements of the aforementioned specification are deemed to be priced hereunder, as the said items represent the only method of measurement and no additional items or extras to the contract in this regard shall be entertained

The **contractor** must take note that compliance with the HIV/AIDS Specification is compulsory. In the event of partial or total non-compliance, the **principal agent**, notwithstanding the provisions of Clause A 31.0 of Section A or any other clause to the contrary, reserves the right to delay issuing any progress **payment certificate** until the **contractor** provides satisfactory proof of compliance. The **contractor** shall not be entitled to any compensation of whatsoever nature, including interest, due to such delay of payment

Fixed

Item

Value Related

Item

Time Related

Item

119 **Clause C13.1 - Awareness Champion**

Selection, appointment, briefing and making available of an Awareness Champion including provision of all relevant services, all in accordance with the HIV/AIDS Specification

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

120

Clause C13.2 - Awareness Workshop

Selection and appointment of a competent Service Provider approved by the **principal agent**, provision of a Service Provider Workshop Plan and a suitable venue, conducting of awareness workshops by means of traditional and/or modern multi-media techniques, including follow-up courses, making available all tuition material and performing assessment procedures, all in accordance with the HIV/AIDS Specification

Fixed

Item

Value Related

Item

Time Related

Item

121

Clause C13.3 - Posters, booklets, videos, etc.

Provision, displaying, maintaining and replacing when necessary of four plastic laminated posters, booklets and educational videos, etc. for the duration of the **construction period**, all in accordance with the HIV/AIDS Specification

Fixed

Item

Value Related

Item

Time Related

Item

Carried to Collection

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

122	Clause C13.4 - Access to Condoms			
	Provision and maintenance of condom dispensers fixed in position, including male and female condoms, replenishing male and female condoms on a daily basis as required for the duration of the construction period , all in accordance with the HIV/AIDS Specification			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
123	Clause C13.5- Monitoring			
	Monitoring HIV/AIDS awareness of workers, providing the principal agent with access to information including making available all reports, thoroughly completed and reflecting the correct information, for the duration of the construction period and close out, all in accordance with the HIV/AIDS Specification			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
124	Clause C13.6- Contractual Price Adjustment (CPAP)			
	Contractual Price Adjustment (CPAP)			
	Fixed	Item		
	Value Related	Item		
	Time Related	Item		
	Carried to Collection			
	Section No. 1 Bill No 1 - Preliminaries LDPW-B/20424		R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 1

Bill No. 1

Bill No 1 - Preliminaries

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

38

Total Brought Forward from Page No.

39

Total Brought Forward from Page No.

40

Total Brought Forward from Page No.

41

Total Brought Forward from Page No.

42

Total Brought Forward from Page No.

43

Total Brought Forward from Page No.

44

Total Brought Forward from Page No.

45

Total Brought Forward from Page No.

46

Total Brought Forward from Page No.

47

Total Brought Forward from Page No.

48

Total Brought Forward from Page No.

49

Total Brought Forward from Page No.

50

Total Brought Forward from Page No.

51

Total Brought Forward from Page No.

52

Total Brought Forward from Page No.

53

Total Brought Forward from Page No.

54

Total Brought Forward from Page No.

55

Total Brought Forward from Page No.

56

Carried Forward

R

Section No. 1

Bill No 1 - Preliminaries

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 1

Bill No. 1

Bill No 1 - Preliminaries

COLLECTION

	Page No	Amount
Brought Forward		R
Total Brought Forward from Page No.	57	
Total Brought Forward from Page No.	58	
Total Brought Forward from Page No.	59	
Total Brought Forward from Page No.	60	
Total Brought Forward from Page No.	61	
Total Brought Forward from Page No.	62	
Total Brought Forward from Page No.	63	
Total Brought Forward from Page No.	64	
Total Brought Forward from Page No.	65	
Total Brought Forward from Page No.	66	
Total Brought Forward from Page No.	67	
Total Brought Forward from Page No.	68	
Total Brought Forward from Page No.	69	
Total Brought Forward from Page No.	70	
Total Brought Forward from Page No.	71	
Total Brought Forward from Page No.	72	
Total Brought Forward from Page No.	73	
Total Brought Forward from Page No.	74	

Carried Forward

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 1

Bill No. 1

Bill No 1 - Preliminaries

COLLECTION

	Page No	Amount
Brought Forward		R
Total Brought Forward from Page No.	75	
Total Brought Forward from Page No.	76	
Total Brought Forward from Page No.	77	
Total Brought Forward from Page No.	78	
Total Brought Forward from Page No.	79	
Total Brought Forward from Page No.	80	
Total Brought Forward from Page No.	81	
Total Brought Forward from Page No.	82	
Total Brought Forward from Page No.	83	
Total Brought Forward from Page No.	84	
Total Brought Forward from Page No.	85	
Total Brought Forward from Page No.	86	
Total Brought Forward from Page No.	87	
Total Brought Forward from Page No.	88	
Total Brought Forward from Page No.	89	
Total Brought Forward from Page No.	90	
Total Brought Forward from Page No.	91	
Total Brought Forward from Page No.	92	

Carried Forward

R

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 1

Bill No. 1

Bill No 1 - Preliminaries

COLLECTION

	Page No	Amount
Brought Forward		R
Total Brought Forward from Page No.	93	
Total Brought Forward from Page No.	94	
Total Brought Forward from Page No.	95	
Total Brought Forward from Page No.	96	
Total Brought Forward from Page No.	97	
Total Brought Forward from Page No.	98	

Carried to Final Summary

Section No. 1
Bill No 1 - Preliminaries
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 2</u></p> <p><u>EARTHWORKS (PROVISIONAL)</u></p> <p><u>(WORK GROUP 104)</u></p> <p>PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"</p>			
<p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Filling material (General)</u></p> <p>It will be, at all times, required from the Contractor to apply and execute strict quality control on all filling material used</p> <p>Samples of potential fill materials obtained from excavations, trench excavations, etc. are to be submitted to and approved by the Engineer prior the re-use thereof as "filling"</p> <p>All filling obtained from a commercial source should comply to a minimum G6 standard and to be approved by Engineer before haulage to site.</p> <p>Should any material be found unsuitable and the use thereof be disapproved, such material shall be disposed and approved material must be sourced and imported.</p> <p>Filling in general shall be compacted to the prescribed percentage Mod AASHTO density</p>			
<p align="center">Carried to Collection</p> <p>Section No. 2 Bill No 1 - Earthworks LDPW-B/20424</p>		R	

Filling to form earth mattresses, in sub-layers, under floors, etc

All filling in layers under surface beds, in sub-layers, to form earth mattresses, etc. shall be done with materials specified and according to methods prescribed by the SABS 1200ME Sub-base Specification.

The aforesaid specification was drawn up to cover activities normally encountered on civil engineering work, which is equally applicable on the filling details and requirements prescribed for this project

The said specification, although not issued with, shall be regarded to form part of these Bills of Quantities. The Contractor shall obtain a copy of the said specification from the South African Bureau of Standards and be kept on site at all times

CBR and Indicator tests

Density tests for monitoring filling shall be done at the minimum prescribed frequencies per each 150mm thick layer of filling placed.

The Contractor is to note that all necessary tests (i.e CBR and indicator tests, etc) are to be conducted for all filling material, whether obtained from the excavations or to be imported from an approved commercial source.

Results of these tests are to be submitted to and approved by Engineer prior commencement of any placement thereof and/or filling done therewith

Carried to Collection

Section No. 2
Bill No 1 - Earthworks
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Density test

It will be required from the Contractor to execute density tests for monitoring filling at the following minimum frequencies per each filling layer placed:

- Filling under surface beds

1 Test per 25m² plan area per each 150mm thick layer

- Filling behind retaining walls:

1 Test per each 10m length of retaining wall

Results of density test executed are to be submitted to and approval obtained from the Engineer prior commencement of any subsequent fill layers and/or other work

Carried to Collection

Section No. 2
Bill No 1 - Earthworks
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Carting away of excessive and/or unsuitable excavated material

Descriptions for "carting away excessive or unsuitable excavated material from site" shall be deemed to include the loading and hauling of excessive or unsuitable excavated material to a suitable dumping site, which has to be located by the Contractor, off the hospital premises

The location of the intended dumping site will be subjected to the prior written approval of the local authority (Municipality)

All materials for excavations marked for caring away shall be cart at Municipal designated dumping site and proof of dumping to be submitted to the Safety / Enviromental officer

The contractor will also be liable to remove upon completion, rehabilitate all those areas of the dumping site used for dumping/spoiling by grading the area to follow the adjacent ground contours and afterwards compacted to 80% Mod AASHTO density, all to the full satisfaction of the Engineer/Principal Agent

Tendered rates must make provision for the above-mentioned as no additional claims in this regard will afterwards be entertained

NOTE: All materials from excavations marked from carting away shall be cart at Municipal designated dumping site and proof of dumping to be submitted to the Safety / Enviromental officer

Carried to Collection

Section No. 2
Bill No 1 - Earthworks
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

EXCAVATIONS, FILLING, ETC,

**Excavate in earth below natural ground level,
reduced or made up ground level, not exceeding 2m
deep, for:**

1	Trenches	m3	165
2	Holes	m3	4

**Extra over trench and hole excavations in earth for
excavation for**

3	Working space not exceeding 500mm deep	m2	608
4	Working space exceeding 500mm and not exceeding 1500mm deep	m2	140

**Extra over trench and hole excavations in earth for
excavation in**

5	Soft rock	m3	15
6	Hard rock	m3	7

Extra over all excavations for carting away

7	Surplus or unwanted excavated material to stock piles on site or to a dumping site to be located by the contractor	m3	130
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Risk of collapse of excavations

8	Sides of trench excavations not exceeding 1,5m deep	m2	786
9	Sides of hole excavations not exceeding 1,5m deep	m2	11

Keeping excavations free of water

10	Allow for bailing, pumping or otherwise keeping all excavations free from water		Item
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Carried to Collection

R

Section No. 2
Bill No 1 - Earthworks
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

<u>Earth filling obtained from the excavations compacted to 93% Mod AASHTO density</u>			
11	In backfilling to trenches, holes, etc	m3	47
12	Under floors, steps, pavings, etc	m3	95
<u>Approved earth filling supplied by the contractor, spread, levelled, watered, and compacted to 95% Mod AASHTO density in layers not exceeding 150mm thick (Rate/m3 shall be for compacted material and not loose material)</u>			
13	Under floors, steps, pavings, etc	m3	18
14	Under floors to form ramps	m3	7
<u>Sand bed</u>			
15	50mm Thick dry, clean, washed riversand layer evenly spread over filling (elsewhere), levelled, watered and rammed to receive waterproofing membrane (elsewhere) under solid floors	m2	883
<u>Compaction of surfaces</u>			
16	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 95% Mod AASHTO density	m2	883
<u>Prescribed density tests on filling (no payment for compaction shall be allowed until compaction results are produced, only results which have passed the test shall be paid for)</u>			
17	Modified AASHTO Density test	No	44
Carried to Collection			R
Section No. 2 Bill No 1 - Earthworks LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

SOIL POISONING

Approved insecticide solutions shall be mixed on site in the presence of clerk of works/engineer/principal agent in strict accordance with the manufacturers/suppliers specifications

Soil insecticide under a 5 year guarantee by an approved firm of registered specialists

18	To bottom and sides of trenches, holes etc	m2	1 083
19	Under floors etc including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m2	883
	<u>Weedkiller, "Hyvar X' or other approved by a firm of specialist</u>		
20	Under aprons,paving etc	m2	400

Carried to Collection

R

Section No. 2
Bill No 1 - Earthworks
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 1

Bill No 1 - Earthworks

COLLECTION

Total Brought Forward from Page No.

**Page
No**

103

Amount

Total Brought Forward from Page No.

104

Total Brought Forward from Page No.

105

Total Brought Forward from Page No.

106

Total Brought Forward from Page No.

107

Total Brought Forward from Page No.

108

Total Brought Forward from Page No.

109

Carried Forward to Summary of Section No. 2

R

Section No. 2
Bill No 1 - Earthworks
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<u>BILL NO. 3</u>			
<u>CONCRETE, FORMWORK AND REINFORCEMENT</u>			
<u>(WORK GROUP 110)</u>			
<u>PREAMBLES</u> For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u>			
<u>NOTE</u> All prices/rates to be net, excluding Value Added Tax			
Carried to Collection			R
Section No. 2 Bill No 2 - Concrete, formwork and reinforcement LDPW-B/20424			

SUPPLEMENTARY PREAMBLES

Concrete test cubes

Descriptions and tendered rates for concrete strength test cubes, as required under clause 7, "Tests" of SABS 1200 G, shall be deemed to cater for all the cost of providing cube moulds necessary for the purpose, making, storing and sending thereof to an approved laboratory for testing, paying all charges in connection therewith and for submitting test results to Principal Agent

All concrete strength test cubes, each 150 x 150 x 150mm shall be prepared in a set of three

It will be required from the contractor to prepare concrete strength test cube sets for each section (radiology, dental etc) at the following minimum frequencies:

- One set of three cubes for every 20m³,
or part thereof, of concrete cast per day,

or

- One set of three cubes for each batch
of concrete cast per event as
directed by the Clerk Of Works.

All concrete strength test cubes shall be done on site regardless of ready mix and shall be labelled and the identity thereof (ie. date, concrete strength type, position where batch was cast relative to the area and section identity) shall be properly recorded for future reference.

Carried to Collection

Section No. 2
Bill No 2 - Concrete, formwork and reinforcement
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Formwork

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 reconditioning as necessary before re-use

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

Formwork to sides of bases, pile caps, ground beams, etc. will only be measured where it is prescribed by the Principal Agent for design reasons. Formwork necessitated by irregularities 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 which is made for in "Earthworks"

Carried to Collection

Section No. 2
Bill No 2 - Concrete, formwork and reinforcement
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Test Blocks (Provisional)

1	Making of 150 x 150 x 150mm concrete strength test cube in sets of three, label and send to an approved laboratory for testing, including paying all charges and submit report to the Principal agent. (only successful tests will be paid for)	Sets	29
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MASS CONCRETE

CONCRETE

Unreinforced concrete cast against excavated surfaces

Reinforced concrete with a coarse aggregate of 19mm and a minimum compressive strength of 15MPa at 28 days

2	Surface blinding under strip footing and column bases	m3	12
3	In aprons cast in panels	m3	23
4	In channels	m3	15

REINFORCED CONCRETE

Reinforced concrete with a coarse aggregate of 19mm and a minimum compressive strength of 30MPa at 28 days

5	In strip footings against excavated surfaces	m3	33
6	In bases against excavated surfaces	m3	1
7	In surface beds cast in bays over waterproofing membrane (elsewhere)	m3	89
8	In ramps	m3	7
9	Ground Beams	m3	70
10	Beams and inverted beams	m3	18

Carried to Collection

R

Section No. 2
Bill No 2 - Concrete, formwork and reinforcement
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

11	Columns	m3	1
12	Stub columns	m3	0.2
<u>SUNDRIES</u>			
<u>Finishing surfaces of concrete smooth with a woodfloat</u>			
13	Surface beds, slabs, etc	m2	883
14	Aprons, slabs, etc	m2	225
<u>Finishing top surfaces of concrete to form anti-skid finish</u>			
15	Ramp, etc	m2	16

Carried to Collection

Section No. 2
Bill No 2 - Concrete, formwork and reinforcement
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

FORMWORK

(WORK GROUP 111)

ROUGH FORMWORK (DEGREE OF ACCURACY III)

Rough formwork to

16	Sides of beams and inverted beams	m2	188
17	Sides of columns	m2	11
18	Ditto but in foundations	m2	656
19	Ditto, but stub columns in foundations	m2	3
20	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	150
21	25 x 25mm Chamfers along top/bottom of beam	m	1 193
22	110mm Diameter to form hole for cable sleeves	No	14
23	160mm Diameter to form hole for cable sleeves	No	3

SMOOTH FORMWORK (DEGREE OF ACCURACY III)

Sundries

24	300mm Hoop iron anchors shot pinned to concrete and built into brickwork	No	50
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Carried to Collection

R

Section No. 2
Bill No 2 - Concrete, formwork and reinforcement
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

MOVEMENT JOINTS ETC

Movement joints

25	Movement joint formed of 15mm bitumen impregnated softboard not exceeding 300mm high built in vertically between brickwork and concrete and sealed with polysulphide sealing compound externally	m	37
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Expansion joints

26	Movement joint not exceeding 300mm high formed of 20mm polystyrene placed vertically in position between concrete surfaces including approved sealant	m	160
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Saw cut joints including polysulphide sealing compound

27	6 x 10mm Saw cut joints in top of concrete	m	274
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Carried to Collection

R

Section No. 2
Bill No 2 - Concrete, formwork and reinforcement
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

REINFORCEMENT (PROVISIONAL)

(WORK GROUP 114)

Mild steel reinforcement to structural concrete work

28	R20 Mild steel rod reinforcement	t	0.43	
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High tensile steel reinforcement to structural concrete work

29	Y10 High tensile steel rod reinforcement	t	1.79	
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30	Y12 High tensile steel rod reinforcement	t	2.18	
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31	Y16 High tensile steel rod reinforcement	t	0.31	
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32	Y20 High tensile steel rod reinforcement	t	0.30	
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33	High tensile Y16 steel rod 700mm long dowels at 1000mm centres in construction joints	No	18	
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Fabric reinforcement

34	Type Ref 193 fabric reinforcement in concrete surface beds, slabs, etc	m2	883	
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Carried to Collection

R

Section No. 2
Bill No 2 - Concrete, formwork and reinforcement
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 2

Bill No 2 - Concrete, formwork and reinforcement

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

111

Total Brought Forward from Page No.

112

Total Brought Forward from Page No.

113

Total Brought Forward from Page No.

114

Total Brought Forward from Page No.

115

Total Brought Forward from Page No.

116

Total Brought Forward from Page No.

117

Total Brought Forward from Page No.

118

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No 2 - Concrete, formwork and reinforcement

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item
No

Quantity

Rate

Amount

BILL NO. 4

MASONRY

(WORK GROUP 118)

PREAMBLESFor preambles refer to
**"Department of Public Works: Specification of
Materials and Method to be used - PW371"**

NOTE

All prices/rates to be net, excluding Value Added Tax

SUPPLEMENTARY PREAMBLES

Wall ties

Descriptions and rates for cavity walls specified to include wire ties shall, unless otherwise specified, be deemed to include at least five metal wire ties, evenly spaced, per square metre brickwork. Metal wall ties shall:

- Comply with SABS 28 and of the butterfly or the modified PWD type
- Of suitable lengths to ensure that ends are built at least 75mm deep into brickwork.

Carried to Collection

R

Section No. 2
Bill No 3 - Masonry
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Face bricks

Bricks shall be ordered timeously to obtain uniformity in size and colour. Contractor to verify size uniformity prior to laying

Pointing

Description of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc

Carried to Collection

R

Section No. 2
Bill No 3 - Masonry
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

SUBSTRUCTURE (PROVISIONAL)

Brickwork

Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar in foundations

1	One brickwall	m2	109
2	One brickwall circular on plan	m2	1

SUPERSTRUCTURE

Brickwork of NFP bricks (7 MPa nominal compressive strength) in class II mortar

3	Half brick walls	m2	205
4	Half brick walls in beamfilling	m2	1
5	Half brick walls above plate level	m2	50
6	One brick walls	m2	987
7	One brick walls in fire walls	m2	40
8	One brick walls above plate level	m2	56
9	One brickwall circular on plan	m2	28
10	One brick yard walls	m2	306
11	One brickwall in gables	m2	67

Carried to Collection

R

Section No. 2
Bill No 3 - Masonry
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

<u>SUNDRIES</u>					
<u>Brick reinforcement in substructure (Provisional)</u>					
12	Brick reinforcement 150mm wide in foundation built into brick walls with sufficient laps at end joints, angles and intersections (measured net)	m	712		
<u>Brick reinforcement in superstructure</u>					
13	Brick reinforcement 75mm wide built into brick walls with sufficient laps at end joints, angles and intersections (measured net)	m	191		
14	Brick reinforcement 150mm wide built into brick walls with sufficient laps at end joints, angles and intersections (measured net)	m	892		
<u>Prestressed fabricated lintels</u>					
15	100mm x 70mm Lintel not exceeding 3m long, hoisted into position and laid over opening in brick wall with ends bedded in class II mortar	m	152		
<u>Turning pieces</u>					
16	230mm Wide turning pieces to lintels etc	m	170		
<u>Movement joints</u>					
17	Movement joint formed of 20mm polystyrene built in vertically between brickwork	m ²	95		
<u>Closing cavities</u>					
18	Closing 50mm cavity of hollow wall one course high, horizontally with mortar in foundations (<u>Provisional</u>)	m	30		
<u>Hoop iron</u>					
19	25 x 1mm thick Galvanised hoop iron 300mm Long shot pinned to concrete beams and built into brick work	No	312		
<u>FACE BRICKWORK</u>					
Carried to Collection					
Section No. 2 Bill No 3 - Masonry LDPW-B/20424					R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

**Equal and approved facebricks to match existing
(PC R6500/1000 bricks including delivery to site but
excluding VAT) pointed with recessed horizontal
and vertical joints**

20	Extra over brickwork for facing and pointing in foundation (Provisional)	m2	55
21	Extra over brickwork for face brickwork	m2	373
22	Extra over brickwork for face brickwork in gables	m2	58
23	Extra over brickwork for face brickwork to dido	m2	325
24	Extra over brickwork for face brickwork curved on plan	m2	0.4
25	Extra over brickwork for brick-on-edge header course lintel pointed on face and 115mm soffit	m	118
<u>Brick-on-edge header course copings, sills, etc of face bricks pointed with recessed joints on all exposed faces</u>			
26	Coping on top of one brick wall	m	81
27	Coping on top of one brick wall curved on plan	m	1
28	175mm Wide sill set sloping and slightly projecting	m	97
29	Fair raking cutting	m	12
30	Fair circular cutting for pipes not exceeding 100mm diameter	No	7
31	Fair circular cutting for pipes exceeding 100mm and not exceeding 200mm diameter	No	14

Carried to Collection

R

Section No. 2
Bill No 3 - Masonry
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

FIBRE-CEMENT WINDOW SILLS

Fibre cement FC77 or equal and approved natural grey sills in single lengths bedded in class I mortar including metal fixing lugs etc

32	15 x 150mm Wide cills set flat and slightly projecting	m	97	
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PAVING (PROVISIONAL)

100 x 200mm "Concor Bondbrick" or similar approved bevelled pre-cast concrete paving (25MPa minimum compressive strength):

33	60mm Thick patterned laid in stretcher bond with continuous joint in one direction and interlocking as per Architectural drawings and specifications	m2	177	
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Carried to Collection

R

Section No. 2
Bill No 3 - Masonry
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 3

Bill No 3 - Masonry

COLLECTION

Total Brought Forward from Page No.

**Page
No**

120

Amount

Total Brought Forward from Page No.

121

Total Brought Forward from Page No.

122

Total Brought Forward from Page No.

123

Total Brought Forward from Page No.

124

Total Brought Forward from Page No.

125

Carried Forward to Summary of Section No. 2

R

Section No. 2
Bill No 3 - Masonry
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 5</u></p> <p><u>WATERPROOFING</u></p> <p><u>(WORK GROUP 120)</u></p> <p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p> <p><u>DAMPPROOFING OF WALLS AND FLOORS</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Waterproofing to flat concrete roofs shall be installed by an approved firm of "Specialist Contractor" under a "<u>ten year guarantee</u>" all in accordance with the materials supplied and methods employed by Manufacturers</p>			
	<p><u>DAMP-PROOFING OF WALLS AND FLOORS</u></p> <p><u>One layer of type 375 micron Consol Plastics Brikgrip DPC or equal and approved embossed damp proof course</u></p>			
1	In walls	m2	245	
	<p><u>One layer of 250 micron USB green medium density waterproof sheeting sealed at laps with pressure sensitive tape all in accordance with the Manufacturer's instruction</u></p>			
2	Medium density damp-proof membrane laid loose on top of sand bed (elsewhere) under solid floors with pressure sensitive tape jointing in building	m2	882	
	<p><u>JOINT SEALANTS ETC</u></p>			
	Carried to Collection			
	<p>Section No. 2 Bill No 4 - Waterproofing LDPW-B/20424</p>			
			R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

<u>Silicone sealing compound including backing cord, bond breaker, primer, etc</u>			
3	Between timber fittings and plastered walls	m	30
4	Between sanitary fittings and wall tiles	m	53
<u>Natural grey polysulphide sealing compound</u>			
5	20mm Deep in Expansion joints	m	15

Carried to Collection

R

Section No. 2
Bill No 4 - Waterproofing
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 4

Bill No 4 - Waterproofing

COLLECTION

Total Brought Forward from Page No.

**Page
No**

127

Amount

Total Brought Forward from Page No.

128

Carried Forward to Summary of Section No. 2

R

Section No. 2
Bill No 4 - Waterproofing
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 6</u></p> <p><u>ROOF COVERING</u></p> <p><u>(WORK GROUP 124)</u></p> <p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p> <p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>General</p> <p>All roof coverings, etc., to be with a covering of Z275 galvanising. All holes to be drilled and not punched</p> <p>Sizes</p> <p>All items are measured net unless otherwise described</p> <p>Flashing, trimming plates, etc</p> <p>Prices to include for all cutting and waste and relevant fixing material, unless otherwise described</p> <p>All rates for flashings, trimmings, etc., to include for forming drips and closed ends to troughs of sheet roof covering where applicable</p>			
<p align="center">Carried to Collection</p> <p>Section No. 2 Bill No 5 - Roof Covering LDPW-B/20424</p>		R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

ROOF COVERINGS

SUPPLEMENTARY PREAMBLES

"Global Roofing Solution" or similar and approved

ArcelorMittal products to be all galvanised and installed strictly to manufacturer's specifications but colours to be to the Architect's approval

0.58mm Thick 900mm cover "klip-Tite profile chromadek Z200 spelter ISQ550 Dark Dolphin finish coat and Pebble Grey backing coat galvanised steel roof sheeting, fixed to steel intermediate purlins at MAX 2500mm centres and eaves and ridge purlins at MAX 2100mm centres using KL700 plus clips fixed with 10No. 16 x 16mm long self-drilling water haed PH2 screws,

1	Roof covering with pitches not exceedin 25 degrees	m2	1 098
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INSULATION, ETC

Roof insulation "Owens" or similar and approved by the Principal Agent Corning Factorylite flexible, non-combustible lightweight industrial fibreglass insulation material (nominal density 12kg per m3), with reinforced kraft aluminium foil faced finish laid taut over purlins at centres and tied down top and bottom after tensioning with galvanized hoop iron ties, all strictly to the manufacturer's specifications

2	100mm Thick Insulation	m2	1 098
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Carried to Collection

R

Section No. 2
Bill No 5 - Roof Covering
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

**SHEET METAL FLASHING, LININGS,
COPING, ETC**

**Concealed fix 0,8mm thick "Global Roofing
Solution" or similar and approved by the Principal
Agent Chromadek Z200 spelter ISQ550 Charcoal
Grey finish top coat and Pebble Grey backing coat
galvanised steel sheeting flashing, three times bent
along girth and notched on site to suit roof profile,
complete with sealing strips**

3	Apex flashing 550mm girth 3 times bent and notched on site	m	50
4	Sidewall flashing 550mm girth 2 times bent and notched on site	m	34
5	Headwall flashing 462mm girth 2 times bent and notched on site	m	34
6	Ridge Cap 550mm girth 3 times bent and notched on site	m	50
<u>0,8mm Z275 "Brownbuilt" spelter galvanised steel sheeting</u>			
7	Fascia or barge angles 500mm girth with "Classicoat" finish on one side	m	324

Carried to Collection

R

Section No. 2
Bill No 5 - Roof Covering
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

SKYLIGHTS

PREAMBLES

Notes:

ALUMINIUM WINDOWS, ETC.,

NOTE: Indicative schedules are attached at the end of the bills of quantities to assist the tenderer in pricing

Rates for the following aluminium windows are to include for supplying and building in of temporary templates

Design, supply, deliver to site and install the following skylights in accordance with the manufacturers instructions

Skylight with 8.38mm thick "SmartGlass" or similar and approved x 2 Pro, Double glazing "seren green", outer pane armourplate and inner pane clearvue, of visible light transmission to, solar heat gain co-efficient 0.52, u-value 2.8 and visible light reflection 13 and shading co-efficient 0.60. Skylight to have seamless glass and sides to be of approved standard.

Skylight glazed with 6mm thick PVB faidbrand laminated safety glass and plugged to brickwork

8	Skylight type 1 size 1000 x 600mm wide	No	6.00	
9	"SUNPAL" Multi polycarbonate standing seam Architectural system or similar and approved by the Principal Agent to suite opening approximately 1000 x 600mm wide	No	6.00	

Carried to Collection

R

Section No. 2
Bill No 5 - Roof Covering
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 5

Bill No 5 - Roof Covering

COLLECTION

Total Brought Forward from Page No.

**Page
No**

130

Amount

Total Brought Forward from Page No.

131

Total Brought Forward from Page No.

132

Total Brought Forward from Page No.

133

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No 5 - Roof Covering

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 7</u></p> <p><u>CARPENTRY AND JOINERY</u></p> <p><u>(WORK GROUP 126)</u></p> <p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p>			
<p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Fixing</p> <p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete</p> <p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at maximum 600mm centres, and where described as "bolted" the bolts have been given elsewhere</p> <p>Sealing of all abutments</p> <p>All cupboards, counter tops, shelves, etc. abutting walls, tiled surfaces, etc. to be sealed watertight with an approved silicon sealant along all joints</p> <p>Unless described, tendered rates must make provision for this as no additional claims in this regard will afterwards be entertained</p>			
<p>Carried to Collection</p>			R
<p>Section No. 2 Bill No 6 - Carpentry and Joinery LDPW-B/20424</p>			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

PREAMBLES

NOTE: Tenders are advised to study the "Department of public works specifications of material and method to be used" (PW371/OCTOBER 1993) before pricing this bill

NOTE: Unless otherwise stated herein all items in this bill shall be deemed to fall into Work Group No.126 for JBCC CPAP Purpose

TIMBER

All softwood to be South African Pine.

DESCRIPTION

The term "screwed on" shall mean the countersunk screwing of one timber member to another

The term "plugged" shall mean the countersunk screwing of a timber member to and including plastic plugs in brickwork or concrete

Descriptions of floors, ceiling, joinery, etc. shall be deemed to include for all square cutting

Descriptions of items given in linear meter shall be deemed to include for mitres, stopped ends, fitted intersections, etc.

Descriptions of rounded angles, rebates, grooves, chamferes, moulded edges, etc, shall be deemed to include for angles, ends, etc.

ROOFS ETC

The following is applicable in respect of roof trusses

Trusses are at maximum 760mm centres

Carried to Collection

Section No. 2
Bill No 6 - Carpentry and Joinery
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Roof coverings are Double Roman Concrete Roof Tiles, laid on 38 x 38mm Sawn softwood brandering, at centres to suit the gauge of tiles and PVC translucent sheeting laid on 50 x 76mm timber purlins

NOTE:

Tiles to match existing in all respects. If there are challenges in matching the tiles, the Contractor to notify the Architect prior to procurement and installation. Works to roof covering are mostly in patchwork and the Contractor to take cognisance that skew views will not be tolerated in the name of what was existing. Rates will be deemed to include correcting discrepancies on existing work.

All prefabricated trusses are to be approved by the Structural Engineer and the Contractor to price for design, workshop drawings and certification by ITC approved manufacturer.

Upon completion of the roofing installation, the Contractor shall call upon own and independant Structural Engineer, who will certify the installation as compliant to design, and issue a roof guarantee certificate, with costs included in the rates.

Plate nailed mono pitch timber roof truss construction

All prices/rates to be net, excluding Value Added Tax

PREFABRICATED ROOF TRUSSES, ETC.

- | | | | | |
|---|--|--|--|--|
| 1 | Allow for the issuing of all relevant roof truss design certificates as per SANS 0243: THE DESIGN, MANUFACTURE AND ERECTION OF TIMBER TRUSSES. | | | |
|---|--|--|--|--|

Prefabricated timber trusses with not exceeding 15 degree pitch.

- | | | | | |
|---|--|--|--|--|
| 2 | Roof truss approximately 6500 x 1200mm high of prefabricated trusses to Guard house. | | | |
|---|--|--|--|--|

No

Item

6

Carried to Collection

R

Section No. 2
Bill No 6 - Carpentry and Joinery
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

<u>Sawn softwood</u>				
3	22 x 228mm Gang boarding (Provisional).	m	11	
4	38 x 114mm Longitudinal bracing (Provisional).	m	12	
5	50 x 76mm Cross bracing (Provisional).	m	8	
6	38 x 114mm Wall plates	m	7	
7	50 x 76mm Purlins	m	79	
<u>Wrought softwood</u>				
8	50 x 76mm Purlins	m	13	
<u>Sundries</u>				
9	Two coats ABE PROVONITE on exposed timbers	m2	5	
10	Teco Hurricane galvanised mild steel purlin to rafter ties fixed in strict accordance with the manufacturers instructions	No	24	
<u>EAVES, VERGES, ETC</u>				
<u>Everite medium density plain nutec-cement</u>				
11	12 x 225mm Fascia with plastic H-profile joint strips, screwed to timber with 14 x 40mm brass screws	m	14	
12	12 x 225mm Barge boards with plastic H-profile joint strips, screwed to timber with 14 x 40mm brass screws	m	13	
Carried to Collection				R
Section No. 2				
Bill No 6 - Carpentry and Joinery				
LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

SKIRTINGS

Timber skirting

13	75 x 19mm Thick hardwood skirting with rounded top and complete with 25mm hardwood quadrant planted on and plugged and screwed to walls, all expansion joints in skirting to be formed with 10mm polysulphide filled joint	m	76
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Hard wood board

14	200mm x 600mm x 22 mm Fire extinguisher backing board, chamfered all round and plugged to wall including varnish on all sides	No	11
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DOORS, ETC

NOTE:

All framed and ledged batten doors and combination doors, where battens are utilised, shall only be of construction acceptable to the Department, i.e. mortice and tennon where the tennon is exposed on the outside edges of styles and where the tennon is wedged to form a dovetailed shape.

Paint backs of subframes one coat wood primer before building in all timber frame

HARDWOOD DOORS, ETC

Meranti framed, ledged, braced and battened door, formed of 110 x 44mm sides, 110 x 44mm top rail, 110 x 22mm middle rail, top and bottom brace and 220 x 44mm bottom rail, all filled in with 63mm tongue and grove slats and 3mm hardwood backing board

15	44mm Door size 813 x 2032mm high for door type D1, D5	No	15
16	44mm Door size 913 x 2032mm high door type D3, D6	No	2

SEMI-SOLID DOORS, ETC

Carried to Collection

R

Section No. 2
Bill No 6 - Carpentry and Joinery
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

**Flush Semi-solid core meranti doors with concealed
hardwood edge and 3mm masonate on both side
hung to steel doorframe**

JOINERY FITTINGS

17	Provide an amount of R 50,000,000 (Five thousand rands) for reception counter in building to the required standards all as directed by the principal agent	Item	50 000.00
18	Profit	Item	
19	Attendance	Item	
20	Provide an amount of R 100,000,000 (One Hundred thousand rands) for Kitchen Unit in building to the required standards all as directed by the principal agent	Item	100 000.00
21	Profit	Item	
22	Attendance	Item	
23	Provide an amount of R 100,000,000 (One Hundred thousand rands) for Counter tops in building to the required standards all as directed by the principal agent	Item	100 000.00
24	Profit	Item	
25	Attendance	Item	
26	Provide an amount of R 50,000,000 (Five thousand rands) for Computer centre in building to the required standards all as directed by the principal agent	Item	50 000.00
27	Profit	Item	
28	Attendance	Item	
29	Provide an amount of R 200,000,000 (Two Hundred thousand rands) for Book Shelves in building to the required standards all as directed by the principal agent	Item	200 000.00
30	Profit	Item	
31	Attendance	Item	

Carried to Collection

R

Section No. 2
Bill No 6 - Carpentry and Joinery
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 6

Bill No 6 - Carpentry and Joinery

COLLECTION

Total Brought Forward from Page No.

**Page
No**

135

Amount

Total Brought Forward from Page No.

136

Total Brought Forward from Page No.

137

Total Brought Forward from Page No.

138

Total Brought Forward from Page No.

139

Total Brought Forward from Page No.

140

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No 6 - Carpentry and Joinery

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 8</u></p>			
<p><u>CEILING, PARTITIONS AND ACCESS FLOORING</u></p>			
<p><u>(WORK GROUP 129)</u></p>			
<p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p>			
<p><u>NOTE</u></p>			
<p>All prices/rates to be net, excluding Value Added Tax</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p>Fixing</p>			
<p>Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete</p>			
<p>Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at maximum 600mm centres, and where described as "bolted" the bolts have been given elsewhere</p>			
<p>Ceilings</p>			
<p>Unless otherwise described, ceilings shall be deemed to be horizontal</p>			
<p>Suspended ceilings, bulkheads, etc</p>			
<p>All suspended ceilings, bulkheads, etc. shall be installed by an approved firm of specialists, all in accordance with the materials supplied and methods employed by Manufacturer</p>			
<p>Proprietary suspended ceilings</p>			
<p>Hangers, suspension grids, "lay-in" panels, etc. of</p>			
<p align="right">Carried to Collection</p>			
<p>Section No. 2 Bill No 7 - Ceilings, Partitions and access flooring LDPW-B/20424</p>			
		R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

suspended ceilings, bulkheads, etc are to be in accordance with the Manufacturers recommendation

Bulkheads

Bulkhead are defined as those portions of ceilings which are stepped vertically down or up from the general ceiling level and which generally occur along the perimeter of a room or area

Bulkheads have only been described as such where they conform to the above defination and where the horizontal or vertical dimensions do not exceed 900mm. Where these dimensions do exceed 900mm, such portions of ceilings have been included in the appropriate general items of ceilings

Unless otherwise described, bulkheads shall be deemed to be horizontal along the length

INSULATION

"Aerolite" or similar and approved by the Principal Agent thermal Insulation

1	135mm Insulation "Owen Corning Aerolite" flexible non-combustible lightweight (nominal density 10kg/m ³) fibreglass reinforced insulation blanket, closely fitted with ends butted firmly and laid loose on top of brandering etc
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m2

883

Carried to Collection

R

Section No. 2
Bill No 7 - Ceilings, Partitions and access flooring
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

CEILING, ETC

NAILED UP CEILINGS

Note:

The tenderer shall make allowance in the ceilings for electrical light fittings, diffusers, panels, etc and for their support inclusive of any flexibility in setting out that may be required (ceiling panels have not been deducted and pricing is to take cognisance thereof)

Tenderers are advised to make allowance in their prices for ceiling subframes where required

PLASTERED PLASTERBOARD CEILINGS

BPB "Gypsum" RhinoCeil Prestige J flush jointed ceiling 9,5mm thick Taper-edge Rhinoboard fixed print side up and screwed to Donn steel capped tee flush plastered ceiling suspension system with drywall screws spaced at 150mm centres, including galvanised main tees at 1200mm centres and cross tees at 500mm centres, all suspended with 25 x 25mm galvanised angles at not exceeding 1200mm centres., all fixed to truses at centres. Joints to taped and finished as per manufacturerers instructions

2	Gypsum board ceilings to timber trusses	m2	16		
3	Skimmed gypsum plaster on ceilings	m2	161		
<u>BPB Gypsum Cornice</u>					
4	45 x 35mm flush plaster trim(9,5mm thick) cornice plugged to straight walls	m	192		
5	Extra over ceiling for opening for 650 x 650 mm trap door complete with trimmers, frame, cross branders, ceiling board, hinges, etc	No	5		

SUSPENDED CEILINGS

Carried to Collection

R

Section No. 2
Bill No 7 - Ceilings, Partitions and access flooring
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

6	<p><u>Ceilings "BPB Gypsum DonnCeil Gyprex" white vinyl finished gypsum ceiling tiles 12,5mm thick, laminated to glass wool board of 55mm x 60kg/m3, laid on and including Q/T38 White powder coated main tees, cross tees, hold-down clips, wedges, etc., all suspended with galvanized hangers at centres not exceeding 1200mm</u></p>	m2	122		
<u>ACOUSTIC CEILINGS</u>					
7	<p><u>Ceilings "OW Acoustic" Constellation Premium biologically absorbable mineral woll ceiling tile, NRC -0.70, CAC -33dB, fire classification A2-s1, d0, weight - 4.5kg/m2, white vinyl finished, laid on fire rated OWA construct S15 exposed demountable T15 suspension system, with galvanised main tees and cross tees, tees suspended by means of galvanised hangers at centres not exceeding 1200mm, all installed to manufacturer's specifications.</u></p>	m2	320		
8	<p><u>"BPB Gypsum" Code LSM25 recessed shadowline cornice pluggged</u></p> <p>Type SM25 47 X 35mm pre-painted cornices</p>	m	211		
<u>ACCESS FLOORING</u>					
9	<p><u>"Bates" access flooring or similar approved</u></p> <p>"Bates" access flooring or similar approved access flooring 600 x 600mm wide with 3CR12 suspension foot pieces not exceeding 1000mm deep.</p>	m	6		
Carried to Collection				R	
<p>Section No. 2 Bill No 7 - Ceilings, Partitions and access flooring LDPW-B/20424</p>					

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 7

Bill No 7 - Ceilings, Partitions and access flooring

COLLECTION

Total Brought Forward from Page No.

**Page
No**

142

Amount

Total Brought Forward from Page No.

143

Total Brought Forward from Page No.

144

Total Brought Forward from Page No.

145

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No 7 - Ceilings, Partitions and access flooring

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 10</u></p> <p><u>IRONMONGERY</u></p> <p><u>(WORK GROUP 132)</u></p> <p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p> <p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Fixing of door locks, handles, flush bolts etc</p> <p>Fixing of all locks, handles, flush bolt, etc. shall be regarded as fixed to timber door leaves, unless specifically otherwise indicated</p> <p>Preparation of door frames</p> <p>Descriptions for flush bolts, door closers, floor spring, etc. shall be deemed to include all necessary preparations to door frames to accomodate same.</p> <p>Tendered rates must make provision for the above-mentioned as no additional claims in this regards will afterwards be entertained</p> <p>All "en-suite" locks shall be ordered to operate in a dedicated master keyed and/or grand master keyed lock system</p>			
<p><u>SUPPLY AND INSTALLATION OF IRONMONGERY</u></p> <p align="center">Carried to Collection</p> <p>Section No. 2 Bill No 8 - Ironmongery LDPW-B/20424</p>		R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

HINGES, BOLTS, ETC

**"Dormakapa" or similar and approved by the
Principal Agent**

1	Type DBB-SS-009 102 x 75 x 3mm Thick two ball bearing butt hinge	No	45
2	Type BFBDM Aluminium anodised flush barrel bolt, with keep fixed to manufacturer's specification	No	6
3	Type HBAFM Hinge for aluminium frame.	No	10
4	Type DRP-SS-022, Adjustable roller bolt	No	2
5	Type HBFMF, Fire Hose reel cabinet door	No	3

"EN-SUITE" LOCKS

"Dormakapa" Locks to be suitable for Master Key

6	Type D02735 SS Narrow stile dead lock operating with european profile cylinder, casing 174 x 52mm deep, forend 238 x 22mm wide, backset 35mm and 20mm throw.	No	12
7	Type D02635 SS Narrow stile Sash lock operating with european profile cylinder, casing 174 x 52mm deep, forend 238 x 22mm wide, backset 35mm and 20mm throw.	No	3
8	Type D037D SS Cylinder deadlock, casing 116.5 x 78mm deep, forend 168 x 22mm wide and backset 57mm.	No	4
9	Type D032D SS, Bathroom deadlock, casing 102 x 78mm deep, forend 155 x 22mm wide and backset 57mm.	No	1
10	Type DDC106601MK Five pin Euro-profile double cylinder 66mm long	No	16
11	Type DCE-105 S.S Narrow Stile cylinder escutcheon	No	8

Carried to Collection

R

Section No. 2
Bill No 8 - Ironmongery
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

12	Type DCE-002 S.S Round cylinder escutcheon	No	6
13	Type D035S SS Bathroom sash lock, casing 102 x 78mm Deep, forend 155 x 22mm wide, backset 57mm and centres 57mm	No	5
14	Type D036S SS, Cylinder sash lock, casing 116.5 x 78mm Deep, forend 168 x 22mm wide, backset 57mm and centres 61mm	No	1
15	Type DKC106601 MK 66mm Long five pin euro-profile knob cylinder master keyed.	No	1
16	Type DSC104301 MK 43mm Long five pin euro-profile knob cylinder master keyed.	No	4
17	Type PHT3901, Exterior access lock with lever handle	No	1
18	Master key	No	2
19	Grand master key	No	1

HANDLES

"Dormakapa" or similar and approved by the Principal Agent

20	Type TH125 NS Cyl S.S Lever handle on narrow stile rose with narrow stile cylinder escutcheons	No	9
21	Type DPH215 BTB 383 x 32mm Dia. D Shaped offset tubular pull handle	No	14
22	Type DPH301A BTB 383 x 25mm Dia. straight tubular pull handle	No	1
23	Type DPH301B, 325 x 25mm Dia. straight tubular pull handle	No	2
24	Type DPH-430-BL-SF Pull handle BT fixed on a plate (Plate elsewhere measured) with no cylinder cutout, installed to manufacturer's specification.	No	3
25	Type DWC-006, Disabled WC indicator and turnknob for physically impaired individuals.	No	1

Carried to Collection

R

Section No. 2
Bill No 8 - Ironmongery
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

26	Type TH125 WC S.S, Lever handle on rose for Bathroom/WC	No	10
27	Type DRP-SS-023, Flush pull handle 62 x 44mm ring	No	2

Carried to Collection

Section No. 2
Bill No 8 - Ironmongery
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

PUSH PLATES AND KICKING PLATES

**"Dormakapa" or similar and approved by the
Principal Agent Pushplate drilled and counter sunk
to timber**

Pushplates

28	Type DPP-430-BL-SF 150 X 300 X 1,2mm Thick push plates fixed to timber door	No	3
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Kickplate drilled and counter sunk to timber

29	Type DKP-430-SF, 300 wide x 1,2mm Thick Kick plate fixed to timber door	No	15
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DOOR CLOSERS AND FLOOR SPRINGS

**"Dorma" or other equal and approved by the
Principal Agent**

30	Type TS71 PA HO (EN3 850-950, EN4 950-1100) parallel arm bracket, hold open door closer - hydraulic speed control, installed to manufacturer's specification.	No	12
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31	Type TS71 (EN3 850-950, EN4 950-1100) parallel arm bracket, non hold open door closer - hydraulic speed control, installed to manufacturer's specification.	No	4
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32	Type TS73V PA DC-PAB-SL (EN3 850-950, EN4 950-1100) parallel arm delayed action, installed to manufacturer's specification.	No	1
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33	Type TS91B G-SR, Non hold co-ordinated door closer system for rebated doors between 1350 - 1900mm, closing force EN3, with hydraulic speed control for door maximum 950mm per leaf, installed to manufacturer's specification.	No	1
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34	Type BTS75 SSA-NHO Single action stainless steel floorspring, EN 1-4 non hold open type, for 120Kg door leaf weight, with adjustable closing and latching speeds, backcheck.	No	2
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Carried to Collection

R

Section No. 2
Bill No 8 - Ironmongery
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

35	Type SR 392 Door co-ordinator for door leaf widths more than 800mm	No	7
<u>KIMBERLEY CLARK</u>			
36	"Kimberley Clark" pump action soap dispenser code SA921950,	No	6
37	Stainless steel toilet paper (TR2) holder	No	6
38	Stainless steel folded towel dispenser code 9962000	No	4
39	Reflex sanitary stainless steel disposal bin 12 litre pedal operated	No	6
40	Reflex stainless steel diposal bin 18.6 litre	No	4
<u>GRAB RAILS</u>			
<u>"Chairman industries" or other equal and approved</u>			
41	Stainless steel side grab rail " Code DL2 " including fixing to wall	No	1
42	Stainless steel rear grab rail " Code SR2 " including fixing to wall around cistern	No	1
43	GR300 Stainless steel door rail and fixing to timber door	No	1
<u>SUNDRIES</u>			
<u>"Dormakapa" or similar and approved by the Principal Agent</u>			
44	Type DPS-SS-032 Dust proof strike	No	6
45	Type DDS-NP-018 Floor mounted door stop fixed to concrete	No	26
46	Type DDH-SS-020, Wall mounted door buffer fixed to brickwork.	No	2
47	Type DHC-SS-031B, Hat and coat hook with rubber buffer, fixed to timber	No	5

Carried to Collection

R

Section No. 2
Bill No 8 - Ironmongery
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

48	Type PHA3 S DD, Three point locking panic bar - double door suitable for door double leaf 1000 x 2270mm high.	No	1
49	Type DPL1000 MK, 50mm Padlock suitable for master key.	No	4
<u>STEEL LOCKERS</u>			
<u>"KROST SHELVING" or similar approved steel lockers with standard baked enamel finish</u>			
50	Interlocking two door lockers 1800mm High x 300mm Wide x 450mm Deep with 3 doors each side	No	6
<u>PINNING BOARDS, WRITING BOARDS, PROJECTION SCREENS, ETC</u>			
<u>"Best Board Manufacturing cc" or similar and approved by the Principal Agent</u>			
<u>Pining board in charcola carpet complete with delux anodised aluminium frame, rounded plastic corner and mounted horizontally against the masonry wall with mounting brackets, all in accordance with manufacturer's specifications</u>			
51	Standard pining board size 1200mm wide x 1500mm high	No	12
<u>SIGNAGE</u>			
<u>"Dormakaba" or similar and approved by the Principal Agent</u>			
52	Type DSS-130 M, 150 x 150mm MALE sign	No	1
53	Type DSS-131 F, 150 x 150mm FEMALE sign	No	1
54	Type DSS-132 MF, 150 x 150mm MALE/FEMALE sign	No	1
55	Type DSS-133 P, 150 x 150mm DISABLED PERSONS sign	No	1

Carried to Collection

R

Section No. 2
Bill No 8 - Ironmongery
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

56	Type DSS-136 EL, 150 x 150mm ELECTRICAL sign	No	1		
57	Type DSS-140 RH, 150 x 150mm RUNNING MAN sign	No	1		
58	Type DSS-143 A, 150 x 150mm ARROW sign	No	1		
59	Type DSS-145 FHR, 150 x 150mm FIRE HOSE REEL sign	No	2		
60	Type DSS-146 FE, 150 x 150mm FIRE EXTINGUISHER sign	No	2		
<u>BLINDS AND CURTAINS</u>					
61	Provide a sum of R 50 000.00 (Fifty thousand rands) for supply and installation of curtain trucks, rails, curtains and blinds			Item	50 000.00
62	Profit			Item	
63	Attendance			Item	
Carried to Collection					
					R
Section No. 2 Bill No 8 - Ironmongery LDPW-B/20424					

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 8

Bill No 8 - Ironmongery

COLLECTION

Total Brought Forward from Page No.

**Page
No**

147

Amount

Total Brought Forward from Page No.

148

Total Brought Forward from Page No.

149

Total Brought Forward from Page No.

150

Total Brought Forward from Page No.

151

Total Brought Forward from Page No.

152

Total Brought Forward from Page No.

153

Total Brought Forward from Page No.

154

Carried Forward to Summary of Section No. 2

R

Section No. 2
Bill No 8 - Ironmongery
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item
No

Quantity

Rate

Amount

BILL NO. 11

STRUCTURAL STEEL

(WORK GROUP 134)

PREAMBLESFor preambles refer to
**"Department of Public Works: Specification of
Materials and Method to be used - PW371"**

All prices/rates to be net, excluding Value Added Tax

SUPPLEMENTARY PREAMBLES

STRUCTURAL STEEL (Provisional)

Standardised Specifications

The SANS 1200 1200H Standardised Specification for Civil Engineering Construction for Structural Steelwork is applicable to this Bill

The SANS 1200 1200HC Standardised Specification for Civil Engineering Construction for Corrosion Protection of Structural Steelwork is applicable to this Bill

Project Specification

If the Standardised Specifications and the Project Specification (bounded in this document) are in conflict, the Project Specification shall apply. If these three specifications conflicts with the Model Preambles for Trades, the provisions of these specifications shall apply.

Carried to Collection

R

Section No. 2
Bill No 9 - Structural Steel
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

<u>Descriptions</u>				
<p>Descriptions of all structural steelwork shall be deemed to include for the preparation of shop detail drawings, supply and fabrication, delivery, abnormal loads, erection and approved protective treatment (Corrosion protection).</p> <p>Items described as "bolted" shall be deemed to exclude the bolts and include the holes.</p> <p>Descriptions of bolts shall be deemed to include nuts and washers</p> <p>Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p> <p>Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete. Where anchor bolts are described as embedded in sides or soffits of concrete it shall be deemed to include holes through formwork.</p>				
<u>STRUCTURAL STEEL WORKS, ETC.</u>				
1 Contractor to supply workshop drawings to the Principal Agent for approval		Item		
2 Allow for the issuing of all relevant roof truss design certificates as per SANS 0243: THE DESIGN, MANUFACTURE AND ERECTION OF STEEL TRUSSES.		Item		
3 Certificates of compliance for complete roof installation		Item		
<u>MILD STEEL COLUMNS AND BEAMS</u>				
<u>Welded and bolted columns in single lengths with welded flat section base and bolted angle section cleats</u>				
4 200 x200 x 29.94kg/m Hollow section square columns	t		0.40	
Carried to Collection				R
Section No. 2 Bill No 9 - Structural Steel LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

	<u>Bolts to columns, beams, etc</u>				
5	Grade 8.8 precision bolts	t	0.002		
6	M20 x 300mm Chemset J- bolt cast into concrete	No	16		
7	M12 x 100mm Expansion bolt	No	16		
	<u>MILD STEEL BOLTED PURLINS, GIRTS, BRACING, ETC</u>				
	<u>Purlins and girts, plates, etc, welded/bolted to steel</u>				
8	350 x 350 x 10mm Thick Baseplate, four times holed and welded to Hollow Section column, and bolted to concrete base with J-bolts (elsewhere measured)	No	17		
	<u>STEEL TRUSSES ETC</u>				
	<u>"Mitek Pamir" or similar and approved by the Principal Agent Ultra-Span light gauge steel roof trusses in accordance with part "A" and "L" of the National Building Regulations.</u>				
	<u>Hoisting into position exceeding 3.0m</u>				
9	Roof construction to double pitched roof supplied and erected complete in position with the following specifications; top chord dead load of 0.100kN/m ² , bottom chord dead load 0.140kN/m ² , wind terrain category C, wind speed of 36m/s, wind pressure 0.436N/m ² , default pitch 5 degrees, etc. Trusses to be at 1400mm centres, battens at 1000mm centres and overhangs at 600mm. Approximately 751m ² on plan. Roof construction to also include galvanised fascias and badge boards and all roof accessories (Refer to Architect's drawings at the back of these Bills of Quantities)			Item	
	Carried to Collection				R
	Section No. 2 Bill No 9 - Structural Steel LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

PAINTWORK, ETC.

ON METAL

Spot primer defects in pre-primed surfaces with zinc chromate primer, one universal undercoat and two coats "Plascon" or equal and approved enamel paint

10	On structural steelwork	m2	8		
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Carried to Collection

R

Section No. 2
Bill No 9 - Structural Steel
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 9

Bill No 9 - Structural Steel

COLLECTION

Total Brought Forward from Page No.

**Page
No**

156

Amount

Total Brought Forward from Page No.

157

Total Brought Forward from Page No.

158

Total Brought Forward from Page No.

159

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No 9 - Structural Steel

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 12</u></p> <p><u>METALWORK</u></p> <p><u>(WORK GROUP 136)</u></p> <p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p>			
<p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p><u>Descriptions</u></p>			
<p>Descriptions of expansion anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete</p>			
<p>Metalwork described as"holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described</p>			
<p>Burglar bars to windows</p>			
<p>All opening sections shall be filled with burglar bars, unless otherwise described</p>			
<p>Glazing beads to windows</p>			
<p>Guarantees for glass shall be provided upon completion of the works.</p>			
<p>Tendered rates must make provision for the above-mentioned as no additional claims in this regards will afterwards be entertained</p>			
<p>Carried to Collection</p>			
<p>Section No. 2 Bill No 10 - Metalwork LDPW-B/20424</p>			
			R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Gates to external doors

1	Single gate 970 x 2125mm high overall comprising of 50 x 75mm galvanised rectangular steel tubular frame with 50 x 5mm thick plate welded onto the inside of the frame and bolted with M10 to brickwork, "Steeldale Bestfence" or similar and approved by the Principal Agent galvanised mesh "BRC Thru Fencing No. 917", with 12.7 x 76.2mm aperture and 4mm thick wire diameter in flush cut sheets of 440 x 1480mm welded to opening section of the gate. G01.	No	3
2	Screen 2800 x 1800mm high overall comprising of 50 x 75mm galvanised rectangular steel tubular frame with 50 x 5mm thick plate welded onto the inside of the frame and bolted with M10 to brickwork, "Steeldale Bestfence" or similar and approved by the Principal Agent galvanised mesh "BRC Thru Fencing No. 917", with 12.7 x 76.2mm aperture and 4mm thick wire diameter in flush cut sheets of 1200 x 2400mm welded to opening section of the gate. L01.	No	2
3	Screen 3000 x 1200mm high overall comprising of 50 x 75mm galvanised rectangular steel tubular frame with 50 x 5mm thick plate welded onto the inside of the frame and bolted with M10 to brickwork, "Steeldale Bestfence" or similar and approved by the Principal Agent galvanised mesh "BRC Thru Fencing No. 917", with 12.7 x 76.2mm aperture and 4mm thick wire diameter in flush cut sheets of 1200 x 2400mm welded to opening section of the gate. L01.	No	1
4	Screen 400 x 4400mm high overall comprising of 50 x 75mm galvanised rectangular steel tubular frame with 50 x 5mm thick plate welded onto the inside of the frame and bolted with M10 to brickwork, "Steeldale Bestfence" or similar and approved by the Principal Agent galvanised mesh "BRC Thru Fencing No. 917", with 12.7 x 76.2mm aperture and 4mm thick wire diameter in flush cut sheets of 440 x 1330mm welded to opening section of the gate. L01.	No	10

Carried to Collection

R

Section No. 2
Bill No 10 - Metalwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

**GALVANISED MILD STEEL DOOR FRAMES,
INCLUDING BUILDING INTO BRICKWORK**

**1,6mm Thick single rebated primed steel door
frames supplied with chromium plated strike plates
suitable for half brick walls**

5	Frame for door size 813mm x 2032mm high, D01	No	9
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6	Frame for door size 889mm x 2032mm high, D03	No	1
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**1,2mm Thick single rebated primed steel door
frames supplied with chromium plated strike plates
suitable for one brick walls**

7	Frame for door size 813mm x 2032mm high, D01	No	5
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8	Frame for door size 1696mm x 2032mm high, D02	No	1
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9	Frame for door size 826mm x 2063mm high D04	No	1
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10	Frame for door size 889mm x 2068mm high D05	No	1
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11	Frame for door size 989mm x 2068mm high D06	No	1
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**ALUMINIUM WINDOWS, ETC., INCLUDING
BUILDING INTO BRICKWORK**

NOTE: Indicative window schedules are attached at the end of the bills of quantities to assist the tenderer in pricing

Rates for the following aluminium windows are to include for supplying and building in of temporary templates

Design, supply, deliver to site and install the following windows/shopfront in accordance with the manufacturers instructions

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R

Section No. 2
Bill No 10 - Metalwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Polyester powder coated aluminium framed windows/shopfront glazed as described, including all necessary framing, transoms, mullions, beads, clips, etc., all ironmongery comprising hinges, friction stays, wedgeless handles, external sealing between gaskets, external sealant between framing and adjoining structure with an approved sealant recommended for the purpose intended, all fixings and supports protection from all damage, cleaning down upon completion and everything necessary for a perfectly weather tight installation to the intent, approval and satisfaction of the Architect. NOTE : All windows to be fitted complete with 12 x 12mm Aluminium square bars @ 150mm centres maximum and rates will be deemed to include such

Windows/shopfront glazed with 6.38mm thick PVB faidbrand laminated safety glass and plugged to brickwork

12	Purpose made window size 600 x 900mm high W1	No	6
13	Purpose made window size 440 x 3570mm high AL01	No	8
14	Purpose made window size 3456 x 680mm high AL02	No	7
15	Purpose made window size 3315 x 1615mm high AL04	No	1
16	Purpose made window size 4278 x 425mm high. AL06	No	1
17	Purpose made window size 3390 x 2465mm high AL07	No	1
18	Purpose made window size 3643 x 425mm high AL08	No	1
19	Purpose made window size 2285 x 2465mm high AL09	No	1
20	Purpose made window size 3036 x 1445mm high AL11	No	1
21	Purpose made window size 1100 x 3740mm high AL14	No	2
22	Purpose made window size 2148 x 1530mm high AL18	No	1
23	Purpose made window size 4500 x 1530mm high AL19	No	1
24	Purpose made window size 2958 x 2465mm high AL21	No	1

Carried to Collection

R

Section No. 2
Bill No 10 - Metalwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

25	Purpose made window size 4787 x 1530mm high AL23	No	1
26	Purpose made window size 3770 x 1105mm high AL24	No	1
27	Purpose made window size 2429 x 1105mm high AL25	No	1
28	Purpose made window size 3100 x 1105mm high AL26	No	1
29	Purpose made window size 4685 x 425mm high AL27	No	1
30	Purpose made window size 440 x 2465mm high AL28	No	3
31	Purpose made window size 5685 x 1072mm high AL30	No	1

Carried to Collection

R

Section No. 2
Bill No 10 - Metalwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

**ALUMINIUM DOORS, ETC., INCLUDING
BUILDING INTO BRICKWORK**

Polyester coated aluminium framed windows/shopfront glazed as described, including all necessary framing, transoms, mullions, beads, clips, etc., all ironmongery comprising hinges, friction stays, wedgeless handles, external sealing between gaskets, external sealant between framing and adjoining structure with an approved sealant recommended for the purpose intended, all fixings and supports protection from all damage, cleaning down upon completion and everything necessary for a perfectly weather tight installation to the intent, approval and satisfaction of the Architect. NOTE : All doors to be fitted complete with "Trellidor" for the entire area and rates will be deemed to include such

Door and sidelights glazed with 6mm thick PVB faidbrand laminated safety glass and plugged to brickwork

Shopfront

32	Epoxy powder coated aluminium frame, 115 x 40mm (4253 x 2465mm high overall) Clip 44 shopfront with single swing 1800 x 2465 double doors, with 8,38mm Laminated safety glass. AL03	No	1.00
33	Epoxy powder coated aluminium frame, 115 x 40mm (4390 x 2465mm high overall) Clip 44 shopfront with single swing 1763 x 2465 double doors, with 8,38mm Laminated safety glass. AL05	No	1.00
34	Epoxy powder coated aluminium frame, 115 x 40mm (1045 x 2465mm high overall) Clip 44 shopfront with single swing 1045 x 2465 single doors, with 8,38mm Laminated safety glass. AL10	No	1.00

Carried to Collection

R

Section No. 2
Bill No 10 - Metalwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

35	Epoxy powder coated aluminium frame, 115 x 40mm (1876 x 2465mm high overall) Clip 44 shopfront with double swing 1876 x 2465 double doors, with 8,38mm Laminated safety glass below and 6,38mm Laminated safety glass above, 1876 x 650mm fanlight glazed with 6,38mm Laminated safety glass. AL12	No	1.00		
36	Epoxy powder coated aluminium frame, 115 x 40mm (2812 x 3740mm high overall) Clip 44 shopfront with double swing 1800 x 2400 double doors, with 8,38mm Laminated safety glass below and 6,38mm Laminated safety glass above, 2812 x 1340mm fanlight glazed with 6,38mm Laminated safety glass. AL13	No	1.00		
37	Epoxy powder coated aluminium frame, 115 x 40mm (3947 x 2890mm high overall) Clip 44 shopfront with double swing 1800 x 2400 double doors, with 8,38mm Laminated safety glass below and 6,38mm Laminated safety glass above, 3947 x 490mm fanlight glazed with 6,38mm Laminated safety glass. AL15	No	1.00		
38	Epoxy powder coated aluminium frame, 115 x 40mm (1200 x 2465mm high overall) Clip 44 shopfront with single swing 950 x 2465 single doors, with 8,38mm Laminated safety glass. AL16	No	1.00		
39	Epoxy powder coated aluminium frame, 115 x 40mm (1317 x 2465mm high overall) Clip 44 shopfront with single swing 950 x 2465 single doors, with 8,38mm Laminated safety glass. AL17	No	1.00		
40	Epoxy powder coated aluminium frame, 115 x 40mm (3810 x 2465mm high overall) Clip 44 shopfront with single swing 980 x 2465 single doors, with 8,38mm Laminated safety glass. AL20	No	1.00		
41	Epoxy powder coated aluminium frame, 115 x 40mm (1997 x 2465mm high overall) Clip 44 shopfront with single swing 999 x 2465 single doors, with 8,38mm Laminated safety glass. AL22	No	1.00		
Carried to Collection					
Section No. 2 Bill No 10 - Metalwork LDPW-B/20424					R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

42	Epoxy powder coated aluminium frame, 115 x 40mm Clip 44 shopfront with single swing 2075 x 2465 double doors, with 8,38mm Laminated safety glass. AL29	No	1.00	
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ROLLER SHUTTER DOORS

**"Xpanda" or any other of similar quality approved
by the Principal Agent, chain operated installed to
manufacturer's specification.**

43	Roller shutter door with stainless steel frame suitable for opening size 4500 x 2800m high with 500mm headroom, 130mm clearance on free side, 315mm clearance on operator side, 75mm wide x 1mm thick slate, 75mm wide side guides, "Xpanda Rol-Lok" or similar quality and approved by the Principal Agent locking mechanism complete with two keys, pressed steel canopy cover and weather strip T-bar to bottom edge, perimeter framing plugged and screwed to face at maximum 300mm centres to concrete and brickwork . D07	No	2	
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44	Roller shutter door with stainless steel frame suitable for opening size 3500 x 2500m high with 500mm headroom, 130mm clearance on free side, 315mm clearance on operator side, 75mm wide x 1mm thick slate, 75mm wide side guides, "Xpanda Rol-Lok" or similar quality and approved by the Principal Agent locking mechanism complete with two keys, pressed steel canopy cover and weather strip T-bar to bottom edge, perimeter framing plugged and screwed to face at maximum 300mm centres to concrete and brickwork . D08	No	1	
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Carried to Collection

R

Section No. 2
Bill No 10 - Metalwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

**STEEL STRONGROOM DOORS,
VENTILATORS, ETC**

**"Austen" or similar and approved by the Principal
Agent record room doors etc suitable for 220mm
walls fixed to brickwork or concrete**

45	"CAT 1 SABS 949" strongroom door and frame 1030 x 2010mm high overall with a mass of 321kg, including one 7 lever security lock and wall mounted doorstop	No	1
46	Double ended strongroom ventilator	No	2

Carried to Collection

R

Section No. 2
Bill No 10 - Metalwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 10

Bill No 10 - Metalwork

COLLECTION

Total Brought Forward from Page No.

**Page
No**

161

Amount

Total Brought Forward from Page No.

162

Total Brought Forward from Page No.

163

Total Brought Forward from Page No.

164

Total Brought Forward from Page No.

165

Total Brought Forward from Page No.

166

Total Brought Forward from Page No.

167

Total Brought Forward from Page No.

168

Total Brought Forward from Page No.

169

Carried Forward to Summary of Section No. 2

R

Section No. 2
Bill No 10 - Metalwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 13</u></p> <p><u>PLASTERING</u></p> <p><u>(WORK GROUP 142)</u></p> <p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p> <p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Textured finishes</p> <p>All textured finishes are to be applied to the satisfaction of the Principal Agent and executed by an approved firm of Specialists, all strictly in accordance with the materials supplied and methods employed by the Manufacturer</p> <p>Preparatory work for textured finishes</p> <p>Textured finishes to be applied to surfaces as described. Rates tendered are to include for all necessary priming, preparatory work, etc.</p> <p>All surfaces are to be inspected and approved by the Principal Agent prior to any work is commenced with</p>			
<p align="center">Carried to Collection</p> <p>Section No. 2 Bill No 11 - Plastering LDPW-B/20424</p>		R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

SCREEDS

3:1 Cement plaster screeds steel trowelled on concrete

1	25mm Thick on concrete floors to receive tiles	m2	614
2	25mm Thick on concrete floors to receive epoxy	m2	55

INTERNAL PLASTER

One coat (1:5) cement plaster on brickwork

3	On walls	m2	1 482
4	On narrow widths	m2	50

DIVIDING STRIPS, COVER STRIPS ETC

Strips

5	3 x 25mm Brass dividing strip with top flush with floor finish	m	17
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"Joint Master " or similar approved

6	Expansion joint seal series 800 Code 806- floor-floor cover strip	m	15
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SPECIALIST FINISH TO WALLS AND FLOORS

EPOXY TO FLOORS

4mm Thick "Sika" or similar and approved by the Principal Agent seamless slip resistant floor finish epoxy as per Manufacturers specification

7	On floors	m2	55
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Carried to Collection

R

Section No. 2
Bill No 11 - Plastering
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 11

Bill No 11 - Plastering

COLLECTION

Total Brought Forward from Page No.

**Page
No**

171

Amount

Total Brought Forward from Page No.

172

Carried Forward to Summary of Section No. 2

R

Section No. 2
Bill No 11 - Plastering
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item
No

Quantity

Rate

Amount

BILL NO. 14

TILING

(WORK GROUP 144)

PREAMBLESFor preambles refer to
**"Department of Public Works: Specification of
Materials and Method to be used - PW371"**

NOTE

All prices/rates to be net, excluding Value Added Tax

SUPPLEMENTARY PREAMBLES

Prices

Prices are to include for all square cutting and waste,
cleaning off on completion and protection from injury.
Areas are measured net to face of bare brickwork and
concrete

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R

Section No. 2
Bill No 12 - Tiling
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

WALL TILING

200 x 200 x 5mm "Tal Gold" or similar and approved by the Principal Agent ceramic wall tiles fixed with adhesive to plaster (plaster elsewhere measured) and flush pointed with tinted jointing compound in diagonal or rectangular dado tile pattern

1	On walls	m2	370
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PORCELAIN FLOOR TILES

600mm x 600mm x 8.5mm Thick "Tal Gold" or similar and approved by the Principal Agent polished porcelain floor tile with 3mm joints complete with rectangular borders and diagonal infill panels, install with tile adhesive as recommended by tile manufacturer on well-prepared screed to suit required level. Finish all joints with CORPROX waterproof grout. All strictly to manufacturer's specifications. Colour and type and detail pattern design to Architect's approval.

2	On floors	m2	614
3	Cut tile skirting 150 mm high with and including approved 10mm "Genesis" or similar approved aluminium trims	m	494
4	Border tile of cut 150mm high with and including 2 x 10mm "Genesis" or approved aluminium strips	m	32
5	10mm "Genesis" or approved aluminium strips to corners of windows and walls	m	70

Carried to Collection

R

Section No. 2
Bill No 12 - Tiling
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 12

Bill No 12 - Tiling

COLLECTION

Total Brought Forward from Page No.

**Page
No**

174

Amount

Total Brought Forward from Page No.

175

Carried Forward to Summary of Section No. 2

R

Section No. 2
Bill No 12 - Tiling
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 15</u></p> <p><u>PLUMBING AND DRAINAGE (PROVISIONAL)</u></p> <p><u>(WORK GROUP 148)</u></p> <p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p> <p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Excavations</p> <p>Prices for excavations must include for necessary staging for risk of collapse of excavation side.</p> <p>Compacting</p> <p>Filling for all types of prices described as "under solid floors, etc" shall be done with approved backfilling and compacted to 93% Mod. AASHTO density, unless otherwise described</p> <p>Testing</p> <p>Descriptions for the testing of plumbing and drainage installations shall be deemed to cater for all testing apparatus, labour, etc. and shall be done strictly as directed by and in accordance to the Principal Agent's instructions, including for retesting after taking out and making good all defective work to his entire satisfaction</p>			
<p align="center">Carried to Collection</p> <p>Section No. 2 Bill No 13 - Plumbing and drainage LDPW-B/20424</p>		R	

Vitrified clay pipes:

Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

uPVC pipes and fittings

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

Soil, waste and vent pipe fittings shall be solvent weld jointed

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class 0 (thin walled hard drawn pipes) shall not be bent. Class 1 (thin half hard), Class 2 (half hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti siphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or ground.

Carried to Collection

Section No. 2
Bill No 13 - Plumbing and drainage
LDPW-B/20424

R

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers , he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers will be entertained.

Excavations

No claim for extra rock excavation will be entertained unless the Contractor has timeously notified the Quantity Surveyor , thereof prior to backfilling, in writing

"Soft rock" and "Hard rock" shall be as defined in "Earthworks"

Laying, Backfilling, Bedding, etc. of Pipes

Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with the manufacturer's instructions

Where no manufacturer's instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200L : Medium Pressure Pipes
LD : Sewers LE : Stormwater Drainage

Pipes trenches, etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB: Earthworks (Pipe Trenches)

Pipes shall be bedded in accordance with Clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes)

Unless otherwise described bedding of rigid pipes shall be Class B bedding

Carried to Collection

Section No. 2
Bill No 13 - Plumbing and drainage
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Flush pans

Flush pans shall have straight or side outlets and "P" or "S" traps as necessary

Waste unions

Description of waste unions shall be deemed to include rubber or vulcanite plugs and chains

DRAINAGE

NOTE: All items in this section shall be deemed to fall into Work Group No 146 for Haylett formula purposes

SOIL DRAINAGE

Unless otherwise stated herein, all items in this section shall be deemed to fall into Work Group No 146 for Haylett formula purposes.

Carried to Collection

Section No. 2
Bill No 13 - Plumbing and drainage
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

RAINWATER DISPOSAL

Approved 0.8mm galvanised sheet iron with
"Chromadek" finish, in:

1	150 x 125mm Eaves gutter	m	145
2	Extra over last for stopped end	No	18
3	Ditto, but for outlet for 100mm diameter pipe	No	13
4	75mm Diameter rainwater downpipe fixed to wall	m	39
5	Extra over last for eaves or plinth offset	No	6
6	Ditto, but for shoe	No	13

SANITARY PLUMBING

uPVC pipes

7	50mm Pipes fixed to walls	m	19
8	50mm Pipes laid under slabs and including trenches not exceeding 1m deep	m	19
9	110mm Pipes fixed to walls or soffits	m	8
10	110mm Pipes laid under surface beds and including trenches not exceeding 1m deep	m	9
11	110mm Pipe encased in concrete 20MPa/20 under surface beds and including excavation exceeding 1m and not exceeding 2m deep	m	8

Extra over upvc pipes for fittings

12	50mm Bend	No	14
13	50mm Access bend	No	11
14	50mm Access junction	No	4
15	50mm Junction	No	2

Carried to Collection

R

Section No. 2
Bill No 13 - Plumbing and drainage
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

16	110 x 50mm Reducer	No	5
17	110mm Plain bend	No	7
18	110mm Access bend	No	6
19	110mm Access junction	No	3
20	110mm Pan connector	No	6
21	110mm Bent pan connector	No	1
22	110mm Two way vent valve	No	4

SANITARY FITTINGS

"Franke" or similar and approved by the Principal Agent Stainless steel grade 304 (18/10)

23	Stainless steel kitchen sink Code: 310332	No	2
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"Vaal Potteries" or other equal and approved by the Principal Agent

24	"Vaal" 510 x 405mm semi rectangular "daisy" wash hand basin with single semi-punched taphole, integrated overflow and chainstay hole including fixing to wall and all accessories complete (code 7023)	No	6
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25	Vaal "Cameo" 595 x 455mm oval self rimming vanity basin with one semi punched taphole wash hand basin with single semi-punched taphole, integrated overflow and chainstay hole including fixing to wall and all accessories complete (code 7023)	No	1
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26	Aquasave vitreous china habiscus close coupled 90 degrees outlet open rim washdown pan as 772610 with solid hard plastic toilet seat and lid , 9 litre cistern as 710531 with chrome plated front -flush lever mounted to cistern	No	6
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Carried to Collection

R

Section No. 2
Bill No 13 - Plumbing and drainage
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

27	"Vaal" vitreous china Protea Paraplegic suite Code 750246, 90 degrees outlet pan Code 750200 and matching 9 litre cistern Code 710631 complete with lid, fittings and purpose made CP side flush lever (left or right) or a back inlet exposed flushvalves 750151 with solid hard plastic toilet seat and lid as Al de Lux (SABS CKS 301)	No	1		
28	Lavetera 385 x 380 x 600mm vitreous china wall mounted urinal with top inlet (Code 704001), overall size 600 x 385 x 380mm. supplied with 38mm chrome plated domical grating (Code 8787),and chromium plated spreader (Code 7041Z0),and including flush master junior FJ6000 complete with all fittings.	No	2		
<u>WASTE UNION</u>					
<u>"Cobra Watertech" or other equal and approved</u>					
29	32mm 301CP waste union	No	9		
30	38mm 316CP Sink waste union	No	1		
<u>TRAPS, ETC</u>					
<u>"Cobra Watertech" or other equal and approved</u>					
31	38mm Chromium plated bottle trap	No	9		
<u>"Rubber"</u>					
32	40mm Deep seal "P" or "S" trap	No	7		
Carried to Collection					
Section No. 2 Bill No 13 - Plumbing and drainage LDPW-B/20424					R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

TAPS, VALVES, ETC

"Brass"

33	15mm Stopcock	No	16
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**"Sandria" or other equal and approved by the
Principal Agent**

34	15mm "Sandria" sink mixer code 3008/13SCCH chromium plated	No	2
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**"Franke" or other equal and approved by the
Principal Agent**

35	15 mm Basin mixer Code No. TVID0250	No	2
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36	15 mm Elbow action pillar tap	No	5
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Valves, control valves etc., fixed to copper pipes

**"Cobra Watertech" or other equal and approved by
the Principal Agent**

37	22mm Cast brass fullway gate valve	No	6
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38	28mm Cast brass fullway gate valve	No	2
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Testing

39	Allow for testing the whole of the sanitary plumbing installation to the approval of the Representative/Agent		Item
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Carried to Collection

R

Section No. 2
Bill No 13 - Plumbing and drainage
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

WATER SUPPLY

Class O thin wall hard drawn copper pipes and fittings with capillary soldered type connections

40	15mm Pipes	m	116
41	22mm Pipes	m	70
42	28mm Pipes	m	40

Extra over class O copper fittings for soldered capillary fittings

43	15mm Fitting	No	32
44	22mm Fitting	No	16
45	15mm Service pipe 350mm girth	No	20

Extra over 28mm diameter copper piping for soldered capillary fittings

46	Bend or elbow	No	14
47	Tee	No	6

FIRE APPLIANCES ETC.

48	Fire hose reel complete with 30m x 20m diameter hose, including reel, valve, nozzle and wall bracket bolted on	No	1
49	9Kg Dry chemical fire extinguisher	No	11

WATER SUPPLY TO FIRE APPLIANCES

Galvanised steel pipes

50	25mm Pipes	m	30
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Extra over galvanised steel pipes for steel fittings

51	25mm Fittings	No	4
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Carried to Collection

R

Section No. 2
Bill No 13 - Plumbing and drainage
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

VALVES TO FIRE APPLIANCES

"Cobra watertech" or other equal and approved

52	25mm 1001/125-25 PRESTEX brass fullway gate valve	No	1
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Testing

53	Allow for testing the whole of the water supplies and fire service installation to the approval of the Representative/ Agent		Item
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Carried to Collection

R

Section No. 2
Bill No 13 - Plumbing and drainage
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 13

Bill No 13 - Plumbing and drainage

COLLECTION

Total Brought Forward from Page No.

**Page
No**

177

Amount

Total Brought Forward from Page No.

178

Total Brought Forward from Page No.

179

Total Brought Forward from Page No.

180

Total Brought Forward from Page No.

181

Total Brought Forward from Page No.

182

Total Brought Forward from Page No.

183

Total Brought Forward from Page No.

184

Total Brought Forward from Page No.

185

Total Brought Forward from Page No.

186

Carried Forward to Summary of Section No. 2

R

Section No. 2

Bill No 13 - Plumbing and drainage

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 16</u></p> <p><u>GLAZING</u></p> <p><u>(WORK GROUP 150)</u></p> <p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p> <p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Prices</p> <p>Prices are to include for all square cutting and waste, cleaning off on completion and protection from injury. Areas are measured net to face of bare brickwork and concrete</p>			
	<p><u>TOPS, SHELVES, DOORS, MIRRORS, ETC</u></p> <p><u>Mirror manufactured from 18/10 stainless steel with a reflective polished surface, drilled for screw to wall and reinforced with Novopan plates screwed to wall</u></p>			
1	Size 450 x 600 x 6mm Silver floated glass with copper backed fixed with gold plated heads at corners	No	7	
	<p>Carried Forward to Summary of Section No. 2</p> <p>Section No. 2 Bill No 14 - Glazing LDPW-B/20424</p>			R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 17</u></p> <p><u>PAINTWORK</u></p> <p><u>(WORK GROUP 152)</u></p> <p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Paint</p> <p>All paint, complete with undercoat, primer, etc., to be used strictly in accordance with the manufacturer's specification. Only paint which bears the described trade names will be permitted on site. No substitution will be allowed</p> <p>Previously painted plastered surfaces</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</p> <p>Access</p> <p>Rates for painting steelwork, shall include access, for unlimited height</p>			
<p>Section No. 2 Bill No 15 - Paintwork LDPW-B/20424</p>	<p>Carried to Collection</p>		<p>R</p>

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

PAINTWORK, ETC

PAINT ON FLOATED PLASTER

Prepare, stop and apply one coat "Plascon" or similar and approved alkali resistant primer and two coats super acrylic emulsion paint for interior use

1	On internal walls	m2	1 532		
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ON FIBRE CEMENT

Prepare, stop and apply one coat "Plascon" or similar and approved alkali resistant primer and two coats acrylic emulsion paint for interior use

2	On fibre cement ceilings	m2	320		
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3	Skimmed gypsum plaster board ceilings	m2	16		
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ON PLASTERBOARD

Prepare, stop and apply one coat "Plascon" or similar and approved alkali resistant primer and two coats acrylic emulsion paint for interior use

4	On plaster board ceilings	m2	264		
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Carried to Collection

R

Section No. 2
Bill No 15 - Paintwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

ON METAL

Spot primer defects in pre-primed surfaces with zinc chromate primer, one universal undercoat and two coats "Plascon" or equal and approved enamel paint

5	On pressed steel door frames	m2	40
6	On steel gates	m2	76

PAINT ON WOOD

Prepare and paint one coat hardboard primer, one undercoat and two coats high gloss enamel "Plascon" or equal and approved paint

7	On general surfaces	m2	65
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Prepare, stop and apply three coats FPR 19 Teak clear varnish, lightly sanded down between coats

8	On skirtings not exceeding 300mm girth	m	46
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Carried to Collection

R

Section No. 2
Bill No 15 - Paintwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 2

Bill No. 15

Bill No 15 - Paintwork

COLLECTION

Total Brought Forward from Page No.

**Page
No**

189

Amount

Total Brought Forward from Page No.

190

Total Brought Forward from Page No.

191

Carried Forward to Summary of Section No. 2

R

Section No. 2
Bill No 15 - Paintwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	<u>BILL NO 16</u>	Quantity	Rate	Amount
	<u>PROVISIONAL SUMS</u>			
	<u>EPWP and Training</u>			
1	Provide an amount of R200 000.00(Two Hundred Thousand) for Training of Local labour	Item		
2	Profit and attendance	Item		
3	Provide an allowance amount of R200 000.00(Two Hundred Thousand rand) for training of targeted labour	Item		
4	Profit and attendance	Item		
	Carried Forward to Summary of Section No. 2			
	Section No. 2			
	Bill No 16-Provisional sums			
	LDPW-B/20424			
			R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Bill No	<u>SECTION SUMMARY - Section 2 - Buildings</u>	Page No	Amount
1	Bill No 1 - Earthworks	110	
2	Bill No 2 - Concrete, formwork and reinforcement	119	
3	Bill No 3 - Masonry	126	
4	Bill No 4 - Waterproofing	129	
5	Bill No 5 - Roof Covering	134	
6	Bill No 6 - Carpentry and Joinery	141	
7	Bill No 7 - Ceilings, Partitions and access flooring	146	
8	Bill No 8 - Ironmongery	155	
9	Bill No 9 - Structural Steel	160	
10	Bill No 10 - Metalwork	170	
11	Bill No 11 - Plastering	173	
12	Bill No 12 - Tiling	176	
13	Bill No 13 - Plumbing and drainage	187	
14	Bill No 14 - Glazing	188	
15	Bill No 15 - Paintwork	192	
16	Bill No 16-Provisional sums	193	
	Carried to Final Summary		R
	Section No. 2 LDPW-B/20424		

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item
No

Quantity

Rate

Amount

BILL NO. 1

EARTHWORKS (PROVISIONAL)

PREAMBLES

For preambles see "Specification of materials and methods to be used - PW 371"

SUPPLEMENTARY PREAMBLES

Supplementary preambles and full descriptions of materials, items, work, etc. applicable to Section No. 3

The Contractor is referred to the previous Section 2 for supplementary preambles and full descriptions of materials, items, work, etc. which shall be regarded to be equally applicable for work described in this Bill, unless specifically otherwise described

General

The Contractor shall carry out the work with as little mess and noise possible and with a minimum of disturbance to the occupants. The Contractor shall provide proper protection and provide and erect any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the Principal Agent, and remove when directed

Site clearance

All rubble, rubbish, vegetable soil, shrubs, bush, trees, etc. shall be removed from the whole area and carted away off the construction site to a suitable dumping site, which has to be located by the Contractor, all to the full satisfaction of the Principal Agent

Carried to Collection

R

Section No. 3
Bill No 1 - Earthwork
LDPW-B/20424

Filling (General)

It will be, at all times, required from the Contractor to apply and execute strict quality control on all filling material used

Samples of potential fill material obtained from excavations, trench excavations, etc. are to be submitted to and approved by the Principal Agent prior the re-use thereof as "filling"

All filling obtained from a commercial source should comply to minimum G6 standard

Should any material be found unsuitable and the use thereof be disapproved, such material shall be disposed and approved material must be sourced and imported from an approved commercial source

Filling in general shall be compacted to the prescribed percentage Mod AASHTO density

CBR and indicator tests

Density tests for monitoring filling shall be done at the minimum prescribed frequencies per each 150mm thick layer of filling placed

The Contractor is to note that all necessary tests (i.e. CBR and indicator tests, etc.) are to be conducted for all filling material, whether obtained from the excavations or to be imported from an approved commercial source

Results of these tests are to be submitted to and approved by the Principal Agent prior commencement of any placement thereof and/or filling done therewith

Density tests

It will be required from the Contractor to execute density tests for monitoring filling at the following minimum frequencies per each filling layer placed:

- **Filling to form building platforms, etc:**
1 Test per 200m² plan area per each 150mm thick layer

Carried to Collection

Section No. 3
Bill No 1 - Earthwork
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Results of density tests executed are to be submitted to and approval obtained from the Principal Agent prior commencement of any subsequent fill layers and/or other work

Keeping excavations free from water:

No separate provision has been made in this Bill for measurement and payment for bailing, pumping or otherwise keeping excavations free from water during the construction process of the work measured in this Bill

Therefore, tenderers are to note that their tendered rates are to cater for the above-mentioned as no claims arising out of their failure to do so will afterwards be entertained

Carting away of excessive and/or unsuitable excavated material

Descriptions for "carting away excessive or unsuitable excavated material from site" shall, unless specifically otherwise described, be deemed to include the loading and hauling of excessive or unsuitable excavated material to a suitable dumping site, which has to be located by the Contractor, off the construction site

The location of the intended dumping site will be subjected to the prior written approval of the Principal Agent

The Contractor shall also be liable to, upon completion, to rehabilitate all areas of the site which was disturbed during the construction phase due to construction activities, temporarily dumping/spoiling of excavated material, etc. It will be required from the Contractor to grade such areas to follow the adjacent ground contours and afterwards compacted to 80% Mod AASHTO density, all to the full satisfaction of the Principal Agent

Tendered rates must make provision for the above-mentioned as no additional claims in this regard will afterwards be entertained

Carried to Collection

Section No. 3
Bill No 1 - Earthwork
LDPW-B/20424

R

Relevant SANS 1200 Specifications

The following relevant SANS 1200 Specifications shall be regarded applicable:

- Earth mattresses, building platforms, etc:

- SANS 1200 AA General (Small Works)
- SANS 1200 C Site clearance
- SANS 1200 D Earthworks
- SANS 1200 ME Sub-base
- SANS 1200 MF Base

All work related to the above-mentioned elements shall be done with materials specified and in according to methods prescribed by the relevant SANS 1200 referred to

SANS 1200 Specification (General)

The SANS 1200 Specifications as referred to above were drawn up to cover activities normally encountered on civil engineering work, which is equally applicable on work scheduled hereunder for this project

All the specifications referred to above, although not issued with these Bills of Quantities, shall be deemed to form part of this document and shall be considered as applying to the performance of work to be completed in terms of this Section

The Contractor shall obtain a copies of the said specifications from the South African Bureau of Standards and be kept on site at all times

Measurement and payment

Measurement and payment clauses as described in the above-mentioned SANS 1200 Specifications shall not apply to the work as set out in this Bill

EARTHWORKS

(WORK GROUP 104)

Carried to Collection

R

Section No. 3
Bill No 1 - Earthwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

GENERAL SITE CLEARANCE ETC

Clear site

1	Digging up and removing rubbish, debris, vegetation, hedges, and shrubs etc, including stock piling of organic rich topsoil for reuse	m2	8 410
2	Cut surface to a depth of 150mm and cart away from site, rip, break down oversize material where necessary, add suitable material where necessary and compact to 90% MOD AASHTO Density.	m2	3 595

BULK EARTHWORKS AND PODIUMS

Extra over all excavations for carting away

3	Surplus material from stock piles on site to a dumping site to be located by the contractor	m3	1 550
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Compaction of surfaces

4	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 95% Mod AASHTO density	m2	3 595
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LAYERWORKS

Earth filling (G6 material) obtained and supplied by the contractor from commercial sources and compacted to 93% Modified AASHTO density

5	Sub-base to from platforms and embankments	m3	524
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Earth filling (G7 material) obtained and supplied by the contractor from commercial sources and compacted to 93% Modified AASHTO density

6	Sub-base to from platforms and embankments	m3	850
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Carried to Collection

R

Section No. 3
Bill No 1 - Earthwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

**Earth filling supplied by the Contractor including
compactions in layers of 150mm in accordance with
the engineers drawings and specifications**

7	Rip and recompact insitu materials compacted to 90% MOD AASHTO density	m3	699
8	Base Course layer (G7 material quality) compacted to 90% MOD AASHTO density obtained from commercial source	m3	373
9	Upper selected sub-base layers (G6 material quality) compacted to 93%MOD AASHTO density obtained from commercial source	m3	369
10	Selected sub-base layer (C4 material quality) compacted to 96%MOD AASHTO density obtained from commercial source	m3	359

Sand bed

11	20mm Thick dry, clean, washed riversand layer evenly spread over filling (elsewhere), levelled, watered and rammed to receive waterproofing membrane (elsewhere) under solid floors	m3	45
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STABILIZATION:

**Chemical stabilization extra over unstabilized
compacted layers**

12	Process subbase materials (Chemically stabilised C4 layer, with with UCS>750, GM>1.2 and PI<6), compacted to 95% MOD AASHTO	m3	359
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B35.01 Chemical stabilizing agent:

(a) Common cement to SABS ENV 197-1

13	CEM IIB-M (32.5N)	t	25
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Carried to Collection

R

Section No. 3
Bill No 1 - Earthwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

<u>Compaction of surfaces</u>					
14	Compaction of insitu ground surface including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 90% Mod AASHTO density	m2	3 295		
	<u>Prescribed density test on filling</u>				
15	"Natural california Bearing Ratio" test	No	15		
16	"Modified AASHTO Density" test	No	20		
17	Atterberg limits test in accordance with method A2 to A4 of TMH1	No	10		
18	UCS test in accordance with method A14 of TMH 1	No	10		
<u>TERMITE CONTROL</u>					
<u>Approved insecticide solutions shall be mixed on site in the presence of clerk of works/engineer/principal agent in strict accordance with the manufacturers/suppliers specifications</u>					
<u>Soil insecticide under a 5 year guarantee by an approved firm of registered specialists</u>					
19	Identifying all termite nests		Item		
20	Termite control to all identifying termite nest and not excluding the site.	m2	8 410		
<u>EXCAVATIONS, FILLING, ETC,</u>					
<u>Excavate in earth below natural ground level, reduced or made up ground level, not exceeding 2m deep, for:</u>					
21	Excavation of all termite nest including carting away material to an approved dumping site.	m3	10		
Carried to Collection					
Section No. 3 Bill No 1 - Earthwork LDPW-B/20424					R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Approved earth filling supplied by the contractor, spread, levelled, watered, and compacted to 95% Mod AASHTO density in layers not exceeding 150mm thick (Rate/m3 shall be for compacted material and not loose material)

22	In backfilling to trenches, holes, etc	m3	10		
	<u>Keeping excavations free of water</u>				
23	Allow for keeping excavations free of water		Item		
	<u>LANDSCAPING</u>				
24	Provide a sum of R 100 000.00 (One Hundred thousand rands) for Landscaping.		Item		100 000.00
25	Profit		Item		
26	Attendance		Item		

Carried to Collection

R

Section No. 3
Bill No 1 - Earthwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 3

Bill No. 1

Bill No 1 - Earthwork

COLLECTION

Total Brought Forward from Page No.

**Page
No**

195

Amount

Total Brought Forward from Page No.

196

Total Brought Forward from Page No.

197

Total Brought Forward from Page No.

198

Total Brought Forward from Page No.

199

Total Brought Forward from Page No.

200

Total Brought Forward from Page No.

201

Total Brought Forward from Page No.

202

Carried Forward to Summary of Section No. 3

R

Section No. 3
Bill No 1 - Earthwork
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 2</u></p> <p><u>RING ROAD (PROVISIONAL)</u></p> <p><u>PREAMBLE</u> These external works bills has been measured in accordance with the engineers specification SABS 1200 and shall be treated as such works</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p><u>Nature of Ground Conditions</u></p> <p>A geotechnical survey has been carried out on other surrounding buildings on site by the Engineers and the report is available at the engineers offices for viewings. Description of excavations shall be deemed to include all ground conditions other than "Hard Rock"</p> <p>"Hard Rock" shall mean granite, quartzitic sandstone or other rock of similar hardness which, in the Engineer's opinion, requires drilling, wedging and splitting or the use of explosives, etc.</p> <p><u>Carting Away of Excavated Material</u></p> <p>Descriptions of carting away of excavated material shall be deemed to include loading excavated material onto trucks directly from the excavations or, alternatively, from stock piles situated on the building site</p> <p><u>Concrete pipes:</u></p> <p>Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings</p> <p><u>uPVC pipes and fittings:</u></p> <p>Soil, waste and vent pipes and fittings shall be solvent weld jointed</p>			
<p align="right">Carried to Collection</p> <p>Section No. 3 Bill No 2 - Road Works LDPW-B/20424</p>		R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

uPVC pressure pipes and fittings:

Pipes for water supply shall be of the class stated

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained

Exposed concrete surfaces

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster

Carried to Collection

R

Section No. 3
Bill No 2 - Road Works
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

CONCRETE BLOCK PAVING FOR ROADS

Precast concrete block road surfacing

Paving is to be laid in accordance with SABS 1200 MJ, SABS 1058 and the Concrete Masonry Association's specifications

Paving is to be laid to herringbone pattern on 25mm (thickness after final compaction) clean river sand (preparation of ground or filling elsewhere)

Clean sand is to be swept into joints between roadstones

80mm Standard grey interlocking "Concor " paving blocks

1	Paving to parking areas etc to falls	m2	2 215
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User note

Where SANS 927 in the following three descriptions is not applicable, refer to other suitable construction standards or provide full specifications

2	150 x 300mm High kerbs (SANS 927 fig 3) with 150 x 150 x 300mm unreinforced concrete haunching at back of each joint, including excavation, backfilling, etc	m	545
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Unreinforced concrete vertically to paving

25MPa/19mm concrete

3	Extra over for edge beam	m	36
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Road signs

4	Standard "STOP" sign with 50mm diameter galvanised mild steel post bedded in and including unreinforced concrete base, including any necessary excavation, paint finish, etc	No	3
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Paintwork

Carried to Collection

R

Section No. 3
Bill No 2 - Road Works
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Two coats reflective road marking paint on tarmacadam

Etching primer and two coats reflective road marking
paint on concrete

5	Line 100mm wide	m	310	
6	Numeral or letter 1.8mm high	No	8	

Carried to Collection

R

Section No. 3
Bill No 2 - Road Works
LDPW-B/20424

CONCRETE CULVERTS

DEMOLITIONS

SUPPLEMENTARY PREAMBLES

Allow for the following requirements to the satisfaction of the Principal Agent

Site visit

Tenderers are to visit and view the site and existing structures to be demolished to thoroughly acquaint themselves with the nature of demolitions, the nature and extent of the work and the conditions under which the works are to be done

Existing structures

In taking down and removing existing work, the utmost care shall be observed to prevent any structural or other damage to the adjoining buildings and the Contractor shall provide all shoring, needling, strutting, etc. to ensure the stability of all structures during the alteration work. Any damage, deforming and/or defaced to the structure and/or building as well as the rectification of same will be for the Contractor's account.

Existing Services

Special care shall be exercised during the progress of the work to ensure that electrical installation, water supply pipes, telephone and other services which may be encountered are not interfered with and notice shall be given to the Representative Agent if any disconnection or alterations become necessary. Any damage to such services shall be to the contractors account

Carried to Collection

Section No. 3
Bill No 2 - Road Works
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Dust and noise

The Contractor is to take all necessary precautions, to minimise noise levels and frequently watering of the works to minimise any nuisance from dust and to ensure the least interference with the general routine of the occupants and operation of the premises including all necessary labour, materials, etc. for so doing and

Disposal of debris

The Contractor shall be responsible for the regular cleaning away all rubble, debris, rubbish, unusable materials, etc. as the work proceeds and for leaving the works in a clean and satisfactory state upon completion suitable for use and occupation, including all necessary labour, materials or plant, etc. for so doing

Old materials

Old materials from the alterations, except where described shall remain the property of the client.

Old materials to be carted away

Old materials from the alterations, except where described to be re-used or handed over, as well as all rubbish, etc. must regularly be carted away from site and not be allowed to accumulate on or around the site.

Handing over of materials

Where certain materials or articles from demolitions or alterations are described as to be handed over by the Contractor to the Representative/ Agent, such materials or articles shall be properly stored by the Contractor until handing over thereof. The Contractor must obtain an official receipt listing materials or articles and dates of handing over. If the Contractor fails to submit the receipt when requested, it shall be deemed that the materials or articles are still in his possession and he will be held liable to the Client for the full replacement value thereof, which amount will be deducted from any monies due to the Contractor.

Carried to Collection

Section No. 3
Bill No 2 - Road Works
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Temporary support to openings through existing walls

Making openings, altering openings in existing walls and removing lintels above existing openings shall be done with the utmost care to prevent any structural damage. All necessary supports, propping, shoring, needling strutting, turning pieces, etc. to wall openings is deemed to be included in the Contractor's rates.

Electrical And Mechanical

Where items include for taking down electrical and mechanical fittings the disconnection and making safe electrically is deemed to be included. Contractor to note items with barcodes (asset numbers) cannot be removed without prior arrangement with authorities

NOTE:-

Contractor to note that items with barcodes, cannot be disposed or removed from site prior to arranging with Hospital Authorities

REMOVAL OF EXISTING WORK

NOTE: All materials from excavations marked from carting away shall be cart at Municipal designated dumping site and proof of dumping to be submitted to the Safety / Enviromental officer

Demolishing and removing headwaal complete and cart away

- 7 Demolishing and remove complete existing 2 x headwalls consisting of brickwalls, foundation walls, footings, slabs including carting away or handing over all relevant materials to the authorities and prepare ground by filling and compacting for new construction.

EXCAVATIONS, FILLING, ETC,

Item

Carried to Collection

R

Section No. 3
Bill No 2 - Road Works
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Excavate in earth below natural ground level, reduced or made up ground level, not exceeding 2m deep, for:

8	Trenches	m3	5
9	Excavation to reduce levels	m3	45

Extra over trench and hole excavations in earth for excavation in

10	Soft rock	m3	4
11	Hard rock	m3	2

Extra over all excavations for carting away

12	Surplus or unwanted excavated material to stock piles on site or to a dumping site to be located by the contractor	m3	20
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Risk of collapse of excavations

13	Sides of trench excavations not exceeding 1,5m deep	m2	30
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Keeping excavations free of water

14	Allow for bailing, pumping or otherwise keeping all excavations free from water		Item
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Sand bed

15	50mm Thick dry, clean, washed riversand layer evenly spread over filling (elsewhere), levelled, watered and rammed to receive waterproofing membrane (elsewhere) under solid floors	m2	15
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Compaction of surfaces

16	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 95% Mod AASHTO density	m2	300
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Carried to Collection

R

Section No. 3
Bill No 2 - Road Works
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

	<u>Prescribed density tests on filling (no payment for compaction shall be allowed until compaction results are produced, only results which have passed the test shall be paid for)</u>			
17	Modified AASHTO Density test	No	5	
	<u>REINFORCED CONCRETE</u>			
	<u>Reinforced concrete with a coarse aggregate of 19mm and a minimum compressive strength of 30MPa at 28 days</u>			
18	In strip footings against excavated surfaces	m3	2	
19	In bases against excavated surfaces	m3	5	
	<u>SUNDRIES</u>			
	<u>Finishing surfaces of concrete smooth with a woodfloat</u>			
20	Surface beds, slabs, etc	m2	80	
	<u>FORMWORK</u>			
	<u>ROUGH FORMWORK (DEGREE OF ACCURACY III)</u>			
	<u>Rough formwork to</u>			
21	Edges, risers, ends and reveals not exceeding 300mm high or wide	m	60	
	<u>MOVEMENT JOINTS ETC</u>			
	<u>Saw cut joints including polysulphide sealing compound</u>			
22	6 x 10mm Saw cut joints in top of concrete	m	22	
	<u>REINFORCEMENT (PROVISIONAL)</u>			
	Carried to Collection			
	Section No. 3 Bill No 2 - Road Works LDPW-B/20424			R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

<u>Fabric reinforcement</u>					
23	Type Ref 193 fabric reinforcement in concrete surface beds, slabs, etc	m2	80		
<u>SUBSTRUCTURE (PROVISIONAL)</u>					
<u>Brickwork</u>					
<u>Brickwork of NFX bricks (14 MPa nominal compressive strength) in class I mortar in foundations</u>					
24	One brickwall	m2	25		
<u>SUNDRIES</u>					
<u>Brick reinforcement in substructure (Provisional)</u>					
25	Brick reinforcement 150mm wide in foundation built into brick walls with sufficient laps at end joints, angles and intersections (measured net)	m	38		
<u>FACE BRICKWORK</u>					
<u>Equal and approved facebricks to match existing (PC R1200/1000 bricks including delivery to site but excluding VAT) pointed with recessed horizontal and vertical joints</u>					
26	Extra over brickwork for facing and pointing in foundation (Provisional)	m2	25		
27	Extra over brickwork for brick-on-edge header course lintel pointed on face and 115mm soffit	m	15		
<u>Precast concrete block road surfacing</u>					
Paving is to be laid in accordance with SABS 1200 MJ, SABS 1058 and the Concrete Masonry Association's specifications					
Carried to Collection					R
Section No. 3 Bill No 2 - Road Works LDPW-B/20424					

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 3

Bill No. 2

Bill No 2 - Road Works

COLLECTION

Total Brought Forward from Page No.

**Page
No**

Amount

204

Total Brought Forward from Page No.

205

Total Brought Forward from Page No.

206

Total Brought Forward from Page No.

207

Total Brought Forward from Page No.

208

Total Brought Forward from Page No.

209

Total Brought Forward from Page No.

210

Total Brought Forward from Page No.

211

Total Brought Forward from Page No.

212

Total Brought Forward from Page No.

213

Carried Forward to Summary of Section No. 3

R

Section No. 3
Bill No 2 - Road Works
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<u>BILL NO. 3</u>			
<u>FENCING</u>			
<u>PREAMBLE</u> These external works bills has <u>been measured in accordance with the engineers specification SABS 1200 and shall be treated as such works</u>			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>User note</u>			
<i>In high corrosion areas fence posts, stays, gates, etc are to be galvanised</i>			
<u>Galvanised security fence with bitumen-aluminium painted (two coats) steel pipe posts, stays, gates, etc including galvanised steel bolts, straining eye bolts, etc, site clearance and preparation of ground</u>			
Carried to Collection			
Section No. 3 Bill No 3 Fencing LDPW-B/20424			
			R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

METALWORK

Invisible mesh security fencing including site clearance and preparation of ground (LI)

1	Powder-coated security fencing 2400mm high overall above ground level, of ref 3510 - 3D mesh panels fabricated from absel with a strength of 60% and a tensile strength of 500N/mm ² , with core diameter of 3mm and a tolerance of 0.07mm, with 4No. 43mm V-Profiled horizontal stiffeners, fixed to and including 76 x 45 x 3mm x 3000mm long steel post galvanised and powder-coated, with rubber cap on top, planted in concrete (elsewhere measured). Fencing panels to be securely fixed between posts, with and including galvanised and powder-coated fixators and nuts at centres not exceeding 300mm and to be twisted until they are detached.	m	490		
2	Galvanised anti-burrow fencing 500mm high below ground level, secured into concrete for posts and haunching of 200 x 200 x 200mm at 1000mm centres maximum, of ref 3510 - 3D mesh panels fabricated from absel with a strength of 60% and a tensile strength of 500N/mm ² , with core diameter of 3mm and a tolerance of 0.07mm, including trench, backfilling and compacting.	m	490		
3	Powder-coated anti-climb structure spiked rail bolted to invisible fence mesh flang along fence top.	m	490		
4	Powder-coated security double gate 7000 x 3000mm high formed of 100 x 75 x 3mm frame with 2No. middle vertical and 1No. horizontal rail. Fencing mesh similar to main fence to be secured to gate frame with fixators. Sliding system to be of 2No 100 x 100 x 3mm vertical posts set into and including 20Mpa concrete. 14m of 50 x 50 x 3mm galvanised angle iron with 12mm diameter R12 reinforcing bar welded onto angle iron, with fixing lugs of 25 x 25 x 5mm flat bar at maximum 350mm, set into and including 20Mpa concrete. Top to have powder-coated anti-climb security spiked rail.	No	1		

Carried to Collection

R

Section No. 3
Bill No 3 Fencing
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

5 Powder-coated security swing pedestrian gate 1500 x 3000mm high formed of 100 x 75 x 3mm frame with 2No. horizontal rails. Fencing mesh similar to main fence to be secured to gate frame with fixators. Posts system to be of 2No 100 x 100 x 3mm vertical posts set into and including 20Mpa concrete. Top to have powder-coated anti-climb security spiked rail. Gate to have approved locking mechanism

No

1

Carried to Collection

R

Section No. 3
Bill No 3 Fencing
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 3

Bill No. 3

Bill No 3 Fencing

COLLECTION

Total Brought Forward from Page No.

**Page
No**

215

Amount

Total Brought Forward from Page No.

216

Total Brought Forward from Page No.

217

Carried Forward to Summary of Section No. 3

R

Section No. 3
Bill No 3 Fencing
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 4</u></p> <p><u>MAIN SEWER LINE (PROVISIONAL)</u></p> <p><u>(WORK GROUP 148)</u></p> <p><u>PREAMBLES</u>For preambles refer to <u>"Department of Public Works: Specification of Materials and Method to be used - PW371"</u></p> <p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Excavations</p> <p>Prices for excavations must include for necessary staging for risk of collapse of excavation side.</p> <p>Compacting</p> <p>Filling for all types of prices described as "under solid floors, etc" shall be done with approved backfilling and compacted to 93% Mod. AASHTO density, unless otherwise described</p> <p>Testing</p> <p>Descriptions for the testing of plumbing and drainage installations shall be deemed to cater for all testing apparatus, labour, etc. and shall be done strictly as directed by and in accordance to the Principal Agent's instructions, including for retesting after taking out and making good all defective work to his entire satisfaction</p>			
<p align="center">Carried to Collection</p> <p>Section No. 3 Bill No 4 - Main Sewer Line LDPW-B/20424</p>		R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Vitrified clay pipes:

Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

uPVC pipes and fittings

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

Soil, waste and vent pipe fittings shall be solvent weld jointed

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class 0 (thin walled hard drawn pipes) shall not be bent. Class 1 (thin half hard), Class 2 (half hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti siphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or ground.

Carried to Collection

Section No. 3
Bill No 4 - Main Sewer Line
LDPW-B/20424

R

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers , he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers will be entertained.

Excavations

No claim for extra rock excavation will be entertained unless the Contractor has timeously notified the Quantity Surveyor , thereof prior to backfilling, in writing

"Soft rock" and "Hard rock" shall be as defined in "Earthworks"

Laying, Backfilling, Bedding, etc. of Pipes

Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with the manufacturer's instructions

Where no manufacturer's instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200L : Medium Pressure Pipes
LD : Sewers LE : Stormwater Drainage

Pipes trenches, etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB: Earthworks (Pipe Trenches)

Pipes shall be bedded in accordance with Clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes)

Unless otherwise described bedding of rigid pipes shall be Class B bedding

Carried to Collection

Section No. 3
Bill No 4 - Main Sewer Line
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Flush pans

Flush pans shall have straight or side outlets and "P" or "S" traps as necessary

Waste unions

Description of waste unions shall be deemed to include rubber or vulcanite plugs and chains

DRAINAGE

NOTE: All items in this section shall be deemed to fall into Work Group No 146 for Haylett formula purposes

Nature of Ground Conditions

A geotechnical survey has been carried out on other surrounding buildings on site by the Engineers and the report is available at the engineers offices for viewings. Description of excavations shall be deemed to include all ground conditions other than "Hard Rock"

"Hard Rock" shall mean granite, quartzitic sandstone or other rock of similar hardness which, in the Engineer's opinion, requires drilling, wedging and splitting or the use of explosives, etc.

Carting Away of Excavated Material

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

Carried to Collection

Section No. 3
Bill No 4 - Main Sewer Line
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Concrete pipes:

Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings

uPVC pipes and fittings:

Soil, waste and vent pipes and fittings shall be solvent weld jointed

uPVC pressure pipes and fittings:

Pipes for water supply shall be of the class stated

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers, etc will be entertained

Exposed concrete surfaces

Exposed surfaces of concrete stormwater channels, cover slabs, inspection eye marker slabs, gully tops, cleaning eye tops, catchpits, inspection chambers, etc shall be finished smooth with plaster

Permission for protected trees

The contractor shall apply to the authorities to seek permission before cutting any trees down

Carried to Collection

Section No. 3
Bill No 4 - Main Sewer Line
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

These external works bills has been measured in accordance with the engineers specification SABS 1200 and shall be treated as such works

SITE CLEARANCE

Clear and grub

1	Strips, 1.5m wide	m	88
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EARTHWORKS (PIPE TRENCHES)

Excavate in all materials for trenches, backfill, compact and dispose of surplus materials:

Pipes over 110mm dia up to 400mm dia for depths:

2	Over 1.0m up to 2.0m	m	88
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Extra over items above for:

3	Intermediate excavation	m3	8
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4	Hard rock excavation	m3	4
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Particular Items:Labour intensive Method to EPWP

5	Shoring of trenches exceeding a depth of 1.5m		Item
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Carried to Collection

R

Section No. 3
Bill No 4 - Main Sewer Line
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

BEDDING (PIPES)

BEDDING FOR SEWER PIPES

Supply only of bedding by importation:

From commercial sources materials:

6	selected granular materials.	m3	22
7	selected fill materials	m3	24

Concrete bedding cradle:

8	Class 15MPa/19mm	m3	5
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Encasing of pipes in concrete

9	Class 15MPa/19mm	m3	5
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PIPE LAYING SEWERS

Supply, Lay, joint, bed on class C bedding and test pipeline:

uPVC (SABS 791) pipes of diameter

10	160mm Dia	m	88
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Extra over for fittings

11	160mm Dia bends	No	3
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Precast concrete manhole:

Supply all materials and labor for the construction of concrete manholes from precast sections complete with cover frame, including step irons, channeling, benching, grouting, sockets, etc. in the following Dia. and depth categories

12	1000mm Dia. 1.5m up to 2.9m	No	4
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Carried to Collection

R

Section No. 3
Bill No 4 - Main Sewer Line
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Extra over items above for testing water tightness

13 Testing of tightness of manholes including all work and materials necessary as specified, only where instructed by the Engineer

Item

Anchor blocks:

14 Grade 20/40 mass concrete anchor blocks on steep slopes as specified and detailed on the drawings where instructed ny the Engineers

m3

3.00

SEWER TREATMENT WORKS

15 Construct a septic tank 2460 x 7310 x 2600mm high with soak away, constructed with 25Mpa bottom and top slab, waterproof plastered brickwork and 550mm dia. manhole covers as per the Engineer's drawing attached to this Bill of Quantities.

Item

Carried to Collection

R

Section No. 3
Bill No 4 - Main Sewer Line
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 3

Bill No. 4

Bill No 4 - Main Sewer Line

COLLECTION

Total Brought Forward from Page No.

**Page
No**

219

Amount

Total Brought Forward from Page No.

220

Total Brought Forward from Page No.

221

Total Brought Forward from Page No.

222

Total Brought Forward from Page No.

223

Total Brought Forward from Page No.

224

Total Brought Forward from Page No.

225

Total Brought Forward from Page No.

226

Carried Forward to Summary of Section No. 3

R

Section No. 3

Bill No 4 - Main Sewer Line

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 5</u></p> <p><u>WATER AND FIRE RETICULATION</u></p> <p>PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"</p>			
<p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Excavations</p> <p>Prices for excavations must include for necessary staging for risk of collapse of excavation side.</p> <p>Compacting</p> <p>Filling for all types of prices described as "under solid floors, etc" shall be done with approved backfilling and compacted to 93% Mod. AASHTO density, unless otherwise described</p> <p>Testing</p> <p>Descriptions for the testing of plumbing and drainage installations shall be deemed to cater for all testing apparatus, labour, etc. and shall be done strictly as directed by and in accordance to the Principal Agent's instructions, including for retesting after taking out and making good all defective work to his entire satisfaction</p>			
<p align="center">Carried to Collection</p> <p>Section No. 3 Bill No 5 - Water Reticulation LDPW-B/20424</p>		R	

Vitrified clay pipes:

Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

uPVC pipes and fittings

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

Soil, waste and vent pipe fittings shall be solvent weld jointed

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class 0 (thin walled hard drawn pipes) shall not be bent. Class 1 (thin half hard), Class 2 (half hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti siphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or ground.

Carried to Collection

Section No. 3
Bill No 5 - Water Reticulation
LDPW-B/20424

R

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers , he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers will be entertained.

Excavations

No claim for extra rock excavation will be entertained unless the Contractor has timeously notified the Quantity Surveyor , thereof prior to backfilling, in writing

"Soft rock" and "Hard rock" shall be as defined in "Earthworks"

Laying, Backfilling, Bedding, etc. of Pipes

Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with the manufacturer's instructions

Where no manufacturer's instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200L : Medium Pressure Pipes
LD : Sewers LE : Stormwater Drainage

Pipes trenches, etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB: Earthworks (Pipe Trenches)

Pipes shall be bedded in accordance with Clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes)

Unless otherwise described bedding of rigid pipes shall be Class B bedding

Carried to Collection

Section No. 3
Bill No 5 - Water Reticulation
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Flush pans

Flush pans shall have straight or side outlets and "P" or "S" traps as necessary

Waste unions

Description of waste unions shall be deemed to include rubber or vulcanite plugs and chains

These external works bills has been measured in accordance with the engineers specification SABS 1200 and shall be treated as such works

Site Clearance

1	Clear vegetation in length of pipeline route 1.5m wide (Provisional)	m	517	
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Excavation for trenches

2	Excavate in earth below natural ground level, reduced or made up ground level, not exceeding 2m deep, for:	m	517	
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3	Extra-over for excavations in intermediate material	m3	52	
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4	Extra-over for excavations in rock (Provisional)	m3	26	
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5	Excavate and dispose of unsuitable material from trench bottom	m3	62	
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Backfill and compaction

6	Backfill and compact trenches using labour intensive methods	m3	72	
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Imported bedding materials:

(Bedding to be class C for flexible pipes as indicated in the contract drawings)

7	Provision of bedding imported from commercial source using selected granular material	m3	88	
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Carried to Collection

R

Section No. 3
Bill No 5 - Water Reticulation
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

	<u>Supply, Lay and bed uPVC pipe complete: (The rate shall exclude disinfection of pipes after completion of hydraulic pipe test)</u>				
8	50mm Dia uPVC pipe class 12	m	517		
	<u>Extra Over Fittings and specials - uPVC bends</u>				
9	50mm 45 degree bend	No	2		
10	50mm 90 degree bend	No	2		
	<u>Extra Over Special fittings - uPVC Tees</u>				
11	50mm dia. Equal Tees	No	3		
	<u>Special fittings - Fire Hydrant Bend: (Cast iron fire hydrant, Bitumen dipped and LYING sockets to SABS 546 and SABS 966 with flanged branch, 80mm dia, drilled to SABS 1123, Table 16.)</u>				
12	50mm Dia.	No	2		
	<u>Extra over for special fittings - end caps:</u>				
13	50mm Dia.	No	4		
	<u>Extra over for special fittings - Isolation Valves: (Flanged RSV isolation valves. Valves to be non-rising spindles with cap top)</u>				
14	50mm Dia PN16	No	2		
	<u>Valve Chamber:</u>				
15	Valve chamber - 1200 x 1400 x 1000mm deep, complete including excavations, materials, plant, labor, incidentals, etc. as per detail drawings.	No	2		
	<u>Hydraulic pipe testing</u>				
	Pipes				
16	50mm dia. uPVC class 12	m	517.00		
	Carried to Collection				R
	Section No. 3 Bill No 5 - Water Reticulation LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

<u>Disinfecting pipe works</u>			
Pipes			
17	50mm dia. uPVC class 12	m	517.00
<u>Thrust Blocks:</u>			
18	Excavations	m3	5
19	Formwork	m2	10
20	Concrete (Class 20/19Mpa)	m3	5
<u>DRILLING OF BOREHOLE</u>			
<u>HYDROLOGICAL SURVEY</u>			
PREAMBLESFor preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"			
<u>NOTE</u>			
All prices/rates to be net, excluding Value Added Tax			
21	Professional Fees		SUM
22	Review existing data		SUM
23	Identify 1 x drill site and 1 x alternative		SUM
24	Drilling and testing supervision in accordance to DWA Standards		SUM
25	Evaluation and reporting with recommendations		SUM
26	Geophysical equipment hire		SUM
27	Chemical analysis for portable water: - Water sample x 1		SUM
Carried to Collection			R
Section No. 3 Bill No 5 - Water Reticulation LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 3
Bill No 5 - Water Reticulation
LDPW-B/20424

Carried to Collection

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

MISCELLANEOUS ITEMS

28 Travelling SUM

29 Printing SUM

Other Items not specified

30 Item 1: _____ SUM

31 Item 2: _____ SUM

32 Item 3: _____ SUM

DRILLING

ESTABLISHMENT, PLANT, SET-UP, INTER-HOLE MOVES AND DE-ESTABLISHMENT

33 Mobilization and setting up of plant to and/or at the first borehole SUM

34 Setting up of plant per borehole (at alternative hole) SUM

35 De-establishment from site SUM

DRILLING

Unconsolidated, consolidated sediments, igneous, metamorphic and fractured carbonate rocks

Rotary air percussion with foam

36 165mm Dia. m 240

37 215mm Dia. m 30

38 245mm Dia. m 10

39 305mm Dia. m 10

Carried to Collection

R

Section No. 3
Bill No 5 - Water Reticulation
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

**"ODEX" or similar and approved by the
Principal Agent**

Including supply, delivery and installation of minimum
6mm sidewall to manufacturers' specifications

**"ODEX" casing or similar and approved by the
Principal Agent**

40	254mm Dia.	m	10
41	Shoe	No	1

CASING

Supply, deliver and install the following

Steel bevel-edged point

42	177mm OD with minimum wall thickness 4mm	m	50
43	219mm OD with minimum wall thickness 4.5mm	m	30
44	273mm OD with minimum wall thickness 4mm	m	10
45	319mm OD with minimum wall thickness 6mm	m	10
46	Perforation of steel casing in all Dia.	m	24

UPVC Casing and screens

47	200mm OD Dia. solid, threaded ends	m	10
48	200mm OD Dia. slotted, threaded ends	m	10

Reaming of borehole

49	165mm to 254mm Dia.	m	50
50	215mm to 305mm Dia.	m	10
51	Recovery of steel casing	m	10

Carried to Collection

R

Section No. 3
Bill No 5 - Water Reticulation
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

52	Formation stabilizer including supply, delivery and installation to the approval of the Principal Agent	kg	2 000		
53	Concrete collar complete per borehole	No	1		
54	Sanitary seal complete prt borehole to minimum 6 meter deep	No	1		
55	Borehole disinfection complete per borehole	No	1		
56	Borehole protection complete per borehole	No	1		
57	Borehole marking complete per borehole	No	1		
58	Site finishing complete per borehole	No	1		
59	Data recording and reporting complete per borehole	No	1		
<u>TEST PUMPING</u>					
<u>ESTABLISHMENT, PLANT, SETTING UP, INTERHOLE MOVES AND DE-ESTABLISHMENT</u>					
60	Establishment of facilities on site to first borehole				SUM
61	Setting up of plant per borehole (at alternative hole)				SUM
62	De-establishment from site				SUM
<u>INSTALLATION AND REMOVAL OF TEST PUMP</u>					
63	For yield up to 10 l/s	No	1		
<u>LAYING OUT OF DISCHARGE HOSE</u>					
64	Minimum of 50m	No	1		
65	Greater than 50m	No	1		
66	Step tests	Hrs	5.00		
Carried to Collection					R
Section No. 3					
Bill No 5 - Water Reticulation					
LDPW-B/20424					

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

CONSTANT DISCHARGE TESTS

67	For yield up to 10 l/s	Hrs	24.00
68	Recovering monitoring	Hrs	30.00
69	Borehole disinfection complete per borehole	No	1
70	Borehole protection complete per borehole	No	1
71	Borehole marking complete per borehole	No	1
72	Site finishing complete per borehole	No	1
73	Data recording and reporting complete per borehole	No	1

ELEVATED AND GROUND TANKS

74	Provide a sum of R 650 000.00 (Six hundred Fifty thousand rands) for supply and installation 21 700 Litre pressed steel elevated tank including commissioning and connections.	Item	650 000.00
75	Profit	Item	
76	Attendance	Item	
77	Provide a sum of R 40 000.00 (Forty thousand rands) for supply and installation of 5000 litre tank including stand, commissioning and connections.	Item	40 000.00
78	Profit	Item	
79	Attendance	Item	

WATER MAIN MUNICIPAL CONNECTION FEE

80	Provide a sum of R 10 000.00 (Ten thousand rands) for municipal connection fee.	Item	10 000.00
81	Profit	Item	
82	Attendance	Item	

Carried to Collection

R

Section No. 3
Bill No 5 - Water Reticulation
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 3

Bill No. 5

Bill No 5 - Water Reticulation

COLLECTION

Total Brought Forward from Page No.

**Page
No**

228

Amount

Total Brought Forward from Page No.

229

Total Brought Forward from Page No.

230

Total Brought Forward from Page No.

231

Total Brought Forward from Page No.

232

Total Brought Forward from Page No.

233

Total Brought Forward from Page No.

234

Total Brought Forward from Page No.

235

Total Brought Forward from Page No.

236

Total Brought Forward from Page No.

237

Total Brought Forward from Page No.

238

Carried Forward to Summary of Section No. 3

R

Section No. 3

Bill No 5 - Water Reticulation

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

SECTION SUMMARY - Section 3 - External Works

Bill No		Page No	Amount
1	Bill No 1 - Earthwork	203	
2	Bill No 2 - Road Works	214	
3	Bill No 3 Fencing	218	
4	Bill No 4 - Main Sewer Line	227	
5	Bill No 5 - Water Reticulation	239	
Carried to Final Summary			R
Section No. 3 LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<u>BILL NO. 1</u>			
PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"			
<u>NOTE</u>			
All prices/rates to be net, excluding Value Added Tax			
<u>MV RETICULATION</u>			
1 Supply and install 50kVA 11kV/400V transformer complete with structures and poles.	Item		
Carried Forward to Summary of Section No. 4			
Section No. 4 Bill No 1 - MV Reticulation LDPW-B/20424			R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No		Quantity	Rate	Amount
	<u>BILL NO. 2</u>			
	PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"			
	<u>NOTE</u>			
	All prices/rates to be net, excluding Value Added Tax			
	<u>LV RETICULATION</u>			
	<u>Distribution Kiosks</u>			
	<u>3CR12, Powder coated, plinth mounted, complete with equipment as specified</u>			
1	Installation of New Kiosk	No	1	
2	Plinth	No	1	
	<u>Trenching</u>			
	<u>Excavation, bedding, backfilling, consolidating and making good as specified.</u>			
3	Pickable earth	m3	56	
4	Soft rock	m3	24	
5	Hard rock	m3	17	
6	Backfilling and compaction	m3	80	
7	75mm Dia. PVC sleeves for road crossing/cable entries into the building-rate must include for galvanised steel draw wires in spare sleeves and sealing of ends.	m	50	
8	Concrete slabs for crossing of other services-rate must include installation 200mm below existing services	m	5	
	Carried to Collection			R
	Section No. 4 Bill No 2 - LV Reticulation LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

9	Cable warning tape, 300mm above cable	m	280
10	Cable marker, above cables	No	8
11	600/1000V PVC SWA cables, in trenches and sleeves, including labels	m	5
12	35mm ² 4core	m	120
13	10mm ² 3core	m	115
14	6mm ² 4core	m	45
15	6mm ² 2core	m	30
<u>600/1000V Cable terminations, for PVC PVC SWA PVC Cu cables, for indoor or outdoor use, as required</u>			
16	Gland no 5 complete with shroud	No	4
17	Gland no 4 complete with shroud	No	2
18	Gland no 2 complete with shroud	No	4
<u>Earth conductors (HDHC), including ends</u>			
19	25mm ²	m	120
20	6mm ²	m	115
21	4mm ²	m	75
<u>Electrical Test</u>			
22	Testing of this section in the presence of 'the Employer and/or the Engineer, including all equipment, power generator, etc.		Item
23	Electrical & Telkom Man holes 600 x 600 x 600mm	No	1

Carried to Collection

R

Section No. 4
Bill No 2 - LV Reticulation
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 4

Bill No. 2

Bill No 2 - LV Reticulation

COLLECTION

Total Brought Forward from Page No.

**Page
No**

242

Amount

Total Brought Forward from Page No.

243

Carried Forward to Summary of Section No. 4

R

Section No. 4
Bill No 2 - LV Reticulation
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item No		Quantity	Rate	Amount
	<u>BILL NO. 3</u>			
	PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"			
	<u>NOTE</u>			
	All prices/rates to be net, excluding Value Added Tax			
	<u>MAIN LIBRARY BUILDING</u>			
	<u>Draw Wires</u>			
1	Supply and install a 0,6mm diameter galvanised draw wire in sleeves and conduit for data installation	m	600	
	<u>Distribution Boards</u>			
	<u>Supply, delivery, storage and submission of workshop drawings for the Flush mounted architrave steel type power distribution boards complete with flush trays, doors, switch gear mounting trays, copper busbars, neutral and earth bars, correctly sized internally</u>			
2	Supply and installation of DB - LIB as per Engineer's specification		Item	
	<u>Conduit Work</u>			
	<u>Supply, delivery and installation of SABS approved PVC / Galvanised Conduits completed with all required conduit accessories.</u>			
	<u>Built or Chase into brick or concrete work:</u>			
3	20mm PVC Conduit	m	400	
	Carried to Collection			R
	Section No. 4 Bill No 3 - Main Library Building LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

4	25mm PVC Conduit	m	50		
	<u>In Ceiling space and steel work or along Purlins</u>				
5	20mm PVC Conduit	m	600		
6	25mm PVC Conduit	m	60		
7	50mm PVC Conduit	m	35		
	<u>Conduit Boxes:</u>				
	<u>Supply and installation of SABS approved conduit boxes, installed in the run of the conduit installation, cast into concrete and built into brickwork or flush inside false ceiling spaces, complete with all required conduit termination accessories.</u>				
8	20mm diameter 4 way type(round box) PVC	No	60		
	<u>Wall Boxes:</u>				
	<u>Supply and installation of SABS approved galvanised pressed steel wall boxes for building flush into brickwork or cast into concrete work.</u>				
	<u>Flush mounted type:</u>				
9	100 x 50 x 50mm	No	12		
10	100 x 100 x 50mm	No	103		
11	100x100mm blank cover	No	15		
	Carried to Collection				
	Section No. 4 Bill No 3 - Main Library Building LDPW-B/20424				R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

<u>PVC Wiring in conduits:</u>			
12	2.5mm ² for lights circuits	m	1 500
13	4mm ² for plug sockets circuits	m	2 100
<u>Stranded Bare Copper Earth Wire</u>			
<u>Supply and installation of stranded bare copper earth wire along with PVC wiring in conduits. Tendered rates shall make provision for wastage.</u>			
14	1.5mm ²	m	1 500
15	2.5mm ²	m	2 100
<u>Light Switches:</u>			
<u>Supply and installation of SABS approved type 16A flush and surface type light switches. Final paint finishes shall be confirmed at a later stage, allowance shall however be made as specified in the general specification. All boxes for flush mounting means</u>			
16	1 Lever 1 way	No	12
17	1 Lever 2 way	No	4
18	Photo cell	No	1
19	Occupancy Sensor	No	2
20	Motion Sensor	No	3
Carried to Collection			
Section No. 4 Bill No 3 - Main Library Building LDPW-B/20424			R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Socket Outlets:

Supply and installation of SABS approved switched and unswitched type flush and surface mounted type 16A switched socket outlets suitable for mounting in flush steel wall boxes or in steel pedestal units or on surface.

The final colour of the paint finish shall be confirmed at a later stage, allowance shall be made as specified in the specification.

All flush type boxes and special pedestals measured elsewhere.

Flush switched sockets type:

21	Single 16A ZA Plug Socket Outlet @300 A.F.F.L	No	40
22	Double 16A ZA Plug Socket Outlet @1200 A.F.F.L	No	1
23	16A 3 pin water tight double socket outlets	No	4
24	16A 3 pin single dedicated socket outlets	No	14
25	RJ 45 DATA outlet	No	18
26	RJ 11 telephone point	No	5
27	Type D: Wall mounted power cluster socket outlets	No	16

Carried to Collection

R

Section No. 4
Bill No 3 - Main Library Building
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Light Fittings:

Supply, delivery to site, storage and installation of the below specified light fittings complete with lamps, fixing material, mounting and tubes. Allowance must be made in the rates for all the required fixing materials and accessories.

Fittings to be equal and similar approved to the below quoted manufacture.

28	TYPE B: 4 Inch 10W LED downlight with with battery backup	No	4
29	TYPE B: 4 INCH 10W LED downlight	No	20
30	18W LED RONDO downlight without Dali modification	No	22
31	18W LED rondo downlight with battery backup	No	7
32	18W LED Up & Down facing IP44 Stainless steel wall light	No	7
33	15W LED round bulkhead	No	11
34	VISUAL LED IP40 - 50W 2250x50mm suspended linear fitting	No	5
35	1200x600mm LED panel recessed light fitting with battery backup	No	11
36	1200x600mm LED Panel recessed light fitting without Dali modification	No	43

Electrical Tests:

Making provision for the required inspection, tests and the commissioning of the complete installation and the issuing of the required certificate.

37	Building installation		Item
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Carried to Collection

R

Section No. 4
Bill No 3 - Main Library Building
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Others:

38	The installation of Telephone Distribution board as specified, lockable, flush mounted (380 x 380 x 120mm) complete with doors, frames, sub-frames and 20mm thick soft board panel as per Engineer's specifications	No	1
39	100 x 100 x 50mm - Draw box for Communication complete with blank cover	No	1
40	2 compartment power skirting installed in offices	m	85
41	Data and Telephone points on Powerskirting; must include draw box, blank cover plate, etc,	No	50
42	P9000 cable tray for small power and Data	m	70
43	Supply and install earthing and lightning protection installations as per Engineer's specification		Item
44	30A TP Isolator, in suitable York Box, for HVAC/three phase isolators	No	2
45	30A SP Isolator, in suitable York Box, for HVAC/single phase isolators	No	9

Carried to Collection

R

Section No. 4
Bill No 3 - Main Library Building
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 4

Bill No. 3

Bill No 3 - Main Library Building

COLLECTION

Total Brought Forward from Page No.

**Page
No**

245

Amount

Total Brought Forward from Page No.

246

Total Brought Forward from Page No.

247

Total Brought Forward from Page No.

248

Total Brought Forward from Page No.

249

Total Brought Forward from Page No.

250

Carried Forward to Summary of Section No. 4

R

Section No. 4

Bill No 3 - Main Library Building

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	<u>BILL NO. 4</u>	Quantity	Rate	Amount
	<p>PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"</p>			
	<p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p>			
	<p><u>GUARD HOUSE</u></p>			
	<p><u>Draw Wires</u></p>			
1	<p>Supply and install a 0,6mm diameter galvanised draw wire in sleeves and conduit for data installation</p>	m	20	
	<p><u>Distribution Boards</u></p>			
	<p><u>Supply, delivery, storage and submission of workshop drawings for the Flush mounted architrave steel type power distribution boards complete with flush trays, doors, switch gear mounting trays, copper busbars, neutral and earth bars, correctly sized internally</u></p>			
2	<p>Supply and installation of DB - LIB as per Engineer's specification</p>		Item	
	<p>Carried to Collection</p>			R
	<p>Section No. 4 Bill No 4 - Guard House LDPW-B/20424</p>			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Conduit Work

Supply, delivery and installation of SABS approved PVC / Galvanised Conduits completed with all required conduit accessories.

Built or Chase into brick or concrete work:

3	20mm PVC Conduit	m	30
4	25mm PVC Conduit	m	40

In Ceiling space and steel work or along Purlins

5	20mm PVC Conduit	m	20
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Conduit Boxes:

Supply and installation of SABS approved conduit boxes, installed in the run of the conduit installation, cast into concrete and built into brickwork or flush inside false ceiling spaces, complete with all required conduit termination accessories.

6	20mm diameter 4 way type(round box) PVC	No	2
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Wall Boxes:

Supply and installation of SABS approved galvanised pressed steel wall boxes for building flush into brickwork or cast into concrete work.

Flush mounted type:

7	100 x 50 x 50mm	No	2
8	100 x 100 x 50mm	No	3

PVC Wiring in conduits:

9	2.5mm ² for lights circuits	m	30
10	4mm ² for plug sockets circuits	m	80

Carried to Collection

R

Section No. 4
Bill No 4 - Guard House
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Stranded Bare Copper Earth Wire

Supply and installation of stranded bare copper earth wire along with PVC wiring in conduits. Tendered rates shall make provision for wastage.

11	1.5mm ²	m	30
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Light Switches:

Supply and installation of SABS approved type 16A flush and surface type light switches. Final paint finishes shall be confirmed at a later stage, allowance shall however be made as specified in the general specification. All boxes for flush mounting means

12	1 Lever 1 way	No	2
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13	Photo cell	No	1
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Socket Outlets:

Supply and installation of SABS approved switched and unswitched type flush and surface mounted type 16A switched socket outlets suitable for mounting in flush steel wall boxes or in steel pedestal units or on surface.

The final colour of the paint finish shall be confirmed at a later stage, allowance shall be made as specified in the specification.

All flush type boxes and special pedestals measured elsewhere.

Flush switched sockets type:

14	16A 3 pin single socket outlets	No	2
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Carried to Collection

R

Section No. 4
Bill No 4 - Guard House
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Light Fittings:

Supply, delivery to site, storage and installation of the below specified light fittings complete with lamps, fixing material, mounting and tubes. Allowance must be made in the rates for all the required fixing materials and accessories.

Fittings to be equal and similar approved to the below quoted manufacture.

15	24W LED wall/ceiling mounted bulkhead	No	6	
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Electrical Tests:

Making provision for the required inspection, tests and the commissioning of the complete installation and the issuing of the required certificate.

16	Supply and install Earthing and Lightning Protection as per Engineer's specification.		Item	
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Others

17	Provide 2kVA UPS		Item	
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Carried to Collection

R

Section No. 4
Bill No 4 - Guard House
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 4

Bill No. 4

Bill No 4 - Guard House

COLLECTION

Total Brought Forward from Page No.

**Page
No**

252

Amount

Total Brought Forward from Page No.

253

Total Brought Forward from Page No.

254

Total Brought Forward from Page No.

255

Carried Forward to Summary of Section No. 4

R

Section No. 4

Bill No 4 - Guard House

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item No		Quantity	Rate	Amount
	<u>BILL NO. 5</u>			
	PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"			
	<u>NOTE</u>			
	All prices/rates to be net, excluding Value Added Tax			
	<u>AREA LIGHTING</u>			
	<u>Supply and installation of SABS approved light fittings as per the specification, complete with lamps, mounted as described including accessories necessary to complete the mounting as specified and are measured separately</u>			
1	4m Steel Pole with brackets and foundation bolts (excluding luminaires), including Delivery to Site and offloading	No	13	
2	"ZELA" 30W LED light fitting complete with lamps, mounted as described including accessories necessities	No	13	
3	Photo cell	No	1	
	<u>Cabling</u>			
	<u>PVC Wiring :</u>			
4	4mm ² x 2core copper cable	m	300	
5	2.5mm ² bare copper earth wire (BCEW)	m	50	
	Carried to Collection			R
	Section No. 4 Bill No 5 - Area Lighting LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

TESTING AND COMISSIONING

6 Testing and commissioning of the entire medium and low voltage network and area lighting including the provision of all test equipment required and issuing of a certificate of compliance for the installation.

Item

Carried to Collection

R

Section No. 4
Bill No 5 - Area Lighting
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 4

Bill No. 5

Bill No 5 - Area Lighting

COLLECTION

Total Brought Forward from Page No.

**Page
No**

257

Amount

Total Brought Forward from Page No.

258

Carried Forward to Summary of Section No. 4

R

Section No. 4
Bill No 5 - Area Lighting
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item No		Quantity	Rate	Amount
	<u>BILL NO. 6</u>			
	<u>BOOK DETECTION SYSTEM</u>			
	PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"			
	<u>NOTE</u>			
	All prices/rates to be net, excluding Value Added Tax			
	<u>PREAMBLES For preambles see "Standard Model Specifications for Building Works PW371/Oct 93"</u>			
1	"Bibliotheca Tattle" or similar and approved by the Principal Agent Tape Gate Single Aisle - Baseplate	No	1	
2	"Bibliotheca Tattle" or similar and approved by the Principal Agent Tape Bookcheck - M942	No	1	
3	"Bibliotheca Tattle" or similar and approved by the Principal Agent Tape strips - B2 1000 per box	No	1	
4	Infra-red Height Detector Beam	No	1	
5	Single Locking Exist Gate with Glass Arm	No	1	
6	Stainless steel helicopter turnstile with screen	No	1	
7	Delivery	No	1	
8	Installation charges	No	1	
	Carried Forward to Summary of Section No. 4			
	Section No. 4 Bill No 6 - Book Detection System LDPW-B/20424			R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 7</u></p> <p><u>ELECTRONIC INSTALLATIONS (CCTV AND NETWORK DATA SYSTEM)</u></p> <p>PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"</p>			
	<p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p> <p><u>PREAMBLES For preambles see "Standard Model Specifications for Building Works PW371/Oct 93"</u></p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <p>Installation of an IP CCTV surveillance and Recording System, with 7 days recording (on motion detection).</p> <p>All Cameras and switches are PoE+ compliant.</p> <p>Cameras are inclusive of, vandal & whetherproof housings.</p> <p>CCTV monitoring will be done from the Security Control Room.</p> <p>The system runs on the 10G Fibre LAN</p>			
1	1080p HD-TVI 30m vision cameras dome	No	3	
2	1080 HD -TVI 360 degree fish eye dome	No	2	
	Carried to Collection			R
	<p>Section No. 4 Bill No 7 - Electronic installation LDPW-B/20424</p>			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

3	1080 HD TVI 40m colour vu vision bullet for outside	No	10		
4	DVR 16 channel	No	1		
5	Hard driver 2TB	No	1		
6	HDMI cable 50m	No	1		
7	Cat6 network cable 80m	No	1		
8	Ups power supply with backup battery	No	1		
9	Universal camera mount enclosure	No	12		
10	Flaxi pipe 25mm	No	30		
11	Connectors	No	32		
12	LCD monitor 32" FULL HD LED	No	1		
13	4U 300 x 200mm collar swing frame wall box cabinet	No	1		
14	LCD wall mount bracket	No	1		
15	Steel wire cable tray	No	17		
16	RG59 +Power -black/100m	No	9		
17	25mm PVC pipes	No	50		
18	25mm PVC adaptor	No	40		
19	25mm PVC coupling	No	30		
20	Labour for new installation and programming			Item	
	<u>Installation of wired data points and wireless access points on power skirting as specified and as indicated on drawings. The system runs on the 10G Fibre LAN</u>				
21	Cat6 Network cable 500M	No	2		
	Carried to Collection				
	Section No. 4				
	Bill No 7 - Electronic installation				
	LDPW-B/20424				
					R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

22	9U CABINET	No	1		
23	24 POT NET SWITCH	No	1		
24	24 POT PATCH PANEL	No	1		
25	BRUSH PANEL	No	1		
26	NETWORK POINTS	No	21		
27	SKIRTING MOUNT POINT	No	21		
28	2M FLYING LEADS	No	21		
29	Cat6 RJ45 and boots	No	100		
30	i7 HP DESKTOP (computer for saver)	No	1		

Carried to Collection

R

Section No. 4
Bill No 7 - Electronic installation
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Section No. 4

Bill No. 7

Bill No 7 - Electronic installation

COLLECTION

Total Brought Forward from Page No.

**Page
No**

261

Amount

Total Brought Forward from Page No.

262

Total Brought Forward from Page No.

263

Carried Forward to Summary of Section No. 4

R

Section No. 4

Bill No 7 - Electronic installation

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

SECTION SUMMARY - Section 4 - Electrical Installations

Bill No		Page No	Amount
1	Bill No 1 - MV Reticulation	241	
2	Bill No 2 - LV Reticulation	244	
3	Bill No 3 - Main Library Building	251	
4	Bill No 4 - Guard House	256	
5	Bill No 5 - Area Lighting	259	
6	Bill No 6 - Book Detection System	260	
7	Bill No 7 - Electronic installation	264	
	Carried to Final Summary		R
	Section No. 4 LDPW-B/20424		

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 1</u></p> <p><u>HVAC INSTALLATION</u></p> <p>PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"</p>			
	<p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p> <p>PREAMBLES For Preambles refer to "Limpopo Department of Public Works and Infrastructure: Part 3.1 - HVAC Specifications"</p> <p><u>SUPPLEMENTARY PREAMBLES</u></p> <ul style="list-style-type: none"> • Specifications, drawings, etc: Tenderers are referred to the specification and drawings prepared by the Consulting Engineer, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification and drawings • Preliminaries: Any preliminaries that may be required by subcontractors are to be included in the itemised rates or included with the main contractor's preliminaries, as no separate preliminary items have been provided for pricing, nor will such items be accepted • General: Where applicable, the air-conditioning sub-contractor is to ensure that all air-conditioning controls are flush-mounted and positioned adjacent to the respective room's light switch, or as otherwise shown, all necessary chasing of walls and installation of necessary conduits and conduit boxes must be undertaken prior to the plastering of the walls, no sharing of lighting circuitry conduits and 			
	Carried to Collection			R
	<p>Section No. 5 Bill No 1 - HVAC Installation LDPW-B/20424</p>			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

conduit boxes will be permitted. All air-conditioning controls are to be wired controls and be labelled to match their respective air-conditioning units. The condensate pipe from the unit shall be connected to the nearest suitable drain point and shall have a fall of not less than 1: 100 and be adequately supported (no bowing of the drains will be entertained). Electrical installation to be completed in accordance with SANS 10142 – 1: 2017 – Edition 2 (South African National Standards: The wiring of premises: Part 1: Low-voltage installations)

- **Ductwork:** Descriptions of ducts shall be deemed to include stiffeners, jointing materials, sealants, couplers in the running length and access/inspection panels in accordance with the specification All Ductwork to be galvanised sheet metal with or without insulation – refer to the BOQ specifications.
- **Air diffusion:** Descriptions of air terminals, grilles, louvres and the like shall be deemed to include necks, frames, supports and flexible connections
- **Fans:** Descriptions of fan assemblies shall be deemed to include supports from the structure, flexible or other connections to ductwork, vibration isolation mountings and airtight inspection doors
- **Sound attenuators:** Descriptions of sound attenuators shall be deemed to include flanged or flexible connections to ducts and supports from the structure
- **Fan coil units, fan air terminals and fan heaters:** Descriptions of fan coil units, fan air terminals and fan heaters shall be deemed to include connection points for water, air and electrical supply, air grilles, dust trays, condensate trays and vibration isolation mountings. Flexible ducts, flexible hose and connecting cables for connecting these units to each other or to water pipe, and electrical

Carried to Collection

Section No. 5
Bill No 1 - HVAC Installation
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

supply are measured separately

- **Piping:** Pipe diameters are nominal internal unless otherwise stated
- **Fixing of pipes:** Unless otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, casting in, building in or suspending not exceeding 1m below suspension level
- **Valves:** Descriptions of valves shall be deemed to include flanged or screwed connections to pipes, reducers, supports, etc.
- **Connections:** All equipment must be supplied complete with operation manuals, and installed/connected to service connection points (by others) within 2m of equipment.

Carried to Collection

Section No. 5
Bill No 1 - HVAC Installation
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

PERSONNEL REQUIRED

Qualified Refrigeration Mechanic will be required to perform all HVAC installations. The Refrigeration Mechanic will be required to have a VALID license to perform installations at the close of tender and during the construction phase of the project.

The practitioner shall be in possession of the following

- **Registration Category** - Category B
- **Registered with SAQCC Gas and the Department of Labour**
- **Trade Test**
- **Proof of Registration** - SAQCC Practitioners Card
- **Registration Title on Card** - Air Conditioning & Refrigeration Practitioner
- **Industry Sector Registration** - Air Conditioning & Refrigeration Plants
- **Refrigerant Group SANS 10147** - Group A1, A2 & A3
- **Authorised to Issue COC**

Carried to Collection

Section No. 5
Bill No 1 - HVAC Installation
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Supply, delivery, installation, commissioning and testing of complete HVAC Systems inclusive of indoor and outdoor units, air-handling unit, interconnecting insulated refrigeration piping, pipe tray (cable tray), valves, wiring, refrigerant gas, drain pipes, mounting brackets, insulated ducting (for main system) and un-insulated system (for ablution) including all duct hangers, duct fittings, accessories, dampers and diffusers. All rates provided by contractor should cater for equipment, components, delivery to site, installation, all equipment required during installation, testing and system balancing, commissioning, final testing and training as well as a 12 month maintenance plan with provision for a breakdown maintenance.

1	70kW Ducted Air Handling Unit Inverter with Heat Pump Power Supply: 3Ph/380-415V/50Hz @ 23.6kW Cooling Capacity: 75.0kW Heating Capacity: 70.0kW Refrigeration Gas: R410A	No	1
2	DVMs 5.6 kW Ceiling Cassette (Indoor) Unit Power Supply: 1Ph/220-240V/50Hz @ 32Watts Cooling Capacity: 5.6kW Heating Capacity: 6.3kW Refrigeration Gas: R410A	No	4
3	DVMs 5.6 kW High Wall (Indoor) Unit Power Supply: 1Ph/220-240V/50Hz @ 32Watts Cooling Capacity: 5.6kW Heating Capacity: 6.3kW Refrigeration Gas: R410A	No	1
4	DVMs 28kW Condenser (Outdoor) Unit Power Supply: 3Ph/380-415V/50Hz @ 7.30kW Cooling Capacity: 28.0kW Heating Capacity: 31.5kW Refrigeration Gas: R410A	No	1

Carried to Collection

R

Section No. 5
Bill No 1 - HVAC Installation
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

5	5.6 kW High Wall Inverter (Indoor and Outdoor) Unit Power Supply: 1Ph/220-240/50Hz @ 1.35kW Cooling Capacity: 5.0kW Refrigeration Gas: R410A	No	1		
6	Ø6.35 mm Dia. Copper Insulated Refrigeration Pipe	m	105		
7	Ø9.52 mm Copper Insulated Refrigeration Pipe	m	181		
8	Ø12.7 mm Copper Insulated Refrigeration Pipe	m	93		
9	Ø15.88 mm Copper Insulated Refrigeration Pipe	m	85		
10	Copper Refrigerant Pipe fittings, fixtures and harnesses			Item	
11	50mm x 50mm Electro-galvanized Steel Wire Cable Tray	m	250		
12	50mm x 50mm Electro-galvanized Steel Wire Cable Tray Bends	No	15		
13	50mm x 50mm Electro-galvanized Steel Wire Cable Connection Accessories			Item	
14	Ø25 mm uPVC Condensate Drain Pipe (Chased into Wall)	m	20		
15	R410 Refrigerant Top-up	kg	15		
16	Condensate Drain Pump: MDP-G075SP	No	4		
17	Wired Remote Controller (Including Wiring): MWR- SH00N	No	4		
18	Ø 550mm (Straight) Insulated Galvanized Steel Ducting	m	42		
19	Ø 350mm (Straight) Insulated Galvanized Steel Ducting	m	10		
20	Ø 300mm (Straight) Insulated Galvanized Steel Ducting	m	75		
21	Ø 900mm x Ø 900mm to Ø 750mm Reducer	No	2		
	Carried to Collection				R
	Section No. 5 Bill No 1 - HVAC Installation LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

22	Ø400mm x Ø400mm to Ø 350mm Reducer	No	1	
23	Ø 550mm Stop End	No	1	
24	Ø 550mm to Ø 550mm by Ø 300mm to Ø 300mm Eccentric Cross	m	7	
25	Ø 550mm, 90°Bend	No	2	
26	Ø 350mm 90°Bend	No	2	
27	Ø 300mm Air Balancing Damper	No	14	
28	600 x 600mm (Throat: Ø 200mm)Constant Volume Diffuser	No	14	
29	Provision of for Aluminium Door 450 x 450 Grilles	No	10	
30	600 x 600mm Return Air Louvered Wall Grille	No	1	
31	200mm x 600mm Return Air Louvered Ceiling Grille	No	4	
32	Ø 750mm x 1500mm Duct Silencer	No	1	
33	Ø 600mm x 1500mm Duct Silencer	No	1	
34	Provision for creating Ø 900mm duct openings and making good	No	2	
35	Core Drilling of up to Ø 200mm including making good where walls have been drilled	No	6	
36	Provision for Duct System Balancing		Item	
37	Provision for Testing of entire System		Item	
38	Provision for Training of Limpopo DSAC Library Staff	No	6	
39	Provision for Commissioning and Testing by Original Equipment Manufacturer	No	4	
Carried to Collection				
				R
Section No. 5 Bill No 1 - HVAC Installation LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

40	Provision for Certificate of Compliance by Registered Refrigeration Mechanic	No	2	
41	Provision for Bi Annual Preventative Maintenance of Entire System inclusive of 1 x Registered Refrigeration Mechanic's call out fee to site for up to 24 working hours 1 x non-Registered Refrigeration Mechanic's call out fee to site for up to 24 working hours Refrigeration top up, Tooling, Hoists and Equipment required to perform maintenance Safety related documentation Refer to Technical Specifications for Maintenance Specifications for envisioned preventative maintenance	No	2	
42	Provision for 36 Month Warranty from OEM on Entire HVAC System Warranty should cover, Call out fee for OEM to perform assessment, Provision for replacing any component or equipment of the HVAC System *Refer to Technical Specifications for Warranty Requirements	No	3	
<u>Ablution HVAC System</u>				
43	Ø 250mm (Straight) Uninsulated Galvanized Steel Ducting	m	5	
44	Ø 200mm (Straight) Uninsulated Galvanized Steel Ducting	m	3	
45	Ø 150mm (Straight) Uninsulated Galvanized Steel Ducting	m	4	
46	Ø 100mm (Straight) Uninsulated Galvanized Steel Ducting	m	2	
47	Ø 100mm (Straight) Uninsulated Flexible Ducting	m	8	
48	Ø 300mm x Ø 300mm to Ø 250mm Reducer	No	1	
49	Ø 250mm to Ø 300mm Reducer	No	4	
Carried to Collection				R
Section No. 5 Bill No 1 - HVAC Installation LDPW-B/20424				

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

50	Ø 250mm to Ø 200mm Reducer	No	1		
51	Ø 200mm to Ø 150mm Reducer	No	4		
52	Ø 150mm to Ø 100mm Reducer	No	4		
53	Ø 250mm, 90°Bend	No	3		
54	Ø 150mm, 90°Bend	No	1		
55	Ø 100mm Uninsulated Flexible Duct Connector Kit	No	4		
56	150mm x 150mm Extraction Valve with Ø 100mm Neck and Duct Connector Kit	No	4		
57	Ø 300 x 300mm Side Wall Louvered Air Grille	No	1		
58	Ø 250mm Duct Silencer	No	1		
59	Provision for Testing of entire System			Item	
60	Provision for Training of Limpopo DSAC Library Staff	No	6		
61	450L/s @ 150pa In-line Duct Extraction Fan with Multiple Occupancy Detection System	No	1		
62	75L/s @ 150pa Wall/Window Mounted Extraction Fan with Occupancy Detection System	No	1		
Carried to Collection					
				R	

Section No. 5
Bill No 1 - HVAC Installation
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 5

Bill No. 1

Bill No 1 - HVAC Installation

COLLECTION

Total Brought Forward from Page No.

**Page
No**

266

Amount

Total Brought Forward from Page No.

267

Total Brought Forward from Page No.

268

Total Brought Forward from Page No.

269

Total Brought Forward from Page No.

270

Total Brought Forward from Page No.

271

Total Brought Forward from Page No.

272

Total Brought Forward from Page No.

273

Total Brought Forward from Page No.

274

Carried Forward to Summary of Section No. 5

R

Section No. 5

Bill No 1 - HVAC Installation

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No		Quantity	Rate	Amount
	<p><u>BILL NO. 2</u></p> <p>PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"</p>			
	<p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p> <p>Tenderers are referred to the departmental specification " Part 3.2 - Fire Protection Specifications" and drawings prepared by the Consulting Engineer, annexed to these Bills of Quantities, for the full descriptions of the following items which are to be read and priced in conjunction with the said specification and drawings</p>			
	<p><u>SUPPLEMENTARY PREAMBLES</u></p> <ul style="list-style-type: none"> • Preliminaries: Any preliminaries that may be required by subcontractors are to be included in the itemised rates or included with the main contractor's preliminaries, as no separate preliminary items have been provided for pricing, nor will such items be accepted • Connections: All equipment must be supplied complete with operation manuals, and installed/connected to service connection points (by others) within 2m of equipment. 			
	<p>PERSONNEL REQUIRED</p> <p>Qualified Fire Detection Technician will be required to perform all Fire Detection installations. The Fire Detection Technician will be required to have a VALID license to perform installations at the close of tender and during the construction phase of the project.</p> <p>The practitioner shall be in possession of the following:</p>			
	Carried to Collection			
	<p>Section No. 5 Bill No 2 - Fire Detection and Protection LDPW-B/20424</p>		R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

- **Registration Category** - SAQCC Fire
1475 Technician
- **Registered with SAQCC Fire**
- **Proof of Registration** - SAQCC 1475
Identity Card
- **Registration Title on Card** - Installer
of Fire Detection System
- **Industry Sector Registration** - Air
Conditioning & Refrigeration Plants
- **Industrial Sector Registration** - Fire
Detection
- **Fire Detection Types** -
Commercial/Residential

FIRE DETECTION, SUPPRESSION AND PROTECTION

Note:

Supply, delivery, installation, commissioning and testing of complete Fire Protection Systems inclusive of all Fire Detection Systems, Fire Hose Reels, Fire Extinguishers, Fire Blankets, Escape Route Signs. All rates should include. All rates provided by contractor should cater for equipment, components, delivery to site, installation, all equipment required during installation, testing and system balancing, commissioning, final testing and training as well as a 12 month maintenance plan with provision for a breakdown maintenance.

Carried to Collection

Section No. 5
Bill No 2 - Fire Detection and Protection
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Fire Detection System

1	Fire Control Panel, Model: TC5100 Intelligent (Addressable) Panel (or equivalent if approved), Devices Per Zone: 126 @ 1 Zone with 2 Sounders @2 x 24V / 0.3A Fuse, Power: 220-240V/1Ph/50Hz with 1 x 12V/7Ah Battery, Dimensions: 340 x 340 x 85mm (HxWxD)	No	1
2	LiFePo4 Rechargeable Battery Capacity: 7Ah Voltage: 24V	No	2
3	Fire Detector (Addressable) Multi-Sensor with Standard Base: (Smoke and Heat) Protection Area: 120m ² Wire Size: 0.4mm ² - 2.0mm ² Dimensions: Ø105mm x 48mm(H)"	No	14
4	Manual Call Point (Addressable) Break-Glass Sensor with Standard Base: Wire Size: 0.4mm - 2.0mm Dimensions: 90mm x 90mm(H)	No	6
5	Audible and Visual Strobe (Addressable) Sounder Beacon with Base (Dual Function: Sound and Visual) Frequency: 400 - 2,850Hz Power: 20W, 80mA, 220-240V/1Ph/50Hz Dimensions: Ø97.5mm x 104mm	No	2
6	1mm ² x 2 core, PH30 Fire Alarm Cable	m	980
7	Ø20mm Externally Threaded Rigid Galvanised Steel Conducting placed in position for casting in concrete, surface bed or screed, for building or chased into brickwork and for surface mounting in ceiling space including flexible bends, threaded coupling joints and draw wires (SANS 62 Flared and Threaded Pipe)	m	735

Carried to Collection

R

Section No. 5
Bill No 2 - Fire Detection and Protection
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

8	Ø20mm x 500mm Externally Threaded Flexible Galvanised Steel Bend (SANS 14 / EN 10242 or BS143)	No	35		
9	Ø20mm x 500mm Externally Threaded Ridged Galvanised Steel Bend (SANS 14 / EN 10242 or BS143)	No	25		
10	Ø20mm Internally Threaded Coupling Joint/Socket (SANS 14 / EN 10242 or BS143)	No	305		
11	Ø20mm Galvanised Steel Conducting, Rubber Lined Wall Pipe Clamps complete with Screws and Nuts/Bolts (where required)	m	795		
12	50mm Anti-Corrosion Denso-Tape	m	480		
13	Core Drilling of up to Ø 50mm including making good where walls have been drilled	No	30		
14	Testing of entire System			Item	
15	Provision for Training of Limpopo DSAC Library Staff	No	6		
16	Provision for Commissioning	No	4		
17	Provision for Certificate of Compliance by Registered Refrigeration Mechanic	No	2		
18	Provision for Bi Annual Preventative Maintenance of Entire System inclusive of 1 x Registered Fire Detection Technician call out fee to site for up to 4 working hours Tooling, Hoists and Equipment required to perform maintenance Refer to Technical Specifications for Maintenance Specifications for envisioned preventative maintenance	No	2		
Carried to Collection					
Section No. 5 Bill No 2 - Fire Detection and Protection LDPW-B/20424					R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

19	Provision for 36 Month Warranty from OEM on Entire Fire Detection System Warranty should cover, Call out fee for OEM to perform assessment, Provision for replacing any component or equipment of the Fire Detection System, *Refer to Technical Specifications for Warranty Requirements	P/Mon	36	
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Fire Protection System

20	Centrifugal Pump Inlet: Ø63 - 80mm Outlet: Ø50 - 63mm Pressure: 400kPa Flowrate: 1 L/s Complete with Baseplate and vibration dampers Power Supply: 415V, 3 Phase, 50Hz	No	1	
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21	Ø63 - 80mm Threaded Strainer	No	1	
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22	Ø63 - 80mm Threaded Isolation Valve	No	1	
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23	Bottom Entry Analogue Positive Pressure Gauge Pressure Range: 1 - 9 Bar Glycerine Filled	No	1	
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24	Ø50 - 63mm Threaded Isolation Valve	No	2	
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25	Ø50 - 63mm Non-Return Valve	No	2	
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26	Upright Pressure Tank Capacity: 100 Litre Material: 304 Stainless Steel Max Pressure: 10 bar Connector: 1 Stainless Steel Inlet Thread Membrane: Fixed Butyl Rubber Membrane Replaceable Type	No	1	
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Carried to Collection

R

Section No. 5
Bill No 2 - Fire Detection and Protection
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

27	Automatic Pressure Switch Max Power: 15kw Starting Pressure: 2.0 Bar Maximum working Pressure: 10 Bar Connection: Ø50 - 63mm Protection Rating: IP 65 Maximum Temperature Rating: 60°C Automatic Start Switch Maximum Current: 25 Amp Power Supply: 415V, 3 Phase, 50Hz	No	1		
28	Ø80mm Galvanized Steel Pipe	m	90		
29	Ø63mm Galvanized Steel Pipe	m	80		
30	Ø50mm Galvanized Steel Pipe	m	80		
31	Ø80mm Galvanized Steel Pipe Connections			Item	
32	Ø63mm Galvanized Steel Pipe Connections			Item	
33	Ø50mm Galvanized Steel Pipe Connections			Item	
34	Ø50mm PN16 HDPE Pipe	m	180		
35	Ø32mm PN16 HDPE Pipe	m	60		
36	30m Swing Type Fire Hose Reel as per SANS 543 Complete with Pressure Gauge, Isolation Valve and Aluminium Nozzel	No	2		
37	9.0kg DCP Fire Extinguisher	No	8		
38	Fire Blanket Size: 1.8 x 1.8m Weight (min): 430 gr/m ² Weight: 1.94kg Ignition Time: 13 min Max temp: 550°C	No	2		
Carried to Collection					
Section No. 5 Bill No 2 - Fire Detection and Protection LDPW-B/20424					R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

39	Complete First Aid Box	No	1
40	SANS 1186 Phosphorescent Fire Signage, Escape Routes and Hazard Warnings	No	32

Carried to Collection

Section No. 5
Bill No 2 - Fire Detection and Protection
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 5

Bill No. 2

Bill No 2 - Fire Detection and Protection

COLLECTION

Total Brought Forward from Page No.

**Page
No**

276

Amount

Total Brought Forward from Page No.

277

Total Brought Forward from Page No.

278

Total Brought Forward from Page No.

279

Total Brought Forward from Page No.

280

Total Brought Forward from Page No.

281

Total Brought Forward from Page No.

282

Carried Forward to Summary of Section No. 5

R

Section No. 5

Bill No 2 - Fire Detection and Protection

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<p><u>BILL NO. 4</u></p> <p>PREAMBLES For preambles refer to "Department of Public Works: Specification of Materials and Method to be used - PW371"</p>			
<p><u>NOTE</u></p> <p>All prices/rates to be net, excluding Value Added Tax</p>			
<p><u>SUPPLEMENTARY PREAMBLES</u></p>			
<p>Excavations</p> <p>Prices for excavations must include for necessary staging for risk of collapse of excavation side.</p>			
<p>Compacting</p> <p>Filling for all types of prices described as "under solid floors, etc" shall be done with approved backfilling and compacted to 93% Mod. AASHTO density, unless otherwise described</p>			
<p>Testing</p> <p>Descriptions for the testing of plumbing and drainage installations shall be deemed to cater for all testing apparatus, labour, etc. and shall be done strictly as directed by and in accordance to the Principal Agent's instructions, including for retesting after taking out and making good all defective work to his entire satisfaction</p>			
<p align="center">Carried to Collection</p>			
<p>Section No. 5 Bill No 3 - Wet Services LDPW-B/20424</p>			
		R	

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Vitrified clay pipes:

Pipes shall rest on solid ground and, where necessary, pockets of sufficient size shall be cut around joints to enable the jointing to be properly performed or, alternatively, pipes shall be bedded full length on and including unreinforced concrete laid in a semi-dry state immediately before pipes are laid

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

uPVC pipes and fittings

Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings

Soil, waste and vent pipe fittings shall be solvent weld jointed

uPVC pressure pipes and fittings

Pipes for water supply shall be of the class stated

Pipes of 40mm diameter and smaller shall be plain ended with solvent welded uPVC loose sockets and fittings

Copper pipes

Pipes shall be hard drawn and half hard pipes of the class stated. Class 0 (thin walled hard drawn pipes) shall not be bent. Class 1 (thin half hard), Class 2 (half hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti siphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016. Only compression fittings shall be used in walls or ground.

Carried to Collection

Section No. 5
Bill No 3 - Wet Services
LDPW-B/20424

R

Reducing fittings

Where fittings have reducing ends or branches they are described as "reducing". In the case of pipes with diameters not exceeding 60mm only the largest end or branch size is given. Should the Contractor wish to use other fittings and bushes or reducers , he may do so on the understanding that no claim in this regard will be entertained. In the case of pipes with diameters exceeding 60mm all sizes are given and no claim for extra bushes, reducers will be entertained.

Excavations

No claim for extra rock excavation will be entertained unless the Contractor has timeously notified the Quantity Surveyor , thereof prior to backfilling, in writing

"Soft rock" and "Hard rock" shall be as defined in "Earthworks"

Laying, Backfilling, Bedding, etc. of Pipes

Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with the manufacturer's instructions

Where no manufacturer's instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following: SABS 1200L : Medium Pressure Pipes
LD : Sewers LE : Stormwater Drainage

Pipes trenches, etc. shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200DB: Earthworks (Pipe Trenches)

Pipes shall be bedded in accordance with Clause 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200LB : Bedding (Pipes)

Unless otherwise described bedding of rigid pipes shall be Class B bedding

Carried to Collection

Section No. 5
Bill No 3 - Wet Services
LDPW-B/20424

R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Flush pans

Flush pans shall have straight or side outlets and "P" or "S" traps as necessary

Waste unions

Description of waste unions shall be deemed to include rubber or vulcanite plugs and chains

WATER SERVICES

Water Supply Piping

Supply, delivery, installation, commissioning and testing of Potable Water Supply Piping

1	Ø20mm Ball Valve	No	2
2	Ø20mm Strainer	No	2
3	Ø20mm Non- Return Valve	No	2
4	Ø20mm Pressure Regulator	No	2
5	Ø15mm Braided Flexible Hose with Ball Valve	No	20
6	Ø20mm Class 2 Copper Piping	m	150
7	Ø15mm Class 2 Copper Piping	m	320
8	Ø20mm Class 2 Copper Piping Capillary Fittings		Item
9	Ø15mm Class 2 Copper Piping Capillary Fittings		Item

Grey Water

Supply, delivery, installation, commissioning and testing of Grey Water Drainage Piping

10	Ø50mm µPVC Piping (Class 34)	m	50
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Carried to Collection

R

Section No. 5
Bill No 3 - Wet Services
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

11	Ø110mm µPVC Piping (Class 34)	m	180		
12	Ø50mm µPVC Piping (Class 34) Fittings		Item		
13	Ø110mm µPVC Piping (Class 34) Fittings		Item		
<u>Water Heating</u>					
<u>Supply, delivery, installation, commissioning and testing of Water Heating System</u>					
14	Hydro-boil Capacity: 10L Power Supply: 240V/1Pha/50Hz	No	1		
<u>Water Purification</u>					
<u>Supply, delivery, installation, commissioning and testing of Water Purification System</u>					
15	Industrial Reverse Osmosis System Model: BLPRO-1500, Membrane: 2 x 4040 Capacity: 150l/hr Power Supply: 240V/1Pha/50Hz	No	1		
<u>Borehole Installations</u>					
<u>Borehole Siting, Verification, Drilling, Equipping, Testing of Water Quality and Flowrate, Commissioning and Provision of COC</u>					
16	Borehole Pump Type: Submersible Max Flowrate: 2L/s Min Head: 150m Power Supply: 415V/3Ph/50Hz Complete with Timer, Grey Box, Outlet Piping, Valves, Pressure Guages, Water Meter and all pipe work, accessories and items required to ensure borehole is fully functional		Item		
Carried to Collection					
Section No. 5 Bill No 3 - Wet Services LDPW-B/20424					R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

17	Automatic Control Box including Borehole Water Level Sensors and Sectional Steel Tank Level Senors		Item
18	16mm ² , 3 Core AWG Power Supply Cable	m	250
19	2.5mm ² , Core AWG Power Supply Cable	m	250

Carried to Collection

R

Section No. 5
Bill No 3 - Wet Services
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 5

Bill No. 3

Bill No 3 - Wet Services

COLLECTION

Total Brought Forward from Page No.

**Page
No**

284

Amount

Total Brought Forward from Page No.

285

Total Brought Forward from Page No.

286

Total Brought Forward from Page No.

287

Total Brought Forward from Page No.

288

Total Brought Forward from Page No.

289

Carried Forward to Summary of Section No. 5

R

Section No. 5

Bill No 3 - Wet Services

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

SECTION SUMMARY - Section 5 - Mechanical Works

Bill No		Page No	Amount
1	Bill No 1 - HVAC Installation	275	
2	Bill No 2 - Fire Detection and Protection	283	
3	Bill No 3 - Wet Services	290	
Carried to Final Summary			R
Section No. 5 LDPW-B/20424			

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

Item No	Quantity	Rate	Amount
<u>SECTION NO 6</u>			
<u>BILL NO. 1</u>			
<u>OCCUPATIONAL HEALTH & SAFETY (PROVISIONAL)</u>			
<u>PREAMBLES</u>			
All prices/rates to be net, excluding Value Added Tax			
<u>SUPPLEMENTARY PREAMBLES</u>			
<u>Disaster Management Act: Regulations: Alert during Corona virus COVID-19 lock down</u>			
i) The following is an extraction from the original gazetted Alert regulations. Amendments as gazetted in Gazette are indicated as follows - changes. Amendments as gazetted as follows - changes as detailed in the website indicated hereunder https://www.gov.za/Coronavirus			
Occupational Health and Safety Act of the Construction Regulation (2014), it is the Client's obligation that the cost for health & safety has been provided for by the Contractor, before appointment. Due to the Disaster Management Act and Regulation (Act nr. 57 of 2002)			
On behalf of the Client, we require the following health & safety to be included by the Principal Contractor for OHS & COVID-19 be made very clear that these are just some of the health & safety be included in the tender pricing. It is duty of the Principal Contractor to ensure that all aspects of the Occupational health & safety Act 85/1993 and construction regulation and additional costs in terms of COVID-19 Legal Requirements are costed for.			
Carried to Collection			
Section No. 6 Bill No 1 - Occupational Health and Safety LDPW-B/20424			
			R

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

**SUPPLY OF ALL ITEMS OF PERSONAL
PROTECTIVE CLOTHING/EQUIPMENT & ENSURE
USE THEREOF FOR FULL COMPLIANCE
(INCLUDING COVID-19 COMPLIANCE PPE)**

1	Overalls (2 x Sets per person)		Item
2	Safety goggles: COVID-19 testing personnel (2 x Sets per person)		Item
3	Full face shields for First Aider & Screening officer		Item
4	3 Layered cloth masks (2 x per person)		Item
5	"FFP2" Dust Mask		Item
6	Ear plugs (2 x Sets per person)		Item
7	Hand gloves (2 x Sets per person)		Item
8	Personal fall arrest and rescue equipment with and including life lines and associated equipment's		Item
9	Safety harnesses		Item
10	Scaffolding		Item

**BARRICADING: SUPPLY AND INSTALL, INCLUDING
REMOVAL UPON COMPLETION TO ENSURE FULL
COMPLIANCE TO LEGISLATION (CR 13
EXCAVATIONS)**

11	Rigid type barricading (open trenches) orange netting - droppers 2.2m high and at 2m intervals	m	200
12	Temporary galvanised mesh fence 1.8m high barricading along perimeter of excavated	m	200
13	Contractor site camp facility fence 1.8m bonox fence (80% green shade net)	m	80
14	Extra over for vehicular gate	No	1
15	Extra over for pedestrian gate	No	1

Carried to Collection

R

Section No. 6
Bill No 1 - Occupational Health and Safety
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUVA LIBRARY, MOPANI DISTRICT**

16	Fencing of waste disposal area: Green netting 1.8m high at 80% green shade net bonox fence	m	80
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OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION

17	Development of a Site Specific Health and Safety Plan, Hazard and Risk Assessment by a Competent qualified person, including Risks for COVID-19 to the approval of the Principal Agent.		Item
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18	Development of Fail Protection and Rescue Plan by a competent and qualified Fall Protection Plan Developer to the approval of the Principal Agent		Item
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19	Competent and qualified Occupational Health and Safety Officer SACPCMP registered (Full time on site)	Month	12
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20	Health and Safety Training		Item
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21	First Aider (Level 1)		Item
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22	SHE REP training		Item
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23	Working at heights training		Item
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24	Covid-19 Compliance Office Training		Item
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25	Scaffold erection/inspection		Item
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EMPLOYEES MEDICALS: CR 7(1)(G)

26	Medical from Occupational Practitioner on annexure 3 format - including COVID-19 medical questionnaire		Item
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ACCESS CONTROL: COVID-19 SCREENING

27	Screening officer full time access/COVID-19	Month	12
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28	Security officer full time access control	Month	12
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29	Tables		Item
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30	Chairs		Item
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Carried to Collection

R

Section No. 6
Bill No 1 - Occupational Health and Safety
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

31	Stationery		Item		
32	Thermometer	No	2		
33	Hand sanitizer access point	No	4		
34	Isolation area (4 x 3m) at access control point: Shade net structure well ventilated with signage	No	1		
<u>WORKERS WELFARE FACILITIES</u>					
35	Toilet facilities (chemical) 1:30 1 x each gender with personnel hand sanitizer for each toilet and a wash hand basin including maintenance.	No	2		
36	Shade netting staggered eating area structure	No	1		
37	Chairs (Social distancing of 1.5m apart)		Item		
38	Tables		Item		
39	20 Litre 2 x bins at eating area (Biological waster)	No	2		
40	Wash hand basin including pump action soap dispenser and maintenance thereof	No	1		
41	Paper towel dispenser including maintenance thereof	No	12		
42	Changing area including lockers for each gender		Item		
<u>OTHER EQUIPMENT: COVID-19 COMPLIANCE</u>					
43	Hand sanitizer (70% alcohol based) and refills	I	50		
44	Disinfectant applied by knapsack sprayer for tools, offices, screening area for the construction period		Item		
45	Hand wash point at working area		Item		
46	First Aid kits	No	2		
47	20L Waste bins (biological waste, domestic waste) lined with plastic bags (waste management)	No	4		
Carried to Collection					
					R
Section No. 6 Bill No 1 - Occupational Health and Safety LDPW-B/20424					

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

48	Fire extinguishers (9Kg) to be place at office, work area(s), eating area, storage area(s), etc. CR29	Item
49	Hazardous chemical cage: lockable with signage and well ventilated to the approval of the Principal Agent. CR25	Item
<u>SAFETY SIGNAGE INCLUDING COVID-19 AWARENESS</u>		
50	Scaffolding tags (Red/GreenN)	Item
51	Deep excavations	Item
52	Covid-19 signage (Awareness)	Item
53	Directional signage emergency routes	Item
54	Emergency assembly point	Item
55	Site office signage	Item
56	Notice Board	Item
57	Name Tags	Item
58	Induction stickers for hard hats	Item

Carried to Collection

R

Section No. 6
Bill No 1 - Occupational Health and Safety
LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No. 6

Bill No. 1

Bill No 1 - Occupational Health and Safety

COLLECTION

Total Brought Forward from Page No.

**Page
No**

292

Amount

Total Brought Forward from Page No.

293

Total Brought Forward from Page No.

294

Total Brought Forward from Page No.

295

Total Brought Forward from Page No.

296

Carried to Final Summary

R

Section No. 6

Bill No 1 - Occupational Health and Safety

LDPW-B/20424

**NEW LIBRARY INCLUDING ELECTRICAL, MECHANICAL INSTALLATION
AND ASSOCIATED EXTERNAL WORKS
AT MAKHUYA LIBRARY, MOPANI DISTRICT**

Section No	<u>FINAL SUMMARY</u>	Page No	Amount
1	Section 1 - Preliminaries	102	
2	Section 2 - Buildings	194	
3	Section 3 - External Works	240	
4	Section 4 - Electrical Installations	265	
5	Section 5 - Mechanical Works	291	
6	Section 6 - Occupational Health and Safety	297	
	Sub Total 1 - BUILDING COSTS		R
	<u>CONTINGENCY SUM</u>		
	Allow the amount of R 750,000.00 (Seven hundred Fifty thousand rands) for Contingencies to be used as directed by the Principal Agent	Item	750 000.00
	Sub Total 2 - BUILDINGS (VAT excl.)		R
	Value Added Tax (15%)		R
	Sub Total (VAT INCL.) CARRIED TO TENDER FORM		R
	Carried to Form of Tender		R
	LDPW-B/20424		

PART C3 SCOPE OF WORKS




PART C3.1: SPECIAL NOTES TO BIDDERS

The following special conditions are for compliance and attention to bidders:

- 1.1. LDPWR&I reserve the right to call interviews with short-listed bidders before final selection.
- 1.2. LDPWR&I reserve the right to conduct supplier due diligence prior to final award or at any time during the contract period. This may include surprise site visits.
- 1.3. LDPWR&I reserve the right to appoint the bidder that proves to be fully capable and qualified to handle and execute the job.
- 1.4. The proposals submitted must be in line with the detailed specification.
- 1.5. LDPWR&I reserve the right to cancel or withdraw this bid if:
 - i. Due to changed circumstances, there is no longer a need for this services; or
 - ii. Funds are no longer available to cover the total envisaged expenditure; or
 - iii. No acceptable bids are received; or
 - iv. There is a material irregularity in the Bid process.
- 1.6. In the case of sub-contracting or joint venture agreement, LDPWR&I will enter into a single contract with the principal bidder.
- 1.7. Bidders who are not registered on Central Supplier Database (CSD) must register before submission of bids.
- 1.8. Any completion of the bid document in pencil or erasable ink will not be acceptable and will automatically disqualify the submitted bid.
- 1.9. Successful bidder will be required to sign and enter into a formal contract upon the award.
- 1.10. Notwithstanding shortcomings and/or inconsistencies, if any, in this specification, which is only a minimum specification, a bidder shall make provision for a complete solution that will deliver the required service efficiently and cost-effectively.
- 1.11. Bid documents must be submitted physically to the closing address as reflected on the Request for Quotations/Tender.
- 1.12. Quotations received after the closing date and time will not be accepted for consideration.
- 1.13. This request for bid document contains confidential information about LDPWR&I, which has been provided to supply potential bidders with the data necessary to provide a holistic response.
- 1.14. No part of the contents may be used, copied, disclosed or conveyed in whole or in part to any party, in any manner whatsoever without the prior written permission of LDPWR&I.
- 1.15. Any reproduction or transmission of information contained in this document except for the sole purpose of responding to this bid is strictly prohibited.
- 1.16. References to LDPWR&I must not be made in any literature, promotional material, and brochures or sales presentations without the express written consent of LDPWR&I.

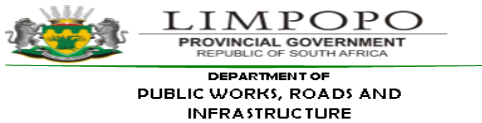


PART C3.2: OHS SPECIFICATIONS

 <p>LIMPOPO PROVINCIAL GOVERNMENT REPUBLIC OF SOUTH AFRICA</p> <hr/> <p>DEPARTMENT OF PUBLIC WORKS, ROADS AND INFRASTRUCTURE</p>	<p>OHS Specification</p> <p>CONSTRUCTION OF NEW MAKHUVA LIBRARY IN VHEMBE DISTRICT</p>	Project Number
		LDPWRI-B/20424
		Page Number
		Page 1 of 42

**OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION FOR CONSTRUCTION OF
NEW MAKHUVA LIBRARY IN VHEMBE DISTRICT**

PREPARED BY:



**DEPARTMENT OF PUBLIC WORKS, ROADS AND INFRASTRUCTURE
LIMPOPO**

**43 Church Street
Polokwane
0700**

Project Name: **CONSTRUCTION OF NEW MAKHUVA LIBRARY IN VHEMBE DISTRICT**

This specification has been prepared, in accordance with the requirements of the Occupational Health and Safety Act (Act 85 of 1993) along with the Construction Regulations 2014, to assist all Contractors in providing for a Health and Safety management system which is in line with The Client requirements, without derogating from the legal obligations of the responding parties. Contractors however will remain responsible for ensuring the health and safety of their employees and must comply with Construction Regulations 2014.

The project has as its driving force the creation of a construction environment in which the achievement of “Zero Harm” is not only possible, but very real. To this end this specification will be the benchmark against which all Contractors’ Safety Management Plans will be measured. Safety Management Plans which are not in line with the requirements contained in this specification will be rejected and Contractors will not be allowed to commence with any works until such time as these have been modified.

Health and safety on the **DEPARTMENT OF PUBLIC WORKS ROADS AND INFRASTRUCTURE LIMPOPO** construction site can only be assured if all stakeholders buy into a singular management approach, integrating the line accountability of all management staff and workers on site. The management systems provided for in this specification are designed to encourage open and unfettered participation, which will in turn provide for continuous improvement, resulting in the completion of a zero-harm project.

Accidents and injuries are preventable and all safety management plans must have as its basis the comprehensive identification, assessment and reduction of risk. This Project Health and Safety Specification is built on the following safety principles:

- All incidents are preventable
- Visible leadership is implemented and imperative at all levels
- Sound non-negotiable world class procedures and standards
- Zero tolerance for unsafe conditions or behaviors

This document sets out the responsibilities, processes and methods that must be complied with to ensure the pro-active management of Contractor’s occupational health and safety during the construction and commissioning phases of the Project.

In view of the above mentioned, you are herewith presented with the Client Safety Specification for the Project; upon the successful awarding of the tender to yourself, you will be required to present the Occupational Health & Safety (OH&S) Agent with your written Health and Safety Plan indicating how you plan to conform to the SafetySpecification on site. Once we have satisfied ourselves that your plan will ensure compliance with the requirements as set out in this specification, Acts and Regulations and Municipal by-laws, approval thereofwill be granted and work may commence. (Please note that generic Safety Plans or a Safety Plan that do not address the requirements as per the Client’s Safety Specification will not be approved).

Thereafter the OH&S Agent will conduct regular monthly audits to ensure on-going adherence to the presented Safety Plan. The Construction Regulations requires of the Client, or the Client’sAgent, to halt construction if the Safety Plan is not adhered to.

Refer to Annexure “C” of this document for package specific requirements which may be required as part of the tender submission.

TABLE OF CONTENTS

- 1 Introduction and Background**
- 2 References**
- 3 Occupational Health & Safety Management System Elements**
 - 3.1 Interpretation
 - 3.1.1 Application
 - 3.1.2 Definitions
- 4. Duties of the Designer**
- 5. Principal Contractor**
 - 5.1 Principal Contractor and Contractor Supervision
 - 5.2 Principal Contractor and Contractor HSE practitioner
 - 5.3 Principal Contractor and Contractor employees
- 6. Minimum Administrative Requirements**
 - 6.1 Notification of Intention to Commence Construction Work
 - 6.2 Assignment of Principal Contractor's and Contractors' Responsible Persons
 - 6.3 Competence of Principal Contractor's and Contractors' Responsible Persons
 - 6.4 Compensation of Occupational injuries and Diseases Act & (COIDA) Act 130 of 1993
 - 6.5 Health and Safety Organogram
 - 6.6 Preliminary Hazard Identification and Risk Assessment
 - 6.7 General Record Keeping
 - 6.8 Injury / Incident Reporting and Investigation
 - 6.9 Permits
 - 6.10 Preparation of Health & Safety Documentation
 - 6.11 Offences and Penalties
 - 6.12 Principal Contractor requirements
 - 6.13 Principal Contractor competency assessment
 - 6.14 Costs for OHS compliance
 - 6.15 Health and Safety plans
 - 6.16 Communication and management of work
- 7. Client identified Hazards and Potentially Hazardous Situations**
 - 7.1 Client identified Hazards
 - 7.2 Unforeseeable Hazards
- 8. Site Operational Requirements**
 - 8.1 Construction Health and Safety Officer
 - 8.2 Health and Safety Representative(s)
 - 8.3 Health and Safety Committee(s)
 - 8.4 Health and Safety Training
 - 8.5 Health & Safety Audits, Monitoring and Reporting
 - 8.6 Emergency Procedures
 - 8.7 First Aid Boxes and First Aid Equipment
 - 8.8 Personal Protective Equipment (PPE) and Clothing
 - 8.9 Occupational Health and Safety (OHS) Signage
 - 8.10 Public and Site Visitor Health & Safety
 - 8.11 Minimum Environmental Requirements

- 8.12 Access to Site
- 8.13 Hours of Work
- 8.14 Lighting

9 Physical Requirements

- 9.1 Erection of Hoarding
- 9.2 Traffic Diversion
- 9.3 Edge Protection, Barricading and Pedestrian
- 9.4 Housekeeping
- 9.5 Stacking and Storage
- 9.6 Fire Extinguisher and Fire Fighting Equipment
- 9.7 Fall Protection
- 9.8 Scaffolding
- 9.9 Roof Work
- 9.10 Severe Weather
- 9.11 Structures

10 Plant, Machinery and Equipment

- 10.1 Construction Vehicles and Mobile Plant
- 10.2 Bulk Earthworks and the Haulage of ground
- 10.3 Pressure Equipment and Gas Bottles
- 10.4 Hired Plant and Machinery
- 10.5 Formwork and Support work
- 10.6 Lifting Machines, Tackle and Lifting Operations
- 10.7 Ladders
- 10.8 Driven Machinery
- 10.9 Electrical Installations and Portable Electrical Tools
- 10.10 Electrical and Mechanical Lockout
- 10.11 Cantilever Loading Platforms
- 10.12 Waste Chutes
- 10.13 Explosive Powered Tools

11 Occupational Health

- 11.1 Industrial Hygiene (Exposure to Physical and Chemical Stresses)
- 11.2 Noise Induced Hearing Loss
- 11.3 Ergonomics
- 11.4 Hazardous Chemical Substances (HCS)
- 11.5 Welfare
- 11.6 Alcohol and Other Drugs
- 11.7 Reporting on Occupational Health Issues
- 11.8 Occupational Health Medicals

12 Annexure

- Annexure A - List of possible legal appointments and assignments
- Annexure B - Safe Work Method Statements, minimum requirement
- Annexure C - Compliance submissions in terms of the specification
- Annexure D - Health and Safety costing guideline
- Annexure E - Sample Site Safety File Index

1. INTRODUCTION AND BACKGROUND

In terms of Construction Regulation 5(1)(b) of the Occupational Health and Safety Act, No.85 of 1993 the Client, is required to compile a Health & Safety Specification for any intended project and provide such specification to any prospective Contractor who, on appointment shall submit a Health and Safety Plan which shall address the requirements of this specification.

This specification's objective is to ensure that any Contractor entering into a Contract with **DEPARTMENT OF PUBLIC WORKS** achieves an acceptable level of OH&S performance. This document forms an integral part of the Contract. Principal and other Contractors should make it part of any Contract that they may have with their Contractors and/or Suppliers. The requirements, as contained in this specification, along with the inherent responsibilities associated with the Occupational Health and Safety Act and its associated Regulations should be taken into account when costing your portion of the works.

This document does not absolve the Client from complying with minimum legal requirements and the Client remains responsible for the Health & Safety of his employees and those of his Mandataries. Client or his appointed Agent, reserves the right to audit, monitor and where necessary regulate the site work activities of any Principal Contractor or Principal-appointed Sub-contractor as per Construction Regulation 5(1)(k) and 7(1)(c)(v).

OMISSIONS FROM THIS SHE SPECIFICATION

By compiling this Safety, Health and Environmental Specification, the Client has endeavored to address the most critical aspects relating to Safety, Health and Environmental issues in order to assist the Contractor in adequately providing for the health and safety of employees on site. Should the Client not have addressed all health and safety aspects pertaining to the work that is tendered for, the Contractor needs to include it in the Safety, Health and Environmental Plan and inform Client of such issues when submitting the tender.

2. REFERENCES

The Contractor shall in respect of all matters arising in the fulfilment of this Safety and Health Specification comply at his own expense with all laws, regulations, by-laws and requirements of local and or other authorities that may be applicable to the Contract Works. In this regard, special reference is made to the following safety, health and labour legislation, which does not constitute an exhaustive list:

- Occupational Health and Safety Act, Act No 85 of 1993
- Compensation for Occupational Injuries and Diseases Act, Act No 130 of 1993
- Hazardous Substances Act, Act No 85 of 1973
- Project and Construction Professions Act, Act 48 of 2000
- National Road Traffic Act, Act No 93 of 1996
- Prevention of Environmental Pollution Ordinance 21 of 1981
- Water Services Act, Act No 108 of 1997

Or any other Act passed in substitution of the abovementioned

3. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM ELEMENTS

3.1 Interpretations

3.1.1 Application

This specification document is a legal compliance document drawn up in terms of the OHS Act and is therefore binding. All Contractors entering into a Contract with the Client shall, as a minimum, comply with the;

- **Occupational Health & Safety Act and Regulations (Act 85 of 1993)**. A current, up-to-date copy of the OHS Act and Construction Regulations must be available on site at all times
- **Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993)**. The Principal Contractor will be required to submit a letter of Registration and "good-standing" from the Compensation Insurer before being awarded the Contract.
- All Contractors shall comply with the "**Integration Labour Law Act**" and regulations
- All relevant **Municipal by-laws and National Building Regulations**
- **The Immigrations Act 2002** as amended and shall further ensure that no illegal aliens are employed on the construction site.

3.1.2 New Construction Regulations 2014

New construction Regulations 2014 have been promulgated on the 7th August 2014.

4. DUTIES OF THE DESIGNER

1) The designer of a structure must —

- Ensure that the applicable safety standards incorporated into these Regulations, under section 44 of the Act, are complied with in the design;
- Take into consideration the Health and Safety Specification submitted by the Client;
- Before the contract is put out to tender, make available in a report to the Client—
- All relevant Health and Safety information about the design of the relevant structure that may affect the pricing of the construction work;
- The geotechnical-science aspects, where appropriate; and
- The loading that the structure is designed to withstand;
- Inform the Client in writing of any known or anticipated dangers or hazards relating to the construction work, and make available all relevant information required for the safe execution of the work upon being designed or when the design is subsequently altered;
- Refrain from including anything in the design of the structure necessitating the use of dangerous procedures or materials hazardous to the health and safety of persons, which can be avoided by modifying the design or by substituting materials;
- Take into account the hazards relating to any subsequent maintenance of the relevant structure and must make provision in the design for that work to be performed to minimize the risk;

- When mandated by the Client to do so, carry out the necessary inspections at appropriate stages to verify that the construction of the relevant structure is carried out in accordance with his design: Provided that if the designer is not so mandated, the Client's appointed Agent in this regard is responsible to carry out such inspections;
- When mandated as contemplated in paragraph (g), stop any Contractor from executing any construction work which is not in accordance with the relevant design's health and safety aspects: Provided that if the designer is not so mandated, the Client's appointed Agent in that regard must stop that Contractor from executing that construction work;
- When mandated as contemplated in paragraph (g), in his or her final inspection of the completed structure in accordance with the National Building Regulations, include the health and safety aspects of the structure as far as reasonably practicable, declare the structure safe for use, and issue a completion certificate to the Client and a copy thereof to the Contractor; and
- During the design stage, take cognisance of ergonomic design principles in order to minimize ergonomic related hazards in all phases of the life cycle of a structure.

(2) The designer of temporary works must ensure that—

- All temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;
- The designs of temporary works are done with close reference to the structural design drawings issued by the Contractor, and in the event of any uncertainty consult the Contractor;
- All drawings and calculations pertaining to the design of temporary works are kept at the office of the temporary works designer and are made available on request by an inspector; and
- The loads caused by the temporary works and any imposed loads are clearly indicated in the design.
- A geo science technical report where appropriate
- The load the structure is designed to withstand
- The methods and sequence of construction the construction process

5. PRINCIPAL CONTRACTOR

The Principal Contractor carries prime accountability & responsibility for the health and safety of his/her employees & his/her Sub-contractors within his/her working area, as contemplated by Section 37(2) of the OHS Act. None of the additional safety requirements specified by the Client/Agent reduces the Principal Contractor's accountability and responsibility for the health and safety of his employees and Sub-contractor employees within his working area. The Principal Contractor remains an employer in their own right and consequently responsible for the implementation and management of all requirements as per the applicable legislation.

5.1 Principal Contractor and Contractor Supervision

(1) A Principal Contractor must—

- Provide and demonstrate to the Client a suitable, sufficiently documented and coherent site-specific Health and Safety Plan, based on the Client's documented Health and Safety Specifications contemplated in regulation 5(1)(b), which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the Principal Contractor as work progresses;
- Open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the Client, the Client's Agent or a Contractor; and
- On appointing any other Contractor, in order to ensure compliance with the provisions of the Act—
 - Provide Contractors who are tendering to perform construction work for the Principal Contractor, with the relevant sections of the Health and Safety Specifications contemplated in regulation 5(1)(b) pertaining to the construction work which has to be performed;
 - Ensure that potential Contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
 - Ensure that no Contractor is appointed to perform construction work unless the Principal Contractor is reasonably satisfied that the Contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
 - Ensure prior to work commencing on the site that every Contractor is registered and in good standing with the Compensation Fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
 - Appoint each Contractor in writing for the part of the project on the construction site;
 - Take reasonable steps to ensure that each Contractor's health and safety plan contemplated in sub-regulation (2)(a) is implemented and maintained on the construction site;
 - Ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the Principal Contractor and any Contractor, but at least once every 30 days;
 - Stop any Contractor from executing construction work which is not in accordance with the Client's Health and Safety Specification and the Principal Contractor's Health and Safety Plan for the site or which poses a threat to the health and safety of persons;
 - Where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the Contractor to execute the work safely; and
 - Discuss and negotiate with the Contractor the contents of the Health and Safety Plan contemplated in sub-regulation (2)(a), and must thereafter finally approve that plan for implementation;
 - Ensure that a copy of his or her health and safety plan contemplated in paragraph (a), as well as the Contractor's Health and Safety Plan contemplated in sub-regulation (2)(a), is available on request to an employee, an inspector, a Contractor, the Client or the Client's Agent;
 - Hand over a consolidated health and safety file to the Client upon completion of the construction work and must, in addition to the documentation referred to in sub-regulation (2)(b), include a record of all drawings, designs, materials used and other similar

information concerning the completed structure;

- In addition to the documentation required in the health and safety file in terms of paragraph (c)(v) and sub-regulation (2)(b), include and make available a comprehensive and updated list of all the Contractors on site accountable to the Principal Contractor, the agreements between the parties and the type of work being done; and
- Ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

(2) A Contractor must prior to performing any construction work —

- Provide and demonstrate to the Principal Contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the Client's Health and Safety Specification contemplated in regulation 5(1)(b) and provided by the Principal Contractor in terms of sub-regulation (1)(a), which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the Contractor as work progresses;
- Open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the Client, the Client's Agent or the Principal Contractor;
- Before appointing another Contractor to perform construction work, be reasonably satisfied that the Contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- Co-operate with the Principal Contractor as far as is necessary to enable each of them to comply with the provisions of the Act; and
- As far as is reasonably practicable, promptly provide the Principal Contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the Health and Safety Plan.
- (3) Where a Contractor appoints another Contractor to perform construction work, the duties determined in sub-regulation (1)(b) to (g) that apply to the Principal Contractor apply to the Contractor as if he or she were the Principal Contractor.
- A Contractor must take reasonable steps to ensure co-operation between all Contractors appointed by the Principal Contractor to enable each of those Contractors to comply with these Regulations.
- No Contractor may allow or permit any employee or person to enter any site, unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.
- A Contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.
- A Contractor must at all times keep on his or her construction site records of the health and safety induction training contemplated in sub-regulation (6) and such records must be made available on request to an inspector, the Client, the Client's Agent or the Principal Contractor;.
- A Contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.
- Description of the objective / scope of work
- Sequence of work / method statements

- Hazard identification & risk assessment (prior to commencement of work)
- Precautionary / preventative measures that are to be taken.
- Identification of sensitive features that may be impacted upon by the project.

5.2 Management and Supervision

- (1) A Principal Contractor must in writing appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the Principal Contractor.
- (2) A Principal Contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.
- (3) Where the construction manager has not appointed assistant construction managers as contemplated in sub-regulation (2), or, in the opinion of an inspector, a sufficient number of such assistant construction managers have not been appointed, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector, and those assistant construction managers must be regarded as having been appointed under sub-regulation (2).
- (4) No construction manager appointed under sub-regulation (1) may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.
- (5) A Contractor must, after consultation with the Client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive.
- (6) No Contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the Contractor
- (7) A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site.
- (8) A Contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor contemplated in sub-regulation (7), and every such employee has, to the extent clearly defined by the Contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties in terms of this regulation.

- (9) Where the Contractor has not appointed an employee as contemplated in sub-regulation (8), or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector, and those employees must be regarded as having been appointed under sub-regulation (8).
- (10) No construction supervisor appointed under sub-regulation (7) may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately designated under sub-regulation (7) on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

5.3 Principal Contractor and Contractor HSE Practitioner

The appointment of a full time / part-time Health and Safety Officer will be required for the duration of the contracted work. It is incumbent on the Principal Contractor during the tender process to evaluate the scope and nature of risk related to the work in order to objectively determine the need for such an appointment. (The Client reserves the right to insist on the appointment of a Health and Safety Officer where it deems the exposure to be of such a nature that a dedicated Health and Safety Officer is required). The Contractors Health and Safety Officer shall assist and support the Contractors Construction Manager to ensure that the Contractors Health and Safety responsibilities are fulfilled and compliance to the Health and Safety specifications and Health and Safety plan are met.

5.4 Principal and Contractor employees on the Project

The Principal Contractor is responsible for adequately informing his employees and Contractors of all relevant information with regard to the Client issued Health and Safety specifications and the Principal Contractors Health and Safety plan.

Employees are responsible for their own health and safety and that of their co-workers in their area. They must be made aware of their responsibilities during induction and awareness sessions some of which are:

- Familiarizing themselves with their workplaces and health and safety procedures.
- Working in a manner that does not endanger them or cause harm to others.
- Keeping their work area tidy.
- Reporting all incidents / accidents and near misses.
- Protecting fellow workers from injury.
- Reporting unsafe acts and unsafe conditions.
- Reporting any situation that may become dangerous.
- Carrying out lawful orders and obeying health and safety rules.
- Ensuring as far as possible no interaction with the public.

Every employee must undergo site induction provided by the Principal Contractor before commencement of the contracted work. Only once this induction has been received, will each employee receive a site access permit. The Client will provide induction to all professional team members as well as Principal Contractor management pertaining to the management of safety on the site.

It must be highlighted to all employees, that anyone who becomes aware of any person disregarding a safety notice, instruction or regulation shall immediately report this to the person concerned. If the person persists, stop the person from working and report the matter to the Project Manager and the Principal Contractor Supervisor immediately.

No person shall damage, alter, remove, render ineffective, or interfere with anything that has been provided for the protection of the site, or for the health and safety of persons.

No person under the influence of alcohol, drugs or medication (in state of intoxication) or any other condition that may render him incapable of controlling himself or of other persons under his charge shall be allowed to enter the site.

All safety and warning signs must be obeyed at all times.

Entering or leaving the Site may only be done via the official designated walkways, do not take short cuts. Follow designated walkways to and from your work place. Walk, do not run, and be alert for motor vehicle traffic and mobile equipment.

All employees must adhere to the HSE and other site-specific rules which may be issued by the Client or his designated Agent.

If any of the Principal Contractor's employees or his Sub-contractor's employees have transgressed any of the requirements of the HSE Specification; HSE plan or site rules, then the employee may be removed from site and his/her site access revoked. The Principal Contractor must follow a process of disciplinary action which shall include re-training / inducting the employee (at the cost of the Principal Contractor) and provide proof thereof to the Client's site / Project Manager and only upon the satisfaction of the Client's Site / Project Manager will the employee be allowed back on site.

6. MINIMUM ADMINISTRATIVE REQUIREMENTS

6.1 Notification to Commence Construction Work (CR4)

The Principal Contractor must notify the Provincial Director of the Department of Labour in writing before construction work commences. A copy of this notification must be held in the Principal Contractor's health & safety file on site. A copy is also to be provided to the Client.

6.2 Assignment of the Principal Contractor's / Contractors' Responsible Persons to Manage Supervise Health and Safety on Site (CR8 and Section 16)

The Principal Contractor and all Contractors must make supervisory appointments as well as other relevant appointments in writing (as stipulated by the OHS Act and Construction Regulations 2014). See attached Annexure 'A' for more detail and relevant appointments.

6.3 Competence of the Principal Contractor's / Contractors' Appointed Competent Persons

The Principal Contractor's and all Contractors' competent persons for the various risk management portfolios must fulfil the criteria as stipulated under the definition of 'Competent' in accordance with the Construction Regulations (2014). It is required that Principal Contractors submit written declarations confirming the competency of all persons deployed on the project as well as the

mechanical soundness of all construction related equipment and plant.

6.4 Compensation for Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The Principal Contractor and Contractors must also hold proof of workman's compensation assurance registration in the form of a letter of good standing and forward a copy to the Principal Contractor before they begin work on site. A copy should also be available on site. No work will be permitted on the project unless these documents are in place.

6.5 Health and Safety Organogram

The Principal Contractor must prepare an organogram, outlining the site health & safety management structure and appointed competent persons. In cases where appointments have not been made, the organogram shall reflect the intended positions. The organogram must be updated when there are changes in the Site Management Structure, and dated accordingly. All HSE appointments are to be indicated on the organogram, clearly identifying the individual as well as providing contact details.

6.6 Preliminary Hazard Identification and Risk Assessments (CR 9)

Every Contractor performing construction work shall, before the commencement of any construction work or work associated with the aforesaid construction work and during such work, cause a Risk Assessment to be performed by a competent person, appointed in writing, and the Risk Assessment shall form part of the Health and Safety Plan and be implemented and maintained as contemplated in the Construction Regulation 9(1).

The following risk management process is to be adopted on the project:

- (1) A Contractor must, before the commencement of any construction work and during such construction work, have Risk Assessments performed by a competent person appointed in writing, which Risk Assessments form part of the health and safety plan to be applied on the site, and must include—
 - (a) The identification of the risks and hazards to which persons may be exposed to;
 - (b) An analysis and evaluation of the risks and hazards identified based on a documented method;
 - (c) A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
 - (d) A monitoring plan; and
 - (e) A review plans.
- (2) A Contractor must ensure that as far as is reasonably practicable, ergonomic related hazards are analyzed, evaluated and addressed in a Risk Assessment.
- (3) A Contractor must ensure that all employees under his or her control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and or control measures before any work commences, and thereafter at the times determined in the Risk Assessment monitoring and review plan of the relevant site.
- (4) A Principal Contractor must ensure that all Contractors are informed regarding any hazard

that is stipulated in the Risk Assessment before any work commences, and thereafter at the times that may be determined in the risk assessment monitoring and review plan of the relevant site.

- (5) A Contractor must consult with the health and safety committee or, if no health and safety committee exists, with a representative trade union or representative group of employees, on the monitoring and review of the risk assessments of the relevant site.
- (6) A Contractor must ensure that copies of the Risk Assessments of the relevant site are available on site for inspection by an inspector, the Client, the Client's Agent, any Contractor, any employee, a representative trade union, a health and safety representative or any member of the health and safety committee.
- (7) A Contractor must review the relevant Risk Assessment—
 - (a) Where changes are effected to the design and or construction that result in a change to the risk profile; or
 - (b) When an incident has occurred.

The Issue Based Risk Assessment shall include, at least:

- The identification of the risks and hazards to which persons may be exposed to
- The analysis and evaluation of the risks and hazards identified
- A documented plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified
- A monitoring plan
- A documented review plan
- Based on the Risk Assessments, the Contractor must develop a set of site-specific OH&S rules and operating procedures that will be applied to regulate the OH&S aspects of the construction. (See annexure "B" for SWMS minimum requirements)
- A copy of the Risk Assessment must be provided to the Client for review.
- The Contractor has consulted with the Health & Safety Committee and in the absence thereof, a representative group of employees, in conducting the risk assessments, monitoring as well as during the review process.
- The Contractor will ensure that no person or employee may enter the site without undergoing comprehensive induction training (proof of which must be retained by the employee) in respect to the risks and hazards present at the time, and where required, will ensure the appropriate use of the correct PPE.
- The Principal Contractor or Contractor has ensured that all employees under his control have been informed, instructed and trained by a competent person in respect to the hazards and risks identified.
- The process as contemplated above is included in the Health & Safety Plan.
- No Generic Risk Assessments will be accepted and approved.

6.7 General Record Keeping

The Principal Contractor and all Contractors must keep and maintain Health and Safety records to demonstrate compliance with these Specifications, with the OHS Act 85/1993, and with the Construction Regulations (2014). The Principal Contractor must also ensure that all records of incidents/injuries, emergency procedures, training, planned maintenance inspections, monthly

Contractor audits, etc. are kept in the health & safety file(s) held in the site office. The Principal Contractor must ensure that every Contractor keeps its own health & safety file, maintains the file and makes it available on request (the file must include the Contractor's health & safety plan). Such Contractor safety files must be audited by the Principal Contractor.

6.8 Injury /Incident Reporting and Investigation

Injuries are to be categorized into first aid; medical; lost time injury (LTI); and fatal injuries. When reporting injuries to the Client, these categories shall be used.

The Principal Contractor must investigate all injuries, and where applicable with an Annexure 1 report being completed and filed. All Contractors must report on the 4 categories of injuries to the Principal Contractor at least monthly. Contractors must investigate injuries and incidents involving their employees and forward a copy of the annexure 1 investigation report to the Principal Contractor forthwith. The Principal Contractor must report all injuries to the Client in the form of an injury report, at least monthly. The Contractor must submit his incident reporting and investigation protocols for review by the Client.

All incidents reportable in terms of the provisions of Section 24 of the OHS Act, 1993 must be reported to the local Dept. of Labour in the prescribed manner within 14 days. (Note: No reports will be made to third parties without the Client being notified of such intentions)

(Department of Labour contact number Polokwane Office: [015 299 5000](tel:0152995000))



All Contractors must immediately report all incidents where an employee is injured on duty to the extent that he/she

- Dies
- Becomes unconscious
- Loses a limb or part of a limb
- Is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed

Or where:

- A major incident occurred
- The health or safety of any person was endangered
- Where a dangerous substance was spilled
- The uncontrolled release of any substance under pressure took place
- Machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
- Machinery ran out of control

The Contractor is required to provide the Client with copies of all internal and external accident/incident investigation reports including the reports contemplated above within 7 days of the incident occurring

6.9 Permits and way leaves

Permits may include the following:

- Closing of public roadways and walkways
- Demolition
- Way Leaves
- Permit to work night Shift
- Hot work Permits

The Principal Contractor must manage and co-ordinate these permit procedures.

6.10 Preparation of Health & Safety Documentation (CR 7)

It is the duty of the Principal Contractor to ensure that all documentation that is required are kept or generated during the construction process and must be consolidated into one set of documents that must be handed over to the Client upon completion of the construction work. This should include instructions from the design team that will be required for the continued safe operation and maintenance of this new structure(s).

The following health and safety deliverables should be reviewed during the tender submission process:

REQUIREMENT	TIMING
H&S DELIVERABLES	
<ul style="list-style-type: none">● The Contractor must submit all deliverables as per the attached list of deliverables. These must be submitted individually under separate cover sheets for review and approval by the Client’s project manager or designate.● The submissions will be commented on and returned to the Contractor for updating and re-submission. Access to site will not be granted unless these submissions have been provisionally approved.● On approval of deliverables the Contractor may gain access to the works, but has a period of 2 weeks in which to have the submissions finally approved for construction.● If this does not occur in the 2 week period the Client reserves the right to suspend all work until such time as the Safety Agent is satisfied with all H&S submissions.	Prior to commencement with construction.

(See annexure “C” with regard to detailed compliance submissions)

6.11 Offences and Penalties

Penalties may be imposed for on-going non-compliance with the provisions of the Client’s health & safety specifications and the Principal Contractor’s Health & Safety Plan. Non-compliances noted during safety agent audits and visits will be categorized into three levels based on severity. These will be as follows:

- Life threatening situations -a prohibition notice will be issued. This activity must be seized immediately and corrective measures taken.
- Serious injury possible – a contravention notice will be issued with a time frame for compliance

stipulated. Failure to comply within the time frame may result in a financial penalty per non-compliance item per day that the non-compliance persists.

- Minor or no injury may result – an improvement notice will be issued. The corrective measures stipulated in the report / notice must be taken.

The methodology used to decide the above levels will be directly linked to the Risk Assessments of the Principal Contractor and Contractors (i.e. high, medium and low). In the absence of a Risk Assessment the decision of the Safety Agent will be final.

6.13 Principal Contractor / Contractor - Competency Assessment

In order to ensure this, the Principal Contractor must demonstrate to the Client that it has a suitable and sufficiently documented OHS Plan and that its Contractors have the necessary competencies and resources to perform the construction work safely.

The Principal Contractor and Contractors must therefore submit the following documentation for perusal and verification by the Client and Principal Contractor respectively:

- Management Structure as envisaged at tender (organogram);
- Registration certificate with the Compensation Commissioner or FEM;
- Proof of management training on the Occupational Health & Safety Act and other related training;
- Example copy of previous Safety Committee Meeting Minutes and Incident Investigation report (from a previous project);
- Any previous convictions under the OHS-Act;
- Your Company's previous two years injury claims as reported to your workman's compensation insurer;
- Your company's approach to co-ordination of health & safety – do you employ safety officers, etc.? If not, what alternative arrangements are used?

The Principal Contractor and all Trade Contractors' competent persons for the various risk management portfolios will fulfill the criteria as stipulated under the definition of 'Competent' in accordance with the Construction Regulations 2014. This will be specific to the following appointments. (Refer to annexure "D" for an outline of legal assignments)

The Principal Contractor shall ensure that all their appointees are made aware of their accountabilities & responsibilities in terms of their appointment, and to advise and assist these appointees in the execution of their duties.

Appointment letters and competency certificates which is signed by the 16.2 appointee, which refers to the relevant training certificates and proof of experience of appointees must be submitted with the Health and Safety Plan.

All minimum required training is to be provided by accredited training service providers. Where legislation requires formal certification in lieu of experience then such proof of competency is to be provided by the Contractor.

6.14 Costs for OHS -Compliance (CR 7)

All parties bidding to work on this construction project must ensure that they have made adequate

provision for the cost of complying with these specifications as well as with the OHS-Act 1993 and incorporated Regulations as a minimum requirement in their tender documentation. It must also be taken into consideration that time is money.

That implies that sufficient time must be allowed for the implementation of the minimum OHS standards. No additional claims will be entertained at a later stage if a compliance requirement was prescribed in the OHS-Act, 1993 and incorporated regulations or this specifications document. Refer to annexure "E" of this document for a breakdown of possible safety costs.

6.15 Contractors' Health & Safety Plans [Construction Regulations 7(1)]

6.15.1 Introduction:

Under the Construction Regulations (2014), the Principal Contractor is required to develop the Health and Safety Plan before work commences on site and to keep it up to date throughout the Construction Phase. The degree of detail required in the Health and Safety Plan for the Construction Phase and the time and effort in preparing it should be in proportion to the nature, size and level of Health and Safety risks involved in the project. Projects involving minimal risks will call for simple, straightforward plans. Large projects or those involving significant risks will need more detail.

All registers and Agreements with Mandatary documents must be signed before commencement on site. **Should any Contractor or Sub-Contractor not be able to comply with all the necessary site safety documentation, an independent Safety Consultant will be appointed by the Client to assist at their own cost?**

6.15.2. What should the construction Health & Safety plan cover?

The Construction Health and Safety Plan should set out the arrangement for ensuring the Health and Safety of everyone carrying out the construction work and all others who may be affected by it. The Plan must demonstrate Management's commitment to safety and must include how safety responsibilities are assigned to different roles within the organization.

6.15.3 What should be addressed as key requirements in the Construction Health & Safety Plan?

- Provide a systematic method of managing hazards according to risk priority, and must include all mobilization and site set up activities as per the Baseline Risk Assessment.
- Methodology/ Scope of Works of what work is to be undertaken on site.
- Anticipated risks and hazards and mitigating controls to be implemented to reduce the risk.
- Competency of Employees and proof of training
- Resources/ Equipment to be used on site

6.16 Communication and Management of the work

Site Safety committee meetings will be held monthly or as determined by the associated risks on site. This does not preclude the requirement that each Contractor will implement and maintain their own safety meetings where applicable.

- In addition to the above, communication may be directly to the Client or his appointed Agent, verbally or in writing, as and when the need arises.
- Consultation with the workforce on OH&S matters will be through their Supervisors, OH&S

- Representatives, the OH&S committee and their elected Trade Union Representatives, if any.
- The Site Manager or his Site Safety Officer will be responsible for the dissemination of all relevant OH&S information to the other Contractors e.g. design changes agreed with the Client and the Designer, instructions by the Client and/or his/her agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.
- A due diligence, one page report must be completed (and retained on file) by the Contractor every week after he has performed a site inspection. This document will be referenced at each formal site safety meeting and should be communicated via e mail with Vunwe sherq services.
- The Contractors will be required to conduct Toolbox Talks with their employees on a weekly basis and records of these must be kept on the OH&S File. Employees must acknowledge the receipt of Toolbox Talks which record must, likewise be kept on the OH&S File.
- The Contract Manager or suitable designate of each appointed Contractor will be required to attend all Site OH&S meetings.

7. CLIENT IDENTIFIED HAZARDS AND POTENTIALLY HAZARDOUS SITUATIONS

7.1 Client identified Hazards

7.2

The following items have been identified by the Client as potential hazards for this construction work and must be incorporated in the Contractor's site-specific Risk Assessments.

- Wind and dust. (Site is in a build up area)
- Working with, around and above other Contractors
- Working on and from scaffolding and ladders
- Working at Heights
- Edge Barricading (Deck Edges and openings)
- Roof work – structural and roof covering. Placement of roof sheeting.
- Lifting operations including mobile plant use, lifting tackle and other fixtures
- Electrical installation (temporary and permanent)
- Deep excavation
- Bulk earth work
- Slip, trip and fall
- Manual handling
- Collapsing trenches
- Electrocutation
- Moving objects
- Heat stress
- Interface with the public – roads and pavements
- Portable electrical tools and extension leads
- Explosive powered tools
- Power tools (jackhammers, core drilling, high pressure air and water jets, etc.)

7.3 Unforeseeable Hazards

The Principal Contractor must immediately notify other Contractors as well as the Client, in writing, of any hazardous or potentially hazardous situations that may arise during the performance of construction activities so that the necessary precautions may be taken.

During the course of the Project, the Client or appointed Agent may advise of any new exposures relating to change of scope or design. These will be communicated in writing.

8. SITE OPERATIONAL REQUIREMENTS

8.1 Construction Health & Safety Officer (CR8.5)

- A Contractor must, after consultation with the Client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time registered construction health and safety officer with **SACPCMP** in writing to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive.
- No Contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint has the necessary competencies and resources to assist the Contractor to conduct at least the following duties:
- Health & safety audits and inspections including administrative and physical audits of all Contractors' health & safety plans, files and activities, and record findings in the form of audit reports to be kept in the health & safety file;
- Maintain the Principal Contractor's Health & Safety Plan and file;
- Investigate near misses, incidents and injuries;
- Co-ordinate the function of reviewing the hazard identifications and risk assessments;
- Assisting with Method Statements and checking whether the responsible persons follow the safe work procedures.

8.2 Health and Safety Representative(s) (Section 17)

The Principal Contractor and all Contractors must ensure that Health and Safety Representative(s) are appointed under consultation with the employees and trained/informed to carry out their functions. The appointments must be in writing. The Health and Safety Representatives could carry out monthly inspections, keep records and report all findings to the responsible person or safety officer forthwith and at monthly health & safety meetings. At least one Health & Safety Representative is required by all Employers. (Appoint one for the first 20 employees and an additional one for each group of up to 50 employees on sit.

8.3 Health and Safety Committees (Section 19)

The Principal Contractor must ensure that project health and safety committee meetings are held monthly with minutes kept. Meetings must be chaired by the Principal Contractor's Responsible Person [CR 8 (1)]. All Contractors' Responsible Persons and Health & Safety Representatives must attend the Principal Contractor's monthly health & safety meetings. The Principal Contractor's appointed supervisors must attend health & safety meetings.

The following topics must be tabled at meetings: management appointments; Sub-contractor legal issues; injuries and incidents; hazards and Risk Assessments (present and foreseen); method statements; planned inspections and registers/record keeping, leading and lagging indicators etc. The committee chairperson must sign off minutes.

8.4 Health and Safety Training

8.4.1 Induction

The Principal Contractor must ensure that all site personnel undergo a site-specific health & safety induction training session before any worker starts work. A record of attendance shall be kept in the health & safety file. The Principal Contractor will be required to induct all Contractors' employees. Workers must carry some sort of proof of inductions on their person.

8.4.2 Awareness

The Principal Contractor must ensure that, on site, periodic toolbox health & safety talks take place at least once every week. These talks should deal with risks relevant to the construction work at hand. Records of attendance must be kept in the health & safety file. Daily pre-task crew talks and DSTI's are to be conducted by the appointed CR 8(7) supervisors.

8.4.3 Competence

All competent persons must have the knowledge, experience, training, and qualifications specific to the work they have been appointed to supervise, control, and carry out. This must be assessed on a regular basis e.g. training, evaluation, and periodic audits by the Client, progress meetings, etc. The Principal Contractor is responsible to ensure that competent Contractors are appointed to carry out construction work.

8.5 Health & Safety Audits, Monitoring and Reporting

A monthly compliance audit will be done by Client (Construction Regulation 5.1(O), through their appointed safety agent.

OH&S Agent will be conducting the audit to comply with Construction Regulations to ensure that the Contractor has implemented, and is maintaining the agreed and approved OH&S Plan.

The Principal Contractor is obligated to conduct monthly audits on all Contractors appointed by him and keep audit reports in its health & safety file. Contractors have to audit their sub- Contractors and keep records of these audits in *their* health & safety files, made available on request.

8.6 Emergency Procedures

The Principal Contractor must prepare a detailed Emergency Procedure / Evacuation Plan prior to commencement on site. The procedure/plan must take into consideration the risks and potential incidents posed by work to be carried out on this project.

The procedure must detail the response plan including the following key elements:

8.6.1 List of key competent personnel;

8.6.2 Details of emergency services;

8.6.3 Actions or steps to be taken in the event of the specific types of emergencies;

Emergency procedure(s) shall include, but shall not be limited to: fire; chemical spills; injury to employees; damage to material/equipment/plant; use of hazardous substances; bomb threats;

major incidents/injuries; evacuation; etc. The Principal Contractor must advise the Client in writing forthwith, of any emergency situations, together with a record of action taken/action to be taken. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and made available to site personnel.

8.7 First Aid Boxes and First Aid Equipment (GSR 3)

The Principal Contractor and all Contractors shall appoint First Aider(s) in writing. The Principal Contractor must appoint at least one First Aider who must be certificated. Copies of valid certificates are to be kept on site. The Principal Contractor must provide at least 1 (one) first aid box, adequately stocked at all times. All Contractors with more than 5 employees shall supply their own first aid box. Contractors with more than 10 employees must have their own trained, certified first aider on site at all times.

The Contingency Plan of the Contractor must include the arrangements for speedily and promptly transporting injured persons to a medical facility or securing emergency medical help to persons that may require it.

8.8 Personal Protective Equipment (PPE) and Clothing

The Principal Contractor and Contractors must ensure that all site workers are issued with and wear the appropriate PPE as indicated in their Risk Assessments.

The Principal Contractor and Contractors must make provision and keep adequate quantities of SABS approved PPE on site at all times according to their Risk Assessments. The above procedure applies to Contractors and their Sub-contractors, as they are all Employers in their own right and must therefore supply their own PPE.

Labour only Contractors appointed by the Principal Contractor become the responsibility of the Principal Contractor unless otherwise instructed. The Contractor must compile a detailed PPE matrix for the various disciplines and tasks.

8.9 Occupational Health and Safety (OHS) Signage

The Principal Contractor must provide adequate on-site OHS signage. Including but not limited to: 'no unauthorized entry', 'report to site office', direction to site office, 'beware of overhead work', 'hard hat area' – to be posted up at all site entrances. Signage must also be posted up on site in strategic locations e.g. access routes, stairways, entrances to structures and buildings, scaffolding, and other potential risk areas/operations such as exposed edges and openings and trenches/excavations where persons are at work. Health & safety signage must be well maintained including weekly inspections, cleaning, replacement and repair.

8.10 Public and Site Visitor Health & Safety

Public walkways and roadways must be kept clean and free of excessive construction materials so as to prevent a negative impact on the public. Roadways and walkways will have to be cleaned on a regular basis – daily inspections to be conducted by the Principal Contractor with action to be taken without delay.

Site visitors must be briefed on the hazards they may be exposed to as well as what measures are in place or should be taken to control these hazards. As per the Construction Regulations, a record

of these 'inductions' must be kept on site. It is advised that a visitor book with a site rules leaflet be kept at the gate or at reception/site office and all visitors to be directed to such point where they must read through the site safety information and sign the visitor book. All hoarding lay out drawing are to be strictly adhered to.

8.11 Minimum Environmental Requirements

All Contractors shall, comply with the following environmental protection procedures and requirements:

8.11.1 Water Use and Disposal:

- 8.11.1.1 No water hoses may be used on site unless they are fitted with nozzles that can prevent flow when not being used. Leaks in hoses are not permitted.
- 8.11.1.2 Water from fire hydrants may not be used without prior authorization from the Client.
- 8.11.1.3 Contaminated water may not be disposed of into the effluent drainage system without the prior authorization of the Engineer.
- 8.11.1.4 Contaminated water may not be discharged into storm water drains under any circumstances.
- 8.11.1.5 Contaminated water that cannot be disposed of via the site effluent system must be removed from site by a recognized waste disposal company and disposed of as per relevant legislation.

8.11.1 Storm Water Drains:

- 8.11.1.1 Nothing other than clean uncontaminated water may be discharged into the site storm water drains.
- 8.11.1.2 In the event of pollutants accidentally entering the storm water drains, the Supervisor shall be notified immediately and the removal of the contaminants from the storm water system and their proper disposal shall be commenced without delay.
- 8.11.1.3 In the event that contamination has reached the outside of the site, the appropriate local authorities shall be notified and full scale cleanup operations shall be commenced immediately.

8.11.2 Sewerage System

- 8.11.2.1 Nothing shall be discharged into the site sewerage systems except domestic waste water.
- 8.11.2.2 Authorization shall be obtained from the site manager before connecting any temporary toilet or ablution facilities into the site sewerage system.

8.11.3 Solid Waste Disposal

- 8.11.3.1 Contractors shall be responsible for the safe and proper disposal of solid waste generated by their activities.
- 8.11.3.2 Hazardous waste material shall only be disposed of via approved and recognized

waste disposal companies. Disposal certificates shall be obtained and copies kept in the safety file.

8.11.4 Discharges to Atmosphere

8.11.4.1 Nothing will be burnt on site.

8.11.4.2 Any process which causes dust will be assessed prior to the work starting and authorization to work obtained before starting work.

8.11.5 Reporting of Environmental Incidents

8.11.5.1 Environmental Incidents shall be reported without delay and at the latest before the end of the shift during which the incident occurred.

8.11.5.2 Spillages or incidents that could cause pollution outside of the boundaries of site shall be reported immediately in order for prompt preventative measures to prevent or reduce contamination of the environment.

8.12 Access to Site

The Principal Contractor or Site Manager will establish site access rules and implement and maintain these throughout the construction period. Access control must include the rule that non-employees will not be allowed on site unaccompanied.

Access to site will be restricted to persons working on site that attended a site specific safety induction BEFORE starting work on site. Safety induction cards must be issued and carried by all persons at all times while on site. Visitors to site must be inducted and accompanied by a safety representative during their visit on site.

8.12.1 Security on Site

Both the Client and the Principal Contractor have a duty in terms of the OHS Act 85/1993 to do all that is reasonably practicable to prevent members of the public and site visitors from being affected by the construction activities. The site must be suitably hoarded at all times with a limited number of access points which must be controlled to ensure safe access and egress.

The access points must be kept closed and must have the adequate notices displayed.

8.13 Hours of Work

Weekend and after-hours work may only be done with the prior approval of the Clients Agent. Approval shall be subject to:

8.13.1 Competent supervision being on site throughout the duration of the weekend/after-hours work.

8.13.2 The Contractor having a demonstrated history of adequate, problem free control and supervision of the work during normal working hours.

8.13.3 Have fatigue management plan in place

8.14 Lighting

The Contractor is to ensure that wherever work is performed where the lighting conditions are less than the minimum requirement as defined in Environmental Regulation 3 and relative schedules, that this is supplemented with additional lighting capacity to ensure that all works contemplated can be conducted safely. Portable Lights must be fitted with a robust non- hygroscopic non-conducting handle and the lamp must be protected by a robust and weather proof guard. The cable lead-in must withstand rough handling. Registers must be maintained for each piece of equipment and findings of regular inspections must be entered into a register. Inspections must concentrate on plug, cord, switch and any obvious faults. When used in wet/damp conditions, it must be protected as for portable electrical tools, above.

9 PHYSICAL REQUIREMENTS

9.1 Erection of Hoarding

- All hoarding operations on site are to comply with the issued drawings.
- A detailed hoarding maintenance plan is to be drafted and submitted for approval.

9.2 Traffic Diversions

Provision by means of a method statement must be made for any traffic diversions to conduct your construction activities as well as any loading and off-loading of materials and waste.

The method statement must include a drawing indicating traffic signage and the like. Please refer to paragraph 4.9 – Permits, of this specification. Permission must be obtained from the local Metropolitan Council’s Traffic Department to use the site entrance for heavy vehicles on site.

9.3 Edge Protection, Barricading and Penetrations (CR 10)

A Contractor must ensure that—

- All unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;
- No person is required to work in a fall risk position, unless such work is performed safely as contemplated in sub-regulation (2);
- A detailed Fall Rescue Plan will be drafted and implemented on site.
- The above-mentioned plan will be demonstrated on instruction of the Clients Agent.

Note: Danger tape does not represent barricading.

9.4 Housekeeping (CR 27)

The Contractor to ensure that:

- Housekeeping is continuously implemented
- Scrap, waste & debris are removed regularly
- Materials placed for use are placed safely and not allowed to accumulate or cause obstruction to free movement of pedestrian and vehicle traffic

- Waste & debris not to be removed by disposing from heights, but by chute or crane
- Where practicable, construction sites are fenced off to prevent access of unauthorised persons
- An unimpeded work space is maintained for every employee
- Every workplace is kept clean, orderly and free of tools etc. that are not required for the work being done.
- As far as is practicable, every floor, walkway, stair, passage and gangway is kept in good state of repair, slip and trip, skid-free and free of obstruction, waste and materials
- The walls and roof of every indoor workplace is sound and leak-free
- Openings in floors, hatchways, stairways and open sides of floors or buildings are barricaded, fences, boarded over or provided with protection to prevent persons from falling.

9.5 Stacking & Storage (Construction Regulation 28)

- The Contractor/Employer must ensure that a competent person is appointed in writing to supervise all stacking and storage on a construction site.
- Adequate storage areas are provided and demarcated
- The base of any stack is level and capable of sustaining the weight exerted on it by the stack
- The items in the lower layers can support the weight exerted by the top layers.
- Cartons and other containers that may become unstable due to wet conditions are kept dry
- Pallets and containers are in good condition and no material is allowed to spill out.
- The height of any stack does not exceed 3X the base unless stepped back at least half the depth of a single container at least every fifth tier or the approval of an inspector has been obtained to build the stacks higher with the aid of an appropriate machine.
- The articles that make up a single tier are consistently of the same size, shape and mass
- Structures for supporting stacks are structurally sound and able to support the mass of the stack
- No articles are removed from the bottom of the stack, but from the top tier first
- anybody climbing onto a stack can and does so safely and that the stack is sufficiently stable to support him/her
- Stacks that are in danger of collapsing are broken down and restacked
- Stability of stacks are not threatened by vehicles or other moving plant and machinery
- Stacks are built in a header and stretcher fashion and that corners are securely bonded
- Persons climbing onto stacks do not approach unguarded moving machinery or electrical installations

9.6 Fire Extinguishers and Fire Fighting Equipment (CR 29)

The Principal Contractor and relevant Contractors shall provide adequate, regularly serviced firefighting equipment located at strategic points on site, specific to the classes of fire likely to occur. The appropriate notices and signs must be posted up as required. A minimum of four 9kg dry chemical powder fire extinguishers must be available in and around the site office establishment and stores. Wherever 'hot work' is taking place, additional fire extinguishers must be on hand. Contractors are responsible for ensuring compliance with hot work procedures and must be in possession of method statements detailing the safe working procedures. 'Hot work' includes all work that generates a spark or flame and may therefore result in a fire.

9.7 Fall Protection – Fall Risk Positions (Construction regulation 10.)

A Contractor must—

- Designate a competent person to be responsible for the preparation of a fall protection plan; ensure that the fall protection plan contemplated in paragraph (a) is implemented, amended where and when necessary and maintained as required; and take steps to ensure continued adherence to the fall protection plan.
- A fall protection plan contemplated in sub regulation (1), must include—
- A Risk Assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;
- The processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;
- A programme for the training of employees working from a fall risk position and the records thereof;
- The procedure addressing the inspection, testing and maintenance of all fall protection equipment; and
- A rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

A Contractor must ensure that a construction manager appointed under regulation 8(1) is in possession of the most recently updated version of the Fall Protection Plan.

Fall prevention and fall arrest equipment are —

- Approved as suitable and of sufficient strength for the purpose for which they are being used, having regard to the work being carried out and the load, including any person, they are intended to bear; and
- Securely attached to a structure or plant, and the structure or plant and the means of attachment thereto is suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who could fall; and
- Fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.

9.8 Scaffolding (CR 16 / SANS 10085 - 1)

The Principal Contractor must ensure that all scaffolding operations are carried out under the supervision of a competent person and that all erectors, team leaders and inspectors are competent to carry out their work. The Principal Contractor must ensure that scaffolding when used and erected, complies with the safety standards as per SANS 10085-1:2004

9.9 Roof work

Where roof work is being performed on a construction site, the Contractor must ensure that; in addition to the requirements set out in sub-regulations (2) and (4), it is indicated in the fall protection plan that—

- The roof work has been properly planned;
- The roof erectors are competent to carry out the work;
- No employee is permitted to work on roofs during inclement weather conditions or if any conditions are hazardous to the health and safety of the employee;

- All covers to openings and fragile material are of sufficient strength to withstand any imposed loads;
- Suitable and sufficient platforms, coverings or other similar means of support have been provided to be used in such a way that the weight of any person passing across or working on or from fragile material is supported; and
- Suitable and sufficient guard-rails, barriers and toe-boards or other similar means of protection prevent, as far as is reasonably practicable, the fall of any person, material or equipment.
- That no work is carried out during inclement weather (Strong wind and rain)
- What safety measures will be implemented, to ensure the safety of roof workers as well as persons working below the roof work (due to removal/placement of roof tiles)

9.10 Severe Weather Plan

- 9.10.1 When high wind creates a hazard to craftsmen or work being performed, i.e., instability in elevated areas, limited visibility due to dust or particles in the air, unmanageable materials, etc., supervision will stop work activities, re-assign work and area, properly store and secure material which might blow away, injure or damage, lower/tie down crane booms and obtain further instruction from Site Management.
- 9.10.2 When rain creates a hazard to craftsmen on work being performed, i.e., un-stable footing conditions due to slippery structural steel, muddy and flooded work environments, unstable trenches or excavations, poor visibility due to rain or eye protection, supervision will stop specific work due to hazard, re-assign work duties and/or areas, and obtain further instructions from Project Management.
- 9.10.3 All scaffolding equipment and lifting equipment to be inspected and proclaimed safe to use or rectified as to be safe to use after any inclement weather. Signage must be posted to indicate the status of the scaffolding.

9.11 Structures (Construction Regulation 11)

The Contractor will ensure that in terms of the Construction Regulations

- (1) A Contractor must ensure that—
- (a) All reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work;
 - (b) No structure or part of a structure is loaded in a manner which would render it unsafe; and
 - (c) All drawings pertaining to the design of the relevant structure are kept on site and are available on request to an inspector, other Contractors, the Client and the Client's Agent or employee.
- (2) An owner of a structure must ensure that—
- (a) Inspections of that structure are carried out periodically by competent persons in order to render the structure safe for continued use;
 - (b) That the inspections contemplated in paragraph (a) are carried out at least once every six months for the first two years and thereafter yearly;
 - (c) The structure is maintained in such a manner that it remains safe for continued use;
 - (d) The records of inspections and maintenance are kept and made available on request to an inspector.

That the structure on/in, which works, are to be performed has been inspected by a certified structural engineer declaring the structure to be safe for construction, demolition or renovations work processes.

Steps are taken to ensure that no structure becomes unstable or poses a threat of collapse due to demolition and construction work being performed on it, or in the vicinity of it.

No structure is overloaded to the extent where it becomes unsafe

He/she has received from the designer the following information:

- Information on known or anticipated hazards relating to the construction/demolition work and the relevant information required for the safe execution of the construction/demolition work
- A geo-scientific report (where applicable)
- The loading the structure is designed to bear
- The methods and sequence of the construction/demolition process
- All drawings pertaining to the design are on site and available for inspection
- The structural engineer shall carry out inspections at appropriate and sufficient intervals of the construction work involving the design of the relevant structure to ensure compliance with the design and record the results of these inspections in writing. These records shall be maintained on the relevant site safety files as per Construction regulation 11(2)(d).

10 PLANT, MACHINERY AND EQUIPMENT

10.1 Construction Vehicles & Mobile Plant (CR 23)

“Construction Plant” includes all types of plant including but not limited to, cranes, piling rigs, excavators, construction vehicles, compaction plant, batch plants and lifting equipment.

The Principal Contractor must ensure that such plant complies with the requirements of the OHS Act, Construction Regulations 2014 and any manufacturer’s specifications. The Principal Contractor and all relevant Contractors must inspect and keep records of inspections on construction vehicles and mobile plant used on site. Only authorised/competent persons in the possession of the necessary training certificates and in possession of a certificate of medical fitness may operate construction vehicles and mobile plant. Appropriate PPE and clothing must be provided and maintained in good condition at all times. Reverse alarms must be installed on construction vehicles i.e. trucks, digger loaders, etc. Vehicles and pedestrian traffic must be safely separated, preventing any unnecessary interfacing.

All construction vehicles and mobile plant has to be tagged and a full-service history of these vehicles and plant must be available on site.

Any vehicle or mobile plant using any public road must be roadworthy and carry a certificate proving this, likewise any operator of such construction vehicle or mobile plant will have to carry the necessary driver’s license.

10.2. Bulk Earthworks and the Haulage of ground

Site preparation for earthworks shall be designed, planned and executed in accordance with engineers’ design.

The effect of earthworks on neighbouring structures, services, etc., shall be analysed (for both short- and long-term effects) and detrimental effects shall be avoided or appropriate measures taken to safeguard the integrity of the item in question. Similarly, the effects of dewatering or disturbance of the existing geohydrological conditions as a result of earthworks on neighbouring structures, services, etc., shall be taken into account.

Examples are:

- Change in horizontal earth pressure on foundations (especially piled foundations) may turn out to be unacceptable
- Damage to foundations and structures as a result of differential settlements caused by lowering and raising of ground water level, placement of fill or other surcharge excavation and horizontal soil movement
- Damage to foundations and structures by vibrations caused by earth moving equipment and heavy traffic.
- Care shall be taken in removing/planting trees and shrubs which could affect the water table, which in turn may affect adjacent structures.

10.3 Pressure Equipment and Gas Bottles (PE Regulations and CR 23)

The Principal Contractor and all relevant Contractors shall comply with the Pressure Equipment Regulations, including:

- Providing competency and awareness training to the operators/users;
- Providing the relevant PPE and clothing;
- Inspect equipment regularly (every month) and keep records of inspections;
- Providing appropriate firefighting equipment (Fire Extinguishers) on hand;
- Oxygen and acetylene bottles must be secured in an upright position, must not show signs of corrosion or damage and must have flash back arrestors fitted on both bottle and torch.

10.4 Hired Plant and Machinery

The Principal Contractor shall ensure that any hired plant and machinery used on site is safe for use and complies with the minimum legislated requirements. The necessary requirements as stipulated by the OHS Act and Construction Regulations 2014 shall apply.

The Principal Contractor shall ensure that operators hired with machinery are competent and that certificates are kept on site in the health & safety file.

Any load test requirements and inspections in terms of legislation must be complied with and copies of load test certificates and inspections must be kept in the health & safety file. All relevant Contractors must ensure the same.

10.5 Formwork and Support Work

- The Principal/sub- Contractor to ensure that all form- & support work operations are carried out under the supervision of a competent person who has been appointed in writing.
- The Principal/Sub-I Contractor to ensure that all form / support work drawings pertaining to their design is kept on site and are available if / when requested.
- The Principal/Sub- Contractor to ensure that all form /support work structures are inspected by a

competent person (appointed in writing), immediately before, during & after the placement of concrete and the result of such inspection recorded in a register.

- The Principal /Sub-Contractor to ensure that form- / support work is erected in such a way that on completion of the deck, a solid handrail is also in place for the safety of persons who has to carry out work on the deck. I.e. steel fixers etc.
- Equipment and material should be handled and transported in such a manner that noise is limited as much as possible i.e. the throwing of equipment from heights will not be tolerated

10.6 Lifting Machines, Tackle and Lifting Operations/ Tower Cranes (DMR 18 / CR 22)

The Principal Contractor and all Contractors shall ensure that lifting machinery and tackle are inspected before use and thereafter in accordance with the Driven Machinery Regulations and the Construction Regulations (Regulation 22).

There must be a competent lifting machines inspector (registered with the Department of Labour, Gazette number 27305) and a competent lifting tackle inspector who must inspect the equipment, taking into account that:

- All lifting machinery and tackle has a safe working load clearly indicated;
- Regular inspection and servicing is carried out (3-monthly inspections and records for tackle and 6-monthly inspections and records for lifting machines);
- Records are kept of inspections and of service certificates;
- There is proper supervision in terms of guiding the loads that includes a trained banks man to direct lifting operations and check lifting tackle and attachments daily;
- Rigging of loads to be done in accordance with acceptable safe work practices;
- Tower crane bases have been designed and finally approved by an engineer before loading such base;
- Annual load test certificates for lifting machines are in place;
- Tower cranes are fitted with wind speed meters and audible alarm/warning lights, crane hooters, and that the crane's load chart is posted up in the crane cab;
- The operators are certified to operate the specific machine (valid certificate to be on site);
- The operators are physically and psychologically fit to work and are in possession of a medical certificate of fitness that is to be available on site.

The Principal Contractor must ensure that safe lifting operations are adhered to. This must include the following:

- Pallets of bricks being lifted by a tower crane or mobile crane may only be lifted when secured in a brick cage or brick net, securing the entire load of bricks to the crane hook;
- Mortar bins, waste bins and any other receptacle must be deemed to be a lifting attachment and must be designed to carry the required load. Such attachments must be on register and inspected every 3 months by the competent lifting tackle inspector;
- Temporary Works may only be lifted by using purpose designed and manufactured lifting tackle – eight-gauge wire and the like is prohibited;
- A competent banks man must be in control of all rigging, slinging and lifting operations and must wear a high visibility vest, be in possession of a two-way radio and make use of a whistle, warning persons of overhead loads. The crane operator may only take commands and signals from the designated bank men;
- Guide ropes (tag lines) must be used when lifting large shutters, long bundles of re-bar and other similar loads. This must be detailed in the Principal Contractor's and Contractors' fall prevention plans.

- Lifting operations must be re-evaluated once wind speeds reach 40 km/h unless otherwise specified by the lifting machine manufacturer.

10.7 Ladders (GSR 13)

The Principal Contractor must ensure that all ladders are inspected daily with monthly records kept; in good safe working order; the correct height for the task; extend at least 1m above the landing; fastened and secured; and at a safe angle. Stepladders must be safe for use, must be the correct height for the task and the top two rungs may not be used. Records of inspections must be kept in a register on site. Contractors using their own ladders must ensure the same.

10.8 Driven Machinery

The Principal Contractor and relevant Contractors must ensure compliance with the Driven Machinery Regulations, which includes carrying out risk assessments on the machines, inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE and relevant clothing, and training those who use machinery.

10.9 Electrical Installations and Portable Electrical Tools (CR 24)

The Client will ensure as far as possible that the Principal Contractor is made aware of the positions of all electrical power lines. The Principal Contractor must notify the Client should it not be sure of the location of any electrical power lines. The Principal Contractor must comply with the Electrical Installation Regulations, the Electrical Machinery Regulations and the Construction Regulations (CR 24).

The Principal Contractor must keep a copy of the Certificate of Compliance (COC) for its electrical power supply. A revised COC is required whenever the installation is altered or changed in any way. All temporary electrical installations must be inspected at least weekly by a competent person appointed in writing.

Portable electrical tools and equipment must be visually inspected daily. Records of inspections must be kept on site (monthly inspection records to be kept after a competent inspector has carried out the monthly check).

10.10 Electrical & Mechanical Lockout

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.

Physical/mechanical lock-out systems shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs.

10.11 Cantilever Loading Platforms

Should these platforms be used, they must carry a design drawing issued by a competent person

indicating the maximum safe workload and the erection and maintenance procedures. The platform must be complete with guardrails and toe boards and must carry a notice indicating the maximum safe workload. Access routes under the loading platforms must be diverted and persons must be protected from the potential material and objects falling. These platforms must be placed on a register and inspected on a weekly basis.

10.12 Waste Chutes

The disposal of rubble and other waste from elevated positions may only be conducted under controlled conditions. Waste chutes must be secured to a scaffold structure, which must in turn be secured to the main building. A person must be designated to take control of waste chute operations, which must include the inspection of the chute on a daily basis. Waste must discharge into an enclosed area (ready fence panels to be used), eliminating the risk of persons being struck by waste material.

10.13 Explosive Actuated Fastening Devices (CR 21)

- (1) No Contractor may use or permit any person to use an explosive actuated fastening device, unless—
- The user is provided with and uses suitable protective equipment;
 - The user is trained in the operation, maintenance and use of such a device;
 - The explosive actuated fastening device is provided with a protective guard around the muzzle end, which effectively confines any flying fragments or particles; and
 - The firing mechanism is so designed that the explosive actuated fastening device, will not function unless —
 - It is held against the surface with a force of at least twice its weight; and
 - The angle of inclination of the barrel to the work surface is not more than 15 degrees from a right angle.

A Contractor must ensure that —

- 10.13.1 Only cartridges suited for the relevant explosive actuated fastening device, and the work to be performed, are used;
- 10.13.2 An explosive actuated fastening device is cleaned and examined daily before use and as often as may be necessary for its safe operation by a competent person who has been appointed for that purpose;
- 10.13.3 The safety devices of an explosive actuated fastening device are in good working order prior to use;
- 10.13.4 When not in use, an explosive actuated fastening device and its cartridges are locked up in a safe place, which is inaccessible to unauthorized persons;
- 10.13.5 An explosive actuated fastening device is not stored in a loaded condition;
- 10.13.6 A warning notice is displayed in a conspicuous manner in the immediate vicinity wherever an explosive actuated fastening device is used; and
- 10.13.7 The issuing and collection of cartridges and nails or studs of an explosive actuated fastening device are—
- 10.13.7.1 Controlled and done in writing by a person having been appointed in writing for that purpose; and
- 10.13.7.2 Recorded in a register by a competent person and that the recipient has accordingly signed for the receipt thereof as well as the returning of any spent and unspent cartridges.

11. OCCUPATIONAL HEALTH

11.1 Industrial Hygiene (exposure to physical and chemical stress factors)

Exposure of workers to occupational health hazards and risks is very common in any work environment, especially in construction. Occupational exposure is a major problem and all Contractors must ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards. Prevent inhalation, ingestion, and adsorption through the skin of hazardous chemical substances.

11.2 Noise Induced Hearing Loss (GNR 307 7th March 2003) refers

Occupational noise emitted by construction machinery and power tools must be controlled as far as possible by implementing engineering solutions such as noise dampening, regular maintenance, servicing and inspection, screening off the noise, and reducing the number of persons exposed. It is generally accepted that all employees on a construction site will be exposed to varying degrees of noise.

In view of this, the Contractor shall ensure full compliance with the above-mentioned regulation; furthermore, provide proof of the relative management process. The Contractor is advised to pay particular attention to section 12 of the "Noise-Induced Hearing Loss Regulation"

11.3 Ergonomics

Ergonomics is the study of how workers relate to their workstations. We advise the Principal Contractor and Contractors to take this into consideration when conducting risk assessments, thereby improving the worker-task relationship, which will in turn improve productivity and reduce chronic conditions such as back strains, joint problems and mental fatigue, amongst others.

11.4 Hazardous Chemical Substances (HCS)

The Principal Contractor must ensure that the use, transport, and storage of HCS are carried out as prescribed in the HCS Regulations. The Principal Contractor and Contractors must ensure that all hazardous chemicals on site have Material Safety Data Sheets (MSDS) on site and the users are made aware of the hazards and precautions that need to be taken when using the chemicals.

The First Aiders must be made aware of the MSDS's and how to treat HCS incidents appropriately. Copies of the MSDS's must be kept in the first aid box and in the store. All containers must be clearly labeled. Flammable substances must be stored separately, away from other materials, and in a well-ventilated area (appropriate cross ventilation). A competent person should be appointed to be in control of this portfolio. Fuel storage tanks must conform to the general environmental legislation and Environmental Management Plan. The necessary safety signage must to be posted up on the tanks – 'no naked flames', 'no smoking'. Two 9kg DCP fire extinguishers must be placed near to fuel tanks, but not within 5m of the tanks. These extinguishers are over and above the minimum four required for the offices and stores.

11.5 Construction Employees' Facilities (CR 30)

The Principal Contractor must supply sufficient toilets (1 toilet per 30 workers), clean, lockable

changing facilities, hand washing facilities, soap, toilet paper, and hand drying material. Waste bins must be strategically placed around site and emptied regularly. Workers must not be exposed to hazardous materials/substances while eating and must be provided with adequate, sheltered eating areas complete with benches and tables. Stores may not double up a change rooms or mess areas.

11.6 Alcohol and other Drugs

No alcohol and drugs will be allowed on site. No person may be under the influence of alcohol or any drug while on the construction site. Any person on prescription medication must inform his/her superior, who shall in turn report this to the Principal Contractor forthwith. Any person suffering from any illness/condition that may have a negative effect on his/her /anyone else's health or safety performance must report this to his/her superior. Any person suspected of being under the influence of alcohol or other drugs must be sent home immediately.

11.7 Reporting on occupational health issues

As per the incident reporting and investigation requirements, it is essential that the Contractor advise the Client on any condition or occurrence where the health of any worker has been affected. Where an occupational health concern has been raised such incident is to be investigated as any other incident.

11.8 Occupational health medicals

Although not a requirement, Contractors are advised to consider the possibility of providing for both entry and exit medicals for all employees. It is however the responsibility of the Principal Contractor to ensure that where legislation requires a medical fitness certificate that such medicals are conducted and records kept in the site safety file. Medicals must be issued as per Annexure 3 document.

12. ANNEXURES

- Annexure A - List of possible legal appointments and assignments
- Annexure B - Safe Work Method Statements, minimum requirement
- Annexure C - Compliance submissions in terms of the Specification
- Annexure D - Sample site safety file index

Annexure A - Assignment of responsible persons

The Principal Contractor must make all management appointments. Below is a list of possible appointments for this project. (Further appointments could become necessary as the project progresses).

No	OHS Ref.	Act	Appointment	Name of Appointee
1	Section 16		Overall Authority and Accountability	
2	Section 16(2)		Assignment of Duties	
3	CR 8(1)		Construction Manager	
4	CR 8(2)		Assistant Construction Manager	
5	CR 8(7)		Construction Supervisor	
6	CR 8(8)		Assistant Construction Supervisor	
7	GMR 2(1)		Supervision of Machinery (not for construction sites)	
8	Section 17		Health and Safety Representative	
9	CR 16(2)		Scaffold Erector, Inspector (separate appointments)	
10	CR 13(1)		Excavation Inspector	
11	GSR 3(4)		First Aiders	
12	CR 29(h)		Fire Equipment Inspector	
13	EMR 10(4)		Portable Electrical Tool Inspector	
14	CR 19(8)(a)		Materials Hoist Inspector	
15	DMR 18(5)		Lifting Machinery and Equipment Inspector	
16	DMR 18(6)		Lifting Tackle Inspector	
17	GSR 13(a)		Ladder Inspector	
18	HCS Reg		Hazardous Chemical Substances Inspector	
19	CR 21(2)(b)		Explosive Actuated Fastening Device Inspector	
20	GSR 3		Emergency Procedure Coordinator	
23	CR 23(j)		Construction Vehicle and Mobile Plant Inspector	
24	CR24(e)		Electrical Installation and Machinery Responsible Person	
25	CR 28(a)		Stacking and Storage Supervisor	
29	DMR 18(11)		Banksman	

CR	=	Construction Regulations
EMR	=	Electrical Machinery Regulations
DMR	=	Driven Machinery Regulations
GMR	=	General Machinery Regulations
ER	=	Environmental Regulations
GSR	=	General Safety Regulations
HCS	=	Hazardous Chemical Substances Regulations

Annexure B - Safe work procedures/method statements required

The hazardous operations listed below have been identified by the Client and must be managed by the Principal Contractor in the form of preparation of method statements / SWP's before such work begins. The onus remains on the Principal Contractor to conduct Risk Assessments and compile method statements for hazardous tasks (Construction Regulations). Contractors appointed by the Principal Contractor will be required to conduct the necessary Risk Assessments and method statements and forward these to the Principal Contractor before such work begins.

Due to the fact that various structures will be constructed with varying engineering designs, structure specific method statements will be required.

No.	METHOD STATEMENT / SWP	DATE APPROVED	DATE LAST REVIEWED
1	Demolition, method statements and demolition plans including the safety thereof		
2	Scaffolding Erection, alteration, dismantling Work thereon Inspections – when and who		
3	Lifting machines and related equip. Erection of equipment, operational procedures (slinging, control of various lifting operations)		
4	Roof work installation/removal of roof tiles, including worker safety methods and procedures while conducting this work		
5	Temporary barricading of exposed edges and elevated walkways (concrete floors, stairways and other)		
6	Movement of construction vehicles and mobile plant across/on public roadways and walkways (including cleaning procedures and road signage)		
7	Temporary Works Erection and dismantling Inspections – when and who. Edge protection strategy		
8	Major concrete work		
9	Cladding, sheeting and other structural steelwork including hot works		
10	Brickwork		
11	Traffic Management		

Annexure C - Compliance submission requirements

The Principal Contractor and Contractors must comply with [where applicable] but not be limited to the requirements tabled below: Prove compliance at audits conducted by the safety agent.

OHS Section/Regulation	Act	Subject	Requirements
Construction. Regulation 4		Notification of intent to commence Construction work	Department of Labour notified Copy of Notice available on Site
General Regulation 4	Admin.	Copy of OH&S Act (Act 85 of 1993)	Updated copy of Act & Regulations on site. Readily available for perusal by employees.
COID Act Section 80		Registration with Compensation Insurer	Written proof of registration/Letter of good standing available on site
Construction. Regulation 5		H&S Specification	H&S Spec received from Client and/or its Agent on its behalf OH&S programme developed & updated regularly
Section 8(2)(d) Construction. Regulation 9		Hazard Identification & Risk Assessment	Hazard Identification carried out/Recorded Risk Assessment and – Plan drawn up/Updated RA Plan available on Site Employees/Sub-Contractors informed/trained
Section 16(2)		Assigned duties (Managers)	Responsibility of complying with the OH&S Act assigned to other person/s by CEO.
Construction Regulations 8(1)		Designation of Person Responsible for Managing of Site	Competent person appointed in writing as Construction Manager with job description
Construction Regulations 8(2)		Designation of Assistant for above	Competent person appointed in writing as Assistant Construction Manager with job description
Construction. Regulation 8(7)		Designation of Person Responsible on Site	Competent person appointed in writing as Construction Supervisor with job description
Construction. Regulation 8(8)		Designation of Assistant for above	Competent person appointed in writing as Assistant Construction Supervisor with job description
Section 17 & 18 General Administrative Regulations 6 & 7		Designation of Health & Safety Representatives	More than 20 employees - one H&S Representative, one additional H&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified in terms of GAR 6 & 7 Meaningful H&S Rep. reports. Reports actioned by Management.
Section 19 & 20 General Administrative Regulations 5		Health & Safety Committee/s	H&S Committee/s established. All H&S Reps shall be members of H&S Committees Additional members are appointed in writing. Meetings held monthly, Minutes kept. Actioned by Management.

Section 24 & General Admin. Regulation 8 COID Act Sect.38, 39 & 41	Reporting of Incidents (Dept. of Labour)	Incident Reporting Procedure displayed. All incidents in terms of Sect. 24 are reported to the Provincial Director, Department of Labour, within 3 days. (Annexure 1)(WCL 1or 2) and to the Client and/or its Agent on its behalf Copies of Reports available on Site Record of First Aid injuries kept
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General Admin. Regulation 9	Investigation and Recording of Incidents	All injuries which resulted in the person receiving medical treatment other than first aid, recorded and investigated by investigator designated in writing. Copies of Reports (Annexure 1) available on Site Tabled at H&S Committee meeting
Construction. Regulation 10	Fall Prevention & Protection	Competent person appointed to draw up and supervise the Fall Protection Plan Proof of appointees competence available on Site Risk Assessment carried out for work at heights Fall Protection Plan drawn up/updated and workers trained Available on Site
Construction. Regulation 10(5)	Roof work	Competent person appointed to plan & supervise Roof work. Proof of appointees competence available on Site Risk Assessment carried out and workers trained Roof work Plan drawn up/updated Roof work inspect before each shift. Inspection register kept Employees medically examined for physical & psychological fitness. Written proof on site
Construction. Regulation 11	Structures	Information re. the structure being erected received from the Designer including: - Geo-science technical report where relevant - The design loading of the structure - The methods & sequence of construction - Anticipated dangers/hazards/special measures to construct safely Risk Assessment carried out Method statement drawn up All above available on Site
Construction. Regulation 16	Scaffolding	Competent persons appointed in writing to: - Erect scaffolding (Scaffold Erector/s) - Inspect Scaffolding weekly and after inclement weather (Scaffold Inspector/s) Written Proof of Competence of above appointees available on Site Risk Assessment carried out Inspected weekly/after bad weather. Inspection register/s kept
Construction. Regulation 19	Materials Hoist	Competent person appointed in writing to inspect the Material Hoist Written Proof of Competence of above appointee available on Site. Materials Hoist to be inspected weekly by a competent person. Inspections register kept.
Construction. Regulation 21	Explosive Actuated fastening devices	Competent person appointed to control the issue of the Explosive Actuated Fastening Devices & cartridges and the service, maintenance and cleaning. Register kept of above Empty cartridge cases/nails/fixing bolts returns recorded Cleaned daily after use Work areas are demarcated.

Construction. Regulation 22/ Driven Machinery Regulations 18 & 19	Lifting Machines Equipment	Competent person appointed in writing to inspect Lifting Machines& Equipment Written Proof of Competence of above appointee available on Site.Lifting tackle identified/numbered Register kept for Lifting Tackle Log Book kept for each individual Crane Inspection: - - Lifting tackle(slings/ropes/chain slings etc.) - daily or before every new application
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Construction. Regulation 24/Electrical Machinery Regulations 9 & 10/ Electrical Installation Regulations	Inspection & Maintenance of Electrical Installation & Equipment (including portable electrical tools)	Competent person appointed in writing to inspect/test the installation and equipment. Written Proof of Competence of above appointee available on Site.Inspections: - Electrical Installation & equipment inspected after installation, after alterations and quarterly. Inspection Registers kept Portable electric tools, electric lights and extension leads must be uniquely identified and numbered. Weekly visual inspection by User/Issuer/Storeman. Register kept.
Construction. Regulation 28/ General Safety Regulation 8(1)(a)	Stacking & Storage Supervisor.	Competent Person/s with specific knowledge and experience designated to supervise all Stacking & Storage Written Proof of Competence of above appointee available on Site
Construction. Regulation 29/ Environment al Regulation 9	Designation of a Person to Co-ordinate Emergency Planning And Fire Protection	Person/s with specific knowledge and experience designated to co- ordinate emergency contingency planning and execution and fire prevention measures Emergency Evacuation Plan developed: - Drilled/Practiced - Plan & Records of Drills/Practices available on Site Fire Risk Assessment carried out All Fire Extinguishing Equipment identified and on register. Inspected weekly. Inspection Register kept Serviced annually
General Safety Regulation 3	First Aid	Every workplace provided with sufficient number of First Aid boxes. (Required where 5 persons or more are employed) First Aid freely available Equipment as per the list in the OH&S Act. One qualified First Aider appointed for every 50 employees. (Required where more than 10 persons are employed) List of First Aid Officials and Certificates Name of person/s in charge of First Aid box/es displayed. Location of First Aid box/es clearly indicated. Signs instructing employees to report all Injuries/illness including first aid injuries
General Safety Regulation 2	Personal Safety Equipment (PSE)	Items of PSE prescribed/use enforced Records of Issue kept Undertaking by Employee to use/wear PSE PSE remain property of Employer, not to be removed from premises GSR 2(4)

General Safety Regulation 9	Inspection & Use of Welding/Flame Cutting Equipment	Competent Person/s with specific knowledge and experience designated to Inspect Electric Arc, Gas Welding and Flame Cutting Equipment Written Proof of Competence of above appointee available on Site All new vessels checked for leaks, leaking vessels NOT taken into stock but returned to supplier immediately Equipment identified/numbered and entered into a register Equipment inspected weekly. Inspection Register kept
Hazardous Chemical Substances (HCS) Regulations Construction Regulation 25	Control of Storage & Usage of HCS and Flammables	Competent Person/s with specific knowledge and experience designated to Control the Storage & Usage of HCS (including Flammables) Risk Assessment carried out Register of HCS kept/used on Site

Pressure Equipment Regulations	Pressure Equipment	Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of VUP's Written Proof of Competence of above appointee available on Site Risk Assessment carried out Register of Pressure Equipment on Site
Construction. Regulation 23	Construction Vehicles & Earth Moving Equipment	Operators/Drivers appointed to: - Carry out a daily inspection prior to use - Drive the vehicle/plant that he/she is competent to operate/drive Written Proof of Competence of above appointee available on Site. Medical Report available for each operator available on site Record of Daily inspections kept
General Safety Regulation 13A	Inspection of Ladders	Competent person appointed in writing to inspect Ladders Ladders inspected at arrival on site and weekly thereafter. Inspections register kept

Annexure D - Typical safety file index and registers

Please note: Site File contents may vary depending on the type of trade.
(Typical Site File Contents)

1. SHE Policy
2. Notification of Construction Work
3. Client Safety Spec
4. SHE Plan
5. Environmental Management Plan
6. Organogram
7. Mandatory Appointments
8. General Appointments
9. Drivers Licenses and Certificates of Training
10. Medical Certificates & Psychiatric Evaluations
11. Method Statements
12. Risk Assessments
13. Risk Assessment Review Plan
14. Proof of Risk Assessment Training
15. Safe Works Procedures
16. Fall Protection Plan
17. Proof of Fall Protection Training
18. Demolition Plan
19. MSDS
20. Emergency Procedure
21. Emergency Tel List
22. Accident and Incident Procedures
23. Annexure 1 Forms
24. Severe Weather Plan
25. Heat Stress Procedure
26. Lock Out Procedure
27. Equipment list and Test Certifications
28. Minutes – Safety Meetings
29. Audits and Notifications
30. WCA Certificate of Good Standing & Claim Forms
31. Site Rules
32. Inductions
33. Toolbox Talks
34. Copy of the Act
35. Copy of Construction Regulation



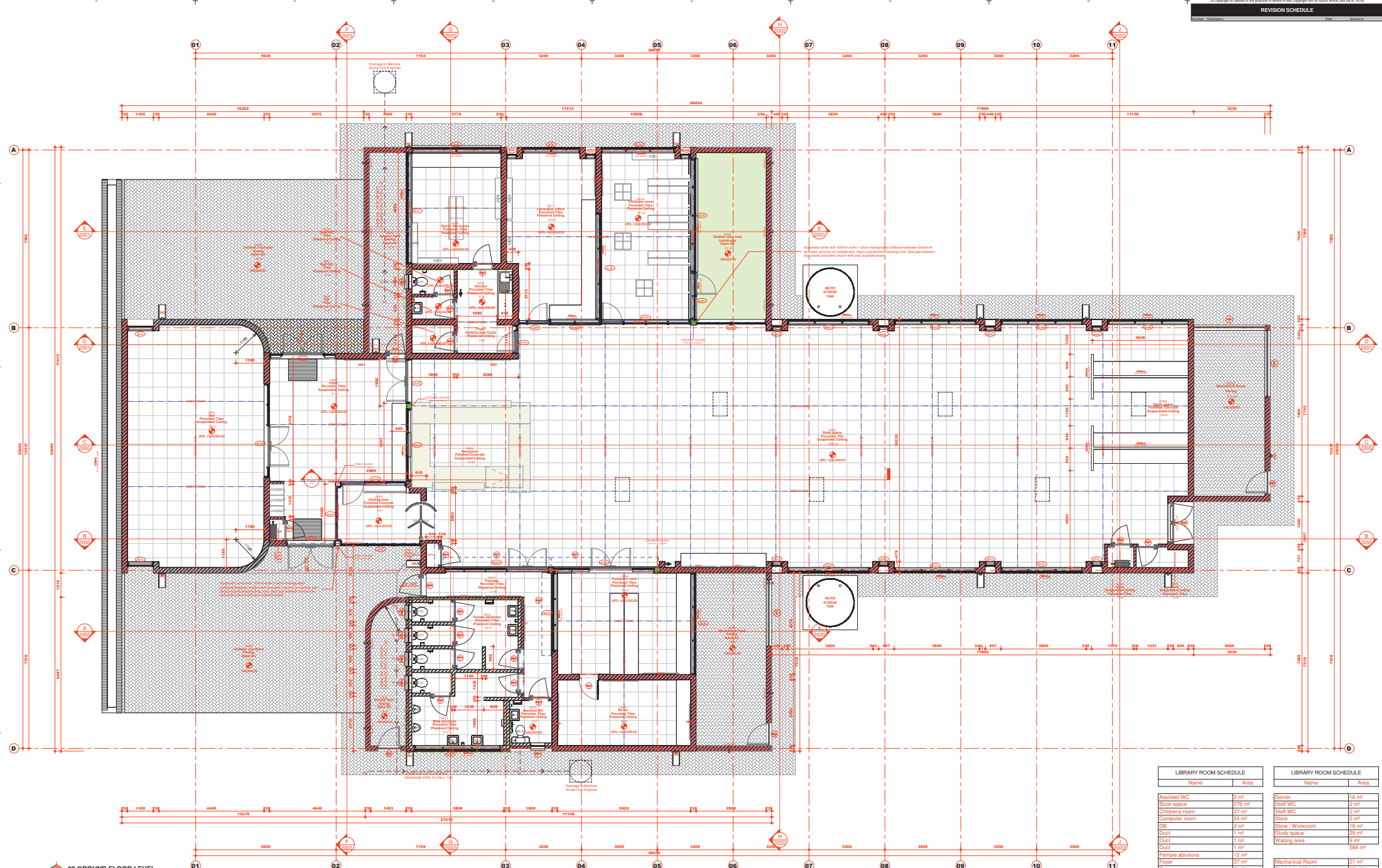
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PART C4 SITE INFORMATION

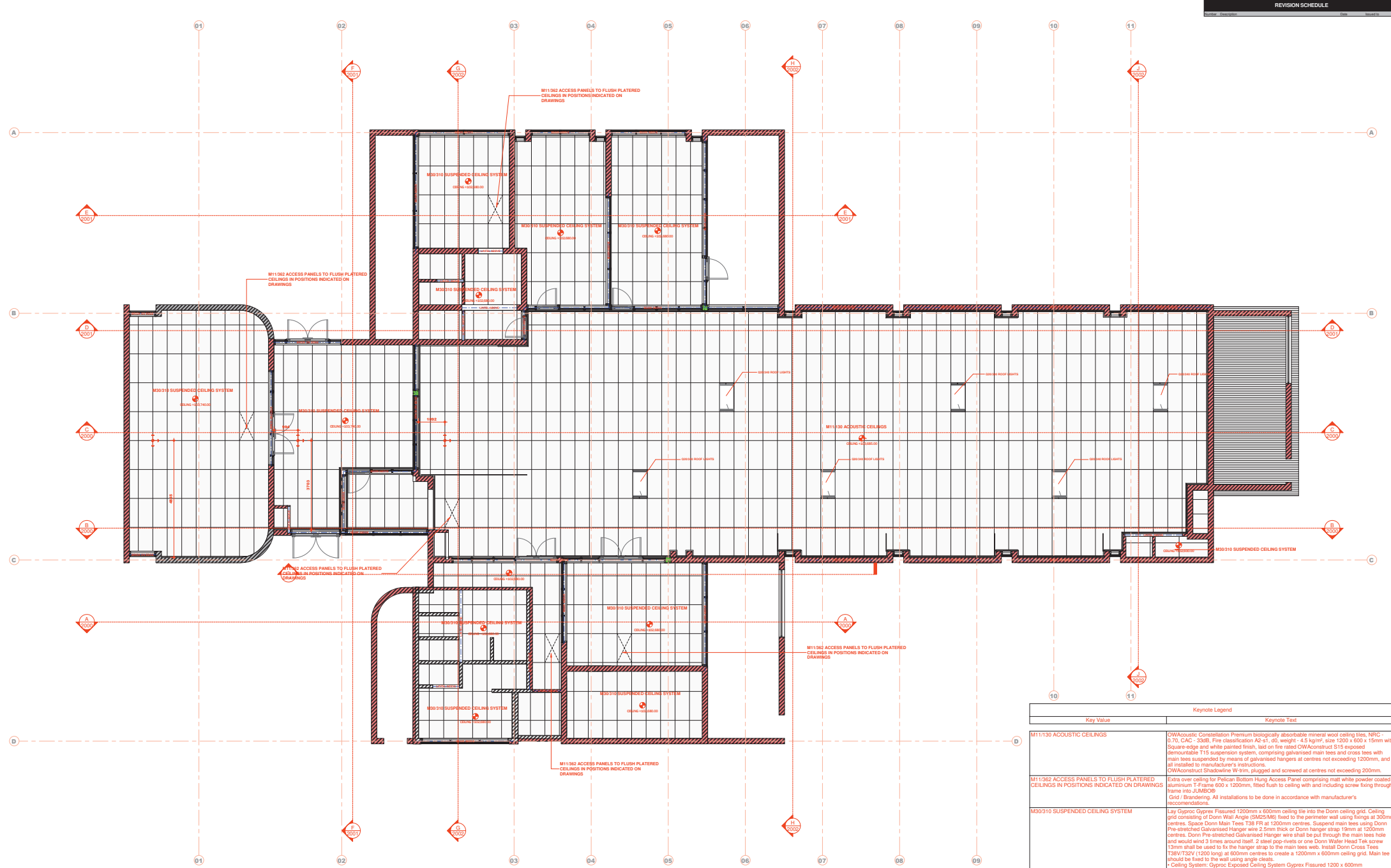


C4.1 DRAWINGS



03 GROUND FLOOR LEVEL

LIBRARY ROOM SCHEDULE		LIBRARY ROOM SCHEDULE	
Name	Area	Name	Area
Assisted WC	3 m ²	Server	16 m ²
Book space	276 m ²	Staff WC	2 m ²
Childrens room	27 m ²	Staff WC	2 m ²
Computer room	24 m ²	Store	2 m ²
DB	2 m ²	Store / Workshop	18 m ²
Duct	1 m ²	Study space	29 m ²
Duct	1 m ²	Waiting area	9 m ²
Duct	1 m ²		548 m ²
Female ablutions	12 m ²	Mechanical Room	21 m ²
Foyer	37 m ²	Mechanical Yard	71 m ²
Kitchen	5 m ²	Outdoor courtyard	66 m ²
Librarians' Office	25 m ²	Outdoor play area	21 m ²
Male ablutions	12 m ²	Refuse Yard	9 m ²
Passage	11 m ²	Service Yard	13 m ²
Reception	14 m ²		223 m ²
			810 m ²



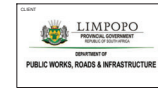
1100 - CEILING PLAN
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Keynote Legend	
Key Value	Keynote Text
M11130 ACOUSTIC CEILING	OWAcoustic Constellation Premium biologically absorbable mineral wool ceiling tiles, NRC - 0.70, CAC - 33dB, Fire classification A2-s1, d0, weight - 4.5 kg/m ² , size 1200 x 600 x 15mm with square-edge and white painted finish, laid on fire rated OWAcoustic S15 exposed detachable T15 suspension system, comprising galvanised main tees and cross tees with main tees suspended by means of galvanised hangers at centres not exceeding 1200mm, and all installed to manufacturer's instructions. OWAcoustic Shadowline W-trim, plugged and screwed at centres not exceeding 200mm.
M11302 ACCESS PANELS TO FLUSH PLATERED CEILING IN POSITIONS INDICATED ON DRAWINGS	Extra over ceiling for Pelican Bottom Hung Access Panel comprising matt white powder coated aluminium T-Frame 600 x 1200mm, fitted flush to ceiling with and including screw long through frame into JUMBOB Grid / Branding: All installations to be done in accordance with manufacturer's recommendations.
M30310 SUSPENDED CEILING SYSTEM	Lay Gyproc Gyproc Fissured 1200mm x 600mm ceiling tile into the Donn ceiling grid. Ceiling grid consisting of Donn Wall Angle (SACS-M) fixed to the perimeter wall using kungs at 300mm centres. Space Donn Main Tees T38 FR at 1200mm centres. Suspend main tees using Donn Pre-stretched Galvanised Hanger wire 2.5mm thick or Donn Hanger strap 19mm at 1200mm centres. Donn Pre-stretched Galvanised Hanger wire shall be out through the main tee hole and would wind 3 times around itself. 2 steel pop-rivets or one Donn Waller Head Tek screw 13mm shall be used to fix the hanger strap to the main tee web. Install Donn Cross Tees T38V/T32V (1200 long) at 600mm centres to create a 1200mm x 600mm ceiling grid. Main tee should be fixed to the wall using angle cleats. • Ceiling System: Gyproc Exposed Ceiling System Gyproc Fissured 1200 x 600mm • Ceiling Grid: exposed ceiling grid.
020/340 ROOF LIGHTS	Global Roofing (or similar approved) Solutions Sungazer Standard 5mm thick perspex sun harvester, size 1000mm x 600mm, installed in accordance with manufacturer's recommendations. • Product: Sungazer Standard • Size: 1000mm x 600mm • Colour: clear with prismatic characteristics • Shape: pyramidal dome • Dome with Fresnel lensing: 5mm UV stabilised Perspex • Weight: 16kg per unit.

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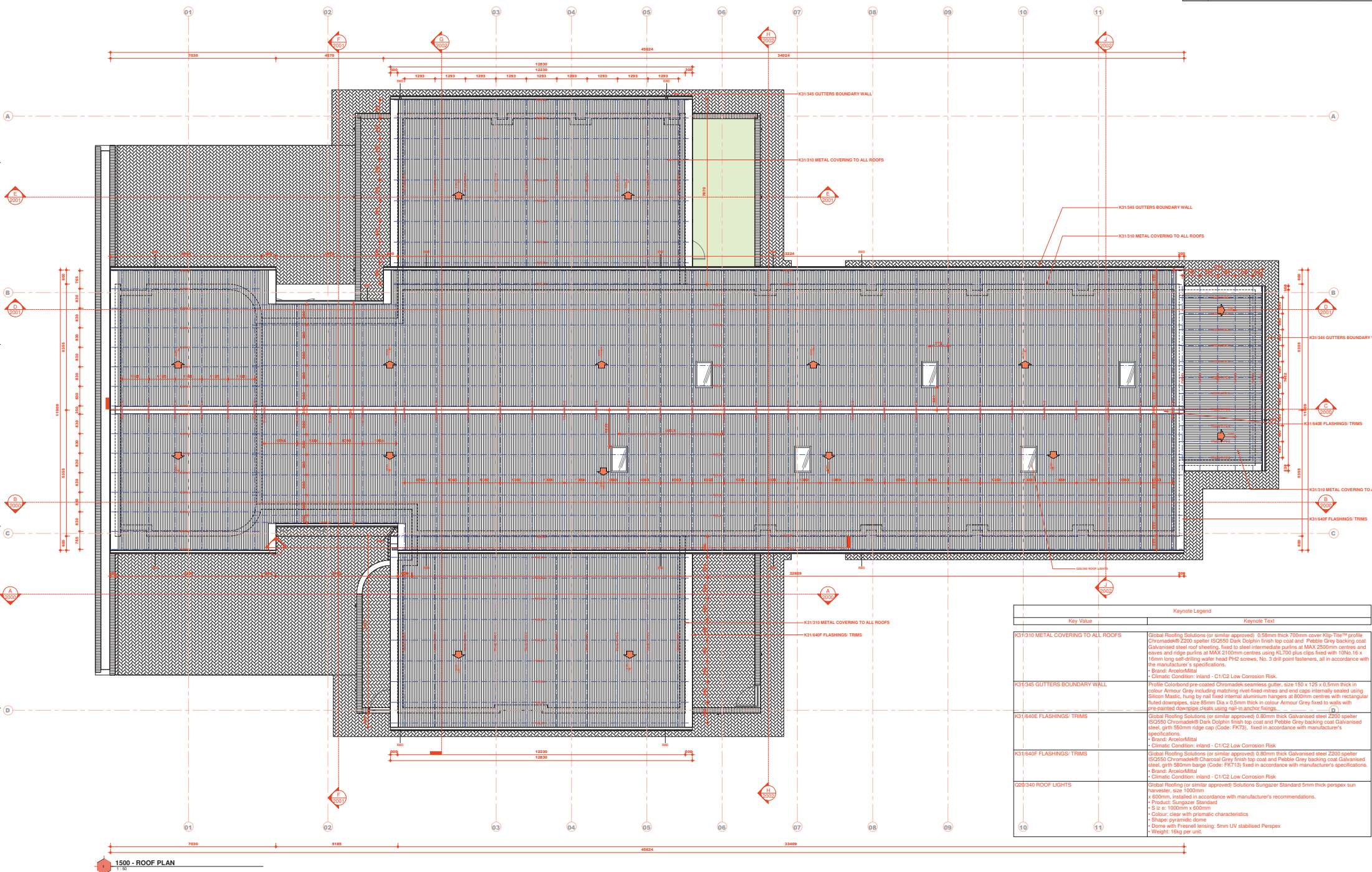
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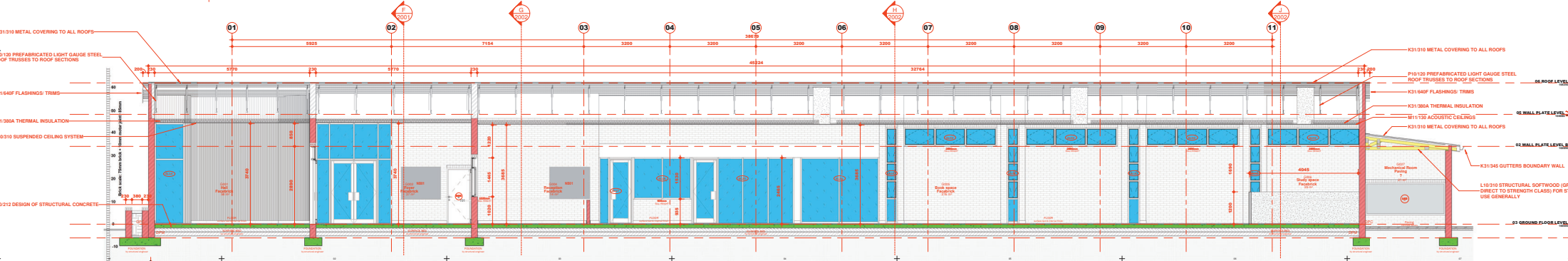
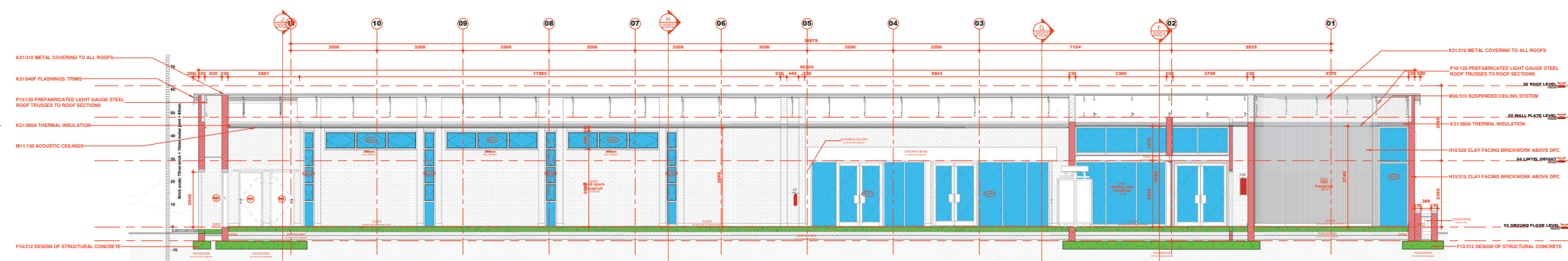
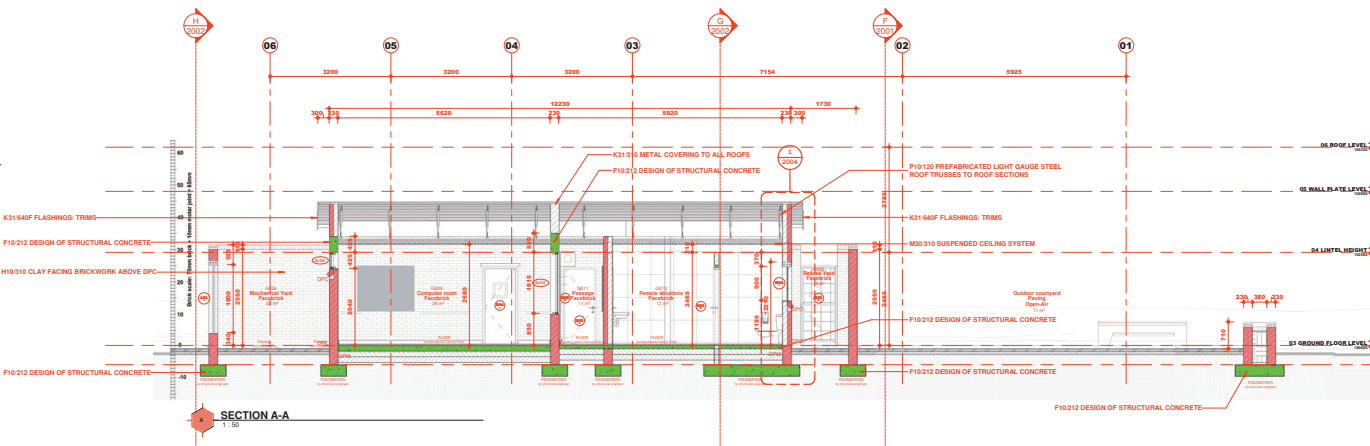
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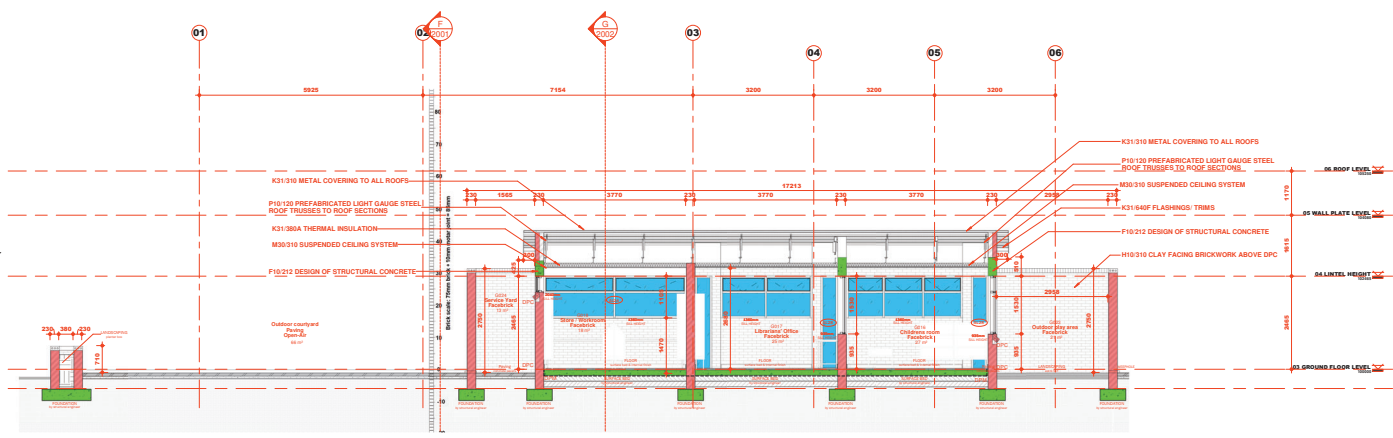


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K31310 METAL COVERING TO ALL ROOFS		Global Roofing Solutions (or similar approved) 0.58mm thick 700mm cover Kip-Tite™ profile Chromadeck® 2200 spelter SQ250 Dark Dolphin finish top coat and Pebble Grey backing coat Galvanised steel roof sheeting, fixed to steel intermediate purlins at MAX 2500mm centres and rakes and ridge purlins at MAX 2100mm centres using KLT200 plus clips fixed with 10No. 18 x 16mm long self-drilling water head PH2 screws. No. 3 drill point fasteners, all in accordance with the manufacturer's specifications. - Brand: Anco/Mita - Climatic Condition: inland - C1/C2 Low Corrosion Risk
K31345 GUTTERS BOUNDARY WALL		Profile Colours® pre-coated Chromadeck® seamless gutter, size 150 x 125 x 0.5mm thick in colour Armour Grey including matching rivet-fixed mitres and end caps internally sealed using Siltan Mastix, hung by nail fixed internal aluminium hangers at 800mm centres with rectangular fixed downpipes, size 80mm Dia x 0.5mm thick in colour Armour Grey fixed to walls with pre-riveted downpipe cleats using nail-in anchor fixings.
K31640E FLASHINGS/ TRIMS		Global Roofing Solutions (or similar approved) 0.80mm thick Galvanised steel 2200 spelter SQ250 Chromadeck® Dark Dolphin finish top coat and Pebble Grey backing coat Galvanised steel, girth 550mm ridge cap (Code: FK73), fixed in accordance with manufacturer's specifications. - Brand: Anco/Mita - Climatic Condition: inland - C1/C2 Low Corrosion Risk
K31640F FLASHINGS/ TRIMS		Global Roofing Solutions (or similar approved) 0.80mm thick Galvanised steel 2200 spelter SQ250 Chromadeck® Charcoal Grey finish top coat and Pebble Grey backing coat Galvanised steel, girth 550mm barge (Code: FK713) fixed in accordance with manufacturer's specifications. - Brand: Anco/Mita - Climatic Condition: inland - C1/C2 Low Corrosion Risk
0203340 ROOF LIGHTS		Global Roofing (or similar approved) Solutions Sungazer Standard 5mm thick perspex sun hemisphere, size 1000mm x 600mm, installed in accordance with manufacturer's recommendations. - Product: Sungazer Standard - S u e: 1000mm x 600mm - Colour: clear with prismatic characteristics - Shape: pyramidal, dome - Dome with Frensel lensing: 5mm UV stabilised Perspex - Weight: 19kg per unit.

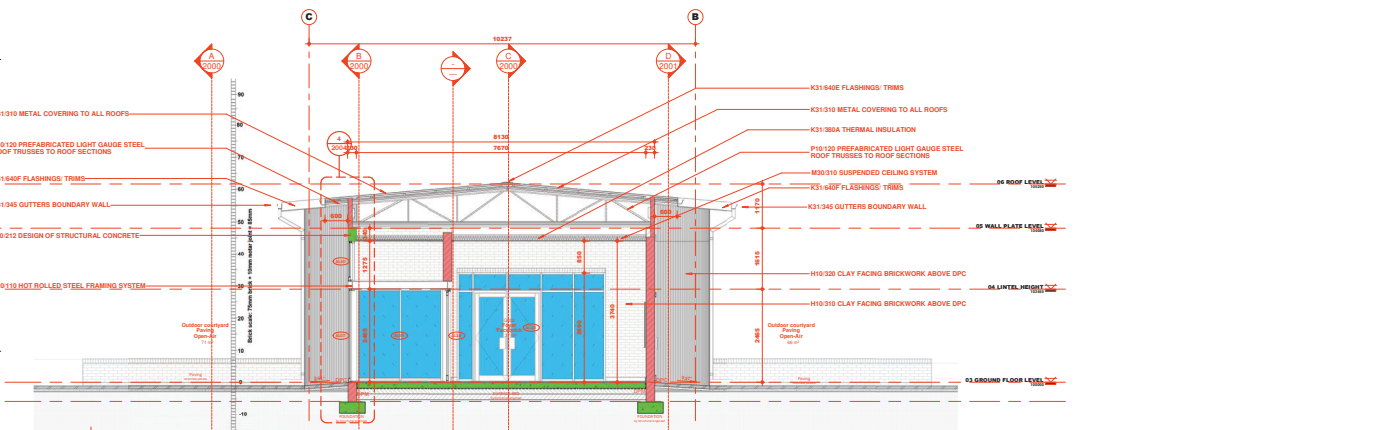
Key Value	Keynote Legend	Keynote Text
F10212 DESIGN OF STRUCTURAL CONCRETE		Materials, drawings, specification, protective equipment and quality assurance must be according to the engineer
H10310 CLAY FACING BRICKWORK ABOVE DPC	Standard SANS 227 Classification: (F3X) Exposure zone: (Zone 1-2) Efflorescence: (Normal grade) Manufacturer: (Corobrik® or similar approved) Product reference: (Country Class) Work size (length x width x height): (222 x 106 x 73 mm) Special shapes: (As shown on drawings) Foundation and loadbearing brickwork: NPXE clay bricks (20MPa nominal compressive strength) in class 2 mortar – in stretcher bond. Perpendicular and horizontal joints: 6mm deep square recessed polished joints.	
H10320 CLAY FACING BRICKWORK ABOVE DPC	Standard SANS 227 Classification: (F3X) Exposure zone: (Zone 1-2) Efflorescence: (Normal grade) Manufacturer: (Corobrik® or similar approved) Product reference: (Oryx) Work size (length x width x height): (222 x 106 x 73 mm) Special shapes: (As shown on drawings) Foundation and loadbearing brickwork: NPXE clay bricks (20MPa nominal compressive strength) in class 2 mortar – in soldier bond. Perpendicular and horizontal joints: 6mm deep square recessed polished joints.	
K31310 METAL COVERING TO ALL ROOFS	Global Roofing Solutions (or similar approved) 0.58mm thick 700mm cover Kip-Tile™ profile Chromadek® Z200 spelter ISO550 Dark Dolphin finish top coat and Pebble Grey backing coat Galvanised steel roof sheeting, fixed to steel intermediate purlins at MAX 2500mm centres and eaves and ridge purlins at MAX 2100mm centres using 10.700 plus clips fixed with 10x6 x 16mm long self-drilling waler head PH2 screws, No. 3 drill pilot fasteners, all in accordance with the manufacturer's specifications. Brand: ArcelorMittal Climatic Condition: Inland - C1/C2 Low Corrosion Risk	
K31345 GUTTERS BOUNDARY WALL	Profile Colorbond pre-coated Chromadek seamless gutter, size 150 x 125 x 0.5mm thick in colour Armour Grey including matching rivet-fixed pines and end caps internally sealed using Silicon Mastic, hung by rail fixed internal aluminum hangers at 600mm centres with rectangular blued downpipes, size 85mm Dia x 0.5mm thick in colour Armour Grey fixed to walls with pre-painted dowerpipe cleats using rail-in anchor fittings.	
K31380A THERMAL INSULATION	Insul floor 125mm thick Aerocel non-combustible light weight Glasswool thermal ceiling insulation. R-value: 3.38m² KW Thermal conductivity: 0.04 W/m.K	
K31840F FLASHINGS/ TRIMS	Global Roofing Solutions (or similar approved) 0.80mm thick Galvanised steel Z200 spelter ISO550 Chromadek® Charcoal Grey finish top coat and Pebble Grey backing coat Galvanised steel, girth 580mm barge (Code: FK13) fixed in accordance with manufacturer's specifications. Brand: ArcelorMittal Climatic Condition: Inland - C1/C2 Low Corrosion Risk	
L10310 STRUCTURAL SOFTWOOD (GRADED DIRECT TO STRENGTH CLASS) FOR STRUCTURAL USE GENERALLY	All solid softwood structural timber must be stress-graded sawn softwood structural timber to comply with SABS 1763. Timber must be ordered in the size in which it must be used. The grade must be marked on each piece of timber.	
M11130 ACUSTIC CEILINGS	OWAcoustic Constellation Premium biologically absorbable mineral wool ceiling tiles, NTC - 0.70, CAC - 33dB, Fire classification A2-s1, d0, weight - 4.5 kg/m², size 1200 x 600 x 15mm with Square-edge and white painted finish, laid on fire rated OWConstruct S15 exposed demountable T15 suspension system, comprising galvanised main tees and cross tees with main tees suspended by means of galvanised hangers at centres not exceeding 1200mm, and all installed to manufacturer's instructions. OWConstruct Shadowline W-Trim, plugged and screwed at centres at 600mm	
M30310 SUSPENDED CEILING SYSTEM	Lay Gyproc Gyproc Fissured 1200mm x 600mm ceiling tile into the Down ceiling grid. Ceiling grid consisting of Down Wall Angle (SM25M6) fixed to the perimeter wall using fangs at 300mm centres. Space Down Main Tees 138 FT at 1200mm centres. Suspend main tees using Down Pre-stretched Galvanised Hanger wire 2.5mm thick or Down hanger strap 19mm at 1200mm centres. Down Pre-stretched Galvanised Hanger wire shall be put through the main tees hole and would wrap 3 times around itself. 2 steel pop-rivets or one Down Waler Head Tee screw 13mm shall be used to fix the hanger strap to the main tees web. Install Down Cross Tees T38V/T32V (1200 long) at 600mm centres to create a 1200mm x 600mm ceiling grid. Main tee should be fixed to the wall using angle cleats. Ceiling System: Gyproc Exposed Ceiling System Gyproc Fissured 1200 x 600mm Ceiling Grid: exposed ceiling grid.	
P10120 PREFABRICATED LIGHT GAUGE STEEL ROOF TRUSSES TO ROOF SECTIONS	Materials, drawings, specification, protective equipment and quality assurance must be according to the engineer	



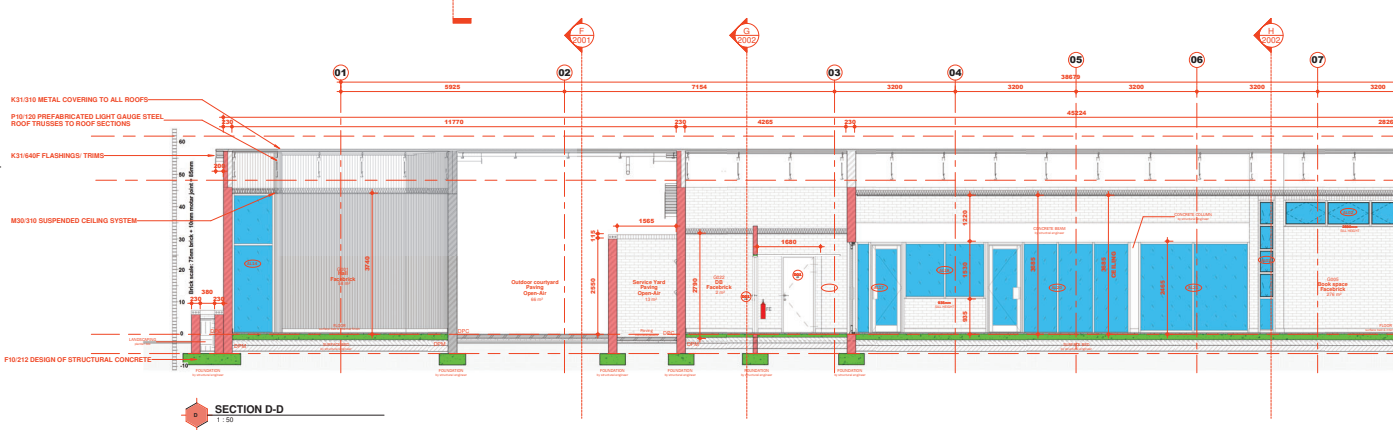
Key Value	Keynote Text
F10/212 DESIGN OF STRUCTURAL CONCRETE	Materials, drawings, specification, protective equipment and quality assurance must be according to the engineer.
H10/310 CLAY FACING BRICKWORK ABOVE DPC	Standard: SANS 227. Classification: [FBX]. Exposure zone: [Zone 1-2]. Efflorescence: [Normal grade]. Manufacturer: [Corobrik® or similar approved]. Product reference: [Country Class]. Work sizes (length x width x height): [222 x 106 x 73 mm]. Special shapes: [As shown on drawings]. Foundation and loadbearing brickwork: NF1C clay bricks (20MPa nominal compressive strength) in class 2 mortar – in stretcher bond. Perpendicular and horizontal joints: 6mm deep square recessed polished joints.
H10/320 CLAY FACING BRICKWORK ABOVE DPC	Standard: SANS 227. Classification: [FBX]. Exposure zone: [Zone 1-3]. Efflorescence: [Normal grade]. Manufacturer: [Corobrik® or similar approved]. Product reference: [Country]. Work sizes (length x width x height): [222 x 106 x 73 mm]. Special shapes: [As shown on drawings]. Foundation and loadbearing brickwork: NF1C clay bricks (20MPa nominal compressive strength) in class 2 mortar – in soldier bond. Perpendicular and horizontal joints: 6mm deep square recessed polished joints.
K31/310 METAL COVERING TO ALL ROOFS	Global Roofing Solutions (or similar approved) 0.58mm thick 700mm cover Kip-Tite™ profile Chromadek® Z200 speeler IS2550 Dark Dolphin finish top coat and Pebble Grey backing coat Galvanneal steel roof sheathing, fixed to steel intermediate purlins at MAX 2500mm centres and eaves and ridge purlins at MAX 2100mm centres using KL700 plus clips fixed with 10No. 16 x 16mm long self-drilling water head PH2 screws. No. 5 drill point fasteners, all in accordance with the manufacturer's specifications. - Brand: ArcelorMita - Climatic Condition: inland - C1/C2 Low Corrosion Risk
K31/345 GUTTERS BOUNDARY WALL	Profile Colorbond pre-coated Chromadek seamless gutter, size 150 x 125 x 0.5mm thick in colour Armour Grey including matching rivet-fixed mitres and end caps internally sealed using Silicon Mastic, hung by nail fixed internal aluminium hangers at 800mm centres with rectangular fluted downpipes, size 85mm Dia x 0.5mm thick in colour Armour Grey fixed to walls with pre-painted downpipe cleats using nail-in anchor bolts. - Brand: ArcelorMita - Climatic Condition: inland - C1/C2 Low Corrosion Risk
K31/380A THERMAL INSULATION	Install Isover 135mm thick Arrolite non-combustible light weight Glaswool thermal ceiling insulation. - R-value: 3.38m² KW - Thermal conductivity: 0.04 W/mK
K31/640E FLASHINGS/ TRIMS	Global Roofing Solutions (or similar approved) 0.80mm thick Galvanneal steel Z200 speeler IS2550 Chromadek® Dark Dolphin finish top coat and Pebble Grey backing coat Galvanneal steel, girth 550mm barge (Code: FK73), fixed in accordance with manufacturer's specifications. - Brand: ArcelorMita - Climatic Condition: inland - C1/C2 Low Corrosion Risk
K31/640F FLASHINGS/ TRIMS	Global Roofing Solutions (or similar approved) 0.80mm thick Galvanneal steel Z200 speeler IS2550 Chromadek® Charcoal Grey finish top coat and Pebble Grey backing coat Galvanneal steel, girth 550mm barge (Code: FK713) fixed in accordance with manufacturer's specifications. - Brand: ArcelorMita - Climatic Condition: inland - C1/C2 Low Corrosion Risk
L10/120 PREFABRICATED TIMBER ROOF TRUSS	114 x 50mm thick pre-fabricated SA Pine roof trusses as indicated at max 1200mm centres complete with cross bracing supply ENG certificate
M11/130 ACOUSTIC CEILINGS	OWAcoustic Constellation Premium biologically absorbable mineral wool ceiling tiles, M10 - 0.70, CAC - 35dB, Fire classification A2-s1, d0, weight 4.5 kg/m², size 1200 x 600 x 15mm with Square-edge and white painted finish, laid on fire rated OWAcoustic S15 exposed demountable T15 suspension system, comprising galvanneal main tees and cross tees with main tees suspended by means of galvanneal hangers at centres not exceeding 1200mm, and all related to manufacturer's instructions, with OWAcoustic Shadowline W-4rim, plugged and screwed at centres not exceeding 200mm.
M30/310 SUSPENDED CEILING SYSTEM	Bay Gyproc Gyproc Fissured 1200mm x 600mm ceiling tile into the Donn ceiling grid consisting of Donn Wall Angle (SM25ME) fixed to the perimeter wall using fixings at 300mm centres, Space Donn Main Tees T38 FT8 at 1200mm centres. Suspend main tees using Donn Pre-stretched Galvanneal Hanger wire 2.5mm thick or Donn hanger strap 15mm at 1200mm centres. Donn Pre-stretched Galvanneal Hanger wire shall be put through the main tees hole and would wind 3 times around each 2 steel pop-rivets or one Donn Water Head Tek screw 13mm shall be used to fix the hanger strap to the main tees web. Install Donn Cross Tees T38V/T32V (1200 long) at 600mm centres to create a 1200mm x 600mm ceiling grid. Main tee should be fixed to the wall using angle cleats. - Ceiling System: Gyproc Exposed Ceiling System Fissured 1200 x 600mm - Ceiling Grid: exposed ceiling grid.
P10/110 HOT ROLLED STEEL FRAMING SYSTEM	Materials, drawings, specification, protective equipment and quality assurance must be according to the engineer.
P10/120 PREFABRICATED LIGHT GAUGE STEEL ROOF TRUSSES TO ROOF SECTIONS	Materials, drawings, specification, protective equipment and quality assurance must be according to the engineer.



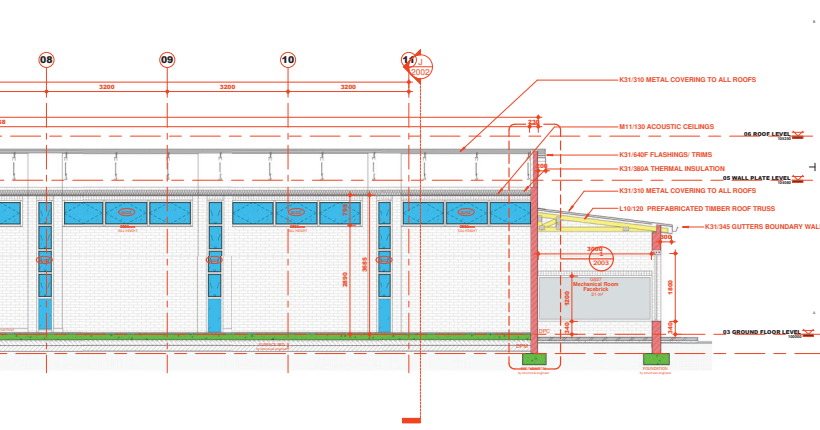
SECTION E-E
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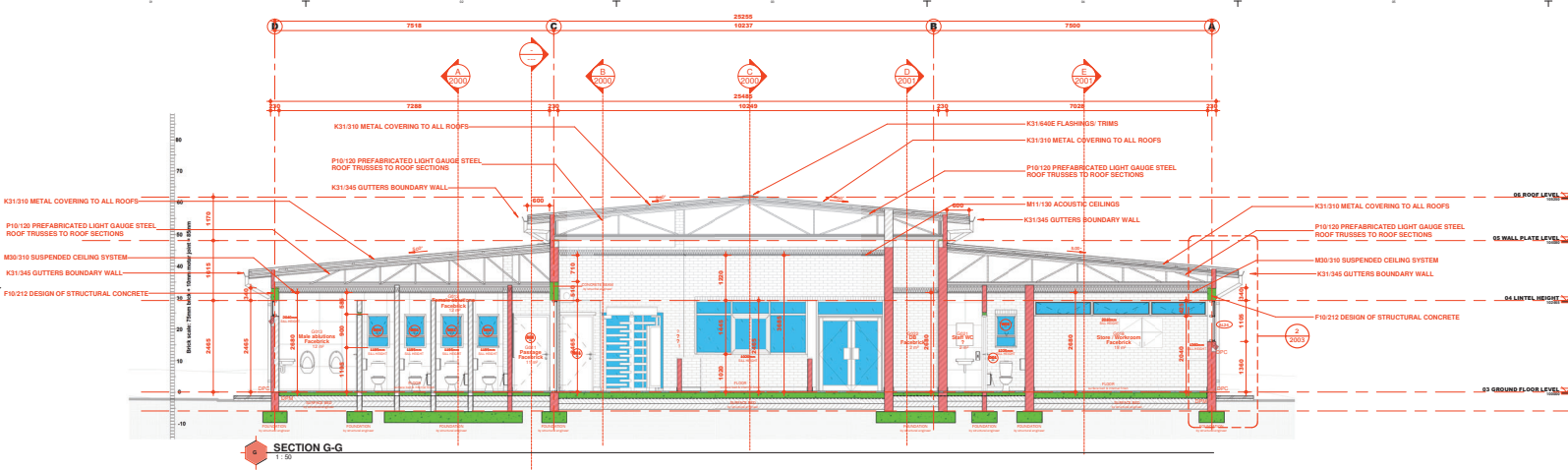


SECTION F-F
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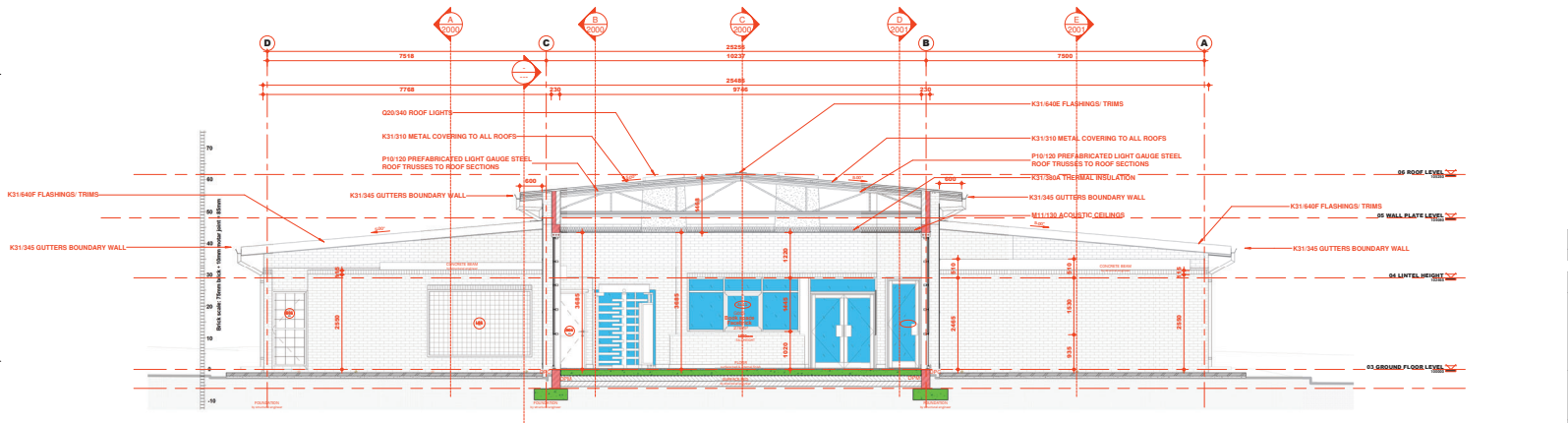


SECTION D-D
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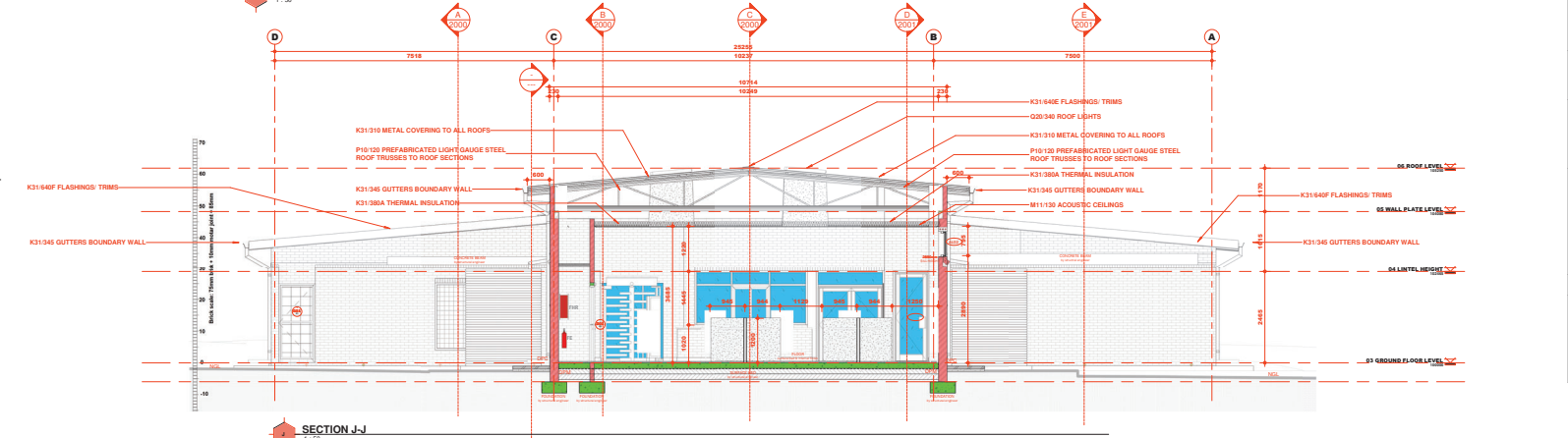




SECTION G-G
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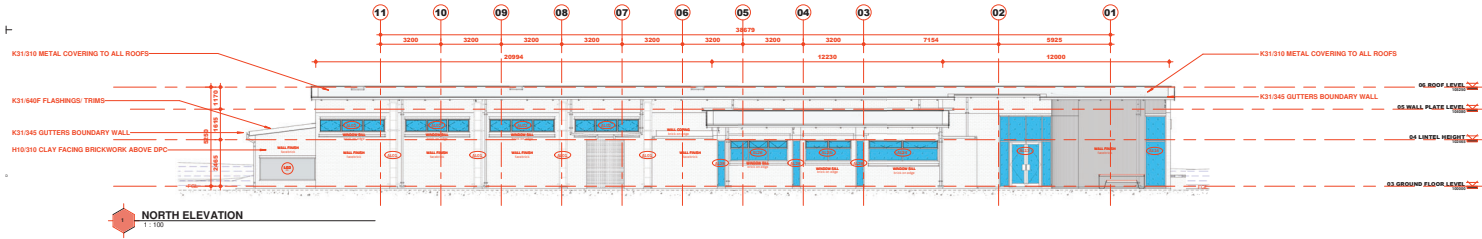


SECTION H-H
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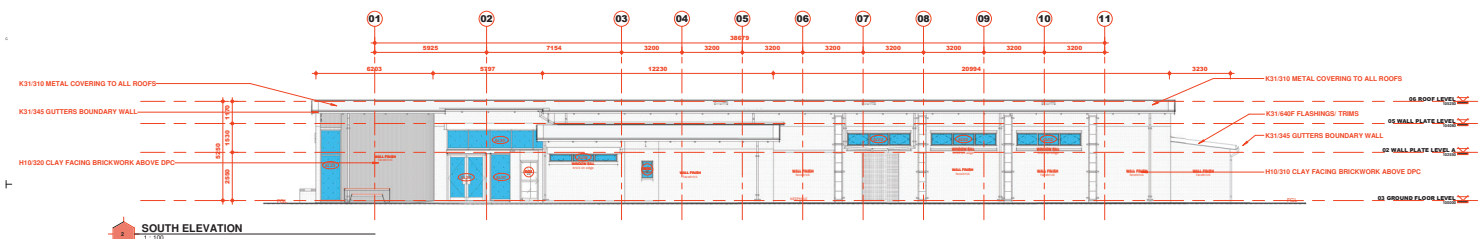


SECTION J-J
1:50

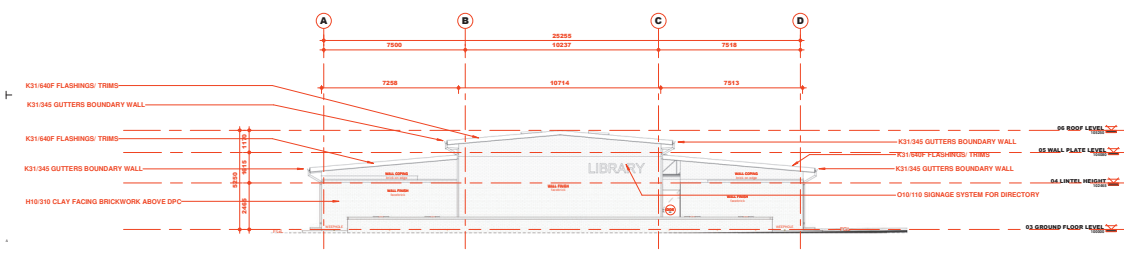
Key Value	Keynote Legend	
	Keynote	Keynote Text
F101212 DESIGN OF STRUCTURAL CONCRETE	Materials, drawings, specification, protective equipment and quality assurance must be according to the engineer.	
K31310 METAL COVERING TO ALL ROOFS	Global Roofing Solutions (or similar approved) 0.58mm thick 700mm cover Kip-Tite™ profile Chromadek® Z200 spelter SQ550 Dark Dolphin finish top coat and Pebble Grey backing coat Chromadek® steel roof sheeting, fixed to steel intermediate purlins at MAX 2500mm centres and eaves and ridge purlins at MAX 2100mm centres using KCT700 plus clips fixed with 100x16 x 16mm long self-drilling waffle head PH2 screws, No. 3 drill point fasteners, all in accordance with the manufacturer's specifications. - Brand: ArcelorMittal - Climatic Condition: Inland - C1/C2 Low Corrosion Risk	
K31345 GUTTERS BOUNDARY WALL	Profile Colorbond pre-coated Chromadek seamless gutter, size 150 x 125 x 0.5mm thick in colour Armour Grey including matching rivet-fixed mires and end caps internally sealed using Silicon Mastic, hung by nail fixed internal aluminium hangers at 600mm centres with rectangular fluted downpipes, size 80mm Dia x 0.5mm thick in colour Armour Grey fixed to walls with pre-painted downpipe cleats using nail-in anchor fixings.	
K31380A THERMAL INSULATION	Install 135mm thick Aerolite non-combustible light weight Glasswool thermal ceiling insulation. - R-value: 3.38m² KW - Thermal conductivity: 0.04 W/m²K	
K31640E FLASHINGS/ TRIMS	Global Roofing Solutions (or similar approved) 0.80mm thick Galvanised steel Z200 spelter SQ255 Chromadek® Dark Dolphin finish top coat and Pebble Grey backing coat Galvanised steel, girth 50mm barge (Code: FK73) fixed in accordance with manufacturer's specifications. - Brand: ArcelorMittal - Climatic Condition: Inland - C1/C2 Low Corrosion Risk	
K31640F FLASHINGS/ TRIMS	Global Roofing Solutions (or similar approved) 0.80mm thick Galvanised steel Z200 spelter SQ255 Chromadek® Dark Dolphin finish top coat and Pebble Grey backing coat Galvanised steel, girth 50mm barge (Code: FK73) fixed in accordance with manufacturer's specifications. - Brand: ArcelorMittal - Climatic Condition: Inland - C1/C2 Low Corrosion Risk	
M11130 ACOUSTIC CEILINGS	OWAcoustic Constellation Premium biologically absorbable mineral wool ceiling tiles, NRC - 0.70, CAC - 33dB, Fire classification A2-s1, d0, weight - 4.5 kg/m², size 1200 x 600 x 15mm with Square-edge and white painted finish, laid on fire rated OWAcoustic S15 exposed demountable T15 suspension system, comprising galvanised main tees and cross tees with main tees suspended by means of galvanized hangers at centres not exceeding 1200mm, and all installed to manufacturer's instructions.	
M30310 SUSPENDED CEILING SYSTEM	Low Gyprox Gyprox Fissured 1200mm x 600mm ceiling tile into the Down ceiling grid. Ceiling grid consisting of Down Wall Angle (SM25-M6) fixed to the perimeter wall using fixings at 300mm centres. Space Down Main Tees T38 FR at 1200mm centres. Suspend main tees using Down Pre-attached Galvanised Hanger wire 2 mm thick or Down hanger size 15mm at 1200mm centres. Down Pre-attached Galvanised Hanger wire shall be pulled through the main tees hole and would wind 3 times around 12 steel girth-ribs or one Down Wall Head Tek screw 13mm shall be used to fix the hanger strap to the main tees web. Install Down Cross Tees T38V12V (1200 long) at 600mm centres to create a 1200mm x 600mm ceiling grid. Main tees should be fixed to the wall using angle cleats. - Ceiling System: Gyprox Exposed Ceiling System Gyprox Fissured 1200 x 600mm - Ceiling Grid: exposed ceiling grid.	
P10120 PREFABRICATED LIGHT GAUGE STEEL ROOF TRUSSES TO ROOF SECTIONS	Materials, drawings, specification, protective equipment and quality assurance must be according to the engineer.	
Q20340 ROOF LIGHTS	Global Roofing (or similar approved) Solutions Sungazer Standard 5mm thick perspex sun transverse, size 1000mm x 600mm, installed in accordance with manufacturer's recommendations. - Product: Sungazer Standard - Size: 1000mm x 600mm - Colour: clear with prismatic characteristics - Shape: dynamic, dome - Done with Fresnel lensing: 5mm UV stabilised Perspex - Weight: 10kg per unit.	



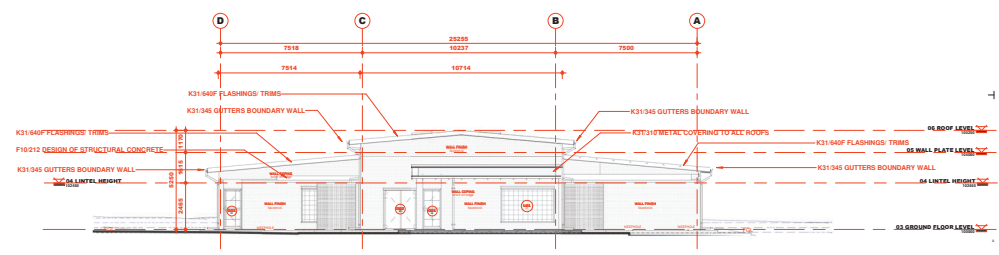
1 NORTH ELEVATION
1:100



2 SOUTH ELEVATION
1:100

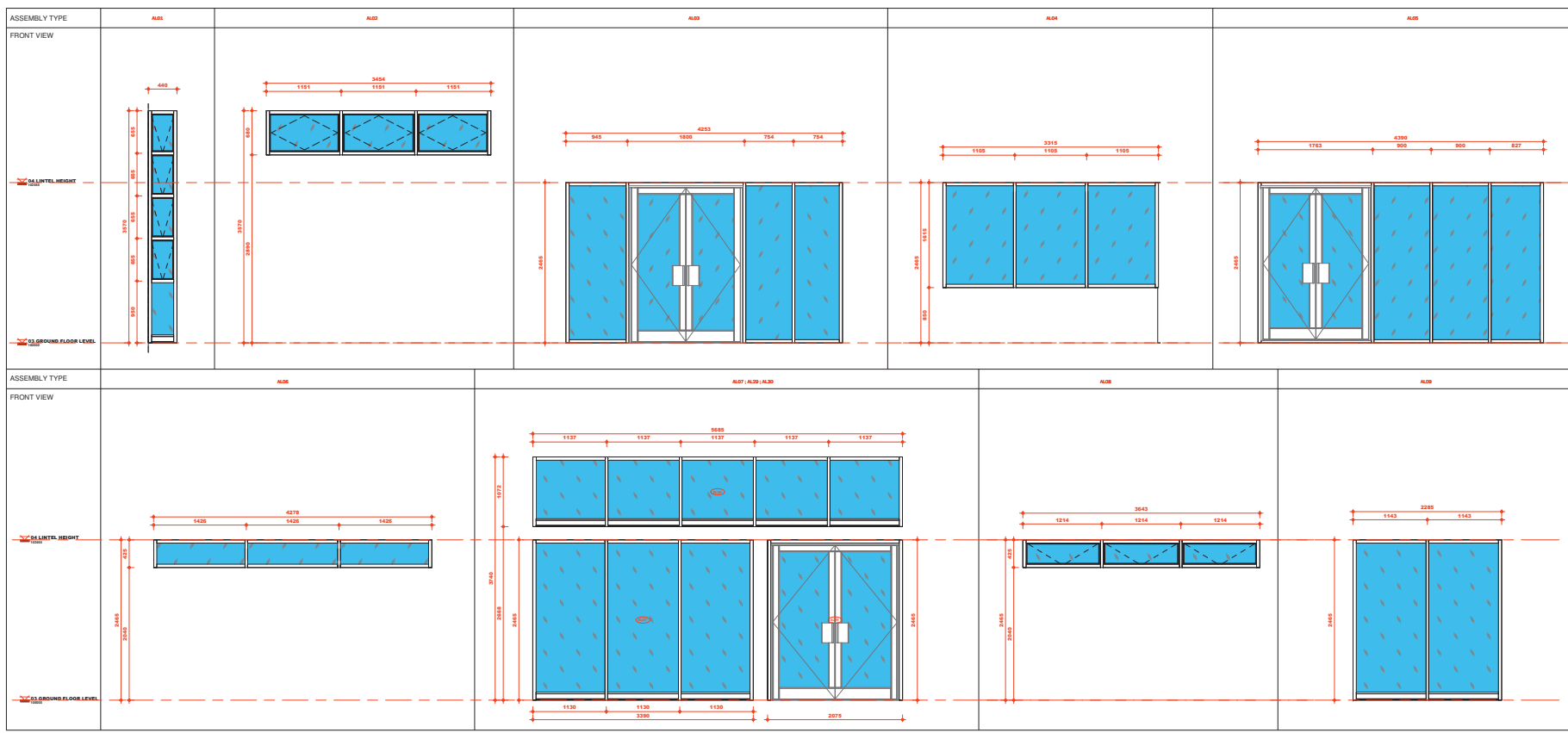


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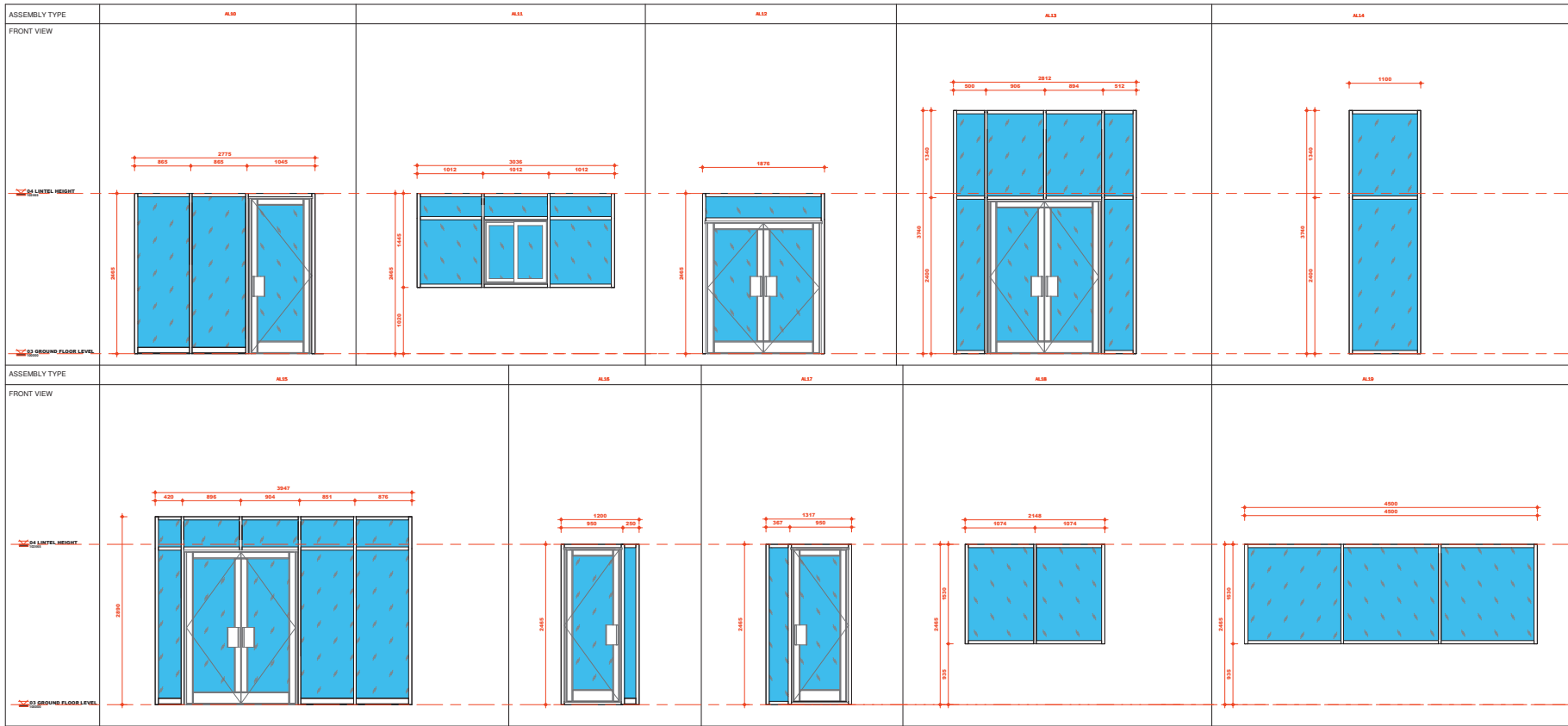
4 EAST ELEVATION
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Keynote Legend	
Key Value	Keynote Text
F10212 DESIGN OF STRUCTURAL CONCRETE	Materials, drawings, specification, protective equipment and quality assurance must be according to the engineer
H10310 CLAY FACING BRICKWORK ABOVE DPC	Standard: SANS 227 Classification: (FBX) Exposure zone: [Zone 1-2] Efflorescence: (Normal grade) Manufacturer: [Corobrik® or similar approved] Product reference: [Country Class] Work sizes (length x width x height): [222 x 106 x 73 mm] Special shapes: [As shown on drawings] Foundation and loadbearing brickwork: NPXE clay bricks (20MPa nominal compressive strength) in class 2 mortar – in stretcher bond. Perpendicular and horizontal joints: 5mm deep square recessed polished joints.
H10320 CLAY FACING BRICKWORK ABOVE DPC	Standard: SANS 227 Classification: (FBX) Exposure zone: [Zone 1-2] Efflorescence: (Normal grade) Manufacturer: [Corobrik® or similar approved] Product reference: [Country Class] Work sizes (length x width x height): [222 x 106 x 73 mm] Special shapes: [As shown on drawings] Foundation and loadbearing brickwork: NPXE clay bricks (20MPa nominal compressive strength) in class 2 mortar – in soldier bond. Perpendicular and horizontal joints: 5mm deep square recessed polished joints.
K31310 METAL COVERING TO ALL ROOFS	Global Roofing Solutions (or similar approved) 0.58mm thick 700mm cover Kip-Tite™ profile Chromadek® Z200 spelter ISO550 Dark Dolphin finish top coat and Pebble Grey backing coat Galvanized steel roof sheeting, fixed to steel intermediate purlins at MAX 200mm centres and eaves and ridge purlins at MAX 2100mm centres using KL700 plus clips fixed with 10No. 16 x 16mm long self-drilling water heated PH2 screws, No. 3 0/8 point fasteners, all in accordance with the manufacturer's specifications. Climate Condition: Inland - C1/C2 Low Corrosion Risk
K31345 GUTTERS BOUNDARY WALL	Profile Colorbond pre-coated Chromadek seamless gutter, size 150 x 125 x 0.5mm thick in colour Armour Grey including matching rivet-fixed mitres and end caps internally sealed using Silicon Mastic, hung by rail fixed internal aluminium hangers at 800mm centres with rectangular fluted downpipes, size 85mm Dia x 0.5mm thick in colour Armour Grey fixed to walls with pre-painted downpipe cleats using nail-in anchor fixings.
K31640F FLASHINGS/ TRIMS	Global Roofing Solutions (or similar approved) 0.60mm thick Galvanized steel Z200 spelter ISO550 Chromadek® Charcoal Grey finish top coat and Pebble Grey backing coat Galvanized steel, girth 500mm barge (Code: PK713) fixed in accordance with manufacturer's specifications. Brand: ArcolorMetal Climate Condition: Inland - C1/C2 Low Corrosion Risk
O10110 SIGNAGE SYSTEM FOR DIRECTORY	Custom design to detail drawings



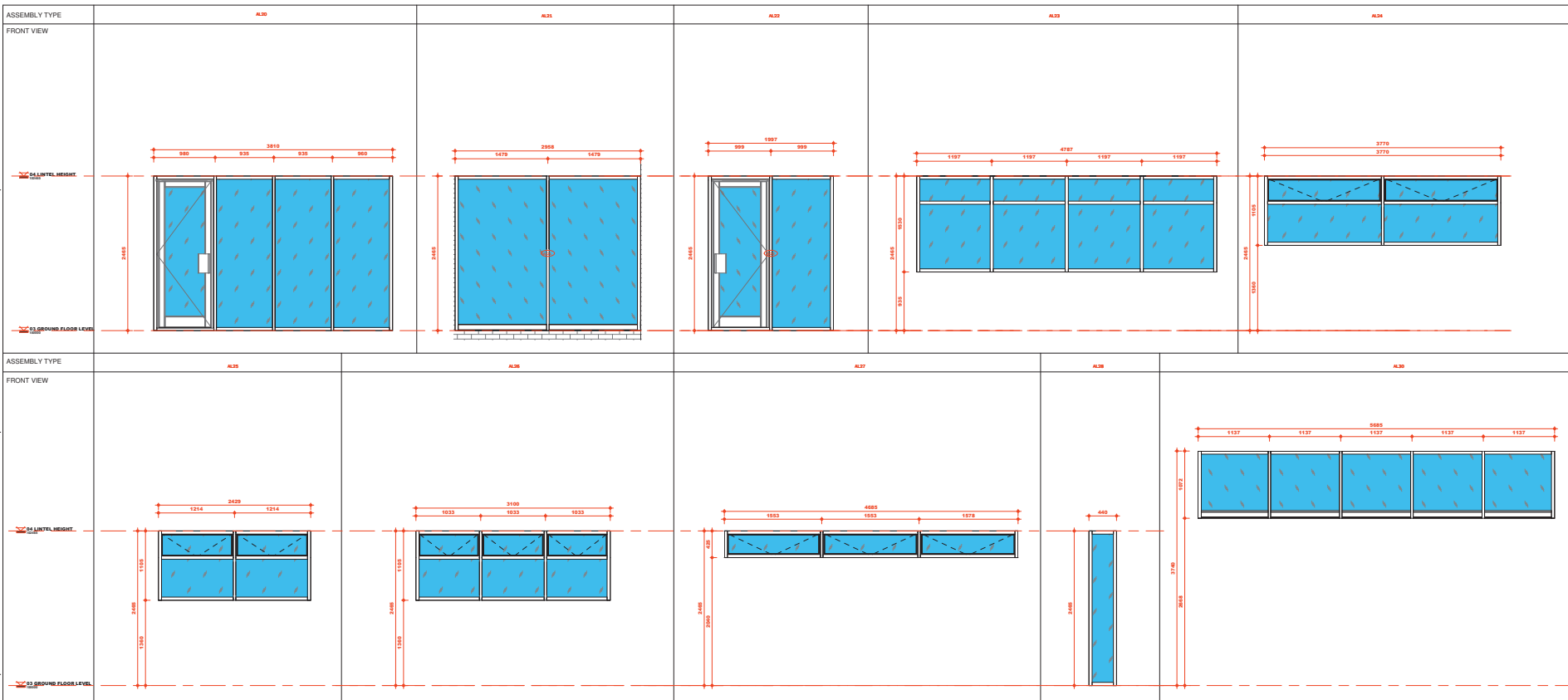
4.1 ASSEMBLY SCHEDULE

Type Mark	SYSTEM		Performance Exposure Category	Performance Class	ALUMINUM FRAME STRUCTURE				CURTAIN WALL GLAZING		Insight/opacity	Glass
	System Type	System Description			Medium Mitrane	Medium Frame	Medium Glass	Medium Glass, Argon Insulated	Medium Glass, Low E, Argon Insulated	Medium Glass, Low E, Argon Insulated, Type		
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AL02	AL02	AL02	AL02	AL02	AL02	AL02	AL02	AL02	AL02	AL02	AL02	AL02
AL03	AL03	AL03	AL03	AL03	AL03	AL03	AL03	AL03	AL03	AL03	AL03	AL03
AL04	AL04	AL04	AL04	AL04	AL04	AL04	AL04	AL04	AL04	AL04	AL04	AL04
AL05	AL05	AL05	AL05	AL05	AL05	AL05	AL05	AL05	AL05	AL05	AL05	AL05
AL06	AL06	AL06	AL06	AL06	AL06	AL06	AL06	AL06	AL06	AL06	AL06	AL06
AL07	AL07	AL07	AL07	AL07	AL07	AL07	AL07	AL07	AL07	AL07	AL07	AL07
AL08	AL08	AL08	AL08	AL08	AL08	AL08	AL08	AL08	AL08	AL08	AL08	AL08
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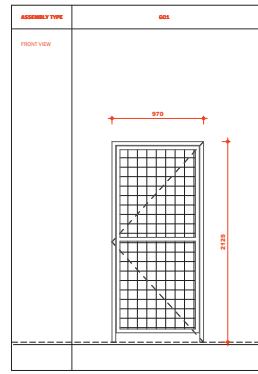
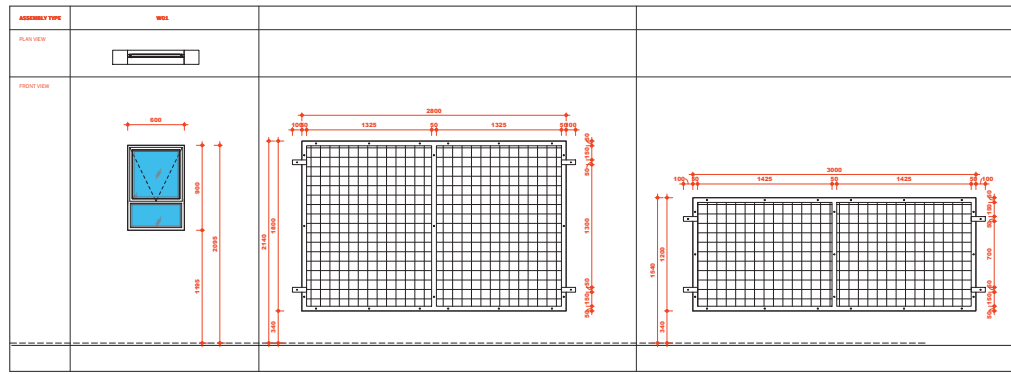
4.1 ASSEMBLY SCHEDULE

Type Mark	SYSTEM		Performance Exposure Category	Performance Class	ALUMINUM FRAME STRUCTURE						CURTAIN WALL GLAZING		Sustainability	Notes
	System Type	System Description			Medium Mitrane	Medium Frame	Medium Glass	Medium Glass, Argon Filler	Medium Glass, Low E, Argon Filler	Medium Glass, Low E, Argon Filler, Acoustic	Medium Glass, Low E, Argon Filler, Acoustic, Insulated	Medium Glass, Low E, Argon Filler, Acoustic, Insulated, Insulated		
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AL11	AL11	AL11	AL11	AL11	AL11	AL11	AL11	AL11	AL11	AL11	AL11	AL11	AL11	
AL12	AL12	AL12	AL12	AL12	AL12	AL12	AL12	AL12	AL12	AL12	AL12	AL12	AL12	
AL13	AL13	AL13	AL13	AL13	AL13	AL13	AL13	AL13	AL13	AL13	AL13	AL13	AL13	
AL14	AL14	AL14	AL14	AL14	AL14	AL14	AL14	AL14	AL14	AL14	AL14	AL14	AL14	
AL15	AL15	AL15	AL15	AL15	AL15	AL15	AL15	AL15	AL15	AL15	AL15	AL15	AL15	
AL16	AL16	AL16	AL16	AL16	AL16	AL16	AL16	AL16	AL16	AL16	AL16	AL16	AL16	
AL17	AL17	AL17	AL17	AL17	AL17	AL17	AL17	AL17	AL17	AL17	AL17	AL17	AL17	
AL18	AL18	AL18	AL18	AL18	AL18	AL18	AL18	AL18	AL18	AL18	AL18	AL18	AL18	
AL19	AL19	AL19	AL19	AL19	AL19	AL19	AL19	AL19	AL19	AL19	AL19	AL19	AL19	



6.1 ASSEMBLY SCHEDULE

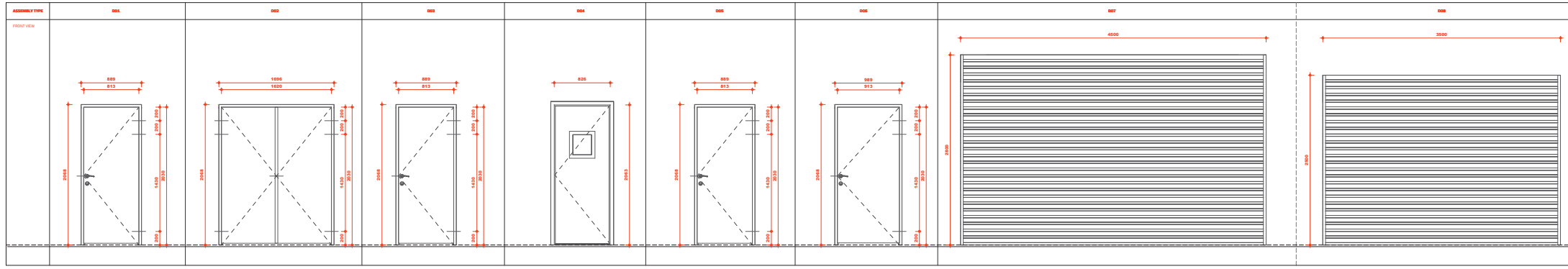
Type Mark	SCHEDULE		Performance Exposure Category	Performance Class	Mullion Material		Mullion Finish		MULLION AND FRAME STRUCTURE		Mullion Cover Cap Material		Mullion Cover Cap Colour		CURTAIN WALL GLAZING		Glazing Type	Insulation	Count	
	System Type	System Type			Material	Finish	Material	Finish	Material	Colour	Material	Colour	Material	Colour	Material	Colour				
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AL01
AL02
AL03
AL04
AL05
AL06
AL07
AL08
AL09
AL30

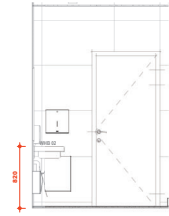
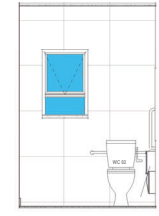
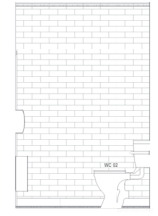
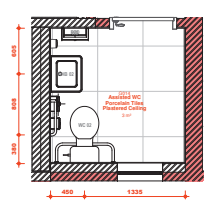


NO	DESCRIPTION	Frame Finish	GLAZING	QUANTITY
001	01 15mm steel for glass frame with mixed cover panels with 12mm double glazing for 600x900.	CN TP 700 C-T FRAME 5700 HD FT high built-up polyurethane external applied in accordance with the manufacturer's specification.	Double Glazed Bestlite powder coated Unisolated Panel with 50mm x 50mm aperture and 4mm thick low E glass in both cut sheets of 1200mm x 2000mm.	1
002	02 15mm steel for glass frame with mixed cover panels with 12mm double glazing for 600x900.	CN TP 700 C-T FRAME 5700 HD FT high built-up polyurethane external applied in accordance with the manufacturer's specification.	Double Glazed Bestlite powder coated Unisolated Panel with 50mm x 50mm aperture and 4mm thick low E glass in both cut sheets of 1200mm x 2000mm.	1
003	Aluminium 2 pane horizontal sliding window.	Powder coated Aluminium - Colour: Charcoal Grey	USA Smart Glass Neutral 4.38mm Thick Low E Single Glazed Laminated Safety Glass complying with SANS 1000 Part 1, SANS 1281 & SABS 9137 - or Equally approved glass.	1

Door No	FRAME TYPE	GATE TYPE	Ironmongery	Quantity
001	001 2 x 15mm galvanneal rectangular steel fabricator frame with 12 x 2mm thick glass welded onto the inside of the frame to receive fence panel.	Double Glazed Bestlite galvanneal mesh BRG Tinted Fencing no 017 with 12 x 2mm x 10 pane aperture and 4mm thick low E glass in both cut sheets of 4000mm x 1400mm.	As per Ironmongery Schedule.	1

DOOR NUMBER	FIRE ESCAPE	DOOR TYPE	DOUBLE DOOR MEETING STILES	DOOR FRAME FACTORY FINISH	FRAME TYPE	DOOR FRAME FINAL FINISH	DOOR FRAME HINGES	IRONMONGERY	Quantity
001	Approved 1 Panel Flush Door Van A20 4200x8100 Horizontal Suspended Sliding door, size 810 x 2000mm.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	1
002	Escape door to be fitted with Approved panic bars.	Approved Panic High Door I) Core: Solid Timber Core of Laminated Sections Faced With Green High Density Chipboard II) Coreboard Core Laminated, Lapped or All Four Edges, Free Glass Central Handrest III) Finish as Delivered Product IV) Size as Delivered with Provision for the Finished Surface V) Size and Configuration as Indicated on The Architect's Door Schedule.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	1
003	Van A20 4200x8100 Horizontal Suspended Sliding door, overall size 810 x 2000mm high. Solid door timber surface to be smooth surface and apply quality timber sealant prior to installation, all in accordance with manufacturer's specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	1
004	Approved Panic High Door (1) right hand (overall door with 700mm security lock, overall size 700 x 1800 high. Finish as delivered and undercoat for final painting by contractor.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	1
005	Approved 1 Panel Flush Door Van A20 4200x8100 Horizontal Suspended Sliding door, overall size 810 x 2000mm high. Solid door timber surface to be smooth surface and apply quality timber sealant prior to installation, all in accordance with manufacturer's specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	1
006	Approved Panic High Door (1) right hand (overall door with 700mm security lock, overall size 700 x 1800 high. Finish as delivered and undercoat for final painting by contractor.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	1
007	Approved Standard chair operated roller shutter in galvanneal finish, size 4000mm x 2000mm high with 150mm clearance on free side and 315mm clearance on operator side. Black sides, 70mm wide side guides, Xpanda Roll Lox, with pressed steel canopy cover and weather strip 7 car to bottom edge, with perimeter framing plugged and screwed to face at maximum 300mm centres to concrete or masonry.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	1
008	Approved Standard chair operated roller shutter in galvanneal finish, size 3500mm x 2000mm high with 150mm clearance on free side and 315mm clearance on operator side. Black sides, 70mm wide side guides, Xpanda Roll Lox, with pressed steel canopy cover and weather strip 7 car to bottom edge, with perimeter framing plugged and screwed to face at maximum 300mm centres to concrete or masonry.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	As per Manufacturer's Specification.	1





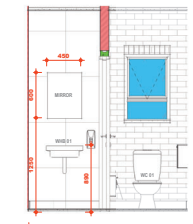
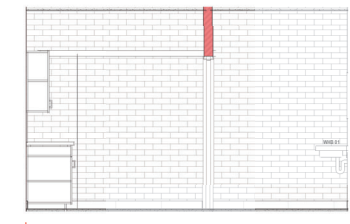
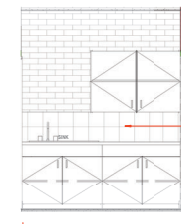
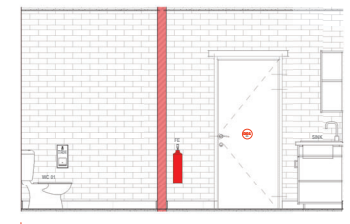
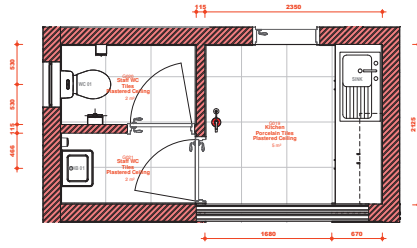
03 GROUND FLOOR LEVEL - G014
1:25

G014 ELEVATION 01
1:25

G014 ELEVATION 02
1:25

G014 ELEVATION 03
1:25

G014 ELEVATION 04
1:25



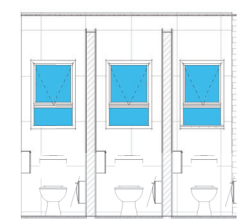
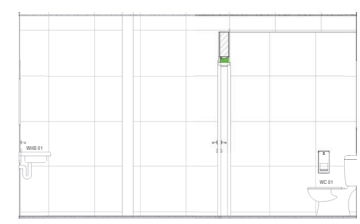
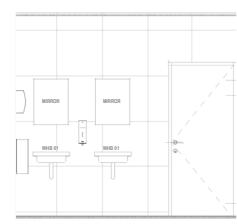
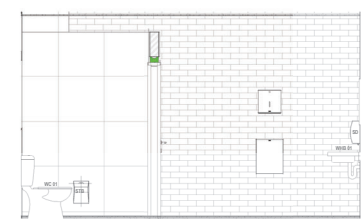
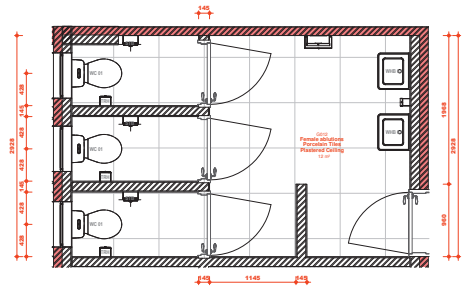
03 GROUND FLOOR LEVEL - G019
1:25

G019 ELEVATION 01
1:25

G019 ELEVATION 02
1:25

G019 ELEVATION 03
1:25

G019 ELEVATION 04
1:25



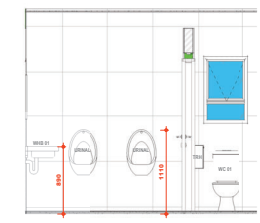
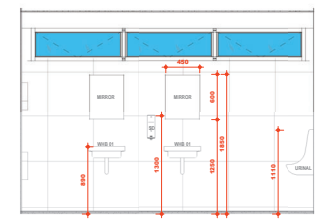
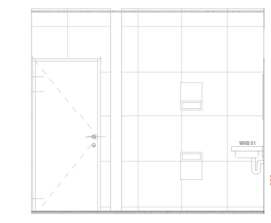
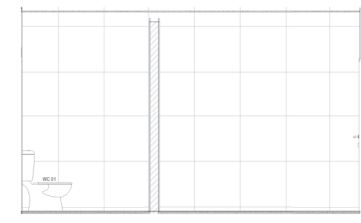
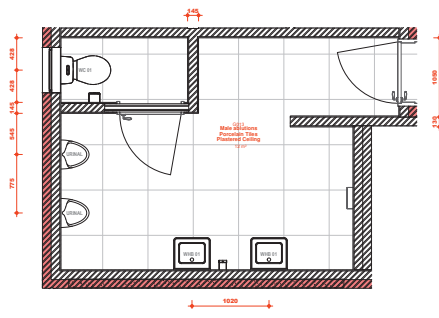
03 GROUND FLOOR LEVEL - G012
1:25

G012 ELEVATION 01
1:25

G012 ELEVATION 02
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G012 ELEVATION 03
1:25

G012 ELEVATION 04
1:25



03 GROUND FLOOR LEVEL - G013
1:25

G013 ELEVATION 01
1:25

G013 ELEVATION 02
1:25

G013 ELEVATION 03
1:25

G013 ELEVATION 04
1:25

AF-6 SCHEDULES, FINISHES									
NO.	NAME	QTY	UNIT	REVISION	REVISION	REVISION	REVISION	REVISION	REVISION
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SANITARY ACCESSORIES			
Type Mark	Description	Image	
MIRROR	450mm x 600mm		
PTD	KIMBERLY CLARK SLIMROLL HAND TOWEL DISPENSER		
SD	Stainless Steel Manual Soap Dispenser - 1,250ml - Vertical		
STB	12L SANITARY BIN - PEDAL OPERATED		
FRH	Encore TR2		
WB	18.6L SS wall bin CL-00093		

Plumbing Fixture Schedule					
Type Mark	Description	Accessories	Supply Type	Count	Image
SINK	Manufacturer: Franke Kitchen Systems (PTY) Ltd. Product reference: Projectline PLN611 Stainless Steel Sink Product Code: 310332	Manufacturer: ISCA. Product reference: Sandria Sink Mixers Wall Type Product Code: 3008/13SCCH		1	
URINAL	Manufacturer: Vaal Sanitaryware Product reference: Lavatera Wall Hung Urinal Product Code: 705427	Walco 330UR exposed 15 mm BSP urinal flush valve. Made from DZR brass and designed for single bowl urinals.	COLD	2	
WC 01	Toilet Pan Manufacturer: Vaal Sanitaryware Product reference: Hibiscus Elite Closed Coupled Toilet Product Code: 772402 Seat and Cover Manufacturer: Vaal Sanitaryware Product reference: Embassy Seat Product Code: 853020	Front-flush Lever: Right hand side fitted.	COLD	5	
WC 02	Toilet Pan Manufacturer: Vaal Sanitaryware Product reference: Protea Paraplegic Toilet with Cistern Product Code: 750246 Seat & Cover Manufacturer: Vaal Sanitaryware Product reference: Bouton Side-Tile toilet seat Product Code: 8515Z100	Side-flush lever: Right hand side fitted.	COLD	1	
WHB 01	Manufacturer: Vaal Sanitaryware. Product reference: Daisy Basin Product Code: 708803	Manufacturer: Franke Kitchen Systems (Pty) Ltd. Product reference: ACUALINE-S Self Closing Pillar Tap AQUA201 Product Code: 358744	COLD	5	
WHB 02	Manufacturer: Vaal Sanitaryware. Product reference: Daisy Basin Product Code: 708803	Manufacturer: Idrul Product reference: Single Lever Medical Basin Mixer Product Code: TVID02150	COLD	1	

