SANBI
Biodiversity for Life
South African National Biodiversity Institute

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI)

Bid No. SANBI: G417/2022

REQUEST FOR BIDS FOR THE APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE

PROCUREMENT DOCUMENT

FEBRUARY 2022

Issued by:

South African National Biodiversity Institute
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Contact:

Supply Chain Management
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Prepared by:

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Name of Tenderer: .....

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PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

Advertising Date:	**25 February 2022**	**Closing Date:**	**18 March 2022**
Closing Time:	**11:00**	**Validity Period:**	**90 days**

T1.1 Tender Notice and Invitation to Tender

THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE INVITES TENDERERS FOR THE PROVISION OF: APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE

Tender documents will be available as from **25 February 2022** and will be available **ONLINE ONLY** on the SANBI website www.sanbi.org (click on “Opportunities”).

Only Tenderers who can demonstrate that they will have in their employ staff which satisfy EPWP requirements during the contract validity, are eligible to submit tenders.

It is a condition of this tender that the successful contractor shall be required to sub-contract a minimum value of work to local SMMEs, equal to 30% of the contract sum excluding preliminaries, contingency and provisional sums.

Kindly note that no site briefing session will take place for this tender, and tenderers are advised to study the drawings and notify the representatives below should there be any queries or uncertainties. Relevant sections within this tender document that pertain to the site briefing can/have be excluded.

Cut-off date for enquiries: **11 March 2022 at 12:00**

Any queries regarding the Tender document or any related matter prior to submission of Tenders must be directed to:

SANBI Representative (Technical Queries Only)	Ms Anri Snyman BVi Consulting Engineers anris@bvi.co.za
SANBI SCM Representative	sanbi.tenders@sanbi.org.za

The closing time and date for the receipt of Tenders is **11:00** on **18 March 2022.**

The Tenders will **NOT** be opened in public (please note that the two-envelope system is being followed). Requirements for sealing, addressing, delivery, opening and assessment of Tenders are stated in the Tender Data.

T1.2 Tender Data

The Conditions of Tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Engineering and Construction Works Contracts – August 2019. (See www.cidb.org.za).

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.

Clause number	Tender Data
C.1.1.1	The Employer is: South African National Biodiversity Institute (SANBI): The Employer's *domicilium citandi et executandi* (permanent physical business address) is: Pretoria National Botanical Garden Biodiversity Centre 2 Cussonia Avenue, Brummeria, Pretoria The Employer's address for communication relating to this project is: Private Bag X101 Silverton 0184
C.1.2	The Tender Documents issued by the Employer comprise the following documents: **PART T THE TENDER** **Part T1 Tendering Procedures** T1.1 Tender Notice and Invitation to Tender T1.2 Tender Data Annexure C Standard Conditions of Tender

Clause number	Tender Data
	Part T2 Returnable Documents T2.1 List of Returnable Documents T2.2 Returnable Documents/Schedules **PART C THE CONTRACT** **Part C1 Agreement and Contract Data** C1.1 Form of Offer and Acceptance C1.2 Contract Data C1.3 Form of Construction Guarantee C1.4 Occupational Health & Safety Agreement 37(2) **Part C2 Pricing Data** C2.1 Pricing Instructions C2.2 Bills of Quantities **Part C3 Scope of works** C3.1 Description of the Works C3.2 Construction C3.3 Management **Part C4 Site information** C4.1 Site Information **Appendix A: Drawings** **Appendix B: Health & Safety Specifications** **Appendix C: Guidelines for the Implementation of Labour- Intensive Projects under the Expanded Public Works Programme (EPWP)** **Appendix D: Geotechnical Report**
C.1.4	The Employer's Agent is: **BVi Consulting Engineers** Menlyn Corporate Park, Block C, Cnr Corobay Ave & Garsfontein Rd, Menlyn, Pretoria P.O BOX 2967, Pretoria, 0001 Contact person: Ms Anri Snyman Tel: +27 12 940 1111 Email: anris@bvi.co.za
C.2.1	Only those Tenderers who satisfy the following eligibility criteria are eligible to submit Tenders Only those Tenderers who score the minimum score in respect of the quality criteria stated in C.3.11.1 of this Tender Data shall be considered responsive and have their Tenders evaluated further. (a) CIDB registration Only those Tenderers who are registered with the CIDB or are capable of being so prior to the evaluation of submissions, in a Contractor grading designation equal to or higher than a Contractor grading designation determined in accordance with the sum Tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a **5GB** class of construction work, are eligible to have their Tenders evaluated. Joint ventures are eligible to submit Tenders provided that: 1. every member of the joint venture is registered with the CIDB; 2. the lead partner has a Contractor grading designation in the 4**GB** class of construction work; and 3. the combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum Tendered for a 5**GB** class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations. (b) National Treasury Central Supplier Database Tenderers who are not registered on the National Treasury Central Supplier Database at close of Tender, shall submit a copy of their application of registration, with their Tender submission. Tenders received from such Tenderers who have not submitted proof of their registration within 21 days after the closing date for Tender submissions, will not be considered.

Clause number	Tender Data
C.2.6	Failure to apply instructions contained in addenda may render a Tenderer's offer non-responsive in terms of clause C.3.8.
C.2.7	~~The arrangements for a non-compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender.~~
C.2.8	Request clarifications at least 7 working days before the closing time.
C.2.12	Main Tender Offers are required to be submitted together with alternative Tenders. If a Tenderer wishes to submit an alternative Tender Offer, the only criteria permitted for such alternative Tender Offer is that it demonstrably satisfies the Employer's standards and requirements, the details of which may be obtained from the Employer's Agent. Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative Tender Offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal. Acceptance of an alternative Tender Offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the Tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements. The modified Pricing Data must include an amount equal to 5% of the amount Tendered for the alternative offer to cover the Employer's costs in confirming the acceptability of the detailed design.
C.2.13.6	A two-envelope procedure will be followed as described in clause C.2.13.7.
C.2.13.7	Tenderers shall note the specific requirements for packaging of their tender documents and include only the following: • Financial: one (1) original document marked "Original" **including** Form of Offer and Acceptance, Estimated monthly expenditure and Priced Bills of Quantities; and • Technical: one (1) document pack **without any** pricing on a **memory stick** Financial or pricing details should **ONLY** be included in the printed document pack marked **'ORIGINAL',** and not in the PDF file(s) of the document(s) on the **memory stick**. **NB**: Failure to submit one printed document pack with pricing in one envelope, and a document pack without pricing on a memory stick will lead to your bid being **disqualified**. INCLUSION OF ANY PRICING INFORMATION ANYWHERE ON THE MEMORY STICK WILL LEAD TO THE BID BEING DISQUALIFIED. The original document will be placed in one envelope and the memory stick will be placed in another envelope. The two envelopes shall be placed together in an outer envelope sealed and bearing the following: • The address as stated in C.2.15.1 below • The identification details as stated in C.2.15.1 below • Name of the Tenderer • The words "Not be opened before the Tender opening" The Technical and Financial envelopes should also contain the details of the last three bullets on them.

Clause number	Tender Data
	The financial envelope must contain the words NOT TO BE OPENED WITH THE TECHNICAL ENVELOPE
C.2.13.9	Telephonic, telegraphic, telex, facsimile or eMailed Tender Offers will not be accepted.
C.2.15.1	The Employer's address for delivery of Tender Offers and identification details to be shown on each Tender Offer package are: **Location of Tender Box:** Biodiversity Centre **Physical address:** Pretoria National Botanical Garden 2 Cussonia Avenue Brummeria Pretoria **Identification Details:** Tender No.: **SANBI: G417/2022** **Title of Tender:** Appointment of a contractor for the construction of a new lapa and the refurbishments of existing gate house and existing ablutions (only on areas where specified), external areas (where defined) and the inspection and works to existing and new services (water, sewer and stormwater) for the South African National Biodiversity Institute (SANBI) at the Mokopane Biodiversity Conservation Centre, Mokopane
C.2.15.2	The closing time for submission of Tender Offers is as stated in the Tender Notice and Invitation to Tender.
C.2.16.1	The Tender Offer validity period is **90 days**.
C.2.16.3	Where a Tenderer, at any time after the opening of his Tender Offer but prior to entering into a contract based on his Tender Offer: (1) withdraws his Tender; (2) gives notice of his inability to execute the contract in terms of his Tender; or (3) fails to comply with a request made in terms of C.2.17, C.2.18 or C.3.9 such Tenderer shall be barred from Tendering on any of the Employer's future Tenders for a period to be determined by the Employer, but not less than six (6) months, from the date of Tender closure. The Employer may fully or partly exempt a Tenderer from the provisions of this condition if he is of the opinion that the circumstances justify the exemption.
C.2.18	The Tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the Labour-Intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.
C.2.22	Tender Documents will **not be returned** to Bidders.
C.2.23	The Tenderer is required to submit with his Tender the following **(failure to provide below documentation will result in the Tender being rejected)**: 1) A copy of the Central Suppliers Database (CSD) registration report or registration number. 2) A printed copy of the Active Contractor's Listing off the CIDB website (www.cidb.org.za) 3) UIF compliance demonstrated by submission of one of the following: • A valid copy of the UIF Letter of Compliance issued by the Department of Labour, or • Labour uFiling Employer Statement of Account indicating UIF payments or accruals not older than 12 months, or • SARS eFiling Employer Statement of Account indicating UIF payments or accruals not older than 12 months, or • Valid proof of exemption for UIF. 4) Letter of Good Standing from the Office of the Compensation Commissioner as required by the Compensation for Occupational Injuries and Diseases Act (COIDA). The letter should be issued by the Department of Labour. 5) A valid certified copy or original Broad-Based Black Economic Empowerment (B-BBEE) Status Level 1 certificate. Note that for this Tender, the following pre-qualification criterion for preferential procurement will be applied: Section 4(1) a Tenderer having a B-BBEE Status Level of Contributor Level 1. 1) Certificates

Clause number	Tender Data
	2) Include in the Tender submission or provide the Employer with any certificates as stated in the Tender Data. 3) In case of a Joint Venture, bidders are required to submit consolidated BBBEE certificate or sworn affidavit, as well as joint venture agreement that clearly outlines each party's percentage involvement or role.
C.3.1.1	The Employer shall respond to clarifications received up to 7 working days before the Tender closing time.
C.3.2	The Employer shall issue addenda until 5 working days before the Tender closing time.
C.3.4.1	The Tenders will not be opened in public
C.3.5.1	The two-envelope system will be followed for this Tender.
C.3.7	In the event of disqualification, the Employer may, at his sole discretion, impose a specified period during which Tender Offers will not be accepted from the offending Tenderer and report same to the CIDB and National Treasury.
C.3.11.1	The procedure for the evaluation of responsive Tenders is stated in **Annexure A**.
C.3.13	In addition to the requirements of the Condition of Tender, offers will only be accepted if: a) the Tenderer submits **a copy of the CSD registration report or registration number** (refer to T2.1.13); b) the Tenderer is registered with the Construction Industry Development Board in an appropriate Contractor grading designation (refer to T2.1.12); c) the Tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector (refer to SBD 8 – T2.1.17); d) the Tenderer has not (refer to SBD 8 – T2.1.17): i) abused the Employer's Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect; e) the Tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the Tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the Tender process and persons in the employ of the state are permitted to submit Tenders or participate in the contract (refer to T2.1.16); f) the Tenderer is registered and in good standing with the compensation fund issued by the Department of Labour (Letter of Good Standing from the Office of the Compensation Commissioner (COIDA)); g) the Employer is reasonably satisfied that the Tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. h) UIF compliance demonstrated by submission of one of the following: • A valid copy of the UIF Letter of Compliance issued by the Department of Labour, or • Labour uFiling Employer Statement of Account indicating UIF payments or accruals not older than 12 months, or • SARS eFiling Employer Statement of Account indicating UIF payments or accruals not older than 12 months, or • Valid proof of exemption for UIF. i) A valid certified copy or original Broad-Based Black Economic Empowerment (B-BBEE) Status Level 1 certificate. Note that for this Tender, the following pre-qualification criterion for preferential procurement will be applied: Section 4(1) a **Tenderer having a B-BBEE Status Level of Contributor Level 1.**
F.2.1	Only those Tenderers who can demonstrate that they will have in their employ management and supervisory staff satisfying the requirements of the scope of work for labour-intensive competencies for supervisory and management staff during the validity of the contract, are eligible to submit tenders.
F.2.18	The Tenderer must submit to the Employer names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works, together with satisfactory evidence that such staff members satisfy the eligibility requirements.

Annexure A

This Annexure contains all the criteria that the Employer shall use to evaluate Tenders. In accordance with clause C.3.11 of the Standard conditions of Tender. No other factors, methods or criteria shall be used. The Tenderer shall provide all the information requested in the forms included in Part T2.2 – Returnable Schedules.

Tenders shall be evaluated in three stages as follows

- Stage 1 – Evaluation of Eligibility and Administrative Compliance
- Stage 2 – Evaluation of Functionality
- Stage 3 – Evaluation of Tender Price and Preference

1 Stage 1: Eligibility and Administrative Compliance

The first stage will determine whether Bids are compliant with all mandatory and disqualifiable submission requirements. Bidders that are deemed compliant will be eligible for further evaluation.

The criteria as identified in Clauses C.2.23 and C.3.13 in the Tender Data will be used to determine the Tenders eligibility.

For administrative compliance, the Tenderers must complete all the returnable forms in Part T2.2, the Bills of Quantities and the Offer section in Part C1.1.

2 Stage 2: Functionality

The Tenderers who complied with the eligibility and administrative criteria in Stage 1, are considered for further evaluation on their capability to execute the project.

In this stage Tenders will be evaluated on functionality according to the criteria listed below. Tenderers who fail to score a minimum of 70 points out of a possible 100 points on functionality criteria will not be eligible for further consideration.

Scoring quality
The functionality (quality) evaluation criteria are listed below. Maximum points for each criterion are in bold while points for each sub-criteria are indicated in brackets.

<table>
<tr><th colspan="3">FUNCTIONALITY CRITERIA</th></tr>
<tr><th>ID</th><th>CRITERIA</th><th>POINTS</th></tr>
<tr><td>1</td><td>Implementation method and project plan or programme
• Method to be followed in delivering this project
• Weekly plan/programme with milestones</td><td>20
(10)
(10)</td></tr>
<tr><td>2</td><td>Contractor’s Experience
• Three reference letters regarding work of similar scope and scale completed in last five years
<table>
<tr><th>Sub-Criteria</th><th>Points</th></tr>
<tr><td>One reference letter</td><td>5</td></tr>
<tr><td>Two reference letters</td><td>10</td></tr>
<tr><td>Three reference letters or more</td><td>15</td></tr>
</table></td><td>55
(15)</td></tr>
</table>

- List of at least five conventional projects with telephonic references, indicating value of works completed and project duration in the last 10 years.

Sub-Criteria	Points
One Project	3
Two Projects	6
Three Projects	9
Four Projects	12
Five Projects	15

(15)

- List of at least five labour intensive construction projects with telephonic references, indicating value of works completed and project duration in the last 10 years.

Sub-Criteria	Points
One Labour Intensive Project	5
Two Labour Intensive Projects	10
Three Labour Intensive Projects	15
Four Labour Intensive Projects	20
Five Labour Intensive Projects	25

(25)

3

Contractor's Resources – Personnel and Plant

25

Proposed personnel:

- CVs for proposed key personnel **(At least 3)** indicating:
  - Previous work experience
  - Total number of years' working experience in construction
  - Individual experience on similar work in last five years
  - Qualifications or artisan's certification or other recognised training courses completed
  - Membership of professional bodies or guilds

Sub-Criteria	Points
Combined CV experience of less than 5 years	4
Combined CV experience of more than 5 years	8
Combined CV experience of more than 10 years	12
Combined CV experience of more than 15 years	16
Combined CV experience of more than 20 years	20

(20)

	Plant: • Equipment owned by Contractor • Equipment to be rented (if any) – with preferred rental companies	(5)
TOTAL		**100**

Functionality shall be scored by not less than three evaluators in accordance with the following schedules:

Each evaluation criterion will be assessed in terms of five indicators – no response, poor, satisfactory, acceptable, good and very good. Scores ranging from of 0 to 5 will be allocated to no response, very poor, poor, acceptable, good and very good responses, respectively. The scores submitted by each of the evaluators will be averaged, weighted and then totalled to obtain the final score for functionality. The prompts for judgment and the associated scores used in the evaluation of quality shall be as follows:

Score	Prompt for judgement
0	Failed to address the question/issue
1	Very poor response - response/answer/solution lacks convincing evidence of skill/experience sought or medium risk that relevant skills will not be available.
2	Poor response – some elements of the response/answer/solution are present but documentary evidence is mostly lacking in respect of the required information
3	Acceptable response/answer/solution to the particular aspect of the requirements and evidence given of skill /experience sought
4	Above acceptable – response/answer/solution demonstrating real understanding of requirements and evidence of ability to meet it.
5	Excellent - response/answer/solution provides confidence that the Tenderer will add real value to the project.

The minimum number of evaluation points for functionality proposal is **70 points** in order to progress to Stage 3 of the evaluation

3 Stage 3: Tender Price and Preference

The Tenderers who complied with the functionality criteria in Stage 2 are considered for further evaluation in terms of their Tender Price and Preference Points.

3.1 Correction of arithmetical errors

Pursuant to clause C.3.9 of the Standard Conditions of Tender as amended in the Tender Data, correction of arithmetical errors shall be undertaken.

3.2 Calculation of score for Tender Price

The score for Tender Price shall be calculated using the following formula:

$$N_F = W_f \times \left[1 - \left(\frac{P_t - P_{min}}{P_{min}}\right)\right]$$

Where:

N_F = the score for Tender Price awarded for the Tender under consideration

W_f = the weighting given to financial offer, determined as follows:

- 90 where the Tender Price, inclusive of VAT, of all responsive Tender Offers received has a value in excess of R50 000 000,00; or

- 80 where the Tender Price, inclusive of VAT, of one or more responsive Tender Offers has a value that equals or is less than R50 000 000,00.

P_t = Tender Price of the Tender under consideration

P_{min} = Tender Price of the lowest responsive Tender

In the event that the calculated value of N_F is negative, the allocated score shall be 0

3.3 Calculation of Preference points

Up to 100 minus W_f Tender evaluation points will be awarded to Tenderers who submit responsive Tenders and who are found to be eligible for the preference claimed. Points are based on a Tenderer's scorecard measured in terms of the Broad-Based Black Economic Empowerment Act (B-BBEE, Act 53 of 2003) and the Regulations (2017) to the Preferential Procurement Policy Framework Act (PPPFA, Act 5 of 2000).

Points awarded will be according to a Tenderer's B-BBEE status level of contributor and summarised in the table below:

B-BBEE Status Level of contributor	Qualification	Number of Points for Contract value up to R50 000 000	Number of Points for Contract Value above R50 000 000
1	≥ 100 points	20	10
2	≥ 85 but < 100 points	18	9
3	≥ 75 but < 85 points	14	6
4	≥ 65 but < 75 points	12	5
5	≥ 55 but < 65 points	8	4
6	≥ 45 but < 55 points	6	3
7	≥ 40 but < 45 points	4	2
8	≥ 30 but < 40 points	2	1
Non-compliant Contributor	< 30 points	0	0

Eligibility for preference points is subject to the following conditions:

(1) A Tenderer's scorecard shall be based on the Construction Sector Codes of Practice promulgated in Government Gazette 32305 of 5 June 2009, only if such certificate has been issued before 17 February 2016, alternatively a B-BBEE Certificate issued in accordance with the revised Notice of Clarification published in Notice 444 of 2015 of Government Gazette No.38799 on 15 May 2015 by the Department of Trade and Industry; and
(2) The scorecard shall be submitted as a certificate attached to Returnable Schedule Form T2.1.06; and
(3) The certificate shall:
  (a) be an original or an original certified copy of the original; and
  (b) have been issued by a verification agency accredited by the South African National Accreditation System (SANAS); or
  (c) have been issued by a registered auditor approved by the Independent Regulatory Board of Auditors (IRBA), and
(4) The Verification Certificate must be valid at the Tender closing date; and
(5) The date of issue of the certificate must be less than 12 (twelve) months prior to the advertised Tender closing date (see Tender Data C.2.15.2); and
(6) Compliance with any other information requested to be attached to Form T2.1.06; and
(7) If a Tenderer claims a preference score without submitting an acceptable verification certificate, a period of 24 hours will be granted to submit an acceptable verification certificate which was valid at date of Tender closure; and
(8) Failure to submit a valid verification certificate will result in the award of 0 (zero) points for preference; and
(9) In the event of a joint venture (JV), a consolidated B-BBEE verification certificate in the name of the JV shall be submitted.

3.4 Financial and Preference

After calculation of the scores for Tender Price and for Preference, a combined score will be calculated as follows:

NT = NF + NP

Where:

NT = Total score for Tender under consideration
NF = Score for Tender Price
NP = Score for Preference

The Tender with the highest score should be recommended for appointment.

Annexure C: Standard Conditions of Tender

C.1 General

C.1.1 Actions

C.1.1.1 The Employer and each Tenderer submitting a Tender Offer shall comply with these conditions of Tender. In their dealings with each other, they shall discharge their duties and obligations as set out in C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

C.1.1.2 The Employer and the Tenderer and all their agents and employees involved in the Tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their Tender submissions. Employees, agents and advisors of the Employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

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

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

C.1.1.3 The Employer shall not seek, and a Tenderer shall not submit a Tender without having a firm intention and the capacity to proceed with the contract.

C.1.2 Tender Documents

The documents issued by the Employer for the purpose of a Tender Offer are listed in the Tender Data.

C.1.3 Interpretation

C.1.3.1 The Tender Data and additional requirements contained in the Tender schedules that are included in the returnable documents are deemed to be part of these conditions of Tender.

C.1.3.2 These conditions of Tender, the Tender Data and Tender schedules which are required for Tender evaluation purposes, shall form part of any contract arising from the invitation to Tender.

C.1.3.3 For the purposes of these conditions of Tender, the following definitions apply:

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

i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfill his or her duties impartially.

ii) an individual or Tenderer is able to exploit a professional or official capacity in some way for their personal or corporate benefit; or

iii) incompatibility or contradictory interests exist between an employee and the Tenderer who employs that employee.

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

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

d) **fraudulent practice** means the misrepresentation of the facts in order to influence the Tender process or the award of a contract arising from a Tender Offer to the detriment of the Employer, including collusive practices intended to establish prices at artificial levels.

C.1.4 Communication and Employer's agent

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

C.1.5 Cancellation and Re-Invitation of Tenders

C.1.5.1 An Employer may, prior to the award of the Tender, cancel a Tender if-

a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation;
b) funds are no longer available to cover the total envisaged expenditure; or
c) no acceptable Tenders are received;
d) there is a material irregularity in the Tender process.

C.1.5.2 The decision to cancel a Tender invitation must be published in the same manner in which the original Tender invitation was advertised

C.1.5.3 An Employer may only with the prior approval of the relevant treasury cancel a Tender invitation for the second time.

C.1.6 Procurement procedures

C.1.6.1 General

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

C.1.6.2 Competitive negotiation procedure

C.1.6.2.1 Where the Tender Data require that the competitive negotiation procedure is to be followed, Tenderers shall submit Tender Offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the Employer shall announce only the names of the Tenderers who make a submission. The requirements of C.3.8 relating to the material deviations or qualifications which affect the competitive position of Tenderers shall not apply.

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

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

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

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

C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1

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

C.1.6.3.2 Option 2

C.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The Employer shall invite all responsive Tenderers to submit Tender Offers in the second stage, following the issuing of procurement documents.

C.1.6.3.2.2 The Employer shall evaluate Tenders received during the second stage in terms of the method of evaluation stated in the Tender Data and award the contract in terms of these conditions of Tender.

C.2 Tenderer's obligations

C.2.1 Eligibility

C.2.1.1 Submit a Tender Offer only if the Tenderer satisfies the criteria stated in the Tender Data and the Tenderer, or any of his principals, is not under any restriction to do business with Employer.

C.2.1.2 Notify the Employer of any proposed material change in the capabilities or formation of the Tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the Employer as the basis in a prior process to invite the Tenderer to submit a Tender Offer and obtain the Employer's written approval to do so prior to the closing time for Tenders.

C.2.2 Cost of Tendering

C.2.2.1 Accept that, unless otherwise stated in the Tender Data, the Employer will not compensate the Tenderer for any costs incurred in the preparation and submission of a Tender Offer, including the costs of any testing necessary to demonstrate that aspects of the offer comply with requirements.

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

C.2.3 Check documents

Check the Tender documents on receipt for completeness and notify the Employer of any discrepancy or omission.

C.2.4 Confidentiality and copyright of documents

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

C.2.5 Reference documents

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

C.2.6 Acknowledge addenda

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

C.2.7 ~~Clarification meeting~~

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

C.2.8 Seek clarification

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

C.2.9 Insurance

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

C.2.10 Pricing the Tender Offer

C.2.10.1 Include in the rates, prices, and the Tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful Tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the Tender Data.

C.2.10.2 Show VAT payable by the Employer separately as an addition to the Tendered total of the prices.

C.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the Contract Data.

C.2.10.4 State the rates and prices in Rand unless instructed otherwise in the Tender Data. The conditions of contract identified in the Contract Data may provide for part payment in other currencies.

C.2.11 Alterations to documents

Do not make any alterations or additions to the Tender documents, except to comply with instructions issued by the Employer, or necessary to correct errors made by the Tenderer. All signatories to the Tender Offer shall initial all such alterations.

C.2.12 Alternative Tender Offers

C.2.12.1 Unless otherwise stated in the Tender Data, submit alternative Tender Offers only if a main Tender Offer, strictly in accordance with all the requirements of the Tender documents, is also submitted as well as a schedule that compares the requirements of the Tender documents with the alternative requirements that are proposed.

C.2.12.2 Accept that an alternative Tender Offer must be based only on the criteria stated in the Tender Data or criteria otherwise acceptable to the Employer.

C.2.12.3 An alternative Tender Offer must only be considered if the main Tender Offer is the winning Tender.

C.2.13 Submitting a Tender Offer

C.2.13.1 Submit one Tender Offer only, either as a single Tendering entity or as a member in a joint venture to provide the whole of the works identified in the Contract Data and described in the scope of works, unless stated otherwise in the Tender Data.

C.2.13.2 Return all returnable documents to the Employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

C.2.13.3 Submit the parts of the Tender Offer communicated on paper as an original plus the number of copies stated in the Tender Data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the Employer.

C.2.13.4 Sign the original and all copies of the Tender Offer where required in terms of the Tender Data. The Employer will hold all authorized signatories liable on behalf of the Tenderer. Signatories for Tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the Employer shall hold liable for the purpose of the Tender Offer.

C.2.13.5 Seal the original and each copy of the Tender Offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the Employer's address and identification details stated in the Tender Data, as well as the Tenderer's name and contact address.

C.2.13.6 Where a two-envelope system is required in terms of the Tender Data, place and seal the returnable documents listed in the Tender Data in an envelope marked “financial proposal” and place the remaining returnable documents in an envelope marked “technical proposal”. Each envelope shall state on the outside the Employer’s address and identification details stated in the Tender Data, as well as the Tenderer's name and contact address.

C.2.13.7 Seal the original Tender Offer and copy packages together in an outer package that states on the outside only the Employer's address and identification details as stated in the Tender Data.

C.2.13.8 Accept that the Employer will not assume any responsibility for the misplacement or premature opening of the Tender Offer if the outer package is not sealed and marked as stated.

C.2.13.9 Accept that Tender Offers submitted by facsimile or e-mail will be rejected by the Employer, unless stated otherwise in the Tender Data.

C.2.14 Information and data to be completed in all respects

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

C.2.15 Closing time

C.2.15.1 Ensure that the Employer receives the Tender Offer at the address specified in the Tender Data not later than the closing time stated in the Tender Data. Accept that proof of posting shall not be accepted as proof of delivery.

C.2.15.2 Accept that, if the Employer extends the closing time stated in the Tender Data for any reason, the requirements of these conditions of Tender apply equally to the extended deadline.

C.2.16 Tender Offer validity

C.2.16.1 Hold the Tender Offer(s) valid for acceptance by the Employer at any time during the validity period stated in the Tender Data after the closing time stated in the Tender Data.

C.2.16.2 If requested by the Employer, consider extending the validity period stated in the Tender Data for an agreed additional period with or without any conditions attached to such extension.

C.2.16.3 Accept that a Tender submission that has been submitted to the Employer may only be withdrawn or substituted by giving the Employer’s agent written notice before the closing time for Tenders that a Tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the Employer evaluating Tender, the Contractor reserves the right to review the price based on Consumer Price Index (CPI).

C.2.16.4 Where a Tender submission is to be substituted, a Tenderer must submit a substitute Tender in accordance with the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".

C.2.17 Clarification of Tender Offer after submission

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

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

C.2.18 Provide other material

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

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

C.2.18.2 Dispose of samples of materials provided for evaluation by the Employer, where required.

C.2.19 Inspections, tests and analysis

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

C.2.20 Submit securities, bonds and policies

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

C.2.21 Check final draft

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

C.2.22 Return of other Tender documents

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

C.2.23 Certificates

Include in the Tender submission or provide the Employer with any certificates as stated in the Tender Data.

Certificates

In case of a Joint Venture, bidders are required to submit consolidated BBBEE certificate or sworn affidavit, as well as joint venture agreement that clearly outlines each party's percentage involvement or role.

C.3 The Employer's undertakings

C.3.1 Respond to requests from the Tenderer

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

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

a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements.
b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or

c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

C.3.2 Issue Addenda

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

C.3.3 Return late Tender Offers

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

C.3.4 Opening of Tender submissions

C.3.4.1 Unless the two-envelope system is to be followed, open valid Tender submissions in the presence of Tenderers' agents who choose to attend at the time and place stated in the Tender Data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

C.3.4.2 Announce at the meeting held immediately after the opening of Tender submissions, at a venue indicated in the Tender Data, the name of each Tenderer whose Tender Offer is opened and, where applicable, the total of his prices, number of points claimed for its BBBEE status level and time for completion for the main Tender Offer only.

C.3.4.3 Make available the record outlined in C.3.4.2 to all interested persons upon request.

C.3.5 Two-envelope system

C.3.5.1 Where stated in the Tender Data that a two-envelope system is to be followed, open only the technical proposal of valid Tenders in the presence of Tenderers' agents who choose to attend at the time and place stated in the Tender Data and announce the name of each Tenderer whose technical proposal is opened.

C.3.5.2 Evaluate functionality of the technical proposals offered by Tenderers, then advise Tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of Tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the Tender Data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to Tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

C.3.6 Non-disclosure

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

C.3.7 Grounds for rejection and disqualification

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

C.3.8 Test for responsiveness

C.3.8.1 Determine, after opening and before detailed evaluation, whether each Tender Offer properly received:

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

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

a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
b) significantly change the Employer's or the Tenderer's risks and responsibilities under the contract, or
c) affect the competitive position of other Tenderers presenting responsive Tenders, if it were to be rectified.

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

C.3.9 Arithmetical errors, omissions and discrepancies

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

C.3.9.2 Check the highest ranked Tender or Tenderer with the highest number of Tender evaluation points after the evaluation of Tender Offers in accordance with C.3.11 for:

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

C.3.9.3 Notify the Tenderer of all errors or omissions that are identified in the Tender Offer and either confirm the Tender Offer as Tendered or accept the corrected total of prices.

C.3.9.4 Where the Tenderer elects to confirm the Tender Offer as Tendered, correct the errors as follows:

a) If Bills of Quantities or pricing schedules apply and there is an error in the line-item total resulting from the product of the unit rate and the quantity, the line item total shall govern, and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line-item total as quoted shall govern, and the unit rate shall be corrected.

b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the Tenderer's addition of prices, the total of the prices shall govern, and the Tenderer will be asked to revise selected item prices (and their rates if Bills of Quantities apply) to achieve the Tendered total of the prices.

C.3.10 Clarification of a Tender Offer

Obtain clarification from a Tenderer on any matter that could give rise to ambiguity in a contract arising from the Tender Offer.

C.3.11 Evaluation of Tender Offers

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that Tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of Tender are by definition the document that establishes a Tenderer's obligations in submitting a Tender and the Employer's undertakings in soliciting and evaluating Tender Offers. Such conditions establish the rules from the time a Tender is advertised to the time that a contract is awarded and require Employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:	
Requirement	**Qualitative interpretation of goal**
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a Tenderer who satisfies all requirements are restrictions from doing business with the Employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	Cost effective

The activities associated with evaluating Tender Offers are as follows:

a) Open and record Tender Offers received
b) Determine whether or not Tender Offers are complete

c) Determine whether or not Tender Offers are responsive
d) Evaluate Tender Offers
e) Determine if there are any grounds for disqualification
f) Determine acceptability of preferred Tenderer
g) Prepare a Tender evaluation report
h) Confirm the recommendation contained in the Tender evaluation report

C.3.11.1 General

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

C.3.12 Insurance provided by the Employer

*If requested by the proposed successful Tenderer, submit for the Tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the Contract Data, require the Employer to provide.

C.3.13 Acceptance of Tender Offer

Accept the Tender Offer; if in the opinion of the Employer, it does not present any risk and only if the Tenderer:

a) is not under restrictions, or has principals who are under restrictions, preventing participating in the Employer's procurement.
b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract.
c) has the legal capacity to enter into the contract.
d) is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing.
e) complies with the legal requirements, if any, stated in the Tender Data; and
f) is able, in the opinion of the Employer, to perform the contract free of conflicts of interest.

C.3.14 Prepare contract documents

C.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the Employer as part of the Tender documents to take account of:

a) addenda issued during the Tender period,
b) inclusion of some of the returnable documents and
c) other revisions agreed between the Employer and the successful Tenderer.

C.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

C.3.15 Complete adjudicator's contract

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

C.3.16 Registration of the award

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

C.3.17 Provide copies of the contracts

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

C.3.18 Provide written reasons for actions taken

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

PART T: THE TENDER
Part T2: Returnable Documents

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

T2.1 List of Returnable Documents

1. RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES

Tender document name	Number of pages issued	Returnable document
Resolution of Board of Directors (T2.2.01)	1 Page	■ Yes □ No
Resolution of Board of Directors to enter into consortia or JV's (T2.2.02) (If Applicable)	2 Pages	■ Yes □ No
Special Resolution of Consortia or JV's (T2.2.03) (If Applicable)	3 Pages	■ Yes □ No
Schedule of Proposed Sub-contractors (T2.2.04)	1 Page	■ Yes □ No
Capacity of Tenderer (T2.2.05)	3 Pages	■ Yes □ No
PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017 (T2.2.06)	4 Pages	■ Yes □ No
Resources to be employed in terms of organization and staffing (T2.2.07)	2 Pages	■ Yes □ No
Estimated Monthly Expenditure (T2.2.08)	1 Page	■ Yes □ No
~~Non-Compulsory Site Inspection Meeting Certificate (T2.2.09)~~	~~1 Page~~	~~■ Yes □ No~~
Compensation of Occupational Injuries and Disease Act (COIDA) (T2.2.18)	1 Page	■ Yes □ No
Unemployment Insurance Fund (UIF) (T2.2.19)	1 Page	■ Yes □ No

2. OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Tender document name	Number of pages issued	Returnable document
Declaration of Interest (T2.2.10)	2 Pages	■ Yes □ No
Medical Certificate for the confirmation of permanent disabled status (T2.2.11)	1 Page	■ Yes □ No

Proof of Registration with Construction Industry Development Board (T2.2.12)	1 Page	■ Yes □ No
Copy of CSD Registration Certificate (T2.2.13)	1 Page	■ Yes □ No
SMME PLAN (T2.2.21)	1 Page	■ Yes □ No

Tender document name	**Number of pages issued**	**Returnable document**
Financial References (T2.2.14)	1 Page	■ Yes □ No
Proof of Liability Insurance (T2.2.20)	1 Page	■ Yes □ No
SBD 6.2 Declaration Certificate for Local Production and Content for Designated Sectors	6 Pages	■ Yes □ No

3. RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT

Tender document name	**Number of pages issued**	**Returnable document**
Record of Addenda to Tender Documents (T2.2.15)	1 Page	■ Yes □ No
Compulsory Enterprise Questionnaire (T2.2.16)	3 Pages	■ Yes □ No

4. OTHER DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT

Tender document name	**Number of pages issued**	**Returnable document**
Applicable Form of Guarantee	3 Pages	■ Yes □ No
Priced Bills of Quantities	159 Pages	■ Yes □ No
Approved SMME Plan	1 Page	■ Yes □ No

C1.1 Offer portion of Form of Offer and Acceptance
C1.2 Contract Data - Part 2
C1.3 Form of Guarantee

RETURNABLE DOCUMENT CHECKLIST

This form has been created as an aid to ensure a Tenderer's compliance with the completion of the returnable schedules and subsequent placement in the correct **Technical** and **Financial** envelopes.

A TECHNICAL ENVELOPE (1 COPY)

Reference No.	Document Description	Tick if completed
T2.2.01	Resolution of Board of Directors	
T2.2.02	Resolution of Board of Directors to enter into consortia or JV's (If Applicable)	
T2.2.03	Special Resolution of Consortia or Joint Ventures (If Applicable)	
T2.2.04	Schedule of Proposed Sub-contractors	
T2.2.05	Capacity of Tenderer	
T2.2.06	Preference points claim form in terms of the Preferential Procurement Regulations 2017	
T2.2.07	Resources to be employed in terms of organization and staffing	
T2.2.09	~~Non-Compulsory Site Inspection Meeting Certificate~~	
T2.2.10	Declaration of Interest	
T2.2.11	Medical Certificate for the confirmation of permanent disabled status	
T2.2.12	Proof of Registration with Construction Industry Development Board	
T2.2.13	Original Valid Tax Clearance Certificate	
T2.2.14	Copy of CSD Registration Certificate	
T2.2.15	Financial References	
T2.2.16	Record of Addenda to Tender Documents	
T2.2.17	Compulsory Enterprise Questionnaire	
T2.2.18	Compensation of Occupational Injuries and Disease Act (COIDA)	
T2.2.19	Unemployment Insurance Fund (UIF)	
T2.2.20	Proof of Liability Insurance	
SBD 8	Declaration of Bidder's Past Supply Chain Management Practices	
SBD 9	Certificate of Independent Quotation Determination	

B FINANCIAL ENVELOPE (ORIGINAL DOCUMENT)

The entire original Tender document must be submitted in this envelope including the forms as listed below:

Reference No.	Document Description	Tick if completed
C1.1	Form of Offer and Acceptance	
C1.2	Contract Data – Part 1	
C2.2	Priced Bills of Quantities	
T2.2.08	Estimated Monthly Expenditure	
SBD 6.2	Local Content Declaration and Annexures	
T2.2.21	SMME PLAN	

T2.2 Returnable Documents/Schedules

T2.2.01: RESOLUTION OF BOARD OF DIRECTORS

RESOLUTION of a meeting of the Board of *Directors / Members / Partners of:

.....

.....
(*legally correct full name and registration number, if applicable, of the Enterprise)*

Held at ..... (place)

On ..... (date)

RESOLVED that:

1. The Enterprise submits a Bid / Tender to the South African National Biodiversity Institute in respect of the following project:

   .....

   .....
   (*project description as per Bid / Tender Document)*

   Bid / Tender Number: ..... *(Bid / Tender Number as per Bid / Tender Document)*

2. *Mr/Mrs/Ms: .....

   in *his/her Capacity as: ..... *(Position in the Enterprise)*

   and who will sign as follows: .....

   be, and is hereby, authorised to sign the Bid/Tender, and any and all other documents and/or correspondence in connection with and relating to the Bid/Tender, as well as to sign any Contract, and any and all documentation, resulting from the award of the Bid/Tender to the Enterprise mentioned above.

	Name	**Capacity**	**Signature**
1			
2			
3			
4			

Note:

1. ** Delete which is not applicable*
2. ***NB**. This resolution must be signed by all the Directors / Members / Partners of the Bidding Enterprise.*
3. *Should the number of Directors / Members/Partners exceed the space available above, additional names and signatures must be supplied on a separate page.*

ENTERPRISE STAMP

T2.2.02: RESOLUTION OF BOARD OF DIRECTORS TO ENTER INTO CONSORTIA OR JOINT VENTURES

RESOLUTION of a meeting of the Board of *Directors/Members/Partners of:

.....

.....
(*Legally correct full name and registration number, if applicable, of the Enterprise)*

Held at ..... (place)

On ..... (date)

RESOLVED that:

1. The Enterprise submits a Bid /Tender, in consortium/Joint Venture with the following Enterprises:

   .....

   .....
   (List all the legally correct full names and registration numbers, if applicable, of the Enterprises forming the Consortium/Joint Venture)

   to the South African National Biodiversity Institute in respect of the following project:

   .....

   .....
   (*Project description as per Bid/Tender Document)*

   Bid/Tender Number: ..... *(Bid/Tender Number as per Bid/Tender Document)*

2. *Mr/Mrs/Ms: .....

   in *his/her Capacity as: ..... *(Position in the Enterprise)*

   and who will sign as follows: .....

   be, and is hereby, authorised to sign a consortium/joint venture agreement with the parties listed under item 1 above, and any and all Other documents and/or correspondence in connection with and relating to the consortium/joint venture, in respect of the project described under item 1 above.

3. The Joint Venture formation/arrangement will be in the following proportions:

Name of Contractor	**Proportion (%)**

4. The Enterprise accepts joint and several liability with the parties listed under item 1 above for the due fulfilment of the obligations of the joint venture deriving from, and in any way connected with, the Contract to be entered into with the Employer in respect of the project described under item 1 above.

5. The Enterprise chooses as its *domicilium citandi et executandi* for all purposes arising from this joint venture agreement and the Contract with the Employer in respect of the project under item 1 above:

Physical address:.....

.....

.....(code)

Postal address: .....

.....

.....(code)

Telephone number: .....(code)

Fax number: .....(code)

	Name	**Capacity**	**Signature**
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Note:

1. ** Delete which is not applicable.*
2. ***NB**. This resolution must be signed by all the Directors/ Members/Partners of the Bidding Enterprise.*
3. *Should the number of Directors/Members/Partners exceed the space available above, additional names and signatures must be supplied on a separate page.*

ENTERPRISE STAMP

T2.2.03: SPECIAL RESOLUTION OF CONSORTIA OR JOINT VENTURES (If Applicable)

RESOLUTION of a meeting of the duly authorised representatives of the following legal entities who have entered into a consortium/joint venture to jointly Bid for the project mentioned below: (*legally correct full names and registration numbers, if applicable, of the Enterprises forming a Consortium/Joint Venture)*

1. .....

   .....

2. .....

   .....

3. .....

   .....

4. .....

   .....

5. .....

   .....

6. .....

   .....

7. .....

   .....

8. .....

   .....

Held at ..... (place)

On ..... (date)

RESOLVED that:

A. The above-mentioned Enterprises submit a Bid in Consortium/Joint Venture to the South African National Biodiversity Institute in respect of the following project:

   .....

   .....
   (*Project description as per Bid /Tender Document)*

   Bid / Tender Number: ..... *(Bid / Tender Number as per Bid / Tender Document)*

   *Mr/Mrs/Ms: .....

   in *his/her Capacity as: ..... *(Position in the Enterprise)*

   and who will sign as follows: .....

be, and is hereby, authorised to sign the Bid, and any and all other documents and/or correspondence in connection with and relating to the Bid, as well as to sign any Contract, and any and all documentation, resulting from the award of the Bid to the Enterprises in Consortium/Joint Venture mentioned above.

B. The Enterprises constituting the Consortium/Joint Venture, notwithstanding its composition, shall conduct all business under the name and style of: .....

C. The Enterprises to the Consortium/Joint Venture accept joint and several liabilities for the due fulfilment of the obligations of the Consortium/Joint Venture deriving from, and in any way connected with, the Contract entered into with the Employer in respect of the project described under item A above.

D. Any of the Enterprises to the Consortium/Joint Venture intending to terminate the consortium/joint venture agreement, for whatever reason, shall give the Employer 30 day's written notice of such intention. Notwithstanding such decision to terminate, the Enterprises shall remain jointly and severally liable to the Employer for the due fulfilment of the obligations of the Consortium/Joint Venture as mentioned under item D above.

E. No Enterprise to the Consortium/Joint Venture shall, without the prior written consent of the other Enterprises to the Consortium/Joint Venture and of the Employer, cede any of its rights or assign any of its obligations under the consortium/joint venture agreement in relation to the Contract with the Employer referred to herein.

F. The Enterprises choose as the *domicilium citandi et executandi* of the Consortium/Joint Venture for all purposes arising from the consortium/joint venture agreement and the Contract with the Employer in respect of the project under item A above:

Physical address: .....

.....

.....(code)

Postal address: .....

.....

.....(code)

Telephone number: .....(code)

Fax number: .....(code)

	Name	**Capacity**	**Signature**
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

Note:

1. ** Delete which is not applicable.*
2. ***NB**. This resolution must be signed by all the Duly Authorised Representatives of the Legal Entities to the Consortium Joint Venture submitting this Bid.*
3. *Should the number of Duly Authorised Representatives of the Legal Entities joining forces in this Bid exceed the space available above, additional names and signatures must be supplied on a separate page.*
4. *Resolutions, duly completed and signed, from the separate Enterprises who participate in this Consortium/Joint Venture must be attached to the Special Resolution.*

T2.2.04: SCHEDULE OF PROPOSED SUB-CONTRACTORS

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

We notify you that it is our intention to employ the following Sub-contractors for work in this contract.

If we are awarded a contract, we agree that this notification does not change the requirement for us to submit the names of proposed Sub-contractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

	Name and address of proposed Sub-contractor	**Nature and extent of work**	**Previous experience with Sub-contractor**
1			
2			
3			
4			

Name of representative:	**Signature**	**Capacity**	**Date**

Name of organisation:	

T2.2.05: CAPACITY OF TENDERER

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

1. WORK CAPACITY: *(The Tenderer is requested to furnish the following particulars, attach additional pages if more space is required. Failure to furnish the particulars may result in the Tender being disregarded)*

Skilled technicians employed		**Unskilled employees employed**	
Categories of technicians	**Number**	**Categories of employees**	**Number**

1.1 Provide full particulars of:

Machinery	**Equipment**	**Workshops**

2. PARTICULARS OF COMMITMENTS WHICH THE TENDERER HAS PREVIOUSLY COMPLETED AND PRESENTLY ENGAGED WITH:

2.1 Current projects:

	Project	Place (town)	Reference / Contact person	Contact Tel. No.	Contract amount	Contract period	Date of commencement	Scheduled date of completion
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

2.2 Previous projects:

	Project	Place (town)	Reference / Contact person	Contact Tel. No.	Contract amount	Contract period	Date of commencement	Scheduled date of completion	Actual date of completion
1									
2									
3									
4									
5									
6									
7									
8									

Name of Tenderer	**Signature**	**Date**

T2.2.06: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2017

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

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

---

1. GENERAL CONDITIONS

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

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

a) The value of this Bid is estimated **to not exceed** R50 000 000 (all applicable taxes included) and therefore the **80/20** preference point system shall be applicable.

1.2 Points for this Bid shall be awarded for:

(a) Price; and
(b) B-BBEE Status Level of Contributor.

1.3 The maximum points for this Bid are allocated as follows:

	POINTS
PRICE	**80**
B-BBEE STATUS LEVEL OF CONTRIBUTOR	**20**
Total points for Price and B-BBEE must not exceed	**100**

1.4 Failure on the part of a Bidder to submit proof of B-BBEE Status level of contributor together with the Bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

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

2. DEFINITIONS

(a) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act.

(b) "**B-BBEE status level of contributor"** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act.

(c) **"Bid"** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive Bidding processes or proposals.

(d) **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003).

(e) **"EME"** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act.

(f) **"functionality"** means the ability of a Tenderer to provide goods or services in accordance with specifications as set out in the Tender documents.

(g) **"prices"** includes all applicable taxes less all unconditional discounts.

(h) **"proof of B-BBEE status level of contributor"** means:

1) B-BBEE Status level certificate issued by an authorized body or person.

2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice.

3) Any other requirement prescribed in terms of the B-BBEE Act.

(i) **"QSE"** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act.

(j) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of Bid invitation, and includes all applicable taxes.

3. POINTS AWARDED FOR PRICE

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

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

80/20 **or** **90/10**

$$Ps = 80\left(1 - \frac{Pt - P\min}{P\min}\right) \quad \text{or} \quad Ps = 90\left(1 - \frac{Pt - P\min}{P\min}\right)$$

Where

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

4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

4.1 In terms of Regulation 6 (2) and 7 (2) of the Preferential Procurement Regulations, preference points must be awarded to a Bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

5. BID DECLARATION

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

6. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

6.1 B-BBEE Status Level of Contributor: = …… (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.

7. SUB-CONTRACTING

7.1 Will any portion of the contract be sub-contracted?

(***Tick applicable box***)

YES		NO	

7.1.1 If yes, indicate:

i) What percentage of the contract will be sub-contracted .....……%
ii) The name of the Sub-contractor……..
iii) The B-BBEE status level of the Sub-contractor.....……..
iv) Whether the Sub-contractor is an EME or QSE
(Tick applicable box)

YES		NO	

v) Specify, by ticking the appropriate box, if subcontracting with an enterprise in terms of Preferential Procurement Regulations,2017:

Designated Group: An EME or QSE which is at last 51% owned by:	**EME** √	**QSE** √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

8. **DECLARATION WITH REGARD TO COMPANY/FIRM**

8.1 Name of company/firm: ……

8.2 VAT registration number: ……

8.3 Company registration number: ……

8.4 TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

……
……
……

8.6 COMPANY CLASSIFICATION

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

[*TICK APPLICABLE BOX*]

8.7 Total number of years the company/firm has been in business: ……

8.8 I/we, the undersigned, who is/are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBEE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:
i) The information furnished is true and correct.
ii) The preference points claimed 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 6.1, the Contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct.

iv) If the B-BBEE status level of contributor has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –

(a) disqualify the person from the Bidding process.

(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 Bidder or Contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution.

WITNESSES 1. …….. 2. ……	…… SIGNATURE(S) OF BIDDER(S) DATE: …….. ADDRESS …….. …….. ……..

T2.2.07: RESOURCES TO BE EMPLOYED IN TERMS OF ORGANIZATION AND STAFFING

The Tenderer shall list below the key personnel (including first nominee and the second choice alternate), whom he proposes to employ on the Contract should his Tender be accepted, both at his headquarters and on the Site, to direct and for the execution of the work, together with their qualifications, experience, positions held and their nationalities.

DESIGNATION	NAME AND NATIONALITY OF: (i) NOMINEE (ii) ALTERNATE	SUMMARY OF QUALIFICATIONS, EXPERIENCE AND PRESENT OCCUPATION
HEADQUARTERS Partner/Director Project Manager Other key staff (give designation)		

DESIGNATION	NAME AND NATIONALITY OF: (i) NOMINEE (ii) ALTERNATE	SUMMARY OF QUALIFICATIONS, EXPERIENCE AND PRESENT OCCUPATION
SITE OFFICE Site Agent Site Engineer/Technician Construction supervisor (give designation) SMME Supervisor Other key staff (give designation)		

T2.2.08: Estimated Monthly Expenditure

The Tenderer shall state below the estimated value of work to be completed every month, based on his preliminary programme and his tendered unit rates.

The amounts for Contingencies and Contract Price Adjustment must not be included

MONTH	VALUE
1	R .....
2	R .....
3	R .....
4	R .....
5	R .....
6	R .....
7	R .....
8	R .....
9	R .....
10	R .....
11	R .....
12	R .....
	COMPLETION OF CONTRACT
TOTAL	R .....

~~T2.2.09: Non-Compulsory Site Inspection Meeting Certificate~~

~~**PROJECT TITLE:**~~	~~**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**~~
~~**BID No.:**~~	~~**SANBI: G417/2022**~~

~~This is to certify that I, _____representing~~

~~_____in the company of~~

~~_____visited the site on: _____~~

~~I have made myself familiar with all local conditions likely to influence the work and the cost thereof. I further certify that I am satisfied with the description of the work and explanations given at the site inspection meeting and that I understand perfectly the work to be done, as specified and implied, in the execution of this contract.~~

~~Name of Tenderer~~	~~Signature~~	~~Date~~

~~Name of Principal Agent~~	~~Signature~~	~~Date~~

T2.2.10: DECLARATION OF INTEREST

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

Any person, including persons in the employ of the South African National Biodiversity Institute; or persons acting on behalf of the South African National Biodiversity Institute performing business as a sole proprietor or in partnership; or persons acting in the capacity of a trustee/s of a trust; or any legal entity, including legal entities and trusts, of which the members, directors, shareholders, trustees and/or beneficiaries are in the employ of the South African National Biodiversity Institute or act on behalf of the South African National Biodiversity Institute, may make an offer or offers in terms of this Tender invitation.

In view of the possible allegations of favouritism, should the resulting Tender, or part thereof, be awarded to persons employed by the South African National Biodiversity Institute; or to persons who act on behalf of the South African National Biodiversity; or to persons connected or related to them, the Bidder / Tenderer or the Bidder / Tenderer's duly authorized representative shall disclose herein any relationship and/or kinship, including blood relation, which he/she; his/her Employer; the Bidder / Tenderer's management; members; directors; partners; shareholders; trustees; and/or beneficiaries may have with any person or persons in the employ of the South African National Biodiversity Institute and/or with any person or persons acting on behalf of the South African National Biodiversity Institute and who may directly or indirectly be involved in, and/or may be in a position to influence the adjudication and/or evaluation and/or award of this Bid / Tender.

In order to give effect to the above, the following questionnaire shall be completed and submitted with the Tender. Failure to furnish the information requested in the questionnaire below may render the Tender submission not to be considered at all.

(In answering the questions below, indicate the applicable answer with a ✔ and cross the other out)

1. Is the Bidder/Tenderer and/or the duly authorized representative in the employ of the South African National Biodiversity Institute?

   ☐ YES ☐ NO

   If yes, State the full particulars of such person/s, together with their current position held as an employee of the South African National Biodiversity Institute.

   _____

   _____

2. Is the Bidder/Tenderer and/or the duly authorized representative in the employ of the person/s or legal entity acting on behalf of the South African National Biodiversity Institute, and who may directly or indirectly be involved in, and/or may be in a position to influence, the adjudication and/or evaluation and/or award of this Tender?

   ☐ YES ☐ NO

   If yes, State the full particulars of such person/s, together with their current position held as an employee of such person/s or legal entity acting on behalf of the South African National Biodiversity Institute.

   _____

   _____

3. Does the Bidder/Tenderer, the Bidder's/Tenderer's duly authorised representative, and/or any of the Bidder's / Tenderer's employees, management, partners, members, directors, shareholders, trustees and/or beneficiaries have

Any reference to words "Bid" or Bidder" herein, and/or in any other documentation, shall be construed to have the same meaning as the words "Tender" or "Tenderer".

any relationship (family, friend, business- or financial interest) with a person, or persons in the employ of the South African National Biodiversity Institute and/or in the employ of the person/s or legal entity acting on behalf of the South African National Biodiversity Institute, and who may directly or indirectly be involved in, and/or may be in a position to influence, the adjudication and/or evaluation and/or award of this Tender?

☐ YES ☐ NO

If yes, state the full particulars of the persons between whom the relationship exists, the nature of the relationship and the current position/status of such employee/s of the South African National Biodiversity Institute and/or of the person/s and/or legal entity acting on behalf of the South African National Biodiversity Institute herein.

_____

_____

I, the undersigned, _____
(name of the person duly authorised to sign the Bid/Tender documents on behalf of the Bidder/Tenderer) hereby certify that the information, furnished above, is correct in all respects. I accept and understand that the South African National Biodiversity Institute, may act against me and the Bidder/Tenderer, jointly and severally, should this declaration prove to be false.

Duly signed at ..... on this .....day of .....(month) of .....(year)

.....	.....
Full name of signatory	Name of Bidder/Tenderer
.....	.....
Capacity of Signatory	Signature

COMMISSIONER OF OATHS

T2.2.11: MEDICAL CERTIFICATE FOR THE CONFIRMATION OF PERMANENT DISABLED STATUS

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

I, ... (*surname and name*), Identity number,

.....do hereby declare that I am a registered medical practitioner, with my

practice number being ..... , practicing at .....

..... (Physical and postal addresses) declare that I have examined Mr/Mrs

..... , identity number of .....

and have found the said person to be permanently disabled

or having a recurring disability.

"Disability" means, in respect of a person, a permanent impairment of a physical, intellectual, or sensory function, which results in restricted, or lack of, ability to perform an activity in the manner, or within the range, considered normal for a human being." – As per Preferential Procurement Policy Framework Act: No 5 of 2000 (PPPFA)

The nature of the disability is as follows:

.....

.....

.....

Thus signed at ..... on this ..... day of ..... of.....

OFFICIAL STAMP OF
MEDICAL PRACTITIONER

.....

Signature

.....

Date

T2.2.12: PROOF OF REGISTRATION WITH CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

The Tenderer shall provide a printed copy of the Active Contractor's Listing off the CIDB website. (www.cidb.org.za). In the case of a joint venture, a printed copy of the Active Contractor's listing must be provided for each member of the joint venture.

Name of Contractor: .....

Contractor Grading Designation: .....

CIDB Contractor Registration Number: .....

T2.2.13: ORIGINAL VALID TAX CLEARANCE CERTIFICATE

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

A valid original Tax Clearance Certificate and/or Tax Pin number **must be included** for evaluation purposes.

T2.2.14: COPY OF CSD REGISTRATION CERTIFICATE

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

A copy of **Central Suppliers' Database (CSD) Registration Certificate <u>must be included</u>** for evaluation purposes.

T2.2.15: FINANCIAL REFERENCES

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

Notes to Tenderers:

1. The Tenderer(s) shall attach to this form a letter from the bank in which it is declared how he/they conducts his/their account(s). The contents of the bank's letter must state the credit rating that the bank, in addition to the information required below, accords to the Tenderer(s) for the business envisaged by this Tender. Failure to provide the required letter with the Tender submission may render the Tenderer's offer unresponsive in terms of Tender Condition C3.8.

2. The Tenderer's banking details as they appear below shall be completed.

3. In the event that the Tenderer is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form.

Details of Company's Bank

	BANK DETAILS APPLICABLE TO TENDERER'S HEAD OFFICE
Name of Bank	
Branch Name	
Branch Code	
Street Address	
Postal Address	
Name of Manager	
Telephone Number	
Fax Number	
Account Number	

T2.2.16: RECORD OF ADDENDA TO TENDER DOCUMENTS

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

I/We confirm that the following communications received from the South African National Biodiversity Institute before the submission of this Tender Offer, amending the Tender documents, have been taken into account in this Tender Offer: *(Attach additional pages if more space is required)*

	Date	Title or Details
1		
2		
3		
4		
5		
6		
7		
8		
9		

Name of Tenderer	Signature	Date

I / We confirm that no communications were received from the South African National Biodiversity Institute before the submission of this Tender Offer, amending the Tender documents.

Name of Tenderer	Signature	Date

Any reference to words “Bid” or Bidder” herein, and/or in any other documentation, shall be construed to have the same meaning as the words “Tender” or “Tenderer”.

T2.2.17: COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: **Name of enterprise:**.....

Section 2: **VAT registration number, if any:**.....

Section 3: **PSIRA registration number, if any:** .....

Section 4: **Particulars of sole proprietors and partners in partnerships**

Name*	Identity number*	Personal income tax number*

*Complete only if sole proprietor or partnership and attach separate page if more than 3 partners.

Section 5: **Particulars of companies and close corporations**

Company registration number: ……..

Close corporation number: .....

Tax reference number:……

Section 6: **Record in the service of the state**

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently, or has been within the last 12 months, in the service of any of the following:

- □ a member of any municipal council
- □ a member of any provincial legislature
- □ a member of the National Assembly or the National Council of Province
- □ a member of the board of directors of any municipal entity
- □ an official of any municipality or municipal entity
- □ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No 1 of 1999)
- □ a member of an accounting authority of any national or provincial public entity
- □ an employee of Parliament or a provincial legislature

If any of the above boxes are marked, disclose the following:

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*Insert separate page if necessary.

Section 7: **Record of spouses, children and parents in the service of the state**

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent or a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently, or has been within the last 12 months, in the service of any of the following:

- □ a member of any municipal council
- □ a member of any provincial legislature
- □ a member of the National Assembly or the National Council of Province
- □ a member of the board of directors of any municipal entity
- □ an official of any municipality or municipal entity
- □ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No 1 of 1999)
- □ a member of an accounting authority of any national or provincial public entity
- □ an employee of Parliament or a provincial legislature

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*Insert separate page if necessary.

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise:

(i) authorises the Employer to obtain a tax clearance certificate from the South African Revenue Services that my/our tax matters are in order.

(ii) confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act, 2004.

(iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise, has within the last five years been convicted of fraud or corruption.

(iv) confirms that I/we are not associated, linked or involved with any other Tendering entities submitting Tender Offers and have no other relationship with any of the Tenderers or those responsible for compiling the Scope of Work that could cause or be interpreted as a conflict of interest; and

(v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed: ..... Date: .....

Name: ..... Position: .....

Enterprise name: .....

T2.2.18: COMPENSATION OF OCCUPATIONAL INJURIES AND DISEASE ACT (COIDA)

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

Letter of Good Standing from the Office of the Compensation Commissioner as required by the Compensation for Occupational Injuries and Diseases Act (COIDA) **must be included** for evaluation purposes. The letter should be issued by the Department of Labour.

T2.2.19: UNEMPLOYMENT INSURANCE FUND (UIF)

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

UIF compliance should be demonstrated by submission of one of the following:

- A valid copy of the UIF Letter of Compliance issued by the Department of Labour, or
- Labour uFiling Employer Statement of Account indicating UIF payments or accruals not older than 12 months, or
- SARS eFiling Employer Statement of Account indicating UIF payments or accruals not older than 12 months, or
- Valid proof of exemption for UIF.

T2.2.20: PROOF OF LIABILITY INSURANCE

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

The Tenderer **shall append** their **Proof of Liability Insurance** behind this page.

T2.2.21: SMME PLAN

The tenderer shall include as an attachment to their submission a detailed SMME plan indicating how the SMME requirements will be achieved per project, as detailed in Scope of Works (Part C3). The SMME Plan must clarify the manner in which the bidder intends to manage, support and empower local SMMEs and contractors.

The SMME plan must detail (i) how quality will be controlled, (ii) how the scope of works will be scheduled (programme), (iii) how will skills be transferred, (iv) how will reporting to the client be done (content of reports, frequency etc.) and (v) a comprehensive list of all bill items which are to be allocated to SMMEs equivalent to 30% of the Offer Price excluding preliminaries, contingency and provisional sums. Tenderers are to demonstrate the list of items allocated to SMMEs by providing a separate schedule

It is to be specifically noted that the rates for items of work to be executed by SMMEs must be market related. Tenderers are to ensure that rates tendered for this portion of the works is to take into account all items that the main contractor would have allowed for in his normal course of pricing, i.e. materials, labour, wastage, profit, attendance, etc. all at applicable productivity rates.

SBD 6.2

DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

This Standard Bidding Document (SBD) must form part of all Bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, Bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

1. General Conditions

1.1. Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.

1.2. Regulation 8(2) prescribes that in the case of designated sectors, organs of state must advertise such Tenders with the specific Bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.

1.3. Where necessary, for Tenders referred to in paragraph 1.2 above, a two stage Bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.

1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.

1.5. The local content (LC) expressed as a percentage of the Bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

LC = [1 - x / y] * 100

Where
x is the imported content in Rand
y is the Bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the Bid as indicated in paragraph 4.1 below.

The SABS approved technical specification number SATS 1286:2011 is accessible on http:/www.thedti.gov.za/industrial development/ip.jsp at no cost.

1.6. A Bid may be disqualified if this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the Bid documentation;

2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this Bid is/are as follows:

No.	Description of services, works or goods	Unit (e.g. m^2, m^3, ton, etc.)	Quantity	Stipulated minimum threshold
1	Steel reinforcement	Tonnage	1.91	100%
2	Mesh 395	M2	162	100%
3	Steel Windows	No	4	100%

4	Burglar Bars	No	4	100%
5	Structural steel	Tonnage	8.02	100%

3. Does any portion of the goods or services offered have any imported content?
(***Tick applicable box***)

YES		NO	

3..1 If yes, the rate(s) of exchange to be used in this Bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the Bid.

The relevant rates of exchange information is accessible on www.reservebank.co.za

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

Currency	**Rates of exchange**
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

4. Where, after the award of a Bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.

LOCAL CONTENT DECLARATION
(REFER TO ANNEX B OF SATS 1286:2011)

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)

IN RESPECT OF BID NO. .....

ISSUED BY: (Procurement Authority / Name of Institution): **SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE.**

NB

1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the Bidder.

2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thedti.gov.za/industrial_development/ip.jsp. Bidders should first complete Declaration D. After completing Declaration D, Bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the Bid documentation at the closing date and time of the Bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the Bidders for verification purposes for a period of at least 5 years. The successful Bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, ……..... (full names),
do hereby declare, in my capacity as …… ……..
of .....(name of Bidder entity), the following:

(a) The facts contained herein are within my own personal knowledge.

(b) I have satisfied myself that:

(i) the goods/services/works to be delivered in terms of the above-specified Bid comply with the minimum local content requirements as specified in the Bid, and as measured in terms of SATS 1286:2011; and

(c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

If the Bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.

(d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.

(e) I understand that the awarding of the Bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____ **DATE:** _____

WITNESS No. 1 _____ **DATE:** _____

WITNESS No. 2 _____ **DATE:** _____

SATS 1286.2011

Annex C

Local Content Declaration - Summary Schedule

(C1)	**Tender No.**	G417/2022				**Note:** VAT to be excluded from all calculations
(C2)	**Tender description:**	Mokopane Biodiveristy Conservation Centre				
(C3)	**Designated product(s)**	Steel Components				
(C4)	**Tender Authority:**	South African National Biodiversity Institute				
(C5)	**Tendering Entity name:**					
(C6)	**Tender Exchange Rate:**	Pula		EU		GBP
(C7)	**Specified local content %**	100%				

		Calculation of local content						Tender summary			
Tender item no's	**List of items**	**Tender price - each (excl VAT)**	**Exempted imported value**	**Tender value- net of exempted imported content**	**Imported value**	**Local value**	**Local content % (per item)**	**Tender Qty**	**Total tender value**	**Total exempted imported content**	**Total Imported content**
(C8)	*(C9)*	*(C10)*	*(C11)*	*(C12)*	*(C13)*	*(C14)*	*(C15)*	*(C16)*	*(C17)*	*(C18)*	*(C19)*
1	Steel Reinforcement						100%	1.91			
	Mesh 395							162.00			
	Steel Windows							4.00			
	Burglar bars							4.00			
	Structural Steel							8.02			

	(C20) **Total tender value**	**R 0**
	(C21) **Total Exempt imported content**	**R 0**
	(C22) Total **Tender value net of exempt imported content**	**R 0**
	(C23) **Total Imported content**	**R 0**
	(C24) **Total local content**	**R 0**
	(C25) **Average local content % of tender**	

Signature of tenderer from Annex B

Date:

SATS 1286.2011

Annex D

Imported Content Declaration - Supporting Schedule to Annex C

(D1)	**Tender No.**	G417/2022
(D2)	**Tender description:**	Mokopane Biodiversity Conservation Centre
(D3)	**Designated Products:**	Steel Components
(D4)	**Tender Authority:**	South African National Biodiversity Institute
(D5)	**Tendering Entity name:**	
(D6)	**Tender Exchange Rate:**	Pula EU GBP

Note: VAT to be excluded from all calculations

A. Exempted imported content

Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Forign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value
(D7)	*(D8)*	*(D9)*	*(D10)*	*(D11)*	*(D12)*	*(D13)*	*(D14)*	*(D15)*	*(D16)*	*(D17)*	*(D18)*

(D19) **Total exempt imported value** R 0

This total must correspond with Annex C - C 21

B. Imported directly by the Tenderer

Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Forign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	*(D21)*	*(D22)*	*(D23)*	*(D24)*	*(D25)*	*(D26)*	*(D27)*	*(D28)*	*(D29)*	*(D30)*	*(D31)*

(D32) **Total imported value by tenderer** R 0

C. Imported by a 3rd party and supplied to the Tenderer

Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Forign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Quantity imported	Total imported value
(D33)	*(D34)*	*(D35)*	*(D36)*	*(D37)*	*(D38)*	*(D39)*	*(D40)*	*(D41)*	*(D42)*	*(D43)*	*(D44)*

(D45) **Total imported value by 3rd party** R 0

D. Other foreign currency payments

Type of payment	Local supplier making the payment	Overseas beneficiary	Foreign currency value paid	Tender Rate of Exchange	Summary of payments: Local value of payments
(D46)	*(D47)*	*(D48)*	*(D49)*	*(D50)*	*(D51)*

(D52) **Total of foreign currency payments declared by tenderer and/or 3rd party**

Signature of tenderer from Annex B

(D53) **Total of imported content & foreign currency payments - *(D32), (D45) & (D52)* above** R 0

This total must correspond with Annex C - C 23

Date:

SATS 1286.2011

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	**Tender No.**	G417/2022
(E2)	**Tender description:**	Mokopane Biodiverity Conservation Centre
(E3)	**Designated products:**	Steel Components
(E4)	**Tender Authority:**	South African National Biodiversity Institute
(E5)	**Tendering Entity name:**	

Note: VAT to be excluded from all calculations

Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
	(E6)	*(E7)*	*(E8)*
	Steel Reinforcement		
	Mesh 395		
	Steel windows		
	Burglar bars		
	Structural steel		
	***(E9)* Total local products (Goods, Services and Works)**		

(E10)	**Manpower costs**	(Tenderer's manpower cost)	
(E11)	**Factory overheads**	(Rental, depreciation & amortisation, utility costs, consumables etc.)	
(E12)	**Administration overheads and mark-up**	(Marketing, insurance, financing, interest etc.)	
		***(E13)* Total local content**	
		This total must correspond with Annex C - C24	

Signature of tenderer from Annex B

Date:

SBD 8

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

This Standard Bidding Document must form part of all Bids invited.

1 It serves as a declaration to be used by institutions in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

2 The Bid of any Bidder may be disregarded if that Bidder, or any of its directors have-

a. abused the institution's supply chain management system;
b. committed fraud or any other improper conduct in relation to such system; or
c. failed to perform on any previous contract.

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

Item	Question	Yes	No
4.1	Is the Bidder or any of it's directors listed on the National Treasury's database as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the *audi alteram partem* rule was applied).	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the Bidder or any of it's directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? **To access this Register enter the National Treasury's website, www.treasury.gov.za, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445.**	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		
4.3	Was the Bidder or any of it's directors convicted by a court of law (including a court outside of the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐
4.3.1	If so, furnish particulars:		
4.4	Was any contract between the Bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) ……

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

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

……	……
Signature	Date
……	……
Position	Name of Bidder

SBD 9

CERTIFICATE OF INDEPENDENT QUOTATION DETERMINATION

1. This Standard Bidding Document (SBD) must form part of all quotations[1] invited.

2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive Bidding (or Bid rigging) [2] Collusive Bidding is a *per se* prohibition meaning that it cannot be justified under any grounds.

3. Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:

    a. disregard the Bid of any Bidder if that Bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.

    b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the Bidding process or the execution of that contract.

4. This SBD serves as a certificate of declaration that would be used by institutions to ensure that, when Bids are considered, reasonable steps are taken to prevent any form of Bid-rigging.

5. In order to give effect to the above, the attached Certificate of Bid Determination (SBD 9) must be completed and submitted with the Bid:

[1] Includes price quotations, advertised competitive Bids, limited Bids and proposals.

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying Bid:

SANBI: G417/2022: APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE

(Bid Number and Description)

in response to the invitation for the quote made by:
SOUTH AFRICAN NATIONAL BIODIVERSITY CONSERVATION CENTRE, MOKOPANE (SANBI)
(Name of Institution)

do hereby make the following statements that I certify to be true and complete in every respect:
I certify, on behalf of: _____that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate.
2. I understand that the accompanying Bid will be disqualified if this Certificate is found not to be true and complete in every respect.
3. I am authorized by the Bidder to sign this Certificate, and to submit the accompanying Bid, on behalf of the Bidder.
4. Each person whose signature appears on the accompanying Bid has been authorized by the Bidder to determine the terms of, and to sign the Bid, on behalf of the Bidder.
5. For the purposes of this Certificate and the accompanying Bid, I understand that the word "competitor" shall include any individual or organization, other than the Bidder, whether or not affiliated with the Bidder, who:
   (a) has been requested to submit a Bid in response to this Bid invitation.
   (b) could potentially submit a Bid in response to this Bid invitation, based on their qualifications, abilities or experience; and
   (c) provides the same goods and services as the Bidder and/or is in the same line of business as the Bidder
6. The Bidder has arrived at the accompanying Bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium[3] will not be construed as collusive Bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
   (a) prices.
   (b) geographical area where product or service will be rendered (market allocation).
   (c) methods, factors or formulas used to calculate prices.
   (d) the intention or decision to submit or not to submit, a Bid.
   (e) the submission of a Bid which does not meet the specifications and conditions of the Bid; or
   (f) Bidding with the intention not to win the Bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this Bid invitation relates.
   [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.
9. The terms of the accompanying Bid have not been, and will not be, disclosed by the Bidder, directly or indirectly, to any competitor, prior to the date and time of the official Bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to Bids and contracts, Bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

…… ……

Signature Date

……. ……

Position Name of Bidder

PART C: THE CONTRACT
Part C1: Agreement and Contract Data

PROJECT TITLE:	**APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**
BID No.:	**SANBI: G417/2022**

C1.1 Form of Offer and Acceptance

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

THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE

The Tenderer, identified in the offer signature block, has examined the documents listed in the Tender Data and Addenda thereto as listed in the Returnable Schedules, and by submitting this offer has accepted the Conditions of Tender.

The Tenderer, identified in the offer signature block, has examined the draft contract as listed in the acceptance section and agreed to provide this offer.

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

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VAT IS:

(in words) ..... Rand;

R..... (in figures)

THE OFFERED PRICES ARE AS STATED IN THE PRICING SCHEDULE

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

Signature(s) .....

Name(s) .....

Capacity .....

For the

Tenderer: .....

.....
(Insert name and address of organisation)

Name & signature of witness ..... Date .....

.....

[Failure of a Tenderer to complete and sign this form will invalidate the Tender]

Acceptance

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

The terms of the Contract are contained in

Part C1	Agreement and Contract Data *[which includes this Agreement]*
Part C2	Pricing Data
Part C3	Scope of Work
Part C4	Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above.

Deviations from and amendments to the documents listed in the Tender Data and any Addenda thereto listed in the Tender Schedules, as well as any 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 Agreement. No amendments to or deviations from the said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representative(s) of both parties.

The Tenderer shall within the time required to submit documentation in accordance with Clause 5.3 of the Contract Data (C1.2) after 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 bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at, or just after, the date this Agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

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

Signature(s) .....

Name(s) .....

Capacity .....

For the Employer: .....

.....

.....
(Insert name and address of organisation)

Name & signature of witness ..... Date .....

.....

Schedule of Deviations

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

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

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

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

5 Subject .....
Details .....
.....
.....
.....

By the duly authorised representatives signing this Schedule of Deviations, 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 Tender Schedules, as well as any confirmation, clarification or change 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.

FOR THE TENDERER:

Signature(s) ....

Name(s) ....

Capacity ....

.....
[Name and address of organisation]

Name and signature of witness ..... Date .....

FOR THE EMPLOYER:

Signature(s) ....

Name(s) ....

Capacity ....

.....
[Name and address of organisation]

Name and signature of witness ..... Date .....

CONFIRMATION OF RECEIPT:

The Tenderer (now Contractor), identified in the offer part of this Agreement, hereby confirms receipt from the Employer, identified in the acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

The ..... *[day]*

of ..... *[month]*

20 .....*[year]*

at .....*[place]*

For the Contractor: .....
Signature

.....
Name

.....
Capacity

Signature and name of witness: .....
Signature

.....
Name

C1.2 Contract Data

The Conditions of Contract are the **JBCC Series 2000 Principal Building Agreement (July 2007 Edition 5.0 - Reprint 1)** published by the Joint Building Contract Committee. Copies of these documents may be obtained from the **Association of South African Quantity Surveyors** (011-315 4140), the **Master Builders Association** (011-205 9000), the **South African Association of Consulting Engineers** (011-463 2022) or the **South African Institute of Architects** (011-486 0684).

The JBCC Principal Building Agreement Contract Data EC and the JBCC Principal Building Agreement Contract Data CE form an integral part of this agreement.

The **ASAQS Preliminaries (August 2010)** published by the Association of South African Quantity Surveyors for use with the said JBCC Principal Building Agreement shall be deemed to be incorporated in the Bills of Quantities.

The **Model Preambles for Trades (2017 Edition)** as published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in the Bills of Quantities and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained.

Contract Data: Employer to Contractor (EC)

Employer Addendum Code 2101-EC

For information purposes only. To be signed on appointment.

Introduction

This addendum contains all variables referred to in the **Principal Building Agreement** that are the responsibility of the Contractor to provide the appropriate information that is necessary for the Contractor to complete his Tender. The Addendum must be completed in full and included in the Tender documents. The Addendums "Contract Data – EC", "Contract Data – CE", "Contract Data – ES" and "Contract Data – SE" form part of the contract between the parties.

Definitions

The definitions used in this document and the interpretation thereof are as listed in the Principal Building Agreement. The work or phrase of a definition is in bold text and shall bear the meaning assigned to it in the Principal Building Agreement. Where such word or phrase is not highlighted it shall bear the meaning consistent with the context of its use. The listed defined word or phrase does not quality as a definition where information required to be stated in the Contract Data has not been provided.

Provision of Contract Data

Spaces requiring information must be filled in, shown as "not applicable" or deleted and not left blank. Where choices are offered, the non-applicable items are to be clearly struck out. Where insufficient space is provided the additional information should be annexed hereto and cross referenced to the applicable clause of the Contract Data.

Reference Clauses

Where relevant the Principal Building Agreement clause applicable to the required information is printed in italics under the Contract Data clause number i.e. [27.4.2]

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CONTRACT DATA – EMPLOYER

1.0 CONTRACTING AND OTHER PARTIES

1.1 *[1.2]*	**Employer:**	South African National Biodiversity Institute		
	Postal Address:	Private Bag X101, Silverton, Gauteng	**Code:**	0184
	Physical Address:	Pretoria National Botanical Garden 2 Cussonia Avenue, Brummeria, Gauteng	**Code:**	0184
	Tel No.:	012 843 5000	**Fax No.:**	012 843 5205
	eMail:	c.willis@sanbi.org.za		
1.2 *[5.1]*	**Principal Agent:**	BVi Consulting Engineers	**Person:**	Anri Snyman
	Postal Address:	PO Box 2967, Pretoria	**Code:**	0001
	Tel No.:	012 940 1111	**Fax No.:**	012 940 1123
	eMail:	anris@bvi.co.za		
1.2 *[5.2]*	**Agent (1):**	BVi Consulting Engineers	**Person:**	Boitumelo Matyeka
	Agent's Service:	Civil Engineer		
	Postal Address:	PO Box 2967, Pretoria	**Code:**	0001
	Tel No.:	012 940 1111	**Fax No.:**	012 940 1123
	eMail:	boitumelom@bvi.co.za		
1.3 *[5.2]*	**Agent (2):**	BVi Consulting Engineers	**Person:**	Desmond Brand
	Agent's Service:	Architect		
	Postal Address:	PO Box 2967, Pretoria	**Code:**	0001
	Tel No.:	012 940 1111	**Fax No.:**	012 940 1123
	eMail:	desmondb@bvi.co.za		
1.4 *[5.2]*	**Agent (3):**	BVi Consulting Engineers	**Person:**	Albert Manamela
	Agent's Service:	Structural Engineer		
	Postal Address:	PO Box 2967, Pretoria	**Code:**	0001
	Tel No.:	012 940 1111	**Fax No.:**	012 940 1123
	eMail:	albertm@bvi.co.za		

1.5 *[5.2]*	**Agent (4):**	Enumerate Consulting CC	**Person:**	Faheem Ismail
	Agent's Service:	Quantity Surveyor		
	Postal Address:	PO Box 1652, Killarney	**Code:**	2041
	Tel No.:	011 646 7765	**Fax No.:**	
	eMail:	faheem@enumerate.co.za		
1.6 *[5.2]*	**Agent (5):**		**Person:**	
	Agent's Service:			
	Postal Address:		**Code:**	
	Tel No.:		**Fax No.:**	
	eMail:			
1.7 *[5.2]*	**Agent (6):**		**Person:**	
	Agent's Service:			
	Postal Address:		**Code:**	
	Tel No.:		**Fax No.:**	
	eMail:			
1.8 *[5.2]*	**Agent (7):**		**Person:**	
	Agent's Service:			
	Postal Address:		**Code:**	
	Tel No.:		**Fax No.:**	
	eMail:			

1.9 *[5.5]* **Interest of Principal Agent or other Agent in the project.** (Yes / No) **No**

Details where "yes": **N/A**

1.10 The **Principal Agent** named in 1.2 above is responsible for the preparation of the **Contract Data** schedule and must be contacted should the **Contractor** be uncertain of the information provided or to be provided. Failure to complete the **Contract Data** schedule in full may result in the Tender being disqualified.

2.0 CONTRACT AND SITE INFORMATION

2.1 *[1.7]* The **law** applicable to this **agreement**: (Country / State) **RSA**

2.2 *[1.1]* **Works** identification: **APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**

2.3 Site description: **Mokopane Biodiversity Centre, Mokopane**

[1.1]

2.4 *[15.2.1]*	Possession of the **site** is to be given on:	(Date)	**Within 5 (five) working days after receipt of documentary evidence that:** • Insurances have been effected *[12.2];* • Security has been provided to the Employer *[14.1];* • Contractor's Lien has been signed; • Safety Plan has been approved by the Employer

2.5 *[15.3]*	Period for the commencement of the **works** after the Contractor takes possession of the **site:**	(Working days)	**5 (Five)**		
2.6 *[15.4], [28.0]*	Completion of the works in **sections** is required.	(Yes / No)	**No**	(No. of sections)	**N/A**
2.7 *[3.3], [31.16.2]*	Waiver of the **Contractor's** lien or right of continuing possession is required.	(Yes / No)	**Yes**		
2.8 *[16.1]*	Defined restrictions to the **site** area. Where "yes" the specific requirements are described below or detailed in the **contract documents**.	(Yes / No)	**Yes**		
2.9 *[16.4]*	Geotechnical investigation of the **site** has been undertaken. Where "yes" the results are included in the **contract documents.**	(Yes / No)	**Yes**		
2.10 *[16.6]*	Existing premises will be occupied. Where "yes" the specific requirements are described below or detailed in the **contract documents.**	(Yes / No)	**Yes**		
2.11 *[16.7]*	Provision of temporary services is required. Where "yes" the specific requirements are described below or detailed in the **contract documents.**	(Yes / No)	**Yes**		

2.11.1	**Water**	Option A Option B Option C	Contractor – his cost Employer – free of charge Contractor – metered (Contractor cost)	(A, B or C)	**A**
2.11.2	**Electricity**	Option A Option B Option C	Contractor – his cost Employer – free of charge Contractor – metered (Contractor cost)	(A, B or C)	**A**
2.11.3	**Telecom**	Option A Option B Option C	Contractor – his cost Employer – free of charge Contractor – metered (Contractor cost)	(A, B or C)	**A**
2.11.4	**Ablutions**	Option A Option B Option C	Contractor – his cost Employer – free of charge Contractor – metered (Contractor cost)	(A, B or C)	**A**

2.12 *[16.8]*	Protection of existing trees and shrubs is required. Where "yes" the specific requirements are described below or detailed in the **contract documents.**	(Yes / No)	**Yes**

3.0 INSURANCE AND SECURITIES

3.1	Contract works insurance to be effected by:	(Employer / Contractor)	**Contractor**

[10.1.1], [12.6]			
	For the sum of:	(Amount)	**Contract Sum Plus 20%**
	With a deductible of:	(Amount)	**R20 000**
3.2 *[10.1.2], [11.1-3], [12.6]*	Supplementary / Special insurance to be effected by:	(Employer / Contractor)	**N/A**
	For the sum of:	(Amount)	**N/A**
	With a deductible of:	(Amount)	**N/A**
3.3 *[10.1.3], [12.6]*	Public liability insurance to be effected by:	(Employer / Contractor)	**Contractor**
	For the sum of:	(Amount)	**R5 000 000 per claim**
	With a deductible of:	(Amount)	**R20 000**
3.4 *[11.1.1]*	Support insurance to be effected by:	(Employer / Contractor)	**N/A**
	For the sum of:	(Amount)	**N/A**
	With a deductible of:	(Amount)	**N/A**
3.5 *[11.1.2-3], [12.1]*	Special insurance to be effected by:	(Employer / Contractor)	**N/A**
	Type:	**N/A**	
	For the sum of:	(Amount)	**N/A**
	With a deductible of:	(Amount)	**N/A**

4.0 PRACTICAL COMPLETION DATES AND PENALTIES

		Date	**Penalty Amount**
4.1 *[24.3.1], [30.1-36]*	For the **works** as a whole: The **Date** for P**ractical Completion** and the **Penalty** per **calendar day** is:	**8 Calendar Months** after date of Site Handover, including builders' holiday period(s)	Penalty per Calendar Day: **R 0.0275 per R100** of Contract Sum (excluding VAT) per Calendar Day

Or

4.2 *[24.3.1], [28.1]* For the **works** in **sections**:
The **Date** for **Practical Completion** and the **Penalty** per **calendar day** is:

	Date	Penalty Amount
Section 1	**N/A**	**N/A**
Section 2	**N/A**	**N/A**

5.0 DOCUMENTS AND GENERAL

5.1 *[3.7]*	Construction document copies to be supplied to the **Contractor** free of charge.			(No. of copies)	**3**
5.2 *[3.9]*	The **priced document** may be used as a specification of **materials and goods** and work methods.			(Yes / No)	**No**
5.3 *[3.10]*	The **Contractor** shall provide a schedule of rates.	(Yes / No)	**No**	(Addendum No.)	**Refer to Bills of Quantities**
5.4 *[3.11]*	Changes made to **JBCC** standard documents.	(Yes / No)	**Yes**	(Addendum No.)	**Refer to Point 6 below**
5.5 *[15.1.1]*	On acceptance of the Tender, the **priced document** is to be submitted within the stated **working days.**			(No. of days)	**Priced document to be submitted with Tender**
5.6 *[22.2]*	Work to be undertaken by **Direct Contractors.**	(Yes / No)	**No**	(Addendum No.)	**N/A**
5.7 *[24.9]*	On achievement of Practical Completion, the **Contractor** is to hand over all certificates and manuals, etc. related to the works.				
5.8 *[31.1]*	Interim **payment certificates** to be issued by:			(Date of Month)	**25th**

5.8 *[4.1]* The following items of works shall be supplied by the Contractor:

(1)	Roof sheeting certificate of compliance	(2)	Roof structure certificate of compliance (If applicable)
(3)	Electrical certificate of compliance	(4)	
(5)		(6)	

EPWP Requirements:

Payment for the labour-intensive component of the works

Payment for works identified by the contractor in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work.

Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

Linkage of payment for labour-intensive component of works to submission of project data

The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the Employer. If the Contractor chooses to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the Employer. The Contractor's invoices shall not be paid until all pending labour information has been submitted.

Applicable labour laws

The current Ministerial Determination (also downloadable at www.epwp.gov.za), Expanded Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice, shall apply to works described in the scope of work as being labour-intensive and which are undertaken by unskilled or semi-skilled workers.

6.0 STATE PROVISIONS AND SUBSTITUTIONS

6.1 *Replace the following definitions with:*

"CONSTRUCTION PERIOD" means the period commencing on the date of acceptance of the Bid as stated in [15.2.1] And ending on the date of **practical completion**

"**INTEREST"** means the interest 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).

6.2 *Replace the last sentence with the following:*
[3.6]

The original signed set of contract documents shall be held by the **Employer**.

6.3 *Replace the clause with the following:*
[5.1]

In terms of the clauses listed hereunder the **Employer** has retained its authority and has not given a mandate to the **Principal Agent**. The **Employer** shall sign all documents in relation to the following clauses:

20.1, 20.7, 26.2.1, 26.3.1, 29.1, 29.2, 29.4.1, 29.4.3, 29.7, 29.8, 32.1, 32.6.2, 32.15, 34.3

Copies of the signed documents shall be provided to the **Principal Agent**.

6.4 *Replace the clause with the following:*
[8.4]

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 protection and security of the **works** as the **Contractor** may deem necessary.

6.6 *Add the following clause:*
[9.3]

The **Employer's** rights to claim damages for the **Contractor's** omissions and actions will not be affected.

6.7 *Replace the clause with the following:*
[10.1]

The **Contractor** shall effect contract works insurances and, where available, supplementary insurance in respect of civil commotion, riot and strike shall be effected for the **works** for the Contractor's all risk and, in addition, covering the **Contractor's** Sub-contractors. Such insured amounts shall include the full value of materials and goods supplied by the **Employer** to the Contractor. Supplementary insurance shall not be effected, where the **Employer** makes such an election as stated in [11.1.2 – 3]

6.8 *Add the following clause:*
[11.2]

The **Contractor** shall effect public liability insurance for not less than the amount and the deductible as stated in [10.1.3]. In addition, the **Contractor** shall affect any relevant workmen's compensation or similar insurances as are required by **law**. The **Contractor** shall ensure that his Sub-contractors effect their own similar insurances.

6.9 *Add the following clause:*
[11.3]

Should the **Employer** decide that the execution of the works could cause the weakening or interference with the support of the land adjacent to the **site**, the **Employer** shall state in [11.1.1] That the **Contractor** shall effect support insurance

6.12 *Replace the clause with the following:*
[12.3]

Where the **Contractor** fails to effect any of the required insurances or to keep them in force, the **Employer** may cancel this agreement in terms of clause [36.0]

6.13 *Replace the clause with the following:*
[12.4]

Before effecting support insurance in terms of [11.2] the **Contractor** shall engage an engineer or technologist to design and inspect the provision of the necessary support.

6.14 *Replace the clause with the following:*
[14.1]

Security:

The securities to be provided by the **Contractor** are:

(1) Variable construction guarantee
(2) Fixed construction guarantee
(3) Advance payment guarantee

6.14 *Replace the clause with the following:*
[15.2.1]

Give the **Contractor** possession of site within ten (10) **working days** of the commencement of the **construction period** provided that the **Contractor** has complied with the terms of [15.1.1] and [15.1.2]

6.15 *Replace the clause with the following:*
[25.3]

Should the **Principal Agent** not issue a **works completion** list, in terms of [25.1] or [25.2.2], within seven (7) **calendar days** from the end of the inspection period, the **Contractor** shall notify the **Employer** and **Principal Agent**. Should the **Principal Agent** not issue such **works completion** list within seven (7) **calendar days** of such notice, the **Employer** may within seven (7) **calendar days** issue to the **Contractor** a **works completion** list. Should the **Employer**:

6.16 *Replace the clause with the following:*
[25.3.1]

Not issue such **works completion** list within seven (7) **calendar days**, then the **certificate of works completion** shall be deemed to have been issued on the date of expiry of the initial notice period and **works completion** shall be deemed to have been achieved on such date.

6.17 *Replace the clause with the following:*
[25.3.2]

Issue a **works completion** list and the work on the **works completion** list not completed or where further **defects** have become apparent, the **Employer** shall forthwith identify such items on the updated **works completion** list and notify the **Contractor**. The **Contractor** shall repeat the procedure in terms of [25.2.2] until such items have been completed to the satisfaction of the **Employer**.

6.18 *Replace the clause with the following:*
[26.1]

The defects liability period for the works shall commence on the date of works completion and end after three hundred and sixty-five (365) **calendar days** for items stated in the **Bills of Quantities**.

6.19 *Replace the clause with the following:*
[26.4]

Should the **Principal Agent** not issue a **defects** list in terms of [26.2.2 or 26.3.2], within seven (7) **calendar days** from the end of the **defects** liability period, the **Contractor** shall notify the **Employer** and **Principal Agent**. Should the **Principal Agent** not issue such **defects** list within seven (7) **calendar days** of receipt of such notice, the **Employer** may within seven (7) **calendar days** issue to the **Contractor** a **defects** list. Should the **Employer**:

6.20 *Replace the clause with the following:*
[26.4.1]

Not issue such **defects** list within seven (7) **calendar days**, then the **certificate of final completion** shall be deemed to have been issued on the date of expiry of the initial notice period and **final completion** shall be deemed to have been achieved on such date.

6.21 *Replace the clause with the following:*
[26.4.2]

Issue a **defects** list and the work on the **defects** list has not been completed or where further **defects** have become apparent, the **Employer** shall forthwith identify such items on the updated **defects** list and notify the **Contractor**. The **Contractor** shall repeat the procedure in terms of [26.3.2] until such items have been completed to the satisfaction of the **Employer**

6.22 *Replace the clause with the following:*
[26.6]

A **certificate of final completion** issued in terms of [26.0] shall be *prima facie* evidence as to the sufficiency of the **works** and that the Contractor's obligations in terms of [2.0] and [15.0] have been fulfilled other than for **latent defects**.

6.23 *Replace the clause with the following:*
[27.1]

The **latent defects** liability period shall commence at the start of the **construction period** and end ten (10) years from the date of **final completion** where **final completion** in terms of [26.0] is achieved.

6.24 *Replace the clause with the following:*
[27.2]

Where cancellation of this **agreement** occurs before the achievement of **final completion** the **latent defects** liability period shall end ten (10) years from the date of cancellation.

6.27 *Replace the clause with the following:*
[31.4.2]

A reasonable estimate of the value of **materials and goods** in terms of [31.6] unless the **Employer** elects not to pay for such.

6.29 *Replace the clause with the following:*
[31.9]

The **Employer** shall pay the **Contractor** the amount certified within thirty (30) **calendar days** of the date for issue of the **payment certificate**. Payment shall be subject to the **Contractor** giving the **Employer** a **tax** invoice for the amount due.

6.30 *[31.11.2]* *Replace the last sentence with the following:*

The **Principal Agent** shall calculate such default interest at 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).

6.31 *[31.12]* *Replace the clause with the following:*

Where a **payment certificate** reflects an amount in favour of the **Employer**, the **Contractor** shall pay the amount certified within twenty-one (21) **calendar days** of the date of issue of the **payment certificate**. Where such an amount has not been paid, the **Contractor** shall be liable for default interest and the **Principal Agent** shall include such an amount in the **recovery statement** in terms of [33.0]. Payment shall be subject to the **Employer** giving the **Contractor** a **tax** invoice for the amount due. The **Principal Agent** shall calculate such interest at 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).

6.32 *[34.1]* *Replace the clause with the following:*

The **Contractor** shall cooperate with and assist the **Principal Agent** in the preparation of the **final account** by timeously providing all relevant documents on request. The **Principal Agent** shall issue the final account to the **Contractor** within one hundred and twenty (120) **working days**.

6.33 *[34.2]* *Add the following clause:*

The **Principal Agent** shall allow the **Employer** twenty (20) **working days**, within the period provided in [34.1] to accept the **final account** before presentation to the **Contractor** in terms of [34.3]

6.34 *[34.5]* *Add the following:*

The final payment certificate shall be issued by the **Employer**.

6.35 *[34.9]* *Replace the clause with the following:*

The **Employer** shall concurrently with the issue of the final **payment certificate** issue a statement to the **Contractor** showing the total amount of **tax** certified.

6.36 *[34.10]* The **Employer** shall pay to the **Contractor** the amount certified for payment in the final **payment certificate** within thirty (30) **calendar days** of the date of issue of the final **payment certificate** subject to the **Contractor** giving the **Employer** a **tax** invoice for the amount due.

6.37 *[34.12]* *Replace the last sentence with:*

Such interest shall be calculated at 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).

6.38 *[36.1]* *Replace the clause with the following:*

The **Employer** may, without prejudice of any other rights available to him, cancel this **agreement** where the **Contractor:**

6.39 *[36.2]* *Replace the clause with the following:*

Where the **Contractor** is in default, the **Employer** may notify the **Contractor**, either directly or through the **Principal Agent**, of his default and of the **Employer's** intention to cancel this **agreement** in terms of [36.1], should the default not be remedied.

6.40 *[37.2]* *Replace the clause with the following:*

Where the **Employer** considers cancelling this **agreement** in terms of [37.1] the **Employer** shall notify the **Contractor** of the **Employer's** intention to cancel this **agreement**.

6.41 *Add the following clause:*
[39.2]

The **Employer** shall be entitled at any time to unilaterally terminate or cancel this **agreement** or any part thereof. Save for the following the **Contractor** shall not be entitled to claim any other amounts whatsoever in respect of such termination or cancellation of this **agreement**. The **Employer** shall be obliged to pay the **Contractor** as damages and/or loss of profit the lesser of:

6.42 *Add the following clause:*
[39.2.1]

An amount not exceeding Ten per cent (10%) of the **contract sum.**

6.43 *Add the following clause:*
[39.2.2]

Ten per cent (10%) of the value of incomplete work.

6.43 *Add the following clause:*
[39.2.3]

The **Contractor's** actual damage or loss as determined by the **Employer** after receipt of evidence substantiating any such damage or loss.

6.44 *Replace the clause with the following:*
[40.2.2]

Litigation where the **Employer** so elects. Institution of the action shall be commenced, and process served within one (1) year from the date of existence of the dispute, failing which the dispute shall lapse.

7.0 CHANGES MADE TO THE STANDARD JBCC DOCUMENT

Changes made to the standard JBCC document are listed in section 6 above.

8.0 DECLARATION BY THE PRINCIPAL AGENT

I, the Principal Agent named in 1.2 above, declare that the information provided above is complete and accurate at the time of calling for Tenders. Where necessary, should any of the above information need to be varied, Tenderers will be forthwith informed thereof in writing.

……
Principal Agent

……
Date

Contract Data: Contractor to Employer (CE)

Contractor Addendum Code 2101-CE

Introduction

This addendum contains all variables referred to in the Principal Building Agreement that are the responsibility of the Contractor to provide the appropriate information that is necessary for the Contractor to complete his Tender. The Addendum must be completed in full and included in the Tender documents. The Addendums "Contract Data – EC", "Contract Data – CE", "Contract Data – ES" and "Contract Data – SE" form part of the contract between the parties.

Definitions

The definitions used in this document and the interpretation thereof are as listed in the Principal Building Agreement. The work or phrase of a definition is in **bold text** and shall bear the meaning assigned to it in the Principal Building Agreement. Where such word or phrase is not highlighted it shall bear the meaning consistent with the context of its use. The listed defined word or phrase does not quality as a definition where information required to be stated in the **Contract Data** has not been provided.

Provision of Contract Data

Spaces requiring information must be filled in, shown as "not applicable" or deleted and not left blank. Where choices are offered, the non-applicable items are to be clearly struck out. Where insufficient space is provided the additional information should be annexed hereto and cross referenced to the applicable clause of the **Contract Data**.

Reference Clauses

Where relevant the Principal Building Agreement clause applicable to the required information is printed in italics under the Contract Data clause number i.e. *[27.4.2]*

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Section No.	Description
1.0	CONTRACTING PARTY
2.0	SECURITIES
3.0	PAYMENT AND ADJUSTMENT OF PRELIMINARIES
4.0	EMPLOYER CHANGES TO JBCC STANDARD DOCUMENTS
5.0	THE TENDER

1.0 CONTRACTING PARTY

1.1 *[1.2]* **Contractor:** _____

Postal Address: _____ **Code:** _____

_____

Physical Address: _____ **Code:** _____

_____ **eMail:** _____

Tel No.: _____ **Fax No.:** _____

VAT No.: _____

2.0 SECURITIES

2.1 The security provisions selected are:

2.1.1 *[14.3]*	Variable Construction Guarantee	(Yes / No)	
2.1.2 *[14.4]*	Fixed Construction Guarantee and Payment Reduction	(Yes / No)	
2.1.3 *[14.5]*	Advanced Payment is required. Where "Yes"	Amount	**N/A**
2.1.4 *[14.5]*	An Advance Payment Guarantee to be provided	(Yes / No)	**No**

3.0 PAYMENT AND ADJUSTMENT OF PRELIMINARIES

3.1 **Payment of Preliminaries**

The payment of Preliminaries shall be according to the option selected by the **Contractor**. The amount included in each monthly **payment certificate** in respect of Preliminaries as stated in the **Contract Data** shall be:

3.1.1 **Option A**

Assessed by the **Principal Agent** as an amount prorated to the value of the work duly executed in the same ratio as the Preliminaries bears to the **contract sum** excluding:

- The amount for Preliminaries
- Any contingency sum
- Any amount in respect of **CPAP**

All inclusive of **tax.**

3.1.2 **Option B**

Calculated from the priced items in the **Bills of Quantities**. The **Contractor** and the **Principal Agent** shall agree on a division of the priced Preliminaries items into:

- An initial or establishment charge
- A monthly charge
- A final or dis-establishment charge

All inclusive of **tax.**

In arriving at such a division cognizance shall be taken of such factors as:

- Premiums for annually renewable insurance policies.
- Plant, scaffolding and the like remaining the property of the **Contractor** or the hiring company and the capital costs thereof not treated as part of the initial charge.

Where the initial **construction period** is extended the monthly charge shall be recalculated on the same basis as was originally applied but taking into account the revised **construction period** and the amounts already paid to the **Contractor.**

Should the **Contractor** and the **Principal Agent** be unable to agree such division then the **Principal Agent** shall make a division of the amount of Preliminaries to be incorporated in the valuations of each monthly **payment certificate.**

3.2 **Adjustment of Preliminaries**

The amount of items of Preliminaries shall be adjusted to take account of the theoretical financial effect which changes in time and/or value have on Preliminaries. Such ad adjustment shall be based on the particulars provided by the **Contractor** for this purpose in terms of Option A or B and shall preclude any further adjustment of Preliminaries.

Adjustment of Preliminaries in terms of Options A or B shall apply notwithstanding the actual employment of resources by the **Contractor** in the execution of the **works**. The adjustment of Preliminaries shall be based on the options as selected in the **Contractor's Tender.**

For the adjustment of the Preliminaries both the **contract sum** and the **contract value** shall exclude:

- The amount of Preliminaries
- Any contingency sum
- Any amount in respect of **CPAP**

All inclusive of **tax.**

3.2.1 **Option A**

The amount of Preliminaries shall be adjusted in the following categories:

- An amount which shall not be varied.
- An amount which shall be varied in proportion to the **contract value** as compared with the **contract sum.**
- An amount which shall be varied in proportion to the **construction period** as compared to the initial **construction period** excluding revisions to the **construction period** for which the **Contractor** is not entitled to adjustment of the **contract value** in terms of the **agreement.**

The **Contractor** shall, within fifteen (15) working days of taking possession of the **site**, give the **Principal Agent** a breakdown, subdivided into the above categories, of the amount for Preliminaries in tabulated form, all to the satisfaction of the **Principal Agent.**

Should the **Contractor** fail to provide such information within the period stipulated then the amount for Preliminaries shall be deemed to be subdivided into the following proportions:

- 10% (ten percent) which amount shall not be varied.
- 15% (fifteen percent) which amount shall be varied in proportion to the **contract value** as compared with the **contract sum.**
- 75% (seventy-five percent) which amount shall be varied in proportion to the **construction period** as compared with the initial **construction period.**

For a lump sum document, should the **Contractor** fail to identify the amount for Preliminaries, then such an amount shall be deemed to be 7,5% (seven and a half percent) of the contract sum excluding:

- Any contingency sum
- Any amount in respect of **CPAP**

All inclusive of **tax.**

Where sectional completion is required in terms of the agreement, the **Contractor** shall provide the **Principal Agent** with the division of the above categorised amounts into sections. Should the **Contractor** fail to provide such information within the period stipulated the categorised amounts shall be prorated to the value of each section.

3.2.2 **Option B**

The **Contractor** shall, within fifteen (15) **working days** of taking possession of the site, provide the **Principal Agent** with a detailed breakdown of the amount for Preliminaries. This breakdown shall set out, among others, full particulars of administrative, supervisory and other personnel, plant, transport and other resources and charges included in the amount for Preliminaries. The **Contractor** shall show the periods to which the individual items related with the charge rate for such items by means of a **programme** all to the satisfaction of the **Principal Agent.**

Where sectional completion is required in terms of the **agreement,** the **Contractor** shall provide the **Principal Agent** with details of the resources required for each section and those that are common to sections. Should the **Contractor** fail to provide such information within the period stipulated, Option A shall apply.

3.2.3 **Payment certificate cash flow**

The **Contractor** shall provide all reasonable assistance to the **Principal Agent** in the preparation of cash flow projections of claims for **payment certificates** where required by the **Employer**. The projections shall be based on the **programme** and shall be updated as and when the **programme** requires updating. The cooperation of the Contractor in terms of this item shall not prejudice his right to receive payment in terms of the **agreement.**

3.2.4	The **contract value** shall be adjusted according to **CPAP** [3.1]	(Yes / No)	**No**
3.2.5	Payment of Preliminaries [3.1.1-2]	(A or B)	
3.2.6	Adjustment of Preliminaries [3.2.1-2]	(A or B)	

4.0 EMPLOYER CHANGES TO JBCC STANDARD DOCUMENTS

4.1	Changes (if any) in terms of the Employer's Contract Data are accepted [3.11]. Where "no" an addendum referenced to this clause is to be attached.	(Yes / No)	**Yes. Refer to EC 6**

5.0 THE TENDER

5.1 This Tender is to be submitted to SANBI at the street address provided in the Invitation to Tender before the Tender closing date and time stated herein.

5.2 By the submission of this Tender to the **Employer,** the Tenderer offers and agrees to contract for, execute and complete the **works** for the Tender Sum as stated below.

5.3 Tenders will be opened in public directly after the stated closing time. Only the total Tender Sum as stated in each Tender will be announced.

5.4 The lowest or any Tender will not necessarily be accepted.

5.5 This Tender shall remain in full legal force for **one hundred and twenty (120) calendar days**. The Tenderer accepts liability for damages as may be suffered by the **Employer** should the Tender validity period not be honoured.

5.6 This Tender takes into account all listed items [4.0] for the purpose of preparing and submitting this Tender.

5.7 The successful Tenderer will be appointed in terms of the JBCC Principal Building Agreement.

5.8	**TENDER SUM COMPILATION**	**Amount**
5.8.1	Tenderer's work including **prime cost amounts**	R
5.8.2	**Employer allowances** stated by the **Principal Agent**	R
5.8.3	**SUB TOTAL**	R
5.8.4	*Add* **tax** on 5.8.3	R
5.8.5	**TOTAL TENDER SUM inclusive of tax**	R
5.8.6	Tender Sum in words	

Thus done and signed at ..... on .....

.....	.....
Name of Signatory	Capacity of Authorised Signatory
.....	.....
As witness	for and on behalf of the Tenderer, who warrants authorisation hereto

C1.3 Form of Construction Guarantee

C1.3.1 FIXED CONSTRUCTION GUARANTEE - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 5.0 (Reprint 1) of July 2007)

To:
South African National Biodiversity Institute
Private Bag X101
Silverton
0184

Sir,

FIXED CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF JBCC 2000 (5.0 EDITION (Reprint 1) JULY 2007)

1. With reference to the contract between .....(hereinafter referred to as the "**Contractor**") and the **South African National Biodiversity Institute** (hereinafter referred to as the "**Employer**"), **Contract/Tender No.: SANBI: G417/2022 for APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**

(hereinafter referred to as the "contract") in the amount of

R ……..(insert amount), ….....

.....(insert amount in words), (hereinafter referred to as the contract sum),

I/We, ...

in my/our Capacity as ..... and hereby

representing .....

(hereinafter referred to as the "**Guarantor**") advise that the **Guarantor** holds at the **Employer's** disposal the sum of R ..... , (insert amount in figures)

.....(insert amount in words) being 5% of the contract sum (excluding VAT), for the due fulfillment of the contract.

2. The **Guarantor** hereby renounces the benefits of the exceptions *non numeratae punia; non causa debiti; excussionis et divisionis;* and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to the **Employer** the amount guaranteed, on receipt of a written demand from the **Employer** to do so, stating that the **Employer** has a right of recovery against the **Contractor** in terms of 33.0 of the contract.

3. Subject to the above, but without in any way detracting from the **Employer's** rights to adopt any of the procedures provided for in the contract, the said demand can be made by the **Employer**, at any stage prior to the expiry of this guarantee.
4. The amount id by the **Guarantor** in terms of this guarantee may be retained by the **Employer** on condition that upon the issue of the last final **payment certificate**, the **Employer** shall account to the **Guarantor** showing how this amount has been expended and refund any balance due to the **Guarantor**.

5. The **Employer** shall have the absolute right to arrange his affairs with the **Contractor** in any manner which the **Employer** deems fit and the **Guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **Guarantor**. Without derogating from the aforegoing, any compromise, extension of

the **construction period**, indulgence, release or variation of the **Contractor's** obligation shall not affect the validity of this guarantee.

6. The **Guarantor** reserves the right to withdraw from this guarantee at any time by depositing the guaranteed amount with the **Employer**, whereupon the Guarantor's liability seizes.

7. This guarantee is neither negotiable nor transferable, and

   (a) must be surrendered to the **Guarantor** at the time when the **Employer** accounts to the **Guarantor** in terms of clause 4 above, or
   (b) shall lapse on the date of the last **certificate of Practical Completion**.

8. This guarantee shall not be interpreted as extending the **Guarantor's** liability to anything more than payment of the amount guaranteed.

Signed at ..... on this ..... day of ..... 20.....

AS WITNESS

1. .....

2. .....

.....
By and on behalf of

.....

.....

(insert the name and physical address of the Guarantor)

Name: .....

Capacity: .....
(Duly authorised thereto by resolution attached marked Annexure A)

Date: .....

A. No alterations and/or additions of the wording of this form will be accepted.

B. The physical address of the Guarantor must be clearly indicated and will be regarded as the Guarantor's *domicilium citandi et executandi,* for all purposes arising from this guarantee.

C. This GUARANTEE must be returned to: .....

.....

C1.3.2: VARIABLE CONSTRUCTION GUARANTEE - JBCC 2000 PRINCIPAL BUILDING AGREEMENT (Edition 5.0 (Reprint 1) of July 2007)

To:
South African National Biodiversity Institute
Private Bag X101
Silverton
0184

Sir,

VARIABLE CONSTRUCTION GUARANTEE FOR THE EXECUTION OF A CONTRACT IN TERMS OF JBCC 2000 (5.0 EDITION JULY 2007)

5. With reference to the contract between .....(hereinafter referred to as the "**Contractor**") and the **South African National Biodiversity Institute** (hereinafter referred to as the "**Employer**"), **Contract/Tender No.: SANBI: G417/2022** for **APPOINTMENT OF A CONTRACTOR FOR THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**

(hereinafter referred to as the "contract") in the amount of

R ……..(insert amount), ….....

.....(insert amount in words), (hereinafter referred to as the contract sum),

I/We, ...

in my/our Capacity as ..... and hereby

representing .....

(hereinafter referred to as the "**Guarantor**") advise that the **Guarantor** holds at the **Employer's** disposal the sum of R ..... , (insert amount in figures)

.....(insert amount in words) being 10% of the contract sum (excluding VAT), for the due fulfillment of the contract.

1. I / We advise that the **Guarantor's** liability in terms of this guarantee shall be as follows:

   (a) From and including the date on which this guarantee is issued and up to and including the date of payment of the amount in the last final **payment certificate**, the **Guarantor** will be liable in terms of this guarantee to the maximum amount of 10% of the **contract sum** (excluding VAT);

   (b) The **Guarantor's** liability shall reduce to 3 % of the **contract value** (excluding VAT) as determined at the date of the last **certificate of practical completion**, subject to such amount not exceeding 10% of the **contract sum** (excluding VAT).

   (c) The **Guarantor's** liability shall reduce to 1 % of the **contract value** (excluding VAT) as determined at the date of the last **certificate of final completion**, subject to such amount not exceeding 10 % of the **contract sum** (excluding VAT).

   (d) This guarantee shall expire on the date of the last **final payment certificate**.

   (e) The **Practical Completion Certificate** and the **Final Completion Certificate** referred to in this guarantee shall mean the certificates issued in terms of the contract.

2. The **Guarantor** hereby renounces the benefits of the exceptions *non numeratae punia; non causa debiti; excussionis et divisionis;* and *de duobus vel pluribus reis debendi* which could be pleaded against the enforcement of this guarantee, with the meaning and effect whereof I/we declare myself/ourselves to be conversant, and undertake to the **Employer** the amount guaranteed on receipt of a written demand from the **Employer** to do so, stating that the **Employer** has a right of recovery against the **Contractor** in terms of 33.0 of the contract.

4. Subject to the above, but without in any way detracting from the **Employer's** rights to adopt any of the procedures provided for in the contract, the said demand can be made by the **Employer** at any stage prior to the expiry of this guarantee.

5. The amount id by the **Guarantor** in terms of this guarantee may be retained by the **Employer** on condition that upon the issue of the last **final payment certificate**, the **Employer** shall account to the **Guarantor** showing how this amount has been expended and refund any balance due to the **Guarantor**.

6. The **Employer** shall have the absolute right to arrange his affairs with the **Contractor** in any manner which the **Employer** deems fit and the **Guarantor** shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the **Guarantor**. Without derogating from the aforegoing, any compromise, extension of the construction period, indulgence, release or variation of the **Contractor's** obligation shall not affect the validity of this guarantee.

7. The **Guarantor** reserves the right to withdraw from this guarantee at any time by depositing the amount guaranteed with the **Employer**, whereupon the **Guarantor's** liability ceases.

8. This guarantee is neither negotiable nor transferable, and

   (a) must be surrendered to the **Guarantor** at the time when the **Employer** accounts to the **Guarantor** in terms of clause 5 above, or
   (b) shall lapse in accordance with clause 2(d) above.

9. This guarantee shall not be interpreted as extending the **Guarantor's** liability to anything more than the payment of the amount guaranteed.

Signed at ..... on this ..... day of ..... 20.....

AS WITNESS

1. .....

2. .....

.....
By and on behalf of

.....

.....

(insert the name and physical address of the Guarantor)

Name: .....

Capacity: .....
(Duly authorised thereto by resolution attached marked Annexure A)

Date: .....

A. **No alterations and/or additions of the wording of this form will be accepted.**

B. **The physical address of the Guarantor must be clearly indicated and will be regarded as the Guarantor's *domicilium citandi et executandi*, for all purposes arising from this guarantee.**

C. **This GUARANTEE must be returned to:** .....

.....

C1.4 Occupational Health and Safety Agreement 37(2)

AGREEMENT MADE AND ENTERED INTO BETWEEN THE

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI)

(hereinafter called the **"EMPLOYER"**)

.....

(Contractor / Mandatary / Company / CC Name)

IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, ACT NO. 85 OF 1993 AS AMENDED

I, ..., representing

....., as an Employer in its own right, do hereby undertake to ensure, as far as is reasonably practicable, that all work will be performed, and all equipment, machinery or plant used in such a manner as to comply with the provisions of the Occupational Health and Safety Act (OHSA) and the Regulations promulgated there under.

I furthermore confirm that I/we am/are registered with the Compensation Commissioner and that all registration and assessment monies due to the Compensation Commissioner have been fully paid or that I/we are insured with an approved licensed compensation insurer.

COID ACT Registration Number: .....

Or Compensation Insurer: ..... Policy No.: .....

I undertake to appoint, where required, suitable competent persons, in writing, in terms of the requirements of OHSA and the Regulations and to charge him / them with the duty of ensuring that the provisions of OHSA and Regulations as well as the Council's Special Conditions of Contract, Way Leave, Lock-Out and Work Permit Procedures are adhered to as far as reasonably practicable.

I further undertake to ensure that any Sub-contractors employed by me will enter into an Occupational Health and Safety Agreement separately, and that such Sub-contractors comply with the conditions set.

I hereby declare that I have read and understand the appended Occupational Health and Safety Conditions and undertake to comply therewith at all times.

I hereby also undertake to comply with the Occupational Health and Safety Specification and Plan.

Signed at ..... this ..... day of .....20 .....

....
WITNESS MANDATARY

Signed at ..... this ..... day of .....20 .....

....
WITNESS FOR AND ON BEHALF OF THE EMPLOYER

OCCUPATIONAL HEALTH AND SAFETY CONDITIONS

1. The Chief Executive Officer of the Contractor shall assume the responsibility in terms of Section 16(1) of the Occupational Health and Safety Act (as amended). Should the Contractor assign any duty in terms of Section 16(2), a copy of such assignment shall immediately be provided to the representative of the Employer as defined in the Contract.

2. All work performed on the Employer's premises shall be performed under the supervision of the construction supervisor who understand the hazards associated with any work that the Contractor performs on the site in terms of Construction Regulations 2003.

3. The Contractor shall appoint a Competent Person who shall be trained on any occupational health and safety aspect pertaining to them or to the work that is to be performed.

4. The Contractor shall ensure that he familiarises himself with the requirements of the Occupational Health and Safety Act and that he, his employees, and any Sub-contractors, comply with them.

5. Discipline in the interests of occupational health and safety shall be strictly enforced.

6. Personal protective equipment shall be issued by the Contractor as required and shall be worn at all times where necessary.

7. Written safe work procedures and appropriate precautionary measures shall be available and enforced, and all employees shall be made conversant with the contents of these practices.

8. No substandard equipment/machinery/articles or substances shall be used on the site.

9. All incidents referred to in terms of Section 24 of the Occupational Health and Safety Act shall be reported by the Contractor to the Department of Labour and the Employer.

10 The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of Section 32 of the Occupational Health and Safety Act and into any incident involving a Contractor and/or his employees and/or his Sub-contractor/s.

11. No use shall be made of any of the Employer's machinery / plant / equipment / substance / personal protective equipment or any other article without prior arrangement and written approval.

12. No alcohol or any other intoxicating substance shall be allowed on the site. Any person suspected of being under the influence of alcohol or any other intoxicating substance shall not be permitted access to or allowed to remain on the site.

13. Prior to commencement of any work, verified copies of all documents mentioned in the agreement, must be presented to the Employer.

PART C: THE CONTRACT
Part C2: Pricing Data

C2.1 Pricing Instructions

1. GENERAL INFORMATION

a. Bills of Quantities
The **Bills of Quantities** forms part of and must be read and priced in conjunction with all the other documents forming part of the **contract documents**, the Standard Conditions of Tender, Conditions of Contract, Specifications, Drawings and all other relevant documentation.

b. Value Added Tax
The **Contract Sum** must include for Value Added Tax (VAT). All rates, provisional sums, etc. in the **Bills of Quantities** must however be net (exclusive of VAT) with VAT calculated and added to the total value thereof in the Final Summary.

c. Contract Price Adjustment
Tenderers are to take note that contract price adjustments are not applicable to this contract

2. PRICING INFORMATION

1. These Bills of Quantities contain sequentially numbered pages as indicated in the contents list. Tenderers are required to check that the pages in their Bills of Quantities are complete/correct. If any pages are duplicated or omitted, or if any quantity or typing is unclear or if the Bills of Quantities contain any obvious errors, the Tenderer shall immediately notify the Principal Agent, so that the problem may be rectified. No responsibility for any errors arising from any of the above shall be accepted by the Principal Agent.

2. The Bills of Quantities form part of and shall be read in conjunction with the specification, which contains full description of the work required to be performed and the materials and equipment to be supplied and used in the execution of the works. Tenderers shall refer to the specification for the full meaning and description of work to be executed and materials and equipment to be supplied or used in the execution of the work.

3. Tenders shall be submitted with Bills of Quantities completed in full. Non or partial completion of the Bills of Quantities shall render Tenders liable for disqualification.

4. The total Tender Price as carried forward to the Form of Offer and Acceptance, after correction for arithmetic extension errors, etc. shall be the Contract Price as awarded to the successful Tenderer. Tenderers are requested to check multiplication and addition of the Bills of Quantities. The rate(s) submitted shall be regarded as the price offered per item.

5. No changes, additions or omissions to the contents of the Bills of Quantities shall be permitted. If any changes, additions or omissions are made these shall not be recognised and the original wording of the Bills of Quantities shall apply.

6. The priced Bills of Quantities (of Tenderer) shall be checked by the Principal Agent. The Principal Agent reserves the right to request adjustments to one or more individual Tender Prices and to rectify contradictions and thereby alter the total Tender Price as submitted. The acceptance of this Tender does not preclude the Principal Agent from querying or requesting of the Contractor to adjust the rates at any stage during the contract period or any extension thereto.

7. The responsibility of the accuracy of the quantities included in the Bills of Quantities, remains with the person who prepared the bills. The Tenderer is relieved from the responsibility of the measurement of quantities at Tender stage and the Tender Amounts shall be for the quantities as listed in the bills. It is, however, expected from the Tenderer to include for minor construction items such as would be required for the complete execution of works in accordance with the specification.

8. The quantities in these Bills of Quantities shall not be used for the ordering of materials.

9. Changes in the scope of works included in the Bills of Quantities shall be permitted and shall be measured and priced at the tariffs as included in the Bills of Quantities and shall form an addition to or omission from

the total of the Bills of Quantities. Any changes not covered by any rates in the Bills of Quantities, shall be agreed and priced as non-schedule items in accordance with the conditions of contract.

10. The extent and value of variations shall be in accordance with the conditions of contract. Variations to the works prior to the execution thereof shall be priced as above. Variations to work already executed, shall not necessarily be priced in accordance with the Bills of Quantities and shall be judged individually on merit.

11. Except where the separate rate for the material and labour components of any item is specifically called for, the unit price of such item shall be deemed to include the supply and installation of that item.

    The description of any items shall, except where otherwise specified, allow for the purchase, delivery, off-loading, storage, packing, lifting, placing, positioning and fixing in position, cutting and wastage, dies and patterns, models and equipment, temporary work, return of packing material, fixing costs, profit or other obligations of the contract arising out of the conditions of contract. All items' prices shall exclude VAT but include any other tax or levy as applicable.

    All items are measured to the net final quantity as indicated on the drawings with the completed work in the position as indicated on the drawing. All prices and rates shall allow for wastage for whatever reason, irrespective of any other standard measurement which may be currently used elsewhere.

12. Should the Contractor identify any additional issues or items which in his opinion are necessary for the complete and proper execution of the works, he shall identify such items in a covering letter attached to his Tender and submit rates for these items. Mistakes in the physical measurement of items in the Bills of Quantities shall be rectified, but no claim shall be considered for the non-measurement of doubtful or minor items or claims resulting of criticism of method of measurement used or descriptions given. The priced Bills of Quantities shall not be adjusted on the grounds of the items which in the opinion of the Tenderer should have been brought into account unless so detailed in the accompanying letter.

13. The Bills of Quantities shall be adjusted to reflect the quantities of materials used on completion of whole or part of the works as a result of remeasurement, qualification or variations. The remeasured quantities shall form the basis for the calculation of payment certificates. The Bills of Quantities are not intended for the ordering of materials, etc. and the Contractor is advised to extract the quantities for the ordering of materials directly from the drawings and specification(s). Any order placed directly from the Bills of Quantities, shall be solely at the Contractor's risk.

14. The unit rates as entered in the Bills of Quantities with the exclusion of dayworks items, shall in all cases include any present and applicable sales tax or similar statutory duties.

15. Labour-intensive Works:
    a) Those parts of the contract to be constructed using labour-intensive methods will be identified by the contractor in the Bills of Quantities and priced accordingly. The works, or parts of the works so designated are to be constructed using labour–intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items identified as labour intensive are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour-intensive specification in the Scope of Works.
    b) Payment for items which are identified by the contractor to be constructed labour-intensively will not be made unless they are constructed using labour-intensive methods. Any unauthorized use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.
    c) The contractor is to provide a schedule of identified labour-intensive items identified in the Bills of Quantities. This schedule will be provided to the principal agent timeously once site is handed over.

16. The amount of the Preliminary and General Section to be included in each monthly payment certificate shall be assessed as an amount prorated to the value of the work duly executed in the same ratio as the preliminaries bears to the total of prices excluding any contingency sum, the amount for the Preliminary and General Section and any amount in respect of contract price adjustment provided for in the contract.

17. Where the initial contract period is extended, the monthly charge shall be calculated on the basis as set out in 16 but taking into account the revised period for completing the works.

18. The amount or items of the Preliminary and General Section shall be adjusted to take account of the theoretical financial effect which changes in time or value (or both) have on this section. Such adjustments shall be based on adjustments in the following categories as recorded in the Bills of Quantities:

- an amount which is not to be varied, namely Fixed (F)
- an amount which is to be varied in proportion to the contract value, namely Value Related (V); and
- an amount which is to be varied in proportion to the contract period as compared to the initial construction period excluding revisions to the construction period for which no adjustment to the contractor is not entitled to in terms of the contract, namely Time Related (T).

19. Where the initial contract period is extended, the monthly charge shall be calculated on the basis as set out in 16 but taking into account the revised period for completing the works. Where no provision is made in the Bills of Quantities to indicate which of the three categories in 17 apply or where no selection is made, the adjustments shall be based on the following breakdown:
    - 10 percent is Fixed;
    - 15 percent is Value Related
    - 75 percent is Time Related.

20. The adjustment of the Preliminary and General Section shall apply notwithstanding the actual employment of resources in the execution of the works. The contract value used for the adjustment of the Preliminary and General Section shall exclude any contingency sum, the amount for the Preliminary and General Section and any amount in respect of contract price adjustment provided for in the contract. Adjustments in respect of any staged or sectional completion shall be prorated to the value of each section.

21. The quantities of work as measured and accepted and certified for payment in accordance with the conditions of contract, and not the quantities stated in the Bill of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by difference between the quantities in the Bill of Quantities and the quantities certified for payment. The Ordering of materials is not to be based on the Bill of Quantities, but only on information issued for construction purposes.

22. For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

23. Unit: The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications
    - Quantity: The number of units of work for each item
    - Rate : The payment per unit of work at each which the Tenderer tenders to do the work
    - Amount : The quantity of an item multiplied by the tendered rate of the (same) item
    - Sum : An amount tendered for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

24. The units of measurements indicated in the bill of Quantities are metric units. The following abbreviations may appear in the Bill of Quantities:
    - mm = millimetre
    - m = metre
    - km = kilometre
    - km-pass = kilometre-pass
    - m^2 = square metre
    - m^2-pass = square metre-pass
    - ha = hectare
    - m^3 = cubic metre
    - m^3-km = cubic metre-kilometre
    - kW = kilowatt
    - kN = kilonewton
    - kg = kilogram
    - t = ton (1 000 kg)
    - % = per cent
    - MN = meganewton
    - MN-m = meganewton-metre
    - PC Sum = Prime Cost Sum (Cost of material supplied excluding vat, profit and labour, but including transport and delivery costs)
    - Prov Sum= Provisional Sum

25. Occupational Health and Safety Act and Construction Regulations
    A payment item in the Bill of Quantities has been made to allow the tenderers to price for compliance with OHSA and the Construction Regulations. This payment item must also include for the erection of Visitors Indemnity Signs and for ensuring that visitors receive instructions and sign an indemnity declaration.

26. The Tenderer must note that this is a fixed rate contract, and that the Tenderer is not entitled to adjust the rates/prices for escalation

27. The Tenderer must take note that this is a Bill of Provisional Quantities and that the total number of units will be re-measured.

28. A price or rate shall be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be covered by the other prices or rates in the Schedule.

29. The short descriptions of the items of payment given in the bill of quantities are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the Scope.

30. Unless otherwise stated, items are measured net in accordance with the drawings and no allowance is made for waste.

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

32. Except where rates only are required, insert all amounts to be included in the total tendered price in the “amount” column and show the corresponding total tendered price.

33. 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. (Refer to www.stanza.org.za or www.iso.org for information on standards).

34. The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. 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.

35. The descriptions provided trades must be read in conjunction with the Architect’s and Engineer’s Drawings, Details, Schedules and Specifications and the tenderer must price accordingly.

C2.2 Bills of Quantities

BILLS OF QUANTITIES

THE CONSTRUCTION OF A NEW LAPA AND THE REFURBISHMENTS OF EXISTING GATE HOUSE AND EXISTING ABLUTIONS (ONLY ON AREAS WHERE SPECIFIED), EXTERNAL AREAS (WHERE DEFINED) AND THE INSPECTION AND WORKS TO EXISTING AND NEW SERVICES (WATER, SEWER AND STORMWATER) FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI) AT THE MOKOPANE BIODIVERSITY CONSERVATION CENTRE

REVISION 0

NOVEMBER 2021

Prepared for:

SANBI
Biodiversity for Life
South African National Biodiversity Institute

BILL OF QUANTITIES

PRICING INSTRUCTIONS

1. Measuring System

1.1) The Bills of Quantities have been drawn up in accordance with the Standard System of Measuring Building Work (as amended) published and issued by the Association of South African Quantity Surveyors (Seventh Edition), 2015.

1.2) The quantities are provisional and will be re-measured upon completion of the works. The Contractor shall **not** use these quantities for ordering of materials. The Contractor must immediately notify the Quantity Surveyor if discrepancies are found between the quantities and/or descriptions in these Bills of Quantities and the Contractor's quantities measured from construction drawings and specifications.

2. General Pricing Notes

2.1) For the purposes of this Bill of Quantities, the following words shall have the meanings hereby assigned to them:

Unit : The unit of measurement for each item of work as defined in the Standardized, Project or Particular Specifications

Quantity : The number of units of work for each item

Rate : The payment per unit of work at each which the Tenderer tenders to do the work

Amount : The quantity of an item multiplied by the tendered rate of the (same) item

Sum : An amount tendered for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units

2.2) The units of measurements indicated in the bill of Quantities are metric units. The following abbreviations may appear in the Bill of Quantities:

mm = millimetre
m = metre
km = kilometre
m² = square metre
ha = hectare
m³ = cubic metre
m³-km = cubic metre-kilometre
No. = number
Sum = Lump Sum
l = litre
kW = kilowatt
kN = kilonewton
kg = kilogram
kPa = kilopascal
t = tonne (1000kg)
% = percent
MN = meganewton
MN-m = meganewton-metre
MPa = megapascal
PC Sum = Prime Cost Sum (Cost of material supplied excluding vat, profit and labour, but including transport and delivery costs)
Prov Sum = Provisional Sum

2.3) The short descriptions of the items of payment given in the bill of quantities are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the Scope.

2.4) Unless otherwise stated, items are measured net in accordance with the drawings and no allowance is made for waste.

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

2.6) A price or rate is to be entered against each item in the Bills of Quantities, whether the quantities are stated or not. 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.

2.7) Except where rates only are required, insert all amounts to be included in the total tendered price in the “amount” column and show the corresponding total tendered price.

2.8) 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. (Refer to www.stanza.org.za or www.iso.org for information on standards).

2.9) The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. 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.

2.10) The quantities of work as measured and accepted and certified for payment in accordance with the conditions of contract, and not the quantities stated in the Bill of Quantities, will be used to determine payments to the Contractor. The validity of the Contract shall in no way be affected by difference between the quantities in the Bill of Quantities and the quantities certified for payment. The Ordering of materials is not to be based on the Bill of Quantities, but only on information issued for construction purposes.

2.11) The contract sum must include for Value Added Tax (VAT). All rates, provisional sums, etc. in the Bills of Quantities are net (exclusive of VAT) with VAT calculated and added to the total value thereof in the Final Summary.

2.12) This is a **Fixed Rate Contract with re-measurable quantities** and no escalation will be considered

2.13) The descriptions provided trades must be read in conjunction with the Architect's and Engineer's Drawings, Details, Schedules and Specifications and the tenderer must price accordingly.

2.14) The contractor is to identify items within the Bills of Quantities that are to be assigned as labour intensive and price these items accordingly

3. Structure and locations of Bills of Quantities

SECTION NO. 1: PRELIMINARIES
SECTION NO. 2: BUILDING WORKS
SECTION NO. 3: EXTERNAL WORKS
SECTION NO. 4: PROVISIONAL SUMS
SECTION NO. 5: ELECTRICAL WORK BOQ
SECTION NO. 6: CONTINGENCY
FINAL SUMMARY - TO BE CARRIED TO FORM OF OFFER AND ACCEPTANCE

Notes
Pricing Instructions

LOCATIONS

M1 : EXISTING ABLUTIONS
M3 : EXISTING GATE HOUSE
M5 : EXTERNAL WORKS
M6 : SERVICE RETICULATION
M9 : NEW LAPA

GENERAL

U1 : ELECTRICAL
U3 : PRELIMINARIES AND GENERAL
U4 : CONTINGENCY
U5 : SMME RELATED ITEMS

4. Details of the Agreement

4.1) The agreement is based on the JBCC Series 2000 Principal Building Agreement, prepared by the Joint Building Contracts Committee, Edition 5.0, Reprint 1 July 2007. The additions, deletions and alterations to the JBCC Principal Building Agreement are stated in the Preliminaries section of the Bills of Quantities as well as the contract specific variables are as stated in the Contract Data.

4.2) The ASAQS Preliminaries published by the Association of South African Quantity Surveyors , August 2010, are forming part of the overall Preliminaries Bill of Quantities and the preliminaries specific variables are stated within the Preliminaries Bills of Quantities.

4.3) Where any item is not relevant to this specific contract, such item is marked N/A (signifying "not applicable")

5. General Preambles for Trades (2017)

5.1) Tenderers are referred to the General Preambles for Trades (2017 Edition as recommended and published by the Association of South African Quantity Surveyors) and to the Supplementary Preambles to all Trades.

The Tenderer must study the General Preambles and the Supplementary Preambles to all Trades before pricing this document and the tender sum shall cover all costs and charges that may be considered necessary by the tenderer for the carrying out and observance of the provisions of the General Preambles and the Supplementary Preambles to all Trades.

5.2) Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the "General Preambles for Trades 2017".

6. General

6.1) The drawings listed in the Scope of Works used for the setting up these Bills of Quantities are kept by the quantity surveyor and can be viewed at any time during office hours up until the completion of the works.

Notes
Pricing Instructions

7. Proprietary Names / Trade Names

7.1) Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted, subject to the Principal Agent's approval.

Notes
Pricing Instructions

Item No		Unit	Quantity	Rate	Amount	
	SECTION 1 **BILL NO. 1** **PRELIMINARIES** **BUILDING AGREEMENT AND PRELIMINARIES** The Conditions of Contract are the ***JBCC Series 2000 Principal Building Agreement (Edition 5.0 (reprint 1) of July 2007), inclusive of the Contract Data Addenda EC and CE,*** prepared by the Joint Building Contracts Committee Inc. amended as hereinafter described The ***ASAQS Preliminaries (August 2010 edition)*** published by the Association of South African Quantity Surveyors for use with the said **JBCC** Principal Building Agreement inclusive of the **Contract Data** Addenda EC and CE shall be deemed to be incorporated hereinafter The **contractor** is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause. In addition the contractor is deemed to have referred to the amendments to the general conditions of contract as well as the specific conditions of contract These clauses are hereinafter referred to by clause number and heading only. Where standard clauses or alternatives are not entirely applicable to this **agreement** such modifications, corrections or supplements as will apply are given under each relevant clause heading and such modifications, corrections or supplements shall take precedence notwithstanding anything contrary contained in the abovementioned documents **Carried to Collection**			R		
	Section No. 1 Preliminaries Bill No. 1 Preliminaries (Section A)					

Item No		Unit	Quantity	Rate	Amount	
	Where modifications or amendments as described are made, such modification and/or amendments shall supersede any conflicting provision in the relevant clauses of the Preliminaries or the Principal Building Agreement and the Tenderer shall make due allowance for whatever costs and charges he may consider necessary for the carrying out and observance of the provisions of the clauses as modified and/or amended. Where any item is not relevant to this specific **agreement** such item is marked **not applicable (N/A)** **PREAMBLES FOR TRADES** Tenderers are referred to the General Preambles for Trades (2017 Edition as recommended and published by the Association of South African Quantity Surveyors) and to the Supplementary Preambles to all Trades. These preambles shall be deemed to be incorporated in these bills of quantities and no claims arising from brevity of description of items fully described in the said Model Preambles will be entertained. The Tenderer must study the General Preambles and the Supplementary Preambles to all Trades before pricing this document and the tender sum shall cover all costs and charges that may be considered necessary by the tenderer for the carrying out and observance of the provisions of the General Preambles and the Supplementary Preambles to all Trades. Supplementary preambles are incorporated in these bills of quantities to satisfy the requirements of this project. Such supplementary preambles shall take precedence over the provisions of the said Model Preambles The contractor's prices for all items throughout these bills of quantities must take account of and include for all of the obligations, requirements and specifications given in the said Model Preambles and in any supplementary preambles					
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 1 Preliminaries (Section A)					

Item No		Unit	Quantity	Rate	Amount	
	STRUCTURE OF THIS PRELIMINARIES BILL Section A : A recital of the headings of the individual clauses in the aforementioned **JBCC** Principal Building Agreement Section B : A recital of the headings of the individual clauses in the aforementioned **JBCC** General Preliminaries (refer to JBCC & Tender Document) Section C : A recital of the headings of the individual special clauses to meet the particular circumstances of the project (refer to Tender Document) **PRICING OF PRELIMINARIES** Option A in the **contract data** applies for the adjustment of **preliminaries**, the amounts entered against the relevant items in these **preliminaries** are to be divided into one or more of the three categories provided namely fixed (F), value related (V) and time related (T)					
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 1 Preliminaries (Section A)					

Item No		Unit	Quantity	Rate	Amount	
	SECTION A - PRINCIPAL BUILDING AGREEMENT					
	Definitions					
	Definitions (A1)					
1	Clause 1.0 - Definitions and interpretation Replace the definitions with the following wording: **AGREEMENT**: The agreement arising from the signing of the Form of Offer and Acceptance by the parties **BILLS OF QUANTITIES**: The document drawn up in accordance with the measuring system as stated in the **Pricing Data**. The **contractor** shall have priced the document to reflect the **contract sum** **CONTRACT DOCUMENTS**: The documents listed in the Form of Offer and Acceptance **CONTRACT DRAWINGS**: The drawings stated in the tender document upon which the accepted tender or negotiated amount was based **CONTRACT SUM**: The total of prices inclusive of VAT as stated in the Form of Offer and Acceptance Add the following definitions: **SCOPE OF WORK**: The listed variables applicable to this **agreement** **SITE INFORMATION**: The listed variables applicable to this **agreement** F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 1 Preliminaries (Section A)					

Item No		Unit	Quantity	Rate	Amount	
	Objective and preparation (A2 - A14)					
2	Clause 2.0 - Offer acceptance and performance obligations F:..... V:..... T:.....		Item			
3	Clause 3.0 - Documents The **contract drawings** are issued with the tender F:..... V:..... T:.....		Item			
4	Clause 4.0 - Design responsibility F:..... V:..... T:.....		Item			
5	Clause 5.0 - Employer's agents F:..... V:..... T:.....		Item			
6	Clause 6.0 - Contractor's site representative F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 1 Preliminaries (Section A)					

Item No		Unit	Quantity	Rate	Amount	
7	Clause 7.0 - Compliance with laws and regulations Without limiting the generality of the provisions of clause 7.0, the contractor's attention is drawn to the provisions of the Construction Regulations, 2014 issued in terms of the Occupational Health and Safety Act, 1993. It is specifically stated that the employer shall prepare a documented health and safety specification for the works and that the employer shall ensure that the contractor has made provision for the cost of health and safety measures during the execution of the works. The contractor shall price opposite this item for compliance with the act and the regulations and the reasonable provisions of the aforementioned health and safety specifications. Contractor to provide a detailed breakdown of all costs for health and safety measures, as per the requirements within the Construction Regulations F:..... V:..... T:.....		Item			
8	Clause 8.0 - Works risk F:..... V:..... T:.....		Item			
9	Clause 9.0 - Indemnities F:..... V:..... T:.....		Item			
10	Clause 10.0 - General insurances F:..... V:.....T:.....		Item			
11	Clause 11.0 - Special insurances F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 1 Preliminaries (Section A)					

Item No		Unit	Quantity	Rate	Amount	
12	Clause 12.0 - Effecting insurances F:..... V:.....T:.....		Item			
13	Clause 13.0 - Assignment F:..... V:..... T:.....		Item			
14	Clause 14.0 - Security F:..... V:..... T:.....		Item			
	Execution (A15 - A23)					
15	Clause 15.0 - Preparation for and execution of the works F:..... V:..... T:.....		Item			
16	Clause 16.0 - Site and access F:..... V:..... T:.....		Item			
17	Clause 17.0 - Contract instructions F:..... V:..... T:.....		Item			
18	Clause 18.0 - Setting out of the works 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 *[18.1]* F: ..... V:.....T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 1 Preliminaries (Section A)					

Item No		Unit	Quantity	Rate	Amount	
19	Clause 19.0 - Temporary works and plant F:..... V:..... T:.....		Item			
20	Clause 20.0 - Nominated subcontractors F:..... V:..... T:.....		Item			
21	Clause 21.0 - **Selected subcontractors** General attendance of **n/s subcontractors** for pricing by the **contractor** shall be in accordance with the **n/s agreement**. Notwithstanding this provision, general attendance shall be deemed to include for the **contractor** to provide free of charge to any **n/s subcontractor** such scaffolding as may reasonably be required by such **n/s subcontractor** for the execution of the relevant subcontract work F:..... V:..... T:.....		Item			
22	Clause 22.0 - Employer's direct contractors F:..... V:..... T:.....		Item			
23	Clause 23.0 - Contractor's domestic subcontractors F:..... V:..... T:.....		Item			
	<u>Completion (A24 - A30)</u>					
24	Clause 24.0 - Practical completion F:..... V:..... T:.....		Item			
25	Clause 25.0 - Works completion F:..... V:..... T:.....		Item			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
26	Clause 26.0 - Final completion F:..... V:..... T:.....		Item			
27	Clause 27.0 - Latent defects liability period F:..... V:..... T:.....		Item			
28	Clause 28.0 - Sectional completion F:..... V:..... T:.....		Item			
29	Clause 29.0 - Revision of date for **practical completion** F:..... V:..... T:.....		Item			
30	Clause 30.0 - Penalty for late or non-completion F:..... V:..... T:.....		Item			
	Payment (A31 - A35)					
31	Clause 31.0 - Interim payment F:..... V:..... T:.....		Item			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
32	Clause 32.0 - Adjustment to the **contract value** All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the **contractor** *[32.13]* Where prices are submitted by the **contractor** or **n/s subcontractor** during the progress of the **works** in respect of **contract instructions** or in regard to a claim under the terms of the **agreement** and notwithstanding the fact that such prices may be used in an interim **payment certificate**, there is to be no presumption of acceptance. Should the **principal agent** wish to accept any such prices prior to the issue of the **certificate of final completion**, it shall be in writing. F:..... V:..... T:.....		Item			
33	Clause 33.0 - Recovery of expense and loss F:..... V:..... T:.....		Item			
34	Clause 34.0 - Final account and final payment F:..... V:..... T:.....		Item			
35	Clause 35.0 - Payment to other parties F:..... V:..... T:.....		Item			
	<u>Termination (A36 - A39)</u>					
36	Clause 36.0 - Termination by employer - contractor's default F:..... V:..... T:.....		Item			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
37	Clause 37.0 - Termination by employer - loss and damage F:..... V:..... T:.....		Item			
38	Clause 38.0 - Termination by contractor - employer's default F:..... V:..... T:.....		Item			
39	Clause 39.0 - Termination - cessation of the works F:..... V:..... T:.....		Item			
	Dispute (A40)					
40	Clause 40.0 - Settlement of disputes F:..... V:..... T:.....		Item			
	SUMMARY OF CATEGORIES Category : Fixed R..... Category : Value R..... Category : Time R.....					
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 1 Preliminaries (Section A)					

Section No. 1

Preliminaries

Bill No. 1

Preliminaries (Section A)

COLLECTION

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Item No		Unit	Quantity	Rate	Amount	
	SECTION 1					
	BILL NO. 2					
	SECTION B - JBCC PRELIMINARIES					
	Definitions and interpretation (B1)					
1	Clause 1.0 - Definitions and interpretation					
	F:..... V:..... T:.....		Item			
	Documents (B2)					
2	Clause 2.1 - Checking of documents					
	F:..... V:..... T:.....		Item			
	Clause 2.2 - Provisional bills of quantities					
	These bills of quantities are provisionally measured.					
	F:..... V:..... T:.....		Item			
	Clause 2.3 - Availability of construction documentation					
	The budgetary allowances and selected/nominated subcontract amounts allocated for subsequent trades included in this document will be separately procured, based on multiple procurement of selected/nominated subcontractors during the construction period, or to be executed by the Main Contractor and priced at Bill rates or rates to be agreed. To be used in part or in full at the discretion of the Principal Agent.					
	F:..... V:..... T:.....		Item			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	Previous work and adjoining properties (B3)					
3	Clause 3.1 - Previous work - dimensional accuracy					
	F:..... V:..... T:.....		Item			
	Clause 3.2 - Previous work - defects					
	F:..... V:..... T:.....		Item			
	Clause 3.3 - Inspection of adjoining properties					
	F:..... V:..... T:.....		Item			
	Samples, shop drawings and manufacturer's instructions (B4)					
4	Clause 4.1 - Samples of materials					
	F:..... V:..... T:.....		Item			
	Clause 4.2 - Workmanship samples					
	F:..... V:..... T:.....		Item			
	Clause 4.3 - Shop drawings					
	F:..... V:..... T:.....		Item			
	Clause 4.4 - Compliance with manufacturer's instructions					
	F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 2 JBCC Preliminaries (Section B)					

Item No		Unit	Quantity	Rate	Amount	
	Deposits and fees (B5)					
5	Clause 5.1 - Deposits and fees F:..... V:..... T:.....		Item			
	Temporary services (B6)					
6	Clause 6.1 - Water Water for the **works** is described in : Contract Data EC F:..... V:..... T:.....		Item			
	Clause 6.2 - Electricity Electricity for the **works** is described in : Contract Data EC F:..... V:..... T:.....		Item			
	Clause 6.3 - Telecommunication facilities Telecommunication facilities are described in : Contract Data EC F:..... V:..... T:.....		Item			
	Clause 6.4 - Ablution facilities Ablution facilities are described in : Contract Data EC F:..... V:..... T:.....		Item			
	Prime cost amounts (B7)					
7	Clause 7.1 - Responsibility for prime cost amounts F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 2 JBCC Preliminaries (Section B)					

Item No		Unit	Quantity	Rate	Amount	
	Special attendance on n/s subcontractors (B8)					
8	Clause 8.1 - Special attendance F:..... V:..... T:.....		Item			
	General (B9)					
9	Clause 9.1 - Protection of the **works** F:..... V:..... T:.....		Item			
	Clause 9.2 - Protection/isolation of existing/sectionally occupied **works** Specific requirements for protection/isolation of existing/sectionally occupied **works** are described in : Contract Data EC F:..... V:..... T:.....		Item			
	Clause 9.3 - Security of the works F:..... V:..... T:.....		Item			
	Clause 9.4 - Notice before covering work F:..... V:..... T:.....		Item			
	Clause 9.5 - Disturbance F:..... V:..... T:.....		Item			
	Clause 9.6 - Environmental disturbance F:..... V:..... T:		Item			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	Clause 9.7 - Works cleaning and clearing F:..... V:..... T:.....		Item			
	Clause 9.8 - Vermin F:..... V:..... T:.....		Item			
	Clause 9.9 - Overhand work F:..... V:..... T:.....		Item			
	SUMMARY OF CATEGORIES Category : Fixed R..... Category : Value R..... Category : Time R.....					
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 2 JBCC Preliminaries (Section B)					

Section No. 1

Preliminaries

Bill No. 2

JBCC Preliminaries (Section B)

COLLECTION

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Item No		Unit	Quantity	Rate	Amount	
	SECTION 1 **BILL NO. 3** **SECTION C - SPECIFIC PRELIMINARIES**					
1	Clause C1 - Contractor To Be Responsible The Contractor acknowledges that the principal objective of his appointment is his expert knowledge in the execution of the scope of work of this Contract. The Contractor shall therefore be solely responsible for all aspects of the construction of the Works including but not limited to management, resourcing, programming, co-ordination, etc., all as required for the type of project described within the time limits and quality standard specified. The Employer, Principal Agent and the other Consultants are in no way responsible for any act or omission on the part of the Contractor which may result in any patent or latent defects in materials or workmanship, breach or neglect of any Local Authority Regulations. The Contractor remains at all times responsible for any such neglect, deviation or wrong act, whether the same be discovered before or after the Final Certificate, or any other Certificate is approved. The Contractor shall also comply with all legal and labour regulations. F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
2	Clause C2 - Warranties Warranties shall be sought by the Principal Agent from all nominated or selected firms carrying out work or supplying goods. All warranties and guarantees issued by Subcontractors shall be underwritten by the Contractor. The Contractor shall obtain and hand over to the Principal Agent at practical completion, all relevant guarantees and maintenance instructions provided by manufacturers, suppliers or subcontractors, suitably filed together. F:..... V:..... T:.....		Item			
3	Clause C3 - Indemnities Indemnities shall be sought by the Principal Agent from all Contractors undertaking any design responsibility. F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
4	Clause C4 - Work Or Installations By Direct Contractors Pursuant to Clause 22 the Employer and his Tenants shall have the right to employ other Contractors (hereinafter referred to as "Direct Contractors") to execute any special or other works or installation whether contained in this Contract or not, concurrently with the work being executed under this Contract. The Contractor shall not be entitled to any percentage, profit or discount on the value of any work executed by "Direct Contractors" other than attendance on specific items as specified elsewhere in these Bills of Quantities but shall nevertheless allow these Direct Contractors and the Employer's Tenants and employees to have access to the Works, allocate reasonable space in the building for the storage of their materials, tools and equipment, and relate the work of such Direct Contractors to the Contract Programme as necessary, all to the satisfaction of the Principal Agent. The Contractor shall also allow the Direct Contractors, etc. to use, free of charge, the latrine accommodation and water and power supply on the Site, and shall not in any way hinder or prevent the execution of their work. F:..... V:..... T:.....		Item			
5	Clause C5 - As-Built Drawings The Contractor shall be required to ensure that, at the end of the project, copies of the plumbing, drainage and fire services reticulation layouts showing the position of main pipe runs, the positions of stopcocks and all other salient information are submitted to the Principal Agent. All such as-built drawings are to be lodged prior to the issue of the certificate of works completion. F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
6	Clause C6 - Use Of Site The Contractor shall not use the site for any purpose other than carrying out the Works. F:..... V:..... T:.....		Item			
7	Clause C7 - Interpretation Of Drawings, Specifications And Bills Of Quantities Should any part or parts of the Drawings, Specifications or Bills of Quantities not be clearly legible to the Contractor, or the material or articles to be used in the execution of the Works be considered insufficiently described or the manner in which the work is to be carried out not be clear, the Contractor must obtain from the Principal Agent the necessary information to clarify such Drawings, Specification, Bills of Quantities or instructions which request shall be in writing. The Contractor shall be held solely responsible for and shall, at his own expense, rectify any errors arising out of incorrect interpretation of the Drawings, Specifications, Bills of Quantities or instructions. F:..... V:..... T:.....		Item			
8	Clause C8 - Ownership and Care of Drawings and Documents All drawings and documents are to be considered the sole property of the Employer and are to be returned to them on completion of the Works. The drawings, etc., are to be used by the Contractor for the purpose of this Contract only. All drawings must be properly cared for, protected and kept in good condition. F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
9	Clause C9 - Checking of Drawings and Specifications Upon receipt of detail drawings for any work, the Contractor shall, before putting that work in hand, ascertain that the dimensions given on the detail drawings correspond with the dimensions of any work already built and which governs the sizes of any work for which details are now issued. In the event of the detail drawings not agreeing with the works already built, the discrepancy shall be brought to the Principal Agent's attention timeously and the detail drawings shall be returned at once for alterations. F:..... V:..... T:.....		Item			
10	Clause C10 - Scale of Dimensions All dimensions will be figured on the drawings or may be calculated from figured dimensions and are always to be followed. No dimensions shall be obtained by scaling. F:..... V:..... T:.....		Item			
11	Clause C11 - Contract Instructions Instructions issued on Site shall be recorded in a Contract instruction book supplied by the Contractor. Only site instructions issued in such book shall be recognised. Site instructions to the Contractor and various Sub-contractors may be issued only by the Principal Agent and shall be issued via the Contractor. F:..... V:..... T:.....		Item			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
12	Clause C12 - Encroachment by Contractor During the course of the building operations the Contractor shall be held entirely responsible for any encroachment onto any adjoining properties or servitudes as a result of his default and the cost of any remedial measures arising therefrom as required by the Principal Agent shall be borne by the Contractor. F:..... V:..... T:.....		Item			
13	Clause C13 - Security at Completion The Contractor shall account for and hand over to the Employer all keys, properly labelled with itemised schedule to be signed by the Employer as receipt. F:..... V:..... T:.....		Item			
14	Clause C14 - Condemned Work The Contractor shall remove from the site all materials condemned by the Principal Agent, whether incorporated in the Works or not. He shall replace and re-execute such work in accordance with the Contract and without expense to the Employer. The Contractor shall also bear the expense (including Professional Fees) of making good all other work destroyed or damaged by such removal or replacement. F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
15	Clause C15 - Labour Record The Contractor shall provide to the Principal Agent, at intervals to be agreed to by the Principal Agent, a written daily record, in schedule form, showing the number and descriptions of tradesmen and labourers currently employed on the Works, including those employed on subcontracts. F:..... V:..... T:.....		Item			
16	Clause C16 - Plant Record The Contractor shall provide to the Principal Agent, at intervals to be agreed to by the Principal Agent, a written daily record, in schedule form, showing the number, type and capacity of all plant, excluding hand tools, currently employed on the Works. F:..... V:..... T:.....		Item			
17	Clause C17 - Costs of Claims All costs incurred by the Contractor in the preparation of claims to the satisfaction of the Principal Agent and/or Quantity Surveyor shall be borne by the Contractor. F:..... V:..... T:.....		Item			
18	Clause C18 - Declaration of Insurance A declaration of insurance shall be sought by the Principal Agent from the party responsible for affecting the applicable insurance cover. F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
19	Clause C19 - Insurances The Contractor warrants that he shall give all notices and shall observe all the terms and conditions and requirements of all insurances applicable to this Contract. Where the Contractor is responsible for the appointment of subcontractors then the Contractor shall: 1. Ensure that potential and appointed subcontractors are aware of the whole content of Clauses 10.0, 11.1 and 12.1. 2. Enforce the compliance of subcontractors with these Clauses where applicable. F:..... V:..... T:.....		Item			
20	Clause C20 - Adjustment Of Attendance The amounts allowed by the Contractor against the respective attendance items will vary only in the following circumstances: 1. Where the actual subcontract amount, less any adjustments in terms of the Contract Price Adjustment Provisions, varies in excess of 15% of the Provisional Sum allowed, then the attendance amount will be varied pro-rata to the subcontract final amount less any adjustments in terms of Contract Price Adjustment Provisions. 2. Where the scope of the subcontract works increases or decreases, then the attendance amount allowed will be increased or decreased pro-rata to the cost of the variation in the scope of the subcontract works only. 3. No adjustment in the attendance amount will be made where the specification increases/decreases the subcontract amount. F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
21	Clause C21 - Overloading By The Contractor Or Subcontractor The Contractor shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the Works. The Contractor shall submit details of his proposed loading, storage, plant erection, etc., to the Principal Agents for their approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the Engineer's requirements in connection with the provision of temporary support work, etc. F:..... V:..... T:.....		Item			
22	Clause C22 - Quality Quality inspections will be carried out timeously prior to handover to ensure quality at an earliest stage. The Contractor is to provide a designated snagging team to do remedial work. F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
23	Clause C23 - Cleaning No claims for clearing or carting away any earth, rubbish or superfluous materials, including that of any Subcontractor, shall be accepted. All such materials must be cleared regularly at the end of each shift and in addition as and when directed by the Principal Agent. All electrical wiring must be protected from dust and water. Should the Contractor fail to carry out any or all of the above the Principal Agent will arrange for such clearing and cleaning as is necessary to be carried out by others and recover the cost as debits against Certificate Payments. F:..... V:..... T:.....		Item			
24	Clause C24 - Accommodation of traffic for construction works as designated by the principal agent. Including barriers, temporary signage, flagman, traffic management plan, temporary road markings, etc. F:..... V:..... T:.....		Item			
25	Clause C25 - Trade Names Wherever a trade name for any product has been described in the **bills of quantities / lump sum document**, 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 F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
26	Clause C26 - Temporary Protection Temporary protection, as per Engineers requirements of existing, roads, fencing, entrances, water, sewer, stormwater, telephone, electrical, etc. services to be affected by the works Protection of municipal roads until construction in vicinity is complete. F:..... V:..... T:.....		Item			
27	Clause C27 - Planning of Municipal Connections Planning and managing connections into existing sewer pipelines, aerator basin, clarifiers, manholes, etc. including liaison with relevant authorities F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
28	Clause C28 - Dayworks Where in the opinion of the Principal Agent any extra work cannot properly be measured or valued, the Contractor will be allowed daywork prices therefore calculated upon the costs defined hereunder together with the stated percentages. The total thus arrived at shall be the total amount recoverable by the Contractor for performing such work. 1. The costs to the Contractor or sub-contractor of materials, being the net cost (at current market prices) actually paid for such materials after the deduction of cash discounts or if materials are supplied from the Contractor's or sub-contractor's stock then the cost of such materials shall be based upon the current market price plus the cost of delivery to Site; to which net cost 10% thereof shall be added. 2. The cost of labour to the Contractor or sub-contractor, being all items of direct cost of labour actually remunerated to the workmen concerned which shall include the cost of all allowances in terms of the industrial Conciliation Act (where applicable) or any other wage determination applying in the area where the daywork is executed: to which labour cost 10% shall be added. Hourly base rates for labour shall be the current market rates for labour based upon standard working hours and shall be applied in respect of the time spent by workers directly engaged on the particular day works including any operator's mechanical plant and transport and erecting and dismantling other plant. If a claim is made that individual workmen have been paid wages and allowances in excess of the minimum legalised rates, then proof must be furnished that such workmen had been so paid prior to the commencement of the daywork referred to. F:..... V:..... T:.....		Item			
	Carried to Collection			R		
	Section No. 1 Preliminaries Bill No. 3 Special Preliminaries (Section C)					

Item No		Unit	Quantity	Rate	Amount	
29	Clause C29 - Hours of Work The contractor is to note that all hours of work should fall within the normal working hours and no work is to take place outside of the normal working hours unless otherwise approved/communicated by the principal agent/client F:..... V:..... T:.....		Item			
	<u>Clause C30 - Client Requirements</u>					
30	C30.1 Managing, supervising and attending to SMMEs		Item			
31	C30.2 Profit on SMME's as per the SMME requirements highlighted in the tender document		Item			
32	C30.3 Preliminaries for SMMEs		Item			
	<u>SUMMARY OF CATEGORIES</u> Category : Fixed R..... Category : Value R..... Category : Time R.....					
	Carried to Collection			R		

Section No. 1
Preliminaries
Bill No. 3
Special Preliminaries (Section C)

Section No. 1

Preliminaries

Bill No. 3

Special Preliminaries (Section C)

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Section No. 1
Preliminaries
Bill No. 3
Special Preliminaries (Section C)

Section No. 1

Preliminaries

SECTION SUMMARY - Preliminaries

Bill No		Page No		Amount
1	Preliminaries (Section A)	122		
2	JBCC Preliminaries (Section B)	128		
3	Special Preliminaries (Section C)	142		
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Item No		Unit	Quantity	Rate	Amount	
	SECTION 2 **BILL NO. 1** **ALTERATION & REMOVAL WORKS** **SUPPLEMENTARY PREAMBLES** **REMOVAL OF EXISTING WORK** **SPECIAL PREAMBLES** **REMOVE** The term "remove" shall mean breaking out as required to remove the item described, disposal of all rubble and old materials, and making good all work disturbed to match existing. Remove walls or partitions shall mean breaking down complete to structure of walls, etc. and trimming up edges and disposal of rubble and all old materials from site (old materials as elsewhere described). Prices shall include for protecting adjacent surfaces against damage and repairing such damage should it occur. **OLD MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR** Old material from the alterations except where described for re-use or handing over, will become the property of the Contractor for which Credit must be allowed. **OLD MATERIAL MUST BE CARTED AWAY** Old material from the alterations except where described for re-use or handing over, as well as all debris must regularly be carted away from site and not be accumulated on site. **OLD MATERIAL MAY NOT BE RE-USED** No old material may be re-used for new work except where it is specifically described as set aside for re-use.					
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	DISPOSAL OF DEBRIS, ETC The Contractor shall be responsible for the removal from the site of all materials, debris and rubbish resulting from the alterations/demolitions. **GENERAL** Damage To Persons And Property All demolitions, pulling down, alterations etc., are to be carried out carefully and in the safest possible manner. The Contractor is to ascertain that all alterations are structurally practicable and safe and he will be held solely responsible for any damage to property or work adjoining the pulling down and must make good at his own expense. Programming Of The Works The programming of demolitions and alterations will have to be co-ordinated with the Principal Agent. Care Of Utility Services Special care is to be exercised not to interfere with any drains, electrical supply, data, or telephone cables and fittings to same. Notice is to be given to the Principal Agent when any disconnections, removal of wires etc. are necessary and the Contractor is to afford every facility to the workmen carrying out this work. Permission must be obtained from the Principal Agent before any services are cut off at any time. Temporary Shoring Etc. Prices are to include for providing, fixing and maintaining in position generally as required all temporary shoring, needling, strutting etc., necessary for the proper execution of the alterations in this Contract and for removing same. Supervision The demolition work is to be executed in a workmanlike, practical and safe manner under the continual supervision of a competent foremen. **Carried to Collection**			R		

Item No		Unit	Quantity	Rate	Amount	
	Protection of existing structures/features etc. The contractor's rates is to allow for provision for protecting all existing structures, walls, trees etc. within the vicinity of works during construction Reinstatement of existing areas The contractor to note as per architects specifications that areas worked on and around are to be reinstated to its original condition and state where specified Treatment of cut surfaces The contractor's rates is to allow for treating all cut surfaces of timber/wooden components with approved enseal					
	REMOVAL OF EXISTING WORK Prices for removal must include for cutting and breaking down into manageable sizes bearing in mind the restrictions which apply to means of disposal. Contractors, where possible, must provide a credit to the Employer for all items that may have any salvage value Tenderers are advised to study the Model Preambles for Trades before pricing this bill					
	TEMPORARY BARRIERS, SCREENS, ETC **Temporary barriers, screens, hoarding, etc. including removal and making good upon completion**					
1	Fencing 1.8m high to Principal Agents Approval including netting fixed to fence, corners, stays etc. M1 : 25 M3 : 0 M5 : 0 M9 : 0	m	25			
2	Extra over fencing for single pedestrian gate 900mm x 1800mm high including frame, hinges, lockset and handles to temporary fencing M1 : 1 M3 : 0 M5 : 0 M9 : 0	No	1			
	CONCRETE					
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 1 Alterations and Removal Work					

Item No		Unit	Quantity	Rate	Amount	
	Breaking through existing in-situ slab for new apron					
3	Break out and remove reinforced concrete M1 : 0 M3 : 0 M5 : 81 M9 : 0	m3	81			
	CLEANING EXISTING WALLS					
	Cleaning down existing face brick and stone surfaces Thoroughly clean down existing surfaces by means of high pressure water jet (minimum 250 bar) and chemicals, remove all flaking substances, fungal marks, grease and all other contaminants, etc, as described in the specification					
4	Vertical and horizontal face brickwork and stone cladding M1 : 112 M3 : 301 M5 : 0 M9 : 0	m2	414			
	ROOF COVERING/STRUCTURE					
	Examing of existing roof and making good					
5	Examining roofs check for roof leaks, check and fix loose timber trusses, supports, rafters including ridge cappings and securing loose nails, replacing missing or defective screws and/or nails with 120mm galvanised steel drive screws, making good holes with approved sealant or waterproofing as specified by the architect to render watertight and leave in good order M1 : 63 M3 : 114 M5 : 0 M9 : 0	m2	177			
	Carefully taking down and removing roofs					
6	Roofs including thatch and purlin laths while securing existing trusses in place M1 : 63 M3 : 114 M5 : 0 M9 : 0	m2	177			
7	Treat existing trusses measured net with two coats Powafix or similar and approved creosote protective coating M1 : 63 M3 : 114 M5 : 0 M9 : 0	m2	177			
	Carried to Collection			R		

Section No. 2
Building Works
Bill No. 1
Alterations and Removal Work

Item No		Unit	Quantity	Rate	Amount	
	Carefully taking down and removing fascias, bargeboards, etc.					
8	Fascias and bargeboards. M1 : 37 M3 : 52 M5 : 0 M9 : 0	m	89			
	CEILINGS, PARTITIONS & ACCESS FLOORING					
	Carefully take down/out and remove ceilings including brandering, hangers, etc.					
9	Ceilings M1 : 55 M3 : 114 M5 : 0 M9 : 0	m2	169			
10	Cornice M1 : 35 M3 : 52 M5 : 0 M9 : 0	m	88			
	METALWORK					
	Carefully taking down and removing					
11	Metal fencing including posts etc. M1 : 0 M3 : 0 M5 : 100 M9 : 12	m2	112			
	PLUMBING & DRAINAGE					
	Carefully taking out and remove sanitary fittings, taps, waste fittings, etc including making safe, disconnecting piping, cutting back, sealing exposed water supply pipes and waste pipes etc. and removing piping from brickwork back to the duct					
12	Gutters and down pipes M1 : 48 M3 : 67 M5 : 0 M9 : 0	m	115			
	PAVING AND KERBING					
	Taking out and remove external paving					
13	Paving bricks/blocks, including sand bedding M1 : 0 M3 : 0 M5 : 338 M9 : 0	m2	338			
14	Concrete kerbing including haunching and bedding M1 : 0 M3 : 0 M5 : 450 M9 : 0	m	450			
	BUILDING UP OPENINGS					
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 1 Alterations and Removal Work					

Item No		Unit	Quantity	Rate	Amount	
	Sundries					
15	Cutting/grinding through existing walls where cracks have occurred in preparation for new sealant (sealant measured elsewhere) M1 : 4 M3 : 0 M5 : 0 M9 : 0	m	4			
16	Cutting and toothing new brickwork to existing M1 : 0 M3 : 0 M5 : 1 M9 : 0	m2	1			
	BUDGETARY ALLOWANCES					
	The following Budgetary Allowances are for work to be executed by the Sub-Contractor or specialist suppliers and priced at Bill rates or rates to be agreed and to be used as directed by the Principal Agent and to be deducted in whole or in part if not required					
17	Provide the sum of R50 000.00 (Fifty Thousand) for breaking down/demolishing and removing existing structures from parking lot as directed by architect		Item		50 000.00	
18	Provide the sum of R50 000.00 (Fifty Thousand) for additional general work sill to be designed and will/may be carried out by the contractor		Item		50 000.00	
	Carried to Collection			R		

Section No. 2

Building Works

Bill No. 1

Alterations and Removal Work

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Item No		Unit	Quantity	Rate	Amount	
	SECTION 2 **BILL NO. 2** **EARTHWORKS** **SUPPLEMENTARY PREAMBLES** **Nature of material to be excavated** A geotechnical investigation has been carried out on site and the report is available from the Engineers. The site is located on transported sandy and gravelly soils that are underlain by quartzite bedrock. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured. **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 and disposing of same from site. **Subterranean water** No information regarding subterranean water is available. The tenderer must acquaint himself of the presence and depth of subterranean water and allow therefor in his prices. **Filling and layer work materials** References such as "G1", "G2", etc and "C1", "C2", etc in descriptions of filling and layer work materials refer to corresponding references in the document "Guidelines for Road Construction Materials. TRH 14 : 1985" compiled by the Committee of State Road Authorities and the properties set out therein for each kind shall be applicable to the respective materials described hereinafter **Carried to Collection**			R		

Item No		Unit	Quantity	Rate	Amount	
	Testing Descriptions & prices for earth filling, compaction, etc. are deemed to include for all necessary density and other testing required in accordance with the SABS 1200 series and Engineer's specifications					
	EXCAVATION, FILLING, ETC. OTHER THAN BULK					
	Excavation in earth not exceeding 2m deep					
1	Holes M1 : 0 M3 : 0 M5 : 12 M9 : 4	m3	16			
2	Trenches M1 : 0 M3 : 0 M5 : 2 M9 : 0	m3	2			
3	Trenches M1 : 0 M3 : 0 M5 : 0 M9 : 11	m3	11			
4	Reduced levels M1 : 0 M3 : 0 M5 : 18 M9 : 0	m3	18			
	Extra over trench and hole excavations in earth for excavation in					
5	Soft rock M1 : 0 M3 : 0 M5 : 1 M9 : 9	m3	10			
6	Hard rock M1 : 0 M3 : 0 M5 : 1 M9 : 5	m3	5			
	Extra over all excavations for carting away					
7	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor M1 : 0 M3 : 0 M5 : 8 M9 : 54	m3	61			
	Risk of collapse of excavations					
8	Sides of trench and hole excavations not exceeding 1,5m deep M1 : 0 M3 : 0 M5 : 5 M9 : 75	m2	79			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 2 Earthworks					

Item No		Unit	Quantity	Rate	Amount	
	Keeping excavations free of water					
9	Keeping excavations free of all water other than subterranean water		Item			
	Selected earth filling obtained from the excavations and/or prescribed stock piles on site (compacted to 98% Mod AASHTO density)					
10	Backfilling to trenches, holes, etc. M1 : 0 M3 : 0 M5 : 6 M9 : 0	m3	6			
	Earth filling supplied by the contractor of G5 quality material in layers of 150mm thick compacted to 95% MOD AASHTO density					
11	Under floors, pavings, etc. M1 : 0 M3 : 0 M5 : 0 M9 : 23	m3	23			
	Compaction of surfaces					
12	Compaction of ground surface under floors etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% MOD AASHTO density M1 : 0 M3 : 0 M5 : 180 M9 : 156	m2	337			
13	Compaction of ground surface in trenches, holes etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to 93% MOD AASHTO density M1 : 0 M3 : 0 M5 : 19 M9 : 34	m2	53			
	Prescribed density tests on filling					
14	Modified AASHTO Density test M1 : 0 M3 : 0 M5 : 0 M9 : 3	No	3			
	SOIL POISONING					
	Weedkiller (active ingredients metalaclor 102,8 g/l, terbitilasien 248,6 g/l and atrasien 248,6 g/l) mixed in the proportion of 100 ml weedkiller to 100 l water and applied at a rate of 10 l/mý					
	Soil insecticide in accordance with SANS 5859					
	Carried to Collection			R		

Section No. 2
Building Works
Bill No. 2
Earthworks

Item No		Unit	Quantity	Rate	Amount	
	Approved brand of anti-termite soil poison & weedkiller is to be applied by a Registered Company and guaranteed for ten years					
15	Under floors, paving, etc. including forming and poisoning shallow furrows against foundation walls etc., filling in furrows and ramming M1 : 0 M3 : 0 M5 : 180 M9 : 0	m2	180			
16	To bottoms and sides of trenches, holes, raft foundations etc. M1 : 0 M3 : 0 M5 : 72 M9 : 305	m2	377			
	Carried to Collection			R		

Section No. 2

Building Works

Bill No. 2

Earthworks

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Section No. 2
Building Works
Bill No. 2
Earthworks

Item No		Unit	Quantity	Rate	Amount	
	SECTION 2 **BILL NO. 3** **CONCRETE, FORMWORK AND REINFORCEMENT** **SUPPLEMENTARY PREAMBLES** General All concrete, formwork and reinforcement to be done according to SABS 1200G. Components cast against excavated surfaces have not been measured or described separately and the Contractor is to ensure adequate allowance for casting against excavated surfaces are made within the relevant items. Cost of Tests The costs of making, storing and testing of concrete test cubes as required under clause 7 "Tests" of SABS 1200 G shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Representative/Agent. The testing shall be undertaken by an independent firm or institution nominated by the contractor to the approval of the Representative/Agent. (Test cubes are measured separately) Formwork All smooth formwork to be in accordance with SABS 1200G - 5.2.1b. Tolerance to concrete surfaces to have a degree of Accuracy II in accordance with SABS 1200 G - 6.1.1b. Descriptions of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for re-conditioning as necessary before re-use. **Carried to Collection**			R		

Item No		Unit	Quantity	Rate	Amount	
	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 soffits of solid slabs, etc. shall be deemed to be to slabs not exceeding 250mm thick unless otherwise described. Formwork to sides of bases, ground beams, etc will only be measured where it is prescribed by the Representative/Agent, for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks". A 13mm x 13mm chamfer shall be provided on all visible corners for off-shutter concrete in collaboration with the Principal Agent. Chamfers may only be formed with rigid type material. Where required by the Principal Agent or his representative, vibration of concrete shall be included in the rates. **CONCRETE CAST AGAINST EXCAVATED SURFACES** **Concrete 30 MPa/19mm**					
1	Aprons M1 : 0 M3 : 0 M5 : 18 M9 : 0	m3	18			
	REINFORCED CONCRETE CAST AGAINST EXCAVATED SURFACES **Concrete 30 MPa/19mm**					
2	Raft foundation on waterproofing M1 : 0 M3 : 0 M5 : 0 M9 : 26	m3	26			
3	Bases M1 : 0 M3 : 0 M5 : 6 M9 : 4	m3	10			
4	Strip footings M1 : 0 M3 : 0 M5 : 2 M9 : 0	m3	2			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 3 Concrete,Formwork and Reinforcement					

Item No		Unit	Quantity	Rate	Amount	
5	Stub columns M1 : 0 M3 : 0 M5 : 2 M9 : 0	m3	2			
6	Ramps M1 : 0 M3 : 0 M5 : 0 M9 : 1	m3	1			
	Concrete test cubes					
7	Making and testing , set of three 150 x 150 x 150mm concrete strength test cubes M1 : 1 M3 : 0 M5 : 0 M9 : 1	No	2			
	Finishing top surface of concrete smooth with a wood float in					
8	Surface bed slabs M1 : 0 M3 : 0 M5 : 180 M9 : 162	m2	342			
9	Ramps M1 : 0 M3 : 0 M5 : 0 M9 : 5	m2	5			
	Wire brushing of concrete aprons to expose aggregate					
10	Wiring brushing to aprons M1 : 0 M3 : 0 M5 : 180 M9 : 0	m2	180			
	25MPa non shrink grout					
11	Bedding approximately 10mm thick under 400 x 270mm base plate including chamfered edges all round M1 : 0 M3 : 0 M5 : 12 M9 : 4	No	16			
	ROUGH FORMWORK (DEGREE OF ACCURACY II)					
	Rough formwork to sides					
12	Edges, risers, ends, reveals,etc. not exceeding 300mm high or wide M1 : 0 M3 : 0 M5 : 180 M9 : 37	m	217			
	Rough formwork to sides					
13	Sides of stub columns M1 : 0 M3 : 0 M5 : 12 M9 : 0	m2	12			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 3 Concrete,Formwork and Reinforcement					

Item No		Unit	Quantity	Rate	Amount	
	MOVEMENT JOINTS ETC.					
	10mm Expansion joints formed of bitumen impregnated soft board					
14	Between vertical concrete and brick surfaces not exceeding 300 mm high or wide M1 : 0 M3 : 0 M5 : 9 M9 : 56	m	65			
15	Ditto but in walls vertically where cracks have occured M1 : 4 M3 : 0 M5 : 0 M9 : 0	m	4			
	Isolation joint between concrete and brick surfaces with 10mm lightweight, cross-linked, closed cell, expanded Polyethylene joint former with hinged temporary blocking piece including sealing with approved sealer					
16	Joints not exceeding 300mmm wide M1 : 0 M3 : 0 M5 : 0 M9 : 16	m	16			
17	Ditto but placed vertically and sealed both sides M1 : 0 M3 : 0 M5 : 180 M9 : 0	m	180			
	Saw cut joints					
18	45mm Deep x 3mm wide saw cut joints in top of concrete M1 : 0 M3 : 0 M5 : 0 M9 : 52	m	52			
	REINFORCEMENT					
	Provision for mild tensile steel reinforcement					
19	Varying diameters in bases and structural concrete work M1 : 0.00 M3 : 0.00 M5 : 0.07 M9 : 0.12	t	0.19			
	Provision for high tensile steel reinforcement					
20	Varying diameters in bases and structural concrete work M1 : 0.00 M3 : 0.00 M5 : 0.67 M9 : 1.05	t	1.72			
	Mesh reinforcement					
21	Mesh reinforcement 395 laid in slabs with 300mm wide side and end laps (measured net) M1 : 0 M3 : 0 M5 : 0 M9 : 162	m2	162			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 3 Concrete,Formwork and Reinforcement					

Section No. 2

Building Works

Bill No. 3

Concrete,Formwork and Reinforcement

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Item No		Unit	Quantity	Rate	Amount	
	SECTION 2 **BILL NO. 4** **MASONRY** **SUPPLEMENTARY PREAMBLES** General All masonry units shall comply with SANS 227:2007 and SANS 1 575:2007 Brickwork shall be in accordance with SANS 0164. Minimum crushing strength of all load bearing bricks shall be 14MPa. The nominal compressive strength for face bricks shall be not less than 17MPa Class 1 Mortar mix Sizes in descriptions Where sizes in descriptions are given in brick units, "one brick" shall represent the length and "half brick" the width of a brick. Wall ties Descriptions of solid walls and cavity walls shall be deemed to include metal wall ties complying with SABS 28 and of the butterfly or of the modified PWD type, of the required length with each end built at least 75mm deep into brickwork, spaced at not more than 1m centres alternatively to every third course of brickwork. Descriptions of solid walls (except if built in English bond) and cavity walls shall be deemed to include metal wall ties complying with SABS 28 and of the butterfly or of the modified PWD type, of the required length with each end built at least 75mm deep into brickwork, spaced at not more than 1m centres alternatively to every third course of brickwork. Face bricks Bricks shall be ordered timeously to obtain uniformity in size and colour. **Carried to Collection**			R		

Item No		Unit	Quantity	Rate	Amount	
	Excessive suction in clay bricks should be controlled by wetting the bricks before laying. Corners and other advanced work shall be raked back and not raised above the general level of the remaining masonry work by more than one metre at any one lift. Face bricks to be kept free from mortar droppings as the work continues. Reinforcing and brickforce to face brick lintels to have steel hangers to be built into brickwork above header course with R8 steel rod reinforcing for three brick courses above the lintel. All joints in the header course shall be solidly filled with mortar. <u>Pointing</u> Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc. <u>Strutting/shoring of brickwork</u> All cost for strutting/shoring of new brickwork while compacting under the ground floor slab shall be for the account of the contractor.					
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 4 Masonry					

Item No		Unit	Quantity	Rate	Amount	
	FOUNDATIONS					
	Contractor shall support all foundation brickwork while compacting fill material under floors					
	Brickwork of NFX bricks in class II mortar					
1	One brick wall in foundations including brick reinforcement every course M1 : 0 M3 : 0 M5 : 3 M9 : 0	m2	3			
	SUPERSTRUCTURE					
	Brickwork of NFP bricks in class II mortar					
2	One brick walls including brick reinforcement every fourth course and hoop iron tie fixings to columns/brickwork as directed M1 : 0 M3 : 0 M5 : 22 M9 : 185	m2	208			
3	One and a half brick walls including brick reinforcement every fourth course and hoop iron tie fixings to columns/brickwork as directed M1 : 0 M3 : 0 M5 : 0 M9 : 16	m2	16			
4	One brick wall in beam filling M1 : 0 M3 : 46 M5 : 0 M9 : 0	m	46			
5	330 x 330mm Brick piers with a 110 x 110mm 30mpa reinforced concrete cavity infill M1 : 0 M3 : 0 M5 : 0 M9 : 14	No	14			
6	460 x 460mm Brick piers M1 : 0 M3 : 0 M5 : 3 M9 : 0	No	3			
7	Extra over one brick walls for sloping, cutting and shaping brickwork as per architects details and drawings to bottom section of chimney structure M1 : 0 M3 : 0 M5 : 0 M9 : 9	m2	9			
	Prestressed fabricated lintels					
8	100 x 70mm Lintels in lengths not exceeding 3m long M1 : 0 M3 : 0 M5 : 0 M9 : 8	m	8			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	FACE BRICKWORK					
	External facebrick (PC R6000/1000 delivered to site, excluding VAT) pointed with square recessed horizontal and vertical joints					
9	Extra over for face brickwork M1 : 0 M3 : 0 M5 : 22 M9 : 122	m2	145			
10	Brick-on-edge header course lintel 106mm wide pointed on one face and on soffit to match face brick of external walls, all as per Architects detail and specification M1 : 0 M3 : 0 M5 : 0 M9 : 6	m	6			
11	Brick-on-edge header course sloping window sill, approximately 222mm wide pointed on one face and top, all as per Architects detail and specification M1 : 0 M3 : 0 M5 : 0 M9 : 6	m	6			
	STONEWORK					
	WALL CLADDING					
	Natural stone wall cladding to match existing - Allow for pricing of fixing on and labour only to cart and install - Material to be sourced locally from site and supplied free of charge to contractor. Refer to architects finishing schedules. Walls to match existing pattern and jointing detail					
12	Extra over brick wall for cladding M1 : 0 M3 : 43 M5 : 22 M9 : 40	m2	105			
	Carried to Collection			R		

Section No. 2

Building Works

Bill No. 4

Masonry

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Section No. 2
Building Works
Bill No. 4
Masonry

Item No		Unit	Quantity	Rate	Amount	
	SECTION 2					
	BILL NO. 5					
	WATERPROOFING					
	DAMP-PROOFING OF WALLS AND FLOORS					
	Horizontal & vertical damp-proof course to be of black polyethylene sheeting complying with SANS specifications 952 type B having embossed surface 0.38mm thick (250 microns) & manufactured in widths of less than 1000mm. Lapped minimum 150mm at all joints, & ensure similarly lapped over green under-floor damp proof membrane sufficiently					
1	In walls, cills etc (measured nett) M1 : 0 M3 : 0 M5 : 2 M9 : 15	m2	17			
	One layer of 250 micron green Polyethylene sheeting to comply with SANS 952 Type C with minimum 150mm lap to DPM including sealing laps with approved tape					
2	250 micron under surface beds, ramps etc. M1 : 0 M3 : 0 M5 : 12 M9 : 295	m2	307			
3	Under apron slabs M1 : 0 M3 : 0 M5 : 180 M9 : 0	m2	180			
	PROTECTIVE WATERPROOFING TO WALLS					
	Prepare and apply two coats protective bitumen waterproofing to brick walls					
4	Vertically to walls M1 : 0 M3 : 43 M5 : 22 M9 : 40	m2	105			
	JOINT SEALANTS ETC					
	Clear silicone sealing compound					
5	Point between steel windows and door frames and face of brickwork M1 : 0 M3 : 0 M5 : 0 M9 : 27	m	27			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	Two part polysulphide sealing compound including backing cord, bond breaker, primer, etc.					
6	3mm Wide x 10mm deep in saw cut joint M1 : 0 M3 : 0 M5 : 0 M9 : 52	m	52			
7	12mm Wide x 50mm deep in walls where cracks have occured M1 : 4 M3 : 0 M5 : 0 M9 : 0	m	4			
8	20 x 20mm Deep in isolation joint M1 : 0 M3 : 0 M5 : 0 M9 : 16	m	16			
9	5mm Wide x 5mm Deep in joints between tiles and sanitary fittings M1 : 0 M3 : 0 M5 : 0 M9 : 1	m	1			
10	20mm Wide x 20mm deep in junctions between concrete soffits and brickwalls M1 : 0 M3 : 0 M5 : 9 M9 : 56	m	65			
	BUDGETARY ALLOWANCES					
	The following Budgetary Allowances are for work to be executed by the Sub-Contractor or specialist suppliers and priced at Bill rates or rates to be agreed and to be used as directed by the Principal Agent and to be deducted in whole or in part if not required					
11	Provide the sum of R15 000.00 (Fifteen Thousand) for waterproofing requirements to existing buildings where leaking and water issues have arised		Item		15 000.00	
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Section No. 2
Building Works
Bill No. 5
Waterproofing

Section No. 2

Building Works

Bill No. 5

Waterproofing

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Section No. 2
Building Works
Bill No. 5
Waterproofing

Item No		Unit	Quantity	Rate	Amount	
	SECTION 2					
	BILL NO. 6					
	ROOF COVERINGS					
	SUPPLEMENTARY PREAMBLES					
	Harvey roof tiles Contractor to note that Harvey roof tiles to be installed by a certified and accredited Harvey roof tile installer/contractor					
	ROOF SHEETING					
	Roofing sheeting shall be Kliplok 404 (or similar/equally approved) concealed fix profile roll-formed in continuous lengths from certified steel chromadek Z200 0.58mm complying with ISQ 550 (3T) and fixed to steel / timber purlins/girts using KL65 clips (aluminium KL65 clips to be used in conjunction with aluminium sheeting) and class 3 fasteners, in strict accordance with manufacturer's specifications by an Approved Contractor. A written and approved five year guarantee of water-tightness shall be issued after approval of roofs by the manufacturer.					
1	Roof covering with pitch not exceeding 25 degrees M1 : 0 M3 : 0 M5 : 444 M9 : 0	m2	444			
	TILES					
	Harvey Thatch Roof Tiles or equal and approved with a galvanised substrate coated with a natural stone finish on 38 x 38mm SA Pine batten trusses @ 360 C/C on timber roof structure (roof structure and trusses elsewhere measured) nailed on an underlay of 150 micron polyethylene sheeting or equal and approved with 150mm sealed laps as per manufacturers instructions					
2	Roof coverings with pitches exceeding 25 degrees but not exceeding 50 degrees M1 : 179 M3 : 323 M5 : 0 M9 : 230	m2	732			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 6 Roof covering					

Item No		Unit	Quantity	Rate	Amount	
3	Circular cutting M1 : 5 M3 : 0 M5 : 0 M9 : 5	m	10			
4	Ridge tiles to match roofing tiles bedded and pointed in 1:3 cement mortar tinted to match tile colour M1 : 10 M3 : 12 M5 : 0 M9 : 25	m	46			
5	Hip tiles to match roofing tiles bedded and pointed in 1:3 cement mortar tinted to match tile colour including 200mm wide strip of 375 micron embossed damp proof M1 : 14 M3 : 26 M5 : 0 M9 : 0	m	41			
	Flashings shall be to the manufacturer's standards or similar approved Galvanized steel Z200 0.58mm with a patent finish to one side with a Pebble Grey backing coat and fixed to the sheeting with S10 brackets or, sliding brackets at apex where roof sheets are 30m or longer, to obviate any direct fixing perforations. Prior to flashings being fixed, all troughs at the apex shall be stop-ended to the full depth of the sheet in order to prevent any penetration of wind driven water. The trough shall be lipped at the eaves end to form a drip. Transverse flashing flanges shall be form a drip. Transverse flashing flanges shall be notched to the sheet profile where necessary					
6	Headwall/Counter Flash 375mm girth 3 times bent and notched on site to suit roof profile (on sloping roof) M1 : 40 M3 : 52 M5 : 0 M9 : 49	m	141			
7	Sidewall Flash 408mm girth 2 times bent (on sloping side) M1 : 0 M3 : 0 M5 : 0 M9 : 4	m	4			
8	Serrated top end closer 700mm girth M1 : 40 M3 : 52 M5 : 0 M9 : 49	m	141			
	ROOF AND WALL INSULATION					
	100mm Isover Saint-Gobain or similar and approved factorylite non-combustible flexible glass wool insulation with metalized foil backing on underside					
9	Insulation laid taut over rafters (at approximately 500mm centres) and fixed concurrent with covering/tiling battens, purlins, etc, including taped laps M1 : 179 M3 : 323 M5 : 444 M9 : 230	m2	1 176			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 6 Roof covering					

Section No. 2

Building Works

Bill No. 6

Roof covering

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Section No. 2
Building Works
Bill No. 6
Roof covering

Item No		Unit	Quantity	Rate	Amount	
	SECTION 2 **BILL NO. 7** **CARPENTRY & JOINERY** **SUPPLEMENTARY PREAMBLES** Particle board Particle board shall comply with the following specifications: a) SABS 1300 Particle board: exterior and flooring type b) SABS 1301 Particle board: interior type Joinery Descriptions of frames shall be deemed to include frames, transomes, mullions, rails, etc. Descriptions of hardwood joinery shall be deemed to include pelleting of bolt holes. Fixing Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete. Cappings All timber beams, columns should include for metal capping's to prevent any splitting of timber Treatment of cut surfaces The contractor's rates is to allow for treating all cut surfaces of timber/wooden components with approved enseal					
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	TIMBER WORK, ETC.					
	Timber columns to be placed in bases, and concrete cast/poured around it in bases as per engineers specifications (Concrete bases measured elsewhere)					
	SA Pine or similar and approved columns, beams and laths bolted in place including bolts, plates, connectors, etc. Timber columns to be treated in three coats Plascon FDR Woodcare preservative or similar and approved					
1	159mm Diameter columns M1 : 0 M3 : 0 M5 : 0 M9 : 10	m	10			
	DOORS, ETC					
	Contractor to allow for undercutting of internal doors when pricing					
	TDM or similar and approved Semi solid door with hardwood edges all round and masonite finish to both sides to Architects specification					
2	Single door, size approximately 815 x 2032mm M1 : 0 M3 : 0 M5 : 0 M9 : 2	No	2			
	EAVES , VERGES , ETC					
	Fascia and barge boards					
3	10 x 225mm Fascias boards including galvanised steel H-profile jointing strips M1 : 40 M3 : 52 M5 : 0 M9 : 49	m	141			
4	10 x 225mm Barge boards including galvanised steel H-profile jointing strips M1 : 0 M3 : 0 M5 : 0 M9 : 19	m	19			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 7 Carpentry					

Item No		Unit	Quantity	Rate	Amount	
	SKIRTINGS					
	Hardwood					
5	100 x 16mm Skirting with 5mm rounded top corner screwed and plugged M1 : 0 M3 : 0 M5 : 0 M9 : 32	m	32			
	JOINERY					
	COUNTER TOPS					
6	32mm Thick PG Bison Formica or similar and approved top with 200mm deep x 32mm thick Formica down stand at front and on exposed side, with exposed side edges and a preformed bullnose edge , approximately 600mm wide including silicon sealant, etc. and polishing all exposed edges with 45 degree mitred joint with 2-3mm bevel on surface edge complete. Tops and down stands to be fixed to 25 x 50mm mild steel 2.5mm thick hollow section frame, finished in one coat red oxide factory supplied metal primer paint with one coat Plascon or similar and approved merit undercoat and two coats enamel paint (colour : black), at maximum 900mm centres with lugs and fixed to walls with chemical anchor bolts at suitable centres using dabs of 100% clear silicone adhesive, with all joints filled with matching polyester resin glue, all in accordance with manufacturer's and architect's specifications M1 : 0 M3 : 0 M5 : 0 M9 : 14	m	14			
7	Extra over item for cutting out openings in vanity tops not exceeding 50mm diameter M1 : 0 M3 : 0 M5 : 0 M9 : 1	No	1			
	Carried to Collection			R		

Section No. 2
Building Works
Bill No. 7
Carpentry

Section No. 2

Building Works

Bill No. 7

Carpentry

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Section No. 2
Building Works
Bill No. 7
Carpentry

Item No		Unit	Quantity	Rate	Amount	
	SECTION 2					
	BILL NO. 8					
	CEILINGS					
	THATCHED CEILING					
	"Correx" Cape Reed ceiling boards 1220 x 2440 x 10mm in size nailed directly on roof timber members above using binding strips (timber roof measured separately), ensuring all nails/screws are driven all the way into binding strip as per architects and manufacturers specifications, treated in Micon coating Thatchsayf or similar and approved finish including all nails, strips connectors etc.					
1	Thatched ceiling fixed to underside of roof structure M1 : 77 M3 : 161 M5 : 0 M9 : 143	m2	381			
	SUSPENDED CEILINGS					
	600 x 1200 x 9mm Thick Pelican or similar approved Econolite foil backed ceiling tiles with vinyl face finish laid onto Pelican Econogrid pre-painted white exposed tee grid system including fire safety punch outs, with main tees suspended by means of 19 x 0.5mm GMS strap/2.5mm wire hangers at 1200mm centres as per manufacturers specifications					
2	Ceilings suspended not exceeding 1m below concrete soffits/roof structure M1 : 0 M3 : 0 M5 : 0 M9 : 43	m2	43			
	Edge trim to flush plastered ceilings					
3	Pelican system or similar and approved PS1 aluminium shadow line ceiling trim fixed to walls M1 : 0 M3 : 0 M5 : 0 M9 : 27	m	27			
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Item No		Unit	Quantity	Rate	Amount	
	SECTION 2					
	BILL NO. 9					
	IRONMONGERY					
	SUPPLEMENTARY PREAMBLES					
	Finishes to ironmongery Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: SS Stainless Steel BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded Unless otherwise stated ironmongery is to be the manufacturer's standard corrosion resistant ironmongery for the particular product ranges. Installed to Architects specification Surface finishes should be restricted to polished chrome or satin chrome on all approved ironmongery for external and internal doors – unless otherwise stated.					
	LOCK SETS, HANDLES, CYLINDERS, FLUSH BOLTS ETC.					
1	Union/Assa Abloy or similar and approved Sable lever door handles per pair (Code - AL65A63) M1 : 0 M3 : 0 M5 : 0 M9 : 2	No	2			
2	Union/Assa Abloy morticed lock (Code - 23315) Euro cylinder sash lock M1 : 0 M3 : 0 M5 : 0 M9 : 2	No	2			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
3	Union/Assa Abloy 2 x 18 Euro profile double cylinder complete with three keys M1 : 0 M3 : 0 M5 : 0 M9 : 2	No	2			
4	152 x 76mm modular backplate suitable for Euro profile cylinder Lock M1 : 0 M3 : 0 M5 : 0 M9 : 2	No	2			
	SUNDRIES					
5	Union/Assa Abloy (Code - AL8730AS) floor mounted door stop to each door leaf M1 : 0 M3 : 0 M5 : 0 M9 : 2	No	2			
	BUDGETARY ALLOWANCES					
	The following Budgetary Allowances are for work to be executed by the Main Contractor or specialist suppliers and priced at Bill rates or rates to be agreed.					
6	Provide the sum of R30 000.00 (Thirty Thousand Rand) for the supply, delivery and installation of general and fire signage		Item		30 000.00	
	Carried to Collection			R		

Section No. 2
Building Works
Bill No. 9
Ironmongery

Section No. 2

Building Works

Bill No. 9

Ironmongery

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Section No. 2
Building Works
Bill No. 9
Ironmongery

Item No		Unit	Quantity	Rate	Amount	
	SECTION 2					
	BILL NO. 10					
	METALWORK					
	PRESSED STEEL DOOR FRAMES (SANS 1129)					
	1,2mm Mild steel double rebated single door frame suitable for 110mm/220mm walls. Door frame to be supplied complete with 1 pair hinges, lugs, strike plate and rubber buffers as supplied by the manufacturer.					
1	Door frame for door size 815 x 2032mm with two 100mm steel butts and slotted for lock strike M1 : 0 M3 : 0 M5 : 0 M9 : 2	No	2			
	MILD STEEL WINDOWS					
	Standard profile steel windows with 4mm thick clear float glass in black neoprene gaskets with matching aluminium square beading plugged to brickwork, concrete, etc					
2	Window overall size 1511 x 654mm high M1 : 0 M3 : 0 M5 : 0 M9 : 4	No	4			
	BURGLAR BARS					
	Burglar bars to windows consisting of frame of 40mm x 10mm thick galvanised mild steel flat bar bolted to internal reveal of brick wall, with bars of 12mm Diameter mild steel round bar welded to flat bar frame at maximum 120mm centres All powder coated (colour to Architects specification)					
3	Burglar bars for window size 1511 x 654mm high M1 : 0 M3 : 0 M5 : 0 M9 : 4	No	4			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 10 Metalwork					

Item No		Unit	Quantity	Rate	Amount
	BLINDS				
	Note: The pricing of all blinds to include all necessary support work				
	Canvas Corporation or sirmilar and approved frameless exterior quality UV resistant roller blinds fixed to purpose made steel supports above including all connections etc.				
4	Blinds for opening size approximately 3660 x 2645mm high M1 : 0 M3 : 0 M5 : 0 M9 : 7	No	7		
	BRAAI STRUCTURE				
	2 x Jet Master or equal and approved 1200 built in UNI mild steel braai structure with flue and mild steel rotating cowl including nickel-plated grill, charcoal tray, light fittings and slide-in and under reinforced door with handle and locking eyes				
5	Braai unit M1 : 0 M3 : 0 M5 : 0 M9 : 2	No	2		
	SUNDRIES				
	Holding down bolts				
6	M16 HVU chemical anchor bolts 400mm long including nuts and washers M1 : 0 M3 : 0 M5 : 48 M9 : 16	No	64		
	BUDGETARY ALLOWANCES				
	The following Budgetary Allowances are for work to be executed by the Main Contractor or specialist suppliers and priced at Bill rates or rates to be agreed.				
7	Provide the sum of R30 000.00 (Thirty Thousand) for chimney cowl and general items still to be specified etc.		Item		30 000.00
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Section No. 2
Building Works
Bill No. 10
Metalwork

Section No. 2

Building Works

Bill No. 10

Metalwork

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Section No. 2
Building Works
Bill No. 10
Metalwork

Item No		Unit	Quantity	Rate	Amount	
	SECTION 2 **BILL NO. 11** **STRUCTURAL WORK** **SUPPLEMENTARY PREAMBLES** 1. Shop drawings The contractor will be required to prepare shop details for the work which must be submitted to the Engineer for approval before fabrication is started. Approval of shop details by the Engineer will include the following: a) Examination of member sizes for consistency with design requirements, b) Examination of all connections designed and/or detailed by the fabricator, for adequacy of load trasference, c) Approval of leading dimensions which are taken to include such dimensions as may influence the design (eg, depth of trusses and girders) or which may grossly affect site programme (eg, truss spans and stanchion heights). Not withstanding any approval of these details, the contractor shall remain responsible for ensuring that the dimensions, details and workmanship result in the correct assembly of the work. 2. Material and workmanship The steelwork is to be fabricated from mild steel to SANS 1431 Grade 350W. The whole of the fabrication and workmanship generally is to be in strict accordance with SANS 0162-1984 as amended. The material shall be of best quality throughout, free from loose rust or millscale, true to thickness and profile throughout and of the section and mass specified subject to a 2% tolerance for rolling margin. Consideration will be given to any detail variation which the contractor may wish to make with the view to the simplification of either fabrication, delivery or erection. Substitutions must be made at the contractor's own expense. The contractor shall provide Works Test Certificates where so required by the Engineer. **Carried to Collection**			R		

Item No		Unit	Quantity	Rate	Amount	
	3. Testing The Engineer shall be at liberty to select test pieces from steelwork in the workshop or on the site and to have them tested. The expense of such tests are to be borne by the contractor if the steelwork does not comply with the standards laid down above. 4. Hold down bolts Holding down bolts and other fixing devices which are to be embedded in concrete must be supplied to the principal contractor on request together with the necessary information, identification and templates. 2mm Mild steel plate templates provided on a scale of one template for every five groups of bolts, suitably marked to ensure easy identification are to be supplied to the principal contractor. Any costs incurred by subsequent repositioning of bolts, etc. resulting from the contractor having failed to furnish adequate information, identification and templates will be for the contractor's account. 5. Welding Welding shall be in accordance with SABS 044 "Welding: Parts I, II and III", E70XX Welding shall be carried out in a manner which will prevent any distortion of the weld or the parent section. All welds shall have adequate root fusion and shall be free from cracks, porosity or other irregularities and any undercutting shall be made good by the deposition of additional runs of weld metal. Any completed welds showing cracks, cavities or other efects shall be cut out and made good at the contractor's own expense. Mild steel electrodes shall comply with SABS 455 "Covered Electrodes for Manual Arc Welding of Mild Steel and Medium High Tensile Steel".					
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 11 Structural Steel					

Item No		Unit	Quantity	Rate	Amount	
	6. Bolts Bolts shall have well-formed heads forged from the solid. Nuts shall closely fit the bolts so that they can only just be turned by hand and at least one clear thread shall project beyond the nut when fully tightened. All bolts shall have one washer under the nuts and shall be so tightened that the threaded portion does not bear on the members connected. Where bolt heads or nuts bear upon bevelled surfaces they shall be provided with tapered washers of 2,3 mm mean thickness to provide a seating square with the axis of the bolt. 7. Friction grip bolts Connections specifying high strength friction grip bolts are to be in strict accordance with SABS 094 "Bolted Friction Grip Joints in Structural Steelwork" and the bolts used are to be in accordance with BS 3139 Part 1 : 1959 "General Grade Bolts, High Strength Friction Grip Bolts for Structural Engineering". Notwithstanding the above, the following must be rigidly adhered to : a) Two-case hardened washers, one flat or bevelled under the head and the other flat or bevelled under the nut shall be used with each bolt. b) Contact surfaces shall not be painted and shall be thoroughly cleaned free of dirt, oil, loose scale, burrs and other defects which are liable to reduce friction resistnace between surfaces. c) At all times the correct torques shall be applied to the different sizes of bolts. **Carried to Collection**			R		
	Section No. 2 Building Works Bill No. 11 Structural Steel					

Item No		Unit	Quantity	Rate	Amount	
	8. Erection The steelwork generally is to be fabricated in the contractor's works having due regard to transport and erection facilities. He must supply all erection tackle, temporary erection bracing, erect and plumb all steelwork and supply all steel wedges and tacks as required. Items may be detailed for delivery "piece small" or the contractor may prefabricate if he is satisfied that suitable arrangements for transport can be made. Connections are to be designed for the forces indicated on the drawings or to the maximum capacity of the members. 9. Cleaning and painting All structural steel is to be thoroughly degreased to remove all grease or oil and then wire-brushed, scraped or sand-papered to remove all rust, mill-scale or surface contaminations and is to be immediately given one coatzinc chromate, allowed to dry overnight and given one coat of universal undercoat prior to delivery to site. All damaged paintwork is to be made good on site after erection is complete. (also refer to 12 below) All structural steel pricing is deemed to include for paint work. 10. Testing of welders Tenderers must include in their rates for the testing of any welder used on the work who has not been tested within a period of six months immediately preceding his employment on this contract. 11. Further notes Also refer to the structural steelwork notes indicated on the Engineer's relevant structural drawings. **Carried to Collection**			R		
	Section No. 2 Building Works Bill No. 11 Structural Steel					

Item No		Unit	Quantity	Rate	Amount	
	12. Painting/corrosion protection options Painted Steelwork ° All steelwork below surface to be painted with two layers of bitumen paint ° All steelwork surfaces to be painted and must be free of mill shale, corrosion, grease or dust ° All steelwork to be cleaned with wire brush in accordance with SABS 1200HC prior to coating ° All structural steel shall be be hot-dip galvanised to SANS 121/ISO 1461 (Heavy Duty Application) ° All steelwork exposed surfaces to be coated with two layers of alkyd enamel paint as final coat (dark charcoal colour to architect specification) **STEEL COLUMNS, BEAMS, POSTS, ETC. (PAINTED)** **Galvanised welded beams/columns in single lengths with flat section bearer and connection plates bolted to columns and all necessary fittings, etc.**					
1	150 x 75 x 20 x 2.5mm Cold formed lipped channels M1 : 0.00 M3 : 0.00 M5 : 2.00 M9 : 0.00	t	2.00			
2	152 x 152 x 23kg/m H-Section beams M1 : 0.00 M3 : 0.00 M5 : 0.21 M9 : 0.00	t	0.21			
3	203 x 133 x 25kg/m I-section beams M1 : 0.00 M3 : 0.00 M5 : 4.37 M9 : 0.00	t	4.37			
4	254 x 146 x 31kg/m I-section columns M1 : 0.00 M3 : 0.00 M5 : 1.07 M9 : 0.00	t	1.07			
5	70 x 70 x 6mm Thick angle M1 : 0.00 M3 : 0.00 M5 : 0.37 M9 : 0.00	t	0.37			
	SUNDRIES **BOLTS, FASTENERS, ETC**					
6	High strength M20 HD grade 8.8 bolts M1 : 0 M3 : 0 M5 : 48 M9 : 0	No	48			
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	Section No. 2 Building Works Bill No. 11 Structural Steel					

Section No. 2

Building Works

Bill No. 11

Structural Steel

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Section No. 2
Building Works
Bill No. 11
Structural Steel

Item No		Unit	Quantity	Rate	Amount	
	SECTION 2					
	BILL NO. 12					
	PLASTERING					
	All floors/screeds to be laid according to SABS 0155 - 1980 Accuracy in Buildings and SABS 0155-1980.					
	SCREEDS					
	Cement screed with min 25MPa strength to comply with SANS 10109. Thickness based on desired finish level and on the surface variations of the concrete sub-base ensuring the minimum specified thickness of toppings. To be finished with wood float					
1	Approximately 35mm thick on floors and landings M1 : 0 M3 : 0 M5 : 0 M9 : 141	m2	141			
2	25mm Thick on ramps M1 : 0 M3 : 0 M5 : 0 M9 : 5	m2	5			
	EXTERNAL PLASTER					
	15mm Thick wood floated sand/cement plaster, Class II mix. Surface to be dry, sound and clean and cured for a minimum of 14 days, with a moisture content measured with a Doser Hygrometer (or equivalent), of BD 2 scale - 8% or less all as per Architects detail, specification and approval					
3	On external walls and columns M1 : 19 M3 : 0 M5 : 0 M9 : 85	m2	103			
4	Behind stone wall finish M1 : 0 M3 : 43 M5 : 22 M9 : 40	m2	105			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 12 Plastering					

Item No		Unit	Quantity	Rate	Amount	
	INTERNAL PLASTER					
	15mm Thick wood floated sand/cement plaster on Class II mix, surface to be dry, sound and clean and cured for a minimum of 14 days, with a moisture content measured with a Doser hygrometer (or equivalent), of BD 2 scale-8% or less					
5	On internal walls M1 : 0 M3 : 0 M5 : 0 M9 : 240	m2	240			
6	On narrow widths M1 : 0 M3 : 0 M5 : 0 M9 : 4	m2	4			
	15mm Thick cement plaster on brickwork to receive tiling as per Architects detail, specification and approval					
7	On walls to receive tiling M1 : 0 M3 : 0 M5 : 0 M9 : 5	m2	5			
	POLISH, SEALERS, ETC					
	Prepare and apply a.b.e Construction Chemicals abecote WD 337 solvent-free water dispersed epoxy coating, all in accordance with the manufacturer's instructions					
8	On screed floors M1 : 0 M3 : 0 M5 : 0 M9 : 146	m2	146			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 12 Plastering					

Item No		Unit	Quantity	Rate	Amount	
	GRANOLITHIC FINISH ON CONCRETE					
	35mm Thick grano finish tinted with Powafix or similar and approved yellow oxide tinting powder					
9	On surface beds and ramps M1 : 0 M3 : 0 M5 : 0 M9 : 146	m2	146			
	Carried to Collection			R		

Section No. 2
Building Works
Bill No. 12
Plastering

Section No. 2

Building Works

Bill No. 12

Plastering

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Section No. 2
Building Works
Bill No. 12
Plastering

Item No		Unit	Quantity	Rate	Amount	
	SECTION NO. 2 **BILL NO. 13** **TILING** Patterns Unless otherwise described, tiles shall be laid with continuous joints in both directions Fixing Unless described as "fixed with adhesive to plaster (plaster elsewhere)" descriptions of tiling on brick or concrete walls, columns, etc shall be deemed to include 1:4 cement plaster backing and descriptions of tiling on concrete floors etc shall be deemed to include 1:3 plaster bedding Tiling described as "fixed with adhesive on power floated concrete" shall be deemed to include for approved tiling key-coat Ceramic, porcelain, marble and granite tiles are to be fixed and grouted with suitable adhesives and grouts as recommended by the manufacturer of the tiles Sealant Rates to include for white silicone sealant to be applied between all sanitary fittings and tile finishes **WALL TILING** **300 x 300 x 5mm thick Glazed ceramic wall tiles (PC amount R 250.00 / m2, excluding VAT, but including delivery) fixed to wall plaster with Pro Grip adhesive mixed with approved bonding liquid in lieu of water 3mm joints continuous in one direction and half length staggered in the other direction and grouted with approved anti bacterial & chemical resistant epoxy tile grout.**					
1	On walls M1 : 0 M3 : 0 M5 : 0 M9 : 5	m2	5			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	Sundries: Genesis or similar and approved					
2	Brushed aluminium straight edge trim size approximately 10/12mm wide x thickness of tile to exposed wall tile edges, corners, etc. as per Architects detail and specification M1 : 0 M3 : 0 M5 : 0 M9 : 7	m	7			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 13 Tiling					

Section No. 2

Building Works

Bill No. 13

Tiling

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Item No		Unit	Quantity	Rate	Amount	
	SECTION NO. 2					
	BILL NO. 14					
	PLUMBING & DRAINAGE					
	SUPPLEMENTARY PREAMBLES					
	Sealing of edges					
	Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone					
	ROOF GUTTERS, RAINWATER PIPES, ETC					
	Aluminium powder coated seamless gutter, overall size 100 x 100 x 0,6mm thick coated internally and externally including cut and mitred angles covered with a mitre strip externally, stop ends crimped and all sealed on the inside with silicone sealer, secured to fascia with 20 x 2,5mm internal hanger brackets at 600mm centres using pop rivets, etc.					
1	100 x 100 x 0,6mm Thick seamless gutter M1 : 0 M3 : 0 M5 : 0 M9 : 56	m	56			
2	Extra over gutter for corners M1 : 0 M3 : 0 M5 : 0 M9 : 6	No	6			
3	Extra over gutter for stop ends M1 : 0 M3 : 0 M5 : 0 M9 : 7	No	7			
4	Extra over gutter for outlets M1 : 0 M3 : 0 M5 : 0 M9 : 7	No	7			
	100mm Diameter thick aluminium powder coated downpipe fixed to wall with straps at 1500mm centres using nail plugs, with downpipes riveted and silicone sealed to gutter outlets, including all necessary bends, elbows, shoes etc.					
5	100mm Diameter thick aluminium downpipe M1 : 0 M3 : 0 M5 : 0 M9 : 16	m	16			
6	Extra over downpipe for shoe M1 : 0 M3 : 0 M5 : 0 M9 : 5	No	5			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
7	Extra over for 300mm offset projection M1 : 0 M3 : 0 M5 : 0 M9 : 5	No	5			
	SANITARY FITTINGS					
8	Franke Projectline PLN 621 polished stainless steel double end bowl inset sink, overall size approximately 1160 x 460mm with two 140mm deep bowls, including 38mm waste fittings, with Marley or similar and approved double drain black rubber deap seal P-trap with a T-Junction and elbow, neatly penetrated through any shelving and concealed below counter, to be installed completer onto counter top as specified by Architects detail and specification M1 : 0 M3 : 0 M5 : 0 M9 : 1	No	1			
	TAPS, VALVES, ETC					
9	Cobra Watertech (Code 166/041/1CA) or similar and approved Carina wall mounted sink mixer tap with swivel outlet supplied complete with concealed connections and flange cover plates including under counter Cobra Watertech (Code 628CA-20) or similar and approved Carina under wall stop taps for hot and cold water M1 : 0 M3 : 0 M5 : 0 M9 : 1	No	1			
10	Cobra watertech (Code 232-10) or similar and approved angle regulating valve with sliding flange in chrome finish M1 : 0 M3 : 0 M5 : 0 M9 : 1	No	1			
11	Cobra Watertech or similar and approved braided flexible inlet tubing, blue and red M1 : 0 M3 : 0 M5 : 0 M9 : 1	No	1			
12	Cobra Watertech (Code 311) or similar and approved unslotted sink waste complete with plug, flange, shank, male outlet, connection and backnut in chrome finish M1 : 0 M3 : 0 M5 : 0 M9 : 1	No	1			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
13	Precast concrete gulley size approximately 445 x 430 x 165mm with 125mm diameter hole with PVC grid cover per gully position including underground 110mm PVC gulley P-trap exceeding 500mm and not exceeding 750mm deep M1 : 0 M3 : 0 M5 : 0 M9 : 1	No	1			
	PLUMBING					
	Sanitary plumbing & water supply (measured per point)					
	Provide all necessary in class II copper piping, branches, pipe fittings, valves as required for cold water supply from main water supply point at perimeter of building to the following sanitary fittings, complete					
	Provide all necessary in class II copper piping, brances, pipe fittings, valve all insulated with an R-value of "1" and as required for hot water supply from central geyser/hot water supply to the following sanitary fittings, complete					
	Provide 50/75mm PVC waste piping to the following sanitary fittings to be discharged into 110mm HDPE sub surface soil piping on the same level (elsewhere) or current stack system where shown, including any necessary fittings, trenches complete					
14	Sink (hot and cold water and waste) M1 : 0 M3 : 0 M5 : 0 M9 : 1	No	1			
15	Geyser/Hot water supply M1 : 1 M3 : 0 M5 : 0 M9 : 0	No	1			
	Carried to Collection			R		

Section No. 2
Building Works
Bill No. 14
Plumbing & Drainage

Item No		Unit	Quantity	Rate	Amount	
	ELECTRIC WATER HEATERS					
16	Kwikot 50 Litre Superline 400 Dual electric water heater (Code: DSG-50-5) complying with SABS 151-2002, overall size 535 x 543mm high fitted with isolator switch, operating at 400kPa with temperature and pressure safety relief valve including 20mm female draincock with inlet compression. Geyser to be installed horizontally in roof space with 600 x 600mm wide polyethylene drip tray with union and back nut connected to 20mm PVC overflow pipe taken out at eaves (Code: GSTP-1200) and 22mm pipe work including two 22mm vacuum breakers (Code: KHN4.200CX) installed on hot and cold water supply. Installation to include a Kwikot Multi control and expansion relief valve, all in accordance with SANS 10254, connected to single phase electrical power supply. M1 : 1 M3 : 0 M5 : 0 M9 : 0	No	1			
	TESTING					
17	Testing water pipe system (per building) M1 : 0 M3 : 0 M5 : 0 M9 : 1	No	1			
	BUDGETARY ALLOWANCES					
	The following Budgetary Allowances are for work to be executed by the Main Contractor or specialist suppliers and priced at Bill rates or rates to be agreed.					
18	Provide the sum of R15 000.00 (Fifteen Thousand) for additional general work sill to be designed and will/may be carried out by the contractor		Item		15 000.00	
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Section No. 2

Building Works

Bill No. 14

Plumbing & Drainage

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Section No. 2
Building Works
Bill No. 14
Plumbing & Drainage

Item No		Unit	Quantity	Rate	Amount	
	SECTION NO. 2 **BILL NO. 15** **PAINTWORK** **SUPPLEMENTARY PREAMBLES** All surfaces to be thoroughly prepared according to manufacturers' specifications. The quality of all preparation work and individual coats shall be to the satisfaction of the Architect (or his appointed representative) before any successive paintwork is undertaken. All paint to new and existing surfaces are to be painted with Plascon, Dulux or similar approved (by Architect) Plastered surfaces, etc. Plastered surfaces shall be thoroughly inspected and, if necessary, washed down and brushed in order to remove any traces of efflorescence and allowed to dry completely before any paint finish is applied. Before any paint is applied, holes, cracks and irregularities in plaster and other surfaces shall be filled with a suitable filler and finished smooth. Unfinished concrete surfaces shall have all projections rubbed off and shall be thoroughly cleaned with a spirits-of-salts solution (1 part concentrated spirits-of-salts to 4 parts water). Previously painted plastered surfaces 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 Previously painted plasterboard surfaces Surfaces shall be thoroughly cleaned 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. Steel H-strips and nails to be reprimed with calcium plumbate primer. **Carried to Collection**			R		

Item No		Unit	Quantity	Rate	Amount	
	Previously painted metal surfaces Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal. Previously painted wood surfaces Surfaces shall be thoroughly cleaned down. Blistered or peeling paint shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth. Existing wood surfaces to be stripped, neutralised, sanded and treated. **PAINTWORK ETC TO PREVIOUSLY PAINTED/NEW WORK** **ON SKIMMED PLASTER** **Prepare, apply one coat suitable plaster primer to entire surface, one coat Plascon acrylic polvin paint and finish with two coats of Plascon super acrylic polvin Matt paint in compliance with SANS specifications**					
1	On internal plastered walls M1 : 0 M3 : 0 M5 : 0 M9 : 240	m2	240			
2	On narrow widths M1 : 0 M3 : 0 M5 : 0 M9 : 4	m2	4			
	ON FLOATED PLASTER **Prepare, apply one coat suitable plaster primer to entire surface, one coat Plascon acrylic polvin paint and finish with two coats of Plascon super acrylic polvin Matt paint in compliance with SANS specifications**					
3	On external brick plastered walls and columns M1 : 19 M3 : 0 M5 : 0 M9 : 85	m2	103			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	ON METAL					
	Prepare one coat Plascon mild steel red oxide primer, one coat merit unversal undercoat and two coats gloss enamel paint					
4	On new steel windows M1 : 0 M3 : 0 M5 : 0 M9 : 8	m2	8			
5	On burglar bars measured net M1 : 0 M3 : 0 M5 : 0 M9 : 8	m2	8			
6	On new steel doors and frames M1 : 0 M3 : 0 M5 : 0 M9 : 2	m2	2			
	ON WOOD					
	Prepare one coat Plascon or similar and approved wood primer, Pink undercoat, one coat merit universal undercoat, White undercoat, and two coats Plascon gloss enamel paint					
7	On timber doors M1 : 0 M3 : 0 M5 : 0 M9 : 7	m2	7			
	Prepare three coats Plascon FPR or similar and approved Woodcare preservative					
8	On existing and new timber roof structures measured net M1 : 63 M3 : 114 M5 : 0 M9 : 0	m2	177			
	Prepare one coat Plascon or similar and approved wood primer, Pink undercoat, one coat merit universal undercoat, White undercoat, and two coats Plascon gloss enamel paint					
9	Skirtings not exceeding 300mm girth M1 : 0 M3 : 0 M5 : 0 M9 : 32	m	32			
	Prepare, two coats gloss enamel paint					
10	Fascias and barge boards not exceeding 300mm girth M1 : 40 M3 : 52 M5 : 0 M9 : 68	m	160			
	Carried to Collection			R		
	Section No. 2 Building Works Bill No. 15 Paintwork					

Section No. 2

Building Works

Bill No. 15

Paintwork

COLLECTION

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Section No. 2
Building Works
Bill No. 15
Paintwork

Section No. 2

Building Works

SECTION SUMMARY - Building Works

Bill No		Page No		Amount
1	Alterations and Removal Work	150		
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5	Waterproofing	168		
6	Roof covering	171		
7	Carpentry	175		
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15	Paintwork	204		
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Section No. 2
Building Works

Item No		Unit	Quantity	Rate	Amount	
	SECTION 3 **BILL NO. 1** **SITE WORKS AND DEMOLITIONS** **SUPPLEMENTARY PREAMBLES** **REMOVAL OF EXISTING WORK** **SPECIAL PREAMBLES** **REMOVE** The term "remove" shall mean breaking out as required to remove the item described, disposal of all rubble and old materials, and making good all work disturbed to match existing. Remove walls or partitions shall mean breaking down complete to structure of walls, etc. and trimming up edges and disposal of rubble and all old materials from site (old materials as elsewhere described). Prices shall include for protecting adjacent surfaces against damage and repairing such damage should it occur. **OLD MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR** Old material from the alterations except where described for re-use or handing over, will become the property of the Contractor for which Credit must be allowed. **OLD MATERIAL MUST BE CARTED AWAY** Old material from the alterations except where described for re-use or handing over, as well as all debris must regularly be carted away from site and not be accumulated on site. **Carried to Collection**			R		

Item No		Unit	Quantity	Rate	Amount	
	OLD MATERIAL MAY NOT BE RE-USED No old material may be re-used for new work except where it is specifically described as set aside for re-use. **DISPOSAL OF DEBRIS, ETC** The Contractor shall be responsible for the removal from the site of all materials, debris and rubbish resulting from the alterations/demolitions. **GENERAL** Damage To Persons And Property All demolitions, pulling down, alterations etc., are to be carried out carefully and in the safest possible manner. The Contractor is to ascertain that all alterations are structurally practicable and safe and he will be held solely responsible for any damage to property or work adjoining the pulling down and must make good at his own expense. Programming Of The Works The programming of demolitions and alterations will have to be co-ordinated with the Principal Agent. Care Of Utility Services Special care is to be exercised not to interfere with any drains, electrical supply, data, or telephone cables and fittings to same. Notice is to be given to the Principal Agent when any disconnections, removal of wires etc. are necessary and the Contractor is to afford every facility to the workmen carrying out this work. Permission must be obtained from the Principal Agent before any services are cut off at any time. **Carried to Collection**			R		
	Section No. 3 External works Bill No. 1 Site works etc.					

Item No		Unit	Quantity	Rate	Amount	
	Temporary Shoring Etc. Prices are to include for providing, fixing and maintaining in position generally as required all temporary shoring, needling, strutting etc., necessary for the proper execution of the alterations in this Contract and for removing same. Supervision The demolition work is to be executed in a workmanlike, practical and safe manner under the continual supervision of a competent foremen. Nature of ground A soils investigation has been carried out on site by the engineer and the report is available upon request. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured 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 Subterranean water The tenderer must acquaint himself of the presence and depth of subterranean water and allow therefore in his prices. 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**			R		
	Section No. 3 External works Bill No. 1 Site works etc.					

Item No		Unit	Quantity	Rate	Amount	
	Filling and layer work materials References such as "G1", "G2", etc and "C1", "C2", etc in descriptions of filling and layer work materials refer to corresponding references in the document "Guidelines for Road Construction Materials. TRH 14:1985" compiled by the Committee of State Road Authorities and the properties set out therein for each kind shall be applicable to the respective materials described hereinafter Testing Descriptions & prices for earth filling, compaction, etc. are deemed to include for all necessary density and other testing required in accordance with the SABS 1200 series and Engineer's specifications					
	SITE CLEARANCE ETC					
	Site clearance					
1	Digging up and removing rubbish, debris, vegetation, hedges, shrubs and trees not exceeding 200mm girth, bush, etc	m2	310			
2	Stripping average 150mm thick layer of top soil and stockpile on site	m2	310			
	REMOVAL OF TREES ETC					
	Cutting down and removing, grubbing up roots and filling in holes					
3	Tree exceeding 200mm and not exceeding 500mm girth	No	3			
4	Tree exceeding 500mm and not exceeding 1000mm girth	No	3			
5	Tree exceeding 1000mm and not exceeding 1500mm girth	No	3			
6	Tree exceeding 1500mm and not exceeding 2000mm girth	No	5			
	Carried to Collection			R		
	Section No. 3 External works Bill No. 1 Site works etc.					

Item No		Unit	Quantity	Rate	Amount	
	BULK EXCAVATION, FILLING, ETC					
	G5 Earth filling supplied by the contractor compacted to 98% Mod AASHTO density					
7	Over site to form platforms	m3	121			
	G5 Earth filling to create stormwater berm with overall size 500mm wide top section, 3500mm wide bottom section and 1:3 slope supplied by the contractor compacted to 95% Mod AASHTO density as per engineers design and specifications					
8	Over site to form stormwater berm	m3	88			
	G6 Earth filling supplied by the contractor compacted to 95% Mod AASHTO density, to Engineers approval					
9	Over site to form platforms	m3	47			
	G7 Earth filling supplied by the contractor compacted to 95% Mod AASHTO density, to Engineers approval					
10	Over site to form platforms	m3	56			
	Compaction of surfaces					
11	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 98% Mod AASHTO density	m2	464			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	BUDGETARY ALLOWANCES **The following Budgetary Allowances are for work to be executed by the Main Contractor or specialist suppliers and priced at Bill rates or rates to be agreed and to be used as directed by the Principal Agent and to be deducted in whole or in part if not required**					
12	Provide the sum of R50 000.00 (Fifty Thousand Rands) for work related to unknown circumstances of the site condition		Item		50 000.00	
	Carried to Collection			R		

Section No. 3

External works

Bill No. 1

Site works etc.

COLLECTION

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Section No. 3
External works
Bill No. 1
Site works etc.

Item No		Unit	Quantity	Rate	Amount	
	SECTION 3 **BILL NO. 2** **ROADWORKS, PAVING ETC.** **SUPPLEMENTARY PREAMBLES** Nature of ground A soils investigation has been carried out on site by the engineer and the report is available upon request. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured 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 and disposing of same from site Subterranean water The tenderer must acquaint himself of the presence and depth of subterranean water and allow therefore in his prices. 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**			R		

Item No		Unit	Quantity	Rate	Amount	
	Filling and layer work materials References such as "G1", "G2", etc and "C1", "C2", etc in descriptions of filling and layer work materials refer to corresponding references in the document "Guidelines for Road Construction Materials. TRH 14 : 1985" compiled by the Committee of State Road Authorities and the properties set out therein for each kind shall be applicable to the respective materials described hereinafter Testing Descriptions & prices for earth filling, compaction, etc. are deemed to include for all necessary density and other testing required in accordance with the SABS 1200D and Engineer's specifications General Where kerb-stones, blocks, etc are laid in ground descriptions shall be deemed to include necessary excavation, filling in and ramming **EXCAVATION, FILLING, ETC. OTHER THAN BULK** **Excavation in compacted earth not exceeding 2m deep**					
1	Reduce levels	m3	856			
	Extra over all excavations for carting away					
2	Surplus material from excavations and/or stock piles on site to a dumping site to be located by the contractor	m3	856			
	Compaction of surfaces					
3	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 90% Mod AASHTO density	m2	1 878			
	Carried to Collection			R		
	Section No. 3 External works Bill No. 2 Roads, Paving, etc.					

Item No		Unit	Quantity	Rate	Amount	
	G5 Earth filling supplied by the contractor and compacted to 95% Mod AASHTO density					
4	Under floors, steps, ramps, pavings, etc	m3	282			
	G6 Earth filling supplied by the contractor and compacted to 93% Mod AASHTO density					
5	Under floors, steps, ramps, pavings, etc	m3	564			
	WEED KILLERS, INSECTICIDES, ETC					
	Weedkiller (active ingredients metalaclor 102,8 g/l, terbitilasien 248,6 g/l and atrasien 248,6 g/l) mixed in the proportion of 100 ml weedkiller to 100 l water and applied at a rate of 10 l/mý					
	Soil insecticide in accordance with SANS 5859					
	Approved brand of anti-termite soil poison and weedkiller to be applied by a Registered Company and guaranteed for ten years					
6	Under paving	m2	1 878			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	PAVING, KERBING AND CHANNELLING Rates for paving must include all cutting including circular cutting **SEGMENTED PAVING** **200 x 150 x 60mm Thick Bosun Ethnic cement paver or similar and approved interlocking paving brick, laid in herringbone pattern in accordance with SANS 1200 MJ and CMA Concrete Block Paving Manuals, with a minimum longitudinal fall of 1% on a transverse fall of at least 2% on 20mm compacted sand bed with fine jointing sand swept and vibrated into joints, all laid on subbase conforming to SANS 1200 D Degree of Accuracy (sub-base elsewhere measured)** **1. Paving to be inspected and re-sanded after three months.**					
7	Paving to walkways, roads, parking areas etc.	m2	1 805			
8	300mm Wide header course paving to make up paving borders	m	245			
	KERBS **Figure 7 Barrier concrete kerb, including in-situ concrete (class 25MPa/19mm stone) haunching behind kerbing at joints, with pointing on all exposed sides, including all necessary excavation, backfilling, carting away, continuous concrete haunching on curves, concrete haunching in blobs on straights, etc.** **Jointed & pointed in joint sealant with 10mm soft board and polyurethane sealant with approved primer**					
9	Laid flat	m	161			
10	Laid flat circular on plan, exceeding 4m radius	m	7			
	Carried to Collection			R		
	Section No. 3 External works Bill No. 2 Roads, Paving, etc.					

Item No		Unit	Quantity	Rate	Amount	
	Figure 10 Precast concrete kerb, including in-situ concrete (class 25MPa/19mm stone) haunching behind kerbing at joints, with pointing on all exposed sides, including all necessary excavation backfilling, carting away, continuous concrete haunching on curves, concrete haunching in blobs on straights, etc. **Jointed & pointed in joint sealant with 10mm soft board and polyurethane sealant with approved**					
11	Laid flat	m	533			
	Prepare and paint with SANS approved road marking paint in white / yellow / red sheen road marking paint on concrete paving / kerbs					
12	Line 100mm wide, broken or continuous	m	389			
13	White numeral or letter approximately 510mm x 1260mm (measured at extremes)	No	51			
14	White traffic arrow approximately 1000mm x 4000mm (measured at extremes)	No	12			
15	Paraplegic Sign approximately 1300mm x 1400mm (measured at extremes)	No	3			
	Carried to Collection			R		

Section No. 3
External works
Bill No. 2
Roads, Paving, etc.

Item No		Unit	Quantity	Rate	Amount	
	BUDGETARY ALLOWANCES					
	The following Budgetary Allowances are for work to be executed by the Main Contractor or specialist suppliers and priced at Bill rates or rates to be agreed and to be used as directed by the Principal Agent and to be deducted in whole or in part if not required					
16	Provide the sum of R15 000.00 (Fifteen Thousand Rands) for permanent road signage		Item		15 000.00	
17	Provide the sum of R50 000.00 (Fifty Thousand Rands) for additional general work sill to be designed and will/may be carried out by the contractor		Item		50 000.00	
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Section No. 3

External works

Bill No. 2

Roads, Paving, etc.

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Section No. 3
External works
Bill No. 2
Roads, Paving, etc.

Item No		Unit	Quantity	Rate	Amount	
	SECTION 3					
	BILL NO. 3					
	FENCING AND GATES					
	METAL FENCING					
	High density anti-climbing and anti-cut pressed mesh panel fencing					
	Fencing to be installed on a sloping site, Contractor to allow for additional vertical supporting members at smaller intervals along a sloping site					
1	High density anti-climbing and anti-cut pressed mesh panel fencing 2,4m high, formed of 3mm diameter horizontal and 3mm diameter vertical high tensile wires powder coated charcoal with aperture size 76mm x 25mm and reinforcing V-section ribs, bolted with vandal resistant bolts and clamping plates to 76mm x 76mm x 2mm mild steel posts 3,0m high including Locking Recess Mechanism at 3,382m centres with sealed end caps and 30 x 3mm x 250mm long angle section base anchors with posts bedded in 15MPa concrete bases size 400 x 400 x 600mm deep.	m	56			
2	Mesh Extension 600mm high fixed to underside of fencing including excavations and bedding	m	56			
3	Extra over fence for spike topping to match fence	m	56			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	GATES					
	Vehicle Sliding Gate to match fencing					
4	9900mm Wide x 2600mm high mild steel sliding gate with 120 x 60mm rectangular tubing frame.Frame to have three vertical 120 x 60mm rectangular tubing supports spaced equally inside frame. Frame infill panels to be 4mm diameter vertical and 3mm diameter horizontal mesh with opening of 76 x 12mm.The mesh panel shall be reinforced with 4 x 50mm deep V-information horizontal recessed bands. All to be galvanised then powder coated colour: dark charcoal to match window frame as per Architects detail. Including galvanised pad bolts and mortice locks two per gate. Gate to be supported by three steel roller brackets positioned underneath each vertical support member, each with 2 x 80mm dia steel rollers. All as per Architect's details and specifications	No	1			
5	Extra over above for gate rail to be 19mm diameter steel bar welded to a 100x50mm IPE steel sections anchored into a 300mm deep concrete bedding using a 40x40mm steel angle welded to the IPE section at 300mm c/c. All as per Architect's detail and specifications	No	1			
6	100mm High toughened steel shark-tooth spike rail to be fixed to the top of the gate using anti-vandal bolts.Spike finish to match fencing.	m	11			
7	Supply and install gate motor and remotes to Engineers approval	No	1			
	Pedestrian Gates to match fencing					
8	2.6m high x 1.5m wide mild steel pedestrian gate with 100 x 50mm rectangular tubing frame. Frame infill panel to be 4mm diameter vertical and 3mm diameter horizontal mesh with openings of 76 x 12mm. The mesh panel shall be reinforced with 4 x 50mm deep V-formation horizontal recessed bands. All to be galvanised then powder coated colour: dark charcoal to match sliding gate All as per Architect's details and specifications. Including galvanised pad bolts and mortice locks two per gate	No	1			
	Carried to Collection			R		
	Section No. 3 External works Bill No. 3 Fencing and Gates					

Item No		Unit	Quantity	Rate	Amount	
9	2.1m high x 3m wide mild steel double swing pedestrian gate with 100 x 50mm rectangular tubing frame. Frame infill panel to be 4mm diameter vertical and 3mm diameter horizontal mesh with openings of 76 x 12mm. The mesh panel shall be reinforced with 4 x 50mm deep V-formation horizontal recessed bands. All to be galvanised then powder coated colour: dark charcoal to match sliding gate All as per Architect's details and specifications. Including galvanised pad bolts and mortice locks two per gate	No	1			
10	100mm High toughened steel shark-tooth spike rail to be fixed to the top of the mesh panel using anti-vandal bolts.Spike finish to be hot dipped galvanised	m	5			
	Carried to Collection			R		
	Section No. 3 External works Bill No. 3 Fencing and Gates					

Section No. 3

External works

Bill No. 3

Fencing and Gates

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Item No		Unit	Quantity	Rate	Amount	
	SECTION 3 **BILL NO. 4** **WATER RETICULATION** **SUPPLEMENTARY PREAMBLES** uPVC pipes and fittings Exposed concrete surfaces Exposed surfaces of concrete storm water channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catch pits, inspection chambers, etc. shall be finished smooth with plaster. Laying, backfilling, bedding, etc. of pipes Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' 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 1200 L: Medium pressure pipelines LD: Sewers LE: Storm water drainage Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB: Earthworks (Pipe trenches) Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LB: Bedding (Pipes) Unless otherwise described bedding of rigid pipes shall be Class B bedding.					
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	Bedding must be selected granular material (specify SABS 1200 LB class B material) minimum 100mm think on top and bottom of pipe compacted to 90% MOD AASHTO. Selected fill blanket according to SABS 1200LB; selected fill material shall be material that has a PI not exceeding 6 and that is free from vegetation and from lumps or stone of diameter exceeding 30mm. In 150mm layers compacted to 90% MOD AASHTO. Fill blanket is above the bedding and 200mm thickness. In 150mm layers compacted to 90% MOD AASHTO. <u>General</u> Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, selected backfilling material, risk of collapse, working space, compaction to a minimum of 95% Mod AASHTO density in layers of 150mm and disposal of surplus material on site <u>As-built drawings</u> Where required, the contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere) **<u>WATER RETICULATION</u>** **<u>HDPE Pipes</u>**					
1	32mm HDPE class 16 water pipes (pipes complete with couplings, spigots, sockets, fittings, adapters, etc,) laid in trenches exceeding 1m not exceeding 1.5m deep including all sockets, fittings, adapters, excavation, bedding, backfilling and compaction and disposal of surplus material	m	41			
	Carried to Collection			R		
	Section No. 3 External works Bill No. 4 Water Reticulation					

Item No		Unit	Quantity	Rate	Amount	
	Extra over HDPE Class 12 pipes for fittings					
2	32mm 45 degree bend	No	8			
3	32mm 90 degree bend	No	4			
4	32mm Tees	No	7			
5	32mm Stop end	No	4			
	Sundries					
6	30 MPa/19mm Unreinforced concrete in thrust blocks in trenches at bends, tees, etc including extra excavation, formwork, etc	m3	3			
7	Pipeline markers complete including SAPMA affiliation, pipe OD & OD tolerance, wall thickness, nominal pressure, pipe class, etc. as per Engineers detail and specification	No	3			
	Water Meter					
8	Supply and install bulk water meters (PC amount R 15 000.00, excluding VAT, but including delivery) (Johannesburg Water Approved) installed in valve chamber, chamber elsewhere measured, complete with all necessary fittings, bends, tees, flanges, couplings, finishes, etc. as per Engineers detail and specifications	No	1			
	Connecting to Existing Pipelines					
9	Connecting new HDPE 40mm diameter to existing water pipes including all necessary fittings	No	1			
	Connecting to new water supply points					
10	Connecting new HDPE 25/32mm diameter to water pipes leading into building including all necessary fittings	No	2			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	Excavate and Build Valve Chamber					
11	Excavate in compacted earth for building Valve Chamber, size approximately 1235mm x 1235mm not exceeding 1000mm deep externally constructed with 230mm brick wall sides built in engineering bricks with 150mm thick 25Mpa in-situ concrete base and cover slab, fitted with 610mm x 305mm x 150mm cast iron hydrant box with lid with slotted hole for lifting key. Excavation to include all backfilling, compaction, working space, formwork, reinforcing, etc. all as per Engineers details and specifications	No	1			
12	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m3	3			
	Gate/Isolation Valves in Chambers					
	Resilient seal gate valves. Specifications to SABS 664 1. Resilient seal gate valve fitted to flange adaptors 2. Clockwise closing 3. Non rising spindle 4. Anti-clockwise closing 5. A removable coupling must be provided at one side of the valve at least 500mm from the shaft.					
13	50mm Gate/Isolation Valve in chamber (chamber elsewhere measured) to water main as per Engineers detail and specification	No	1			
14	50mm Non-Return Valve in chamber (chamber elsewhere measured) to water main, complete including all couplings, flanges, etc. as per Engineers detail and specification	No	1			
	Testing					
15	Provide all necessary testing apparatus, water, materials, etc. and allow for testing and chlorination of water reticulation system to the satisfaction of the Representative. All defective work shall be taken out and replaced at the Contractor's expense and the whole re-tested until found perfect		Item			
	Carried to Collection			R		
	Section No. 3 External works Bill No. 4 Water Reticulation					

Item No		Unit	Quantity	Rate	Amount	
	BUDGETARY ALLOWANCES					
	The following Budgetary Allowances are for work to be executed by the Main Contractor or specialist suppliers and priced at Bill rates or rates to be agreed and to be used as directed by the Principal Agent and to be deducted in whole or in part if not required					
16	Provide the sum of R25 000.00 (Twenty Five Thousand Rands) for municipal connection fees		Item		25 000.00	
17	Provide the sum of R35 000.00 (Thirty Five Thousand Rands) for additional general work still to be designed and will/may be carried out by the contractor		Item		35 000.00	
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	Section No. 3 External works Bill No. 4 Water Reticulation					

Section No. 3

External works

Bill No. 4

Water Reticulation

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Section No. 3
External works
Bill No. 4
Water Reticulation

Item No		Unit	Quantity	Rate	Amount	
	SECTION 3 **BILL NO. 5** **SEWER RETICULATION** **SUPPLEMENTARY PREAMBLES** uPVC pipes and fittings Soil, waste pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be PVC-U fittings all with similar push-in type joints Exposed concrete surfaces Exposed surfaces of concrete storm water channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catch pits, inspection chambers, etc. shall be finished smooth with plaster. Nature of ground A soils investigation has been carried out on site by the engineer and the report is available upon request. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured Subterranean water The tenderer must acquaint himself of the presence and depth of subterranean water and allow therefore in his prices. Laying, backfilling, bedding, etc. of pipes Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions. **Carried to Collection**			R		

Item No		Unit	Quantity	Rate	Amount	
	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 1200 L: Medium pressure pipelines LD: Sewers LE: Storm water drainage Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB: Earthworks (Pipe trenches) Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LB: Bedding (Pipes) Unless otherwise described bedding of rigid pipes shall be Class B bedding. Bedding must be selected granular material (specify SABS 1200 LB class B material) minimum 100mm think on top and bottom of pipe compacted to 90% MOD AASHTO. Selected fill blanket according to SABS 1200LB; selected fill material shall be material that has a PI not exceeding 6 and that is free from vegetation and from lumps or stone of diameter exceeding 30mm. In 150mm layers compacted to 90% MOD AASHTO. Fill blanket is above the bedding and 200mm thickness. In 150mm layers compacted to 90% MOD AASHTO. <u>General</u> Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, selected backfilling material, risk of collapse, working space, compaction to a minimum of 95% Mod AASHTO density in layers of 150mm and disposal of surplus material on site					
	Carried to Collection			R		
	Section No. 3 External works Bill No. 5 Sewer Reticulation					

Item No		Unit	Quantity	Rate	Amount	
	As-built drawings Where required, the contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere)					
	SOIL DRAINAGE					
	uPVC Class 34 pipes with socketed joints					
1	110mm uPVC Class 34 sewer drainage pipes (pipes complete with couplings, spigots, sockets, fittings, adapters, etc,) laid in trenches not exceeding 1000m deep including all sockets, fittings, adapters, dpc, excavation, bedding, stone filling, backfilling and compaction and disposal of surplus material	m	77			
2	Ditto,but exceeding 1000mm not exceeding 2000mm deep including all sockets, fittings, adapters, excavation, bedding, backfilling and compaction and disposal of surplus material	m	39			
3	Ditto, but exceeding 2000mm not exceeding 3000mm deep including all sockets, fittings, adapters, excavation, bedding, backfilling and compaction and disposal of surplus material	m	39			
	Extra over uPVC Class 34 pipes for fittings in trenches					
4	110mm Bend	No	31			
5	110mm Junction	No	6			
6	110 x 75m Reducing junction	No	5			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	Excavate and Build Manholes					
7	Excavate in compacted earth for and build pre-cast concrete manhole with 560mm diameter Class B125 Polyester Resin or Type 4 concrete manhole cover and frame. Manhole with 1000mm internal diameter shaft with 75mm reinforced concrete wall spacer rings internally, 1110 x 1110mm x minimum 150mm thick cast in-situ concrete slab 25MPa with reinforcement, HDPE steps 300c/c vertical and horizontal, 20mm Dolomitic steel floated benching to top of concrete base, 25MPa concrete haunching 100mm wide, including leaving or forming opening in precast concrete wall for 150mm diameter outlets including all excavations, backfilling, compaction, working space, de-watering, risk of collapse, formwork, reinforcing, etc. not exceeding 1500 mm deep.	No	1			
8	Ditto, but exceeding 1500mm and not exceeding 2000mm deep	No	1			
9	Ditto, but exceeding 2000mm and not exceeding 2500mm deep	No	1			
10	Ditto, but exceeding 2500mm and not exceeding 3000mm deep	No	1			
11	Extra over excavation in earth for pipe trenches, chambers, etc for excavation in soft rock	m3	1			
	Municipal Connection					
12	Excavate, carefully create opening in existing sewer manhole exceeding 3000mm not exceeding 4000mm deep, connect new sewer pipe with fittings and make good	No	1			
	Septic Tank Connection					
13	Carefully open up existing septic tank, connect new sewer pipe with fittings and make good	No	1			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	Sundries					
14	Unreinforced concrete encasement of pipes (25MPa)	m3	6			
15	Provide all necessary testing apparatus, water, materials, etc. and allow for testing of drainage system to the satisfaction of the Representative. All defective work shall be taken out and replaced at the Contractor's expense and the whole re-tested until found perfect		Item			
	BUDGETARY ALLOWANCES					
	The following Budgetary Allowances are for work to be executed by the Main Contractor or specialist suppliers and priced at Bill rates or rates to be agreed and to be used as directed by the Principal Agent and to be deducted in whole or in part if not required					
16	Provide the sum of R25 000.00 (Twenty Five Thousand Rand) for decommissioning of existing septic tank and sewer line		Item		25 000.00	
17	Provide the sum of R50 000.00 (Fifty Thousand Rands) for municipal connection fees		Item		50 000.00	
18	Provide the sum of R75 000.00 (Seventy Five Thousand Rands) for additional general work still to be designed and will/may be carried out by the contractor		Item		75 000.00	
	Carried to Collection			R		

Section No. 3

External works

Bill No. 5

Sewer Reticulation

COLLECTION

		Page No		Amount
	Total Brought Forward from Page No.	230		
		231		
		232		
		233		
		234		
	Carried Forward to Summary of Section No. 3		R	

Section No. 3
External works
Bill No. 5
Sewer Reticulation

Item No		Unit	Quantity	Rate	Amount	
	SECTION 3 **BILL NO. 6** **STORMWATER DRAINAGE, SUB-SOIL DRAINAGE, ETC.** **SUPPLEMENTARY PREAMBLES** Concrete pipes: interlocking joints Pipes shall be jointed with interlocking joints with rubber collars or socket and spigot joints with rubber rings. uPVC pipes and fittings Soil, waste pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be PVC-U fittings all with similar push-in type joints Exposed concrete surfaces Exposed surfaces of concrete storm water channels, cover slabs, inspection eye marker slabs, gulley tops, cleaning eye tops, catch pits, inspection chambers, etc. shall be finished smooth with plaster. Nature of ground A soils investigation has been carried out on site by the engineer and the report is available upon request. Descriptions of excavations shall be deemed to include all ground conditions classifiable as "earth" described in the above report and where conditions of a more difficult character are indicated these are separately measured Subterranean water The tenderer must acquaint himself of the presence and depth of subterranean water and allow therefore in his prices. **Carried to Collection**			R		

Item No		Unit	Quantity	Rate	Amount	
	Laying, backfilling, bedding, etc. of pipes Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' 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 1200 L: Medium pressure pipelines LD: Sewers LE: Storm water drainage Pipe trenches, etc shall be backfilled in accordance with Clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200 DB: Earthworks (Pipe trenches) Pipes shall be bedded in accordance with Clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200 LB: Bedding (Pipes) Unless otherwise described bedding of rigid pipes shall be Class B bedding. Selected granular bedding and cradle material in 150mm layers 100 mm below pipe and 200mm above the pipe, compacted to 90% MOD AASHTO. Selected backfill blanket is above the bedding in 150mm layers compacted to 90% MOD AASHTO. Approved backfill 150mm layers compacted to 90% MOD AASHTO. General Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, selected backfilling material, risk of collapse, working space, compaction to a minimum of 95% Mod AASHTO density in layers of 150mm and disposal of surplus material on site					
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	As-built drawings Where required, the contractor shall prepare an updated set of as-built drawings. At completion of the contract the contractor shall hand these drawings to the principal agent for reproducing onto the originals for handing over to the employer (provision for allowance of as-built drawings elsewhere)					
	STORM WATER DRAINAGE					
	Concrete Stormwater Channel					
1	25Mpa/19mm V shaped concrete drainage channel 100mm thick with overall canal size 600mm wide x 50mm deep finished smooth on all exposed surfaces to a uniform dense finish with closed cell expanded polyethylene filler and polyurethane sealant expansion joints at 2m centres, 150mm bottom layer to be ripped and re-compacted to 93% Modified AASHTO density, 150mm top layer of G5 imported material to 95% Modified AASHTO density including all necessary excavation, backfilling, carting away, cutting into paving, formwork, reinforcement, dowels, etc.. Channels including slopes, overall shape etc. as per engineers drawings	m	18			
2	25Mpa/19mm Trapezium shaped concrete drainage channel 125mm thick with overall canal size 600mm wide x 250mm deep finished smooth on all exposed surfaces with a steel float to a uniform dense finish with closed cell expanded polyethylene filler and polyurethane sealant expansion joints at 1.8m centres, 150mm bottom layer to be ripped and re-compacted to 93% Modified AASHTO density, 150mm top layer of G5 imported material to 93% Modified AASHTO density including all necessary excavation, backfilling, carting away, cutting into paving, formwork, reinforcement dowels, etc.. Channels including slopes, overall shape etc. as per engineers drawings	m	74			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
3	25Mpa/19mm U shaped concrete drainage channel 200mm thick with overall canal size 600mm wide x 300mm deep finished smooth on all exposed surfaces with a steel float to a uniform dense finish with closed cell expanded polyethylene filler and polyurethane sealant expansion joints at 1.8m centres, 150mm bottom layer to be ripped and re-compacted to 93% Modified AASHTO density, 150mm top layer of G5 imported material to 93% Modified AASHTO density including all necessary excavation, backfilling, carting away, cutting into paving, formwork, reinforcing, dowels, etc.	m	22			
	Stone pitched Stormwater Channel					
4	19mm Compacted stone V shaped drainage channel 200mm thick with 1:3 slope, 150mm bottom layer to be ripped and re-compacted to 93% Modified AASHTO density, 150mm top layer of G5 imported material to 95% Modified AASHTO density including all necessary excavation, backfilling, carting away, cutting into paving, mortar etc.. Channels including slopes, overall shape etc. as per engineers drawings	m	63			
5	Bidim A4 geofabric filter blanket of 2,1mm thickness under 2kPa with 150mm side and 300mm end laps including stitching over compacted surface underneath compacted stone (stone measured elsewhere)	m2	151			
	Sundries					
6	Extra over channel for 90 degree angle	No	24			
7	Extra over channel for forming of 20MPA concrete silt trap size 300 x 200mm high in channel including class B grate, all necessary formwork, reinforcing etc.	No	1			
8	Extra over channel for closed end	No	6			
9	Extra over channel for open end into catchpit (catchpit elsewhere measured)	No	6			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
10	Extra over channel for Rectagrid RS40 or similar and approved grating size 640 x 2560mm with closed ends and 60 x 4,5mm bearer bars, laid on loose on and including 25 x 5 x 5mm thick mild steel angle iron with 100mm anchors embedded in concrete	No	10			
	Rocla or similar and approved Concrete Pipes					
	Supply, handle, lay, joint, precast concrete pipe complete with spigots & socket with rubber ring seal, etc, and bed pipes on class A/B rigid pipe bedding compacted to 90% MOD. AASHTO, etc. all as per Engineers detail and specifications					
11	375mm Diameter class 75D pre-cast concrete pipe laid in trenches not exceeding 1m deep, including excavation, bedding, backfilling and compaction and disposal of surplus material	m	6			
12	Ditto exceeding 1m but not exceeding 2m deep	m	4			
13	Ditto exceeding 2m but not exceeding 3m deep	m	4			
14	450mm Diameter class 100D pre-cast concrete pipe laid in trenches not exceeding 1m deep, including excavation, bedding, backfilling and compaction and disposal of surplus material	m	35			
15	Ditto exceeding 1m but not exceeding 2m deep	m	22			
16	Ditto exceeding 2m but not exceeding 3m deep	m	31			
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	Excavate and Build Manholes, Kerb Inlets, etc.					
17	Excavate in compacted earth for building up manhole/kerb inlet, size approximately 1600 x 1750 not exceeding 1m deep internally with 220mm brick wall sides in engineering bricks built on and including 175mm thick, 25Mpa in-situ concrete base with ref. 888 mesh reinforcement, on 1:5 cement mortar, benching to bottom in 187.5mm thick 15Mpa concrete finished off smooth with a steel trowel and fitted with & including 25Mpa reinforced concrete roof slab and 600mm diameter heavy duty type 2A manhole cover and frame, frame cast into concrete surround with step irons to SABS 1247 fixed to brickwork at 300c/c including leaving or forming opening in brickwork for 2No. 375mm diameter outlets including all excavations, backfilling, formwork, de-watering, risk of collapse, reinforcing, etc. all as per engineers detail and specification	No	1			
18	Ditto exceeding 2m but not exceeding 3m deep	No	1			
	Excavate and Build Catchpits and grid inlets					
19	Excavate in compacted earth for building up grid inlet, size approximately 1800 x 1800mm not exceeding 1m deep internally with 230mm brick wall sides in engineering bricks built on and including 150mm thick, 25Mpa in-situ concrete base with ref. 245 mesh reinforcement, on 1:5 cement mortar, benching to bottom in 15Mpa concrete finished off smooth with a steel trowel and fitted with & including 25Mpa reinforced (mesh ref. 395) concrete dished cover slab approximately 1800 x 1600mm finished with steel trowel, including 520 x 790mm heavy duty grating and frame, frame cast into 1:10 sloping reinforced concrete surround with step irons to SABS 1247 fixed to brickwork at 300c/c including leaving or forming opening in brickwork for 2No. 375/450mm diameter outlets including all excavations, backfilling, de-watering, risk of collapse, formwork, reinforcing, etc. all as per engineers detail and specification	No	1			
20	Ditto exceeding 1m but not exceeding 2m deep	No	1			
	BUDGETARY ALLOWANCES					
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	The following Budgetary Allowances are for work to be executed by the Main Contractor or specialist suppliers and priced at Bill rates or rates to be agreed and to be used as directed by the Principal Agent and to be deducted in whole or in part if not required					
21	Provide the sum of R50 000.00 (Fifty Thousand Rands) for municipal connection fees		Item		50 000.00	
22	Provide the sum of R50 000.00 (Fifty Thousand Rands) for additional general work still to be designed and will/may be carried out by the contractor		Item		50 000.00	
	Carried to Collection			R		
	Section No. 3 External works Bill No. 6 Stormwater Reticulation					

Section No. 3

External works

Bill No. 6

Stormwater Reticulation

COLLECTION

		Page No		Amount
Total Brought Forward from Page No.		236		
		237		
		238		
		239		
		240		
		241		
		242		
Carried Forward to Summary of Section No. 3			R	

Item No		Unit	Quantity	Rate	Amount	
	SECTION 3					
	BILL NO. 7					
	STREET FURNITURE					
	STREET FURNITURE					
	Supply and install furniture					
	Recycled Plastic Benches					
1	3 Seater 1500mm x 700mm width (RP95) Gloria Bench	No	10			
	Monkey Proof Recycled Plastic bins					
2	540 x 540 x 850mm self standing Monkey proof Eco bin with rotating lid	No	8			
	Timber Bollards					
3	Tanalith (CCA) treated H4 timber bollard timber bollard 170mm in diameter, 1000mm high fixed into 350 x 350 x 350mm base including all excavations, concrete, carting away, reinforcing connections holding down bolts, screws, plates etc. all in accordance with manufacturers, architect's and engineers Specifications	No	12			
	Carried Forward to Summary of Section No. 3			R		

Section No. 3

External works

SECTION SUMMARY - External works

Bill No		Page No		Amount
1	Site works etc.	212		
2	Roads, Paving, etc.	219		
3	Fencing and Gates	223		
4	Water Reticulation	229		
5	Sewer Reticulation	235		
6	Stormwater Reticulation	243		
7	Street Furniture	244		
	Carried to Final Summary		R	

Section No. 3
External works

Item No		Unit	Quantity	Rate	Amount	
	SECTION 4 **BILL NO. 1** **PROVISIONAL SUMS** The following Provisional Sums are all NET amounts and are for work to be executed complete by Nominated/Selected Sub-Contractors or by the Contractor himself. Provisional Sums may be omitted or reduced at the Employers's sole discretion and the contractor shall not be entitled to claim for any loss by way of reductions or omissions of any discount, or percentage relating to Provisional Sums or P.C. amounts or any loss of profit related thereto. The Employer shall also have the right to send onto the works and install any furniture, finishings or fitments, machinery, equipment, etc., and to supply and execute any other special works not contained in this contract during this contract, and the Contractor shall not be entitled to any percentage or discount thereon. The Profit and Attendance on the following items will only be paid to the Contractor should a Nominated/Selected Sub-contractor conduct the work. If the allowance is directed for work to be done by the Contractor the Attendance amounts will not be paid to the Contractor. Refer to Clause C20 for the Adjustment of Attendance. N.B. Any builder's work that the Contractor may be called upon to do so in connection with any such special works or services will be measured and valued at schedule rates as executed. **Carried to Collection**			R		

Item No		Unit	Quantity	Rate	Amount	
	SPECIALIST SUB-CONTRACTORS TO THE MAIN CONTRACTOR					
	COMMUNITY LIAISON OFFICER					
1	Provide the sum of R68 000.00 (Sixty Eight Thousand Rands) for the appointment of a Community Liaison Officer		Item		68 000.00	
2	Allow for profit on above			%		
3	Allow for attendance on above			%		
	TRAINING OF LOCAL LABOUR					
4	Provide the sum of R130 000.00 (One Hundred and Thirty Thousand Rands) for the Training of Local Labour		Item		130 000.00	
5	Allow for profit on above			%		
6	Allow for attendance on above			%		
	SMME MENTOR					
7	Provide the sum of R200 000.00 (Two Hundred Thousand Rands) for SMME mentor		Item		200 000.00	
8	Allow for profit on above			%		
9	Allow for attendance on above			%		
	SECURITY GATES					
10	Provide the sum of R50 000.00 (Fifty Thousand Rand) for security gates including installation executed complete		Item		50 000.00	
11	Allow for profit on above			%		
12	Allow for attendance on above			%		
	Carried to Collection			R		

Item No		Unit	Quantity	Rate	Amount	
	FANS TO LAPA					
13	Provide the sum of R25 000.00 (Twenty Five Thousand Rand) for the supply and installation of fans to Lapa executed complete		Item		25 000.00	
14	Allow for profit on above			%		
15	Allow for attendance on above			%		
	ENTRANCE SIGNAGE					
16	Provide the sum of R25 000.00 (Twenty Five Thousand Rand) for the supply and installation of entrance signage executed complete		Item		25 000.00	
17	Allow for profit on above			%		
18	Allow for attendance on above			%		
	ROOF STRUCTURE					
19	Provide the sum of R200 000.00 (Two Hundred Thousand Rand) for the design, fabrication and installation of roof structures executed complete		Item		200 000.00	
20	Allow for profit on above			%		
21	Allow for attendance on above			%		
	Carried to Collection			R		

Section No. 4

Provisional Sums

Bill No. 1

Provisional Sums

COLLECTION

		Page No		Amount
	Total Brought Forward from Page No.	246		
		247		
		248		
	Carried to Final Summary		R	

ELECTRICAL BOQ

SANBI: MOKOPANE

PRELIMINARY AND GENERAL

ITEM NO		ITEM DESCRIPTION	UNIT	QTY	MATERIAL		LABOUR		TOTAL
					RATE	TOTAL	RATE	TOTAL	
1.1		Compliance with the Conditions of Contract, including cost of insurance, sureties, guarantee, attending all inspections and site meetings and services for which no specific items are listed in the *Schedule of Quantities and Prices.*	Sum	100%					
1.2		**SITE ESTABLISHMENT**							
		Provision of site offices stores, workshops, ablutions and latrines, water, electricity and telephone connections, removal of all facilities upon completion, etc.	Sum	100%					
1.3		**GUARANTEE**							
		Guarantee period of 12 months against defects in material, equipment and workman-ship, but excluding abuse, wear and tear and normal maintenance.	Sum	100%					
1.4		**COMMISSIONING AND TESTING**							
		Supply all test equipment and labour for testing, commissioning and adjustments of the final installation as well as being in attendance for any inspections and tests that the Engineer may call for.	Sum	100%					
1.5		**PROVISIONAL AMOUNTS**							
	a.	Test, identify and label all existing distribution kiosks/boards including circuit breakers and cable sizes. Supply circuit breaker legened card in each distribution kiosk/board.	Sum	100%					R 30,000.00
	b.	Refurbish existing distribution kiosks/boards including cleaning/dusting out internally, re-paint if required and replace all circuit breaker cover plates if missing. The exercise is to make the kiosks/boards save.	Sum	100%					R 50,000.00
1.6		**ADDITIONAL ITEMS**							
		Any additional item(s) that the Tenderer may wish to detail and price to complete the installation.							
	a.								
	b.								
	c.								
	e.								
SUB-TOTAL FOR PRELIMANARY & GENERAL: To be carried over to SUMMARY PAGE									

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

SANBI: THOHOYANDOU - EXTERNAL ELECTRICAL RETICULATION

SCHEDULE 1 – LOW VOLTAGE DISTRIBUTION

Item No		Item Description	Unit	Qty	MATERIAL		LABOUR		TOTAL PRICE
					Rate	Total	Rate	Total	
1.1		**LOW VOLTAGE CABLES**							
1.1.1		Supply and install PVC insulated PVC bedded SWA PVC sheathed 600/1000 V cables manufactured to SANS 1507-3 including BCEW strapped to cable.							
	a	16mm² Cu x 3 core cable (From new main-distribution kiosk to new Lapa distribution board)	m	100					
1.1.2		Supply and install termination kits PVC insulated PVC bedded SWA PVC sheathed 600/1000 V cables, including glands, shrouds, lugs and bi-metal lugs for Al cables.							
	a	16mm² Cu x 3 core cable (No.2 gland)	No	2					
1.2		**CABLE ROUTE MARKER TAPE**							
1.2.1		Supply and install cable route marker tape	m	100					
1.3		**EXCAVATIONS & ROAD CROSSINGS**							
1.3.1		Excavate and back fill cable trench, including bedding material sifted on site from excavated material.(0,5m wide x 0,6m deep). Reinstate paving and ground to original condition.	m³	30					
1.3.2		Supply and install black ∅110mm nextube sleeve pipes for road crossings including all bends and couplings required for the installation.	m	20					
1.4		**DISTRIBUTION KIOSKS**							
1.4.1		Supply and install distribution kiosk as specified on drawing 34398-02-392-05-01. Including all labels, padlocks, disconnecting of existing cables, removing existing distribution kiosk and place in designated place on site. Install new kiosk and reconnect all existing cables.	No	1					
1.4.2		Supply and install earth mat for distribution kiosks. 16mm² BCEW + 1.8m earthing electrodes)	No	3					
1.4.3		Test, identify and label cables installed in new Entrance Main Distribution Kiosk and issue COC.	No	1					
SUB-TOTAL FOR SCHEDULE 1: To be carried over to LOW VOLTAGE DISTRIBUTION SUMMARY PAGE									

SCHEDULE 2 – EXTERNAL ELECTRICAL RETICULATION SUMMATION OF SCHEDULES

Item No		Description	Page	Total Summary
1		SCHEDULE 1 – LOW VOLTAGE DISTRIBUTION	2	
SUB-TOTAL (excluding V.A.T): To be carried over to SUMMARY PAGE				

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

SANBI: MOKOPANI - GATE HOUSE

SCHEDULE 1 – SMALL POWER & LUMINAIRE INSTALLATION

Item No		Item Description	Unit	Qty	MATERIAL		LABOUR		TOTAL PRICE
					Rate	Total	Rate	Total	
1.1		**EXTERNAL LUMINAIRES**							
1.1.1		Supply and install the following luminaires suspended 4.6m above the entrance and exist road of the gate house with 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Avg supply length of 20m.							
	a	Beka EcoBay 146W with clear glass 4011 optic and aluminium finish - 4000K IP66 rated or similar. Including all accessories to be suspended.	No	4					
	b	Supply and install Beka Focus 26W 4000K LED IP66 signage luminaire including earthspike for mounting or similar. Complete with all accessories to complete installation excluding the cable. Cable measured elsewhere.	No	2					
1.1.2		Supply and install vandal proof steel cage around Beka Focus luminaires, with lockable gate. Including padlock and accessories to complete the installation.	No	1					
1.2		**LOW VOLTAGE CABLES**							
1.2.1		Supply and install PVC insulated PVC bedded SWA PVC sheathed 600/1000 V cables manufactured to SANS 1507-3 including BCEW strapped to cable.							
	a	2.5mm² Cu x 3 core cable (From existing gate house distribution board to Beka Focus signage luminaires). Complete with pratley boxes.	m	40					
1.2.2		Supply and install termination kits PVC insulated PVC bedded SWA PVC sheathed 600/1000 V cables, including glands, shrouds, lugs and bi-metal lugs for Al cables.							
	a	2.5mm² Cu x 3 core cable (No.0 gland)	No	2					
1.3		**LUMINAIRES SWITCHING**							
1.3.1		Supply and install 16amp photocell (day/night switch) on outside wall with 2 x 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Supply length of 20m.	No	3					
1.4		**CIRCUIT BREAKER**							
1.4.1		Supply and install 20amp 3kA circuit breaker inside existing Gate House DB with 2 x 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Supply length of 20m to photocells (day/night switch)	No	1					
1.5		**TESTING**							
1.5.1		Testing and commisioning of installation and issue of COC	No	1					
SUB-TOTAL FOR SCHEDULE 1: To be carried over to GATE HOUSE SUMMARY PAGE									

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

SCHEDULE 2 – CABLE CONDUIT

Item No		Item Description	Unit	Qty	MATERIAL		LABOUR		TOTAL PRICE
					Rate	Total	Rate	Total	
2.1		**ELECTRICAL CONDUIT**							
2.1.1		Supply and install Ø25mm Galvanised Steel conduit, including all couplings, loop/inspection boxes, plugs, fixing saddles (hospital saddles) and screws, cutting bending, fixing, cleaning for wiring purposes cast in concrete, in brickwork or on surface. To Include all chasing into brickwork, making good of the walls and draw wire.	m	120					
2.1.2		Supply and install Ø25mm PVC conduit, including all couplings, loop/inspection boxes, plugs, fixing saddles and screws, cutting bending, fixing, cleaning for wiring purposes cast in concrete, in brickwork or on surface. To Include all chasing into brickwork and making good of the walls.	m	40					
SUB-TOTAL FOR SCHEDULE 2: To be carried over to GATE HOUSE SUMMARY PAGE									

SCHEDULE 3 – GATE HOUSE SUMMATION OF SCHEDULES

Item No		Description	Page	Total Summary
2		SCHEDULE 1 – SMALL POWER & LUMINAIRE INSTALLATION	3	
3		SCHEDULE 2 – CABLE CONDUIT	4	
SUB - TOTAL (excluding V.A.T): To be carried over to SUMMARY PAGE				

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

SANBI: MOKOPANE - EXISTING ABLUTIONS

SCHEDULE 1 – LOW VOLTAGE DISTRIBUTION

Item No		Item Description	Unit	Qty	MATERIAL		LABOUR		TOTAL PRICE
					Rate	Total	Rate	Total	
1.1		**EXISITNG ELECTRICAL INSTALLATION**							
1.1.1		Disconnect and remove exisitng lighting installation and store in designated space provided on site. Inspect and test socket outlets and geyser isolator installation. (Existing installation consist of 6 luminaires and 2 handdryers)	Sum	100%					
1.2		**DISTRIBUTION BOARD**							
	a	Provisional sum for distribution board refurbishment.	No	1					R 8,000.00
SUB-TOTAL FOR SCHEDULE 1: To be carried over to EXISTING ABLUTIONS SUMMARY PAGE									

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

SCHEDULE 2 – SMALL POWER & LUMINAIRE INSTALLATION

Item No		Item Description	Unit	Qty	MATERIAL		LABOUR		TOTAL PRICE
					Rate	Total	Rate	Total	
2.1		**GEYSER SUPPLY**							
2.1.1		Supply and install *Crabtree Classic Range* or similar 30A double pole isolator switch in surface mounted 4 x 4 box next to geyser including yoke and cover plate with 2 x 4mm² PVC insulated conductors and 4mm² PVC insulated earth wire. Supply length of 6m to geyser. (Colour of switch: White)	No	1					
2.2		**HAND DRYER SUPPLY**							
2.2.1		Supply and install *Crabtree Classic Range* 30A double pole isolator switch in flush mounted 4 x 4 box, 300mm from ceiling above the hand dryer, including yoke and cover plate with 2 x 4mm² PVC insulated conductors and 4mm² PVC insulated earth wire. Supply length of 15m to each hand dryer. (Colour of switch: White)	No	3					
2.3		**EXTERNAL LUMINAIRES**							
2.3.1		Supply and install the following luminaires suspended 4.6m above the entrance and exist road of the gate house with 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Avg supply length of 10m.							
	a	Lascon C10 / 24W LED tridonic / 6080LM / photo engrave lense - 4000K IP65 rated or similar. Including all accessories to be suspended	No	7					
	b	Lascon C10 / 24W LED tridonic / 6080LM / photo engrave lense - 4000K IP65 rated or similar. Including all accessories to be fitted under roof steel beam.	No	3					
2.4		**LOW VOLTAGE CABLES**							
2.4.1		Supply and install PVC insulated PVC bedded SWA PVC sheathed 600/1000 V cables manufactured to SANS 1507-3 including BCEW strapped to cable.							
	a	2.5mm² Cu x 3 core cable (From existing gate house distribution board to Beka Focus signage luminaires). Complete with pratley boxes.	m	45					
2.4.2		Supply and install termination kits PVC insulated PVC bedded SWA PVC sheathed 600/1000 V cables, including glands, shrouds, lugs and bi-metal lugs for Al cables.							
	a	2.5mm² Cu x 3 core cable (No.0 gland)	No	2					
2.5		**CABLE ROUTE MARKER TAPE**							
2.5.1		Supply and install cable route marker tape	m	40					

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

2.6		**EXCAVATIONS & ROAD CROSSINGS**							
2.6.1		Excavate and back fill cable trench, including bedding material sifted on site from excavated material.(0,5m wide x 0,6m deep). Reinstate paving and ground to original condition.	m³	15					
2.7		**LUMINAIRES SWITCHING**							
2.7.1		Supply and install *Crabtree Classic Range* one lever one way 20A light switch in surface mounted 2 x 4 box, 1200mm from AFFL, including yoke and cover plate with 2 x 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Supply length of 10m to each light switch.	No	3					
2.7.2		Supply and install 16amp photocell (day/night switch) on outside wall with 2 x 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Supply length of 20m.	No	2					
2.5		**TESTING**							
2.5.1		Testing and commisioning of installation and issue of COC	No	1					
SUB-TOTAL FOR SCHEDULE 2: To be carried over to EXISTING ABLUTIONS SUMMARY PAGE									

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

SCHEDULE 3 – CABLE CONDUIT

Item No		Item Description	Unit	Qty	MATERIAL		LABOUR		TOTAL PRICE
					Rate	Total	Rate	Total	
3.1		**ELECTRICAL CONDUIT**							
3.1.1		Supply and install Ø25mm Galvanised Steel conduit, including all couplings, loop/inspection boxes, plugs, fixing saddles (hospital saddles) and screws, cutting bending, fixing, cleaning for wiring purposes cast in concrete, in brickwork or on surface. To Include all chasing into brickwork, making good of the walls and draw wire.	m	80					
3.1.2		Supply and install Ø25mm PVC conduit, including all couplings, loop/inspection boxes, plugs, fixing saddles and screws, cutting bending, fixing, cleaning for wiring purposes cast in concrete, in brickwork or on surface. To Include all chasing into brickwork and making good of the Walls.	m	25					
SUB-TOTAL FOR SCHEDULE 3: To be carried over to EXISTING ABLUTIONS SUMMARY PAGE									

SCHEDULE 4 – MOKOPANE EXISTING ABLUTIONS SUMMATION OF SCHEDULES

[illegible]		Description	Page	Total Summary
1		SCHEDULE 1 – LOW VOLTAGE DISTRIBUTION	5	
2		SCHEDULE 2 – SMALL POWER & LUMINAIRE INSTALLATION	6-7	
3		SCHEDULE 3 – CABLE CONDUIT	8	
SUB - TOTAL (excluding V.A.T): To be carried over to SUMMARY PAGE				

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

SANBI: MOKOPANE - NEW LAPA

SCHEDULE 1 – LOW VOLTAGE DISTRIBUTION

Item No		Item Description	Unit	Qty	MATERIAL		LABOUR		TOTAL PRICE
					Rate	Total	Rate	Total	
1.1		**SLEEVES**							
1.1.1		Supply and install Ø50mm nextube sleeve pipe with slow bend	m	10					
1.2		**DISTRIBUTION BOARD**							
1.2.1	a	Supply and install flush mounted distribution board as specified on drawing 34398-02-392-01-01. Including all lables and padlock.	No	1					
SUB-TOTAL FOR SCHEDULE 2: To be carried over to NEW LAPA SUMMARY PAGE									

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

SCHEDULE 2 – SMALL POWER & LUMINAIRE INSTALLATION

Item No		Item Description	Unit	Qty	MATERIAL		LABOUR		TOTAL PRICE
					Rate	Total	Rate	Total	
2.1		**GEYSER SUPPLY**							
2.1.1		Supply and install *Crabtree Classic Range* 30A double pole isolator switch in surface mounted 4 x 4 box next to geyser including yoke and cover plate with 2 x 4mm² PVC insulated conductors and 4mm² PVC insulated earth wire. Supply length of 10m to geyser. (Colour of switch: White)	No	1					
2.1		**SMALL POWER OUTLETS**							
2.1.1		Supply and install *Crabtree Classic Range* 16A single socket outlet switched in surface mounted 4 x 4 wall box yoke and cover plate with 2 x 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Supply length of 20m to socket. (Colour of switch: White)	No	5					
2.1.1		Supply and install *Crabtree Classic Range* 16A double socket outlet switched in flush mounted 4 x 4 wall box yoke and cover plate with 2 x 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Supply length of 20m to socket. (Colour of switch: White)	No	7					
2.1.2		Supply and install two channel powerskirting similar to *Cabstrut Platinum Double Compartment PVC Powerskirting (EP202),* including all elbows, tees, end caps and fixtures.	m	25					
2.1.3		Supply and install the following power skirting outlets, including all coverplates and fixtures.							
	a	16A normal switched socket outlet with 2 x 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Supply length of 10m to socket. (Colour of switch: White)	No	8					
	b	16A dedicated switched socket outlet with 2 x 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Supply length of 10m to socket. (Colour of switch: Red)	No	8					
	c	CAT 6 datat outlet. (Colour of switch: White)	No	8					
2.3		**INTERNAL LUMINAIRES**							
2.3.1		Supply and install the following luminaires including a 6A unswitched socket outlet in round PVC box, yoke and cover plate with 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Avg supply length of 15m							
	a	Beka LED Panel 600 x 1200 48W - recessed or similar	No	6					
2.3.2		Supply and install the following luminaires onto timber pole structure with 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Avg supply length of 15m							
	a	Lascon C10 / 24W LED tridonic / 6080LM / photo engrave lense - 4000K IP65 rated or similar.	No	8					

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

2.4		**EXTERNAL LUMINAIRES**							
2.4.1		Supply and install the following wall luminaires including a flush mounted 65mm round PVC box with cover plate, 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Avg supply length of 15m							
	a	BEKA SERIES 30 NW 17W or similar	No	8					
2.5		**LUMINAIRES SWITCHING**							
2.5.1		Supply and install *Crabtree Classic Range* three lever one way 20A light switch in flush mounted 2 x 4 box, 1200mm from AFFL, including yoke and cover plate with 2 x 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Supply length of 10m to each light switch.	No	2					
2.5.1		Supply and install *Crabtree Classic Range* one lever two way 20A light switch in flush mounted 2 x 4 box, 1200mm from AFFL, including yoke and cover plate with 2 x 2.5mm² PVC insulated conductors and 2.5mm² PVC insulated earth wire. Supply length of 10m to each light switch.	No	2					
2.6		**TESTING**							
2.6.1		Testing and commisioning of installation and issue of COC	No	1					
SUB-TOTAL FOR SCHEDULE 3: To be carried over to NEW LAPA SUMMARY PAGE									

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

SCHEDULE 3 – CABLE CONDUIT

Item No		Item Description	Unit	Qty	MATERIAL		LABOUR		TOTAL PRICE
					Rate	Total	Rate	Total	
3.1		**ELECTRICAL CABLE TRAY**							
3.1.1		Supply and install Ø25mm Galvanised Steel conduit, including all couplings, loop/inspection boxes, plugs, fixing saddles (hospital saddles) and screws, cutting bending, fixing, cleaning for wiring purposes cast in concrete, in brickwork or on surface. To Include all chasing into brickwork, making good of the walls and draw wire.	m	100					
3.1.2		Supply and install Ø25mm PVC conduit, including all couplings, loop/inspection boxes, plugs, fixing saddles and screws, cutting bending, fixing, cleaning for wiring purposes cast in concrete, in brickwork or on surface. To Include all chasing into brickwork, making good of the walls and draw wire.	m	50					
SUB-TOTAL FOR SCHEDULE 3: To be carried over to NEW LAPA SUMMARY PAGE									

SCHEDULE 4 – NEW LAPA SUMMATION OF SCHEDULES

[illegible]		Description	Page	Total Summary
1		SCHEDULE 1 – LOW VOLTAGE DISTRIBUTION	9	
2		SCHEDULE 2 – SMALL POWER & LUMINAIRE INSTALLATION	10-11	
3		SCHEDULE 3 – CABLE CONDUIT	12	
SUB-TOTAL (excluding V.A.T): To be carried over to SUMMARY PAGE				

SCHEDULE OF QUANTITIES

SANBI: MOKOPANE

SUMMATION OF SCHEDULES

e	d	Description	Page	Total Summary
1		PRELIMINARY AND GENERAL	1	
2		SANBI: MOKOPANI - EXTERNAL ELECTRICAL RETICULATION	2	
3		SANBI: MOKOPANI - GATE HOUSE	3-4	
4		SANBI: MOKOPANE - EXISTING ABLUTIONS	5-8	
5		SANBI: MOKOPANE - NEW LAPA	9-12	
SUB-TOTAL (excluding V.A.T)				
V.A.T (15%)				
TOTAL (including V.A.T)				

FINAL SUMMARY

Section No		Page No		Amount	
1	Preliminaries	143	R		
2	Building Works	205	R		
3	External Works	245	R		
4	Provisional Sums	249	R		
5	Electrical Works	262	R		
6	Contingency		R	400 000	00
	SUB- TOTAL EXCLUDING VAT		R		
	ADD: VALUE ADDED TAX @15%		R		
	Total including VAT carried to form of offer and acceptance		**R**		

PART C: THE CONTRACT
Part C3: Scope of Work

C3.1 Description of the Works

C3.1.1 Employer's Objectives

The Employer's objective is to erect various buildings/structures at the **MOKOPANE BIODIVERSITY CONSERVATION CENTRE, MOKOPANE**

C3.1.2 Extent of the Works

The scope of works includes but is not limited to the following:

The following is a brief outline of the scope of works:

- Refurbishment to existing ablution, internally approximately 55 m^2
- Refurbishment to existing Gate house, internally approximately 67 m^2
- Construction of a new lapa, internally approximately 147 m^2
- External construction works:
    - External works in areas where defined
    - Maintenance and inspection of existing services
- Specialist installations:
    - Electrical installation

The Contractor will be required to construct the works in conformity with design criteria specified in the Project Specification and/or shown on the drawings. The scope of work supplied must not be seen as exclusive and may be changed at any stage by the Employer.

C3.1.3 Location of the Works

The project is located at the Mokopane Biodiversity Conservation Centre, Limpopo

C3.2 Construction

C3.2.1 Construction Standards

The Model Preambles for Trades (2017 Edition) recommended and published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in the Bills of Quantities, with amendments as follows: References to "Architect" in the Model Preambles are to be read as "Principal Agent" shall apply to this contact.

This publication is available from The Association of South African Quantity Surveyors, P.O. Box 3527, Halfway House, 1685 - telephone (011) 315-4140, before a Tender is submitted.

The SANS 1200 Standardised Specification for Civil Engineering Construction prepared by Standards South Africa and specific amendments and additions to the SANS 1200 Standardized Specifications shall apply to this contract (for all Structural and Civil Work).

The SANS 1200 Standardised Specification publications are available from Standard South Africa, Private Bag X191, Pretoria, 0001.

C3.2.2 Plant and Materials

C3.2.2.1 Plant and Materials Supplied by the Employer

None

C3.2.2.2 Materials, Samples and Shop Drawings

All materials are to be tested by a commercial laboratory as directed by the Engineer.

C3.2.3 Construction Equipment

C3.2.3.1 Requirements for Equipment

The Contractor is required to use plant and equipment that is sufficient for the contract.

C3.2.3.2 Equipment Provided by the Employer

None

C3.2.4 Existing Services

C3.2.4.1 Known Services

As-built information is unavailable at the time of Tender, the onus still lies with the main Contractor to ensure that no services are damaged during the construction phase.

C3.2.4.2 Treatment of Existing Services

Contractor to use caution.

C3.2.4.3 Use of Detection Equipment for the Location of Underground Services

At Principal Contractor's discretion.

C3.2.4.4 Damage to Services

It is the responsibility of the Principal Contractor to ensure that no services are damaged during the construction
process. In case the known services are damaged, the Principal Contractor shall be responsible for the repair of the services to the original state before it was damaged, as well as all cost associated with the damaged service.

C3.2.5 Site Establishment

C3.2.5.1 Services and Facilities Provided by the Employer

None.

C3.2.5.2 Facilities Provided by the Contractor

The onus lies with the Principal Contractor to find a suitable camp site, approved by the Principal Agent.

C3.2.5.3 Storage

No requirements are specified.

C3.2.5.4 Other Facilities and Services

No requirements are specified.

C3.2.5.5 Vehicles and Equipment

No requirements are specified.

C3.2.5.6 Advertising Rights

It is the Principal Contractor's responsibility that no suppliers advertise on site. Any advertisement(s) from Suppliers shall be removed at the cost of the Principal Contractor.

C3.2.5.7 Notice Boards

The Principal Contractor is allowed to place a Notice Board on site. The design should be in accordance with the EPWP type of Notice Board (refer EPWP Specification Document appended).

C3.2.5.8 Office Accommodation for Meeting Room

The Principal Contractor must provide a workstation and storage area per SMME (Office base may be subdivided per SMME)

C3.2.6 Site Usage

The Contractors are not allowed to work outside the allowed working hours, as agreed with the Principal Agent.

C3.2.7 Features requiring special attention

C3.2.7.1 Site Maintenance

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner and shall keep the Site free from debris and obstructions.

C3.2.7.2 Employment of un-skilled and semi-skilled workers in labour-intensive works

Requirements for the sourcing and engagement of labour

(1) Unskilled and semi-skilled labour required for the execution of all labour-intensive works shall be engaged strictly in accordance with prevailing legislation and SANS 1914-4, Participation of Targeted Enterprises and Targeted Labour (local resources)

(2) The rate of pay set for the EPWP shall not be less than the prevailing hourly wage rates as published by the Department of Labour (for Task Grade 1 – General Worker).

"In accordance with the Code of Good Practice for Employment and Conditions of Work for Expanded Public Works Programmes (clause 10.4), the public body must set a rate of pay (task-rate) for workers to be employed on the labour-intensive projects.
Clause 10.4 requires that the following should be considered when setting rates of pay for workers:
10.4.1 The rate set should take into account wages paid for comparable unskilled work in the local area per sector, if necessary.
10.4.2 The rate should be an appropriate wage to offer an incentive for work, to reward effort provided and to ensure a reasonable quality of work. It should not be more than the average local rate to ensure people are not recruited away from other employment and jobs with longer-term prospects.
10.4.3 Men, women, youth, disabled persons and the aged must receive the same pay for work of equal value."

(3) Tasks established by the Contractor must be such that:

(a) the average worker completes 5 tasks per week in 40 hours or less; and
(b) the weakest worker completes 5 tasks per week in 55 hours or less.

(4) The Contractor must revise the time taken to complete a task whenever it is established that the time taken to complete a weekly task is not within the requirements of 1.1.3.

(5) The Contractor shall, through all available community structures, inform the local community of the labour-intensive works and the employment opportunities presented thereby. Preference must be given to people with previous practical experience in construction and/or who come from households:

(a) where the head of the household has less than a primary school education;
(b) that have less than one full-time person earning an income;
(c) where subsistence agriculture is the source of income;
(d) those who are not in receipt of any social security pension income.

(6) The Contractor must provide monthly statistics to the Client indicating the number of new jobs created through this contract. This statistic must be provided with each monthly payment certificate using Councils electronic prescribed format, which will be provided by the Project Manager of this project to the successful bidder. **Failure to provide the required statistics Council may withhold payment.**

Specific provisions pertaining to SANS 1914-4

C3.2.7.3 **Definition**

Targeted labour:

Individuals, employed by the Contractor in the performance of the contract, who are defined as the target group in the contract and who permanently reside in the target area or who are recognized as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area.

C3.2.7.4 **Contract participation goals**

a) The Contractor shall engage targeted labour and targeted enterprises directly in the performance of the contract to the extent that the total monetary value of such engagements, exclusive of any value added tax or sales tax required by law, expressed as a percentage of the net amount, is not less than the contract participation goal provided for in the contract.

b) The Contractor shall submit details of his plan to achieve the contract participation goal on the contract participation goal implementation form contained in annex B, within five working day of being instructed to do so. If no such instructions are given, these plans shall be submitted before the submission of the first claim for payment.

c) The wages and allowances used to calculate the contract participation goal shall, with respect to both time-rated and task-rated workers, comprise all wages paid and any training allowance paid in respect of agreed training programmes.

C3.2.7.4.1 **Terms and conditions for the engagement of targeted labour**

Further to the provisions of clause 3.3.2 of SANS 1914-4, written contracts shall be entered into with targeted labour.

Variations to SANS 1914-4

(aa) The definition for net amount shall be amended as follows:
Financial value of the contract upon completion, exclusive of any value-added tax or sales tax which the law requires the employer to pay the Contractor.

(bb) The schedule referred to in 5.2 shall in addition reflect the status of targeted labour as women, youth and persons with disabilities and the number of days of formal training provided to targeted labour.

(III) Training of targeted labour

(1) The Contractor shall provide all the necessary on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract in a manner that does not compromise worker health and safety.
(2) The cost of the formal training of targeted labour, will be funded by the provisional sum allowed for in the Bills of Quantities.
(3) The Contractor shall be responsible for scheduling the training of workers and shall take all reasonable steps to ensure that each beneficiary is provided with a minimum of six (6) days of formal training if he/she is employed for 3 months or less and a minimum of ten (10) days if he/she is employed for 4 months or more.
(4) The Contractor shall do nothing to dissuade targeted labour from participating in training programmes.
(5) An allowance equal to 100% of the task rate or daily rate shall be paid by the Contractor to workers who attend formal training, in terms of h (III) (4) above.
(6) Proof of compliance with the requirements of h (III) (1) to h (III) (5) must be provided by the Contractor to the Employer prior to submission of the final payment certificate.

C3.2.7.5 Employment of Local Labour

It is the intention that this Contract should make maximum use of the SMMEs and local labour force that is presently under-employed. To this end the Contractor shall limit the utilisation on the Contract of non-local employees to that of key personnel only and to employ and train local labour to the extent necessary for the execution and completion of this Contract.

The Contractor shall fill in the form entitled Key Personnel in the Forms to be completed by the Bidder. The data stated on the above-mentioned form will be strictly monitored during the Contract period and any deviations therefrom shall be subject to the prior approval of the Engineer, which approval shall not be unreasonably withheld.
The employment of casual labour will be done in co-operation with community leaders and local structures. The bidder shall ensure that all remuneration paid to employees is in line with the relevant sectorial determination in terms of the Basic Conditions of Employment Act, no 75 of 1997, as determined by the Department of Labour.

The contractor shall also ensure that priority is given to unemployed people that fall within the following categories:

a) Previously disadvantage groups
b) Youth
c) Women
d) Special focus given to African people
e) Preference given to south African citizens before foreign nations (Only foreign nationals with South African citizenship should be appointed)

C3.2.7.6 Construction in restricted areas

Working space is sometimes restricted. The construction method used in these restricted areas largely depends on the Contractor's Plant. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices bidded will be deemed to include full compensation for any difficulties encountered by the Contractor while working in restricted areas. No extra payment nor any claim for payment due to these difficulties will be considered.

C3.2.7.7 Sub-Contractors

All matters pertaining to subcontractors (including Selected Subcontractors) and the work executed by them shall be dealt with directly between the Engineer and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.
The Engineer will not liaise directly with any subcontractors nor will he issue instructions concerning the subcontract works directly to any subcontractor.
All matters arising from the subcontract agreements shall be dealt with directly between the Contractor and the subcontractors and the Engineer will not become involved.

C3.2.7.8 Testing and Quality Control

(i) Contractor to Engage Services of an Independent Laboratory

Notwithstanding the requirements of the Specifications pertaining to testing and quality control, the Contractor shall engage the services of an approved independent laboratory to undertake all testing of materials, the results of which are specified in, or may reasonably be inferred from, the Contract. These results will be taken into consideration by the Principal Agent in deciding whether the quality of materials utilised and workmanship achieved by the Contractor comply with the requirements of the Specifications. .
The Contractor shall be responsible for arranging with the independent testing laboratory for the timeous carrying out of all such testing specified in the Contract, at not less than the frequencies and in the manner specified. The Contractor shall promptly provide the Principal Agent with copies of the results of all such testing carried out by the independent laboratory.
For the purposes of this clause, an "independent laboratory" shall mean an "approved laboratory" which is not under the management or control of the Contractor and in which the Contractor has no financial interest, nor which has any control or financial interest in the Contractor.

(ii) Costs of Testing

(a) Costs of Testing

The costs of all testing carried out by the independent laboratory shall be borne by the Contractor and shall be deemed to be included in the bided rates and prices for the respective items of work as listed in the Schedule of Quantities and which require testing in terms of the Specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out.

Where, as a result of the consistency of the materials varying or as a result of failure to meet the required specifications for the work, it becomes necessary to carry out additional tests (e.g. re-tests on rectified work and/or replacement materials), the costs of such additional testing shall be for the Contractor’s account.

(b) Additional Tests Required by the Principal Agent

Additional testing required by the Principal Agent, shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Schedule of Quantities; provided always that the costs of any such additional tests ordered by the Principal Agent, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved are/is not in accordance with the specifications, shall not be reimbursable to the Contractor.

C3.2.7.9 Access to property

The Contractor shall organise the work to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work, and except as hereunder provided, shall at all times provide and allow pedestrian and vehicular access to properties within or adjoining or affected by the area in which he is working. If, as a result of restricted road reserve widths and the nature of the work, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions to provide access to erven and properties. Notwithstanding the foregoing, the Contractor may, with the prior approval of the Engineer (which approval shall not be unreasonably withheld), make arrangements with and obtain the acceptance of the occupiers of erven and properties to close off part of a street, road, footpath or entrance temporarily, provided that the Contractor duly notifies the occupiers of the intended closure and its probable duration, and reopens the route as punctually as possible. Where possible, such streets, roads, footpaths and entrances shall be made safe and reopened to traffic overnight. Such closure shall not absolve the Contractor from his obligations under the Contract to provide access at all times. Barricades, traffic signs, drums and other safety measures appropriate to the circumstances shall be provided by the Contractor to suit the specific conditions.

C3.2.7.10 Monthly statements and payment certificates

The statement to be submitted by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Engineer, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.
For the purposes of the Engineer's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal workings days from the date on which the Engineer communicated to the Contractor the adjustments required. The Contractor shall submit to the Engineer five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer's payment certificate will be added to the times allowed to the Engineer in terms of Subclause 6.10.4 of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

C3.2.7.11 Notices, signs, barricades and advertisements

All notices, signs and barricades, as well as advertisements, may be used only if approved by the Engineer. The Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his bidded rates.
The Engineer shall have the right to instruct the Contractor to move any sign, notice or advertisement to another position, or to remove it from the Site of the Works if in his opinion it is unsatisfactory, inconvenient or dangerous.

C3.2.7.12 Workmanship and quality control

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.
The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates bidded for the related items of work. The Contractor's attention is drawn to the provisions of the various Standardized Specifications regarding the minimum frequency of testing required. The Contractor shall, at his own discretion increase this frequency where necessary to ensure adequate control. On completion and submission of every

part of the work to the Engineer for examination and measurement, the Contractor shall furnish the Engineer with the results of the relevant tests, measurements and levels to demonstrate the achievement of compliance with the Specifications

C3.3 Management

C3.3.1 Planning and Programming

C3.3.1.1 General

This clause describes the requirements for the preparation, submission, updating and revision of the programme for the works. The requirements are in addition to or in expansion of the JBCC PBA clause [15.6].

The programme shall be used by the Contractor to plan and execute the works. The programme shall also be used by the Principal Agent to monitor progress and be the sole basis for the assessment of revisions of the date for Practical Completion.

The programme shall be produced by the Contractor as follows:

a) A programme for the totality of the works shall be submitted to the Principal Agent for acceptance. If the Principal Agent does not accept such programme, it shall be revised and amended until it is accepted by the Principal Agent. This programme will then be regarded as the baseline programme.

b) This baseline programme shall be updated with actual progress on a monthly basis, or any more frequent basis as necessitated by construction events. The Contractor may submit to the principal for acceptance revisions to the baseline programme.

c) Acceptance by the Principal Agent of any programme submitted by the Contractor does not make such programme a contract document, nor does it mandate that the works shall be constructed strictly in accordance therewith. The Contractor at all times remains responsible for the construction of the works.

C3.3.1.2 Submission of Programme

Within 10 (Ten) working days of been given possession of the site, the Contractor shall submit to the Principal Agent for his review and acceptance a programme for the whole of the works showing the order in which the Contractor proposes to execute the works. This programme becomes the baseline programme upon acceptance by the Principal Agent. The baseline programme shall have regard to the contract completion dates, any other milestones and any restraints set out in the contract. Thereafter, if the actual progress does not conform with the baseline programme, the Principal Agent is entitled to require the Contractor to submit a revised programme showing the order of activities necessary to ensure completion of the works by the contract completion dates.

The Contractor shall supply the Principal Agent with an electronic copy of each programme, together with a print-out bar chart or tabular report in a pre-agreed format. All programmes shall be prepared and submitted using Microsoft Project software.

Within 10 (Ten) working days of the Contractor submitting a programme complete with all the information required by this clause to the Principal Agent for acceptance, the Principal Agent will accept the programme or state reasons for not accepting the programme. If such reasons are given, the Contractor shall take account of the reasons and resubmit the programme within 5 (five) working days.

If the Principal Agent fails to act the programme is deemed to be rejected.

The programme shall at minimum contain:

a) Time Scale (minimum):
   i. Days, where the period does not exceed three months. Weeks, where the project period exceeds three months.
   ii. Months, where the period does not exceed one year.
   iii. Years, where the project period exceeds one year.

b) Tasks: Where phases or stages are anticipated, this shall be the highest level of division and all tasks related to the successful accomplishment of that phase of the area shall be grouped.
   Resources allocation and task dependency shall be indicated.
c) Start and Finish Dates: All tasks shall have specific start and finish dates.
d) Critical Path: All tasks forming the programme line that will establish any delays in the overall Contract Period shall be clearly indicated and an indication of their sensitivity characteristics shall be provided.

e) Progress Tracking: The Contractor shall be required to periodically indicate progress per task graphically and on a percentage basis.

f) Non-working Time: All South African public holidays, weekends and the local traditional annual builder's break shall be incorporated in the programme.

No deviation from the approved sequence of construction shall be accepted without prior written approval.

The programme shall not be in the form of a bar chart only but shall show clearly the anticipated quantities of work to be performed each month, together with the manner in which the listed plant is to be used, as well as the anticipated earnings for the various sections of work.

The Contractor shall provide the Principal Agent with a method statement indicating the manner and sequence in which he intends to construct the works, for each work area (and SMME contractor), with the program. In the method statement the Contractor must address at minimum the following items:

a) sequence of the works for the relevant works area.
b) target dates for the tasks identified in sequence of the works for the relevant works area.
c) materials requirements.
d) construction plant to be used.
e) services affecting construction; and
f) any factors that could affect construction progress after commencement.

The method statement must be approved by the Principal Agent before commencement of construction. In order to minimize the impact on traffic, pedestrians and business the Contractor shall be required to segment the works in such a manner that no portion of the works is more than one day ahead of the following position. These segments of the works shall be clearly defined in the Contractor's method statement for each work area.

If, during the progress of the work, the quantities of work performed per month fall below those shown on the program or if the sequence of operations is altered, or if the program is deviated from in any other way, the Contractor shall, within one week after being notified by the Principal Agent, submit a revised program.

If the program is to be revised by reason of the Contractor falling behind his program, he shall produce a revised program showing the modifications to the original program necessary to ensure completion of the Works or any part thereof within the time for completion. Any proposal to increase the rate of work must be accompanied by positive steps to increase production by providing more labour and plant on the Site, or by using the available labour and plant in a more efficient manner.

Failure on the part of the Contractor to submit or to work according to the program or revised program shall be sufficient reason for the Employer to take steps as provided for in the Contract.

The approval by the Principal Agent of any program shall have no contractual significance other than that the Principal Agent would be satisfied if the work is carried out in accordance to such program and that the Contractor undertakes to carry out the work in accordance with the program. It shall not limit the right of the Principal Agent to instruct the Contractor to vary the program should circumstances make this necessary.

C3.3.1.3 <u>Default in submission of programme(s)</u>

Should the Contractor fail to submit a programme for acceptance as the baseline programme or not update the programme as described above; the Principal Agent shall be entitled to withhold 25% of the amount due to the Contractor in interim payment certificates until the Contractor has complied with its obligations in this regard.

C3.3.1.4 Monthly Report

The Contractor shall report on a monthly basis on:

a) Construction progress achieved, supported with an updated project programme, reasons for deviation from programme and plans to regain on lost time.
b) Expenditures achieved on SMME contractor, supported by financial SMME account statement.
c) Expanded Public Works Programme statistics.
d) Test results for all works (including SMME contractors) completed during the months, with clear indication of areas to be reworked due to non-compliance to project specifications.
e) Plant and equipment, clearly showing effective usage per day for the month, ie typically a usage percentage of the reporting period.
f) Materials, including material on site, materials available from suppliers (i.e. the supplier has materials in stock for the project or will meet project demands), and quality of materials (compliance with issued specification, i.e. block colours and strength).
g) Training achieved, including formal and informal training sessions.
h) Cash flow projections, taking into account already expended values.

NOTA BENE: Failure on the part of the Contractor to submit any of the above reports on the 25th day of each month (or the previous workday for the applicable month) until the issue of the Certificate of Completion shall give effect to a penalty, which shall not be reversible.

C3.3.1.5 Security

The Contractor shall be responsible to provide security on site(s) as he deems necessary. The Employer shall not be held responsible for any loss or damage(s) suffered by the Contractor, his plant, equipment, materials, subcontractors or employees as a result of a security incident of any nature.

Proper written agreement(s) shall also be provided detailing the security roles and responsibilities between the Contractor and targeted SMME contractors. Where no such agreements is provided within **14 days of Contract commencement**, it shall be understood that the Contractor assumes full liability, including SMME Contractor works, equipment and plant, for the provision of security for the Works, Labour and Plant, including the Works, Labour and Plant of the targeted SMME contractors, until the issue of Certificate of Completion.

C3.3.2 Health and Safety

C3.3.2.1 Health and Safety Specification

1. Scope

This health and safety specification establishes the overarching framework within which a contractor is required to satisfy general requirements for occupation health and safety in an engineering and construction works contract.

Note:

a) This specification establishes general requirements to enable the employer and the contractor to satisfy the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Construction Regulations, 2014.
b) The Construction Regulations, 2014, require an employer to stop any contractor from executing construction work which is not in accordance with the contractor's health and safety plan for the site or which poses a threat to the health and safety of persons.

2. Definitions

Act: The Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

competent person: any person having the knowledge, training and experience specific to the work or task being performed

ergonomics: the application of scientific information concerning humans to the design of objects, systems and the environment for human use in order to optimize human well-being and overall system performance

hazard: a source of or exposure to danger

incident: an event or occurrence occurring at work or arising out of or in connection with the activities of persons at work, or in connection with the use of plant or machinery, in which, or in consequence of which:

a) any person dies, becomes unconscious, suffers the loss of a limb or part of a limb or is otherwise injured or becomes ill to such a degree that he 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 to continue with the activity for which he was employed or is usually employed;

b) a major incident occurred; or

c) the health or safety of any person was endangered and where-

i) a dangerous substance was spilled;
ii) the uncontrolled release of any substance under pressure took place;
iii) machinery or any part thereof fractured or failed resulting in flying, falling or uncontrolled moving objects; or machinery ran out of control

health and safety plan: a documented plan which addresses hazards identified and includes safe work procedures to mitigate, reduce or control the hazards identified.

health and safety specification: a documented specification of all health and safety requirements pertaining to the associated works on a construction site, so as to ensure the health and safety of persons

inspector: a person designated as such under section 28 of the Act

major incident: an occurrence of catastrophic proportions, resulting from the use of plant or machinery, or from activities at a workplace

reasonably practicable: practicable having regard to:

a. the severity and scope of the hazard or risk concerned;
b. the state of knowledge reasonably available concerning that hazard or risk and of any means of removing or mitigating that hazard or risk;
c. the availability and suitability of means to remove or mitigate that hazard or risk; and
d. the cost of removing or mitigating that hazard or risk in relation to the benefits deriving therefrom;

risk: the probability that injury or damage will occur

safe: free from any hazard

scaffold: any temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both

specification data: data, provisions and variations that make this specification applicable to a particular contract

Structure

a) any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, batching plants, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;

b) any formwork, false work, scaffold or other structure designed or used to provide support or means of access during construction work; or

c) any fixed plant in respect of work which includes the installation, commissioning, decommissioning or dismantling and where any such work involves a risk of a person falling two metres or more

substance: any solid, liquid, vapour, gas or aerosol, or combination thereof

suitable: capable of fulfilling or having fulfilled the intended function or fit for its intended purpose

3. Interpretation

3.1 The Act and its associated regulations shall have precedence in the interpretation of any ambiguity or inconsistency between it and this specification.
3.2 Compliance with the requirements of this specification does not necessarily result in compliance with the provisions of the Act.

4. Requirements

4.1 General requirement

4.1.1 The contractor shall execute the works in a manner that complies with all the requirements of the Act and all its associated regulations, and in so doing, minimize the risk of incidents occurring.

4.1.2 The contractor shall with respect to the site and the engineering and construction works that are contemplated:

a) identify the hazards and evaluate the risks associated with such work constituting a hazard to the health and safety of such employees and the steps that need to be taken to comply with the Act; and

b) as far as is reasonably practicable, prevent the exposure of such employees to the hazards concerned or, where prevention is not reasonably practicable, minimize such exposure.

4.1.3 The contractor shall as far as is reasonably practicable, cause every employee to be made conversant with the hazards to his health and safety attached to any work which he has to perform, any article or substance which he has to produce, process, use, handle, store or transport and any plant or machinery which he is required or permitted to use, as well as with the precautionary measures which should be taken and observed with the respect to those hazards.

4.1.4 The contractor shall ensure that all employees under his or her control are:

f) informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment; and

g) issued with proof of health and safety induction training issued by a competent person and carry proof of such induction when working on site.

4.1.5 The contractor shall not allow or permit any employee to enter any site, unless such person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

4.1.6 The contractor shall ensure that each visitor to a construction site, save where such visitor only visits the site office and is not in direct contact with the construction work activities:

a) undergoes health and safety instruction pertaining to the hazards prevalent on the site; and
b) is provided with the necessary personal protective equipment.

4.1.7 The contractor shall provide suitable on-site signage to alert workers and visitors to health and safety requirements.

4.1.8 The contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace.

4.2 Health and safety representatives

4.2.1 The contractor shall appoint in writing one health and safety representative for every 50 employees of the contactor working on the site, whenever there are more than 20 employees on the site; to:

a) review the effectiveness of health and safety measures;

b) identify potential hazards and potential major incidents;

c) in collaboration with his employer, examine the causes of incidents;

d) investigate complaints by any employee of the contractor relating to that employee's health or safety on the site;

e) make representations to the contractor on matters arising from a), b), c) or d) or on general matters affecting the health or safety of the employees at the workplace;

g) inspect the site with a view to the health and safety of employees, at regular intervals;

h) participate in consultations with inspectors at the workplace and accompany inspectors on inspections of the workplace; and

i) participate in any internal health or safety audit.

4.2.2 The contractor shall inform the relevant safety representative:

a) beforehand of inspections, investigations or formal inquiries of which he has been notified by an inspector; and

b) as soon as reasonably practicable of the occurrence of an incident on the site.

4.2.3 The contractor shall convene health and safety meetings whenever more than two health and safety representatives have been appointed for the site. These meetings shall be attended by all health and safety representatives and shall be convened at least once every month to:

a) make recommendations to the employer regarding any matter affecting the health or safety of persons on the site; and

b) discuss any incident on the site in which or in consequence of which any person was injured, became ill or died.

4.2.4 The contractor shall consult with the health and safety committee on the development, monitoring and review of the risk assessment.

4.3 Appointment of construction supervisor and safety officers

4.3.1 The contractor shall appoint a full-time competent employee designated in writing as the construction supervisor for the site, with the duty of supervising the performance of the work falling within the scope of the contract and may appoint one or more competent employees to assist the appointed construction supervisor.

4.3.2 A contractor may having considered the size of the project, the degree of dangers likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction safety officer in writing, who has in the contractor's opinion the necessary competencies and resources, to assist the contractor in the control of all safety related aspects on the site.

4.3.3 The contractor shall ensure that the construction supervisor is in possession of the most recently updated version of the fall protection plan.

4.3.4 The contractor shall ensure that the following activities, as relevant, are carried out under the supervision of a competent person and that such persons are appointed in writing:

a) all formwork and support work operations.

b) excavation work.

c) demolition work.

d) scaffolding work operations.

e) suspended platform work operations.

f) operation of batch plants; and

g) the stacking and storage of articles on the site.

4.4 Risk assessment

4.4.1 The contractor performing work falling within the contract shall, before the commencement of any such work and during construction work, cause a risk assessment to be performed by a competent person appointed in writing. Such an assessment shall as a minimum:

a) identify the risks and hazards to which persons may be exposed to.

b) analyse and evaluate the identified risks and hazards.

c) document a plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified.

d) provide a monitoring plan; and

e) provide a review plan.

Note: A risk assessment is an important step in protecting workers as well as complying with the law. It helps you focus on the risks that really matter in a particular workplace – the ones with the potential to cause real harm. Workers and others have a right to be protected from harm caused by a failure to take reasonable control measures. The following four steps are recommended:

Identify the hazards by looking at what could reasonably be expected to cause harm, ask employees or their representatives what they think, obtain advice from trade associations or publications on health and safety, check manufacturer's instructions or data sheets for chemicals and equipment as they can be very helpful in spelling out the hazards and putting them in their true perspective, review accident and ill-health records, think about long-term hazards to health (eg high levels of noise or exposure to harmful substances) as well as safety hazards etc.

Identify who may be harmed and how by identifying how groups of people might be harmed i.e. what type of injury or ill health might occur.

Evaluate the risks and decide on precautions by doing everything 'reasonably practicable' to protect people from harm i.e. by looking at how things are done, what controls are in place and how the work is organised and comparing this against good practice to see if more can be done to bring practices up to standard. Consider if the hazard can be got rid of all together, and if not how can the risks be controlled so that harm is unlikely, e.g. try a less risky option (e.g. switch to using a less hazardous chemical); prevent access to the hazard (e.g. by guarding); organise work to reduce exposure to the hazard (e.g. put barriers between pedestrians and traffic); issue personal protective equipment (e.g. clothing, footwear, goggles etc); and provide welfare facilities (e.g. first aid and washing facilities for removal of contamination).

Record the findings by writing down the findings of the risk assessment.

4.4.2 The contractor shall ensure that as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in the risk assessment.

4.4.3 The contractor shall require a competent person to prepare a fall protection plan in compliance with the requirements of the Construction Regulations.

4.4.4 Notwithstanding the provisions of the fall protection plan, the contractor shall ensure that:

a) 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.

b) no person works in an elevated position, unless such work is performed safely as if working from a scaffold or ladder.

c) notices are conspicuously placed at all openings where the possibility exists that a person might fall through such openings.

d) fall prevention and fall arrest equipment is:

i) suitable and of sufficient strength for the purpose or purposes for which it is being used having regard to the work being carried out and the load, including any person, it is intended to bear; and
ii) securely attached to a 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 is liable to fall;

e) fall arrest equipment is only used where it is not reasonably practicable to use fall prevention equipment; and

f) suitable and sufficient steps are taken to ensure, as far as is reasonably practicable, that in the event of a fall by any person, the fall arrest equipment or the surrounding environment does not cause injury to the person.

4.4.5 Where roof work is being performed on a construction site, the contractor shall ensure that it is indicated In the fall protection plan that:

a) the roof work has been properly planned.

b) the roof erectors are competent to carry out the work.

c) no employees are permitted to work on roofs during inclement weather conditions or if weather conditions are a hazard to the health and safety of the employees.

d) prominent warning notices are to be placed where all covers to openings are not of sufficient strength to withstand any imposed loads and where fragile material exists.

e) the areas mentioned in paragraph *(d)* are to be barricaded off to prevent persons from entering.

f) 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

g) there is suitable and sufficient guard-rails or barriers and toe-boards or other similar means of protection to prevent, so far as is reasonably practicable, the fall of any person, material or equipment.

4.4.6 The contractor shall 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) specification data prepared by the designer of the structure is taken into account in the risk assessment.

Note: The specification data provided by the designer should outline known or anticipated dangers or hazards relating to the works and make available all information required for the safe execution of the work. It should provide as relevant, geotechnical information (or make reference to reports provided in the site information), the loading the structure is designed to withstand, the methods and sequence of construction.

4.5 Health and safety plans

4.5.1 The contractor shall prior to commencing the works to which this specification applies, submit to the employer for approval a suitable and sufficiently documented health and safety plan, based on this specification and the risk assessment that is conducted.

The health and safety plan shall as a minimum provide:

a) the information contained in Table 1 in respect of each of the hazards associated with work falling within the scope of the contract (see Figure 1); and

What are the hazards ?	Who might be harmed and how?	What are the safe work procedures for the site?	What further action is necessary (monitoring and review)?	Action by whom	Actio n by when

Table 1: Example of the format of a health and safety plan

b) an outline of the manner in which the contractor intends complying with the requirements of this specification.

4.5.2 The contractor shall discuss the submitted health and safety plan with the employer's representative, modify such plan in the light of the discussions and resubmit the modified plan for approval.

4.5.3 The contractor shall apply the approved health and safety plan from the date of commencement of and for the duration of the works to which this specification applies.

4.5.4 The contractor shall conduct periodic audits for compliance with the approved health and safety plan at intervals agreed upon with the employer, but at least once every month.

4.5.5 The contractor shall update the health and safety plan whenever changes to the works are brought about.

4.6 Subcontractors

4.6.1 The contractor may only subcontract work in terms of a written subcontract and shall only appoint a subcontractor should he be reasonably satisfied that such a subcontractor has the necessary competencies and resources to perform the work falling within the scope of the contract safely. Such a subcontract shall require that the subcontractor shall:

a) shall co-operate with the contractor as far as is necessary to enable both the contractor and sub-contractor to comply with the provisions of the Act; and

b) as far as is reasonably practicable, promptly provide the contractor with any information which might affect the health and safety of any person at work carrying out work or 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.

4.6.2 The contractor shall provide any sub-contractor who is submitting a tender or appointed to perform a sub-contract falling within the scope of the contract, with the relevant sections of this specification and associated specification data which might be pertinent to the sub-contract.

4.6.3 The contractor shall take reasonable steps as are necessary to ensure:

a) co-operation between all sub-contractors to enable each of those sub-contractors to comply with the requirements of the Act and associated regulations; and
b) that each sub-contractor's health and safety plan is implemented.

4.6.4 The contractor shall conduct periodic audits for compliance with the approved health and safety plan of each and every sub-contractor working on the site at intervals agreed upon with such contractors, but at least once per month.

4.6.5 The contractor shall stop any contractor from executing construction work which is not in accordance with the contractor's or subcontractor's health and safety plan for the site or which poses a threat to the health and safety of persons.

4.6.6 The contractor shall ensure that where changes to the works occur, sufficient health and safety information and appropriate resources are made available to the subcontractor to execute the work safely.

4.6.7 The contractor shall ensure that:

a) every subcontractor is registered and in good standing with the compensation fund or with a licensed compensation insurer prior to work commencing on site;

b) potential subcontractors submitting tenders have made provision for the cost of health and safety measures during the construction process; and

c) every subcontractor has in place a documented health and safety plan prior to commencing any work on site which falls within the scope of the contract.

4.6.8 The contractor shall receive, discuss and approve health and safety plans submitted by subcontractors.

4.6.9 The contractor shall ensure that all subcontractors are informed regarding any hazard as stipulated in the risk assessment before any work commences, and thereafter at such times as may be determined in the risk assessment.

4.6.10 The contractor shall reasonably satisfy himself that all employees of subcontractors are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment.

The contractor shall satisfy himself and ensure that all subcontractor employees deployed in the site are:

a) informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment; and

b) issued with proof of health and safety induction training issued by a competent person and carry proof such induction when working on site.

4.7 Reporting of incidents

The contractor shall notify the employer's representative of any incident as soon as possible after it has occurred and report such incidence to an inspector.

4.8 Administration

4.8.1 Notification of intention to commence construction work

The contractor shall notify the Provincial Director of Labour in writing using a form similar to that contained in Annexure A of the Construction Regulations issued in terms of the Act before construction work commences and retain a copy of such notification in the health and safety file where such work:

- involves the demolition of a structure exceeding a height of 3m.
- involves the use of explosives to perform construction work.
- involves the dismantling of fixed plant at a height greater than 3m.
- exceeds 30 days or will involve more than 300-person days of construction work; and includes:
  - i) excavation work deeper than 1m; or
  - ii) working at a height greater than 3 m above ground or a landing.

4.8.2 Health and safety file

4.8.2.1 The contractor shall maintain on site a health and safety file on site which contains copies of the following, as relevant:

1) the notification made to the Provincial Director of Labour in terms of 4.4.1.

2) the letters of appointment of health and safety representatives.

3) the minutes of all health and safety meetings.

4) a comprehensive and updated list of all the subcontractors (nominated, selected or domestic) employed on site by the contractor, indicating the type of work being performed by such sub-contractors.

5) a copy of each and every subcontract agreement.

6) the contractor's health and safety plan.

7) the health and safety plans of all the contractor's subcontractors who are required to provide such plans

8) the recommendations made to the contractor by the health and safety committee in 4.2.3

9) any report made to an inspector by the health and safety committee referred to in 4.2.3; and

10) the findings of all audit reports made regarding the implementation of the contractor's or a subcontractor's health and safety plan

11) proof that the contractor and every subcontractor is registered and in good standing with the compensation fund or with a licensed compensation insurer

12) the inputs of the safety officer, if any, into the health and safety plan

13) a copy of risk assessments made by competent persons

14) details of induction training conducted whenever it is conducted

15) proof of all subcontractor's induction training whenever it is conducted

16) letters of appointments for competent persons to supervise prescribed activities

17) proof of the following where suspended platforms are used

18) a certificate of system design issued by a professional engineer professional certificated engineer or a professional engineering technologist.

19) proof of competency of erectors.

20) proof of compliance of operational design calculations with requirements of the system design certificate.

21) proof of performance test results.

22) sketches indicating the completed system with the operational loading capacity of the platform.

23) procedures for and records of inspections having been carried out.

24) procedures for and records of maintenance work having been carried out.

25) proof that the prescribed documentation has been forwarded to the provincial director.

26) records of the register of inspections made by a competent person immediately before and during the placement of concrete or any other load on formwork; and

27) the names of the first aiders on site and copies of the first aid certificates of competency.

4.8.2.2 The health and safety file shall be made available for inspection by any inspector, subcontractor, employer's representative, employer's agent, health and safety representative or employee of the contractor upon the request of such persons.

4.8.2.3 The contractor shall hand over the health and safety file to the employer upon completion of the contract together with a record of all drawings, designs, materials used and other similar information concerning the completed structure.

4.9 First aid, emergency equipment and procedures

The contractor shall where more than five employees are employed at a workplace, provide a first aid box or boxes at or near the workplace which shall be available and accessible for the treatment of injured persons at that workplace. Such first aid boxes shall contain suitable first aid equipment.

The contractor shall ensure that where there are more than 10 employees employed on the site that for every group of up to 50 employees at that workplace, at least one person is readily available during normal working hours, who is in possession of a valid certificate of competency in first aid.

C3.3.3 EPWP

C3.3.3.1 Employer's objectives

The Employer's objectives are to deliver public infrastructure using labour-intensive methods in accordance with EPWP Guidelines.

C3.3.3.2 Labour-intensive works

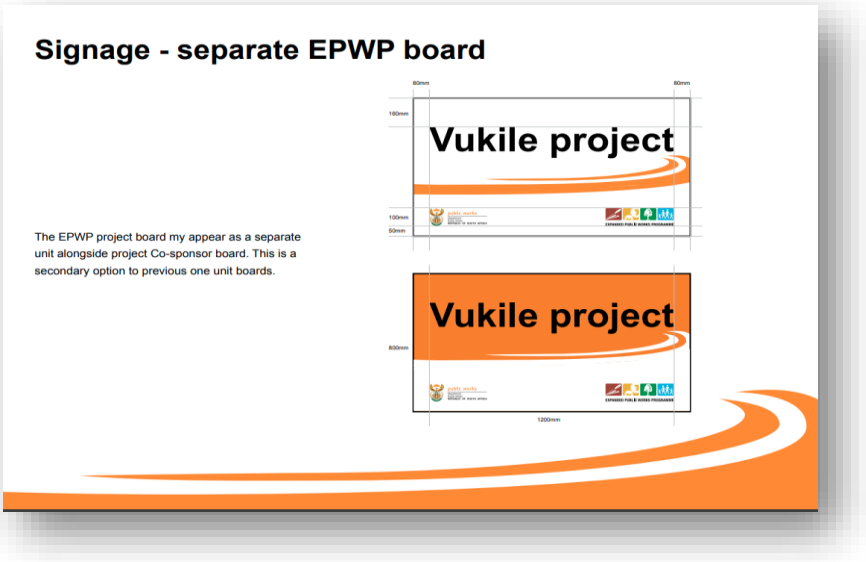
Labour-intensive works shall be constructed/maintained using local workers who are temporarily employed in terms of the scope of work. These items are to be identified by the contractor and provided to the client prior to commencement of works on site.

C3.3.3.3 Labour-intensive competencies of supervisory and management staff

Contractors shall only engage supervisory and management staff in labour-intensive works that have completed the skills programme, including Foremen/Supervisors at NQF level 4 "National Certificate: Supervision of Civil Engineering Construction Processes" and Site Agent/Manager at NQF level 5 "Manage Labour-Intensive Construction Processes" or equivalent QCTO qualifications (see Appendix C) at NQF outlined in Table 1).

C3.3.3.4 EPWP Notice Board (separate board)

See example hereunder.



C3.3.3 PROCUREMENT

3.3.3.1 Requirements

The contractor shall be required to adopt labour-based techniques through the full spectrum of the works with the proviso that the Employers specific objectives regarding TIME & QUALITY are in no way compromised. **Maximization of employment shall be of the essence on this contract.**

Tenderers are to note that it is an explicit condition of this tender that all unskilled labourers on the project are to be employed from the local community. It is also a condition of this tender that the successful contractor is required to sub-contract a minimum value of work to local SMMEs equal to 30% of the contract sum excluding any preliminaries, contingency and provisional sums. Such work must be clearly identified in the SMME Plan which plan will be considered in the functionality assessment of the tender evaluation process. Furthermore, it is a condition of this tender that the successful contractor is required to take full responsibility of managing all appointed sub-contractors and the quality of their works.

The Contractor shall in general, maximise the involvement of the local community.

The minimum number of jobs created on this contract shall be 8 jobs for every one million rand of the contract sum. This target applies to the Contractor's labourers and local labourers and to the sub-contractor's labourers.

The Contractor shall be required to submit employment and SMME data on a monthly basis to the Principal Agent.

The Contractor and all sub-contractors including local SMMEs will be required to pay labour rates which are in accordance with SAFCEC rates.

The client reserves the right to reject bids that are deemed to be non-market related especially for the portion of works to be executed by the local SMMEs.

3.3.3.2 Subcontracting SMMEs – Special Conditions of Contract

Participation and Advancement of Start-Up, Small and Micro Enterprises, and the SMME programme.

"Start-up Enterprises" means an enterprise that has been in existence and operating for less than two years.

"Small Enterprises" means an enterprise that has a CIDB grading designation of 1 or 2.

"Micro Enterprises" means an enterprise that has a CIDB grading designation of 3.

"Locally based SMMEs" means enterprises that have their operational base in the ward in which the project is to be executed or, alternatively, the members of the enterprise are resident in the particular ward. Should suitable locally based SMME contractors as defined above not be available in the particular ward, then they shall be sourced from adjacent wards.

It is a condition of this tender that the successful Contractor is required to take full responsibility of managing all appointed subcontractors and the quality of their works. The Contractor will be expected to pay SMMEs full rates as submitted by the Contractor to the client.

The form of contract to be used with SMMEs is the JBCC sub-contract agreement. The Contract Data must record the specific requirements in respect of penalties, retention and payment. With regard to the latter, the Contractor is to allow for fortnightly certificates from the SMMEs and for payment to the SMMEs to be effected within 7 days of certification.

It is intended that fortnightly payments to the SMMEs will be as follows:

- Payment 1 – for the SMME to pay suppliers for material/plant, subject to the necessary proof being furnished.

- Payment 2 – for SMMEs to pay labourers employed, subject to the necessary proof being furnished and upon receipt of proof of payment of suppliers.
- Payment 3 – for any balance due based on a valuation done of works completed, upon receipt of proof of payment of labour.

The contractor will be expected to pay SMMEs full rates as submitted by the contractor to the client.

Above this, it is a condition of this contract that should the contractor fail to pay the SMMEs with no valid reason/s, the client reserves the right to pay the SMMEs directly and deduct same from any amount paid to the contractor.

In order to achieve the goals of this policy and to ensure that the SMMEs are treated fairly and given every opportunity to advance their business whilst delivering a successful project, the Contractor is to note the following and provide for any cost that may be associated therewith.

1. The bill of quantities identified for implementation by the SMMEs is to provide for market related P&G items in order that the SMME may be compensated for any unforeseen delays or events that impact on his ability to complete his works. The Contractor shall subcontract the local SMME works at the Contractor's tendered rates. **It is to be specifically noted that the rates for items of work to be executed by SMMEs must be market related. Tenderers are to ensure that rates tendered for this portion of the works is to take into account all items that the main contractor would have allowed for in his normal course of pricing, i.e. materials, labour, wastage, profit, attendance, etc. all at applicable productivity rates.**

2. The Contractor will be expected to have clearly specified the programme dates to the SMME sub-contractor and these dates are to be included in the contract of agreement between the two parties. The Contractor is to monitor the SMME sub-contractor's progress against the programme and hold progress meetings with the SMME sub-contractor where minutes are to be kept and signed off by both parties.

3. The Contractor is to assess the skills of the SMME sub-contractor and provide the relevant support and training where it is necessary in order for the SMME sub-contractor to complete the works to programme, budget and specification. The Contractor will be expected to provide on-site training to the SMME sub-contractor that will ensure that the SMME sub-contractor's staff is suitably trained to execute the works and that they receive sufficient relevant experience on the project. The Contractor will be expected to explain to and train the SMMEs on how the BoQ rates were built up.

4. The Contractor is responsible for safety compliance on the project and will assist the SMME sub-contractor in all aspects to achieve safety compliance, that will include:

a) Assisting the SMME sub-contractor with developing their safety files, legal appointments, etc.
b) Assisting the SMME sub-contractor with achieving safety on site.
c) Having toolbox talks with the SMME sub-contractor employees on a daily basis.
d) Providing all safety equipment and signage.
e) Providing safety training where necessary.

5. The Contractor is to provide all the necessary equipment for the timeous monitoring and the checking of the quality of works as carried out by the SMME sub-contractor. The Contractor will be expected to monitor the SMME sub-contractor's works for quality compliance and provide all the necessary support to the SMME sub-contractor in order to achieve quality requirements. The Contractor is to ensure that if the SMME sub-contractors' quality of works does not achieve specification the Contractor will assist the SMME sub-contractor to achieve specification and not allow the works to continue until the quality requirements are achieved.

6. The Contractor is to generate monthly reports for the client that includes the following:

a) SMME sub-contractor resources on the site, i.e. supervisors, labour, plant tools and equipment
b) SMME sub-contractor progress of works on site.
c) SMME sub-contractor quality control on site.
d) SMME sub-contractor expenditure on the project versus target expenditure.
e) Copies of minutes of the SMME sub-contractor and Contractor progress meetings.
f) Concerns and improvements to be made.

The Tenderers are to price the works to achieve full compliance with the above requirements. Tenderers are to ensure that they allocate a dedicated individual to manage the SMMEs and fulfil the requirements stated above.

The SMME supervisor will be required to conclude a scorecard with the client. Said scorecard will encompass four key performance areas and several key performance indicators as outlined overleaf. The SMME supervisor will be required to score a minimum of 95%. The scorecard review will take place on a monthly basis.

Key Performance Areas	**(a) Key Performance Indicators**
2) Safety	(a) Be familiar with and ensures SMME Contractor enforces the safety specs and relevant OHSA (b) Reporting of incidents and accidents • Ensures SMME Contractor Reports incidents and accidents to the Contractor on the day they occur
3) Quality Control	(b) Setting out of the Works • Ensures that the Works have been set out correctly prior to construction commencing (c) Monitoring of Construction • Examine the Works daily and pre-empt unnecessary work by the SMME Contractor by warning him of incorrect workmanship as soon as it is identified (d) Approval of the Works • Assist SMME Contractor in the works approval process (e) Read Drawings • Assist SMME Contractor in reading and interpreting construction drawings
4) Financial	(a) Daily Costing • Ensures that SMME Contractors do daily costing (b) Variances to Scope • Assist SMME Contractors identify and claim for additional works (c) Standing Time Costs • Assist SMME Contractors compute and Claim standing time costs
5) Site Administration and Progress Monitoring	(a) Communication • Ensures that SMME Contractors communicate with the Contractor in writing on site related issues (b) Reporting • Ensures that the Main Contractor's progress report is communicated with the SMME Contractors and that contingency plans are followed through (c) Site diary • Ensures SMME Contractors maintain a site diary (d) Claims • Assist SMME Contractors draft claims for Extension of Time where applicable (e) Quantities • Assist SMME Contractors in the measurement of the works

Following from the above, the SMMEs to be contracted on the project must be selected from a database which will be issued to the appointed contractor on the commencement date of the contract. The data base will include for SMME that are youth, women owned, disabled and ex-combats. The contractor will be expected to give preference to SMMEs that comply with all/most of these groups. The following information must be provided by said contractor within 14 days of the commencement date of the contract.

1. Detailed approach and methodology on the employment of local SMMEs
2. SMME(s) company name/s to be employed on the project.
3. SMME contact persons
4. Works to be executed by SMME(s)
5. Programme (anticipated start, duration and end dates) applicable to the works defined in item 4 above.

The onus is on the Contractor to prove to the Employer that no fully fledged SMMEs are active in the area of the project. In this case, the contractor can source SMMEs from adjacent wards and must submit a proposal with his tender on how he intends to advance the growth of the SMMEs in the project ward.

SANBI reserves the right to withdraw its acceptance of offer, should the appointed contractor fail to satisfactorily address the above requirements (1 to 5) within 14 days of the commencement date of the contract. Approved documentation will form part of the contract.

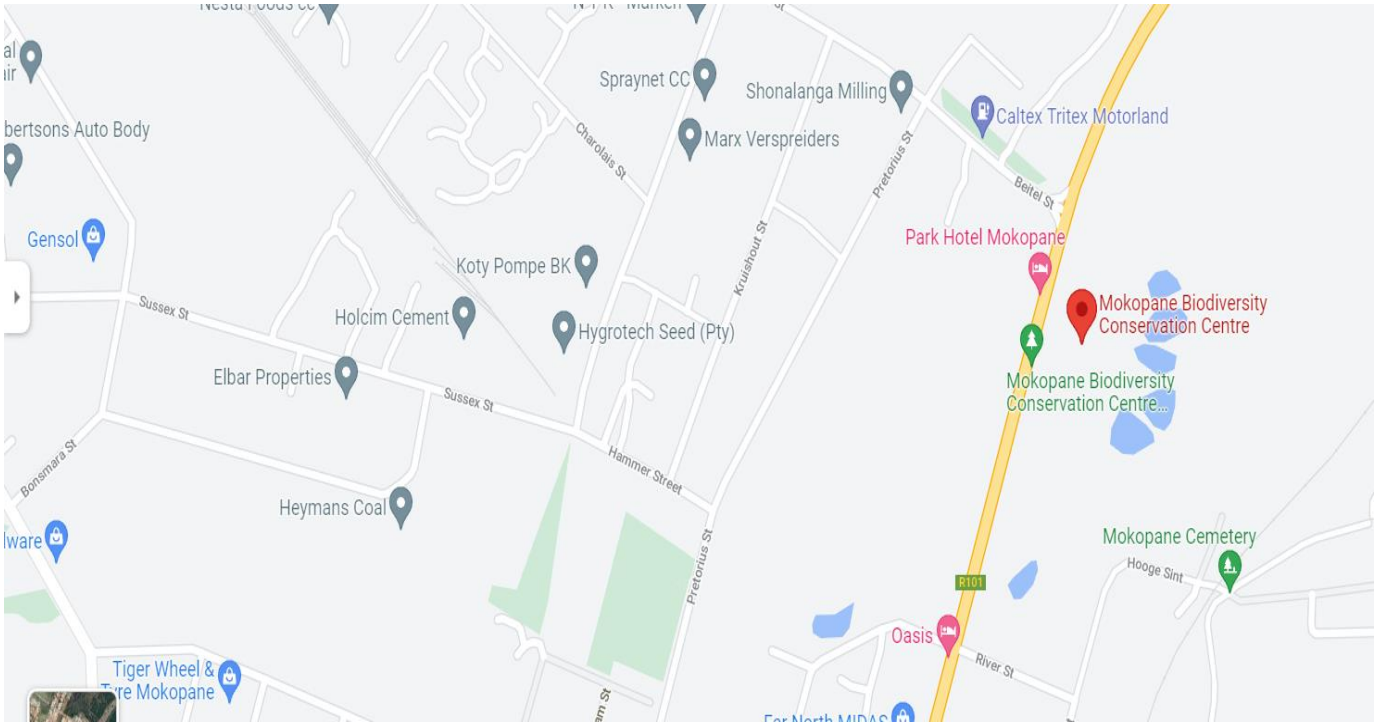
Failure of the Contractor to achieve the requirements set out in this tender document during construction may result in the client enforcing compliance by appointing 3rd parties if necessary, to assist and deducting all reasonable costs for achieving compliance from money due to the Contractor.

Should the contractor, at Practical Completion, be in default by non-attainment of the above-mentioned labour-intensive targets and SMME requirements, the Employer shall have the right to, without prejudice of any other rights, apply a penalty not exceeding 5% of the contract sum

PART C: THE CONTRACT
Part C4: Site Information

C4.1 Site Information

The site is located in Mokopane, at the Mokopane Biodiversity Conservation Centre, Limpopo



Appendix A: Drawings

• ENGINEERING • PROCUREMENT • MANAGEMENT

Menlyn Corporate Park
Block C, Cnr Corobay Ave & Garsfontein Rd
Menlyn, Pretoria

PO Box, 2967
Pretoria
0001
DocControl-GP@bvi.co.za

Documentation Transmittal

34398-02-001

SANBI
South African National Biodiversity Institute
Biodiversity for Life

Date	:	**21 October 2021**
Company	:	**SANBI**
Attention	:	**Christopher Willis** C.Willis@sanbi.org.za
Description	:	**SANBI Projects - Mokopane Biodiversity Conservation Centre**
Project No	:	**34398-02**

			BVi	Rev No	Issue For					Description		Size	Type:	
					A	B	C	D	E				Paper	OneDrive
1			34398-02-100-01-01	BB	x					GENERAL	SITE PLAN	A1		
2			34398-02-602-01-01	BB	x					NEW LAPA	GROUND FLOOR PLAN, SECTIONS AND SITE PLAN	A1		
3			34398-02-603-01-01	BB	x					NEW LAPA	ELEVATIONS	A1		
4			34398-02-605-01-01	BB	x					NEW LAPA	CEILING PLAN, WINDOW AND DOOR SCHEDULE	A1		
5			34398-02-611-01-01	BB	x					NEW LAPA	FINISHING SCHEDULE	A4		
6			34398-02-611-01-02	BB	x					NEW LAPA	SANITARY SCHEDULE	A4		
7			34398-02-602-03-01	BB	x					EXISTING ABLUTION BLOCK	GROUND FLOOR PLAN , ELEVATIONS AND SECTIONS	A1		
8			34398-02-611-03-01	BB	x					EXISTING ABLUTION BLOCK	FINISHING SCHEDULE	A4		
9			34398-02-602-04-01	BB	x					EXISTING GATE HOUSE	GROUND FLOOR PLAN AND ELEVATIONS	A1		
10			34398-02-611-04-01	BB	x					EXISTING GATE HOUSE	FINISHING SCHEDULE	A4		
11			34398-02-601-05-01	BB	x					NEW VISITORS PARKING	AND CARPORTS - LYOUT AND SECTION	A1		
12			34398-02-601-05-02	BB	x					STAFF PARKING	CAR PORT	A1		
13			34398-02-611-05-01	BB	x					NEW VISITORS PARKING	FINISHING SCHEDULE	A4		
14			34398-02-611-05-02	BB	x					STAFF PARKING	FINISHING SCHEDULE	A4		
15			34398-02-101-01-01	BB	x					GENERAL	GENERAL SITE SERVICES LAYOUT	A1		
16			34398-02-110-01-01	BB	x					ROADS	NEW VISITORS PARKING LOT LAYOUT	A1		
17			34398-02-110-02-01	BB	x					ROADS	NEW STAFF PARKING LOT LAYOUT	A1		
18			34398-02-111-01-01	BB	x					ROADS	NEW VISITORS PARKING LOT SECTIONS	A1		
19			34398-02-111-03-01	BB	x					ROADS	ROAD SECTIONS	A1		
20			34398-02-120-01-01	BB	x					STORMWATER	STORMWATER LAYOUT	A1		
21			34398-02-121-01-01	BB	x					STORMWATER	STORMWATER LAYOUT AND SECTIONS SHEET 1 OF 3	A1		
22			34398-02-121-01-02	BB	x					STORMWATER	STORMWATER LAYOUT AND SECTIONS SHEET 2 OF 3	A1		
23			34398-02-121-01-03	BB	x					STORMWATER	STORMWATER LAYOUT AND SECTIONS SHEET 3 OF 3	A1		
24			34398-02-123-01-01	BB	x					STORMWATER	STORMWATER CHANNELS SECTIONS	A1		
25			34398-02-123-02-01	BB	x					STORMWATER	STORMWATER CATCHPIT DETAILS AND SECTIONS	A1		
26			34398-02-123-03-01	BB	x					STORMWATER	TYPICAL STORMWATER DETAILS	A1		
27			34398-02-130-01-01	BB	x					SEWER	SEWER GENERAL LAYOUT	A1		
28			34398-02-133-01-01	BB	x					SEWER	SEWER CONCRETE MANHOLE TYPICAL DETAILS	A1		
29			34398-02-140-01-01	BB	x					WATER	WATER GENERAL LAYOUT	A1		
30			34398-02-143-01-01	BB	x					WATER	TYPICAL WATER DETAILS	A1		
31			34398-02-143-01-02	BB	x					WATER	POTABLE WATER HDPE PIPING THRUST BLOCK DETAILS	A1		
32			34398-02-310-01-01	AA	x					NEW LAPA	GROUND FLOOR PLAN - ELECTRICAL POINTS	A1		
33			34398-02-325-01-01	AA	x					NEW LAPA	GROUND FLOOR PLAN - LIGHTING LAYOUT	A1		
34			34398-02-392-01-01	AA	x					NEW LAPA	GROUND FLOOR PLAN - SCHEMATIC LAOUT	A1		
35			34398-02-310-03-01	AA	x					EXISTING ABLUTION BLOCK	GROUND FLOOR PLAN - ELECTRICAL POINTS	A1		
36			34398-02-325-03-01	AA	x					EXISTING ABLUTION BLOCK	GROUND FLOOR PLAN - LIGHTING LAYOUT	A1		
37			34398-02-325-04-01	AA	x					GATE HOUSE	GROUND FLOOR PLAN - LIGHTING LAYOUT	A1		
38			34398-02-392-05-01	AA	x					MAIN ENTRANCE	DISTRIBUTION KIOSK - SCHEMATIC LAYOUT	A1		
39			34398-02-325-06-01	AA	x					NEW CARPORT	GROUND FLOOR PLAN - LIGHTING LAYOUT	A1		
40			34398-02-201-01-01	AA	x					NEW LAPA	FOUNDATION - LAYOUT AND SECTIONS	A1		
41			34398-02-201-02-01	AA	x					NEW LAPA	REINFORCEMENT - SECTION AND DETAILS	A1		
42			34398-02-202-01-01	AA	x					NEW STONE WALL	CONCRETE - LAYOUT AND SECTIONS	A1		
43			34398-02-202-02-01	AA	x					NEW STONE WALL	REINFORCEMENT - LAYOUT AND SECTIONS	A1		
44			34398-02-203-01-01	AA	x					EXISTING ABLUTION BLOCK	CRACK REPAIR DETAILS	A1		
45			34398-02-205-01-01	AA	x					STAFF PARKING	LAYOUT AND SECTIONS	A1		

Please sign this Transmittal to signify receipt of the above.

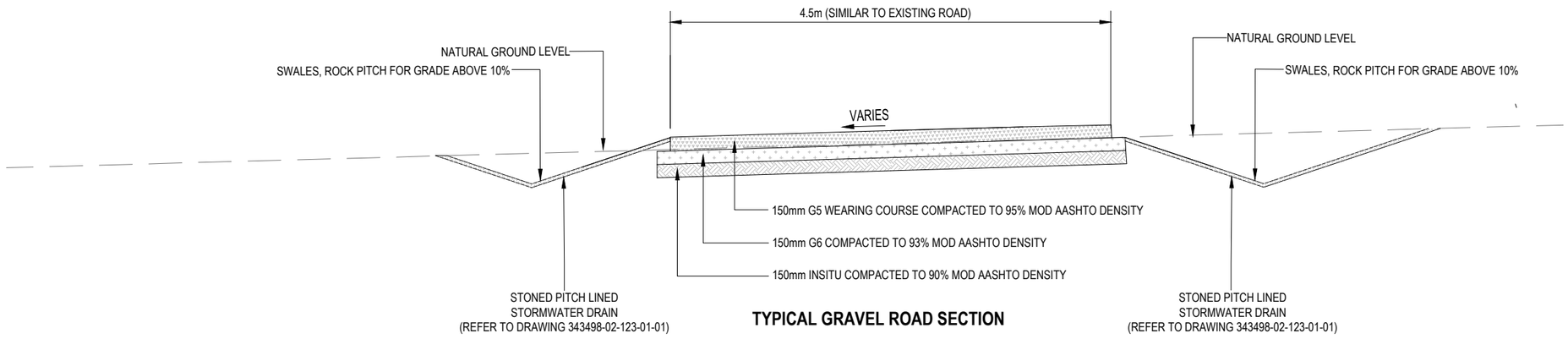
Date :

Signature : _____

A - Issued for Tender Purposes
B - Issued for Review
C - Issued for Approval
D - Approve for Construction
E - Issued for As Built

Document Control

Issued by: Roberto van der Lith **21 October 2021**



TYPICAL GRAVEL ROAD SECTION

DO NOT SCALE DRAWING
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CLIENT PLAN NUMBER: ---

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION
34398-02-123-01-01	STORMWATER SECTIONS

APPROVED BY COUNCIL / CLIENT

CITY ENGINEER / CLIENT | REG. NO. | DATE

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17-07-21	B.M.	A	ISSUED FOR INFORMATION
07-10-21	B.M.	B	ISSUED FOR TENDER

CLIENT

SANBI
Biodiversity for Life
South African National Biodiversity Institute

BVi Consulting Engineers Gauteng PTY (Ltd)
Registration no. 1998/000322/07
ENGINEERING PROCUREMENT MANAGEMENT
CESA GREEN BUILDING COUNCIL
Visit or contact us online at www.bvigroup.co.za
PROVINCE Gauteng | OFFICE Pretoria | +27 12 940 1111 | E-MAIL pta@bvigp.co.za

PROJECT: MOKOPANE

DRAWING TITLE: ROAD SECTIONS

APPROVED BY BVi

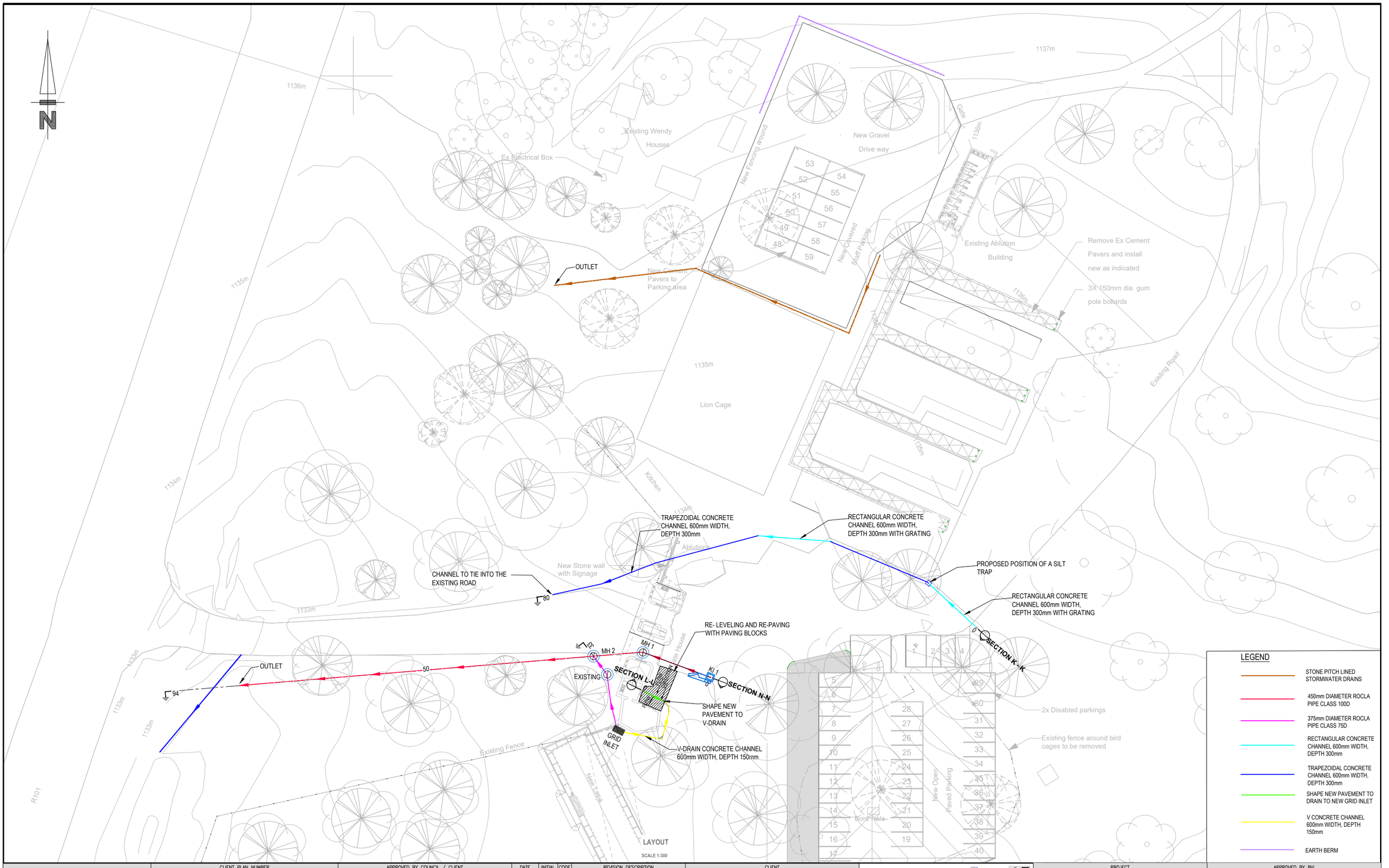
ENGINEER/TECHNOLOGIST | REG. NO. | DATE

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DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-111-03-01	B	13/10/2021 MassiquiniT A1

34398-02-111-03-01-RB

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DATE	INITIAL	CODE	REVISION DESCRIPTION
05-08-21	F.S.	A	ISSUED FOR INFORMATION
13-10-21	F.S.	B	ISSUED FOR TENDER

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PROJECT: MOKOPANE

DRAWING TITLE: STORMWATER LAYOUT

APPROVED BY BVi

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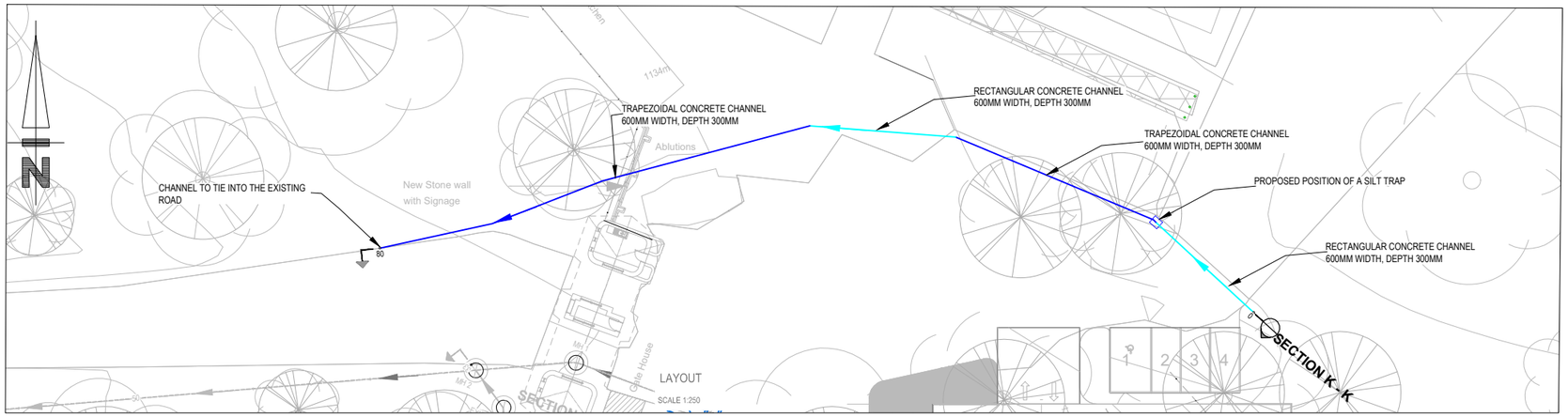
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DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA

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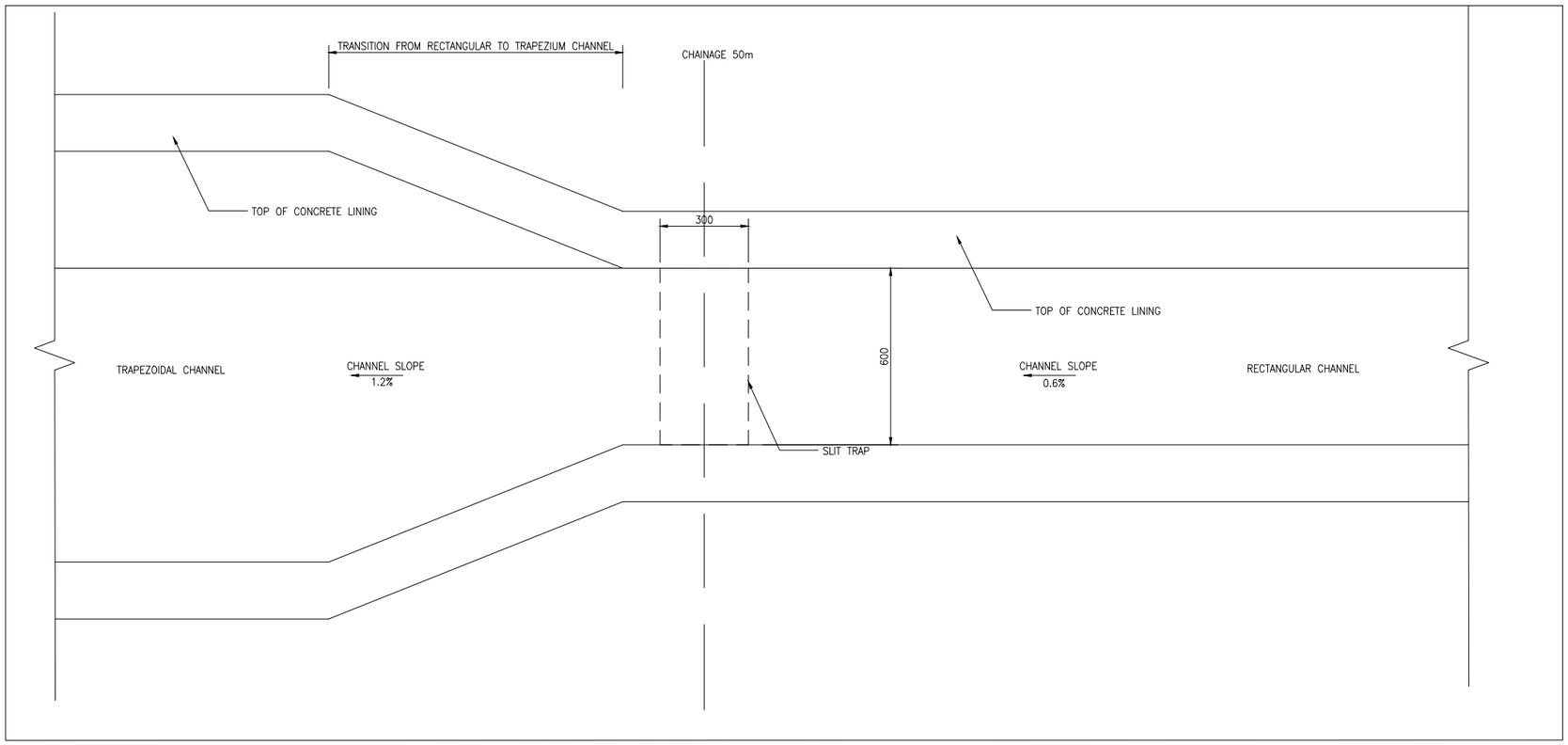
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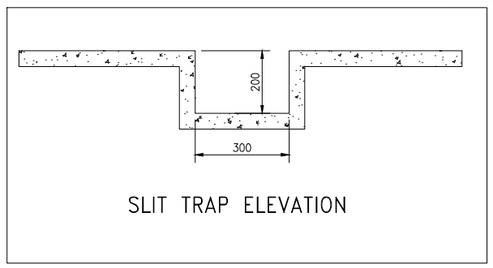
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LEGEND

- RECTANGULAR CONCRETE CHANNEL 600MM WIDTH, DEPTH 300MM
- TRAPEZOIDAL CONCRETE CHANNEL 600MM WIDTH, DEPTH 300MM





SLIT TRAP ELEVATION

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DATE	INITIAL	CODE	REVISION DESCRIPTION
15-09-21	B.M	A	ISSUED FOR INFORMATION
07-10-21	B.M	B	ISSUED FOR TENDER

CLIENT

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PROJECT: MOKOPANE

DRAWING TITLE: STORMWATER LAYOUT AND SECTIONS SHEET 1 OF 3

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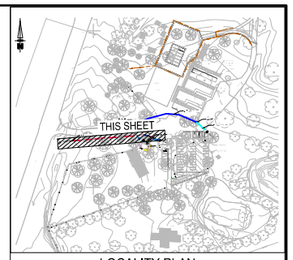
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DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA
PLAN NUMBER		REV. NO.	DATE SAVED
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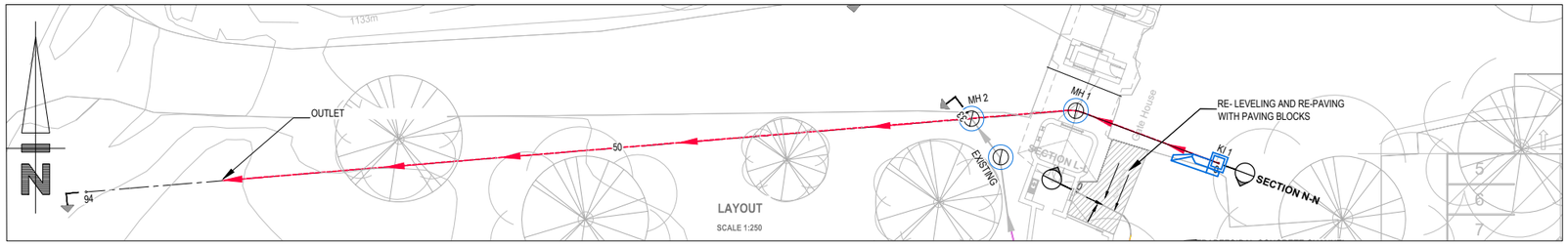
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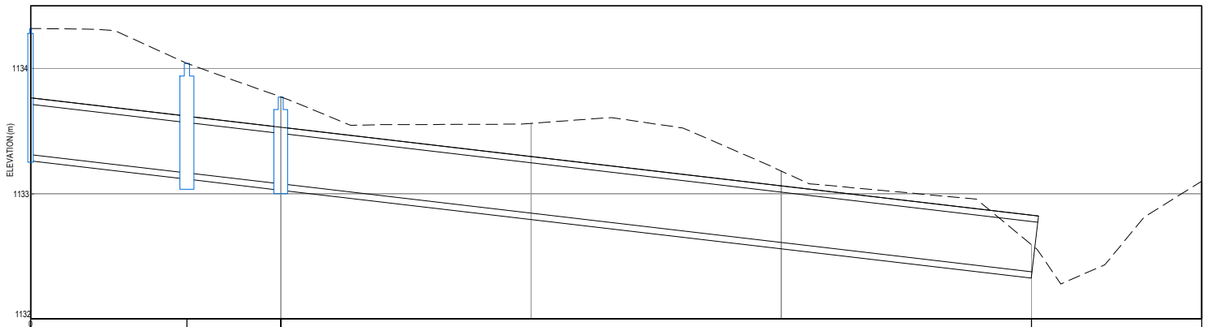
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LOCALITY PLAN
SCALE 1 : 3 000





HORIZONTAL SCALE 1:100
VERTICAL SCALE 1:10
DISTORTED SCALE 1:10

CHAINAGE (m)	12,439		20		80	94
MANHOLE	P1.1 KI 1	MH 1	P1.2	MH 2	P1.3	OUTLET
NATURAL GROUND LEVELS (m)	1134,319	134,004		133,772		132,592
INVERT LEVELS	133,315	133,072		133,081		132,376
DEPTH TO INVERT	1,004	0,932		0,691		0,216
GRADE (%)	-1,2%		-1,2%		-1,2%	
PIPE LENGTH	11,692		6,433		62,24	
PIPE DIAMETER PIPE MATERIAL	450 ROCLA CLASS 100D CONCRETE		450 ROCLA CLASS 75D CONCRETE			

SECTION N-N
SCALE 1:250

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REFERENCE DRAWINGS

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/E : BY OTHER ( )

DATE	INITIAL	CODE	REVISION DESCRIPTION
07-09-21	B.M.	A	ISSUED FOR INFORMATION
07-10-21	B.M.	B	ISSUED FOR TENDER

CLIENT

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PROJECT: MOKOPANE

DRAWING TITLE: STORMWATER LAYOUT AND SECTIONS (SHEET 2 OF 3)

APPROVED BY BVi

ENGINEER/TECHNOLOGIST _____ REG. NO. _____ DATE _____

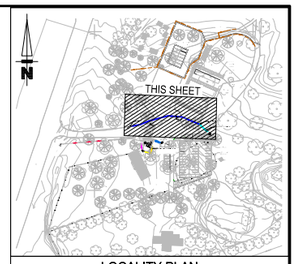
SCALE	AS SHOWN	DRAWN	M.A TEMBE
DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-121-01-02	B	13/10/2021 Massiquinit

A1

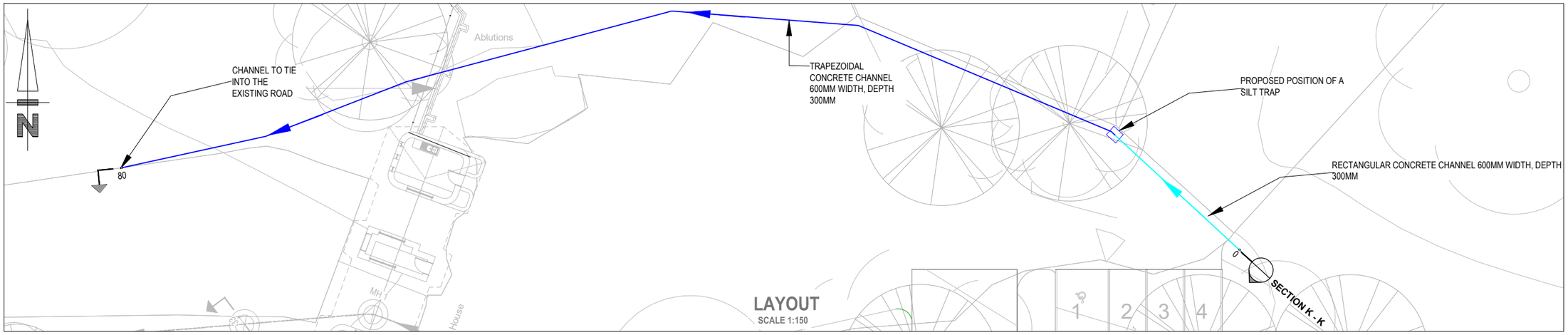
34398-02-121-01-02-RB

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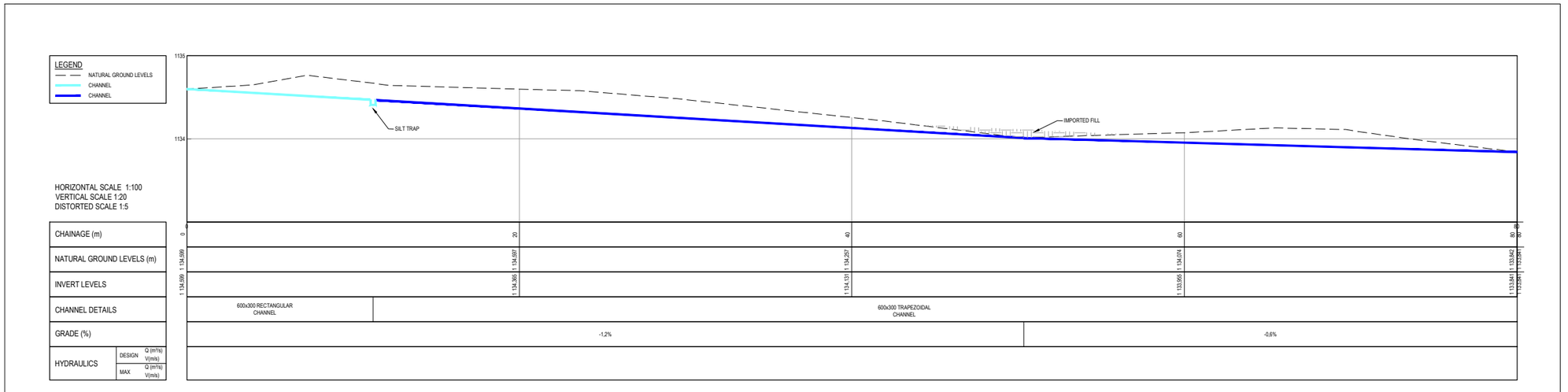
LOCALITY PLAN

SCALE: 1 : 12500



LAYOUT

SCALE 1:150



SECTION K-K

SCALE 1:150

DO NOT SCALE DRAWING
IF IN DOUBT, REFER TO DRAWING OFFICE

CLIENT PLAN NUMBER: ---

REFERENCE DRAWINGS

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DATE	INITIAL	CODE	REVISION DESCRIPTION
08–09–21	B.M	A	ISSUED FOR INFORMATION
07–10–21	B.M	B	ISSUED FOR TENDER

CLIENT

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PROJECT

MOKOPANE

DRAWING TITLE

STORMWATER LAYOUT AND SECTIONS (SHEET 3 OF 3)

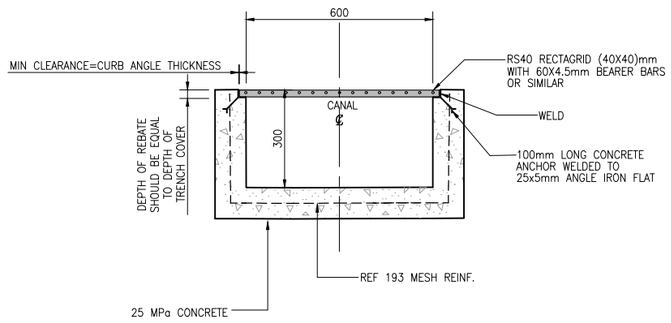
APPROVED BY BVi

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SCALE	AS SHOWN	DRAWN	M.A TEMBE
DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA
PLAN NUMBER		REV. NO.	DATE SAVED
34398-02-121-01-03		B	13/10/2021 Massiquini A1

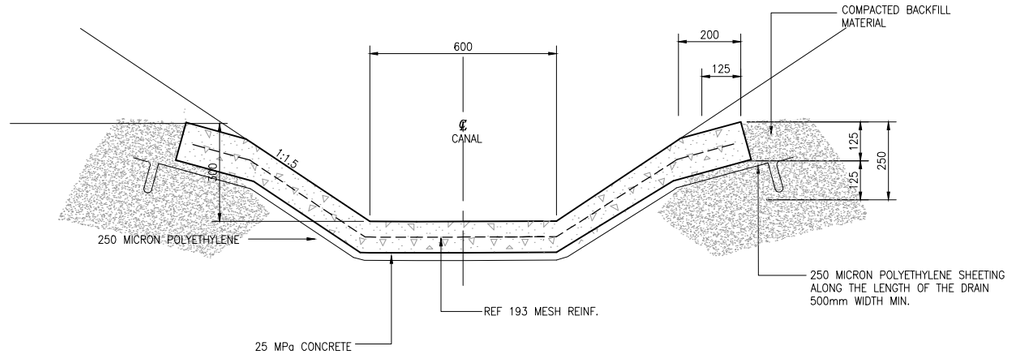
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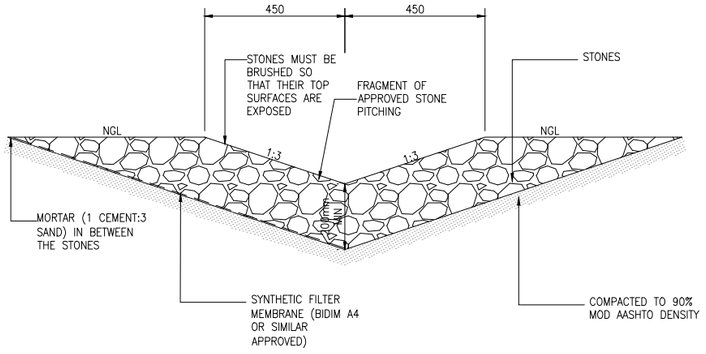
TYPICAL RECTANGULAR CHANNEL DETAIL

(FOR NON–TRAFFIC AREAS)
(200 mm THICK CONCRETE FOR TRAFFIC AREAS)
SCALE 1 : 10



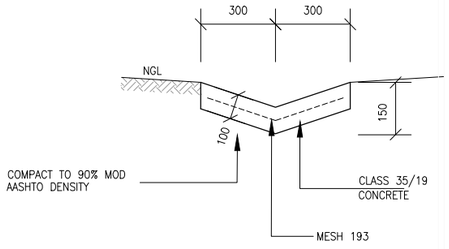
TYPICAL TRAPEZIUM CHANNEL DETAIL

(FOR NON–TRAFFIC AREAS)
(200 mm THICK CONCRETE FOR TRAFFIC AREAS)
SCALE 1 : 10



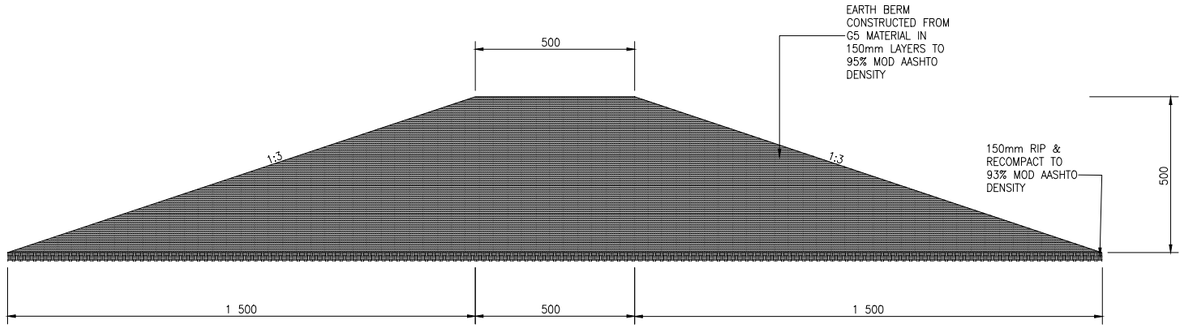
GROUTED STONE PITCHING

SCALE 1 : 10



TYPICAL STORMWATER CONCRETE V–CHANNEL – TYPE 25

SCALE 1 : 25



TYPICAL EARTH BERM

SCALE 1 : 10

DO NOT SCALE DRAWING
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CLIENT PLAN NUMBER: – – –

REFERENCE DRAWINGS

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DATE	INITIAL	CODE	REVISION DESCRIPTION
17–08–21	B.M	A	ISSUED FOR INFORMATION
07–10–21	B.M	B	ISSUED FOR TENDER

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PROJECT: MOKOPANE

DRAWING TITLE: STORMWATER CHANNELS SECTIONS

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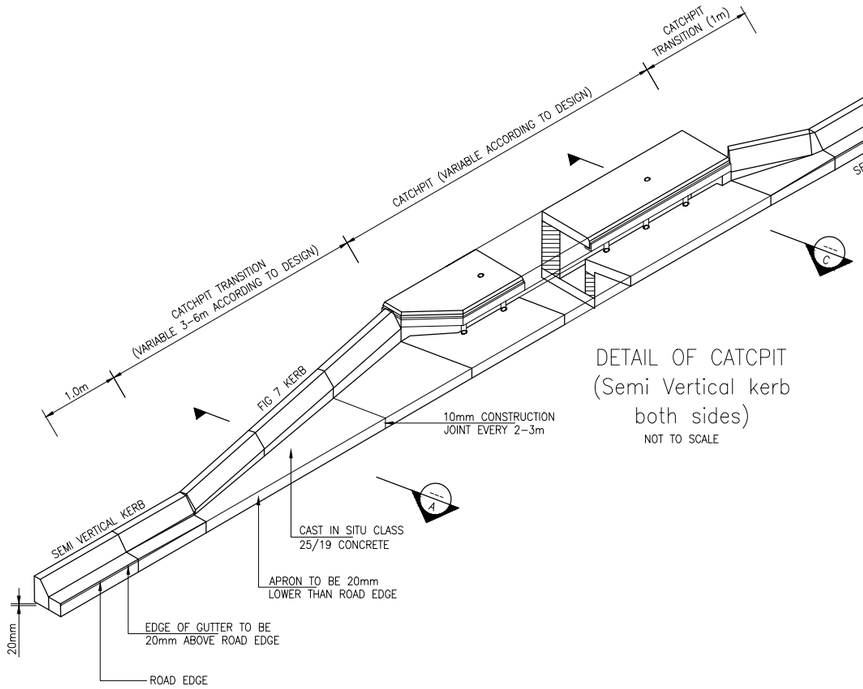
ENGINEER/TECHNOLOGIST | REG. NO. | DATE

SCALE	AS SHOWN	DRAWN	M.A TEMBE
DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA

PLAN NUMBER	REV. NO.	DATE SAVED
34398–02–123–01–01	B	19/10/2021 MassiquiniT A1

34398-02-123-01-01-RB

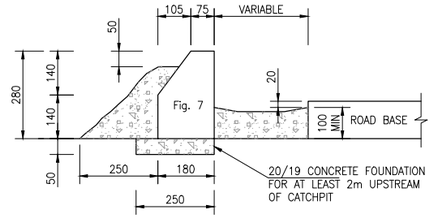
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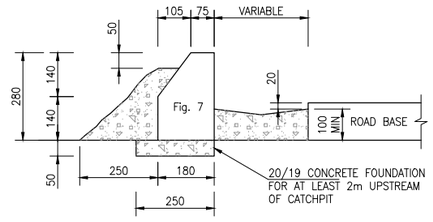
DETAIL OF CATCPIT
(Semi Vertical kerb both sides)
NOT TO SCALE

NOTES:

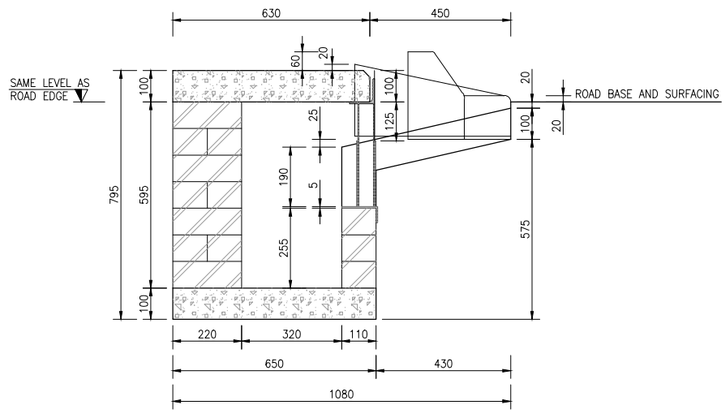
1. PERMISSION MUST BE OBTAINED FROM THE ENGINEER AS WELL AS FROM THE ROADS AND STORMWATER DINISION IF ANY OTHER CATCHPIT TYPE IS PROPOSED.
2. 'SILT TRAP CATCHPITS' WILL BE SPECIFIED BY THE ENGINEER IN AREAS SUBJECT TO SILTATION. 'SILT TRAP CATCHPITS' WILL BE CONSTRUCTED BY LOWERING THE CATCHPIT FLOOR WITH ONE BRICK LAYER AND CONSTRUCTING A 170MM HIGH DOUBLE BRICK WALL AT THE CATCHPIT OUTLET. THE WALL MUST NOT BE CONSTRUCTED TO THE WALLS OF THE CATCHPIT BUT A 10MM SLOT MUST BE FORMED ON EACH SIDE TO ENSURE WATER SEEPING THROUGH INTO THE JUNCTION BOX AFTER A STORM. THE OTHER LEVELS AND DIMENSIONS OF THE CATCHPIT REMAIN THE SAME.
3. 'SILT TRAP CATCHPIT' WILL BE MEASURED SEPARATELY FROM THE OTHER CATCHPITS AND INDICATED AS SUCH IN THE SCHEDULE OF QUANTITIES.



SECTION B
SCALE 1 : 10



SECTION A
SCALE 1 : 10



SECTION C
SCALE 1 : 10

NOTES / LEGEND

DO NOT SCALE

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REFERENCE DRAWINGS

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CITY ENGINEER / CLIENT | REG. NO. | DATE

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/E : BY OTHER ( )

DATE	INITIAL	No./CODE	REVISION DESCRIPTION
07/10/2021	B.M	B	ISSUED FOR TENDER
09/09/2021	B.M	A	ISSUED FOR INFORMATION

OFFICES

PROVINCE	OFFICE	☎	E-MAIL
Gauteng	Pretoria	(012) 349-0099	pta@bvigp.co.za
Free State	Bloemfontein	(051) 447-2137	bfn@bvifs.co.za
	Welkom	(057) 353-2499	wel@bvifs.co.za
Northern Cape	Upington	(054) 337-6600	upt@bvinc.co.za
	Springbok	(027) 712-9990	spk@bvinc.co.za
KwaZulu Natal	Durban	(031) 266-8382	dbn@bvikn.co.za
	Empangeni	(035) 788-0230	emp@bvikn.co.za
Eastern Cape	Port Elizabeth	(041) 373-4343	bviec@mweb.co.za
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bvi CONSULTING ENGINEERS
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Registration no. 1998/000322/07

CLIENT

SANBI Biodiversity for Life
South African National Biodiversity Institute

PROJECT

MOKOPANE

DRAWING TITLE

STORMWATER
CATCHPIT DETAILS
AND
SECTIONS

APPROVED BY BVi

ENGINEER/TECHNOLOGIST | REG. NO. | DATE

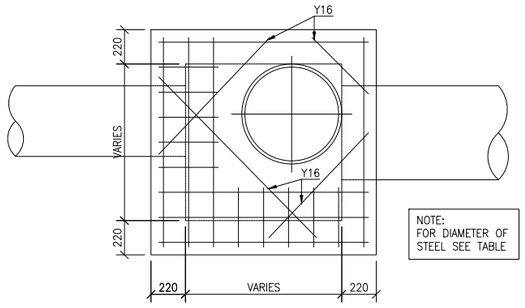
SCALE	AS SHOWN	DRAWN	M.A TEMBE
DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA

PLAN NUMBER	REVISION NO.	DATE SAVED
34398-02-123-02-01	B	13/10/2021 MassiquiniT

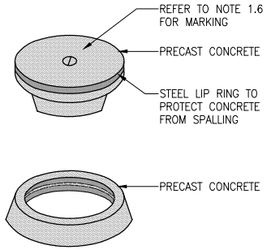
A1

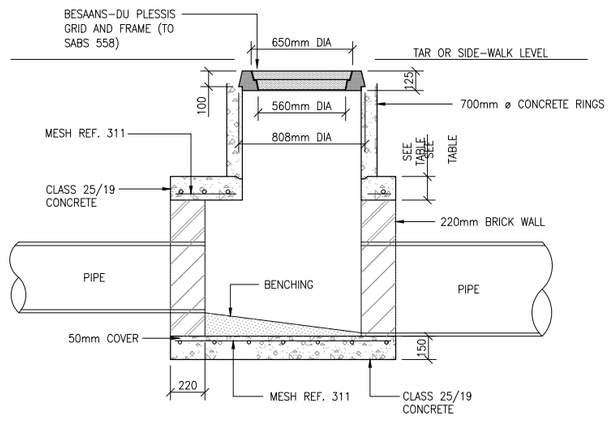
34398-02-123-02-01-RB

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PLAN



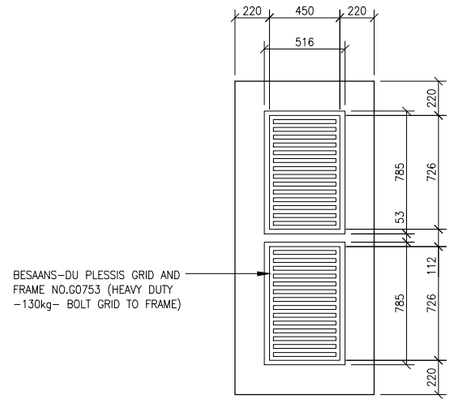


SECTION

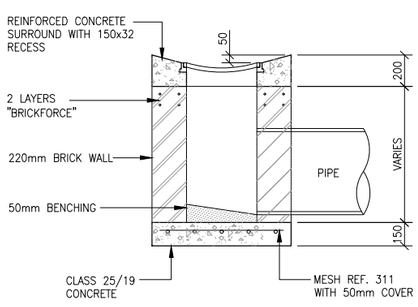
UPPER CONCRETE SLAB					
TYPE	INTERNAL SIZE	SLAB THICKNESS	STEEL DIA.	PIPE SIZE	STEEL SPACING
A	1000x1000	150	Y16	450-900	170
B	1500x1500	180	Y16	900-1500	140
C	1800x1800	200	Y16	1500-1800	120

STORMWATER MANHOLE

SCALE 1 : 20



PLAN



SECTION

DETAIL OF HEAVY DUTY GRID INLET

SCALE 1 : 20

NOTES / LEGEND

DO NOT SCALE

IF IN DOUBT, REFER TO DRAWING OFFICE

CLIENT PLAN NUMBER

REFERENCE DRAWINGS

NUMBER	REVISION	DRAWING DESCRIPTION

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DATE	INITIAL	No./CODE	REVISION DESCRIPTION
07/10/2021	B.M	B	ISSUED FOR TENDER
08/09/2021	B.M	A	ISSUED FOR INFORMATION

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	Welkom	(057) 353-2499	wel@bvifs.co.za
Northern Cape	Upington	(054) 337-6600	upt@bvinc.co.za
	Springbok	(027) 712-9990	spk@bvinc.co.za
KwaZulu Natal	Durban	(031) 266-8382	dbn@bvikn.co.za
	Empangeni	(035) 788-0230	emp@bvikn.co.za
Eastern Cape	Port Elizabeth	(041) 373-4343	bviec@mweb.co.za
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Pretoria
GAUTENG

CLIENT

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South African National Biodiversity Institute

PROJECT

MOKOPANE

DRAWING TITLE

TYPICAL
STORMWATER
DETAIL

APPROVED BY BVi

ENGINEER/TECHNOLOGIST | REG. NO. | DATE

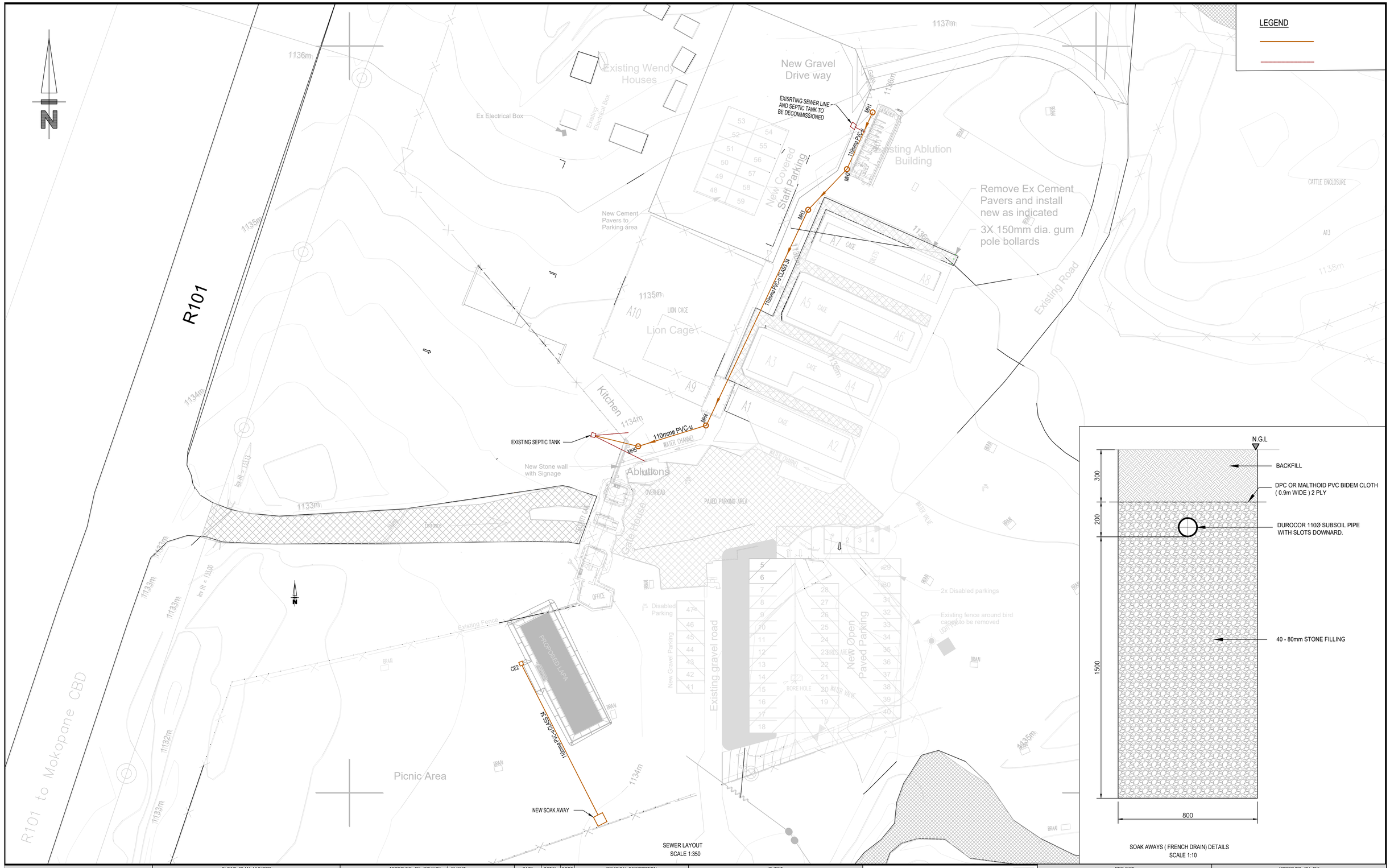
SCALE	AS SHOWN	DRAWN	M.A TEMBE
DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA

PLAN NUMBER	REVISION NO.	DATE SAVED
34398-02-123-03-01	B	07/10/2021 Massiquini

A1

34398-02-123-03-01-RB

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CLIENT PLAN NUMBER: ---

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION
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CITY ENGINEER / CLIENT | REG. NO. | DATE

AMENDMENTS CODE

A-Y / : REPORT/DESIGN/TENDER
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/D : BY BVi
/E : BY OTHER ( )

DATE	INITIAL	CODE	REVISION DESCRIPTION
09-06-21	B.M.	A	ISSUED FOR CLIENT REVIEW
07-10-21	B.M.	B	ISSUED FOR TENDER

CLIENT

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PROJECT: MOKOPANE

DRAWING TITLE: SEWER LAYOUT

APPROVED BY BVi

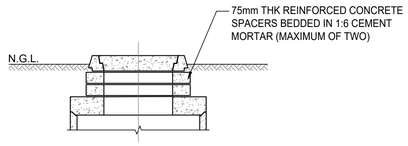
ENGINEER/TECHNOLOGIST | REG. NO. | DATE

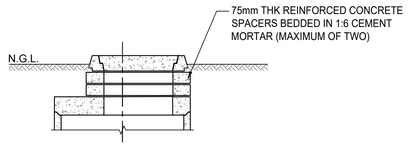
SCALE	AS SHOWN	DRAWN	B. MATYEKA
DESIGNED	B. MATYEKA	CHECKED	F.C.A SMITH
PLAN NUMBER		REV. NO.	DATE SAVED
34398-00-130-01-01		B	13/10/2021 BoitumeloM

A1

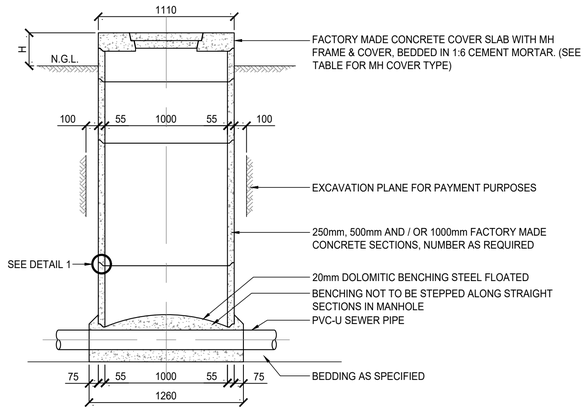
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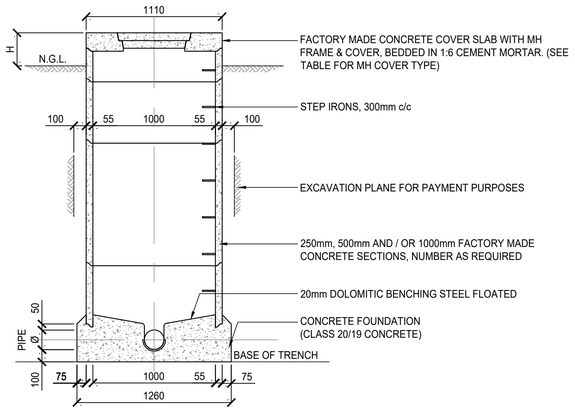




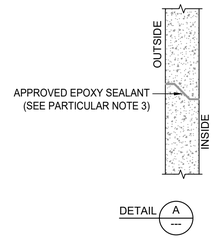
ALTERNATIVE LAYOUT WITH SPACERS



SECTION A
SCALE 1:25



SECTION B
SCALE 1:25

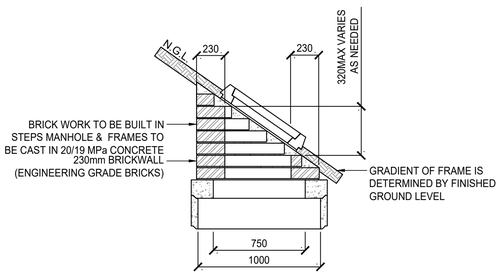


MANHOLE COVERS AND FRAMES
SANS 50124 (SABS EN 124)

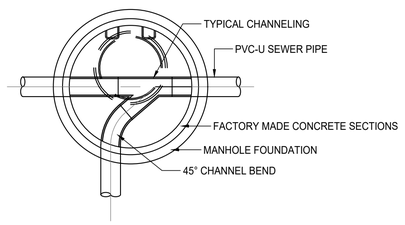
POSITION OF MANHOLE	FRAME AND COVER TYPE
ERVEN	560mm Ø CLASS B125 POLYESTER RESIN OR TYPE 4 CONCRETE REPLACEMENT

MANHOLE CHAMBER SIZES

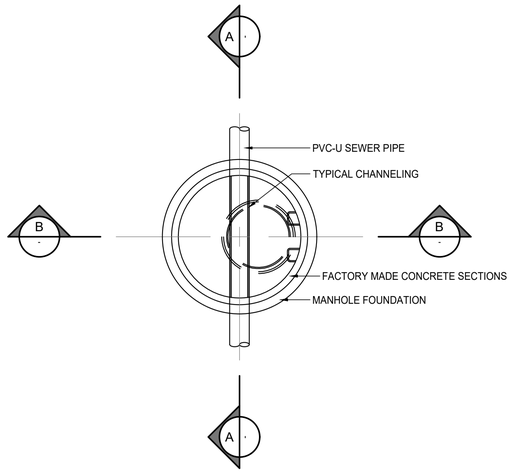
NOMINAL Ø (mm)	USAGE
1000	150 ND PIPES WITH STRAIGHT THROUGH MANHOLES UP TO 1.25m DEEP
1250	BENDS IN MANHOLES, LARGER PIPES & MANHOLES BETWEEN 1.25m & 3.0m DEEP
1500	LARGER PIPES & MANHOLES DEEPER THAN 3.0 m



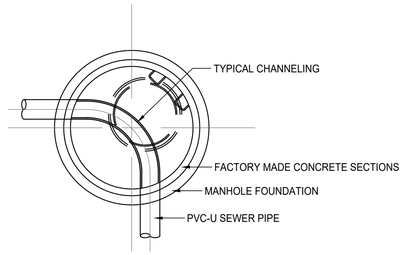
TYPICAL SECTION
SCALE 1 : 25
BUILT IN MANHOLE FRAME AT FINISHED SLOPED SIDEWALKS (WITH WRITTEN PERMISSION FROM THE ENGINEER ONLY)



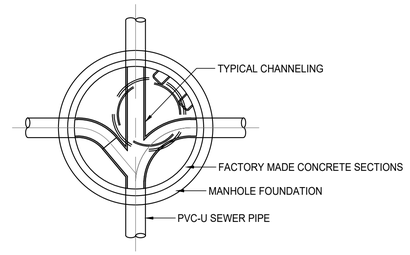
PLAN
SCALE 1 : 25
(TYPICAL EXAMPLE OF THROUGH CONNECTION IN MANHOLE)



PLAN
SCALE 1 : 25
(TYPICAL EXAMPLE OF 90° CONNECTION IN MANHOLE)



PLAN
SCALE 1 : 25
(TYPICAL EXAMPLE OF 90° BEND IN MANHOLE)



PLAN
SCALE 1 : 25
(TYPICAL EXAMPLE OF SIDE CONNECTIONS IN MANHOLE)

DO NOT SCALE DRAWING
IF IN DOUBT, REFER TO DRAWING OFFICE

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MOKOPANE

SEWER TYPICALDETAIL

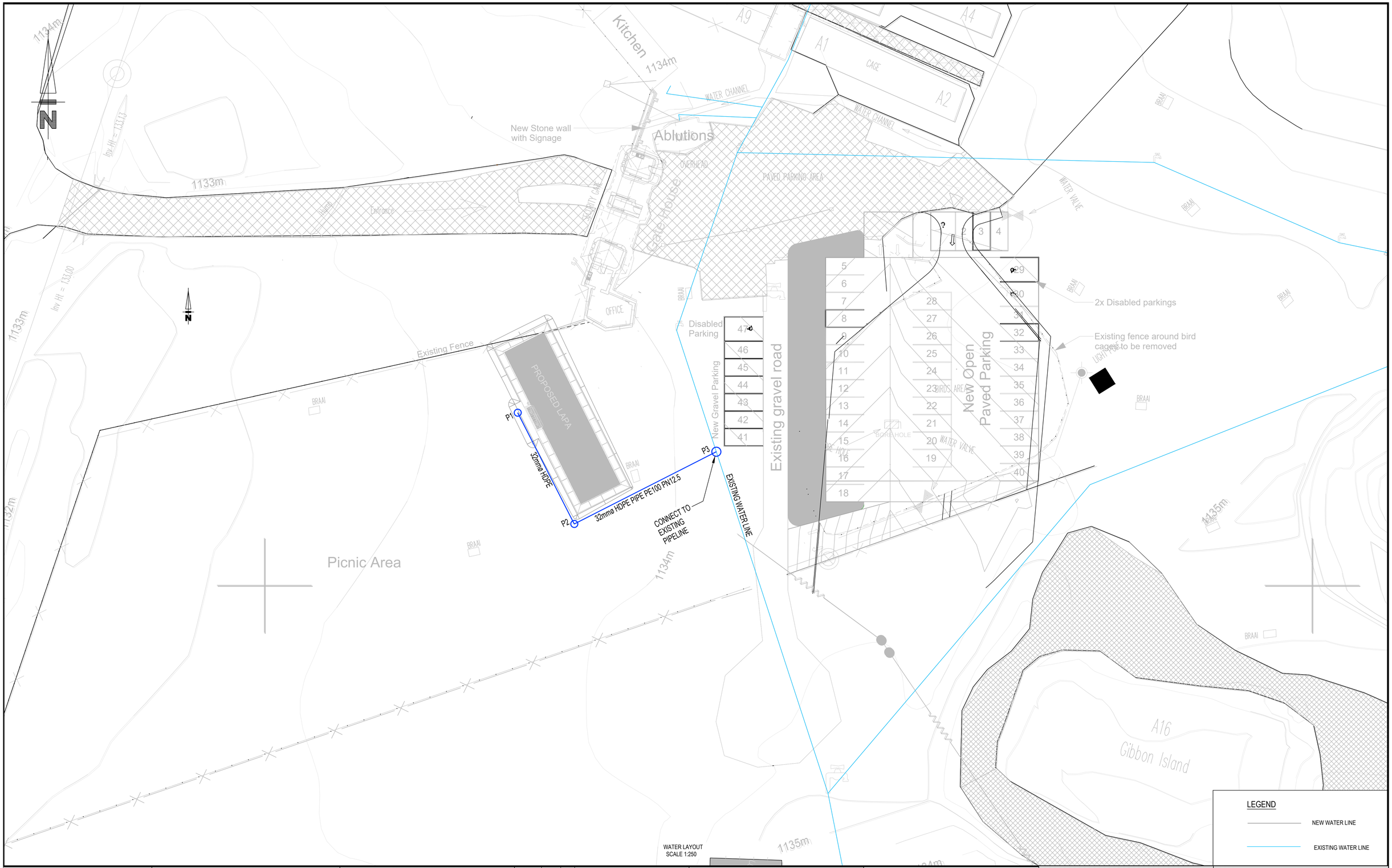
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ENGINEER/TECHNOLOGIST | REG. NO. | DATE

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DESIGNED	BM	CHECKED	BM

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CLIENT PLAN NUMBER: ---

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION
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PROJECT: MOKOPANE

DRAWING TITLE: WATER LAYOUT

APPROVED BY BVi

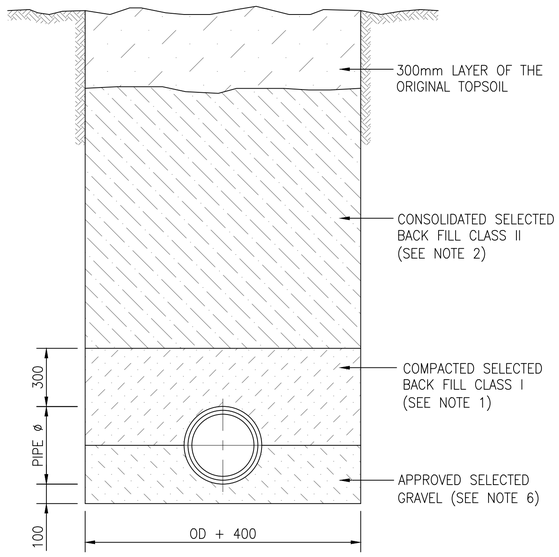
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DESIGNED	B. MATYEKA	CHECKED	F.C.A SMITH

PLAN NUMBER	REV. NO.	DATE SAVED
34398-00-140-01-01	B	13/10/2021 BoitumeloM A1

34398-02-140-01-RB

P:\34398-02\16 Drawings\16.4 Civil\140 - Water\bind\34398-02-140-01-01-RB.dwg



CLASS "B" BEDDING

SELECTED BACK FILL BEDDING FOR uPVC AND HDPE PIPES

NOTES :

BACK FILLING OF TRENCH EXCAVATIONS

1. SELECTED BACK FILL CLASS I – IMPLIES APPROVED SELECTED MATERIAL FROM TRENCH EXCAVATION, FREE FROM STONES AND WITH A OPTIMUM MOISTURE CONTENT.
2. SELECTED BACK FILL CLASS II – IMPLIES SELECTED BACK FILL FROM THE TRENCH EXCAVATION, WHICH SHALL NOT CONTAIN ANY STONES LARGER THAN 150mm ø.
3. CLASS "A" BEDDING/ ENCASING CONCRETE BETWEEN JOINTS SHALL BE CARRIED OUT IN ONE CONTINUOUS OPERATION USING CLASS 20/19 CONCRETE.
4. FLEXIBLE JOINTS MUST BE PROVIDED, AT EACH PIPE JOINT IN A CLASS "A" CONCRETE BEDDING/ENCASING, WITH A 12mm THICK SOFT BOARD PLACED VERTICALLY FOR THE ENTIRE CONCRETE AREA. PIPE JOINTS MUST BE SEALED WITH WET CLAY TO PREVENT SLUSH FROM PENETRATING THE JOINT.
5. EXCEPT FOR THE 300mm BACK FILL ON TOP OF THE PIPE THE BALANCE OF THE TRENCH MAY BE BACK FILLED WHEN THE CLASS "A" BEDDING/ENCASING HAS OBTAINED A COMPRESSIVE STRENGTH OF 15 MPa.
6. APPROVED SELECTED GRAVEL MATERIAL WITH A PI NOT EXCEEDING 6, FREE FROM STONES EXCEEDING 20mm, ORGANIC MATTER AND LUMPS OF CLAY.

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MOKOPANE

WATER DETAILS

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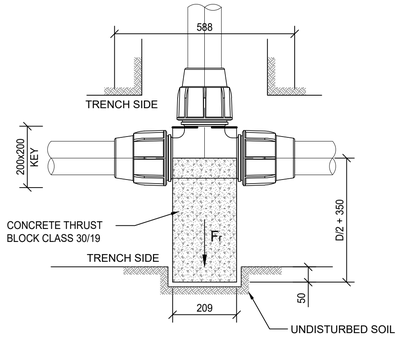
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DESIGNED	BM	CHECKED	BM

PLAN NUMBER	REV. NO.	DATE SAVED
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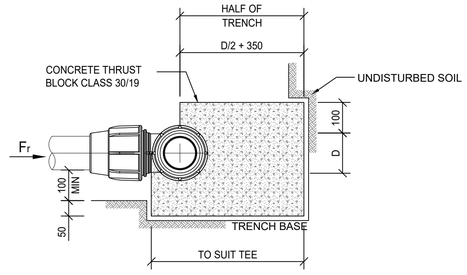
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PLAN OF TEE

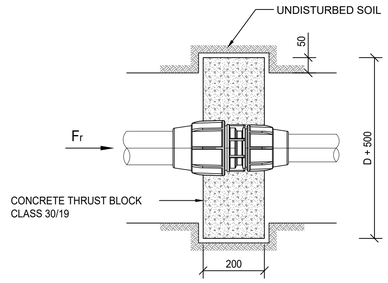
EXAMPLE SHOWS A 110
EQUAL TEE

SCALE 1 : 10



ELEVATION OF TEE

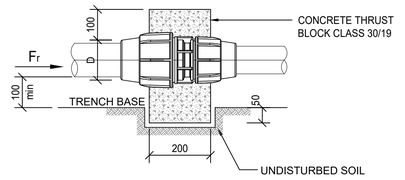
EXAMPLE SHOWS A 110
EQUAL TEE
SCALE 1 : 10



PLAN OF REDUCER

EXAMPLE SHOWS A 110
TO 90 REDUCER

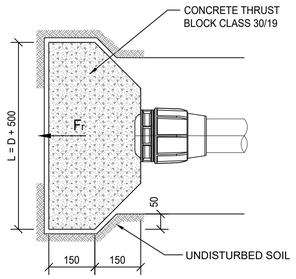
SCALE 1 : 10



SIDE ELEVATION OF REDUCER

EXAMPLE SHOWS A 110
TO 90 REDUCER

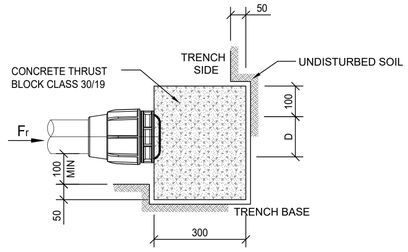
SCALE 1 : 10



PLAN OF END CAP

EXAMPLE SHOWS A
110 END CAP

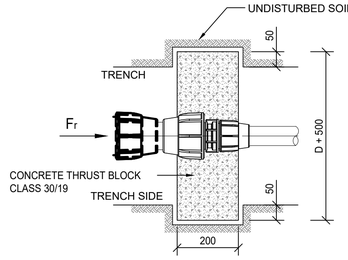
SCALE 1 : 10



ELEVATION OF END CAP

EXAMPLE SHOWS A
110 END CAP

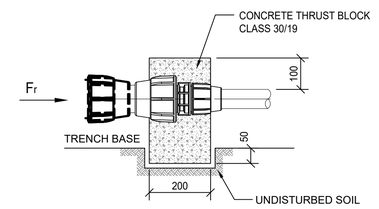
SCALE 1 : 10



PLAN OF REDUCER BUSH

EXAMPLE SHOWS A 110
TO 50 REDUCER BUSH

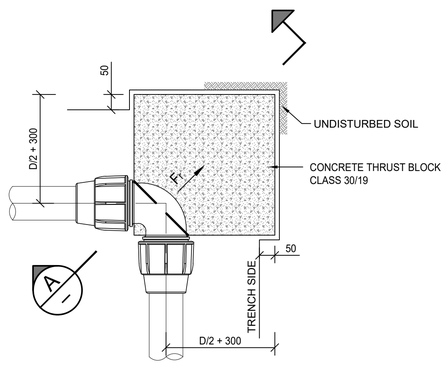
SCALE 1 : 10



SIDE ELEVATION OF REDUCER BUSH

EXAMPLE SHOWS A 110
TO 50 REDUCER BUSH

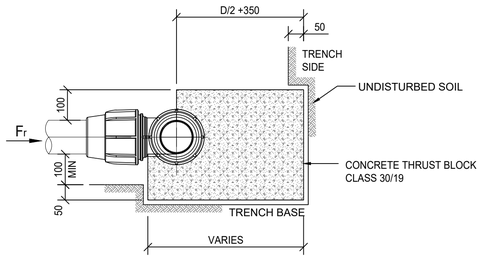
SCALE 1 : 10



PLAN OF 90° BEND

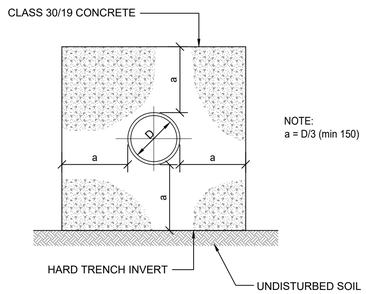
EXAMPLE SHOWS A
110 90° BEND

SCALE 1 : 10



SECTION A–A
SCALE 1 : 10

EXAMPLE SHOWS A
110 90° BEND



CONCRETE ENCASING DETAILS

NOT TO SCALE

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ENGINEERING PROCUREMENT MANAGEMENT

MOKOPANE

POTABLE WATER
HDPE PIPING THRUST
BLOCK DETAILS

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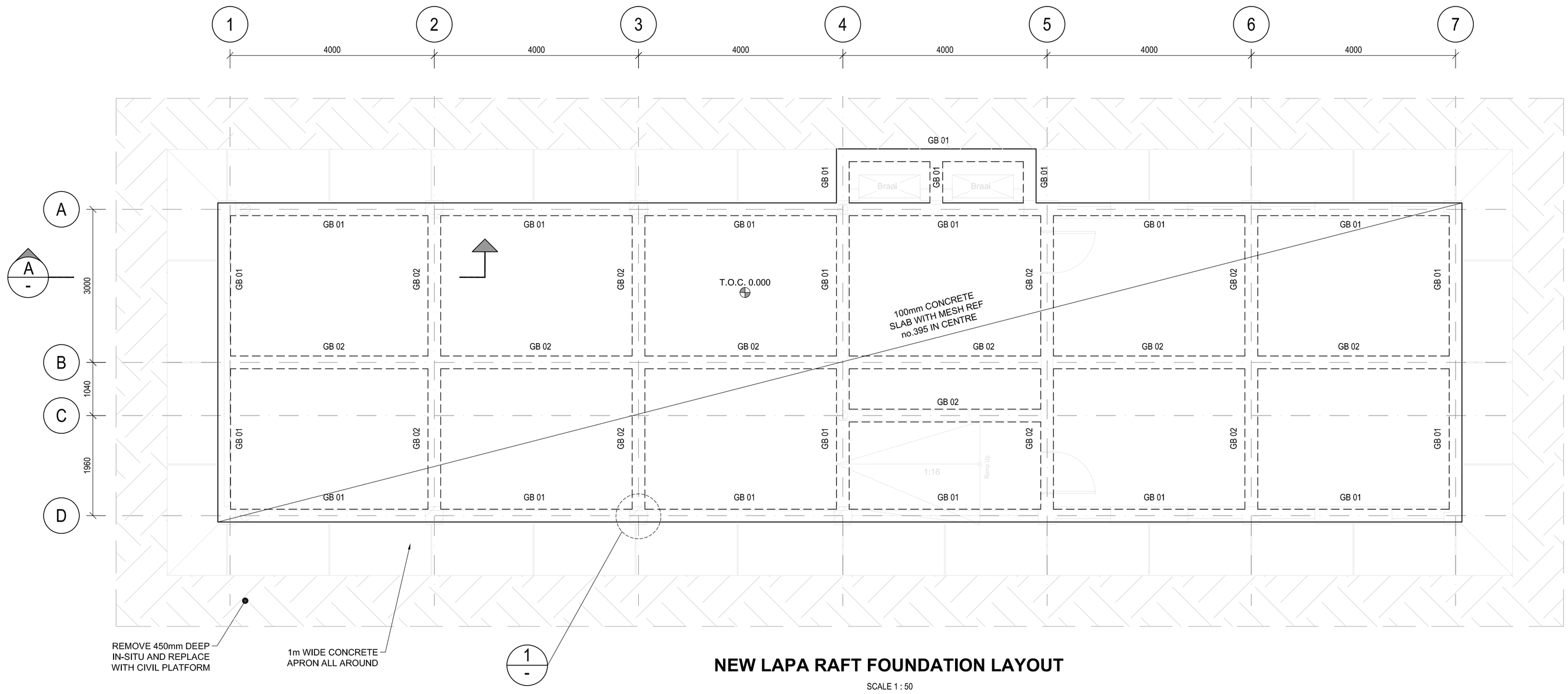
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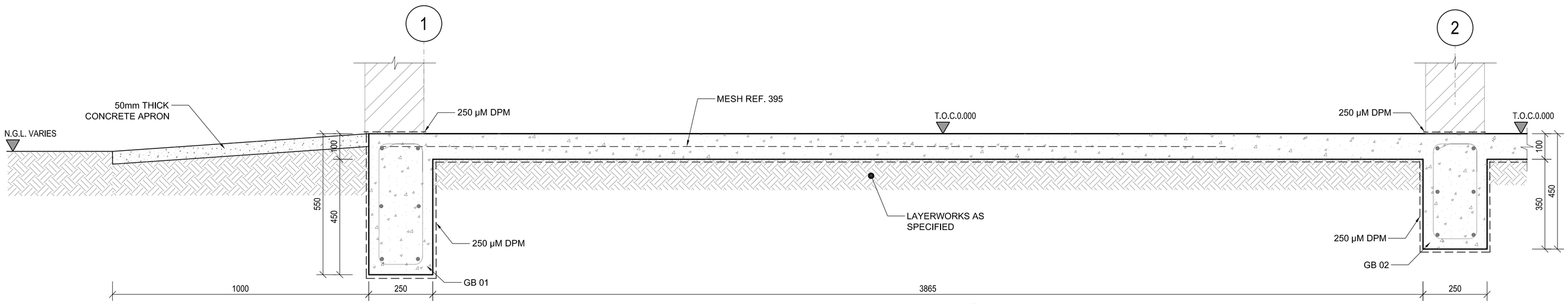
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NEW LAPA RAFT FOUNDATION LAYOUT

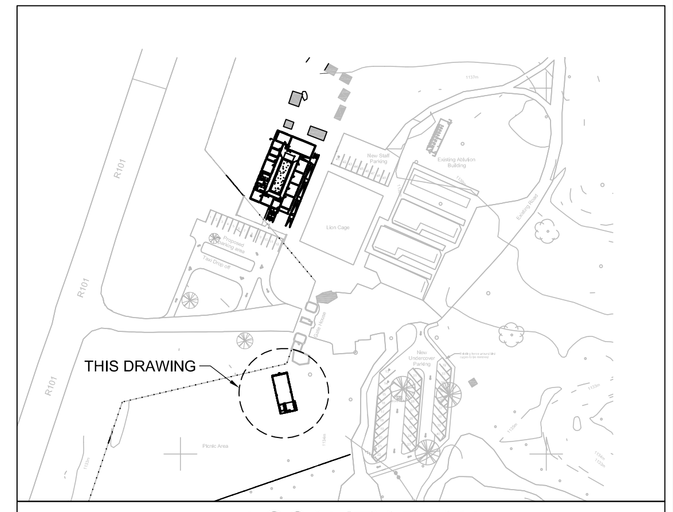
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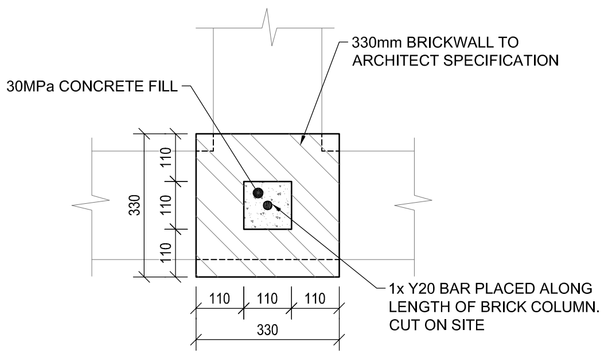
SECTION A

SCALE 1 : 10

TYPICAL RAFT SECTION



LOCALITY PLAN



DETAIL 1/-

SCALE 1 : 5

BRICK COLUMN DETAIL (6 No. OFF)

SCALE 1 : 5

CONCRETE NOTES :

1. CONCRETE GRADE: 30 MPa/19mm.
2. CONCRETE SURFACE TO BE FINISHED WITH 30MM THICK 1:4 SMOOTH CEMENT SAND SCREED
3. The Contractor shall adhere to the following codes during construction as applicable:
   SANS 2001 Construction Works:
   Part CC1: Concrete Works (Structural)
   Part CC2: Concrete Works (Minor Works)
   Part CG1: Installation of Glazing in Window and Door Frames
   Part CM1: Masonry Walling
   Part CS1: Structural Steelwork
   Part CT1: Structural Timberwork (Flooring)
   Part CT2: Structural Timberwork (Roofing)
   Part EM1: Cement Plaster

   SANS 10155 Accuracy in Buildings
   Grade II permissible deviation / tolerance shall apply unless otherwise noted.
   One copy of each of these codes shall be kept on site and shall be made available to The Engineer on request.

MASONRY NOTES :

1. ALL BRICK WALLS TO BE OF SOLID HARD BURNED CLAY BRICKS WITH A COMPRESSIVE STRENGTH OF NOT LESS THAN 14MPa LAID ON A CLASS II MORTAR WITH A 28 DAYS COMPRESSIVE STRENGTH OF 5MPa AS SPECIFIED IN SABS 0164 PART 1-1987 (CODE OF PRACTICE FOR MASONRY).
2. BRICKFORCE :
   MINIMUM DIAMETER OF BRICKFORCE = 2.8mm.
   YIELD STRENGTH = 485MPa.
   LAP LENGTH = 400mm.
3. BRICKFORCE TO BE PLACED IN THE FIRST FIVE LAYERS OF BRICKWORK ON STRIP FOOTINGS, THEREAFTER TO BE PLACED IN EVERY 4th LAYER. PLACE BRICKFORCE IN THE FIRST 5 LAYERS OF BRICKWORK OVER ALL WINDOW AND DOOR OPENINGS.
4. LAYOUT OF ALL BRICKWORK TO ARCHITECT'S DRAWINGS.
5. DPM TO BE PLACED ON SLAB PRIOR TO LAYING BRICKWORK

LEGEND

GB01 : GROUND BEAM TYPE 1: 250mm X 550mm DEEP
GB02 : GROUND BEAM TYPE 2: 250mm X 450mm DEEP
M.J : 10mm MOVEMENT JOINT IN BRICK WALL

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Mokopane

NEW LAPA FOUNDATION LAYOUT AND DETAILS

APPROVED BY BVi

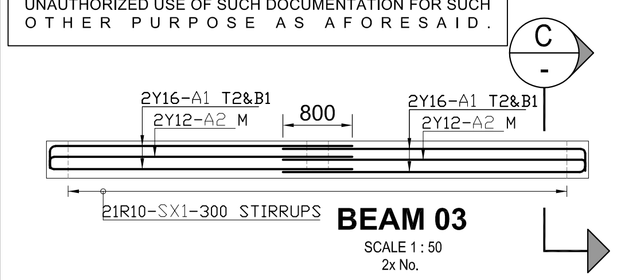
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DESIGNED	A.M	CHECKED	S.R
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34398-02-201-01-01		A	2021-10-05 Albert Manamela

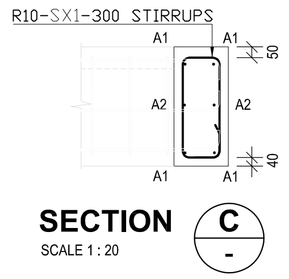
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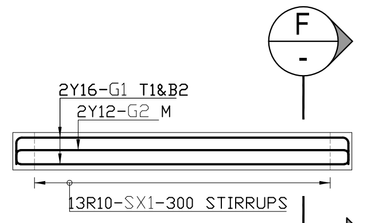
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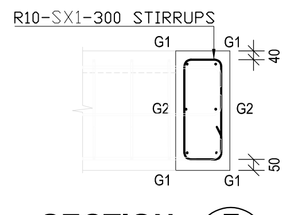
BEAM 03
SCALE 1 : 50
2x No.



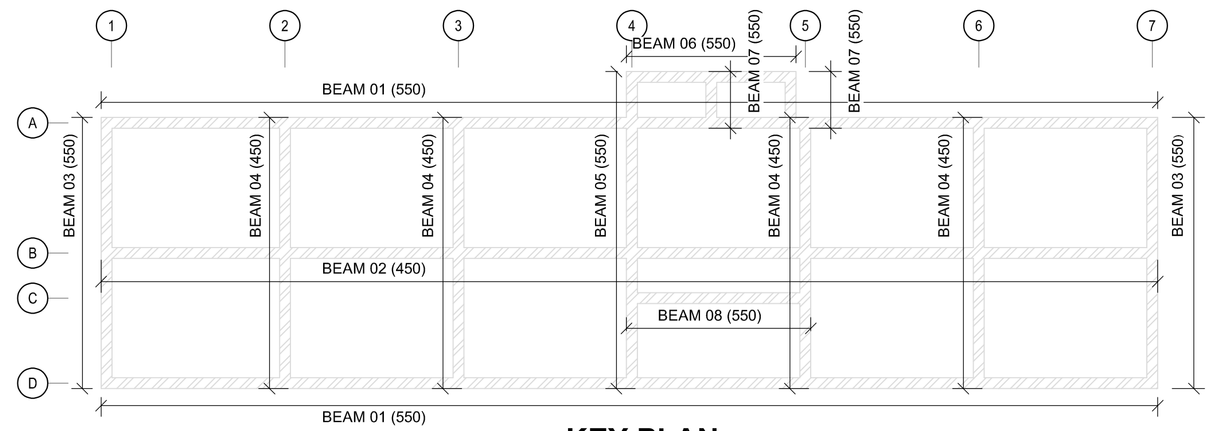
SECTION C
SCALE 1 : 20



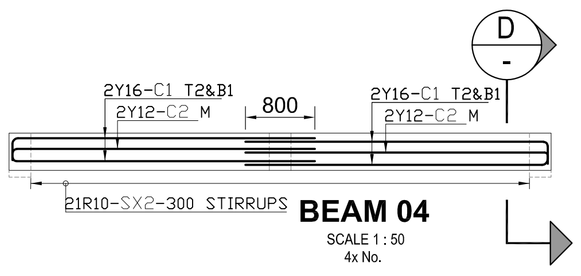
BEAM 06
SCALE 1 : 50
1x No.



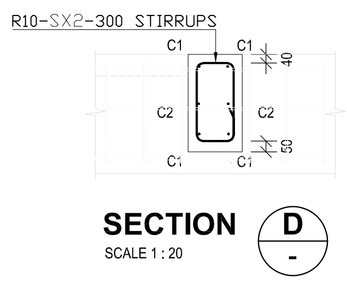
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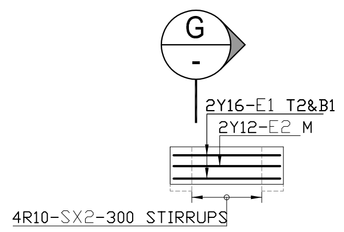
KEY PLAN



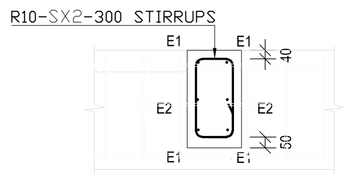
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4x No.



SECTION D
SCALE 1 : 20



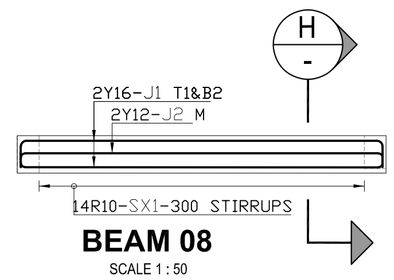
BEAM 07
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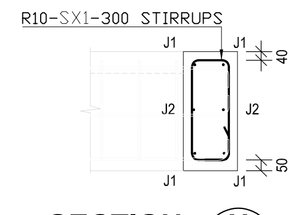
SECTION G
SCALE 1 : 20

MEMBER	NO OF	NO BARS	DIA	CUT LENGTH	TOTAL	BAR MARK	SC	A	B	C	D	E/R	kg
BEAM 01	2	8	Y16	5900	16	F1	37	5800	[120]				149
	2	4	Y12	5900	8	F2	37	5800	[120]				42
	2	8	Y16	5950	16	F3	20	[5940]					150
	2	4	Y12	5950	8	F4	20	[5940]					42
	2	4	Y16	4000	8	F5	20	[4000]					51
	2	2	Y12	4000	4	F6	20	[4000]					14
	2	81	R10	1400	162	SX1	60	170	460				140
BEAM 02	1	8	Y16	5900	8	H1	37	5800	[120]				74
	1	4	Y12	5900	4	H2	37	5800	[120]				21
	1	8	Y16	5950	8	H3	20	[5940]					75
	1	4	Y12	5950	4	H4	20	[5940]					21
	1	4	Y16	4000	4	H5	20	[4000]					25
	1	2	Y12	4000	2	H6	20	[4000]					7
	1	81	R10	1200	81	SX2	60	170	360				60
BEAM 03	2	8	Y16	3550	16	A1	37	3480	[120]				90
	2	4	Y12	3600	8	A2	37	3480	[120]				26
	2	21	R10	1400	42	SX1	60	170	460				36
BEAM 04	4	8	Y16	3550	32	C1	37	3480	[120]				179
	4	4	Y12	3600	16	C2	37	3480	[120]				51
	4	21	R10	1200	84	SX2	60	170	360				62
BEAM 05	1	8	Y16	4100	8	D1	37	4010	[120]				52
	1	4	Y12	4100	4	D2	37	4010	[120]				15
	1	24	R10	1400	24	SX1	60	170	460				21
BEAM 06	1	4	Y16	4100	4	G1	38	160	3830	[160]			26
	1	2	Y12	4100	2	G2	38	160	3830	[160]			7
	1	13	R10	1400	13	SX1	60	170	460				11
BEAM 07	2	4	Y16	1250	8	E1	20	[1220]					16
	2	2	Y12	1250	4	E2	20	[1220]					4
	2	4	R10	1200	8	SX2	60	170	360				6
BEAM 08	1	4	Y16	4400	4	J1	38	160	4170	[160]			28
	1	2	Y12	4450	2	J2	38	160	4160	[160]			8
	1	14	R10	1400	14	SX1	60	170	460				12
MESH REF 395 = 160m²													

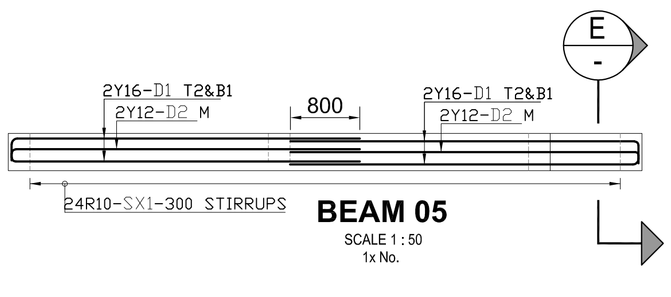
	6	8	10	12	16	20	25	32	40	TOTAL
R			348							348
Y				258	915					1173
TOTAL			348	258	915					1521



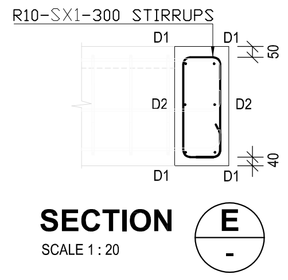
BEAM 08
SCALE 1 : 50
1x No.



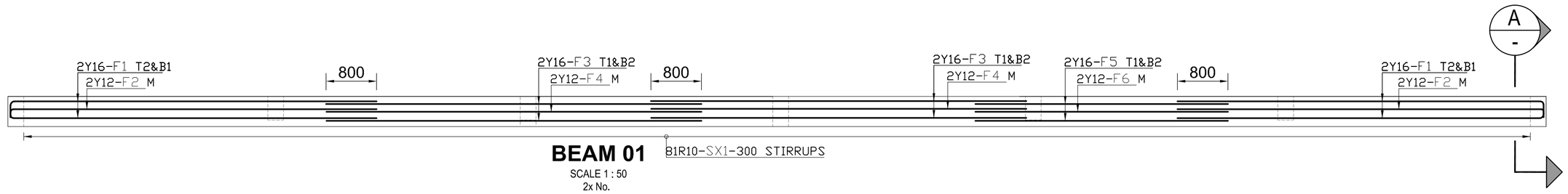
SECTION H
SCALE 1 : 20



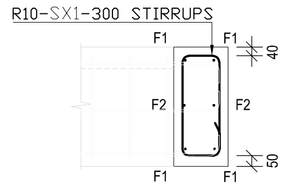
BEAM 05
SCALE 1 : 50
1x No.



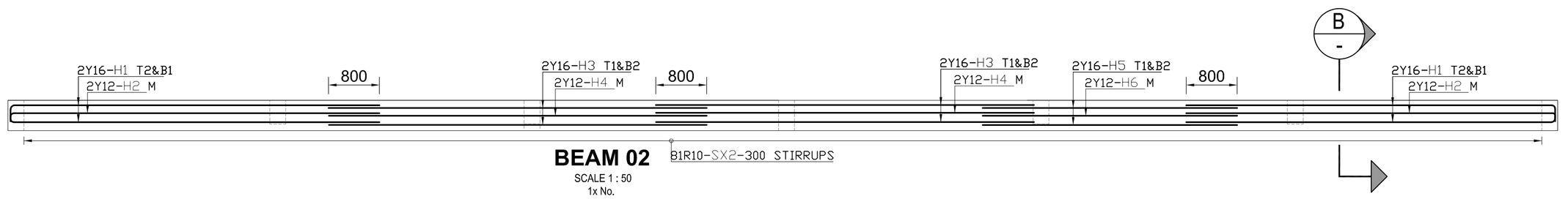
SECTION E
SCALE 1 : 20



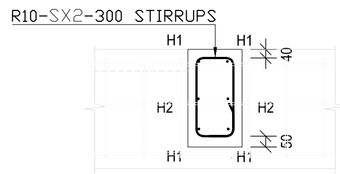
BEAM 01
SCALE 1 : 50
2x No.



SECTION A
SCALE 1 : 20



BEAM 02
SCALE 1 : 50
1x No.



SECTION B
SCALE 1 : 20

CONCRETE COVER:
TOP : AS SHOWN
BOTTOM : AS SHOWN
SIDES : 40mm

LAP LENGTH:
MINIMUM 50Ø
12mmØ BARS = 600mm
16mmØ BARS = 800mm

CONCRETE GRADE : 30 MPa

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CESA GREEN BUILDING COUNCIL

ENGINEERING PROCUREMENT MANAGEMENT

Mokopane

NEW OFFICE BUILDING REINFORCEMENT SECTIONS AND DETAILS

APPROVED BY BVi

ARCHITECT | REG. NO. | DATE

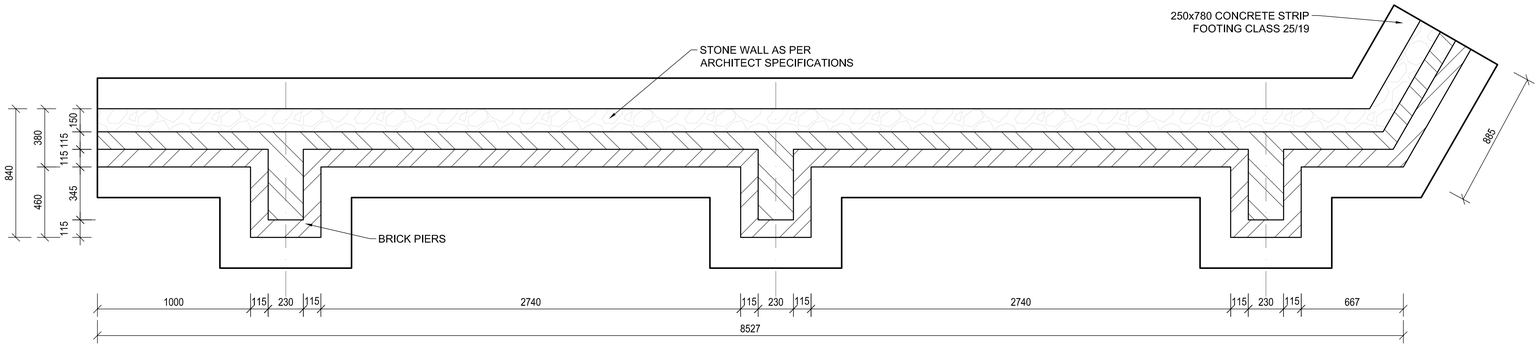
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DESIGNED	A.M	CHECKED	S.R

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-201-02-01	0A	2021-06-09 Desmond Brand

A1

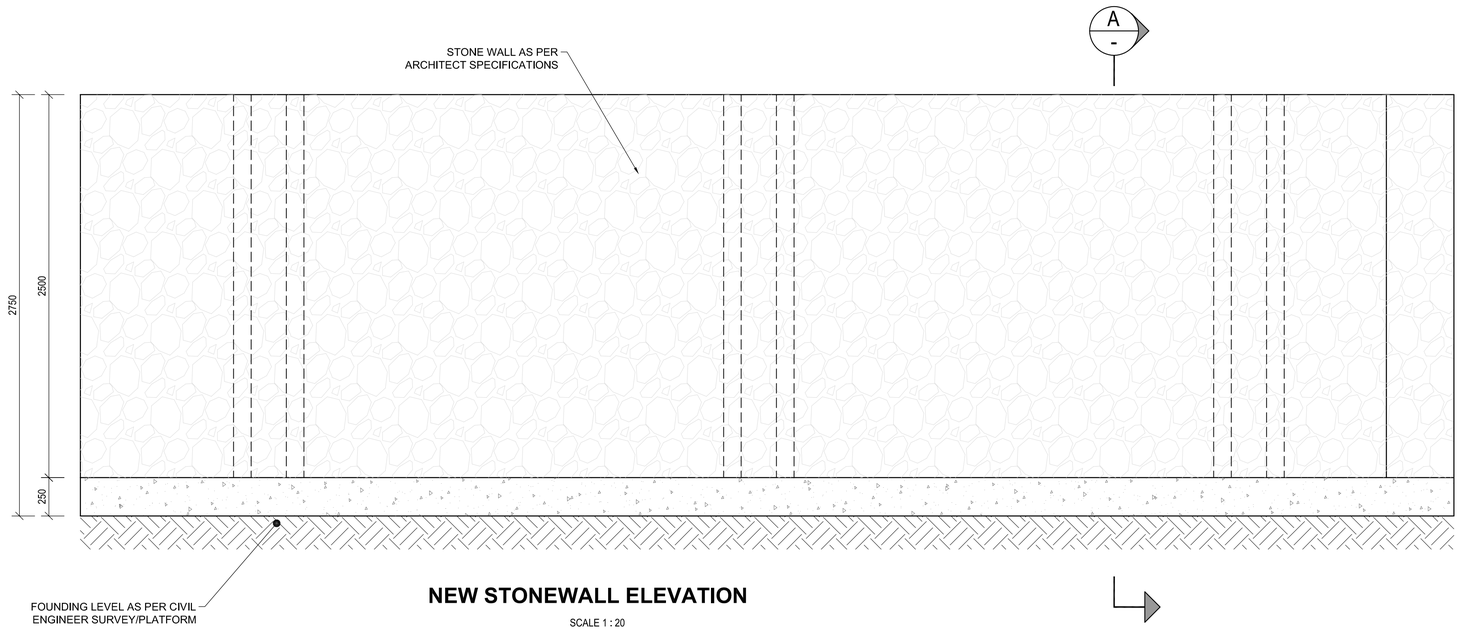
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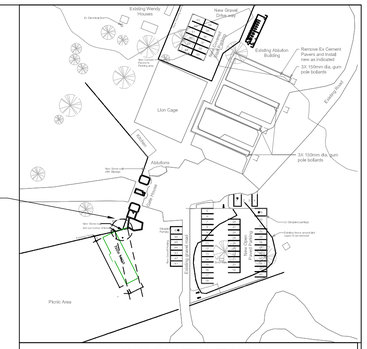
NEW STONEWALL PLAN

SCALE 1 : 50

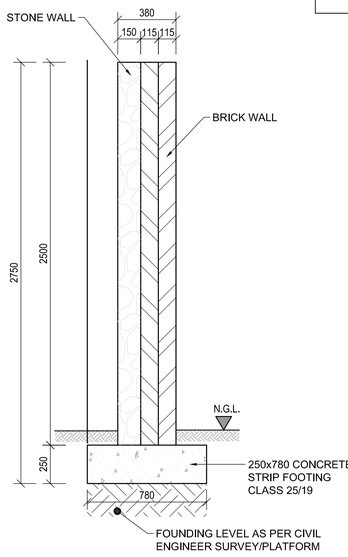


NEW STONEWALL ELEVATION

SCALE 1 : 20



LOCALITY PLAN



SECTION A-

SCALE 1 : 20

CONCRETE COVER:
TOP : 40mm
BOTTOM : 50mm
SIDES : 40mm

LAP LENGTH:
MINIMUM 50Ø
12mmØ BARS = 600mm
16mmØ BARS = 800mm

CONCRETE GRADE : 30 MPa

CONCRETE NOTES :

1. CONCRETE GRADE: 30 MPa/19mm.
2. CONCRETE SURFACE TO BE FINISHED WITH 30MM THICK 1:4 SMOOTH CEMENT SAND SCREED
3. The Contractor shall adhere to the following codes during construction as applicable:
   SANS 2001 Construction Works:
   Part CC1: Concrete Works (Structural)
   Part CC2: Concrete Works (Minor Works)
   Part CG1: Installation of Glazing in Window and Door Frames
   Part CM1: Masonry Walling
   Part CS1: Structural Steelwork
   Part CT1: Structural Timberwork (Flooring)
   Part CT2: Structural Timberwork (Roofing)
   Part EM1: Cement Plaster

   SANS 10155 Accuracy in Buildings
   Grade II permissible deviation / tolerance shall apply unless otherwise noted.
   One copy of each of these codes shall be kept on site and shall be made available to The Engineer on request.

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MOKOPANE

NEW STONE WALL CONCRETE LAYOUT AND SECTIONS

APPROVED BY BVI

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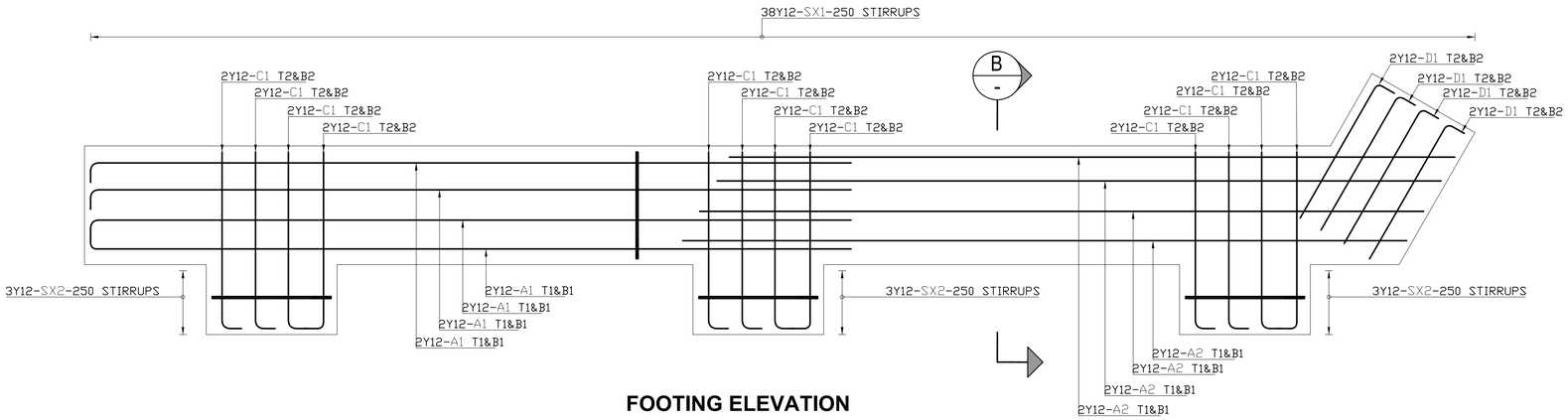
SCALE	1 : 100	DRAWN	A.M
DESIGNED	A.M	CHECKED	S.R
PLAN NUMBER		REV. NO.	DATE SAVED
34398-02-201-02-01		A	2021-10-11

Albert Manamela

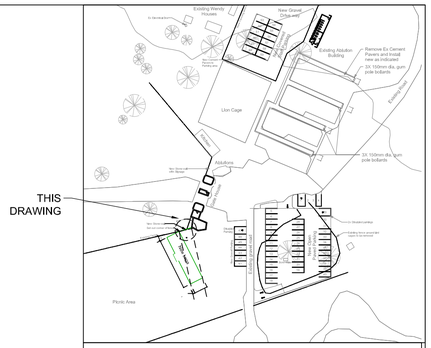
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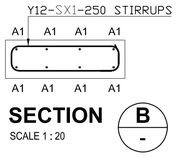
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FOOTING ELEVATION



LOCALITY PLAN



SECTION B-B

SCALE 1 : 20

MEMBER	NO OF	NO BARS	DIA	CUT LENGTH	TOTAL	BAR MARK	SC	A	B	C	D	E/R	kg
WALL BASE	1	8	Y12	5100	8	A1	37	5000	[120]				36
	1	8	Y12	4750	8	A2	20	[4760]					34
	1	24	Y12	1250	24	C1	37	1160	[120]				27
	1	8	Y12	1100	8	D1	37	1020	[120]				8
	1	38	Y12	1850	38	SX1	60	700	160				62
	1	9	Y12	2000	9	SX2	60	780	160				16

	6	8	10	12	16	20	25	32	40	TOTAL
R										
Y				183						183
TOTAL				183						183

CONCRETE COVER:
TOP : 40mm
BOTTOM : 50mm
SIDES : 40mm

LAP LENGTH:
MINIMUM 50Ø
12mmØ BARS = 600mm
16mmØ BARS = 800mm

CONCRETE GRADE : 30 MPa

CONCRETE NOTES :

1. CONCRETE GRADE: 30 MPa/19mm.
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MOKOPANE

NEW STONE WALL REINFORCEMENT LAYOUT AND SECTIONS

APPROVED BY BVI

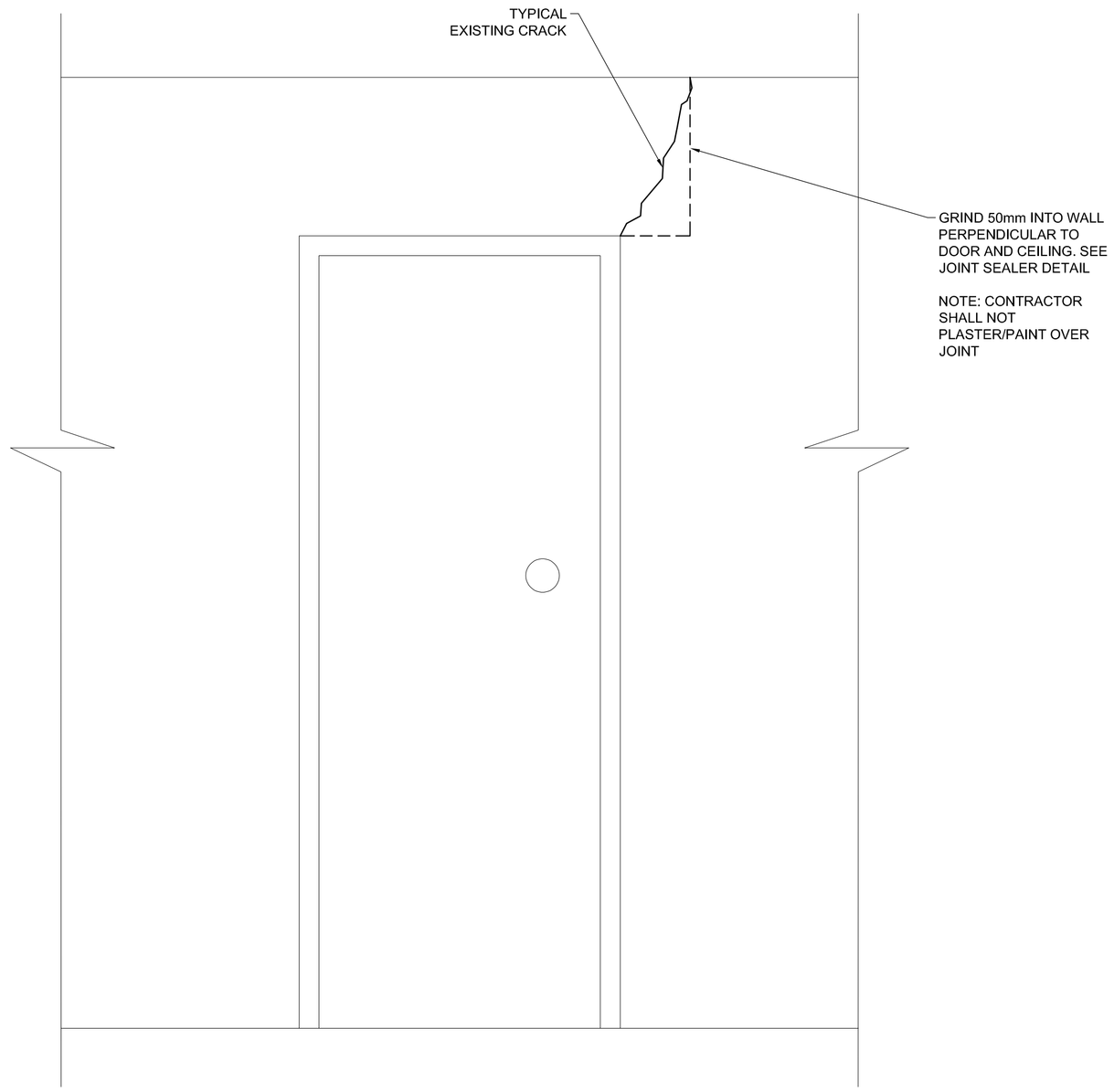
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DESIGNED	A.M	CHECKED	S.R
PLAN NUMBER		REV. NO.	DATE SAVED
34398-02-202-01-02		A	2021-10-11 Albert Manamela

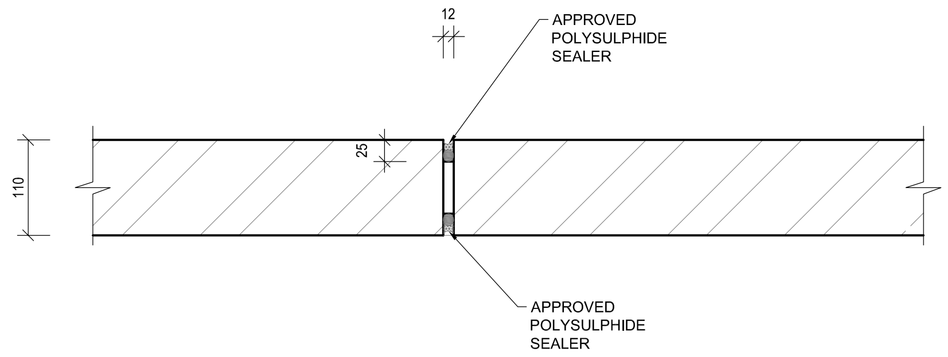
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TYPICAL CRACK ELEVATION
2x No. OFF
SCALE 1 : 10



JOINT SEALER DETAIL
SCALE 1 : 10

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MOKOPANE

EXISTING ABLUTION CRACK REPAIR DETAILS

APPROVED BY BVi

ARCHITECT | REG. NO. | DATE

SCALE	1 : 100	DRAWN	A.M
DESIGNED	A.M	CHECKED	S.R

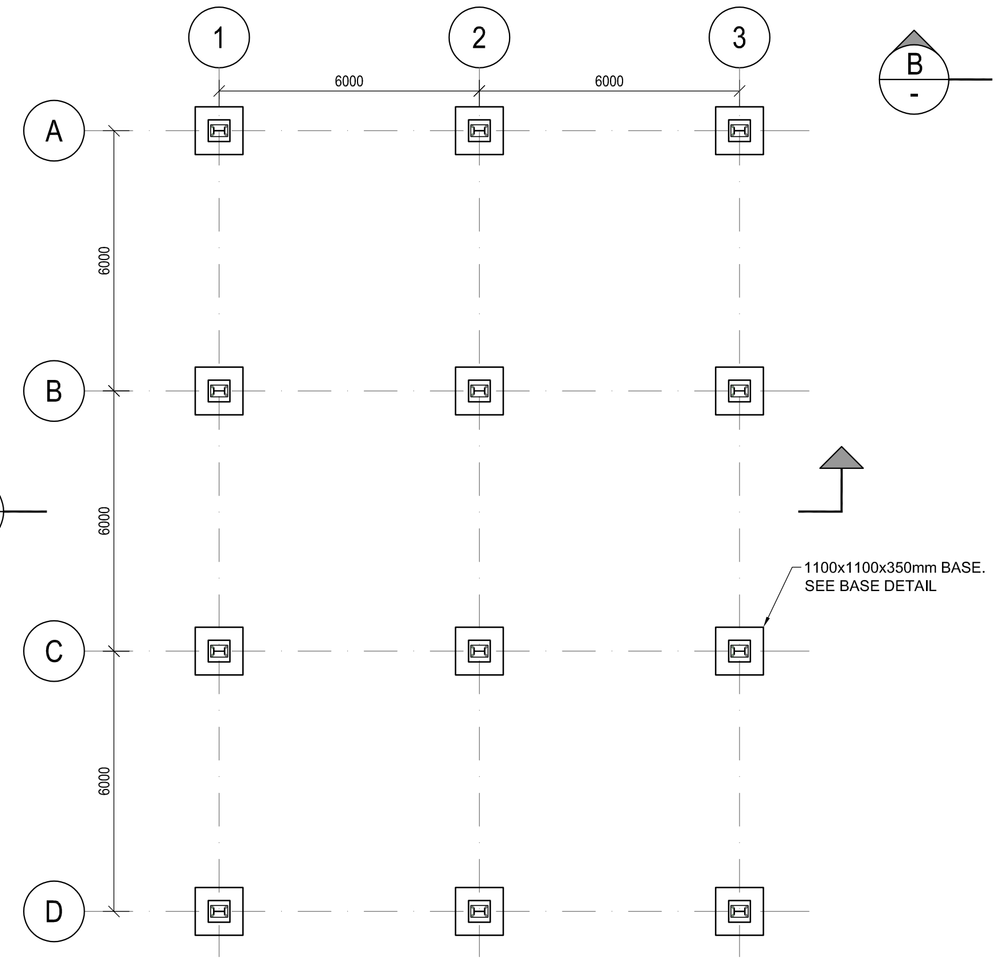
PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-203-01-01	A	2021-09-17 Albert Manamela

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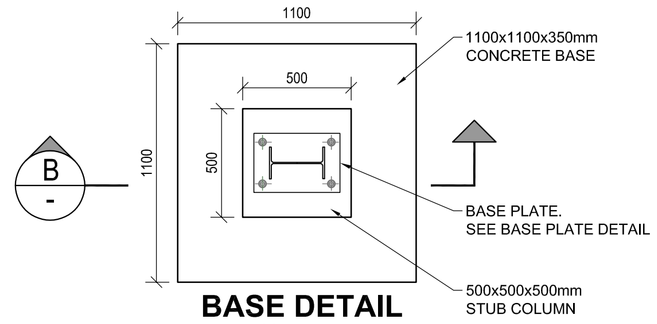
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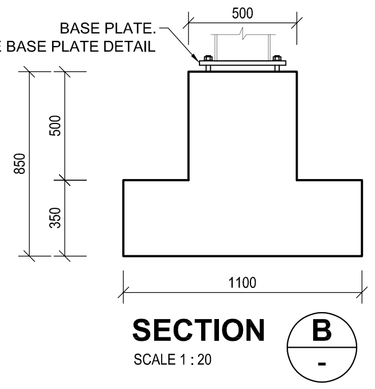
STEEL LAYOUT
SCALE 1 : 100



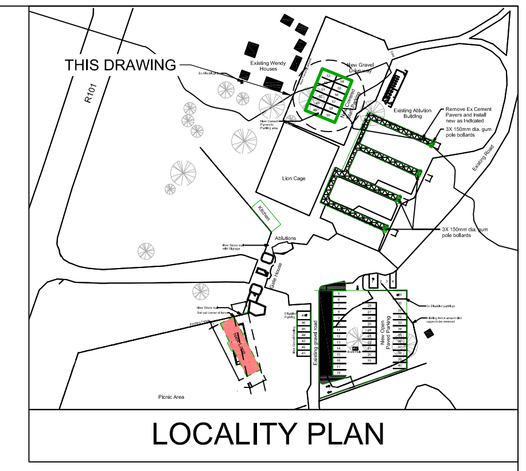
CONCRETE FOUNDATION LAYOUT
SCALE 1 : 100

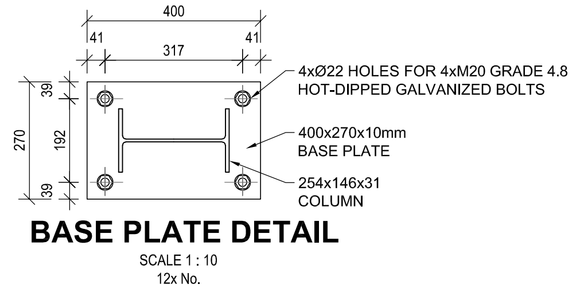


BASE DETAIL
SCALE 1 : 20
12x No. OFF



SECTION
SCALE 1 : 20





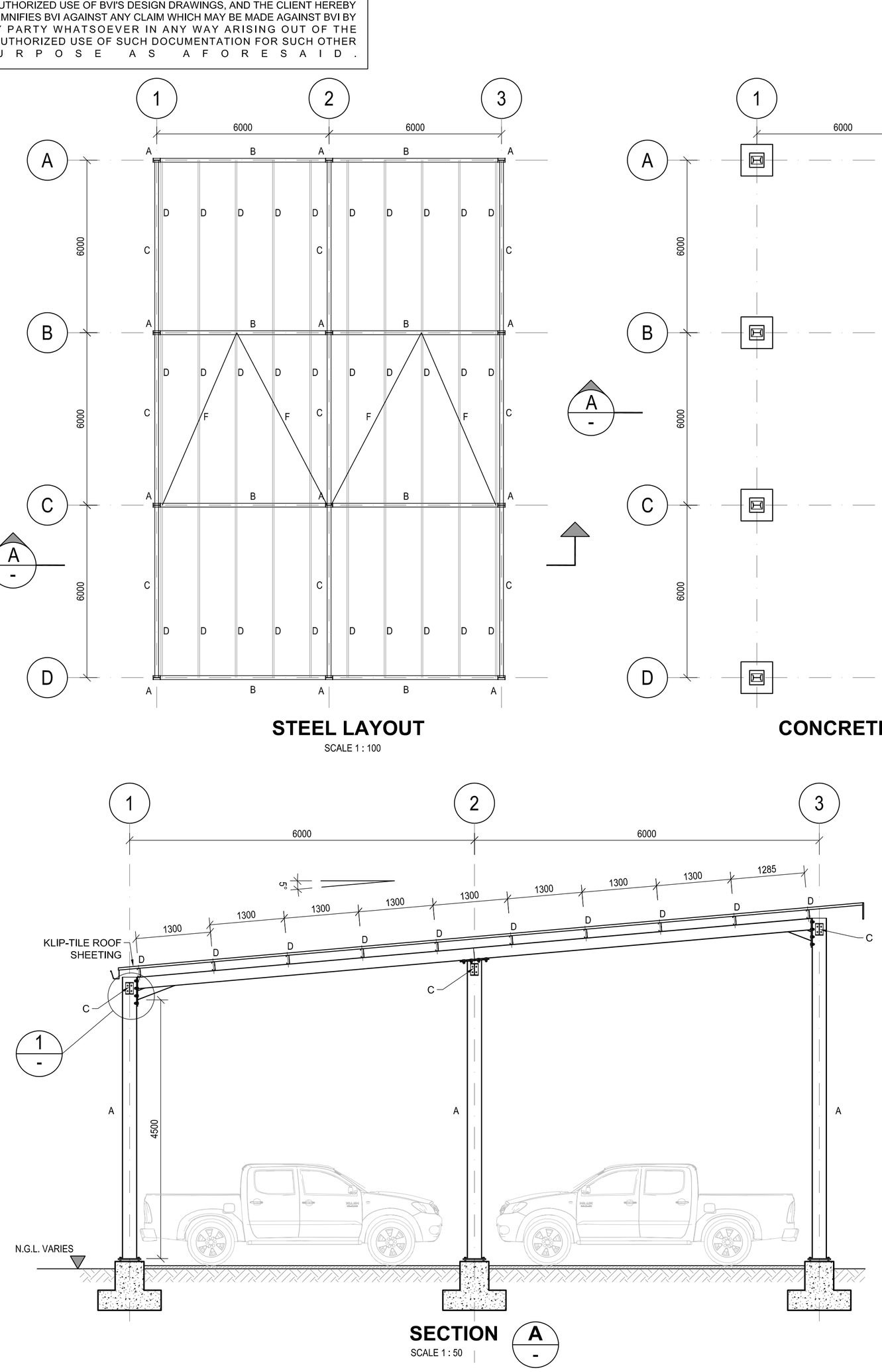
BASE PLATE DETAIL
SCALE 1 : 10
12x No.

NOTE:

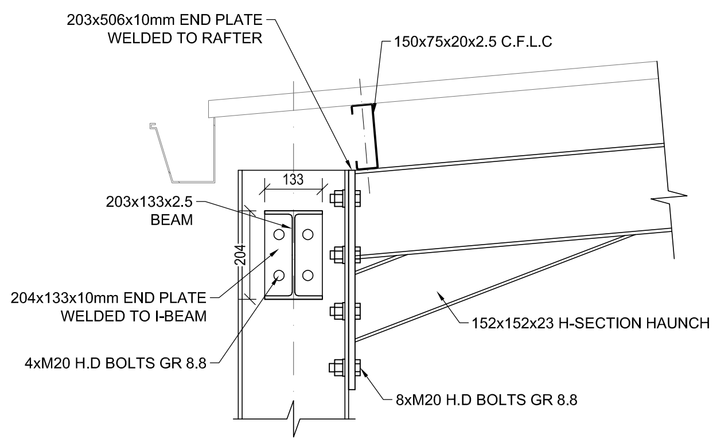
TOTAL BOLT LENGTH = e + t + lb + b + projection

PROJECTION LENGTH = 150mm

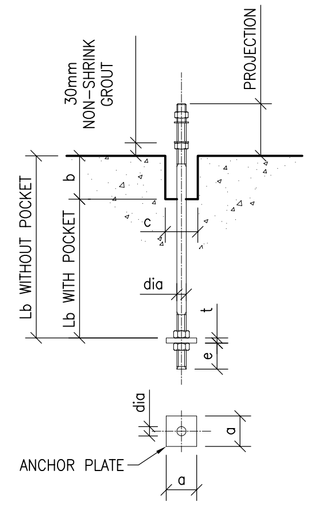
ALL HD-BOLTS TO BE HOT DIP GALVANISED



SECTION
SCALE 1 : 50
A
-



DETAIL
SCALE 1 : 20
1
-



HOLDING DOWN BOLTS WITH ANCHOR PLATES SCHEDULE

BOLT DIAMETER ON THREAD	GRADE 4.8 BOLTS. fu= 400 MPa					POCKET		THREAD	
	BOLT		ANCHOR PLATE						
	TENSILE STRENGTH Tr	BOND LENGTH lb	SIZE a	THICKNESS t	EXTEND e	DEPTH b	DIA c	TOP	BOT
(mm)	(kN)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
16	40	180	60	10	30	100	75	160	70
20	60	230	70	12	40	150	75	170	90
24	90	275	85	12	50	200	75	185	110
30	142	355	105	14	50	250	100	200	115

NOTE:
VALUES OF THIS TABLE ARE BASED ON GRADE 4.8 BOLTS. IF THESE ARE NOT COMMERCIALLY AVAILABLE THE CONTRACTOR MUST USE MILD STEEL REINFORCING (R) BARS. WITH AN ULTIMATE TENSILE STRENGTH OF 400MPa. DIAMETERS IN THE TABLE ARE TO BE USED TO DETERMINE THE EQUIVALENT BOLT DIAMETER ON THE TREAD.

LEGEND
MEMBERS LEGEND
A – 254x146x31 kg/m I–COLUMN
B – 203x133x2.5 kg/m RAFTER
C – 203x133x2.5 kg/m I–BEAM
D – 150x75x20x2.5 C.F.L.C.
E – 152x152x23 kg/m H–HAUNCH
F – 70x70x10 ANGLE BRACING

CONCRETE NOTES :

1. CONCRETE GRADE: 30 MPa/19mm.
2. CONCRETE SURFACE TO BE FINISHED WITH 30MM THICK 1:4 SMOOTH CEMENT SAND SCREED
3. The Contractor shall adhere to the following codes during construction as applicable:
   SANS 2001 Construction Works:
   Part CC1: Concrete Works (Structural)
   Part CC2: Concrete Works (Minor Works)
   Part CG1: Installation of Glazing in Window and Door Frames
   Part CM1: Masonry Walling
   Part CS1: Structural Steelwork
   Part CT1: Structural Timberwork (Flooring)
   Part CT2: Structural Timberwork (Roofing)
   Part EM1: Cement Plaster

   SANS 10155 Accuracy in Buildings
   Grade II permissible deviation / tolerance shall apply unless otherwise noted.
   One copy of each of these codes shall be kept on site and shall be made available to The Engineer on request.

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CITY ENGINEER / CLIENT | REG. NO. | DATE

AMENDMENTS CODE

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MOKOPANE

STAFF PARKING
CONCRETE & STEEL
LAYOUT AND SECTIONS

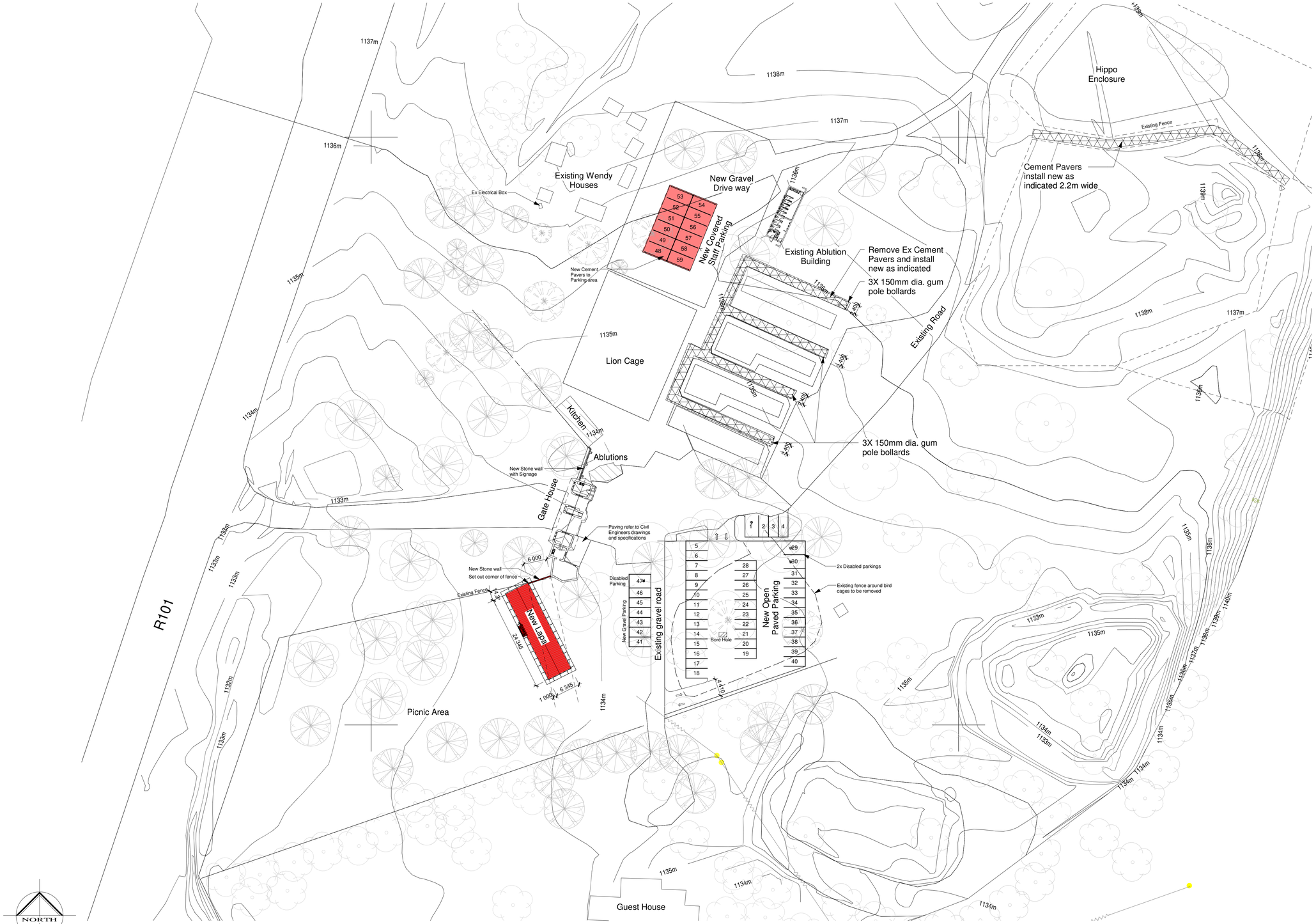
APPROVED BY BVi

ARCHITECT | REG. NO. | DATE

SCALE	1 : 100	DRAWN	A.M
DESIGNED	A.M	CHECKED	S.R
PLAN NUMBER		REV. NO.	DATE SAVED
34398-02-205-01-01		A	2021-10-05 Albert Manamela

A1

Z:\JLS ARCHITECTURAL CONSULTING (Pty) Ltd\PROJECTS\BA28 – SANBI Projects\B – Mokopane Bio Diversity Centre\Revit\Mokopane - Office Block.rvt



Site Plan

1 : 500

CLIENT PLAN NUMBER	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	CODE	REVISION DESCRIPTION	CLIENT
DO NOT SCALE DRAWING IF IN DOUBT, REFER TO DRAWING OFFICE		21-06-09	JLS	A	Issue For Client Review	SANBI Biodiversity for Life South African National Biodiversity Institute
REFERENCE DRAWINGS NUMBER / DRAWING DESCRIPTION	CITY ENGINEER / CLIENT REG. NO. DATE	21-10-12	JLS	B	Issue For Tender	
	AMENDMENTS CODE					
	A-Y / : REPORT/DESIGN/TENDER 00-99 / : CONSTRUCTION Z / : AS BUILT /A : BY CLIENT /B : BY ARCHITECT /C : BY MECHANICAL OR ELECTRICAL /D : BY BVi /E : BY OTHER ( )					

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PROJECT: Mokopane - Bio Diversity Centre

DRAWING TITLE: SITE PLAN

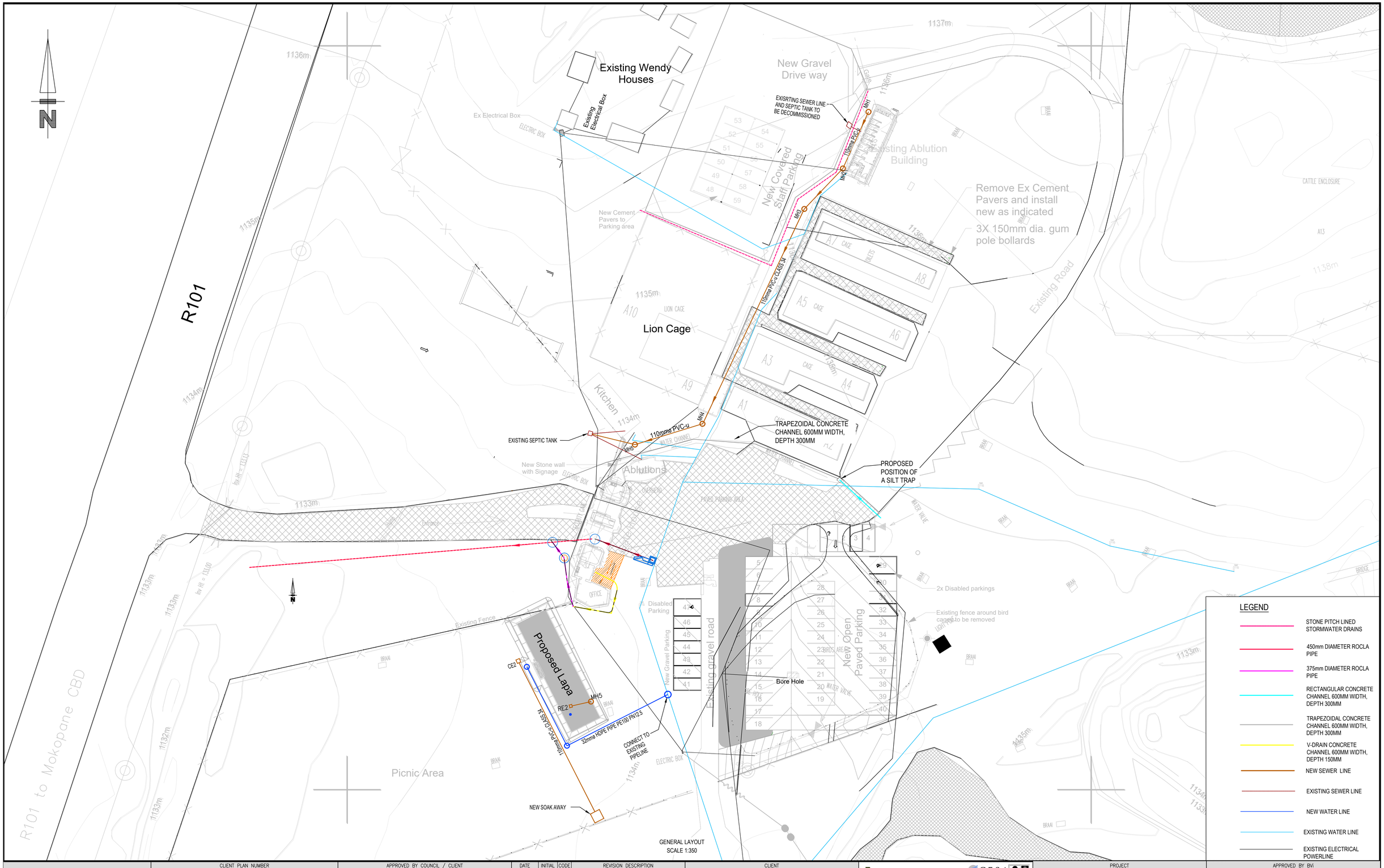
APPROVED BY BVi

ARCHITECT REG. NO. DATE

SCALE	1 : 500	DRAWN	JLS
DESIGNED	DB	CHECKED	DB

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-100-01-01	B	2021-10-12 Desmond Brand A1

J:\PROJECTS\BA28 – SANBI Projects\B – Mokopane Bio Diversity Centre\Revit\Mokopane - Site.rvt



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CLIENT PLAN NUMBER: ---

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION
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APPROVED BY COUNCIL / CLIENT

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/E : BY OTHER ( )

DATE	INITIAL	CODE	REVISION DESCRIPTION
09-06-21	B.M.	A	ISSUED FOR CLIENT REVIEW
07-10-21	B.M.	B	ISSUED FOR TENDER

CLIENT

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PROJECT: MOKOPANE

DRAWING TITLE: GENERAL SITE SERVICES LAYOUT

APPROVED BY BVi

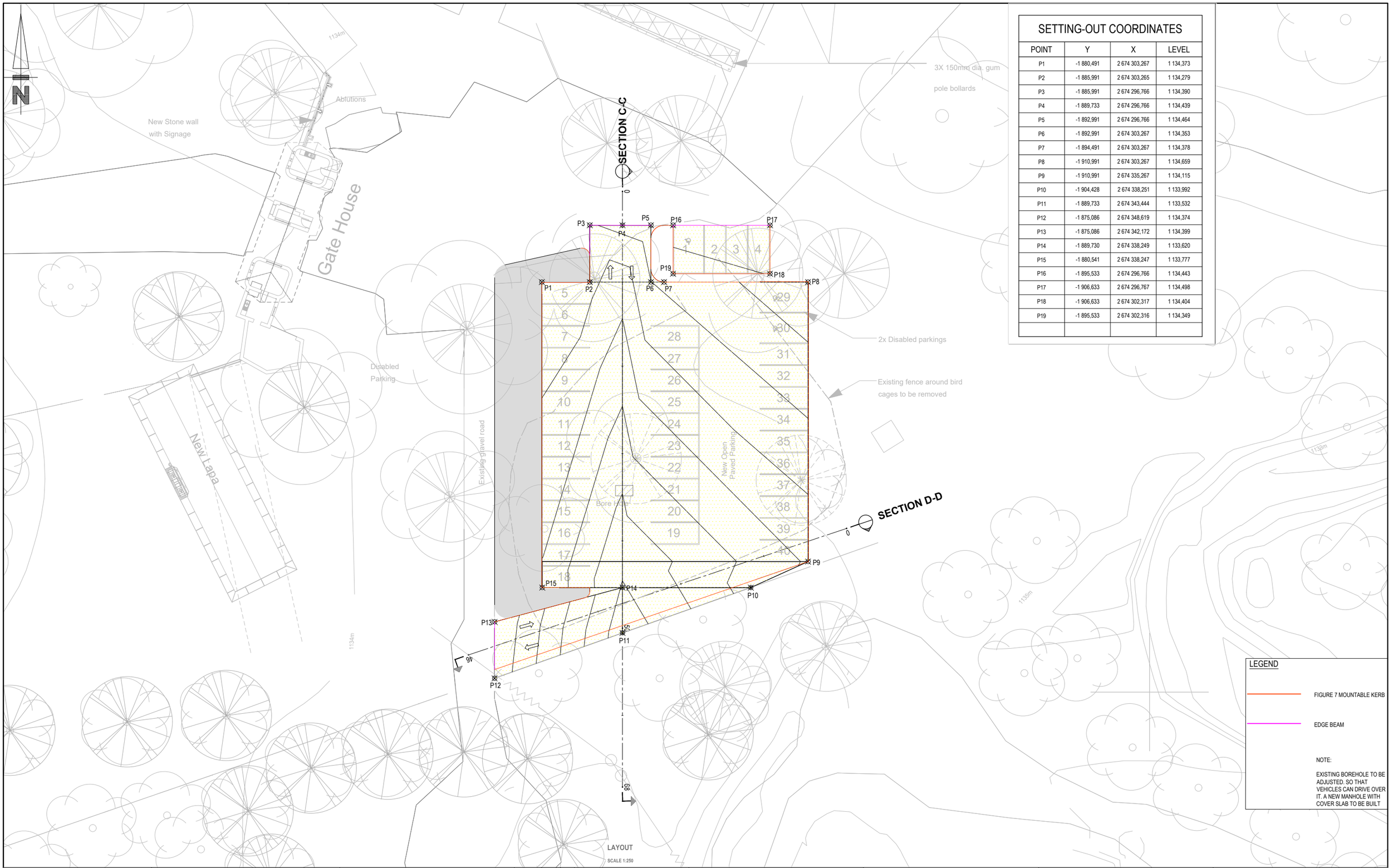
ENGINEER/TECHNOLOGIST | REG. NO. | DATE

SCALE	AS SHOWN	DRAWN	B. MATYEKA
DESIGNED	B. MATYEKA	CHECKED	F.C.A SMITH

PLAN NUMBER	REV. NO.	DATE SAVED
34398-00-101-01-01	B	13/10/2021 BoitumeloM A1

34398-02-101-01-RB

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SETTING-OUT COORDINATES

POINT	Y	X	LEVEL
P1	-1 880,491	2 674 303,267	1 134,373
P2	-1 885,991	2 674 303,265	1 134,279
P3	-1 885,991	2 674 296,766	1 134,390
P4	-1 889,733	2 674 296,766	1 134,439
P5	-1 892,991	2 674 296,766	1 134,464
P6	-1 892,991	2 674 303,267	1 134,353
P7	-1 894,491	2 674 303,267	1 134,378
P8	-1 910,991	2 674 303,267	1 134,659
P9	-1 910,991	2 674 335,267	1 134,115
P10	-1 904,428	2 674 338,251	1 133,992
P11	-1 889,733	2 674 343,444	1 133,532
P12	-1 875,086	2 674 348,619	1 134,374
P13	-1 875,086	2 674 342,172	1 134,399
P14	-1 889,730	2 674 338,249	1 133,620
P15	-1 880,541	2 674 338,247	1 133,777
P16	-1 895,533	2 674 296,766	1 134,443
P17	-1 906,633	2 674 296,767	1 134,498
P18	-1 906,633	2 674 302,317	1 134,404
P19	-1 895,533	2 674 302,316	1 134,349

LEGEND

FIGURE 7 MOUNTABLE KERB

EDGE BEAM

NOTE:

EXISTING BOREHOLE TO BE ADJUSTED. SO THAT VEHICLES CAN DRIVE OVER IT. A NEW MANHOLE WITH COVER SLAB TO BE BUILT

DO NOT SCALE DRAWING
IF IN DOUBT, REFER TO DRAWING OFFICE

— — —

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION
34398-02-113-01-01	TYPICAL ROAD KERB DETAILS

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21-09-21	B.M.	A	ISSUED FOR INFORMATION
05-10-21	B.M.	B	ISSUED FOR TENDER

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MOKOPANE

DRAWING TITLE

NEW VISITORS PARKING LOT LAYOUT

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ENGINEER/TECHNOLOGIST — REG. NO. — DATE

SCALE	AS SHOWN	DRAWN	M.A TEMBE
DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-110-01-01	B	19/10/2021 MassiquiniT A1

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N

SECTION E-E

SECTION F-F

P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 P15

53 52 54 51 55 50 56 49 57 48 58 59

New Gravel Drive way

New Fencing around

New Covered Staff Parking

New Cement Pavers to Parking area

Existing Wendy Houses

Ex Electrical Box

Existing Ablution Building

Remove Ex Cement Pavers and install new as indicated

3X 150mm dia. gum pole bollards

Lion Cage

Kitchen

Existing Road

1137m 1136m 1135m 1134m

LAYOUT
SCALE 1:200

SETTING-OUT COORDINATES

POINT	Y	X	LEVEL
P5	-1 903,492	2 674 204,897	1 136,501
P6	-1 901,801	2 674 200,860	1 136,726
P7	-1 888,728	2 674 195,490	1 137,147
P8	-1 877,770	2 674 190,989	1 137,500
P9	-1 860,288	2 674 233,538	1 135,619
P10	-1 871,138	2 674 237,994	1 135,780
P11	-1 885,272	2 674 243,788	1 135,989
P12	-1 890,577	2 674 230,848	1 136,129
P13	-1 898,232	2 674 225,369	1 136,223
P14	-1 904,890	2 674 209,187	1 136,398
P15	-1 904,192	2 674 207,041	1 136,450

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REFERENCE DRAWINGS

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17-07-21	B.M.	A	ISSUED FOR INFORMATION
07-10-21	B.M.	B	ISSUED FOR TENDER

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DRAWING TITLE

NEW STAFF PARKING LOT
LAYOUT

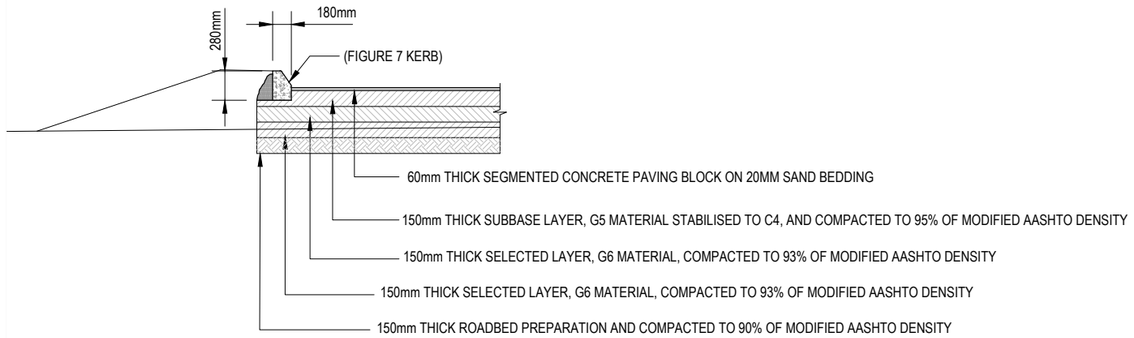
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ENGINEER/TECHNOLOGIST | REG. NO. | DATE

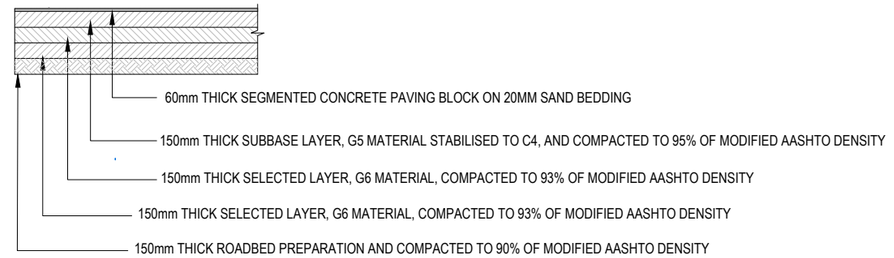
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DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA
PLAN NUMBER		REV. NO.	DATE SAVED
34398-02-110-02-01		B	19/10/2021 Massiquini T

A1

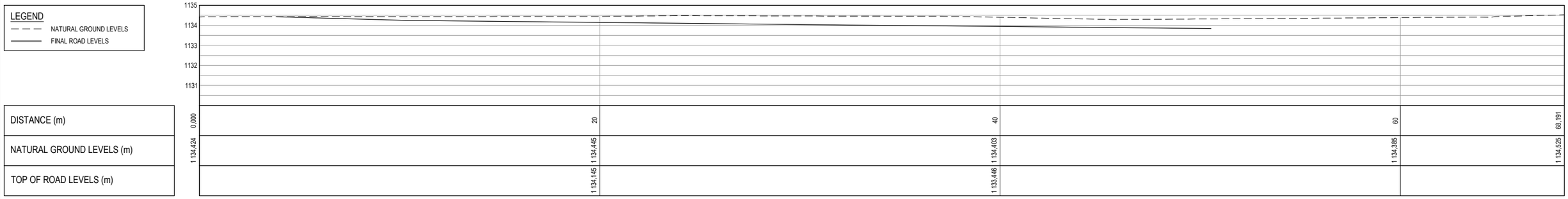
P:\34398-02\16 Drawings\16.4 Civil\110 – Roads\34398-02-110-02-01-RB.dwg



PAVEMENT DESIGN - PARKING AREAS

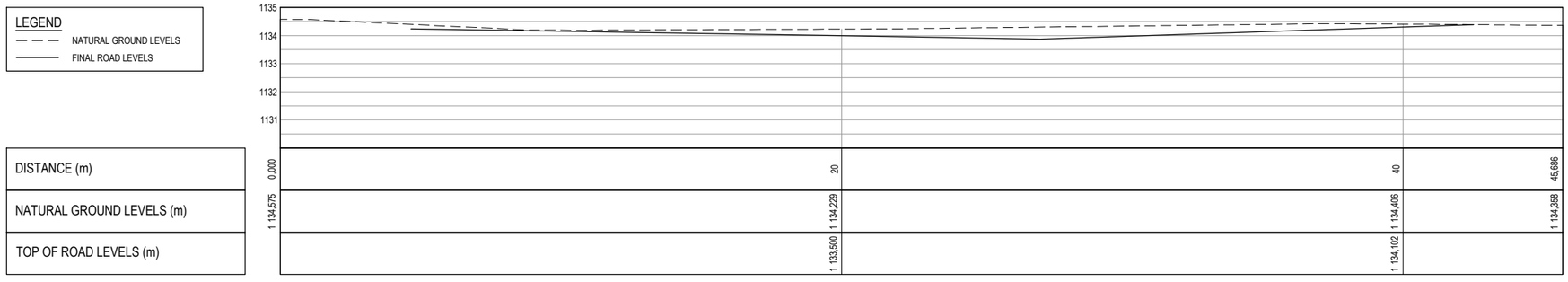


PAVEMENT DESIGN - WALK WAY



SECTION C-C

SCALE 1:100



SECTION D-D

SCALE 1:100

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REFERENCE DRAWINGS	
NUMBER	DRAWING DESCRIPTION
34398-02-110-01-01	NEW VISITORS PARKING LOT LAYOUT

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21-09-21	B.M.	A	ISSUED FOR INFORMATION
07-10-21	B.M.	B	ISSUED FOR TENDER

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MOKOPANE

DRAWING TITLE

NEW VISITORS PARKING LOT SECTIONS

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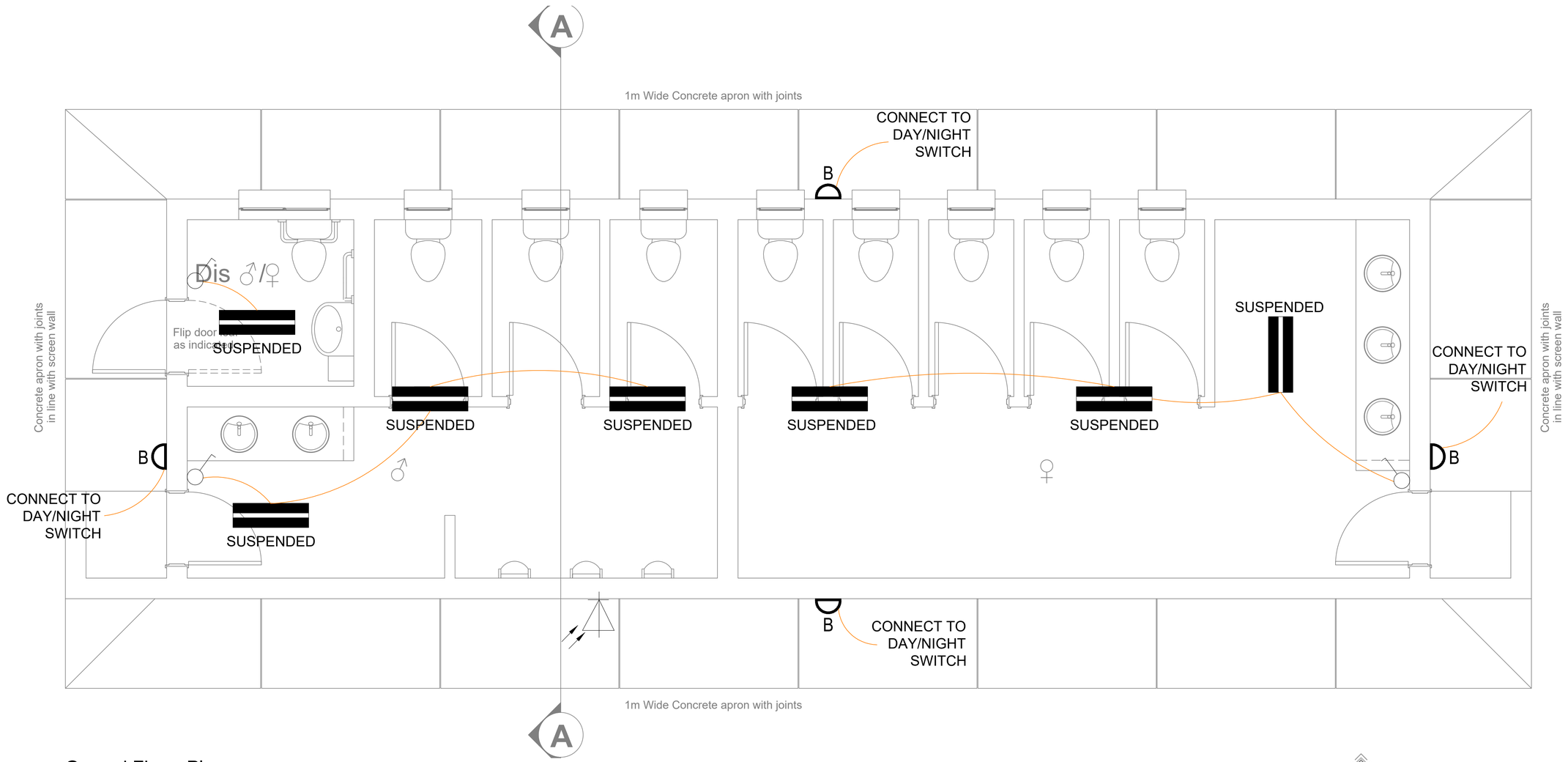
ENGINEER/TECHNOLOGIST — REG. NO. — DATE

SCALE	AS SHOWN	DRAWN	M.A TEMBE
DESIGNED	M.A TEMBE	CHECKED	B. MATYEKA

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-111-01-01	B	13/10/2021 MassiquiniT A1

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Plot Date: 04/10/2021



Ground FLoor Plan

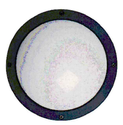
1 : 25

LEGEND:	
SYMBOL	DESCRIPTION
▬	SUSPENDED MOUNTED LINEAR LUMINAIRE COMPLETE WITH 4000K 24W LED's: TYPE LASCON C10 / 24W LED TRIDONIC / 6080LM / PHOTO ENGRAVE LENSE - 4000K IP65 RATED OR SIMILAR.
DB	SURFACE MOUNTED BULKHEAD LUMINAIRE COMPLETE WITH 4000K 17W LED's: TYPE BEKA SERIES 30 17W 4000K BLACK TEXTURED BULKHEAD OR SIMILAR.
	FLUSH MOUNTED ONE WAY ONE LEVER LIGHT SWITCH WITH STEEL COVER PLATE. HEIGHT - 1200mm AFFL.
	DAY/NIGHT SWITCH

NOTES:

1. USE STEEL CONDUIT FOR INDOOR SURFACE MOUNTED OR OUTDOOR APPLICATIONS AND PVC CONDUIT IN CEILING VOID OR CONCRETE APPLICATIONS, USE HOSPITAL SADDLES FOR STEEL CONDUIT.
2. CONNECT SURFACE MOUNTED LUMINAIRE VIA 65mmØ OUTLET BOX MOUNTED IN CEILING VOID OR FLUSH IN WALL.
3. ON SITE COORDINATION BETWEEN ALL SERVICES SHOULD BE DONE (BY CONTRACTOR) BEFORE ANY INSTALLATION WORK COMMENCES.
4. INSTALL WIRING/CABLING IN CONDUIT, WIRING CHANNEL OR ON CABLE LADDER.
5. FLOOD LIGHTS SHOULD BE INSTALLED ON A RETROFIT SWIVEL POLE MOUNTING BRACKET EQUAL OR SIMILAR TO EAZYREACH ROTATE POLE AND MOUNTED AT GUTTER HEIGHT AGAINST THE STRUCTURE.

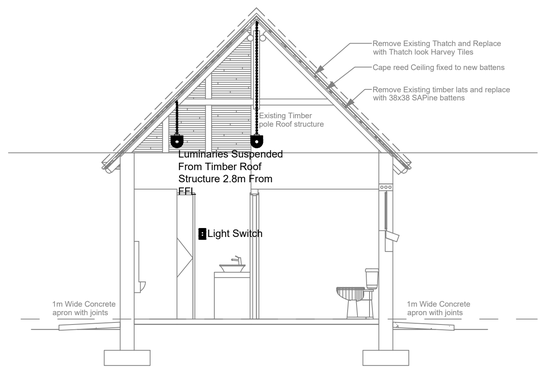
Proposed Luminaires



Beka Series 30



Lascon C10



Section A-A

1 : 50

DO NOT SCALE DRAWING
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CLIENT PLAN NUMBER

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION

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DATE	INITIAL	CODE	REVISION DESCRIPTION
04/10/2021	G.F.	AA	ISSUED FOR TENDER

CLIENT

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PROJECT

Mokopane - Bio Diversity Centre

DRAWING TITLE

Existing Ablution Block - Ground Floor Plan Lighting Layout

APPROVED BY BVi

ENGINEER/TECHNOLOGIST _____ REG. NO. _____ DATE _____

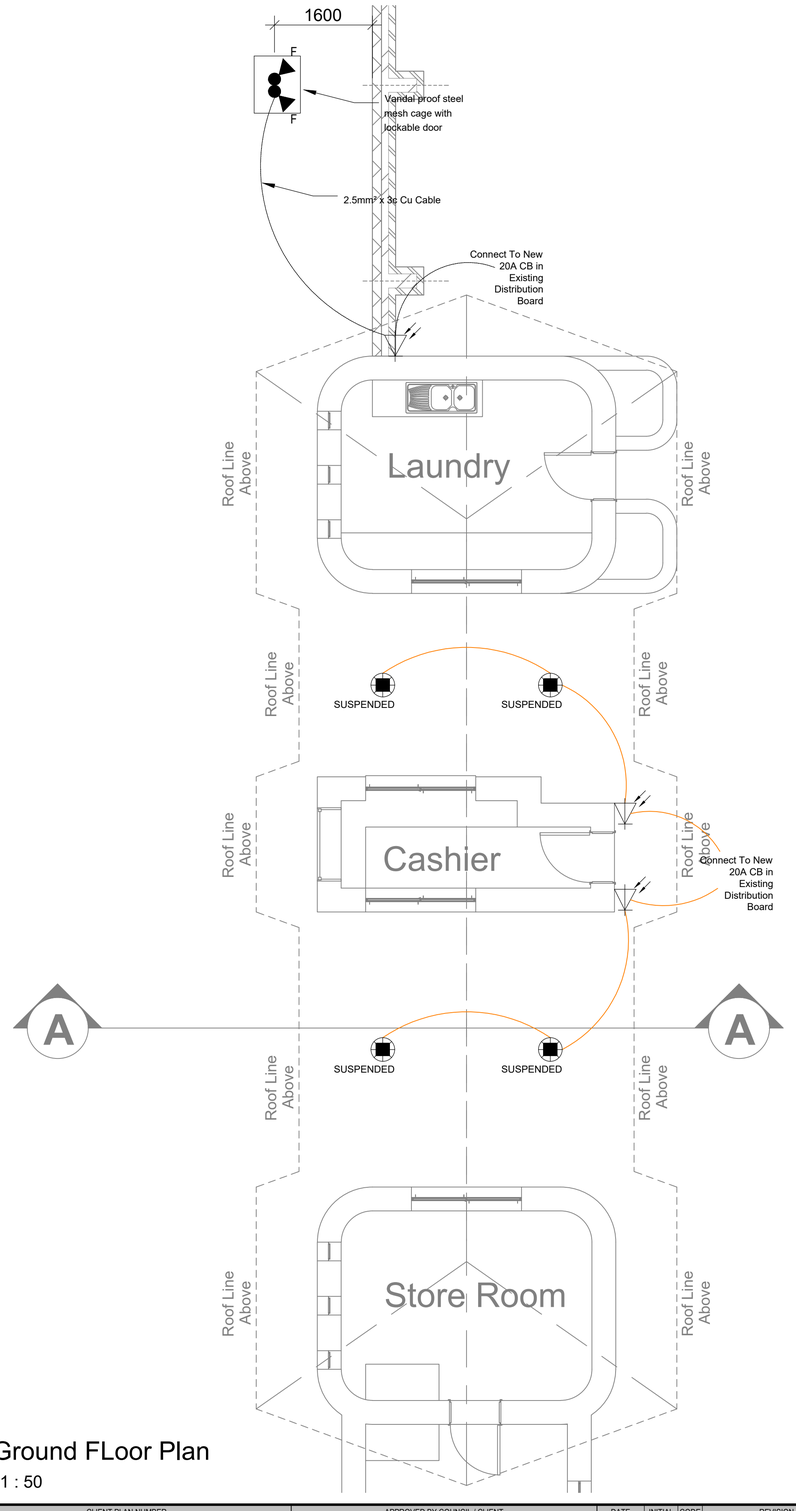
SCALE	AS SHOWN	DRAWN	FN
DESIGNED	GF	CHECKED	GF

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-325-03-01	AA	13/09/2021

Revisions A1

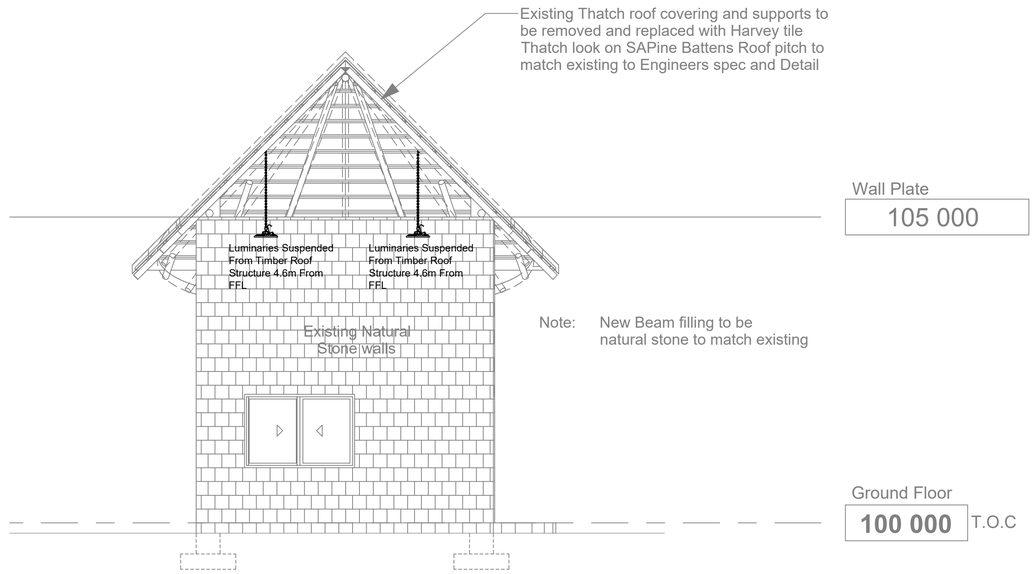
34398-02-325-03-01 - EXISTING ABLUTION- LIGHTING LAYOUT.dwg

Plot Date: 06/10/2021



Ground FLoor Plan

1 : 50



Section A-A

1 : 50

LEGEND:	
SYMBOL	DESCRIPTION
	SUSPENDED MOUNTED HI-BAY LUMINAIRE COMPLETE WITH 4000K 146W LED's: TYPE BEKA ECOBAY 146W LED WITH GLASS PROTECTOR - 4000K IP66 RATED OR SIMILAR.
	SIGNAGE LUMINAIRE COMPLETE WITH 4000K 26W LED's: TYPE BEKA FOCUS 26W LED - 4000K IP66 RATED OR SIMILAR.
	DAY/NIGHT SWITCH

NOTES:

1. USE STEEL CONDUIT FOR INDOOR SURFACE MOUNTED OR OUTDOOR APPLICATIONS AND PVC CONDUIT IN CEILING VOID OR CONCRETE APPLICATIONS. USE HOSPITAL SADDLES FOR STEEL CONDUIT.
2. CONNECT SURFACE MOUNTED LUMINAIRE VIA 65mmØ OUTLET BOX MOUNTED IN CEILING VOID OR FLUSH IN WALL.
3. ON SITE COORDINATION BETWEEN ALL SERVICES SHOULD BE DONE (BY CONTRACTOR) BEFORE ANY INSTALLATION WORK COMMENCES.
4. INSTALL WIRING/CABLING IN CONDUIT, WIRING CHANNEL OR ON CABLE LADDER.
5. FLOOD LIGHTS SHOULD BE INSTALLED ON A RETROFIT SWIVEL POLE MOUNTING BRACKET EQUAL OR SIMILAR TO EAZYREACH ROTATE POLE AND MOUNTED AT CLUTTER HEIGHT AGAINST THE STRUCTURE

Proposed Luminaire



BEKA ECOBAY



BEKA FOCUS

DO NOT SCALE DRAWING
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CLIENT PLAN NUMBER

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION

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/D : BY BVi
/E : BY OTHER ( )

DATE	INITIAL	CODE	REVISION DESCRIPTION
04/10/2021	G.F.	AA	ISSUED FOR TENDER

CLIENT

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PROJECT

Mokopane - Bio Diversity Centre

DRAWING TITLE

Gate House - Ground Floor Plan Lighting Layout

APPROVED BY BVi

ENGINEER/TECHNOLOGIST | REG. NO. | DATE

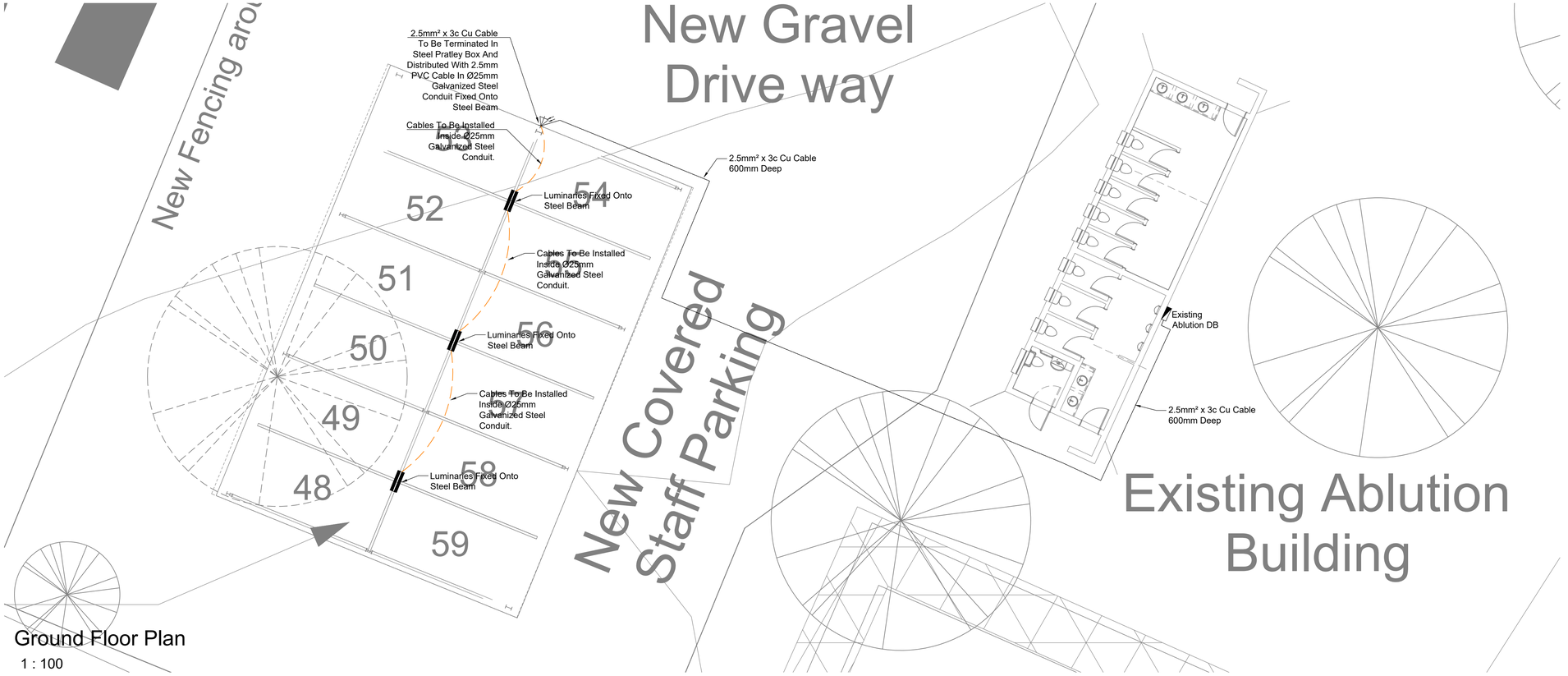
SCALE	AS SHOWN	DRAWN	FN
DESIGNED	GF	CHECKED	GF

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-325-04-01	AA	06/10/2021 RE-Francois

A1

34398-02-325-04-01 - GATE HOUSE - LIGHTING LAYOUT AA.dwg

Plot Date: 05/10/2021



Ground Floor Plan

1 : 100

LEGEND:	
SYMBOL	DESCRIPTION
▬	SURFACE MOUNTED LINEAR LUMINAIRE COMPLETE WITH 4000K 24W LED's: TYPE LASCON C10 / 24W LED TRIDONIC / 6080LM / PHOTO ENGRAVE LENSE - 4000K IP65 RATED OR SIMILAR.
	DAY/NIGHT SWITCH

NOTES:

1. USE STEEL CONDUIT FOR INDOOR SURFACE/WOODEN POLE MOUNTED OR OUTDOOR APPLICATIONS AND PVC CONDUIT IN CEILING VOID OR CONCRETE APPLICATIONS. USE HOSPITAL SADDLES FOR STEEL CONDUIT.
2. CONNECT SURFACE MOUNTED LUMINAIRE VIA 65mmØ OUTLET BOX MOUNTED IN CEILING VOID OR FLUSH IN WALL.
3. ON SITE COORDINATION BETWEEN ALL SERVICES SHOULD BE DONE (BY CONTRACTOR) BEFORE ANY INSTALLATION WORK COMMENCES.
4. INSTALL WIRING/CABLING IN CONDUIT, WIRING CHANNEL OR ON CABLE LADDER.
5. FLOOD LIGHTS SHOULD BE INSTALLED ON A RETROFIT SWIVEL POLE MOUNTING BRACKET EQUAL OR SIMILAR TO EAZYREACH ROTATE POLE AND MOUNTED AT GUTTER HEIGHT AGAINST THE STRUCTURE.

Proposed Luminaires



Lascon Reel D/L

DO NOT SCALE DRAWING
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CLIENT PLAN NUMBER

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION

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/A : BY CLIENT
/B : BY ARCHITECT
/C : BY MECHANICAL OR ELECTRICAL
/D : BY BVi
/E : BY OTHER ( )

DATE	INITIAL	CODE	REVISION DESCRIPTION
04/10/2021	G.F.	AA	ISSUED FOR TENDER

CLIENT

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Biodiversity for Life
South African National Biodiversity Institute

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PROJECT

Mokopane - Bio Diversity Centre

DRAWING TITLE

NEW CARPORT - GROUND FLOOR PLAN LIGHTING LAYOUT

APPROVED BY BVi

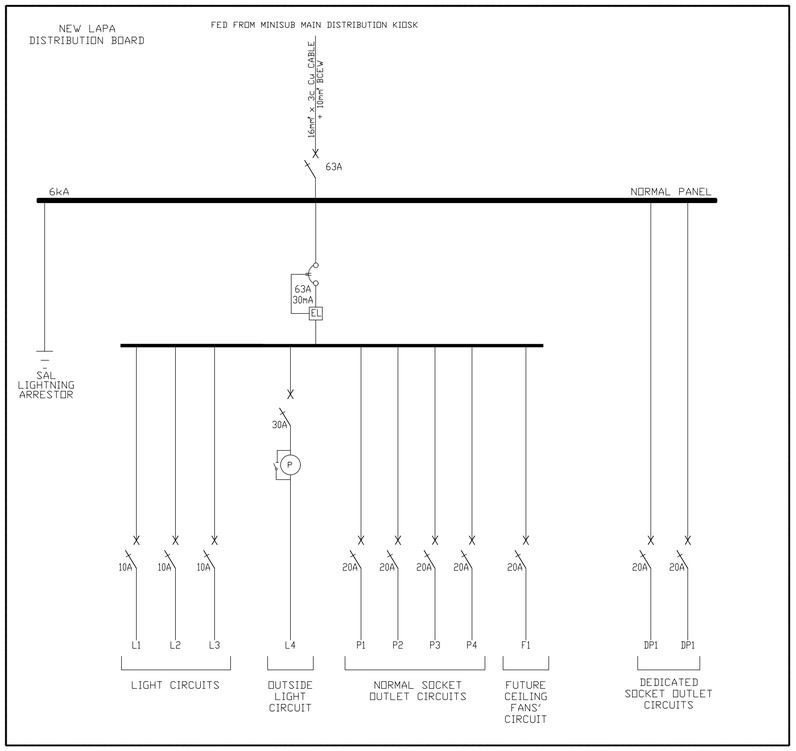
ENGINEER/TECHNOLOGIST | REG. NO. | DATE

SCALE	As indicated	DRAWN	FN
DESIGNED	GF	CHECKED	GF

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-325-06-01	AA	05/10/2021 RE-Francois

A1

34398-02-325-06-01 - NEW CARPORT - LIGHTING LAYOUT AA.dwg



LEGEND

- BUSBAR
- SINGLE POLE
- DOUBLE POLE
- TRIPLE POLE
- ISOLATOR
- MOULDED CASE CIRCUIT BREAKER SIZE AS SHOWN
- EARTH LEAKAGE PROTECTION UNIT WITH OVERLOAD PROTECTION (EL)
- EARTH LEAKAGE PROTECTION UNIT WITH DISCONNECTOR (EL)
- ELECTRICITY CONSUMPTION METER (M)
- COMBINATION FUSE SWITCH UNIT 125 A = FUSE SIZE 160 A = SWITCH FUSE FRAME SIZE
- TIMER
- SPLIT METERING FOR PRE-PAID METER (SM)
- PHOTO CELL (P)
- CABLES
  - NO. OF CORES: 4C
  - CORE SIZE mm: 10
  - EARTH CONDUCTOR mm²: 6
- WIRING IN CONDUIT
  - CONDUIT SIZE mm²: 25
  - NO. & CONDUCTOR SIZE mm²: 2x4
  - EARTH CONDUCTOR mm²: 2.5
- CONTACTOR IN DB WITH BYPASS SWITCH IN DB, CONTROLLED VIA PHOTO CELL MOUNTED ELSEWHERE (P, NO, N)

NOTES:
1. DISTRIBUTION BOARD TO BE FLUSH MOUNTED
2. DISTRIBUTION BOARD TO BE IP54 RATED
3. DISTRIBUTION BOARD TO HAVE A LOCKABLE DOOR
4. ALLOW FOR 25% SPARE SPACE
5. CIRCUIT BREAKERS TO BE CBI
6. COLOUR: ORANGE

DO NOT SCALE DRAWING
IF IN DOUBT, REFER TO DRAWING OFFICE

CLIENT PLAN NUMBER

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION

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DATE	INITIAL	CODE	REVISION DESCRIPTION
04/10/2021	G.F.	AA	ISSUED FOR TENDER

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PROJECT

Mokopane - Bio Diversity Centre

DRAWING TITLE

NEW LAPA - GROUND FLOOR PLAN SCHEMATIC LAYOUT

APPROVED BY BVi

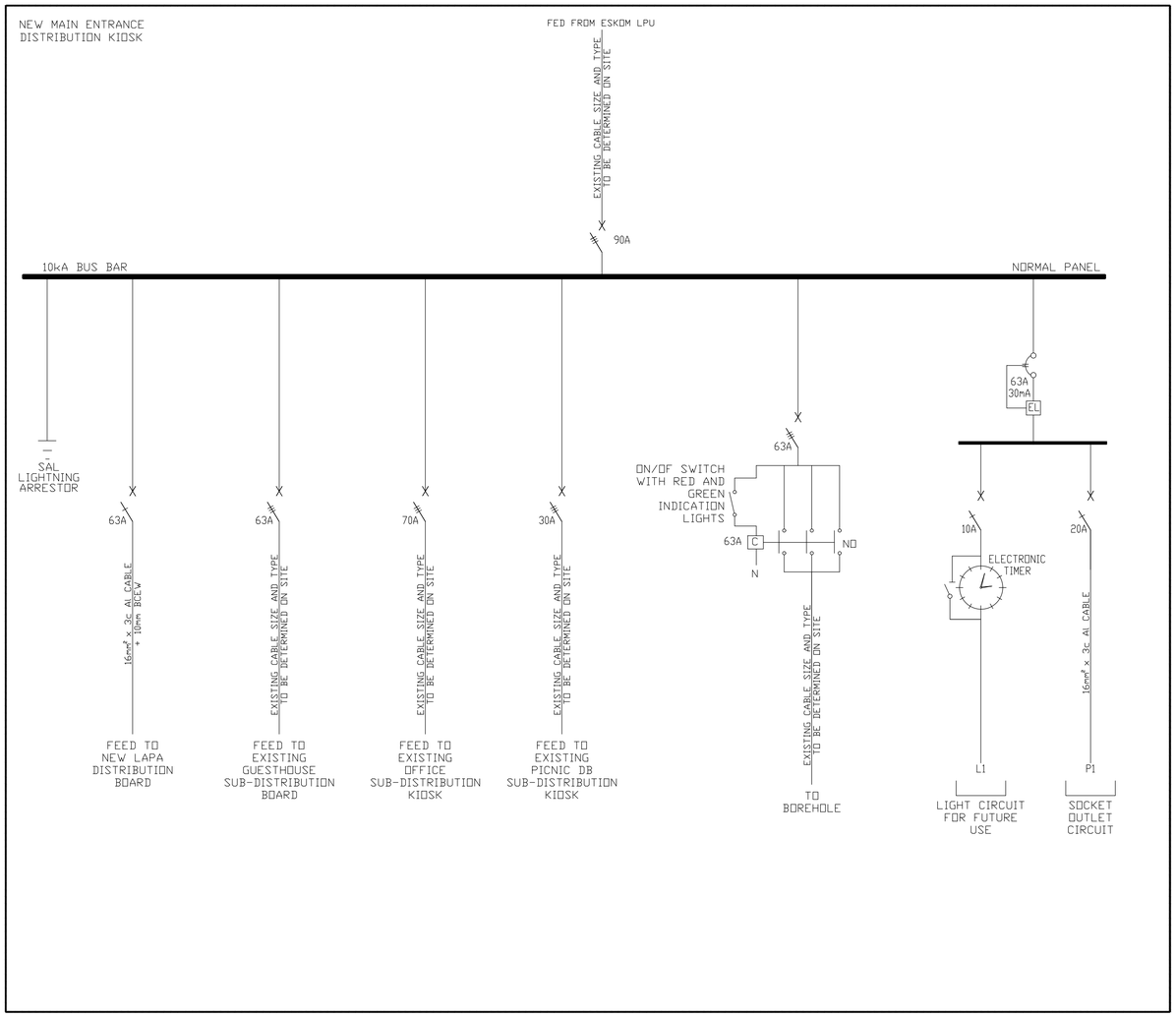
ENGINEER/TECHNOLOGIST | REG. NO. | DATE

SCALE	NTS	DRAWN	FN
DESIGNED	GF	CHECKED	GF

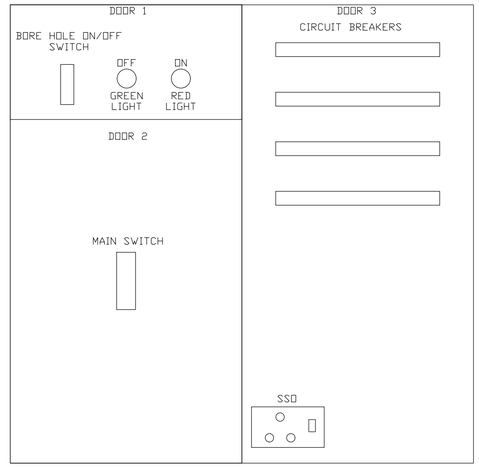
PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-392-01-01	AA	10/09/2021 RE-Francois

A1

34398-02-392-01-01 - NEW LAPA - GROUND FLOOR PLAN - SCHEMATIC LAYOUT.dwg

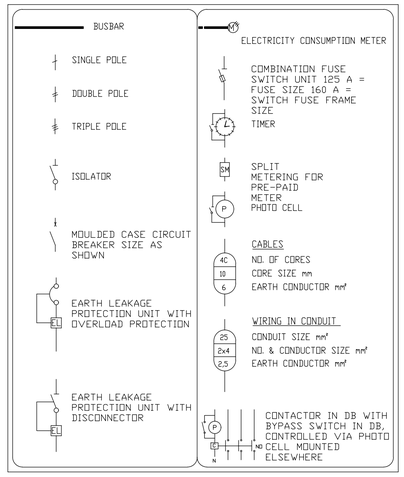


NOTES:
1. DISTRIBUTION KIOSK TO BE MOUNTED IN THE GROUND (FREE STANDING)
2. DISTRIBUTION KIOSK TO BE IP54 RATED
3. DISTRIBUTION KIOSK TO HAVE LOCKABLE DOORS
4. ALLOW FOR 30% SPARE SPACE
5. CIRCUIT BREAKERS TO BE CBI
6. INSTALL 16A SOCKET OUTLET INSIDE DISTRIBUTION KIOSK.
7. COLOUR: ORANGE



TYPICAL DETAIL OF DISTRIBUTION KIOSK

LEGEND



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CLIENT PLAN NUMBER

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION

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CITY ENGINEER / CLIENT | REG. NO. | DATE

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DATE	INITIAL	CODE	REVISION DESCRIPTION
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PROJECT

Mokopane - Bio Diversity Centre

DRAWING TITLE

MAIN ENTRANCE DISTRIBUTION KIOSK SCHEMATIC LAYOUT

APPROVED BY BVi

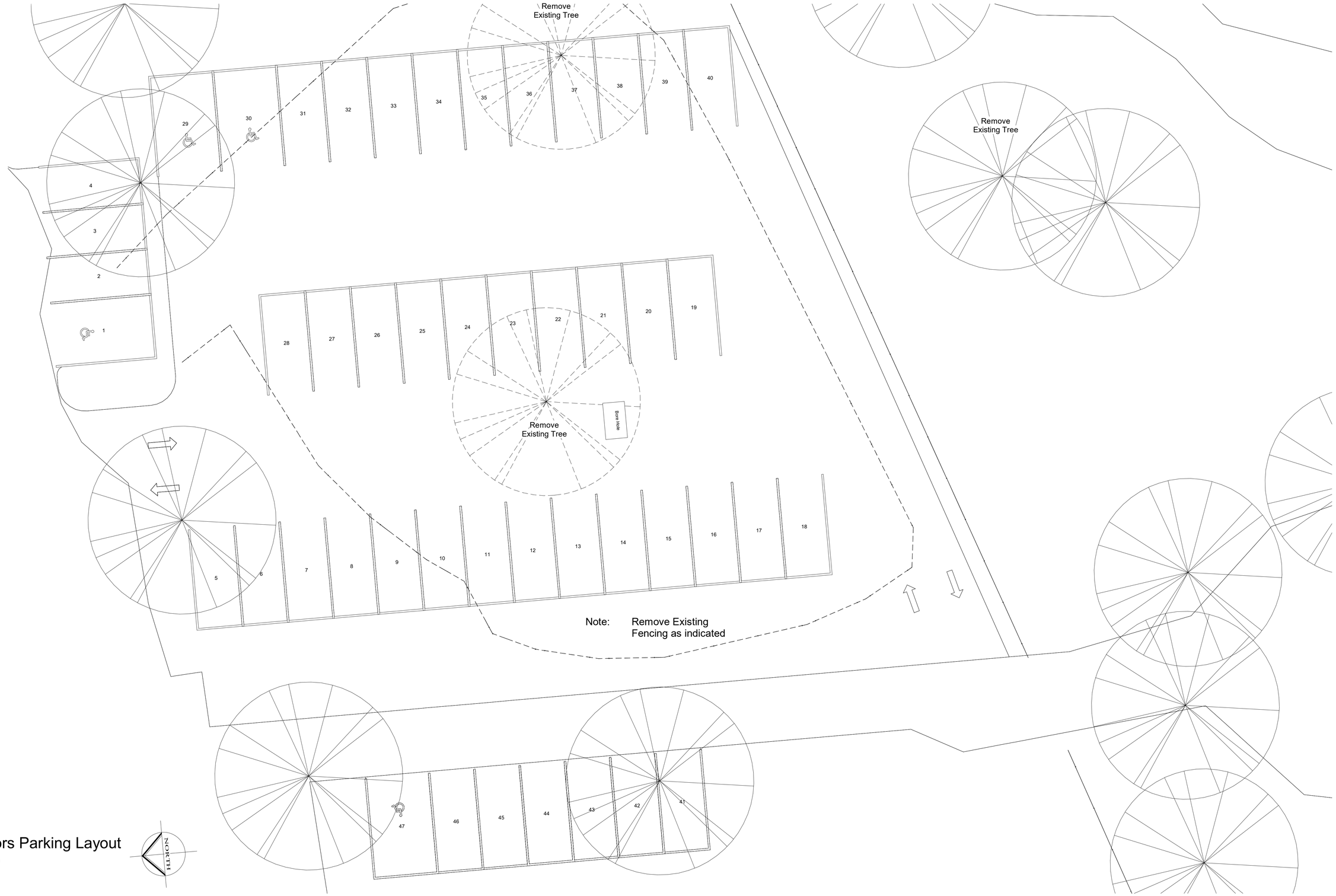
ENGINEER/TECHNOLOGIST | REG. NO. | DATE

SCALE	NTS	DRAWN	FN
DESIGNED	GF	CHECKED	GF

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-392-05-01	AA	04/10/2021 RE-Francois

A1

34398-02-392-05-01 - LOW VOLTAGE KIOSK - SCHEMATIC LAYOUT AA.dwg



Visitors Parking Layout

1 : 100

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REFERENCE DRAWINGS NUMBER / DRAWING DESCRIPTION	CITY ENGINEER / CLIENT REG. NO. DATE	21-10-01	JLS	B	Issue For Tender	
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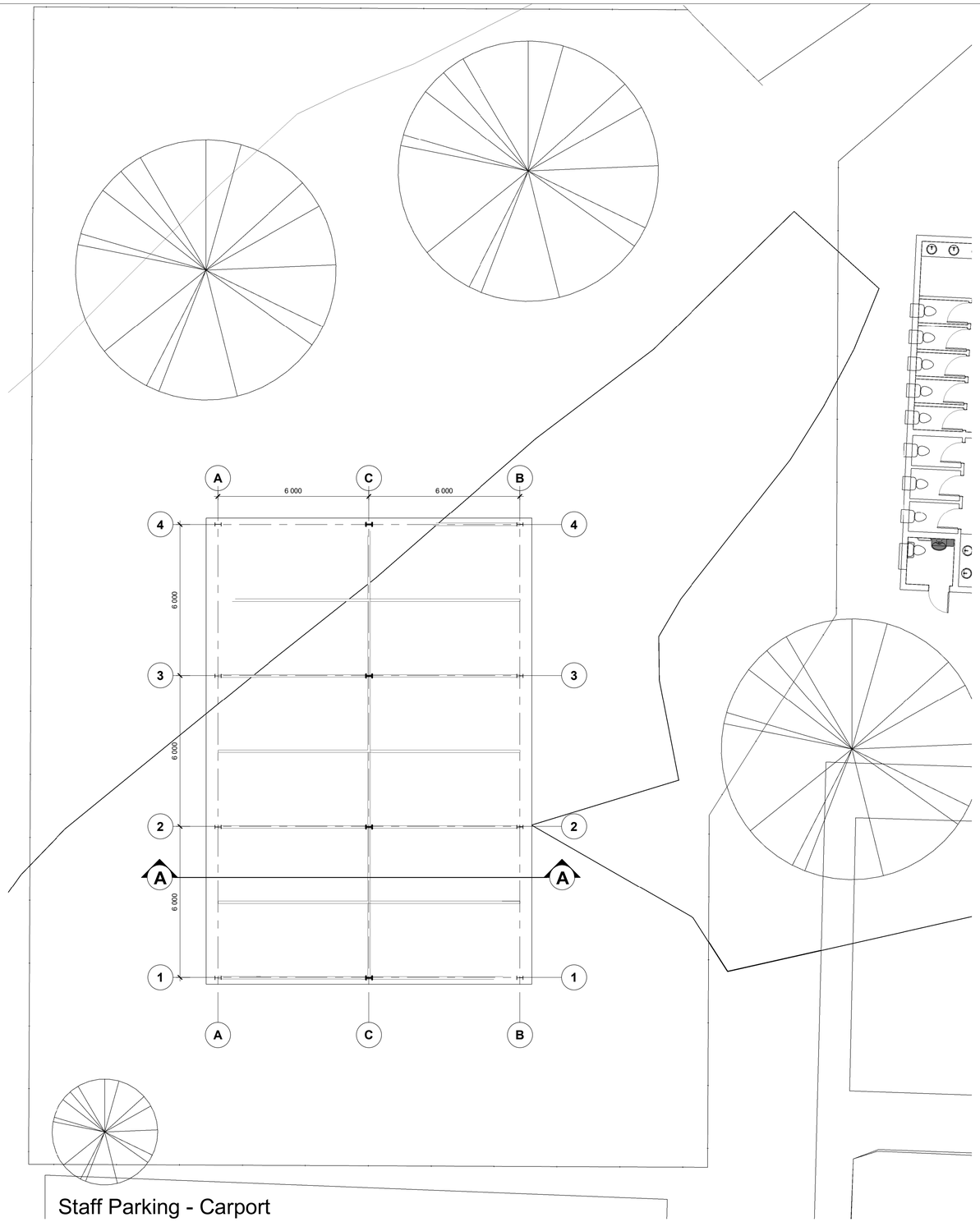
CESA GREEN BUILDING COUNCIL MEMBER ORGANISATION 2015

ENGINEERING PROCUREMENT MANAGEMENT

PROJECT	APPROVED BY BVi
Mokopane - Bio Diversity Centre	ARCHITECT REG. NO. DATE
DRAWING TITLE	SCALE 1 : 100 DRAWN JLS
NEW VISITOR PARKING	DESIGNED DB CHECKED DB
	PLAN NUMBER 34398-02-601-05-01 REV. NO. B DATE SAVED 06/18/21 Desmond Brand

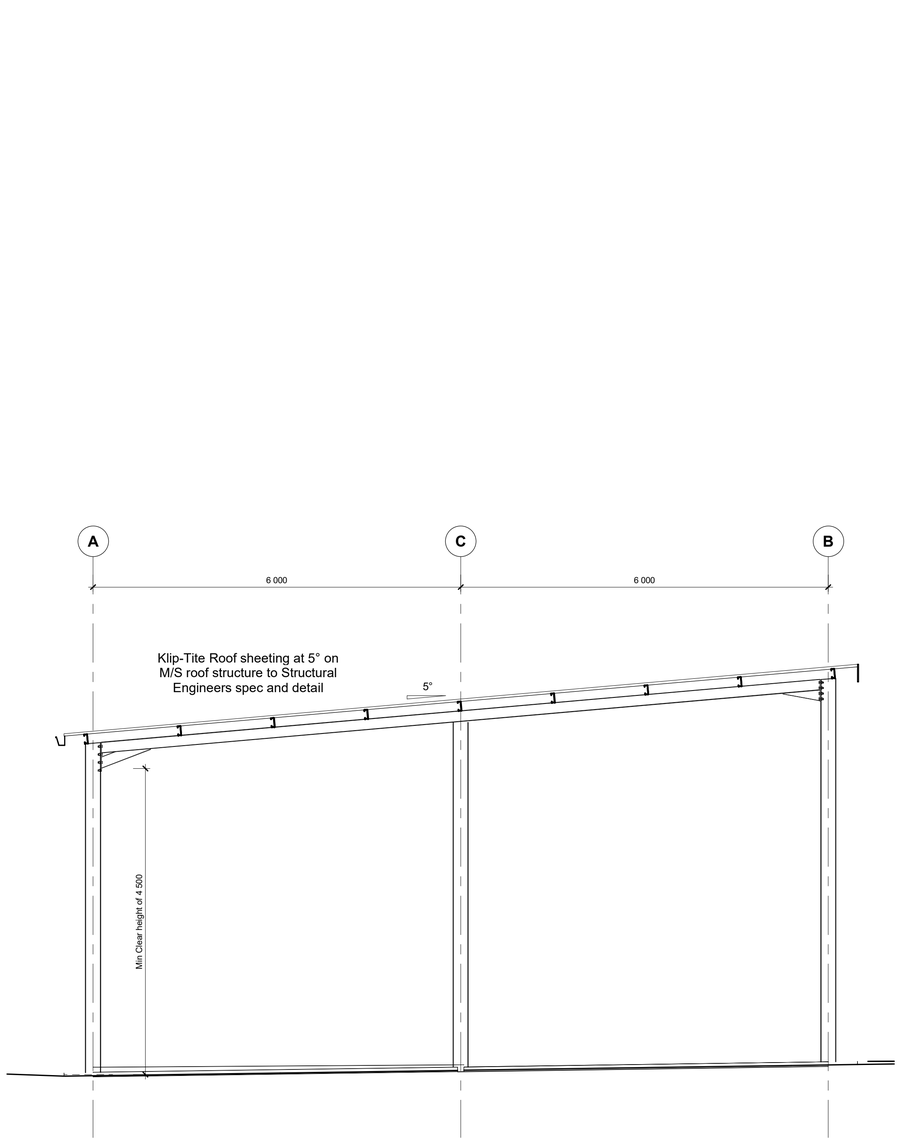
A1

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Staff Parking - Carport

1 : 100



Section A-A

1 : 50

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PROJECT: Mokopane - Bio Diversity Centre

DRAWING TITLE: STAFF PARKING - CARPARK

APPROVED BY BVi

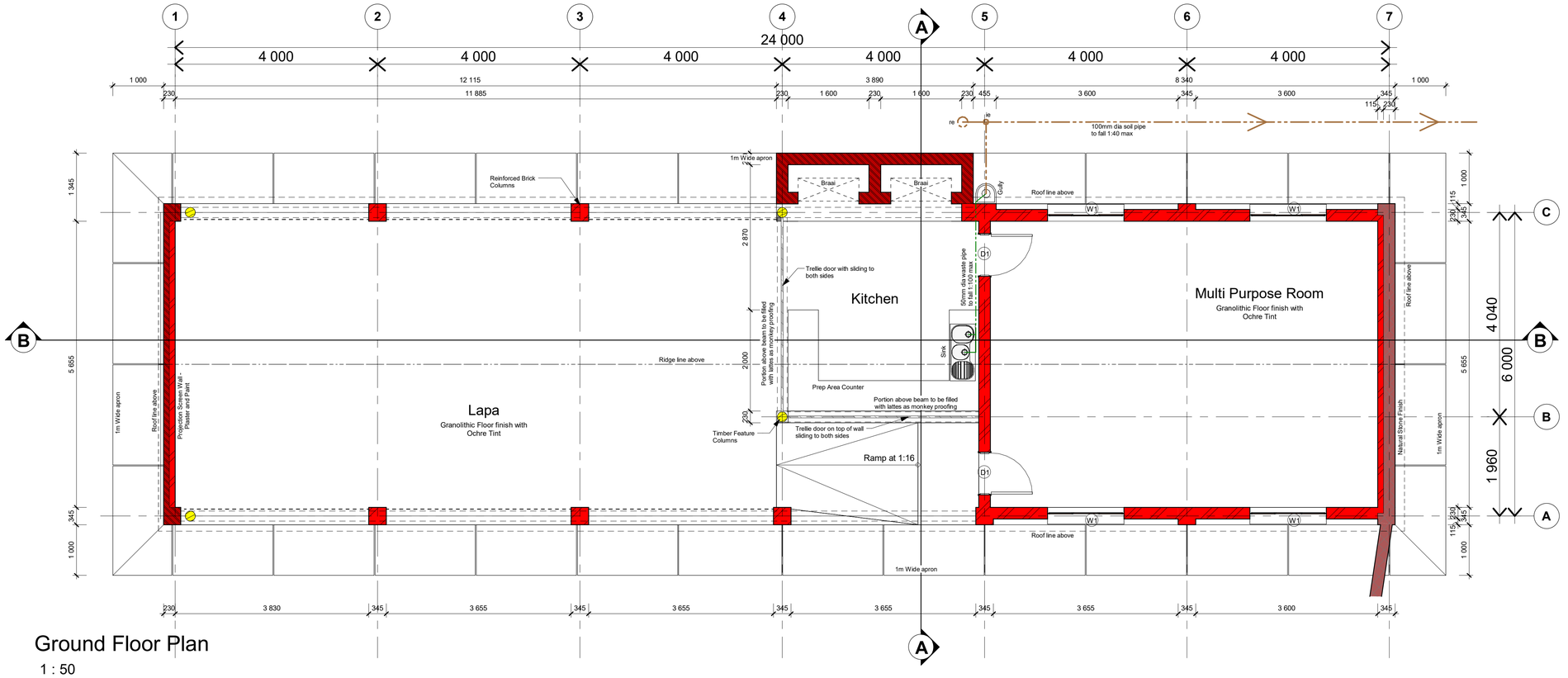
ARCHITECT | REG. NO. | DATE

SCALE	As indicated	DRAWN	Author
DESIGNED	Designer	CHECKED	Checker

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-601-05-02	B	2021-09-15 Desmond Brand

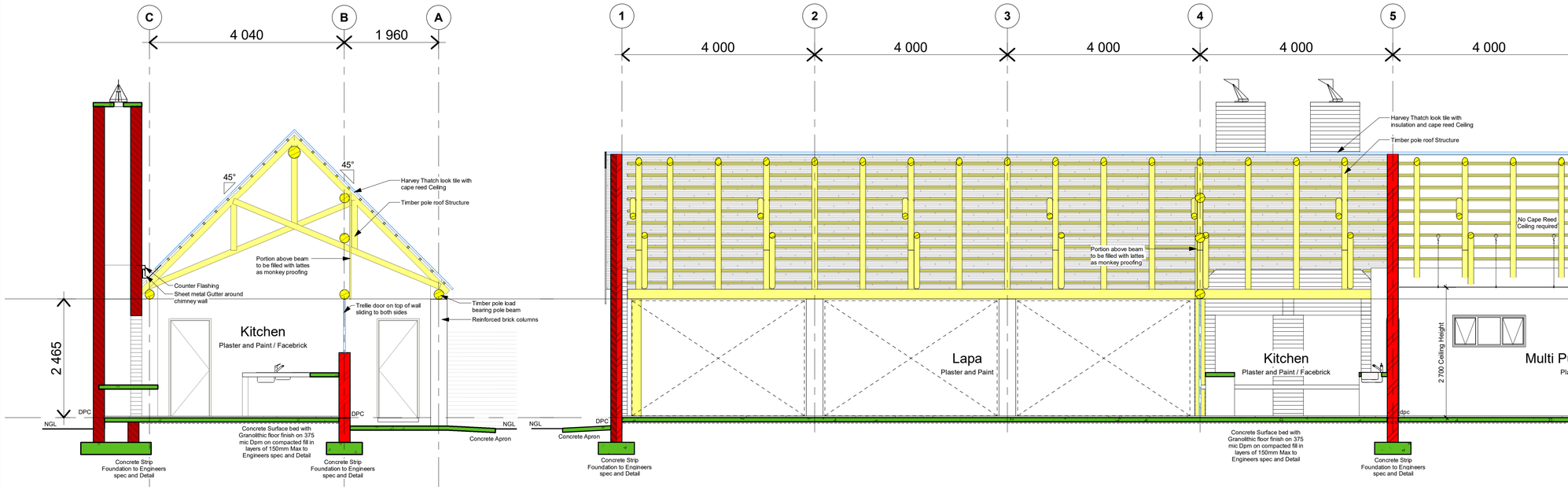
A1

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Ground Floor Plan

1 : 50



Section A-A

1 : 50

Section B-B

1 : 50

CLIENT PLAN NUMBER	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	CODE	REVISION DESCRIPTION	CLIENT
DO NOT SCALE DRAWING IF IN DOUBT, REFER TO DRAWING OFFICE		21-06-08	JLS	A	Issued for Client Review	SANBI Biodiversity for Life South African National Biodiversity Institute
REFERENCE DRAWINGS NUMBER / DRAWING DESCRIPTION	CITY ENGINEER / CLIENT — REG. NO. — DATE	21-10-01	JLS	B	Issue For Tender	
	AMENDMENTS CODE A-Y / : REPORT/DESIGN/TENDER 00-99 / : CONSTRUCTION Z / : AS BUILT /A : BY CLIENT /B : BY ARCHITECT /C : BY MECHANICAL OR ELECTRICAL /D : BY BVi /E : BY OTHER ( )					

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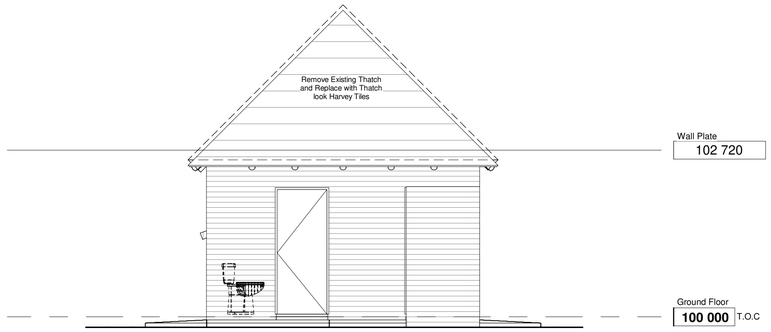
DRAWING TITLE: NEW LAPA - GROUND FLOOR PLAN, SECTIONS

APPROVED BY BVi

ARCHITECT — REG. NO. — DATE

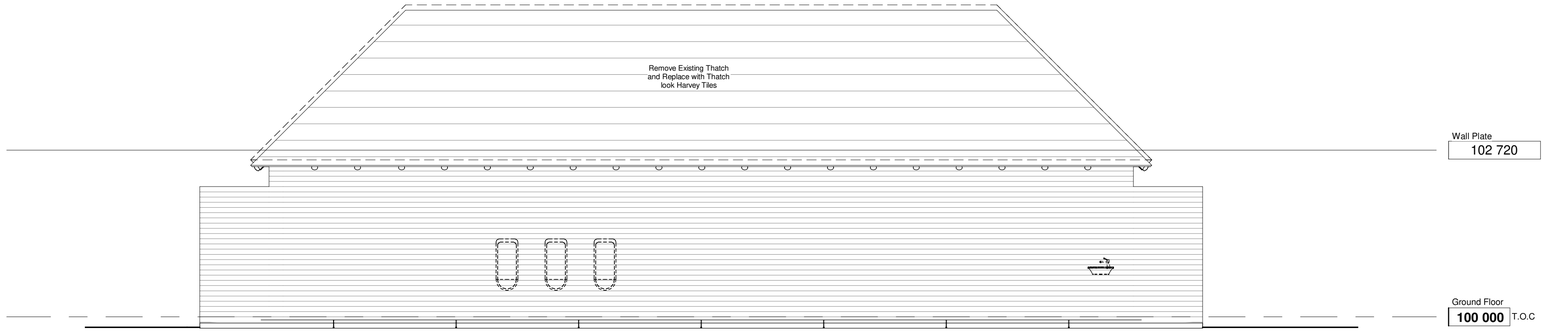
SCALE	1 : 50	DRAWN	JLS
DESIGNED	DB	CHECKED	DB
PLAN NUMBER	REV. NO.	DATE SAVED	
34398-02-602-01-01	B	2021-09-15 Desmond Brand	A1

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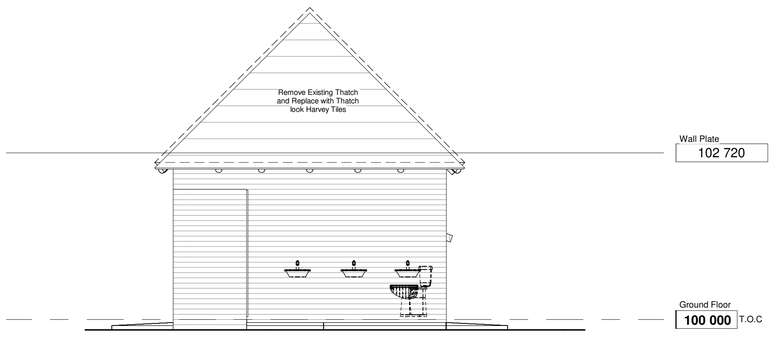
North Elevation

1 : 50



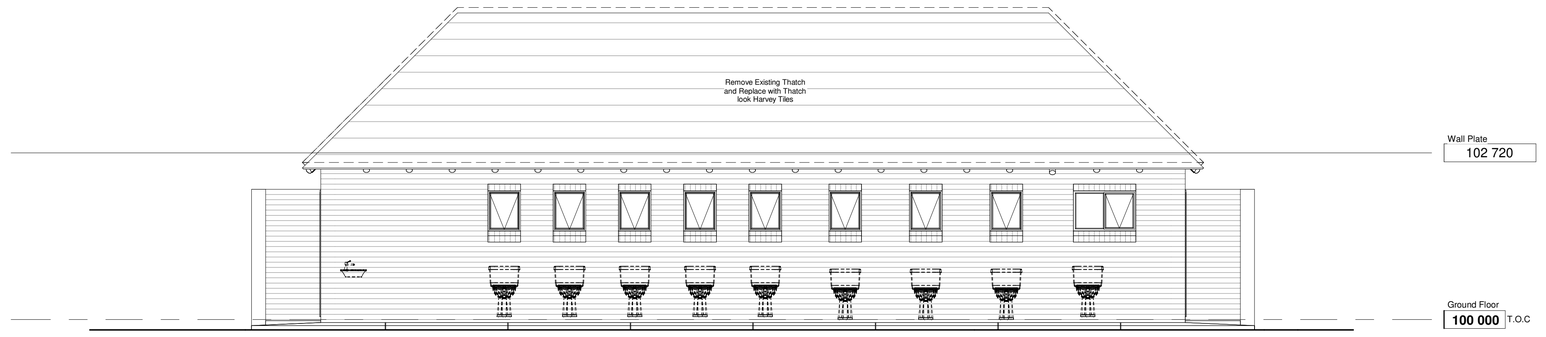
East Elevation

1 : 50



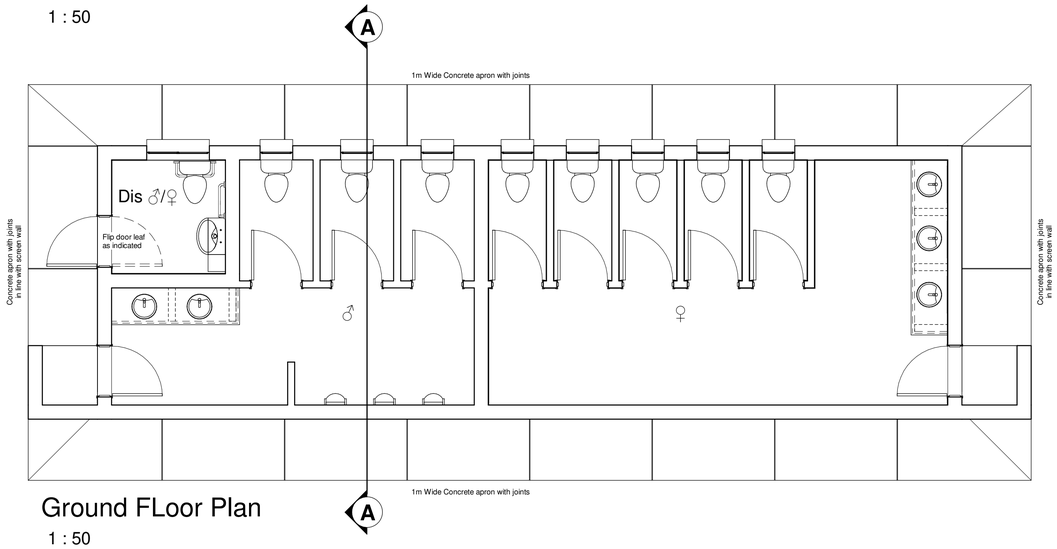
South Elevation

1 : 50



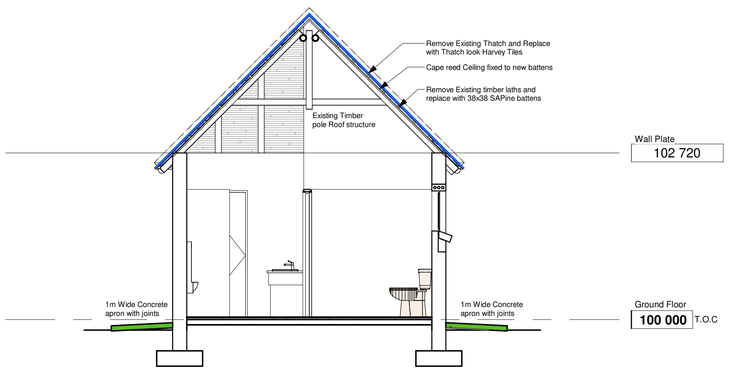
West Elevation

1 : 50



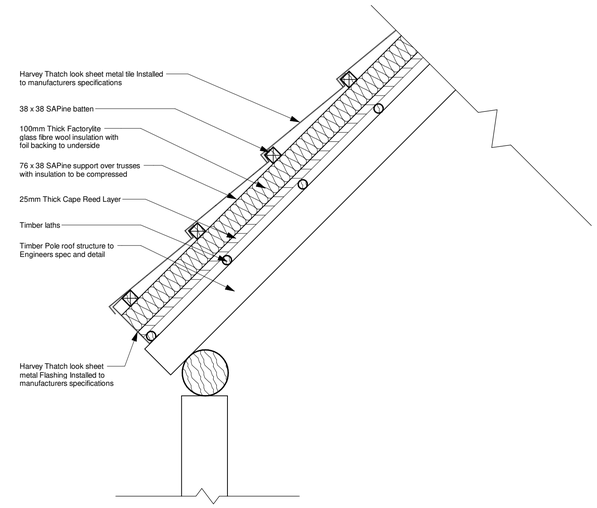
Ground FLoor Plan

1 : 50



Section A-A

1 : 50



Roof Detail

1 : 10

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		21-10-01	JLS	B	Issue for Tender	

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NUMBER	DRAWING DESCRIPTION

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PROJECT

Mokopane - Bio Diversity Centre

DRAWING TITLE

Existing Ablution Block - Ground Floor Plan, Section and Elevations

APPROVED BY BVi

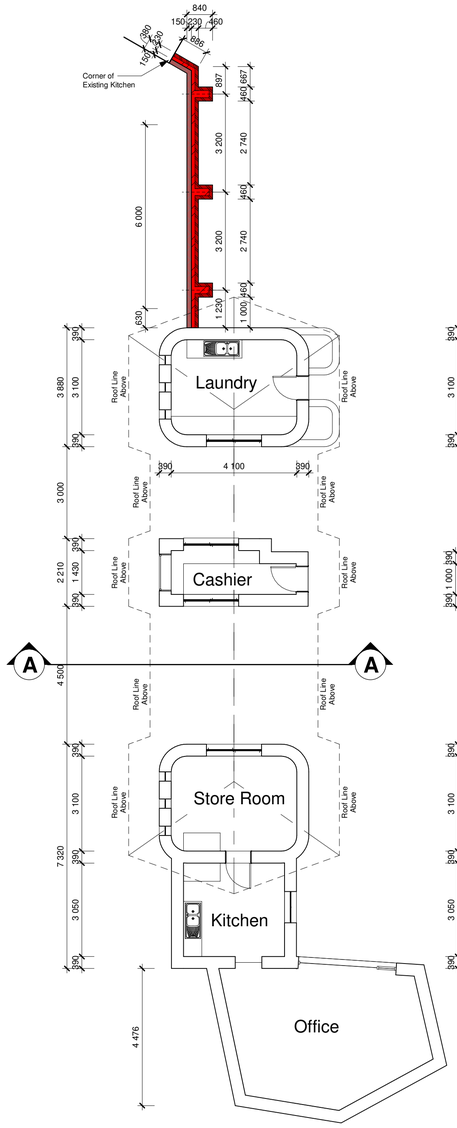
ARCHITECT | REG. NO. | DATE

SCALE	As indicated	DRAWN	JLS
DESIGNED	DB	CHECKED	DB

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-602-03-01	B	2021-10-01 Desmond Brand

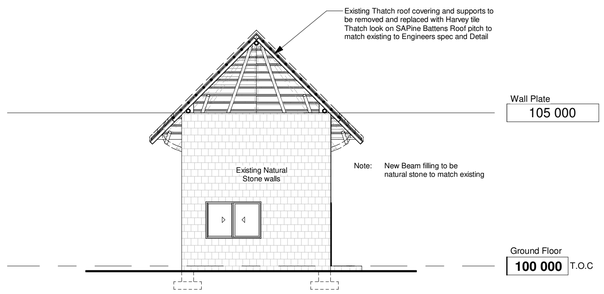
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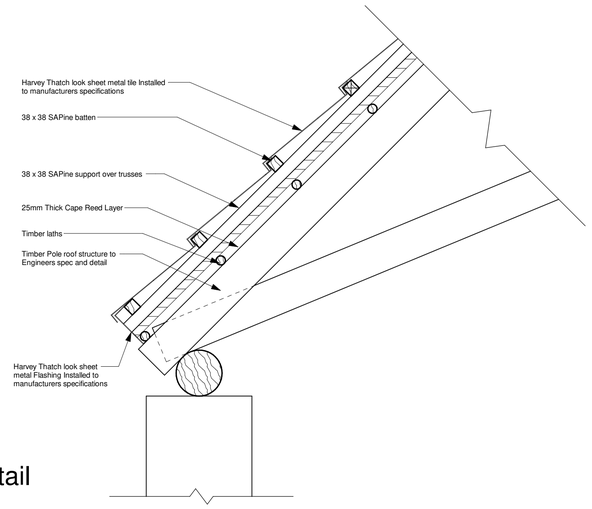
Ground FLoor Plan

1 : 100



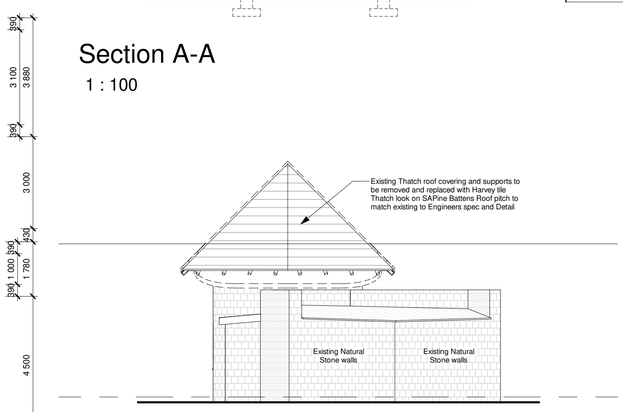
Section A-A

1 : 100



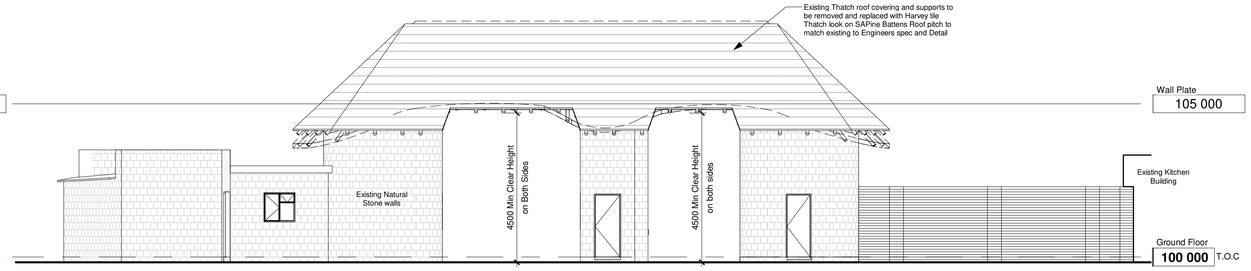
Roof Detail

1 : 10



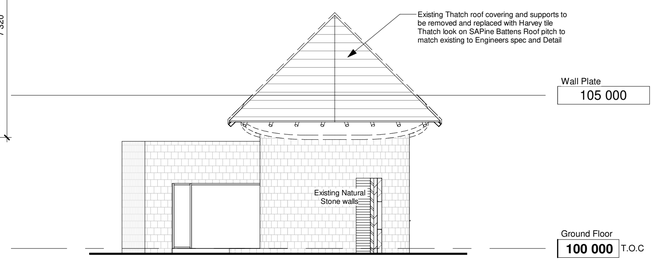
North Elevation

1 : 100



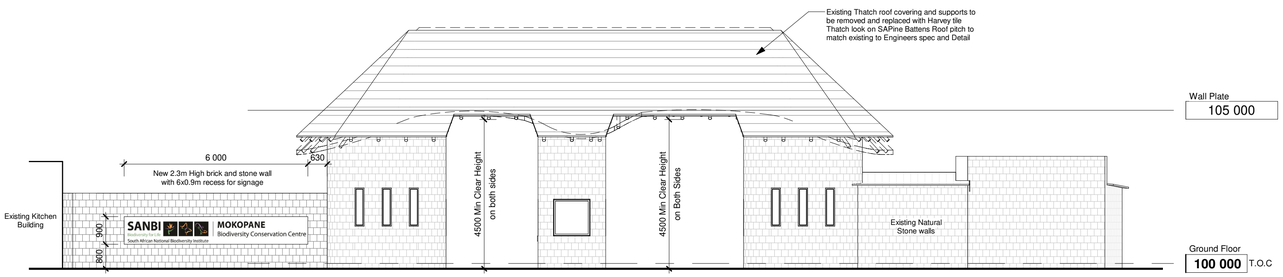
East Elevation

1 : 100



South Elevation

1 : 100



West Elevation

1 : 100

CLIENT PLAN NUMBER	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	CODE	REVISION DESCRIPTION	CLIENT
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REFERENCE DRAWINGS NUMBER / DRAWING DESCRIPTION	CITY ENGINEER / CLIENT REG. NO. DATE	21-10-01	JLS	B	Issue For Tender	
	AMENDMENTS CODE A-Y / : REPORT/DESIGN/TENDER 00-99 / : CONSTRUCTION Z / : AS BUILT /A : BY CLIENT /B : BY ARCHITECT /C : BY MECHANICAL OR ELECTRICAL /D : BY BVi /E : BY OTHER ( )					

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PROJECT: Mokopane - Bio Diversity Centre

DRAWING TITLE: Gate House - Ground Floor Plan, Section and Elevations

APPROVED BY BVi

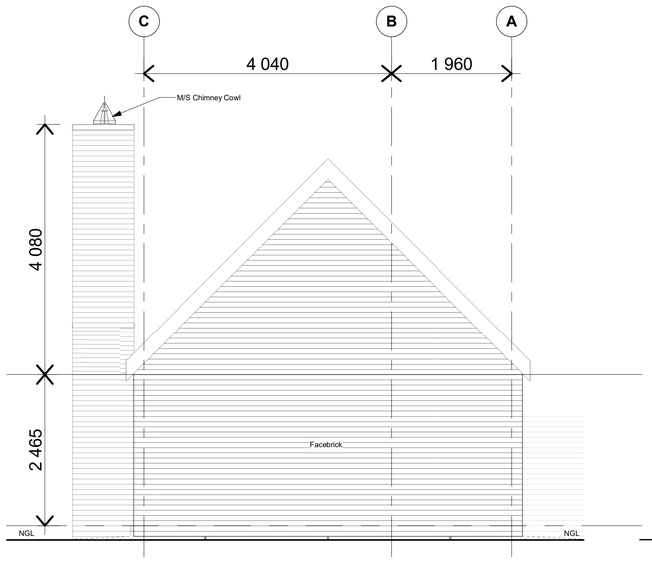
ARCHITECT REG. NO. DATE

SCALE	As indicated	DRAWN	JLS
DESIGNED	DB	CHECKED	DB

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-602-04-01	B	2021-10-01 Desmond Brand

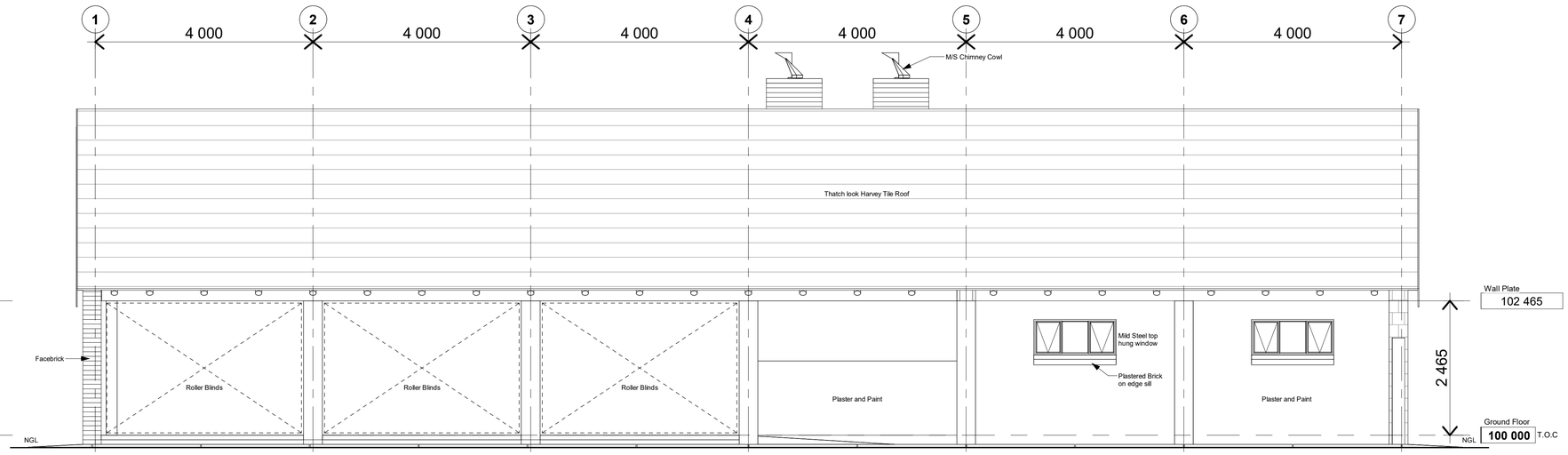
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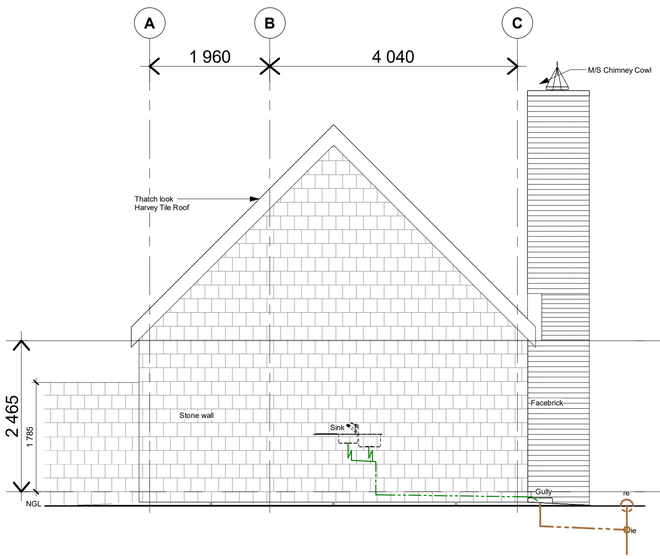
North Elevation

1 : 50



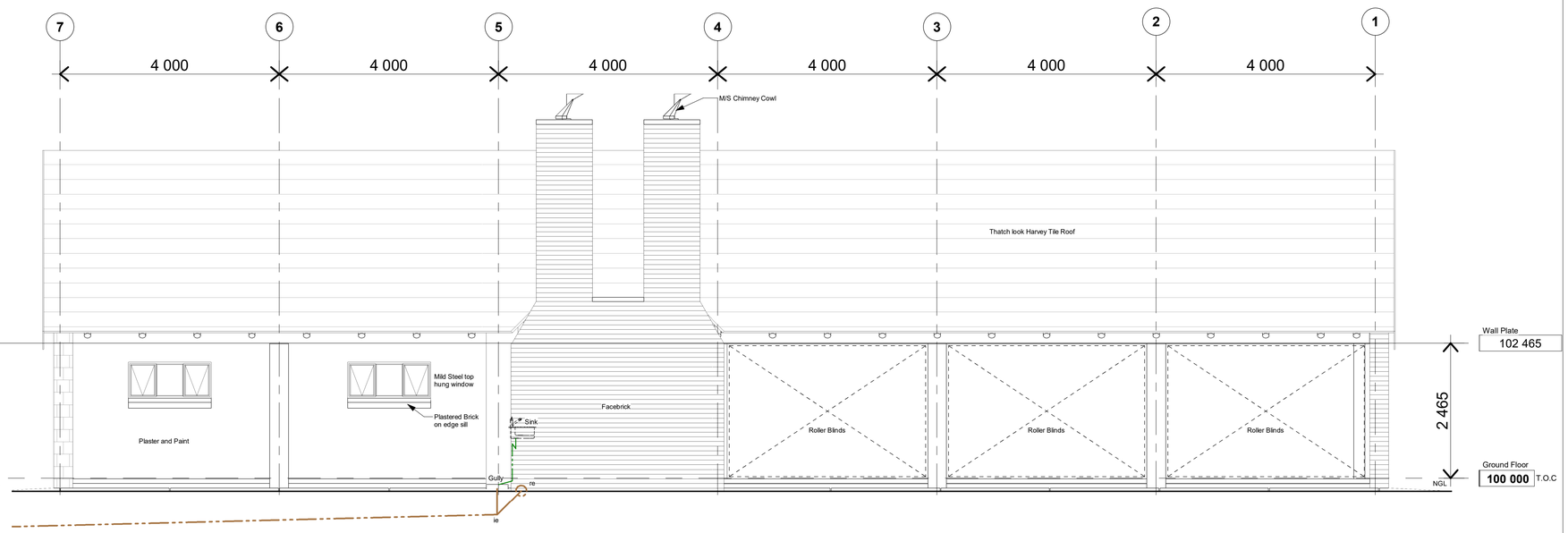
East Elevation

1 : 50



South Elevation

1 : 50



West Elevation

1 : 50

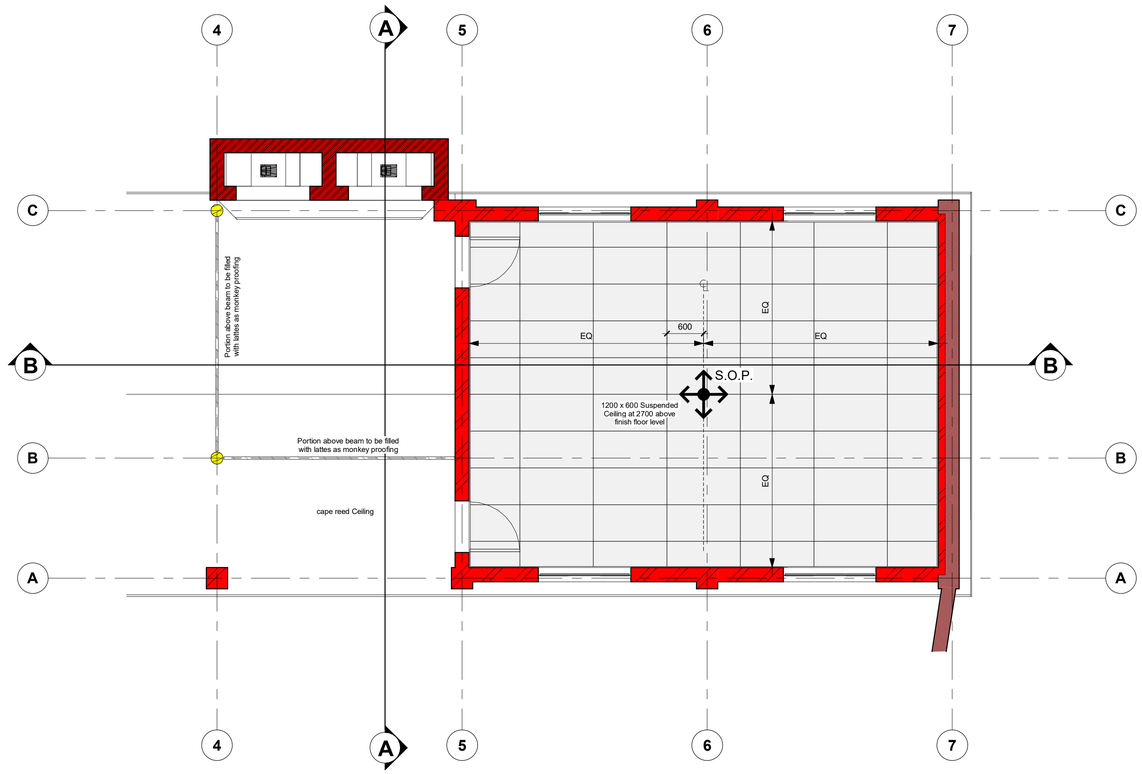
CLIENT PLAN NUMBER	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	CODE	REVISION DESCRIPTION	CLIENT
DO NOT SCALE DRAWING IF IN DOUBT, REFER TO DRAWING OFFICE		21-06-08	JLS	A	Issued for Client Review	SANBI Biodiversity for Life South African National Biodiversity Institute
REFERENCE DRAWINGS NUMBER / DRAWING DESCRIPTION	CITY ENGINEER / CLIENT REG. NO. DATE	21-10-01	JLS	B	Issue For Tender	
	AMENDMENTS CODE					
	A-Y / : REPORT/DESIGN/TENDER 00-99 / : CONSTRUCTION Z / : AS BUILT /A : BY CLIENT /B : BY ARCHITECT /C : BY MECHANICAL OR ELECTRICAL /D : BY BVi /E : BY OTHER ( )					

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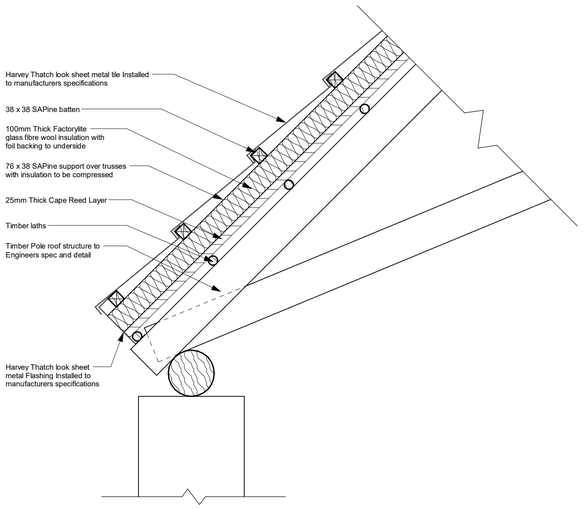
PROJECT	APPROVED BY BVi
Mokopane - Bio Diversity Centre	ARCHITECT / REG. NO. / DATE
DRAWING TITLE	SCALE 1 : 50 · DRAWN JLS
NEW LAPA - ELEVATION	DESIGNED DB · CHECKED DB
	PLAN NUMBER 34398-02-603-01-01 · REV. NO. B · DATE SAVED 2021-09-15 Desmond Brand · A1

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Ground Floor Ceiling Plan

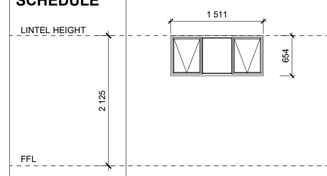
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Roof Detail

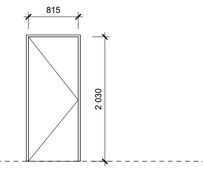
1 : 10

WINDOW SCHEDULE



DESCRIPTION	New mild steel window. Code: NE4
QUANTITY	4
WINDOW NUMBER	W1
GENERAL	
WINDOW FRAME	Manufactured from standard steel profiles with standard top hung window frame and opening section as supplied complete with hinges and handles by manufacture. Window frames to be delivered to site.
WINDOW FRAME FINISH	Prepare and apply one coat merit universal undercoat and two coats gloss enamel paint Colour – to be confirmed by Architects.
GLASS	4 mm thick clear float glass. Glass to be in accordance with SANS 10400.
WINDOW FURNITURE	As supplied complete by manufacturer.
BURGLAR BARS	Standard mild steel flat bar burglar proofing bars to window opening sections with finish as per window frames

DOOR SCHEDULE



DESCRIPTION	New steel frame with new timber door leaf
QUANTITY	2
DOOR NUMBER	D1
DOOR FRAME	Standard 1.2 mm thick mild steel double rebated single door frame. Door frame to be suitable for wall with plaster and paint both sides. Door frame to be supplied complete with 1½ pair hinges per door leaf with lugs and rubber buffers as supplied complete by manufacturer. Door frame to be pre painted and delivered to site with a factory applied Red Oxide metal primer.
DOOR FRAME FINISH	Apply Plascon or similar approved mild steel primer as required to any damaged pre painted metal primer areas. Prepare and clean door frame and apply one coat Plascon or similar approved merit universal undercoat and finish with two coats Plascon or similar approved gloss enamel paint finish. Colour – to be confirmed by Architects.
DOOR LEAF	TDM Doors or similar approved solid single door leaf with hardwood edges and Masonite finish suitable for painting to both sides.
DOOR LEAF FINISH	Prepare and apply timber door leaf and apply one coat Plascon or similar approved wood primer – Pink UC 2, one coat merit universal undercoat - White UC 1 and two coats Plascon or similar approved gloss enamel paint. Paint to be roller applied. Colour – to Architects approval.
KICK PLATE	None
PUSH PLATE	None
HANDLE	Union/Assa Abloy or similar approved Sable lever door handle on backplate code AL 65A63 lever handle on 152x76mm modular backplate to both sides suitable for euro profile cylinder lock. Finish – Anodised Silver.
LOCK	Union/Assa Abloy or similar approved upright mortice lock,, code 22315 suitable for Euro cylinder lock. SABS approved and to conforms to SABS ISO 9001:2000 norms.
CYLINDER	Union/Assa Abloy or similar approved 2 x 18 Euro profile double cylinder. Cylinder to be supplied complete with three keys.
FLUSH BOLT	-
CABIN HOOKS	-
COAT HOOKS	-
DOOR STOP	Union/Assa Abloy or similar approved AL8730AS floor mounted door stop. Position to be confirmed on site.

CLIENT PLAN NUMBER

DO NOT SCALE DRAWING
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REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION

APPROVED BY COUNCIL / CLIENT

CITY ENGINEER / CLIENT | REG. NO. | DATE

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21-06-08	JLS	A	Issued for Client Review
21-10-01	JLS	B	Issue For Tender

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PROJECT

Mokopane - Bio Diversity Centre

DRAWING TITLE

NEW LAPA - CEILING PLAN AND WINDOW AND DOOR SCHEDULE

APPROVED BY BVi

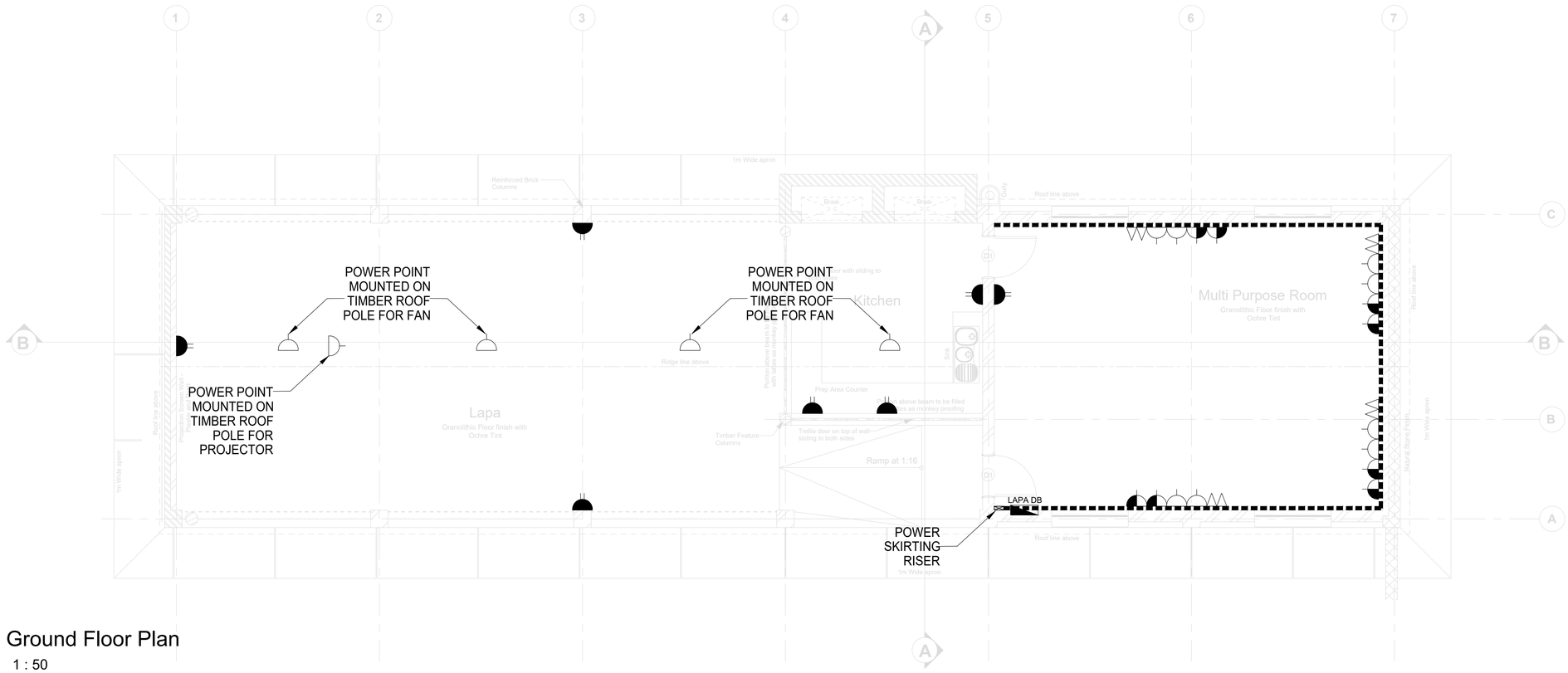
ARCHITECT | REG. NO. | DATE

SCALE	As indicated	DRAWN	Author
DESIGNED	Designer	CHECKED	Checker

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-605-01-01	B	2021-09-16 Desmond Brand

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Ground Floor Plan

1 : 50

	LEGEND:
SYMBOL	DESCTRIPTION
	16 AMP SOCKET OUTLET (NORMAL) INSTALLED IN THE POWER SKIRTING OR DRAWBOXES
	16 AMP DEDICATED SOCKET OUTLET (RED - FLAT EARTH PIN) INSTALLED IN THE POWER SKIRTING OR DRAWBOXES
	16 AMP DOUBLE SOCKET OUTLET (NORMAL) INSTALLED IN DRAWBOXES
	CAT 6 NETWORK POINT
	POWER SKIRTING RISER VERTICAL AGAINST WALL (LINKING TO CEILING VOID)
	TWO CHANNEL TWO COMPARTMENT POWER SKIRTING
	DISTRIBUTION BOARD

NOTES:

1. CONDUIT: STEEL
2. FINAL POSITION OF ALL EQUIPMENT TO BE CONFIRMED ON SITE
3. INSTALL SOCKETS FLUSH IN WALL AT 300mm A.F.F.L. IN 100x100x50mm STEEL WALL BOXES OR AS OTHERWISE INDICATED.
4. HEIGHT OF POWER SKIRTING TO BE DETERMINED ON SITE
5. INSTALL 3X32mmØ FLEXIBLE CONDUIT LINKING BETWEEN POWER SKIRTING UPRIGHT AND P9000 WIRING CHANNEL IN CEILING VOID.
6. CONTRACTOR SHALL COORDINATE POSITIONING OF SUPPLY SLEEVES TO ENTER THE DISTRIBUTION BOARD UNDERNEATH THE MAIN CIRCUIT BREAKER.
7. CABLES SHALL BE SECURED TO CABLE LADDER WITH BAND-IT STAINLESS STEEL CABLE STRAPS. CABLES ABOVE 185mm² SHALL BE FIXED WITH CLAMPS.

DO NOT SCALE DRAWING
IF IN DOUBT, REFER TO DRAWING OFFICE

CLIENT PLAN NUMBER

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DATE	INITIAL	CODE	REVISION DESCRIPTION
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CLIENT

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PROJECT

Mokopane - Bio Diversity Centre

DRAWING TITLE

NEW LAPA - GROUND FLOOR PLAN ELECTRICAL POINTS

APPROVED BY BVi

ENGINEER/TECHNOLOGIST | REG. NO. | DATE

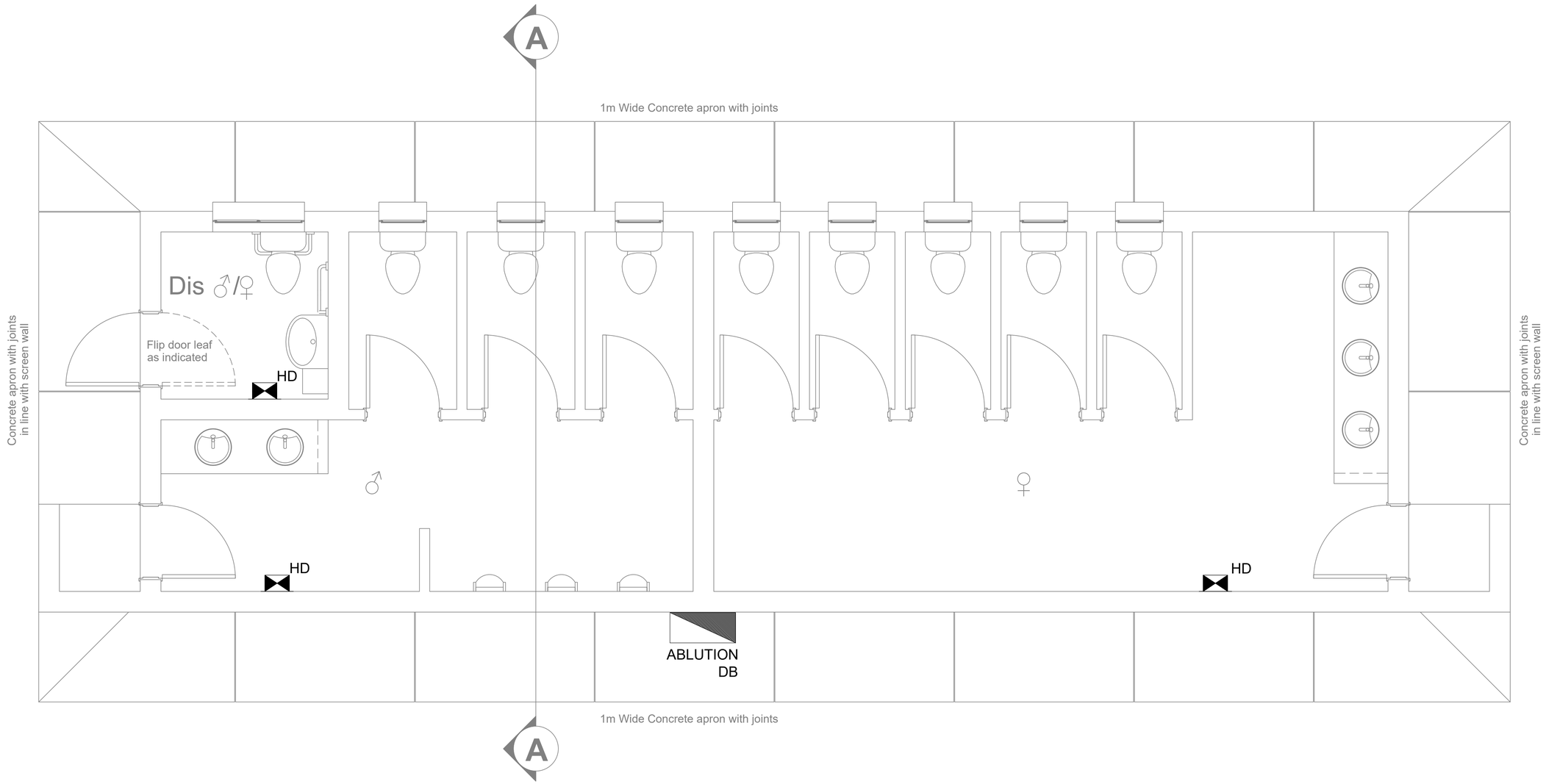
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DESIGNED	GF	CHECKED	GF

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-310-01-01	AA	13/09/2021 RE-Francois

A1

34398-02-310-01-01 - NEW LAPA - GROUND FLOOR PLAN - ELECTRICAL LAYOUT.dwg

Plot Date: 04/10/2021



LEGEND:

SYMBOL	DESCRIPTION
HD	SURFACE MOUNTED 20A DOUBLE POLE HAND DRYER ISOLATOR SWITCH WITH STEEL COVER PLATE. HEIGHT - 250mm BELOW CEILING
	SURFACE MOUNTED DISTRIBUTION BOARD

NOTES:

1. USE STEEL CONDUIT FOR INDOOR SURFACE MOUNTED OR OUTDOOR APPLICATIONS AND PVC CONDUIT IN CEILING VOID OR CONCRETE APPLICATIONS. USE HOSPITAL SADDLES FOR STEEL CONDUIT.
2. ON SITE COORDINATION BETWEEN ALL SERVICES SHOULD BE DONE (BY CONTRACTOR) BEFORE ANY INSTALLATION WORK COMMENCES.
3. INSTALL WIRING/CABLING IN CONDUIT, WIRING CHANNEL OR ON CABLE LADDER.
4. FLOOD LIGHTS SHOULD BE INSTALLED ON A RETROFIT SWIVEL POLE MOUNTING BRACKET EQUAL OR SIMILAR TO EAZYREACH ROTATE POLE AND MOUNTED AT GUTTER HEIGHT AGAINST THE STRUCTURE.

DO NOT SCALE DRAWING
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CLIENT PLAN NUMBER

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PROJECT

Mokopane - Bio Diversity Centre

DRAWING TITLE

Existing Ablution Block - Ground Floor Plan Electrical Layout

APPROVED BY BVi

ENGINEER/TECHNOLOGIST | REG. NO. | DATE

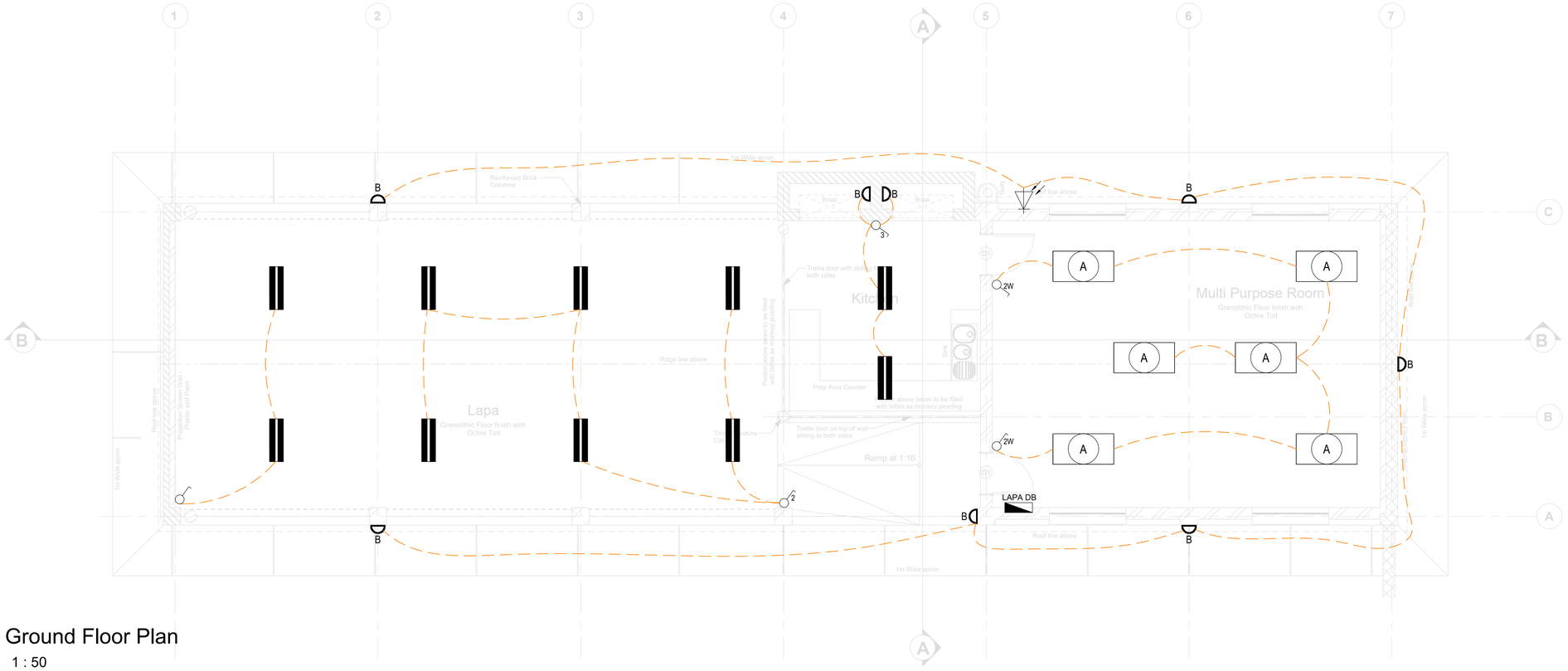
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DESIGNED	GF	CHECKED	GF

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-310-03-01	AA	02/09/2021 RE-Francois

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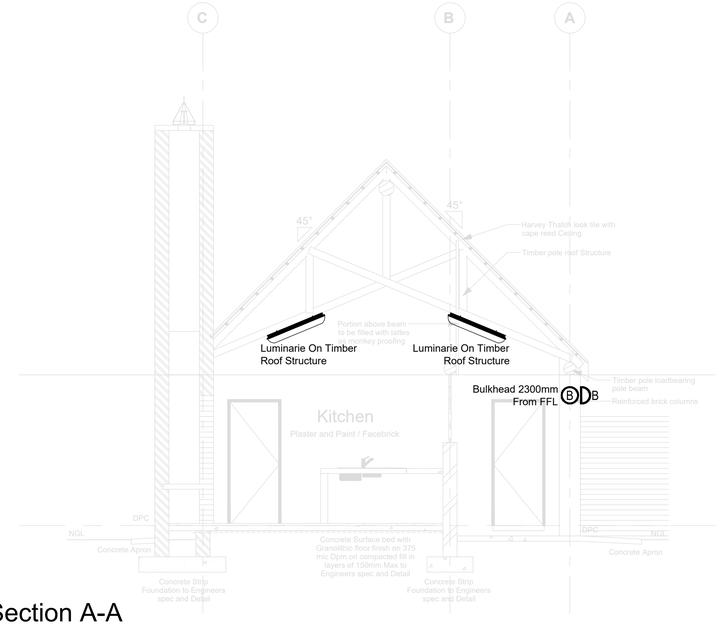
34398-02-310-03-01 - EXISTING ABLUTION - ELECTRICAL LAYOUT.dwg

Plot Date: 04/10/2021



Ground Floor Plan

1 : 50



Section A-A

1 : 50

LEGEND:	
SYMBOL	DESCRIPTION
	SURFACE MOUNTED LINEAR LUMINAIRE COMPLETE WITH 4000K 24W LED's: TYPE LASCON C10 / 24W LED TRIDONIC / 6080LM / PHOTO ENGRAVE LENSE - 4000K IP65 RATED OR SIMILAR.
DB	SURFACE MOUNTED BULKHEAD LUMINAIRE COMPLETE WITH 4000K 17W LED's: TYPE BEKA SERIES 30 17W 4000K BLACK TEXTURED BULKHEAD OR SIMILAR.
A	RECESSED MOUNTED LED PANEL LUMINAIRE COMPLETE WITH 4000K 48W LED'S, ACRYLIC (OPAL) DIFFUSER, 3m CORD SET AND 5A PLUG TOP: TYPE BEKA LED PANEL 600 x 1200 48W - RECESSED OR SIMILAR.
	FLUSH MOUNTED ONE WAY ONE LEVER LIGHT SWITCH WITH STEEL COVER PLATE. HEIGHT - 1200mm AFFL.
3	FLUSH MOUNTED ONE WAY THREE LEVER LIGHT SWITCH WITH STEEL COVER PLATE. HEIGHT - 1200mm AFFL.
2W	FLUSH MOUNTED TWO WAY ONE LEVER LIGHT SWITCH WITH STEEL COVER PLATE. HEIGHT - 1200mm AFFL.
	DAY/NIGHT SWITCH

NOTES:

1. USE STEEL CONDUIT FOR INDOOR SURFACE/WOODEN POLE MOUNTED OR OUTDOOR APPLICATIONS AND PVC CONDUIT IN CEILING VOID OR CONCRETE APPLICATIONS. USE HOSPITAL SADDLES FOR STEEL CONDUIT.
2. CONNECT SURFACE MOUNTED LUMINAIRE VIA 65mmØ OUTLET BOX MOUNTED IN CEILING VOID OR FLUSH IN WALL.
3. ON SITE COORDINATION BETWEEN ALL SERVICES SHOULD BE DONE (BY CONTRACTOR) BEFORE ANY INSTALLATION WORK COMMENCES.
4. INSTALL WIRING/CABLING IN CONDUIT, WIRING CHANNEL OR ON CABLE LADDER.
5. FLOOD LIGHTS SHOULD BE INSTALLED ON A RETROFIT SWIVEL POLE MOUNTING BRACKET EQUAL OR SIMILAR TO EAZYREACH ROTATE POLE AND MOUNTED AT GUTTER HEIGHT AGAINST THE STRUCTURE.

Proposed Luminaires



Beka Series 30



Lascon Reel D/L



Beka LED Panel

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REFERENCE DRAWINGS

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PROJECT

Mokopane - Bio Diversity Centre

DRAWING TITLE

NEW LAPA - GROUND FLOOR PLAN LIGHTING LAYOUT

APPROVED BY BVi

ENGINEER/TECHNOLOGIST | REG. NO. | DATE

SCALE	As indicated	DRAWN	FN
DESIGNED	GF	CHECKED	GF

PLAN NUMBER	REV. NO.	DATE SAVED
34398-02-325-01-01	AA	10/09/2021 RE-Francois

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34398-02-325-01-01 - NEW LAPA - GROUND FLOOR PLAN - LIGHTING LAYOUT.dwg

Appendix B: HEALTH AND SAFETY SPECIFICATION



Government Gazette
Staatskoerant

REPUBLIC OF SOUTH AFRICA
REPUBLIEK VAN SUID-AFRIKA

Regulation Gazette **No. 10113** *Regulasiekoerant*

Vol. 584 **Pretoria,** **7** **February / Februarie** **2014** **No. 37305**

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GOVERNMENT NOTICES

DEPARTMENT OF LABOUR

No. R. 84 **7 February 2014**

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993

CONSTRUCTION REGULATIONS, 2014

The Minister of Labour has under section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), after consultation with the Advisory Council for Occupational Health and Safety, made the regulations in the Schedule.

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Definitions

1. In these Regulations any word or expression to which a meaning has been assigned in the Act shall have the meaning so assigned and, unless the context otherwise indicates—

"**agent**" means a competent person who acts as a representative for a client;

"**angle of repose**" means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away;

"**bulk mixing plant**" means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work;

"**client**" means any person for whom construction work is being performed;

"**competent person**" means a person who—

(a) has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and

(b) is familiar with the Act and with the applicable regulations made under the Act;

"**construction manager**" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

"**construction site**" means a work place where construction work is being performed;

"**construction supervisor**" means a competent person responsible for supervising construction activities on a construction site;

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"construction vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work;

"construction work" means any work in connection with—

(a) the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or

(b) the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work;

"construction work permit" means a document issued in terms of regulation 3;

"contractor" means an employer who performs construction work;

"demolition work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"design" in relation to any structure, includes drawings, calculations, design details and specifications;

"designer" means—

(a) a competent person who—

(i) prepares a design;

(ii) checks and approves a design;

(iii) arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or

(iv) designs temporary work, including its components;

(b) an architect or engineer contributing to, or having overall responsibility for a design;

(c) a building services engineer designing details for fixed plant;

(d) a surveyor specifying articles or drawing up specifications;

(e) a contractor carrying out design work as part of a design and building project; or

(f) an interior designer, shop-fitter or landscape architect;

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"excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"explosive actuated fastening device" means a tool that is activated by an explosive charge and that is used for driving bolts, nails and similar objects for the purpose of providing fixing;

"fall arrest equipment" means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines or similar equipment;

"fall prevention equipment" means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guardrails, screens, barricades, anchorages or similar equipment;

"fall protection plan" means a documented plan, which includes and provides for—

(a) all risks relating to working from a fall risk position, considering the nature of work undertaken;

(b) the procedures and methods to be applied in order to eliminate the risk of falling; and

(c) a rescue plan and procedures;

"fall risk" means any potential exposure to falling either from, off or into;

"health and safety file" means a file, or other record containing the information in writing required by these Regulations;

"health and safety plan" means a site, activity or project specific documented plan in accordance with the client's health and safety specification;

"health and safety specification" means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work;

"material hoist" means a hoist used to lower or raise material and equipment, excluding passengers;

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"**medical certificate of fitness**" means a certificate contemplated in regulation 7*(8)*;

"**mobile plant**" means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site;

"**National Building Regulations**" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"**person day**" means one normal working shift of carrying out construction work by a person on a construction site;

"**principal contractor**" means an employer appointed by the client to perform construction work;

"**Professional Engineer or Professional Certificated Engineer**" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"**Professional Technologist**" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"**provincial director**" means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003;

"**scaffold**" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"**shoring**" means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation;

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"**structure**" means—

(a) any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;

(b) any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or

(c) any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling;

"**suspended platform**" means a working platform suspended from supports by means of one or more separate ropes from each support;

"**temporary works**" means any falsework, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work;

"**the Act**" means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

"**tunneling**" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

Scope of application

2. (1) These Regulations are applicable to all persons involved in construction work.

(2) Regulations 3 and 5 are not applicable where the construction work carried out is in relation to a single storey dwelling for a client who intends to reside in such dwelling upon completion thereof.

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Application for construction work permit

3. (1) A client who intends to have construction work carried out, must at least 30 days before that work is to be carried out apply to the provincial director in writing for a construction work permit to perform construction work if the intended construction work will—

(a) exceed 180 days;

(b) will involve more than 1800 person days of construction work; or

(c) the works contract is of a value equal to or exceeding thirteen million rand or Construction Industry Development Board (CIDB) grading level 6.

(2) An application contemplated in subregulation (1) must be done in a form similar to Annexure 1.

(3) The provincial director must issue a construction work permit in writing to perform construction work contemplated in subregulation (1) within 30 days of receiving the construction work permit application and must assign a site specific number for each construction site.

(4) A site specific number contemplated in subregulation (3) must be conspicuously displayed at the main entrance to the site for which that number is assigned.

(5) A construction work permit contemplated in this regulation may be granted only if—

(a) the fully completed documents contemplated in regulation 5(1)*(a)* and *(b)* have been submitted; and

(b) proof in writing has been submitted—

(i) that the client complies with regulation 5(5)

(ii) with regard to the registration and good standing of the principal contractor as contemplated in regulation 5(1)*(j)*; and

(iii) that regulation 5(1)*(c)*, *(d)*, *(e)*, *(f)*, *(g)* and *(h)* has been complied with.

(6) A client must ensure that the principal contractor keeps a copy of the construction work permit contemplated in subregulation (1) in the occupational health and safety file for inspection by an inspector, the client, the client's authorised agent, or an employee.

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(7) No construction work contemplated in subregulation (1) may be commenced or carried out before the construction work permit and number contemplated in subregulation (3) have been issued and assigned.

(8) A site specific number contemplated in subregulation (3) is not transferrable.

Notification of construction work

4. (1) A contractor who intends to carry out any construction work other than work contemplated in regulation 3(1), must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will—

(a) include excavation work;

(b) include working at a height where there is risk of falling;

(c) include the demolition of a structure; or

(d) include the use of explosives to perform construction work.

(2) A contractor who intends to carry out construction work that involves construction of a single storey dwelling for a client who is going to reside in such dwelling upon completion, must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2

Duties of client

5. (1) A client must—

(a) prepare a baseline risk assessment for an intended construction work project;

(b) prepare a suitable, sufficiently documented and coherent site specific health and safety specification for the intended construction work based on the baseline risk assessment contemplated in paragraph *(a)*;

(c) provide the designer with the health and safety specification contemplated in paragraph *(b)*;

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(d) ensure that the designer takes the prepared health and safety specification into consideration during the design stage;

(e) ensure that the designer carries out all responsibilities contemplated in regulation 6;

(f) include the health and safety specification in the tender documents;

(g) ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures;

(h) ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely;

(i) take reasonable steps to ensure co-operation between all contractors appointed by the client to enable each of those contractors to comply with these Regulations;

(j) ensure before any work commences on a site that every principal 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 (Act No. 130 of 1993);

(k) appoint every principal contractor in writing for the project or part thereof on the construction site;

(l) discuss and negotiate with the principal contractor the contents of the principal contractor's health and safety plan contemplated in regulation 7(1), and must thereafter finally approve that plan for implementation;

(m) ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor;

(n) take reasonable steps to ensure that each contractor's health and safety plan contemplated in regulation 7(1)*(a)* is implemented and maintained;

(o) ensure that periodic health and safety 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;

(p) ensure that a copy of the health and safety audit report contemplated in paragraph *(o)* is provided to the principal contractor within seven days after the audit;

(q) stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site;

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(r) where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely; and

(s) ensure that the health and safety file contemplated in regulation 7(1)*(b)* is kept and maintained by the principal contractor.

(2) Where a client requires additional work to be performed as a result of a design change or an error in construction due to the actions of the client, the client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.

(3) Where a fatality or permanent disabling injury occurs on a construction site, the client must ensure that the contractor provides the provincial director with a report contemplated in section 24 of the Act, in accordance with regulations 8 and 9 of the General Administrative Regulations, 2013, and that the report includes the measures that the contractor intends to implement to ensure a safe construction site as far as is reasonably practicable.

(4) Where more than one principal contractor is appointed as contemplated in subregulation (1)*(k)*, the client must take reasonable steps to ensure co-operation between all principal contactors and contractors in order to ensure compliance with these Regulations.

(5) Where a construction work permit is required as contemplated in regulation 3(1), the client must, without derogating from his or her health and safety responsibilities or liabilities, appoint a competent person in writing as an agent to act as his or her representative, and where such an appointment is made the duties that are imposed by these Regulations upon a client, apply as far as reasonably practicable to the agent so appointed.

(6) Where notification of construction work is required as contemplated in regulation 4(1), the client may, without derogating from his or her health and safety responsibilities or liabilities, appoint a competent person in writing as an agent to act as his or her representative, and where such an appointment is made the duties that are imposed by these Regulations upon a client, apply as far as reasonably practicable to the agent so appointed: Provided that, where the question arises as to whether an agent is necessary, the decision of an inspector is decisive.

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(7) An agent contemplated in subregulations (5) and (6) must—

(a) manage the health and safety on a construction project for the client; and

(b) be registered with a statutory body approved by the Chief Inspector as qualified to perform the required functions;

(8) When the chief inspector has approved a statutory body as contemplated in subregulation (7)*(b)*, he or she must give notice of that approval in the *Gazette*.

Duties of designer

6. (1) The designer of a structure must—

(a) ensure that the applicable safety standards incorporated into these Regulations under section 44 of the Act are complied with in the design;

(b) take into consideration the health and safety specification submitted by the client;

(c) before the contract is put out to tender, make available in a report to the client—

(i) all relevant health and safety information about the design of the relevant structure that may affect the pricing of the construction work;

(ii) the geotechnical-science aspects, where appropriate; and

(iii) the loading that the structure is designed to withstand;

(d) 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;

(e) 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;

(f) 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;

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(g) 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;

(h) 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;

(j) 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

(j) 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—

(a) all temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;

(b) 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;

(c) 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

(d) the loads caused by the temporary works and any imposed loads are clearly indicated in the design.

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Duties of principal contractor and contractor

7. (1) A principal contractor must—

(a) 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;

(b) 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

(c) on appointing any other contractor, in order to ensure compliance with the provisions of the Act—

(i) 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;

(ii) ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;

(iii) 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;

(iv) 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;

(v) appoint each contractor in writing for the part of the project on the construction site;

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(vi) take reasonable steps to ensure that each contractor's health and safety plan contemplated in subregulation (2)*(a)* is implemented and maintained on the construction site;

(vii) 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;

(viii) stop any contractor from executing construction work which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;

(ix) 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

(x) discuss and negotiate with the contractor the contents of the health and safety plan contemplated in subregulation (2)*(a)*, and must thereafter finally approve that plan for implementation;

(d) 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 subregulation (2)*(a)*, is available on request to an employee, an inspector, a contractor, the client or the client's agent;

(e) 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 subregulation (2)*(b)*, include a record of all drawings, designs, materials used and other similar information concerning the completed structure;

(f) in addition to the documentation required in the health and safety file in terms of paragraph *(c)*(v) and subregulation (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

(g) 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.

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(2) A contractor must prior to performing any construction work—

(a) 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 subregulation (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;

(b) 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;

(c) 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;

(d) 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

(e) 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 subregulation (1)*(b)* to *(g)* that apply to the principal contractor apply to the contractor as if he or she were the principal contractor.

(4) A principal 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.

(5) 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.

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(6) 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.

(7) A contractor must at all times keep on his or her construction site records of the health and safety induction training contemplated in subregulation (6) and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor;.

(8) 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.

Management and supervision of construction work

8. (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 subregulation (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 subregulation (2).

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(4) No construction manager appointed under subregulation (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 subregulation (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 subregulation (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

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indicated by the inspector, and those employees must be regarded as having been appointed under subregulation (8).

(10) No construction supervisor appointed under subregulation (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 subregulation (7) on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

Risk assessment for construction work

9. (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 plan.

(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.

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(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.

Fall protection

10. (1) A contractor must—

(a) designate a competent person to be responsible for the preparation of a fall protection plan;

(b) ensure that the fall protection plan contemplated in paragraph *(a)* is implemented, amended where and when necessary and maintained as required; and

(c) take steps to ensure continued adherence to the fall protection plan.

(2) A fall protection plan contemplated in subregulation (1), must include—

(a) 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;

(b) the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;

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(c) a programme for the training of employees working from a fall risk position and the records thereof;

(d) the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and

(e) 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.

(3) 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.

(4) A contractor must ensure that—

(a) 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;

(b) no person is required to work in a fall risk position, unless such work is performed safely as contemplated in subregulation (2);

(c) fall prevention and fall arrest equipment are—

(i) 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

(ii) securely attached to a structure or plant, and the structure or plant and the means of attachment thereto are suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who could fall; and

(d) fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.

(5) Where roof work is being performed on a construction site, the contractor must ensure that, in addition to the requirements set out in subregulations (2) and (4), it is indicated in the fall protection plan that—

(a) the roof work has been properly planned;

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(b) the roof erectors are competent to carry out the work;

(c) 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;

(d) all covers to openings and fragile material are of sufficient strength to withstand any imposed loads;

(e) 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

(f) 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.

Structures

11. (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;

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(d) the records of inspections and maintenance are kept and made available on request to an inspector.

Temporary works

12. (1) A contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.

(2) A contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.

(3) A contractor must ensure that—

(a) all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;

(b) all temporary works structures are done with close reference to the structural design drawings, and where any uncertainty exists the structural designer should be consulted;

(c) detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other contractors, the client, the client's agent or any employee;

(d) all persons required to erect, move or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely;

(e) all equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used;

(f) all temporary works structures are inspected by a competent person immediately before, during and after the placement of concrete, after inclement weather or any other imposed load and at least on a daily basis until the temporary works structure has been removed and the results have been recorded in a register and made available on site;

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(g) no person may cast concrete, until authorization in writing has been given by the competent person contemplated in paragraph *(a)*;

(h) if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately;

(i) adequate precautionary measures are taken in order to—

(i) secure any deck panels against displacement; and

(ii) prevent any person from slipping on temporary works due to the application of release agents;

(j) as far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;

(k) upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person contemplated in paragraph *(a)*;

(l) the foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design.

(m) provision is made for safe access by means of secured ladders or staircases for all work to be carried out above the foundation bearing level;

(n) a temporary works drawing or any other relevant document includes construction sequences and methods statements;

(o) the temporary works designer has been issued with the latest revision of any relevant structural design drawing;

(p) a temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and

(q) the temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

(4) No contractor may use a temporary works design and drawing for any work other than its intended purpose.

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Excavation

13. (1) A contractor must—

(a) ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and

(b) evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

(2) A contractor who performs excavation work—

(a) must take reasonable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;

(b) may not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where—

(i) the sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or

(ii) such an excavation is in stable material: Provided that—

(aa) permission has been given in writing by the appointed competent person contemplated in subregulation (1) upon evaluation by him or her of the site conditions; and

(bb) where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person contemplated in subregulation (1) and the professional engineer or technologist, as the case may be;

(c) must take steps to ensure that the shoring or bracing contemplated in paragraph *(b)* is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question;

(d) must ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of

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sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;

(e) must ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken to ensure the stability of such building, structure or road and the safety of persons;

(f) must cause convenient and safe means of access to be provided to every excavation in which persons are required to work, and such access may not be further than six meters from the point where any worker within the excavation is working;

(g) must ascertain, as far as is reasonably practicable, the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved;

(h) must ensure that every excavation, including all bracing and shoring, is inspected—

(i) daily, prior to the commencement of each shift;

(ii) after every blasting operation;

(iii) after an unexpected fall of ground;

(iv) after damage to supports; and

(v) after rain,

by the competent person contemplated in subregulation (1), in order to ensure the safety of the excavation and of persons, and those results must be recorded in a register kept on site and made available on request to an inspector, the client, the client's agent, any other contractor or any employee;

(i) must cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be—

(i) adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable; and

(ii) provided with warning illuminants or any other clearly visible boundary indicators at night or when visibility is poor,

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or have resort to any other suitable and sufficient precautionary measure where subparagraphs (i) and (ii) are not practicable;

(j) must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with by any person entering any excavation;

(k) must, where the excavation work involves the use of explosives, appoint a competent person in the use of explosives for excavation, and must ensure that a method statement is developed by that person in accordance with the applicable explosives legislation; and

(l) must cause warning signs to be positioned next to an excavation within which or where persons are working or carrying out inspections or tests.

Demolition work

14. (1) A contractor must appoint a competent person in writing to supervise and control all demolition work on site.

(2) A contractor must ensure that before any demolition work is carried out, and in order to ascertain the method of demolition to be used, a detailed structural engineering survey of the structure to be demolished is carried out by a competent person and that a method statement on the procedure to be followed in demolishing the structure is developed by that person.

(3) During a demolition, the competent person contemplated in subregulation (1) must check the structural integrity of the structure at intervals determined in the method statement contemplated in subregulation (2), in order to avoid any premature collapses.

(4) A contractor who performs demolition work must—

(a) with regard to a structure being demolished, take steps to ensure that—

(i) no floor, roof or other part of the structure is overloaded with debris or material in a manner which would render it unsafe;

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(ii) all reasonably practicable precautions are taken to avoid the danger of the structure collapsing when any part of the framing of a framed or partly framed building is removed, or when reinforced concrete is cut; and

(iii) precautions are taken in the form of adequate shoring or other means that may be necessary to prevent the accidental collapse of any part of the structure or adjoining structure;

(b) ensure that no person works under overhanging material or a structure which has not been adequately supported, shored or braced;

(c) ensure that any support, shoring or bracing contemplated in paragraph *(b)*, is designed and constructed so that it is strong enough to support the overhanging material;

(d) where the stability of an adjoining building, structure or road is likely to be affected by demolition work on a structure, take steps to ensure the stability of such structure or road and the safety of persons;

(e) ascertain as far as is reasonably practicable the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of demolition work that may affect any such service, take the steps that are necessary to render circumstances safe for all persons involved;

(f) cause every stairwell used and every floor where work is being performed in a building being demolished, to be adequately illuminated by either natural or artificial means;

(g) cause convenient and safe means of access to be provided to every part of the demolition site in which persons are required to work; and

(h) erect a catch platform or net above an entrance or passageway or above a place where persons work or pass under, or fence off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe where there is a danger or possibility of persons being struck by falling objects.

(5) A contractor must ensure that no material is dropped to any point, which falls outside the exterior walls of the structure, unless the area is effectively protected.

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(6) No person may dispose of waste and debris from a high place by a chute unless the chute—

(a) is adequately constructed and rigidly fastened;

(b) if inclined at an angle of more than 45 degrees to the horizontal, is enclosed on its four sides;

(c) if of the open type, is inclined at an angle of less than 45 degrees to the horizontal;

(d) where necessary, is fitted with a gate at the bottom end to control the flow of material; and

(e) discharges into a container or an enclosed area surrounded by barriers.

(7) A contractor must ensure that every chute used to dispose of rubble is designed in such a manner that rubble does not free-fall and that the chute is strong enough to withstand the force of the debris travelling along the chute.

(8) A contractor must ensure that no equipment is used on floors or working surfaces, unless such floors or surfaces are of sufficient strength to support the imposed loads.

(9) Where a risk assessment indicates the presence of asbestos, a contractor must ensure that all asbestos related work is conducted in accordance with the Asbestos Regulations, 2001, promulgated by Government Notice No. R. 155 of 10 February 2002.

(10) Where a risk assessment indicates the presence of lead, a contractor must ensure that all lead related work is conducted in accordance with the Lead Regulations, 2001, promulgated by Government Notice No. R.236 of 28 February 2002.

(11) Where the demolition work involves the use of explosives, a method statement must be developed in accordance with the applicable explosives legislation, by an appointed person who is competent in the use of explosives for demolition work and all persons involved in the demolition works must adhere to demolition procedures issued by the appointed person.

(12) A contractor must ensure that all waste and debris are as soon as reasonably practicable removed and disposed of from the site in accordance with the applicable legislation.

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Tunneling

15. No person may enter a tunnel, which has a height dimension of less than 800 millimetres.

Scaffolding

16. (1) A contractor must appoint a competent person in writing who must ensure that all scaffolding work operations are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work.

(2) A contractor using access scaffolding must ensure that such scaffolding, when in use, complies with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act.

Suspended platforms

17. (1) A contractor must appoint a competent person in writing who must ensure that all suspended platforms work operations are carried out under his or her supervision and that all suspended platform erectors, operators and inspectors are competent to carry out their work..

(2) No contractor may use or permit the use of a suspended platform, unless—

(a) the design, stability and construction thereof comply with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act;

(b) he or she is in possession of a certificate of system design issued by a professional engineer, certificated engineer or a professional technologist for the use of the suspended platform system; and

(c) he or she is, before the commencement of the work, in possession of an operational compliance plan developed by a competent person based on the certificate of system design contemplated in subparagraph *(b)* and applicable to the environment in which the system is being used, which operational compliance plan must include proof of the—

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(i) appointment of the competent person contemplated in subregulation (1);
(ii) competency of erectors, operators and inspectors;
(iii) operational design calculations, which must comply with the requirements of the system design certificate;
(iv) performance test results;
(v) sketches indicating the completed system with the operational loading capacity of the platform;
(vi) procedures for and records of inspections having been carried out; and
(vii) procedures for and records of maintenance work having been carried out.

(3) A contractor making use of a suspended platform system must submit a copy of the certificate of system design contemplated in subregulation (2)*(b)*, including a copy of the operational design calculations contemplated in subregulation 2*(c)*(iii), sketches and test results, to the provincial director before commencement of the use of the system and must further indicate the intended type of work that the system will be used for.

(4) A contractor must submit a copy of the certificate of system design in the manner contemplated in subregulation (3) for every new project.

(5) A contractor must ensure that the outriggers of each suspended platform—
(a) are constructed of material of adequate strength and have a safety factor of at least four in relation to the load it is to carry; and
(b) have suspension points provided with stop devices or other effective devices at the outer ends to prevent the displacement of ropes.

(6) A contractor must ensure that—
(a) the parts of the building or structure on which the outriggers of a suspended platform are supported, are checked by means of calculations to ensure that the required safety factor is adhered to without risk of damage to the building or structure;
(b) the suspension wire rope and the safety wire rope are separately connected to the outrigger;

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(c) each person on a suspended platform is provided with and wears a body harness as a fall prevention device, which must at all times be attached to the suspended platform;

(d) the hand or power driven machinery to be used for the lifting or lowering of the working platform of a suspended platform is constructed and maintained in such a manner that an uncontrolled movement of the working platform cannot occur;

(e) the machinery referred to in paragraph *(d)* is so situated that it is easily accessible for inspection;

(f) the rope connections to the outriggers are vertically above the connections to the working platform; and

(g) when the working platform is suspended by two ropes only, the connections of the ropes to the working platform are of a height above the level of the working platform to ensure the stability of the working platform.

(7) A contractor must ensure that a suspended platform—

(a) is suspended as near as possible to the structure to which work is being done to prevent as far as is reasonably practicable horizontal movement away from the face of the structure;

(b) is fitted with anchorage points to which workers must attach the lanyard of the safety harness worn and used by the worker, and such anchorage connections must have sufficient strength to withstand any potential load applied to it; and

(c) is fitted with a conspicuous notice easily understandable by all workers working with the suspended platform, showing—

(i) the maximum mass load;

(ii) the maximum number of persons; and

(iii) the maximum total mass load, including load and persons, which the suspended platform can carry.

(8) A contractor must cause—

(a) the whole installation and all working parts of a suspended platform to be thoroughly examined by a competent person in accordance with the manufacturer's specification;

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(b) the whole installation to be subjected to a performance test as determined by the standard to which the suspended platform was manufactured;

(c) the performance test contemplated in paragraph *(b)* to be done by a competent person appointed in writing, with the knowledge and experience of erection and maintenance of suspended platforms or similar machinery, and who must determine the serviceability of the structures, ropes, machinery and safety devices before they are used, every time suspended platforms are erected; and

(d) the performance test contemplated in paragraph *(b)* of the whole installation of the suspended platform to be subjected to a load equal to that prescribed by the manufacturer or, in the absence of such load, to a load of 110 per cent of the rated mass load, at intervals not exceeding 12 months and in such a manner that every part of the installation is stressed accordingly.

(9) A contractor must, in addition to subregulation (8), cause every hoisting rope, hook or other load-attaching device which forms part of the suspended platform to be thoroughly examined in accordance with the manufacturer's specification by the competent person contemplated in subregulation (8) before they are used every time they are assembled, and, in cases of continuous use, at intervals not exceeding three months.

(10) A contractor must ensure that the suspended platform supervisor contemplated in subregulation (1), or the suspended platform inspector contemplated in subregulation (8)*(c)*, carries out a daily inspection of all the equipment prior to use, including establishing whether—

(a) all connection bolts are secure;

(b) all safety devices are functioning;

(c) all safety devices are not tampered with or vandalized;

(d) the total maximum mass load of the platform is not exceeded;

(e) the occupants in the suspended platform are using body harnesses which have been properly attached;

(f) there are no visible signs of damage to the equipment; and

(g) all reported operating problems have been attended to.

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(11) A contractor must ensure that all inspection and performance test records are kept on the construction site at all times and made available to an inspector, the client, the client's agent or any employee upon request.

(12) A contractor must ensure that all employees required to work or to be supported on a suspended platform are—

(a) medically fit to work safely in a fall risk position or such similar environment by being in possession of a medical certificate of fitness;

(b) competent in conducting work related to suspended platforms safely;

(c) trained or received training, which includes at least—

(i) how to access and egress the suspended platform safely;

(ii) how to correctly operate the controls and safety devices of the equipment;

(iii) information on the dangers related to the misuse of safety devices; and

(iv) information on the procedures to be followed in the case of—

(aa) an emergency;

(bb) the malfunctioning of equipment; and

(cc) the discovery of a suspected defect in the equipment; and

(v) instructions on the proper use of body harnesses.

(13) A contractor must ensure that where the outriggers of a suspended platform are to be moved, only persons trained and under the supervision of the competent person effect such move, within the limitation stipulated in the operational compliance plan contemplated in subregulation (2)*(c),* and that the supervisor must carry out an inspection and record the result thereof prior to re-use of the suspended platform.

(14) A contractor must ensure that the suspended platform is properly isolated after use at the end of each working day in such a manner that no part of the suspended platform presents a danger to any person thereafter.

Rope Access Work

18. (1) A contractor must—

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(a) appoint a competent person in writing as a rope access supervisor with the duty of supervising all rope access work on the site, including the duty of ensuring occupational health and safety compliance in relation to rope access work: Provided that the appointment of any such person does not relieve the construction manager of any personal accountability for failing in his management duties in terms of this regulation;

(b) ensure that all rope access work on the construction site is carried out under the supervision of a competent person; and

(c) ensure that all rope access operators are competent and licensed to carry out their work.

(2) No contractor may use or allow the use of rope access work unless—

(a) the design, selection and use of the equipment and anchors comply with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act; and

(b) he or she is in possession of a site specific fall protection plan developed by a competent person applicable to the specific work and environment prior to the commencement of the work, including records of maintenance and inspections of all the equipment used for the work operations.

(3) A contractor must ensure that adequate measures are in place to allow rescue procedures to commence immediately in the event of a fall incident taking place.

Material hoists

19. (1) A contractor must ensure that every material hoist and its tower have been constructed in accordance with the generally accepted technical standards and are strong enough and free from defects.

(2) A contractor must ensure that the tower of every material hoist is—

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(a) erected on firm foundations and secured to the structure or braced by steel wire guy ropes, and extends to a distance above the highest landing to allow a clear and unobstructed space of at least 900 millimetres for over travel;

(b) enclosed on all sides at the bottom, and at all floors where persons are at risk of being struck by moving parts of the hoist, except on the side or sides giving access to the material hoist, with walls or other effective means to a height of at least 2100 millimetres from the ground or floor level; and

(c) provided with a door or gate at least 2100 millimetres in height at each landing, and that door or gate must be kept closed except when the platform is at rest at such a landing.

(3) A contractor must cause—

(a) the platform of every material hoist to be designed in a manner that it safely contains the loads being conveyed and that the combined mass of the platform and the load does not exceed the designed lifting capacity of the hoist;

(b) the hoisting rope of every material hoist which has a remote winch to be effectively protected from damage by any external cause to the portion of the hoisting rope between the winch and the tower of the hoist; and

(c) every material hoist to be provided with an efficient brake capable of holding the platform with its maximum load in any position when power is not being supplied to the hoisting machinery.

(4) No contractor may require or permit trucks, barrows or material to be conveyed on the platform of a material hoist and no person may so convey trucks, barrows or material unless those articles are secured or contained in a manner that displacement thereof cannot take place during movement.

(5) A contractor must cause a notice, indicating the maximum mass load which may be carried at any one time and the prohibition of persons from riding on the platform of the material hoist, to be affixed around the base of the tower and at each landing.

(6) A contractor of a material hoist may not require or permit any person to operate a hoist, unless the person is competent in the operation of that hoist.

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(7) No contractor may require or permit any person to ride on a material hoist.

(8) A contractor must ensure that every material hoist—

(a) is inspected on daily basis by a competent person appointed in writing by the contractor and such competent person must have the experience pertaining to the erection and maintenance of material hoists or similar machinery;

(b) inspection contemplated in paragraph *(a)*, includes the determination of the serviceability of the entire material hoist, including guides, ropes and their connections, drums, sheaves or pulleys and all safety devices;

(c) inspection results are entered and signed in a record book by a competent person, which book must be kept on the premises for that purpose;

(d) is properly maintained and the maintenance records in this regard are kept on site.

Bulk mixing plant

20. (1) A contractor must ensure that the operation of a bulk mixing plant is supervised by a competent person who has been appointed in writing and is—

(a) aware of all the dangers involved in the operation thereof; and

(b) conversant with the precautionary measures to be taken in the interest of health and safety.

(2) No person supervising or operating a bulk mixing plant may authorize any other person to operate the plant, unless that person is competent to operate a bulk mixing plant.

(3) A contractor must ensure that the placement and erection of a bulk mixing plant complies with the requirements set out by the manufacturer and that such plant is erected as designed.

(4) A contractor must ensure that all devices to start and stop a bulk mixing plant are provided and that those devices are—

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(a) placed in an easily accessible position; and

(b) constructed in a manner to prevent accidental starting.

(5) A contractor must ensure that the machinery and plant selected is suitable for the mixing task and that all dangerous moving parts of a mixer are placed beyond the reach of persons by means of doors, covers or other similar means.

(6) No person may remove or modify any guard or safety equipment relating to a bulk mixing plant, unless authorized to do so by the appointed person contemplated in subregulation (1).

(7) A contractor must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with when entering any silo.

(8) A contractor must ensure that a record is kept of all repairs or maintenance to a bulk mixing plant and that the record is available on site to an inspector, the client, the client's agent or any employee.

Explosive actuated fastening device

21, (1) No contractor may use or permit any person to use an explosive actuated fastening device, unless—

(a) the user is provided with and uses suitable protective equipment;

(b) the user is trained in the operation, maintenance and use of such a device;

(c) the explosive actuated fastening device is provided with a protective guard around the muzzle end, which effectively confines any flying fragments or particles; and

(d) the firing mechanism is so designed that the explosive actuated fastening device, will not function unless—

(i) it is held against the surface with a force of at least twice its weight; and

(ii) the angle of inclination of the barrel to the work surface is not more than 15 degrees from a right angle.

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(2) A contractor must ensure that—

(a) only cartridges suited for the relevant explosive actuated fastening device, and the work to be performed, are used;

(b) 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;

(c) the safety devices of an explosive actuated fastening device are in good working order prior to use;

(d) 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;

(e) an explosive actuated fastening device is not stored in a loaded condition;

(f) a warning notice is displayed in a conspicuous manner in the immediate vicinity wherever an explosive actuated fastening device is used; and

(g) the issuing and collection of cartridges and nails or studs of an explosive actuated fastening device are—

(i) controlled and done in writing by a person having been appointed in writing for that purpose; and

(ii) 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.

Cranes

22. A contractor must, in addition to compliance with the Driven Machinery Regulations, 1988 ensure that where tower cranes are used—

(a) they are designed and erected under the supervision of a competent person;

(b) a relevant risk assessment and method statement are developed and applied;

(c) the effects of wind forces on the crane are taken into consideration and that a wind speed device is fitted that provides the operator with an audible warning when the wind speed exceeds the design engineer's specification;

(d) the bases for the tower cranes and tracks for rail-mounted tower cranes are firm, level and secured;

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(e) the tower crane operators are competent to carry out the work safely; and

(f) the tower crane operators have a medical certificate of fitness to work in such an environment, issued by an occupational health practitioner in the form of Annexure 3.

Construction vehicles and mobile plant

23. (1) A contractor must ensure that all construction vehicles and mobile plant—

(a) are of an acceptable design and construction;

(b) are maintained in a good working order;

(c) are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;

(d) are operated by a person who—

(i) has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;

(ii) has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.;

(e) have safe and suitable means of access and egress;

(f) are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;

(g) are prevented from falling into excavations, water or any other area lower than the working surface by installing adequate edge protection, which may include guardrails and crash barriers;

(h) are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;

(i) are equipped with an acoustic warning device which can be activated by the operator;

(j) are equipped with an automatic acoustic reversing alarm; and

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(k) are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

(2) A contractor must ensure that—

(a) no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;

(b) every construction site is organized in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;

(c) the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;

(d) every traffic route is, where necessary, indicated by suitable signs;

(e) all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;

(f) all construction vehicles or mobile plant when not in use, have buckets, booms or similar appendages, fully lowered or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set and ignition secured;

(g) whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;

(h) tools, material and equipment are secured and separated by means of a physical barrier in order to prevent movement when transported in the same compartment with employees;

(i) vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and

(j) all construction vehicles or mobile plant traveling, working or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.

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Electrical installations and machinery on construction sites

24. A contractor must, in addition to compliance with the Electrical Installation Regulations, 2009, and the Electrical Machinery Regulations, 1988, promulgated by Government Notice No. R. 1593 of 12 August 1988, ensure that—

(a) before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;

(b) all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;

(c) the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;

(d) all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and

(e) all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

Use and temporary storage of flammable liquids on construction sites

25. A contactor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that—

(a) where flammable liquids are being used, applied or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;

(b) no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;

(c) an adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;

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(d) only the quantity of flammable liquid needed for work on one day is taken out of the store for use;

(e) all containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;

(f) where flammable liquids are decanted, the metal containers are bonded and earthed; and

(g) no flammable material, including cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids.

Water environments

26. (1) A contractor must ensure that where construction work is done over or in close proximity to water, provision is made for—

(a) preventing persons from falling into water; and

(b) the rescuing of persons in danger of drowning.

(2) A contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

Housekeeping and general safeguarding on construction sites

27. A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including—

(a) the proper storage of materials and equipment;

(b) the removal of scrap, waste and debris at appropriate intervals;

(c) ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;

(d) ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;

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(e) ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in regulation 14(6);

(f) ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and

(g) ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under, or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.

Stacking and storage on construction sites

28. A contractor must, in addition to compliance with the provisions for the stacking of articles in the General Safety Regulations, 2003, ensure that—

(a) a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;

(b) adequate storage areas are provided;

(c) there are demarcated storage areas; and

(d) storage areas are kept neat and under control.

Fire precautions on construction sites

29. A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that—

(a) all appropriate measures are taken to avoid the risk of fire;

(b) sufficient and suitable storage is provided for flammable liquids, solids and gases;

(c) smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;

(d) in confined spaces and other places in which flammable gases, vapours or dust can cause danger—

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(i) only suitably protected electrical installations and equipment, including portable lights, are used;

(ii) there are no flames or similar means of ignition;

(iii) there are conspicuous notices prohibiting smoking;

(iv) oily rags, waste and other substances liable to ignite are without delay removed to a safe place; and

(v) adequate ventilation is provided;

(e) combustible materials do not accumulate on the construction site;

(f) welding, flame cutting and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;

(g) suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;

(h) the fire equipment contemplated in paragraph *(g)* is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;

(i) a sufficient number of workers are trained in the use of fire- extinguishing equipment;

(j) where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;

(k) the means of escape is kept clear at all times;

(l) there is an effective evacuation plan providing for all—

(i) persons to be evacuated speedily without panic;

(ii) persons to be accounted for; and

(iii) plant and processes to be shut down; and

(m) a siren is installed and sounded in the event of a fire.

Construction employees' facilities

30. (1) A contractor must, in addition to the construction site provisions in the Facilities Regulations, 2004, promulgated by Government Notice No. R. 924 of 3 August 2004, provide at

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or within reasonable access of every construction site, the following clean, hygienic and maintained facilities:

(a) Shower facilities after consultation with the employees or employees representatives, or at least one shower facility for every 15 persons;

(b) at least one sanitary facility for each sex and for every 30 workers;

(c) changing facilities for each sex; and

(d) sheltered eating areas.

(2) A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

Construction health and safety technical committee

31. (1) The chief inspector must establish a construction health and safety technical committee which must consist of—

(a) a person who is to be the chairperson;

(b) two persons designated by the Chief Inspector from the employees of the Department of Labour;

(c) two persons to represent the Department of Public Works, one each designated by the Built Environmental Council and the Construction Industry Development Board;

(d) one person to represent Higher Education in the field of construction and related studies designated by the Director General of the Department of Higher Education;

(e) one person designated by the South African Property Owners Association;

(f) two persons designated by employer's organizations to represent employers who are directly involved in the construction industry;

(g) two persons designated by employees organizations to represent the unions who are directly involved in the construction industry;

(h) one person to represent consultants who are directly involved in the construction industry: and

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(i) persons who are competent in respect of the matters to be dealt with by the construction health and safety technical committee who have been co-opted by the committee with the authorization of the chief inspector.

(2) The chief inspector must appoint the members of the Construction Health and Safety Technical Committee for the period that he or she may determine at the time of appointment: Provided that the chief inspector may after having afforded a member a reasonable opportunity to respond, discharge him or her at any time, for reasons that are fair and just, and appoint a new member in his or her place.

(3) The Construction Health and Safety Technical Committee must—

(a) advise the chief inspector on construction related codes, standards and training requirements: Provided that any accredited or approved training must be in accordance with South African Qualifications Authority standards;

(b) designate persons in writing to examine safety systems and safety records of companies who have high incident rates and provide recommendations to the chief inspector of occupational health and safety on the findings;

(c) make recommendations and submit reports to the chief inspector of occupational health and safety regarding any matter to which these Regulations relate;

(d) advise the chief inspector of occupational health and safety regarding any matter referred to the Construction Regulations Technical Committee by the chief inspector of occupational health and safety;

(e) perform any other function for the administration of a provision of these Regulations that may be requested by the chief inspector of occupational health and safety;

(f) conduct its work in accordance with the instructions and rules of conduct framed by the chief inspector of occupational health and safety; and

(g) refer appeals against decisions of the Construction Regulations Technical Committee to the chief inspector of occupational health and safety.

(4) Any person affected by any decision of the Construction Health and Safety Technical Committee may appeal against such decision to the chief inspector within 60 days of such decision becoming known and the chief inspector shall, after having considered the grounds of

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the appeal and the Construction Health and Safety Technical Committee's reasons for the decision, confirm, set aside or vary the decision or substitute for such decision any other decision which the Construction Health and Safety Technical Committee's in the chief inspector's opinion ought to have taken.

(5) Any person aggrieved by a decision taken by the chief inspector under subregulation (4) may, within 60 days after the chief inspector's decision was given appeal against such decision to the Labour court.

Approved Inspection Authority

32. (1) The chief inspector may approve as an Inspection Authority any organisation that has been accredited in terms of the provision of the Act and these Regulations.

(2) The Approved Inspection Authority will perform its functions as prescribed by the guidance document issued by the Department of Labour for Approved Inspection Authorities.

(3) The chief inspector may at any time withdraw any approval granted to an approved inspection authority, subject to section 35 of the Act.

Offences and penalties

33. Any person who contravenes or fails to comply with any provision of regulations 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 and 30, is guilty of an offence and liable upon conviction to a fine or to imprisonment for a maximum of 12 months and, in the case of a continuous offence, not exceeding an additional fine of R200 or additional imprisonment of one day for each day on which the offence continues: Provided that the period of such additional imprisonment will not exceed 90 days.

Repeal of regulations and commencement

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34. (1) The Construction Regulations, 2003, promulgated by Government Notice No. R. 1010 of 18 July 2003, are hereby repealed.

(2) Regulation 3 and 5 (7)(b) will come into effect 18 months after the commencement of these Regulations.

Short title

35. These Regulations are called the Construction Regulations, 2014.

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ANNEXURE 1

APPLICATION FOR A PERMIT TO DO CONSTRUCTION WORK

[In terms of Regulation 3(2) of Construction Regulations, 2014]

This application must be submitted with the following documents:

1. Health and Safety specification.
2. Health and Safety plan.
3. Baseline risk assessment.

1. Name, postal address and telephone numbers of the client:

   _____

   _____

2. Details of the Agent.
   a. Title, Surname and Initials._____
   b. Identity number/ Passport Number _____
   c. Registration number with SACPCMP_____
   d. Office Tel. number and/or Mobile number _____
   e. Postal address. _____

      _____

3. Name, postal address and telephone numbers of the appointed principal contractor:

   _____

   _____

4. Name, postal address and telephone numbers of designer of the project:

   _____

   _____

5. Name, postal address and telephone numbers of the following persons:

   a. Construction Manager:

      _____

   b. Construction Health and Safety Manager:

      _____

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c. Construction Health and Safety Officer:

_____

6. Exact physical address of the construction and site office:

_____

_____

7. Nature of construction work:

_____

_____

_____

8. Expected commencement date:

_____

9. Expected completion date:

_____

10. Estimated maximum number of persons on the construction site:

_____

11. Planned number of contractors on site accountable to principal contractor:

_____

12. Name(s) of contractors appointed:

_____

_____

_____

_____

_____

13. _____
Signature of Client/Client's Agent

14. _____
Signature of the Principal Contractor

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FOR OFFICE ONLY

Authorization /Unique No.	LABOUR CENTRE	OFFICIAL APPROVAL STAMP

15. Date of application: _____

16. Submitted documents prescribed in Construction Regulation 5(4) (Please Tick √):

CR 5(1)(a)		CR 5(1)(b)		CR 5(1); (C-S)	

17. Result of the application (Please Tick √):	**Approved**		**Declined**	

18. Reason for declining the application:

_____

_____

_____

_____

19. _____
Signature of the Supervisor

20. _____
Signature of revoking Officer/ Inspector

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ANNEXURE 2

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
(Regulation 4 of the Construction Regulations, 2014)

NOTIFICATION OF CONSTRUCTION WORK

1.(a) Name and postal address of principal contractor:

_____

(b) Name and tel. no of principal contractor's contact person:

_____

2. Principal contractor's compensation registration number:

_____

3.(a) Name and postal address of client:

_____

(b) Name and tel. no of client's contact person or agent:

_____

4.(a) Name and postal address of designer(s) for the project:

_____

(b) Name and tel. no of designer(s) contact person:

_____

5. Name and telephone number of principal contractor's construction supervisor on site appointed in terms of regulation 8(1).

_____

6. Name/s of principal contractor's sub-ordinate supervisors on site appointed in terms of regulation 8(2).

_____

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7. Exact physical address of the construction site or site office:

_____

8. Nature of the construction work:

_____

_____

_____

9. Expected commencement date: _____

10. Expected completion date: _____

11. Estimated maximum number of persons on the construction site.

Total: _____ Male:_____Female:_____

12. Planned number of contractors on the construction site accountable to principal contractor: _____

13. Name(s) of contractors already selected.

_____

_____

_____

_____ _____

Principal Contractor Date

_____ _____

Client's Agent (where applicable) Date

_____ _____

Client Date

- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.

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Annexure 3

OCCUPATIONAL HEALTH AND SAFETY ACT, 85 OF 1993 Construction Regulations, 2014

Medical Certificate of Fitness

Name of Employee _____ ID Number _____ Co. Number_____

	*Possible Exposures e.g. noise, heat, fall risk, confined space etc.	*Job Specific Requirements e.g. Operating Mobile Crane, Digging Trenches, Erecting Formwork & Supportwork etc.	*Protective Equipment e.g. Dust Respirator (Light Duty), Welding Gloves etc.
*Occupation e.g General Worker, Welder, Bricklayer, Steel fixer, Mobile Crane Operator, etc.			

*** The Employer to complete the information in the spaces marked with an * before sending the Employee for a medical examination**

Declaration by the Medical Examiner:

I certify that I have, by examination and testing, using the above criteria specified by the employer, satisfied myself that the abovementioned employee is fit to perform the duties as described by the employer in the matrix above.

Occupational Medicine Practitioner/Occupational Health Nursing Practitioner: (Please Print Name)_____

Signature _____ Practice Number: _____ Date: _____

Address: _____

No. R. 85 **7 February 2014**

NOTICE OF APPROVAL OF A STATUTORY BODY AS CONTEMPLATED IN REGULATION 5 (8)

OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
CONSTRUCTION REGULATIONS, 2014

I Thobile Lamati, appointed as the chief inspector in terms of section 27(1) of the said Act, hereby approve the South African Council for the Project and Construction Management Professions (SACPCMP) as contemplated in regulation 5(8)

The South African Council for the Project and Construction Management Professions is a statutory body established in terms of section 2 of the Project and Construction Management Act, Act No. 48 of 2000.

The following category of construction health and safety professionals have been identified as per the construction regulation 2014

1. **Construction Health and Safety Agent (PrCHSA)**
   Registration Rules for Construction Health and Safety Agent (PrCHSA) in Terms of Section 18(1) (c) of the Act, (Act No.48 of 2000), as published on 31 May 2013 in the Government Gazette, Gazette No. 36525, **Board Notice** 115 of 2013 for commencement 1 June 2013.

2. **Construction Health and Safety Manager (CHSM)**

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Registration Rules for Construction Health and Safety Manager (CHSM) in Terms of Section 18(1) (c) of the Act, (Act No.48 of 2000), as published on 31 May 2013 in the Government Gazette, Gazette No. 36525, **Board Notice** 114 of 2013 for commencement 1 August 2013.

3. Construction Health and Safety Officer (CHSO)

Registration Rules for Construction Health and Safety Officer (CHSO) in Terms of Section 18(1) (c) of the Act, (Act No.48 of 2000), as published on 31 May 2013 in the Government Gazette, Gazette No. 36525, **Board Notice** 113 of 2013 for commencement 1 August 2013

Thobile Lamati
Chief Inspector

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2017

SANBI CONTRACTOR HEALTH AND SAFETY EVALUATION GUIDELINE

1. Introduction

It is widely recognised that there are obligations placed on employers to do all that is reasonable and practicable to protect the health and safety of employees. However, the health and safety obligations of employers in relation to Contractors is unfortunately not as widely understood or recognised. The Occupational Health and Safety Act no.85 of 1993 and Construction Regulation 2014 specifically provide that the duties owed by an employer to employees are also owed to independent Contractors and their employees.

The main objective of the document is to provide relevant and practical guidance to enable SANBI Managers to effectively integrate health and safety requirements into contract management activities and to fulfill their health and safety obligations in relation to Contractors as per Construction Regulation 2014.

The document provides practical guidelines to assist SANBI establish a systematic approach to managing Contractor health and safety risks. Requirements are outlined with regard to three important stages in the contracting process:

(i) **Contract specification**: ensuring that appropriate health and safety requirements are incorporated into specification documents for tenderers.

(ii) **Tender evaluation**: establishing a systematic approach to evaluating tenderers health and safety capabilities and resources.

(iii) **Contract management**: ensuring that Contractors' health and safety performance is adequately monitored and supervised for the duration of the contract.

Specific requirements and procedures associated with each element are presented in this document. These are supported by checklists and proformas to facilitate the practical implementation of the system. OHS Managers may choose to modify the various guideline documents and checklists to suit their own particular requirements.

2. Legal Obligations

The law requires SANBI as an employer to take steps to see that no person is exposed to a risk to their health and safety from the way in which the business is operated. A breach of this duty may result in a criminal prosecution or claims for damages.
In addition, quite specific obligations are owed to employees and Contractors of SANBI.

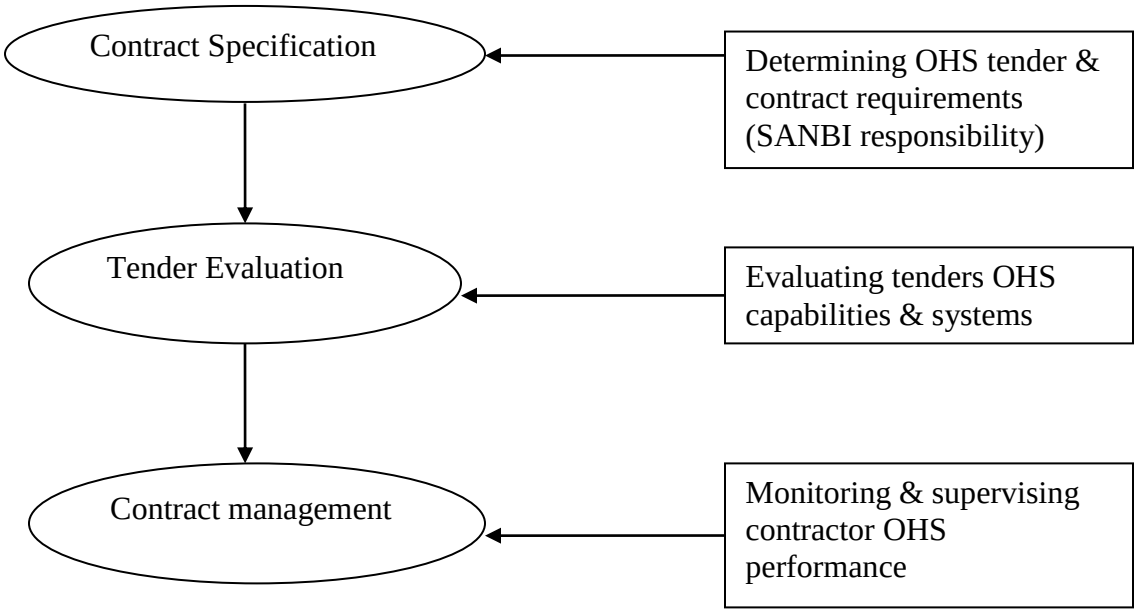
Occupational Health and Safety Act no 85 of 1993 and its Regulations, requires SANBI to ensure that its employees and Contractors (and employees of the Contractors) carry out their work in safe premises, using proper and safe plant and substances, employing systems of work that are safe, and in which there has been adequate instruction, training and supervision. This obligation applies to each and every aspect of work to be carried out by an employee or Contractor appointed to work or do business with SANBI.

3. Elements of Contractor OHS Management System

SANBI OHS management system clearly identifies the health and safety requirements for managing Contractors. All parties must understand their obligations with respect to legal, contractual and technical aspects of the work to be undertaken. This must be supported by appropriate policies, procedures and work practices which are integrated within SANBI's health and safety management system and the day to day business operations. SANBI Project managers/Initiators seeking to appoint contractors or issuing tenders

must ensure that health and safety requirements are met at the initial stage and they must again ensure that health and safety requirements are coordinated throughout the project life span.

There are three important stages of the contracting process in which health and safety issues must be considered when engaging Contractors:



3.1 Contract Specifications

The contract specification documents represent an important first stage in which SANBI can specify health and safety requirements to Contractors tendering for works. Specification is an important document from a legal perspective and provides SANBI with the opportunity to ensure OHS issues are considered in the early stages of letting a contract. No tender should go out without health and safety specifications.

By ensuring that health and safety requirements are clearly identified in specification documents, several key messages are conveyed:

- SANBI considers OHS as an important priority in the way it conducts its business, including Contractors engaged by SANBI.
- SANBI understands and recognizes its OHS legal obligations with regard to Contractors and associated systems are developed to manage the process.
- Contractors are required to demonstrate that they have an appropriate OHS management system and can verify its implementation in practice.
- Contractors are required to comply with contract specific OHS requirements.

In general terms, the contract specification should incorporate the following contract health and safety requirements.

(i) Compliance with health and safety legislative requirements

As a minimum requirement, tenderers must comply with all applicable legislation relating to health and safety. The Occupational Health and Safety Act no.85 of 1993 is the principal legislation. There are,

however, other Acts, regulations, Codes of Practice and SANS which impose specific health and safety requirements that may be relevant to different work activities.

(ii) Demonstrate evidence of OHS management system

The tenderer's OHS management system must demonstrate compliance with the employer duties section of the Occupational Health and Safety Act no.85 of 1993 including those relating to the public. In general terms these duties entail that the tenderer and its employees are able to carry out their work in safe premises, using proper and safe plant and substances employing systems of work that are safe and providing adequate instruction, training and supervision.

Requirements for tenderers to demonstrate or achieve within a prescribed time frame certification of their OHS management system (NOSA etc) can also be considered as a contract requirement. This requirement may be more relevant for long term service or works contracts. Registration with compensation commission is a requirement.

(iii) Complete Tenderer OHS Management System Questionnaire

Tenderers are required to complete a questionnaire which evaluates the status of their OHS management system. Tenderers are required to demonstrate how the relevant system elements operate within their company and can support their statements with documentary evidence.

The questionnaire will be used as a pre-qualification requirement for Contractors who are engaged by SANBI on a regular basis. Under these circumstances, long term Contractors would be required to complete the questionnaire on an annual basis. A face to face interview on health and safety performance should be done through this process. Bid evaluation committees must allocate time to go through this process.

(iv) Risk Assessment

The successful tenderer must prepare and submit a Risk Assessment prior to commencing the contract work. The Risk Assessment requires the tenderer to identify the hazards associated with the contract, assess the risks and develop appropriate control measures. The risk assessment should be undertaken using a standard format for review by SANBI.

(v) Develop Health and Safety Plan

For major contracts the successful tenderer must prepare and submit a Health and Safety Plan prior to commencing the contract. The Health and Safety Plan outlines the structure and means by which health and safety will be managed by the Contractor for the term of the contract. The Health and Safety Plan will consider the specific OHS issues relevant to the contract works and will document the systems and methods implemented to effectively manage OHS risks. Safety for SANBI employees must be addressed in the health and safety plan.

(vi) OHS Performance Reporting

The successful tenderer is required to provide SANBI with regular reports on health and safety performance relating to the contract works or services.

(vii) OHS Incident Reports

Contractors engaged by SANBI are required to notify SANBI of any accident, injury, near miss, property or environmental damage associated with the provision of contract works or services. A standard incident reporting procedure must be included in the health and safety plan.

(viii) Non-Compliance

SANBI has the right to suspend or terminate the contract work if in the opinion of SANBI, the Contractor fails to comply and remedy breaches of health and safety.

3.2 Tender Evaluation

The tender evaluation stage must allow SANBI Bid Evaluation Committees and OHS division to verify tenderer compliance with specification requirements, including health and safety aspects. This process is critical. It ensures that SANBI establishes that tenderers have adequate OHS management systems and have considered health and safety issues in relation to the contract works. This will prevent risks associated with safety environmental and property damages.

The tender evaluation process typically involves the following tasks:

- Examination of tenderer's OHS management system documentation (including policies, procedures, work methods, training/competency records).
- Verification of the operation of the OHS management system. This may include review of tenderers records pertaining to audits, hazard inspections, plant records, safety meetings, accidents.
- Evaluation of reports on the tenderer's health and safety performance (records of accidents and incidents, infringements, prosecutions).
- Undertaking interviews or discussions with tenderers to confirm their understanding of contract OHS requirements, specific OHS issues related to the contract and their ability to respond accordingly.

The capacity and performance of tenderers with regard to OHS should be important criteria in the overall tender evaluation process. Tenderers who cannot demonstrate that they can adequately meet the health and safety requirements of the specification should not be considered in the selection process. However, some flexibility will be required in this approach in relation to smaller Contractors who are less likely to have formalized OHS management systems.

3.3 Contract Management

While in no way reducing Contractors responsibility or liability as an employer for the health and safety of their employees, SANBI must ensure that they meet their employer duty of care obligations to all employees working on their behalf. To meet these obligations SANBI must undertake adequate monitoring and supervision of Contractors.

The level of monitoring and supervision will depend on such factors as:

- Complexity of the tasks
- The level of risk
- The control SANBI has over the workplace
- Interaction with other parties (ie: SANBI employees, other Contractors, public)

It is important that a systematic approach is adopted when monitoring and supervising Contractors. Requirements of the Contractor and principal should be clearly identified in the contract documentation. Appropriate records of activities related to monitoring and supervision of Contractor operations clearly

demonstrate SANBI commitment to meeting its OHS legal obligations. These records are important legal documents and can be relied upon when a non-compliance or serious health and safety incident occurs.

Monitoring and supervision of Contractor activities is most efficiently undertaken when combined with other contract management activities. Integration of health and safety procedures into the day to day aspects of the contract management process is a key element for success.

4. Classification of contracts.

Different approaches should be considered in relation to OHS requirements for major and minor contracts. These are outlined below:

4.1.1 Major Contracts

(i) OHS Legal Requirements

When the successful contractor is awarded the contract, the following must be complied with before the commencement of work:

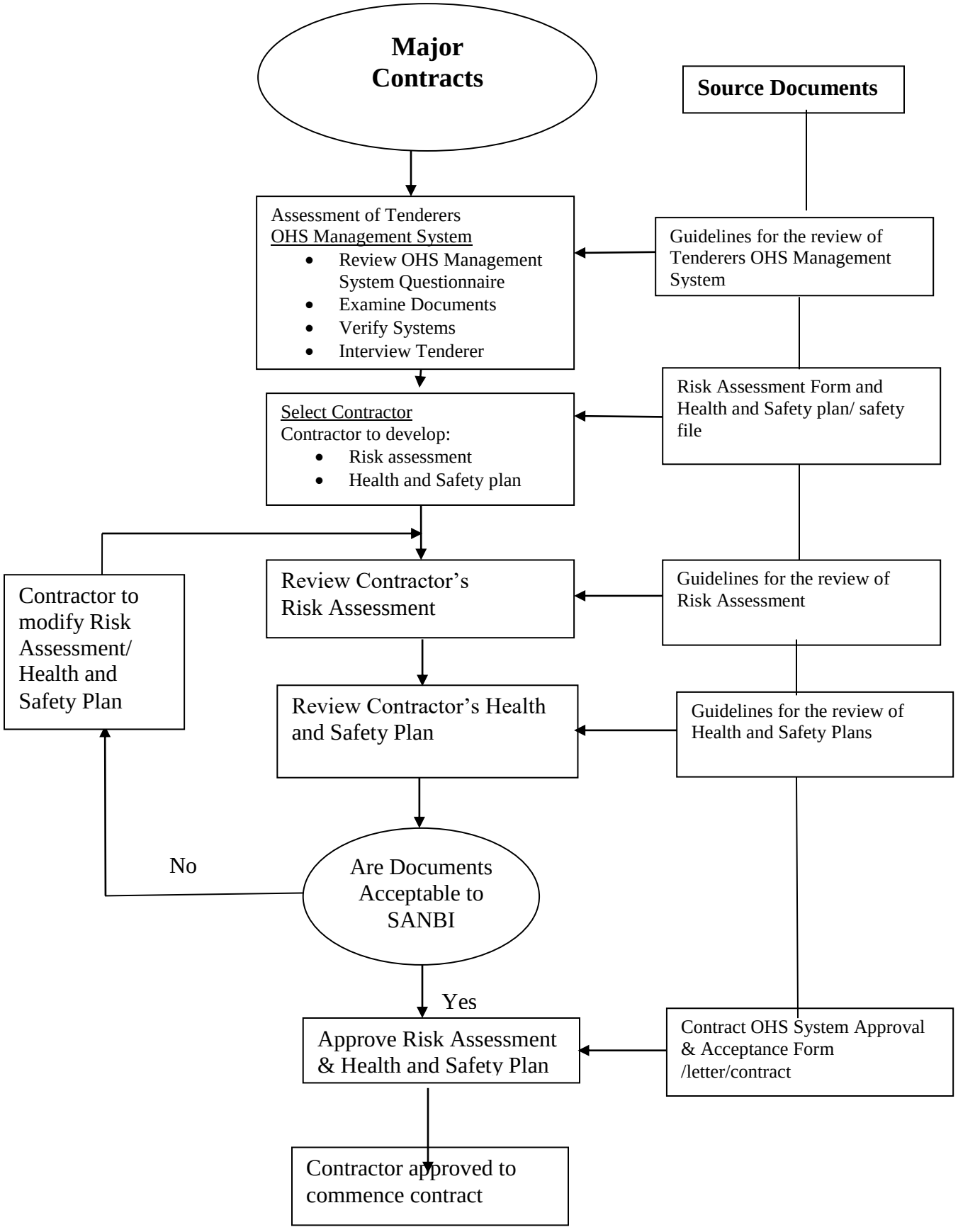
- Application for construction work permit- depending on the size of the project (SANBI responsibility as per **Section 3(1, 7) of Construction Regulation 2014**).
- Notification of Construction work- depending on the nature of work (CONTRACTOR responsibility as per **Section 4(1, 2) of Construction Regulation 2014)**
- Baseline risk assessment (SANBI responsibility as per Section 5(1(a)) of Construction Regulation 2014.
- Site specific health and safety plan (CONTRACTOR responsibility as per **Section 7(1) of Construction Regulation 2014**
- Appointment letter of Principal contractor(SANBI responsibility as per **Section 5(1(k)) of the Construction Regulation 2014**
- Letter of good standing with the compensation fund or with a licensed compensation insurer as contemplated in the COID Act, 1993 (Act No. 130 of 1993) (SANBI **responsibility as per Section 5(1(j)) of the Construction regulation 2014)**
- Employee's valid medical certificates of fitness issued by occupational health practitioner (Principal Contractor responsibility **as per Section 7(1(g)) of the Construction Regulation 2014.**
- All legal appointments (Principal contractor as per **Section 8 of the Construction regulation 2014.**
- Risk assessment and Notification of asbestos work as per Asbestos Regulation 3 of 2001 promulgated by Government Notice No. R. 155 of 10 February 2002.

(ii) Tenderer OHS Management System Questionnaire

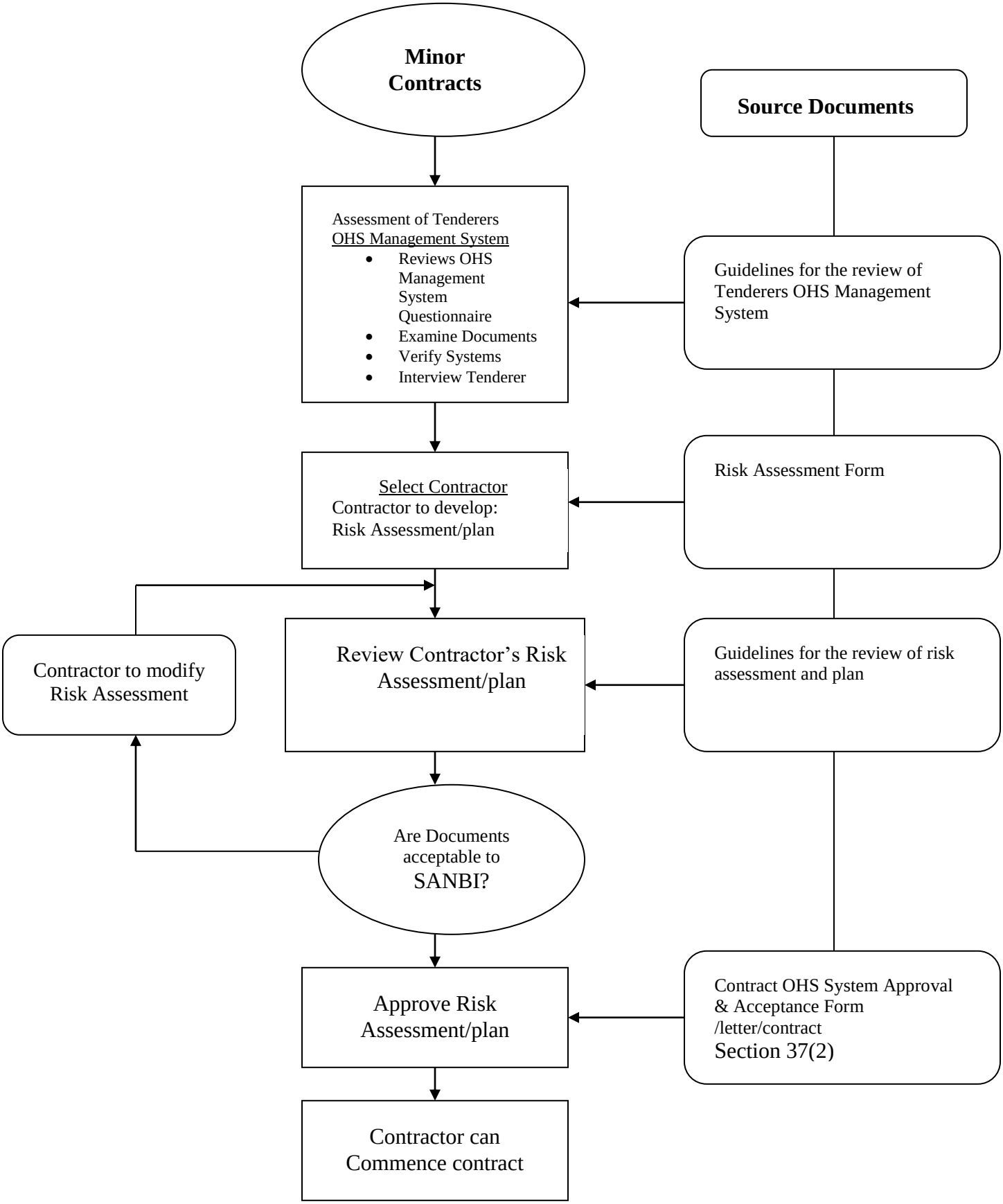
Project initiators must consult SHE department for questionnaire and should be incorporated with specification documents for completion by tenderers and submitted as part of their tender.

Completed questionnaires should be reviewed by SANBI and where appropriate responses verified.

Tender Evaluation – Process Flow Chart: Major Contracts



Tender Evaluation – Process Flow Chart: Minor Contracts



5. Contract Monitoring

The extent to which SANBI should monitor and supervise Contractors will be influenced by several factors, including:

- ***The level of risk associated with Contractor's activities***
- ***Complexity of the tasks performed by the Contractor***
- ***Interaction with other parties (ie: SANBI employees, other Contractors, public)***
- ***Duration of contract***

A higher level of supervision by SANBI officers may be required in special circumstances.
Supervision may need to be targeted to specific key elements of a contract, for example:

- **Contract start-up:** *ensuring that suitable systems and procedures are in place and the workplace is appropriately established*
- **High risk or complex activities:** *monitoring conformance with safe work procedures and risk assessment control measures*
- **High level of interaction with other parties:** *review of co-ordination and notification systems operating at the workplace*
- **Introduction of new plant, equipment or systems of work:** *may require separate risk assessment and monitoring of control procedures*

Monitoring and supervision of Contractor activities include:

(i) Regular review of Contractor health and safety documentation. This may involve review of:

- *induction records*
- *plant maintenance/inspection records*
- *health and safety inspection reports*
- *risk assessment documents*
- *employee training/competency records*
- *safety meeting minutes*

(ii) Undertaking regular site inspections to monitor compliance with health and safety procedures, considering:

- *legislative requirements*
- *conformance with Risk Assessment control measures*
- *conformance with Health and Safety Plan*
- *conformance with SANBI health and safety policy and procedures*

(iii) Providing Contractors with advice on unusual or unexpected risks and feedback on areas of non compliance. This may arise from:

- *inspections undertaken by SANBI officers*
- *inspections or reports from other parties*
- *SANBI experience from similar contracts*
- *Annual audit*

(iv) Reviewing Contractor health and safety performance. This may include review of:

- *accident/incident reports*
- *third party reports or complaints*
- *review of monthly OHS performance reports*

(v) Ensuring that corrective action is taken where non conformance is identified by:

- *issuing of non-conformance report*
- *reviewing and confirming that corrective action implemented*
- *issuing formal notice (ie: site instruction) when action not taken within reasonable timeframe*

(vi) Incorporating health and safety issues as part of regular contract review meetings. This may include:

- *health and safety as an agenda item*
- *safety inspections undertaken after/before site meetings*
- *health and safety issues considered as high priority in relation to overall contract performance*

6. Contract Inspection Checklist

To determine which aspects are priority areas for inspection, reference should be made to the Risk Assessment completed by the Contractor. The risk assessment identifies the hazards associated with the contract and the particular control measures to be implemented by the Contractor.

The control measures can be extracted from the Risk Assessment Form, transferred onto a Contract Inspection Checklist and used as a basis for workplace inspections to be conducted by the Contractor on a regular basis and by SANBI as part of its supervision program.

The Contract Inspection Checklist allows the systematic review of health and safety issues relevant to the contract activities. The inspection checklist can be modified as a result of other health and safety issues identified during the contract.

6.1.1 Frequency of Inspections

Frequency of inspections will depend on the nature and circumstances of each contract. Issues such as the level of risk and extent of control SANBI has over the workplace will influence the frequency of inspections.

For short duration contracts from several days up to several weeks it may be appropriate that the Contractor undertake daily health and safety inspections. For longer term contracts weekly or monthly health and safety inspections are likely to be more practicable. However, daily pre-start safety inspections may be required for particular high risk plant, equipment and processes.

6.2 Contract Records

Effective contract management involves adoption of a systematic approach to record keeping during the period of the contract. Relevant health and safety records retained by SANBI provide documentary evidence of SANBI due diligence in relation to the health and safety of Contractors. These records will be particularly important in situations where the Contractor is in breach of health and safety requirements or a significant incident or accident occurs from activities performed by the Contractor.

Where SANBI officers identify a breach of health and safety, this should be promptly notified to the Contractor. Relevant details should be recorded on an inspection checklist or as a file/diary note. Significant

breaches which are considered to contribute to a minor or major risk should be notified using a non-conformance report, and a copy retained by SANBI.

Other relevant health and safety records that should be retained by SANBI include:

- Risk Assessment
- Health and Safety Plan
- Contract documents
- Health and safety inspection reports
- Minutes of safety meetings and site meetings
- Incident investigation reports
- Monthly OHS performance reports
- Non-conformance reports
- Photographs and test results
- Site instructions and diary notes
- WSWP (written safe work procedures) etc.

For the duration of each contract, relevant health and safety documents should be consolidated and retained in the contract file. These are important documents that may be required even some time after the contract has been completed.

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TENDERER OCCUPATIONAL HEALTH AND SAFETY (OHS) MANAGEMENT SYSTEM QUESTIONNAIRE

This questionnaire forms part of the SANBI tender evaluation process and is to be completed by tenderers and submitted with their tender offer. The objective of the questionnaire is to provide an overview of the status of the tenderers' OHS management system. Tenderers will be required to verify their responses noted in their questionnaire by providing evidence of their ability and capacity in relevant matters.

Declaration

The information provided in this questionnaire is an accurate summary of the company's occupational health and safety management system.

Company name:			
Signed:		Name:	
Position:		Date:	

Contract details

Contract name:	
Contract number:	

Tenderers are required to supply evidence to the questions posed below (see the client's checklist of what will be considered):

1. OHS policy and management	Yes	No
1.1 Is there a written company health and safety policy? *If yes, provide a copy of the policy.* *Comments:*		
1.2 Does the company have an OHS management system certified by a a recognised independent authority, e.g. NOSA? *If yes, provide details:*		

1.3 Is there a company OHS management system file available?
If yes, prepare and provide when requested.
Comments:

1.4 Are health and safety responsibilities clearly identified for all levels of staff employed?
If yes, provide appointment letters.

2. Safe work practices and procedures

2.1 Has the company prepared safe operating procedures or specific safety instructions relevant to its operations?
If yes, provide a summary listing of procedures or instructions.
Comments:

2.2 Is the company registered with the Compensation Commissioner?
If yes, provide a letter of good standing for the company.

2.3 Is there a documented incident investigation procedure?
If yes, provide a copy of a standard incident report form.

2.4 Are there procedures for maintaining, inspecting and assessing the hazards of plant operated/machinery owned by the company?
If yes, provide procedure document.

2.5 Are there procedures for storing and handling of hazardous substances?
If yes, provide a copy of a procedure document.

2.6 Are there procedures for identifying, assessing and controlling risks associated with manual handling?
If yes, provide a copy of procedure and risk assessment documents.

3. OHS training

3.1 Are records maintained of all training and induction programmes undertaken for employees in your company?
If yes, provide examples of the safety training records, especially for employees to be utilised.

4. Health and safety workplace inspection

4.1 Are regular health and safety inspections undertaken at work sites? | | |
If yes, provide a copy of such inspection checklists.

4.2 Is there a procedure in place for employees to report hazards at the workplace? | | |
If yes, provide an incident reporting procedural document as example.

5. Health and safety consultation

5.1 Is there a workplace health and safety committee? | | |

5.2 Are there employees elected as health and safety representatives? | | |
Comments:

6. OHS performance monitoring

6.1 Is there a system in place for recording and analysing health and safety performance statistics? | | |
If yes, provide details of such recordings and analyses:

6.2 Are employees regularly provided with information on the company's health and safety performance? | | |
If yes, provide details of what was communicated:

6.3 Has the company ever been convicted of an occupational health and safety offence? | | |
If yes, provide details of the offence, outcomes and corrective measures implemented:

6.4 Additional checklists
The OHS department must be consulted to provide all other relevant forms.

7. Company references

7.1 Please provide the following information for the three most recent contracts completed by the company:

	Contract 1	Contract 2	Contract 3
Contract description:			
Client:			
Contact person:			
Phone number:			
Number of lost time injuries:			
Number of person days on contract:			
Total days lost due to injuries:			

REVIEW OF TENDERER'S OHS MANAGEMENT SYSTEM QUESTIONNAIRE

Contract name:			
Contract description:			
Contract manager:		Date:	
Contractor:			

Indicate in the following manner:
√ – acceptable × – not acceptable N/A – not applicable

1. OHS policy and management

Company health and safety policy
The policy provided by the tenderer should indicate the following:

• Be signed by the CEO or equivalent	
• Outline clear objective statements	
• Show commitment to improve performance	
• Be relevant to the company's operations	
• Be reviewed on a regular basis (at least once a year)	

Certified OHS management system

Certification demonstrates that the tenderer meets the minimum standards, and that it was verified by an independent party.	
•The company indicated the independent party, e.g.:	

NOSA, etc.
• Indicated certification

OHS management system or plan
The company's OHS manual or plan should have included as a the following:
• An OHS policy
• Management's OHS responsibilities
• General OHS procedures
• Safe work procedures relevant to the company's operations
• A waste management plan and procedures
• An incident/accident management plan and procedures
• Induction and training procedures
• Issued resolution and OHS consultation mechanisms

Health and safety responsibilities
Health and safety responsibilities in the company should have been documented and must demonstrate the following:
• OHS responsibility statements
• Employee's job description (especially those utilized for the project)
• Demonstrate formal and informal performance appraisal on Health and Safety issues
• Issued and signed appointment letters
• Accountability of line managers and supervisors for health and safety performance of their employees.

2. Safe work practices and procedures

The tenderer should have demonstrated safe work procedures which:
• Are relevant to the company's operations
• Contain a description of the tasks and associated hazards
• Outlined control measures and methods to minimize health and safety risks
• Make reference to any relevant legislation, codes of practice, standards or regulations

Safe work permits
Where relevant, the tenderer should have demonstrated that safe work permits for the following types of work have been issued:
• Work in confined spaces (confined space entry permits)
• Hot work (hot work permits)
• Lockout permits (plant, electrical systems, steam)

Incident reporting and investigation
Tenderers should have provided evidence of the following:
• Incident/accident reporting and investigation form
• Incident/accident investigation procedure
• Evidence of completed investigation forms

- Corrective measure adopted to correct future similar situations

Plant safety

The tenderer should demonstrate that mechanisms are in place for the identification of hazards, assessment of risks and the implementation of control measures associated with the plant. This should have included:

- Documented risk assessments for the relevant plant or risk assessment procedure
- A copy of plant operator licenses and/or permits
- A register of plant requiring registration
- A list of persons responsible for undertaking plant risk assessments
- Plant maintenance and inspection forms
- Pre-start daily safety inspection forms for plant
- Plant fault reporting system and forms
- Public and client employee health and safety reports

Hazardous substances

Tenderer should have provided evidence to demonstrate the safe handling and storage of hazardous substances by supplying the following documentation:

- A manifest or register of chemicals used by the company
- Copies of material safety data sheets for chemicals used
- Safe handling procedures, including personal protective equipment issued
- Proof of the relevant training

Manual handling

The tenderer should have supplied documented evidence of the following:

- The risk assessments for manual handling of hazards
- Systems used to control manual handling of risks e.g. lifting aids, work procedures, etc.

3. OHS training

Tenderer should have supplied evidence of the following:

- Training records and competencies of employees (licenses, permits, certificates)
- Records of ‘on the job’ training
- Toolbox talk sessions conducted
- Induction training programmes

4. Health and safety workplace inspections

Regular inspections undertaken

Tenderer should have provided evidence of the following:

- Plant inspection schedules
- Completed inspection reports

• Types of inspections undertaken

Standard inspection checklists

Tenderer should have supplied:

Copies of the types of inspection checklists used.

Hazard reporting from tenderer

The tenderer should have supplied evidence of the following:

• Documented hazard reporting procedures and forms

• Copies of completed hazard reports

5. Health and safety consultation

Health and safety committee

The tenderer should have supplied evidence of the following:

• Structure of the committee/s

• Meeting schedule/s

• Minutes of meetings

Employee consultation

The tenderer should have provided evidence of the following:

• The list of employee health and safety representatives

• Documented procedures for consultation and dissemination of information

• Employee involvement in inspections and accident investigations

6. OHS performance monitoring

Safety performance statistics

The tenderer should have supplied evidence of the following:

• Reports on the company's health and safety injury trend data

• Performance targets established e.g. lost time injuries, person days lost, etc.

Health and safety performance information

The tenderer should have supplied evidence of the following:

• Records of who received reports

• Types of reports produced and supplied

Conviction of health and safety offence

If the tenderer had been convicted of a health and safety offence, details/casefile should be supply for the client to determine:

• The nature and circumstances of the incident/accident

• Proof of corrective actions undertaken

Comments:

The checklist below is included as a guide only and may be modified to suit specific contract requirements.

GENERAL HEALTH AND SAFETY CHECKLIST

Contract name:			
Contract description:			
Contractor:			
Worksite location:		Date:	
Persons completing inspection:			

Indicate in the following manner:

√ – acceptable × – not acceptable N/A – not applicable

1.	**Health and safety systems evidence:**	
1.1	OHS policy displayed	
1.2	Accident report book available	
1.3	Induction records	
1.4	Rehabilitation policy available	
1.5	Workplace inspection records	
1.6	Emergency procedures	
1.7	Training records	
1.8	Documented safe work procedures	
1.9	Protective clothing and equipment records	
1.10	Material safety data sheets (MSDS) available	
1.11	Health and safety systems manual	
1.12	Health and safety representatives appointed	
1.13	Management safety representative appointed	
1.14	Contract risk assessment available	
1.15	Contract health and safety plan available	
2.	**Housekeeping**	
2.1	Work areas free from rubbish and obstructions	
2.2	Surfaces safe and suitable	
2.3	Surfaces free from slip/trip hazards	
2.4	Floor openings covered	
2.5	Stock/material stored safely	
	Aisles:	
2.6	Unobstructed and clearly defined	
2.7	Adequate lighting	
2.8	Vision at corners	
2.9	Wide enough	
3.	**Electrical**	
3.1	No broken plugs, sockets, switches, etc.	
3.2	No frayed or defective leads	

3.3	Power tools in good condition	
3.4	No work near exposed live electrical equipment	
3.5	Tools and leads inspected and tagged	
3.6	No strained leads	
3.7	No cable-trip hazards	
3.8	Switches/circuits identified	
3.9	Lock-out procedures/danger tags in place	
3.10	Earth leakage systems used	
3.11	Start/stop switches clearly identified	
3.12	Switchboards secured	
3.13	Appropriate fire fighting equipment	

4. Mobile plant and equipment

4.1	Plant and equipment in good condition	
4.2	Daily safety inspection procedures/checklists	
4.3	Fault reporting/rectification system used	
4.4	Operators trained and licensed	
4.5	Warning and instructions displayed	
4.6	Warning lights operational	
4.7	Reversing alarm operational	
4.8	Satisfactory operating practices	
4.9	Fire extinguisher in good condition and operational	
4.10	Tyres satisfactory	
4.11	SWL of lifting or carrying equipment displayed	

5. Machinery and workbenches

5.1	Adequate work space	
5.2	Clean and tidy	
5.3	Free from excess oil and grease	
5.4	Adequately guarded	
5.5	Warnings or instructions displayed	
5.6	Emergency stops appropriately placed and clearly identifiable	
5.7	Operated safely and correctly	
	Workbenches:	
5.8	Clear of rubbish	
5.9	Tools in proper place	
5.10	Duckboards or floor mats provided	

6. Hazardous substances

6.1	Stored appropriately	
6.2	Containers labelled correctly	
6.3	Adequate ventilation/exhaust systems	
6.4	Protective clothing/equipment available/issued and used	
6.5	Personal hygiene – dermatitis control	
6.6	Waste disposal procedures	
6.7	Material safety data sheets (MSDS) available	
6.8	Chemical handling procedures followed	
6.9	Chemical register kept	
6.10	Appropriate emergency/first aid equipment (shower, eye bath, extinguishers)	

6.11	Hazchem signing displayed	

7. Welding

7.1	Gas bottles securely fixed to trolley	
7.2	Welding fumes well ventilated	
7.3	Fire extinguisher near work area	
7.4	Only flint guns used to light torch	
7.5	Flash back spark arresters fitted	
7.6	Vision screens used for electric welding	
7.7	LPG bottles within 10 year stamp	
7.8	Personal protective equipment issued and worn	
7.9	Hot work permit system used	

8. Excavations

8.1	Shoring in place and in sound condition	
8.2	Excavation well secured	
8.3	Signage displayed	
8.4	Banks battered correctly and spoil away from edge	
8.5	Clear and safe access around excavation	
8.6	Separate access and egress points from excavation	
8.7	Safe work procedure in place	

9. Prevention of falls

9.1	All work platforms have secure handrails, guarding or fence panels	
9.2	Harnesses and lanyards or belts provided	
9.3	All floor penetrations covered or barricaded	
9.4	Unsafe areas signposted and fenced	
9.5	Safe work procedure in place	

10. Stairs, steps and landings

10.1	No worn or broken steps	
10.2	Handrails in good repair	
10.3	Clear of obstructions	
10.4	Adequate lighting	
10.5	Emergency lighting	
10.6	Non-slip treatments/treads in good condition	
10.7	Kick plates where required	
10.8	Clear of debris and spills	
10.9	Used correctly	

11. Ladders

11.1	Ladders in good condition	
11.2	Ladders not used to support planks for working platforms	
11.3	Correct angle to structure 1:4	
11.4	Extended 1.0 metre above top landing	
11.5	Straight or extension ladders securely fixed at top	
11.6	Metal ladders not used near live exposed electrical equipment	

12. Personal protection

12.1	Employees provided with personal protective equipment	

12.2	Personal protective equipment worn by employees	
12.3	Sun cream and sunglasses provided	
12.4	Correct signage at access points	

13. Manual handling

13.1	Mechanical aids provided and used	
13.2	Safe work procedures in place	
13.3	Manual handling risk assessment performed	
13.4	Manual handling controls implemented	

14. Workplace ergonomics

14.1	Workstation and seating design acceptable	
14.2	Ergonomic factors considered in work layout and task design	
14.3	Use of excessive force and repetitive movements minimised	
14.4	Appropriate training provided	

15. Material storage

15.1	Stacks stable	
15.2	Heights correct	
15.3	Sufficient space for moving stock	
15.4	Material stored in racks/bins	
15.5	Shelves free of rubbish	
15.6	Floors around stacks and racks clear	
15.7	Drums checked	
15.8	Pallets in good repair	
15.9	Heavier items stored low	
15.10	No danger of falling objects	
15.11	No sharp edges	
15.12	Safe means of accessing high shelves	
15.13	Racks clear of lights/sprinklers	

16. Confined spaces

16.1	Risk assessment undertaken	
16.2	Communication and rescue plan in place	
16.3	Safety equipment in good working condition	
16.4	Suitable training provided to employees	
16.5	Confined space permit used	

17. Lasers

17.1	Operator has laser operator licence	
17.2	Signage displayed	
17.3	Laser not used in a manner to endanger other persons	

18. Demolition

18.1	Risk assessment undertaken in advance	
18.2	Access prevented to demolition area	
18.3	Overhead protection in place	
18.4	Protection of general public	
18.5	Safe work procedures in place	

19. Public protection

19.1	Appropriate barricades, fencing, hoarding, gantry secure and in place	
19.2	Signage in place	
19.3	Suitable lighting for public access	
19.4	Footpaths clean and free from debris	
19.5	Dust and noise controls in place	
19.6	Site access controlled	
19.7	Traffic control procedures in place	
19.8	Public complaints actioned	

20. Amenities

20.1	Washrooms clean	
20.2	Toilets clean	
20.3	Lockers clean	
20.4	Meal rooms clean and tidy	
20.5	Rubbish bins available – covered	

21. First aid

21.1	Cabinets and contents clean and orderly	
21.2	Stocks meet requirements	
21.3	First aiders names displayed	
21.4	First aiders location and phone numbers	
21.5	Qualified first aider(s) (Certificates available)	
21.6	Record of treatment and of supplies dispensed	

22. Lighting

22.1	Adequate and free from glare	
22.2	Lighting clean and efficient	
22.3	Windows clean	
22.4	No flickering or inoperable lights	
22.5	Emergency lighting system operational	

23. Fire control

23.1	Extinguishers in place	
23.2	Firefighting equipment serviced/tagged	
23.3	Appropriate signing of extinguishers	
23.4	Extinguishers appropriate to hazard	
23.5	Emergency exit signage	
23.6	Exit doors easily opened from inside	
23.7	Exit pathways clear of obstruction	
23.8	Alarm/communication system – adequate	
23.9	Smoking/naked flame restrictions observed	
23.10	Minimum quantities of flammables at workstation	
23.11	Flammable storage procedures	
23.12	Emergency personnel identified and trained	
23.13	Emergency procedures documented – issued	
23.14	Emergency telephone numbers displayed	
23.15	Alarms tested	
23.16	Trial evacuations conducted	

23.17	Personnel trained in use of firefighting equipment	

Appendix C: Guidelines for the Implementation of Labour-Intensive Projects under the Expanded Public Works Programme (EPWP)



public works

Department:
Public Works
REPUBLIC OF SOUTH AFRICA





EXPANDED PUBLIC WORKS PROGRAMME

NON STATE SECTOR:

PROCEDURE MANUAL

Version 1(2014/15)
EPWP Phase 3

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Annexure A:	EPWP NSS NGO Application guide
Annexure B:	EPWP Report Form
Annexure C:	Payment Claim Form
Annexure D:	Beneficiary Registration Form
Annexure E:	Beneficiary Agreement template with NPOs
Annexure F:	Ministerial Determination
Annexure G:	Code of Good Practice

How to use this Manual

This manual is structured in such a way that users can easily find the relevant information they need. Each chapter will focus on a specific topic. While it is useful to read the entire manual to get a good overall understanding of how the subsidy functions, users can also just use specific chapters to ensure they are able to complete specific tasks they are responsible for.

Each chapter of the manual will distinguish the user of such information; the following categories of users have been identified:

a- NPO's that are contracted to the NSS Programme

b- Beneficiaries that have been contracted by the NPO's in the NSS Programme

c- IDT & DPW Programme Managers

d- Provincial staff implementing the EPWP programmes

e- Service Providers who need to understand their reporting responsibilities

f- Provincial Project Management Teams supporting the EPWP in the provinces and the National Project Management Team that plays an advisory role over the programme.

Frequently Asked Questions (FAQs) are provided to give a better understanding of the programme.

Note regarding Version 1 EPWP Phase 3(2014/15)

This is the first version of the implementation manual for the Non-State Sector EPWP Phase 3 wage subsidy issued by the National Department of Public Works in April 2014.

Chapter 1: Introduction of the EPWP Non-State Sector Programme

Chapter summary: *This chapter defines the EPWP Non-State Sector Programme and the objectives of the programme.*

The Expanded Public Works Programme (EPWP) is one element within a broader government strategy to reduce poverty through the alleviation and reduction of unemployment. Phase I of the Expanded Public Works Programme commenced on 1 April 2004 and had the goal of creating 1 million work opportunities over its first five years.

Phase II (2009-2014) of the EPWP is an extension of the first phase with the following additions:

- The scale of the programme has increased significantly to approximately four times its current scale. The programme aims to provide 4, 5 million work opportunities (2 million full time equivalent jobs) over the next five years. The first phase created 1.6 million work opportunities, and the target was 1 million.

- A new component called the Non State Sector Programme (NSS) has been introduced which uses the wage subsidy to support non state entities in providing work opportunities as part of the EPWP. The Non-State sector is to create 640 000 work opportunities in the next five (5) years.

The NSS NPO Programme in EPWP Phase III (2014-2019) of the EPWP is an extension of the EPWP Phase II NSS with the following additions:

- 3 years multi-year contracting for NPOs
- Focus on support to the management of the NPO and creation of networks for the NPOs.
- The NSS NPO Programme will not fund NPO's already supported by the Social Sector.
- Focus of programmes grassroots community services e.g. family support

Definitions Box

DPW is the Department of Public Work it is the custodian of the Expanded Public works Programme.

A ***work opportunity*** is paid work created for an individual on an EPWP project for any period of time.

A ***full time equivalent job*** refers to one person-year of employment. One person year is equivalent to 230 person days of work.

EPWP means the Expanded Public Works Programme (2009 – 2014) as approved by Cabinet.

The ***EPWP Wage Subsidy Allocation*** is a specifically and exclusively appropriated budgetary allocation to eligible Non- Profit Organisations to expand EPWP work for the EPWP target group by implementing EPWP programmes to achieve a targeted number of FTEs.

The ***IDT*** is the Independent Development Trust.

and social awareness and cross cutting national issues of priority that do not really have a departmental home for implementation e.g. youth development.

1.1. Objective of the Non-State Sector NPO Programme

In line with the NSS NPOs Programme design, the objective of the NSS NPOs Programme is as follows:

"To trigger and stimulate development in programmes delivered by Non-Programme Organizations (NPOs) in communities"

1.2. Focus on the Creation of Work for the EPWP Target Group

While many projects and programmes of government create work, not all of them are classified as EPWP. Given the wide variation of projects implemented by government, it is not always straightforward to distinguish between EPWP and non-EPWP projects.

The key characteristics of EPWP projects are listed below:

a) They employ large numbers of local, low skilled, unemployed persons who are willing to work, defined as the EPWP target group

b) They are highly labour intensive: a large percentage of the overall project costs are paid out in wages to the EPWP target group

c) They provide a service to, or develop an asset for, the community

d) Projects and programmes should not result in the displacement of existing workers or in the downgrading of existing workers' employment conditions.

For the purpose of distinguishing what work will qualify as EPWP work falling within the Non- State Sector EPWP it has been set that:

a- Work that complies with the Ministerial Determination and the Code of Good Practice for Special Public Works Programmes will be categorised as EPWP work qualifying for the incentive.

Definitions Box

Beneficiary - any person actively working in the EPWP programme

Financial Year a Period of 1st April – 31 March

DCOG the Department of Cooperative Governance

NPO Non-Profit Organisations

MOA a contractual agreement signed by to entities with regards to the implementation of the NSS Programme.

PARTNERSHIP structured agreement between two entities on the implementation of the programme.

PMT the project management team that plays an oversight role over the implementation of the NSS programme.

b- In addition to the above Code, it should be noted that:

- Government employees or permanent employees of the implementing agent will not be included in the count of the number of FTEs created
- The EPWP target group may not be paid below the daily wage rate upon which the subsidy is based – i.e. may not be paid below R71 per person day of work in 2014/15.
- NPO's must use the wage subsidy allocation for wage costs of beneficiaries.

Non- State Sector NPO Targets

The target for the Non State Sector NPO Programme over five years is:

Year	Overall Targets (W/O)	IDT Targets	NYDA Targets
2014/15	49 660	47 660	2 000
2015/16	47 765	45 765	2 000
2016/17	56 700	53 865	2 835
2017/18	56 700	53 865	2 835
2018/19	56 700	53 865	2 835

The Memorandum of Agreement (MoA) entered between the Department of Public Works and the IDT sets out the second phase of the Non State Sector Programme and it includes:

- Developing criteria for NPO's who wish to participate in the programme.
- Appointment of NPO's
- Monitoring
- Reporting
- Evaluation of impact
- Review of the incentive model.

1.4. PURPOSE

The purpose of the NSS programme is to:

- create an avenue where NPO's can assist government in creating income for large numbers of individuals through socially constructive activities in their local communities,

- provide accredited training to beneficiaries so that at the end of the year beneficiaries can evolve into the second phase of the job market which would be to exist into full time jobs in line with the 6 job drivers of governments' new growth path and

- Encouraging municipalities in utilizing the human capacity of NPO's funded by the NSS Programme in municipal IDP projects aimed at developing local communities.

1.5. SUPPORT PARTNERSHIP INTERVENTIONS

The daily wage in some NGO's will be used as a supplement to the wages of beneficiaries. As long as private sector, sector departments or municipalities continue to fund the resources of the programme DPW complements the work of the NPO by providing the wage subsidy. This will continue to build a co-funding approach in which national, provincial, local government and private sector work together in the creation of work opportunities.

1.6. THE ROLE OF THE PROJECT MANAGEMENT TEAM

The Non-State Sector is a key component of the second phase of the EPWP and is led by the Minister of Public Works. It is funded from the overall wage subsidy allocation provided to DPW on its budget vote. The Non-State Sector Programme is managed by DPW with oversight provided by the Project Management Team (PMT). The PMT comprises of the following stakeholders: (DSD, DEA, NEDLAC Community Constituency, IDT, National Treasury); with the assistance of IDT the sector has programme managers at national and in the regions. The regional programme managers' report to the provincial oversight committee called the Provincial Project Management Team (PPMT).

Definitions Box

EPWP Target Group refers to unemployed, local, low skilled South Africans willing to work on EPWP projects and programmes for a minimum wage rate of R60 per person day of work.

The Minister of Labour issued a ***Ministerial Determination and Gazetted a Code of Good Practice*** for Special Public Works Programmes which allows for special conditions to facilitate greater employment on Public Works Programmes. Refer to Gazette No 64, 1 November 2010.

ACCOUNTABILITY refers to providing of all necessary financial records and information on administrative processes in possesses of the service provider.

MOA is the memorandum of agreement between an NPO and the intermediary (IDT)

Given the nature of the Non-State Sector, which will involve a wide range of activities that coincide with the roles and functions of government and sector stakeholders, an Interdepartmental Committee (Project Management Team) has been established to oversee the NSS. The Project Management Team (PMT) is an Advisory Technical Committee which has these key responsibilities:

- Reviewing the sector to make recommendations for its improvement and growth.
- Provide oversight on the non-state programme i.e. ensuring that the 5 year targets are met.

- Setting criteria for the selection of non-state sector organizations to be procured by IDT.
- Developing funding model and re-imbursement plan for the sector
- Evaluating and adjudicating non-state organization tenders (evaluation at regional level)
- Aligning non-state programmes to government priorities e.g. focus on rural development
- Establishment of the following committees: evaluation and audit committees.
- Review funding models of the non-state sector

1.7. THE ROLE OF THE PROGRAMME MANAGEMENT TEAM

The Non State Sector Programme is growing rapidly and will ultimately fund a large number of NGO's and CBO's spread all over the country. All of these NGO's and CBO's will have to be actively monitored to ensure that they comply with the rules of the wage incentive. In addition to this, these organizations typically do not have strong cash flows and investigations so if the wage subsidy is to be effective it would need to be paid at least monthly and very promptly.

The intermediary the Independent Development Trust (IDT) has been appointed to implement the programme as an intermediary at national and provincial level. IDT is a schedule 2 entity of government which already disburses funds to NGO's and CBO's. It monitors activities of programmes to ensure that they comply with the requirements as set by DPW. The role of the programme manager is to:

- Manage the cash flow projections which form part of the national Programme Implementation Plan (PIP);
- monitor the implementation of the national PIP
- ensure that non-state sector organisations are directly contracted as independent contractors;
- Monitor the PIP of NPOs submitted upon appointment by the IDT regional programme managers.

DEPARTMENT OF PUBLIC WORKS– is the custodian of the Expanded Public Works Programme.

INDEPENDENT DEVELOPMENT TRUST (IDT) - is the intermediary appointed by DPW for the implementation of the NSS Programme. Their role is to contract NPOs and monitor the work of NPOs in implementing the NSS programme.

NON PROFIT ORGANISATIONS – contract unemployed people that participate in the programme, these people are called beneficiaries. NPO's administer payments of wage subsidies to beneficiaries. Beneficiaries should be employed in line with the ministerial determination.

BENEFICIARIES- People employed by the NPO's under the NSS Programme are paid a daily wage subsidy as per the ministerial determination. The NPO's should work towards the following equity targets: 55% women, 55% youth and 2 % people with disabilities.

PROJECT MANAGEMENT TEAM – are sector specialists who play an oversight and advisory role of the work undertaken in the NSS programme. The PMT consists of the following stakeholders: Dept Public Works, IDT, NEDLAC Community Constituency, Department of Social Development and National Youth Development Agency.

Chapter 2: Principles of the Non-State Sector EPWP Wage Subsidy

Chapter summary: *This chapter explains the key principles that underpin the intent of the Non-State Sector EPWP Wage Subsidy.*

There are a number of principles that explain the intention of the Non-State Sector wage subsidy which is important for implementing the NSS EPWP programme.

These principles are:

2.1. Eligibility of NPOs Based on the Contribution to EPWP

The first principle is that only *Non-Profit Organisations are deemed eligible* for the wage subsidy. In order to be eligible NPO's must:

2.1.1. Be registered as an NPO (NGO, CBO or FBO) with the Department of Social Development.

2.1.2. Have a solid plan to expand by creating EPWP work opportunities, and align to EPWP principles of focusing on poor unemployed South Africans.

2.1.3. Have proof of capacity for scaling up those Programmes that would generate increased employment.

2.1.4. Be highly labour intensive.

2.1.5. The NPO must have proof of existence and be operational for a period of 2 years. (This is to ensure that credible entities with good track record participate, and at the same time, allows for medium sized entities to participate).

2.1.6. Have good financial, administrative and reporting systems.

2.1.7. Present proof of their ability to report on; work to be undertaken, number of extra jobs created, duration of work opportunities, cost of the work opportunity, training provided (if any), number of beneficiaries employed by gender and age and developmental outputs.

2.1.8. Provide an expansion plan over the contractual period must be submitted. Budget to be outlined.

2.1.9. Provide SARS documentation.

2.1.10. Have a more community development focus.

The following NPO's will be excluded:

2.1.11. Any NPO participating on the EPWP Non-State Sector: Community Work Programme (CWP) cannot report the same beneficiaries participating on the Community Work Programme in the Non-State Sector NGO programme.

2.2. Subsidising the Expansion of NPO Programmes

The subsidy aims to provide additional funds to those NPOs creating work opportunities through local community programmes and supporting community development initiatives.

2.2.1. The Non-State Sector EPWP Wage Subsidy is:

a) Aimed at expanding the EPWP contribution of area based community development projects.

b) Aimed at providing wage subsidies for workers in NPO's that have the potential to expand further.

c) Aimed at promoting the sustainability of EPWP interventions in the sector.

2.2.2. This expansion is planned in the following manner:

- Increasing subsidies to existing non-profit organisations or implementing agents (NPOs) to:
- Increase the number of work days available to existing workers
- Provide stipends to unpaid volunteers
- Increase the number of volunteers (bring in new volunteers)

- Increasing the number of NPOs (bringing in new NPOs) delivering these services and expanding the scope and coverage of the programme.
- Expanding a broader range of non-state sector services.

2.3. Commitment to Transparency and Accountability

It is important that the subsidy is managed, disbursed and used in a manner that is transparent and helps to improve accountability for EPWP outcomes. This means that:

In terms of planning: Planning for the creation of work must be mainstreamed to reflect a community developmental initiative.

In terms of disbursing and reporting on the subsidy:

- There should be mechanisms within the NPO's and IDT as the intermediary that monitors spending and systems that can easily identify the expenditure patterns of disbursements and wage payments.
- There should be clear funding agreements between IDT and the NGOs regarding the allocation, disbursement and use of the subsidy.
- Over and above the wage subsidy, there is a 5% provision of the NPOs non-wage costs. The 5% non-wage subsidy is broken down and allocated as follows (1% for payment of bank charges by NPOs, 1% for NPO contribution to COIDA, 1% for NPO contribution to UIF and 2% for NPO administration costs).
- Reporting should occur in the prescribed EPWP reporting format and within the time frames prescribed so as to promote consistency in what is reported to determine progress.

Definitions Box

Criteria are a set of decisive factors or elements often used to reach a decision.

EPWP Web Based Reporting System is the reporting system used by the national Department of Public Works to record, verify and report on EPWP performance across government.

A Baseline FTE target means the targeted number of Full Time Equivalent Jobs that the programme is required to create using its baseline budget within the period 1 April 2011 to 31 March 2012.

An Incentive FTE target means the targeted number of Full Time Equivalent Jobs that the programme is required to create using its incentive allocation within the period 1 April 2011 to 31 March 2012.

The **R67 Wage Subsidy** is adjusted on on a yearly basis according to Ministerial Determination

2.4. Effective use of Funds

The subsidy must only be utilised in the manner indicated in the approved MOA and the contract between IDT and the NGOs.

2.4.1. Why is it called a wage subsidy?

The reason we talk about a wage subsidy is because the subsidy does not determine the wage rate of an NPO. The term wage subsidy implies that the DPW in other instances subsidises with EPWP wage of e.g. R71 with the already existing wage cost paid to the beneficiaries by the NPOs in the NSS programme.

2.4.2. Is the Non- State Sector EPWP wage subsidy different to the incentive grant?

Yes. The EPWP incentive grant allocation available to provincial departments and municipalities in the infrastructure, social and environment and culture sectors is an indicative amount. The amount received from the sectors and other spheres of government is not fixed, but will depend on the performance of the provincial department during the set financial year.

The Non- State Sector wage subsidy is a fixed amount set aside for NPO wage costs and the NPO bank fees based on the number of beneficiaries that the NPO has agreed to employ for a set financial year. This amount will be disbursed monthly in terms of an agreed contract. The wage subsidy allocation is determined by the set Non-State Sector work opportunity targets.

Chapter 3: How the Non-State Sector EPWP Wage Subsidy Works

Chapter summary: *This chapter explains how NPOs become eligible, how their subsidy allocations are calculated and disbursed, and how the subsidy should be utilised.*

As with any other subsidy the first steps involve determining a basis for distribution and identifying the parties eligible for the subsidy. The following process describes the basis of the Non-State Sector EPWP Wage Subsidy.

3.1. Step 1: Stakeholders of the NSS Programme

The recognised sector stakeholders have an oversight role on the Non-State Sector EPWP programmes:

- Department of Public Works
- Department of Social Development
- District municipalities
- National Youth Development Agency
- NEDLAC Community Constituency
- National Development Agency
- National Treasury

3.2. Step 2: Determining Eligibility for the Subsidy

In order to determine whether a NPO is eligible for a wage subsidy, they are assessed based on the following four criteria:

3.2.1. Systems & Accounts responsibility:

- Ensure effective running of internal systems.
- Effective and efficient pay roll system.
- Effective administration in relation to NSS.
- Assign an administrator dedicated for the NSS programme.
- Write a letter of contract acknowledgment & commitment to the programme (to be signed by at least 3 members of the Executive).
- Records kept safe and tidy.
- Maintain payment register and ensure all paid workers signed.

3.2.2. Beneficiary and performance responsibility

- Service providers must hire South Africans with valid ID books.
- Maintain records and relevant documentations of all workers.
- Verify all workers ID numbers.
- Ensure all workers come to work on time and finish on time.
- Keep daily registers of all workers.
- Ensure all workers sign for their daily attendance (morning & afternoon).
- Ensure all workers signed a working agreement or contract.
- Deal with absenteeism, negligent, dereliction of duty and any conduct affecting the performance of a worker, in accordance with signed contract.
- Ensure all workers read, understood their signed contracts.
- Conduct all workers programme induction (if possible invite IDT).
- Establish workers/beneficiary forum meetings on monthly basis.

3.2.3. Social responsibility:

- Mobilise communities around EPWP, NSS in particular.
- Recruit interested unemployed community people for participation in the programme.
- Build the knowledge and skills of recruited workers/participants about the programme.
- NPO’s should collect all identification and related information on individual participants.

Reporting is one of the essential responsibilities that both IDT and Knop’s are obliged to perform. NPO's should submit the reports to IDT in time so that IDT can submit performance reports on monthly and quarterly basis to Public Works. These reports however differ in content and structure.

3.2.4. Responsibility of NPO on reporting:

- Collection of beneficiary data at its level.
- Ensure accuracy of data before submitting to IDT.
- Submit collected accurate data to IDT on IRS.
- Compile monthly and quarterly performance report to IDT (the report shall cover finance, beneficiaries and programme impact/analysis).
- Submit monthly invoices to IDT as per stipulated deadlines.
- Ensure invoices are compatible with reports (meaning no report no payment of an invoice).
- Ensure all submitted reports are signed by a designated person.
- Ensure that reports are submitted on time and are of good quality as per IDT standard (refer to template by IDT).

3.3. Step 3: Determining the Subsidy Allocation to an NPO

So, in essence for NPO's responsible for a Non-State Sector EPWP programme to be eligible, it would have to show proof that it has proper systems to report on EPWP performance. The subsidy allocation is then determined for each eligible NPO.

Example: The subsidy allocation is determined based on:

First, *how many beneficiaries will NPO x contract in a relevant base year e.g. (150)* ***[factor a]***

Second, *How many days in a month that the beneficiaries in NPO x will work e.g. (36)* ***[factor b]***

Third, *The R71 wage subsidy*

[factor c]

[THE WAGE SUBSIDY OF R67 MAY CHANGE ON A YEARLY BASIS]

Example 1

Subsidy Allocation *= [a] x[b] x [c]*

= *150 x 36 x 71 performance score*

= R 382 400

3.3.1 Determining COIDA and UIF Costs

The UIF 2% contribution is determined by calculating: 1% from the beneficiary total monthly wage or salary payment and 1% UIF payment made available by the NSS programme as provision for NPOs contribution towards the UIF.

Example 2

UIF Contribution *= 1% of R71 daily wage subsidy x 14 days a month*

= [beneficiary contribution R9.94 + 1% from the provision of the NPOs non-wage cost equivalent to R9.94]

= R19.88

Example 3

COIDA Allocation = [Dependent on Department of Labour COIDA assessment of NPO project site]

As soon as the Department of Labour grading on COIDA is provided and a quote submitted, the NPO must submit an invoice for payment of COIDA to the IDT.

3.4) Step 4: Planning

The next step is for every eligible NPO to develop a proposal for their EPWP programmes to indicate how they will effectively and efficiently apply their baseline budget and incentive allocation to activities to expand service delivery and meet their programmatic outputs as well as EPWP targets.

3.4.1. The Application Proposal

The proposal must carry the following documentation:

3.4.1.1. A registration certificate from the Department of Social Development.

3.4.1.2. A plan that clearly outlines the expantion of EPWP work opportunities aligned to the EPWP.

3.4.1.3. Evidence of financial administrative and reporting systems.

3.4.1.4. The NPO must have proof of existence and be operational for a period of 2 years.

3. 4.2. The Role of the Intermediary in Planning for Appointment of NPO's

For purposes of transparency, IDT is obligated to publicise through different means of publication its call for Non-Profit Organisations to apply as service providers for the non state sector programme. The advertisement requires that a proposal be submitted as an application by the NPO's into the NSS Programme. A dominant medium of publicity currently used is print media where almost all national newspapers including some regional or provincial as well as community papers are used o publicise calls of interest.

3.4.3. Due Diligence by the Intermediary

A contributor to access whether the Non- Profit Organisations proposals is to conduct due diligence site visits. The IDT and Provincial Project Management Team (PPMT) are responsible to conduct these site visits as a form of verification that the organisations that DPW will be supporting have proper administrative and financial systems. The other important role of due *diligence is to verify that the NPO's have already existing sights and projects in operation.*

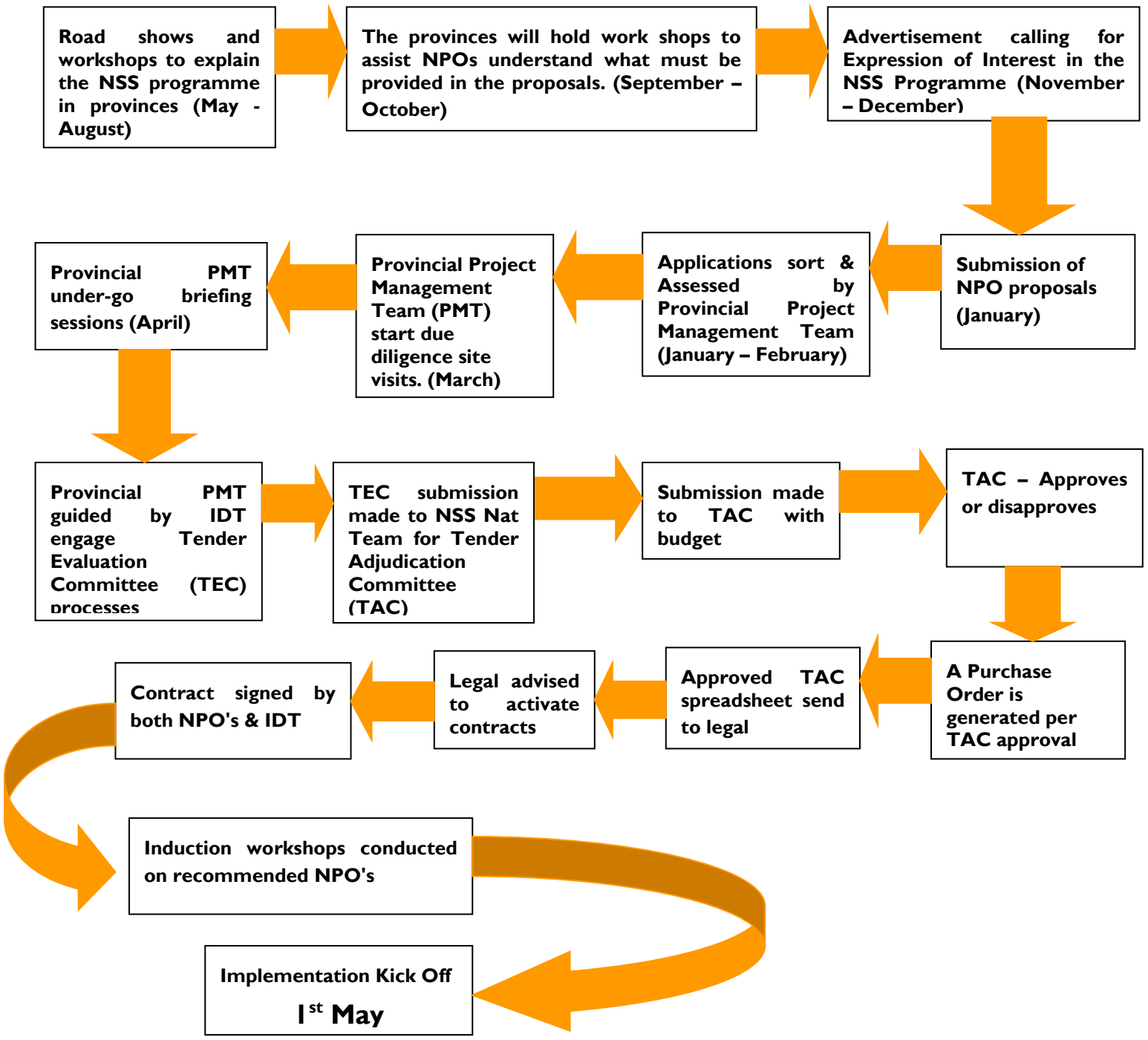
3.4.4. Administration by the Intermediary

The NSS Programme financial year begins on the 1st April each year. The role of the intermediary is:

- to effect the process of advertising for new NPO's into the programme in November,
- receive submissions in January,
- evaluate the proposals along with the PPMT by February,
- conduct due diligence site visits, call NPO's for briefing sessions on the process of appointment and adjudication of projects,

- submit recommended proposals to the Tender Evaluation Committee and
- Facilitate the process of signing contracts of approved NPO's that have been approved by TAC and legal.

3.4.5. THE PROCESS OF APPOINTING NPOs



Chapter 4: Branding & Training in the Non-State Sector Programme

Chapter summary: *This chapter presents the detailed information on how NPOs can brand the projects affiliated with the EPWP NSS Programme.*

4.1. Branding

The Department of Public Works encourages all Non-Profit Organisations, communities and beneficiaries to communicate the lessons learnt and best practices of the programme to the media and the intermediary. The programme also encourages communities to write letters of testimony with regards to how the programme is impacting on their lives. NPOs are encouraged to communicate through radio and newspapers the work that they have managed to undertake through assistance of the NSS wage subsidy provided by the department.

For the programme to gain recognition the Department of Public Works requires that project sites should include the EPWP logo on their signboards. As part of profiling the programme one of the requirements of the programme is for the NPO to keep the intermediary and DPW updated on any awards that the NPOs may receive for profiling purposes.

4.2. NSS Messages that must be communicated to the Public

Some of the messages that the programme intends to communicate to stakeholders and the greater public are:

> Non State Sectors role in job creation
> The targets of the Non State Sector and the approach
> Private sector support to the NSS through their CSI programme
> Know NSS projects happening in your community (how can you take part)
> Role of the Provincial and local government spheres in the NSS programme

4.3. Training & Workshops

The Non-State Sector programme has a component of skills development and training for contracted NPOs and beneficiaries. The programme has established partnerships for trained beneficiaries to receive accredited certificates for critical skills identified in the EPWP projects. The accredited training is available to all beneficiaries based on the

budget allocation for the Non-State Sector. Training is also provided by IDT for project management and financial management and other administrative related courses. As part of mobilisation and awareness the intermediary is mandated to hold workshops from time to time and share best practises with contracted NPOs on how to participate successfully in the NSS programme.

Chapter 5: Records Management and Progress Reporting

Chapter summary: *This chapter presents the detailed procedures that must be followed by eligible NPO's to be able to access the subsidy as intended and report on progress and the use of the incentive.*

EPWP Reporting Procedures

5.1. Managing Programme Information

Every EPWP programme must collect and keep specific programme information for the purpose of EPWP and the wage subsidy paid; all of the information below should be kept by each NPO for every EPWP programme:

5.1.1. Beneficiary information:

A beneficiary list must be maintained by every NPO. The information required in this beneficiary list is indicated in **Annexure B** of this manual. This form should be filled in (either weekly or bi-weekly) and signed off and checked by the NPO at every monthly reporting cycle. A beneficiary list containing the following information should be kept and maintained for audit purposes:

5.1.1.1. Identity – name, surname, date of birth and a unique identifier number

5.1.1.2. Medical certificate for people with disabilities

5.1.1.3. Gender, age and disability status

5.1.1.4. Daily wage to be received

5.1.1.5. Training attended.

5.2. Site information:

This generally seeks to confirm the number of people at work daily for the programme. The following information must be maintained and provided by the NPO to the National Department of Public Works upon request when undertaking sample project auditing. The documentation that should be kept includes:

5.2.1. Daily attendance register – register showing all the beneficiaries that were registered at work every day. Attendance registers should be completed on site on a daily basis and signed off by the project manager on a weekly basis.

5.2.2. Summary of monthly attendance.

5.3. Payment information:

This generally seeks to confirm what was paid, for how much work and to whom. There are various ways this information can be maintained by the NPO. Any proof of payment is required. It is advised that one of the following methods becomes standard procedure:

5.3.1. Payment register – which is a list of workers, showing the wages paid to each worker, signed off as proof of acceptance of payment. Information on this register must include: the name of the worker, either an identity number or other unique identifier, the number of calendar days that the pay period covers, the wage rate and total wages paid.

5.4. Alternatively, the NPO could keep:

5.4.1. Bank records showing the transfers to each worker account signed by contractor as proof of payment – which must specifically show the name of the worker, an identity number or other unique identifier, the period for which the pay covers and the amount in wages being paid.

5.4.2. *This information must be available and applicable for the entire period for which the NPO is receiving the Non-State Sector EPWP wage subsidy for person days of work created.*

5.5. Employment output information:

5.5.1. Number of work opportunities created by the wage subsidy provided.

5.5.2. Number of person days of work created from which the number of FTEs created and the average duration of work opportunities created can be calculated

5.5.3. Average daily wage rates paid.

5.6. Financial information:

Allocated baseline programme budgets, subsidy allocation; and spending against the baseline programme budgets must be kept. *It should be noted that spending in this context does not refer to funds transferred to an NPO for implementation; it refers to funds actually spent by the NPO.*

For each NPO, beneficiary information, employment information and financial information will be part of the monthly reporting requirements to the provincial department. *Site information and payment information will only be required for auditing or information quality assessment tests. These will only be carried out on a sample of projects periodically during the financial year.*

Provincial departments must ensure that their NPOs have established adequate controls measures (i.e. an attendance record and payroll system with workers recorded by identification number) to be used for tracking employment and financial information.

There are specific set procedures and deadlines to be met in terms of reporting EPWP performance information by NPOs. The procedures and timelines for reporting are strict and rigorous given that DPW must consolidate a number of different sphere and sector inputs for consolidated EPWP performance reporting.

Definitions Box

The ***EPWP web based reporting system*** is the reporting system used by the national Department of Public Works to record, verify and report on EPWP performance across government.

An ***In-Year Monitoring (IYM) report*** is a report to the relevant Provincial or National Treasury on spending against appropriations as required in section 40(4)(c) of the Public Finance Management Act, and further stipulated in section 12(2)(a) and 12(3).

Data Capturers are IDT officials sitting at regional IDT offices who load NPO beneficiary, employment and financial information for purposes of monitoring, evaluation and reporting.

5.7. Responsibility of IDT on Reporting

- Make available reporting templates and guidelines to NPO.
- Ensure NPOs are well capacitated/trained on reporting as per NSS requirements.
- Ensure data is accurate and verified.
- Transmit data from NPOs to Public Works.
- Conduct quality data assessment periodically.

5.8. Reporting EPWP Performance Information on the EPWP Web Based Reporting System

- NPOs will report to the intermediary (IDT) on a monthly basis.

- NPO's are ***advised*** to complete the EPWP reporting template ***on a monthly basis*** so as to enable the loading of their performance information on the EPWP web based system for validation and clean-up.

5.*8.1. The report template will contain the following information:*

5.8.1.1. Summary of beneficiary profiles in terms of gender, age and disability status

5.8.1.2. Employment information (EPWP outputs)

5.8.1.3. Financial information

5.8.2. *The purpose of monthly reporting*:

The purpose of the monthly report is to load programme performance information onto the EPWP Web Based Reporting System this will be undertaken by delegated data capturers for validation.

5.8.2.1. The EPWP Web Based Reporting System will validate the information provided.

5.8.2.2. DPW will provide IDT with an exclusion report showing 'validated information' as well as 'un-validated information' (indicating information requiring clean-up). IDT should ensure that the required information cleaning processes are undertaken to deal with all 'un-validated information' so that the overall EPWP report at the next quarterly reporting date presents an accurate performance picture.

5.8.2.3. It is the responsibility of IDT to report to DPW the performance of their EPWP programme(s), 7 calendar days after the end of every month, in the manner prescribed by DPW. This quarterly report must be "signed off" by a delegated official from IDT. This will be consolidated through the EPWP web based system into the Quarterly EPWP Report released quarterly.

5.8.2.4. DPW will on a quarterly basis, report to the National Treasury, on the following dates an example of this financial year– ***29 July 2014 (for Q1), 31 October 2014 (for Q2), 31 January 2015 (for Q3) and 30 April 2015 (for Q4)*****:**

5.8.2.5. The progress NSS EPWP programme against the targets set for each programme in the contract.

5.8.2.6. Wage subsidy amounts transferred to each NPO.

5.8.2.7. Wage subsidy spending by the NPOs and for the sector as a whole.

5.8.3. Reporting Flow Chart:

DATA CAPTURED AT SITE DAILY.

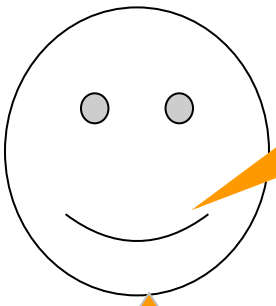
IDT VERIFIES THE DATA REPORTED.

IDT DATA CENTRE CAPTURE ON EPWP IRS BY THE 25TH OF EVERY MONTH.

DPW RECEIVE FINANCIAL REPORT FROM IDT BY THE 7TH OF EACH MONTH

THE IDT EVALUATES AND APPROVE REPORTS FROM THE NPO'S BY THE 19TH OF EACH MONTH.

THE IDT PROCESSES PAYMENT TO NPO's FROM THE 20TH OF EACH MONTH



I THEN GET PAID BY THE NPO A DAILY WAGE MULTIPLIED BY THE NUMBER OF DAYS THAT I WORKED.

BENEFICIARY

5.9. The Annual Financial Statements and Annual Report of the NPO must specify:

5.9.1. the total amount received;

5.9.2. the total amount spent;

5.9.3. any funds withheld;

5.9.4. compliance with the subsidy and the Contract Agreement provisions; and any steps taken to deal with non-compliance;

5.9.5. the extent to which the objectives and outputs were achieved;

5.9.6. The results of the evaluation of the performance of its EPWP programmes.

5.10. The EPWP Annual Evaluation Report:

The EPWP annual evaluation report is prepared by the National Department of Public Works. In addition to the in-year EPWP reporting, it is crucial that DPW is able to assess and report to Parliament on the manner in which the incentive has been used and the outcomes achieved.

5.10.1. The Non-State Sector EPWP Subsidy will be evaluated in order to assess its effectiveness and to inform any changes that need to be made to make it function better. Some of the studies that will be undertaken through the EPWP unit will address:

i. Whether the implementation of the subsidy is being done in accordance with the regulations and procedures

ii. Whether the subsidy is leading to better performance of non-state entities on the EPWP

iii. What non-state entities use the subsidy for

iv. Whether the procedures for the subsidy need to be adjusted

v. Areas in which the overall EPWP programme design needs to be amended

5.10.2. Non-state entities that are eligible for the EPWP subsidy are expected to cooperate fully with any evaluation conducted by the EPWP Unit by providing evaluators with relevant information and records; ensuring that provincial department staff participates in interviews, focus group discussions and surveys; and facilitating access to project sites and EPWP workers.

5.11. Annual Audit:

DPW will undertake an **annual audit on the performance of the programme**; control effectiveness and compliance with the conditions of the Non-State Sector EPWP Wage Subsidy. The audit work to be undertaken could unearth non-compliance or inaccurate performance information. The following could be found:

5.11.1. Non-compliance includes a lack of reporting at the time specified; or non-compliance with the set condition in the contract.

5.11.2. Misrepresentation: such as inaccurate performance information provided, the inclusion of non-EPWP projects, misappropriation of subsidy allocations.

Frequently Asked Questions

Can the wage subsidy amount received be distributed at the discretion of the NPOs?

No. The Non-State Sector EPWP wage subsidy allocation is determined based on specific set targets of the number of beneficiaries that the NPOs must contract.

Is monthly EPWP performance reporting mandatory?

Yes, it is advised that the NPOs report monthly so as to deal with 'un-validated information' clean-ups, so that the quarterly reports produced are an accurate performance picture.

Is monthly expenditure reporting mandatory?

Yes, for the purposes of accountability and transparency.

Is quarterly EPWP performance reporting mandatory?

Yes, should a NPO not report quarterly performance it could have its next monthly payment withheld for non-compliance until such report is submitted.

Chapter 6: Navigating the EPWP Integrated Reporting System

Chapter summary: *This chapter provides a description of the EPWP IRS and some of its key features and aims to assist officials who have to use the EPWP IRS for performance reporting. It aims to provide a basic overview of the EPWP IRS and the project registration and progress reporting processes and the type of information that needs to be entered into the system.*

6.1. *Introduction to the EPWP IRS*

The 'EPWP WBS' is a reporting system used for the collection, validation; storing and dissemination of EPWP programme and project data on EPWP projects in the form of information needed to monitor the performance of the programme as a whole. The EPWP WBS is managed by National Public Works.

6.2. Who Can Gain Access to the System?

Delegated representatives from IDT, Department of Public Works implementing EPWP projects can gain access to the system.

6.3. How Can One Gain Access to the System?

The system is accessed through the website, http://epwpreporting.dpw.gov.za/. The system will then show the Login page. When a user gets to the Login Screen, select the *New User Registration* link to get registered, this will take a user to a new screen where it will require information to be entered onto the system. All the yellow highlighted fields are compulsory, and to be registered on the system, all compulsory fields need to be entered before you click the register button. Specific information required to register on the system includes:

- **First and Last Name:** User's name and surname
- **Preferred Username:** This name will be used to login to the system after the administrator grants the user the rights to login onto the system. The username should be typed in lowercase.
- **Password:** This should be 8 characters and it should not be the same as the username. The password should be in lowercase.

- **Sectors:** Choose from the dropdown list the sector that the user will be accessing on the system.
- **Access Rights/User Role:** Choose from the dropdown list whether as a user, capturer, viewer or signing off person. Click the register button to be registered, the users' information will be registered on the system. An email will be sent informing the user of his/ her successful registration status. Only after receipt of this email, can the new user start using the system.

6.4. Signing onto the System:

Once registered, signing onto the system merely involves entering a username, password and selecting the applicable province on the drop down menu.

Note: The system will not allow a user to login if the incorrect province has been selected or an incorrect username and/or password has been entered. All three of these must be entered correctly in order to login successfully. A successful login will lead the user to the home page. The Home page will reflect a number of functionalities. Some of them are only applicable to certain users depending on their access rights. Select from the four predefined sectors (Infrastructure, Environmental & Culture, Social and Non-State Sector) the sector that the user wants to access. After choosing the appropriate sector, the system will take the user to the Welcome Screen for that sector.

6.5. System Support:

If IDT regional data capturers experience problems related to the system such as logging in, acquiring passwords and user names or require any other assistance on the system, call 0800204102 or email: admin.epwp@dpw.gov.za.

6.6. Capturing Project Information on the EPWP IRS

Once on the sector welcome page, the system will display the projects screen. It is a screen that shows the user a list of projects that the user has previously worked on. The use may choose to *Add New Projects*, *Update existing Projects or Delete incorrect project information*.

Chapter 7: Records Management and Audit Requirements

Chapter summary: *The Audit Requirements apply to external and internal audits. It is expected that all NPOs and regions will compare their current practices and approaches to the management of project information with these requirement and take the necessary action to comply with the stated requirements. These Audit Requirements have been formulated as a set of principles for all public bodies within EPWP broadly, to assist their understanding in meeting these requirements.*

7.1. Internal Audit Purpose and Objective

Purpose: The purpose of the Internal Audit function for the Non-State Sector EPWP wage subsidy specifically, is to maintain an independent objective assurance activity designed to improve a department's programme management operations. It will assist the department to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes. Internal Audit should provide the management of the department and the Audit Committee with analysis, appraisals, recommendations and information concerning the project activities and information reviewed.

Objective: The objective of the Internal Audit function at the Department of Public Works for the Non-State Sector EPWP wage subsidy is to identify and evaluate significant exposures to risks to be able to develop risk mitigation plans for management, control and governance systems. This should include:

7.1.1. Overseeing the risk management framework and monitoring risk.

7.1.2. Reviewing the established systems to ensure compliance with those procedures, laws and regulations that could have a significant impact on operations and report and determine whether the department is in compliance.

7.1.3. Ensuring that an effective system of internal controls exist and is operating as required.

7.1.4. Evaluating the reliability and integrity of financial, project management and other operational information.

7.2 Scope of Information that NPOs must keep in their records and may be requested during audit processes

Internal Audit will communicate in time their plans to conduct an audit of particular NPOs contracted through the NSS programme or the intermediary contracted to implement the NSS programme nationally. The following documents must always be available for audit purposes:

7.2.1. Signed contracts between the NPO and the intermediary.
7.2.2. Signed contracts between the beneficiaries and the NPOs.
7.2.3. Proof of certified medical certificates for disabled people taking part in the programme.
7.2.4. Payment forms signed by beneficiaries when they have received after receiving wages.
7.2.5. Signed daily register of work attendance by beneficiaries.
7.2.6. Certified ID copies of all the contracted beneficiaries.
7.2.7. Confirmation of receipt of payment by beneficiaries.
7.2.8. Confirmation of transfer of payment by NPO to beneficiaries.

Chapter 8: Unemployment Insurance Fund (UIF) and Compensation Fund (CF) Registration

Chapter summary: *In order to claim for the 1% UIF and 1% Compensation Fund cost from the Implementing Agent; the programme requires proof of registration that includes the names of the beneficiaries registered by the NPO for the NSS NPO programme for Department of Labour (DOL).*

8.1. Unemployment Insurance Fund Registration Process – Online

If employers want to register online they should use the following steps:

Step 1: Get the necessary information ready

Get information like the ID numbers and addresses of employers and workers ready before registering.

Step 2: Complete the online registration

Complete the online registration forms:

- For Commercial Employers
- For Employers of Domestic Workers

NB: THIS FORM OF REGISTRATION IS CURRENTLY NOT ACTIVE

Re: If employers want to register via e-mail they should use the following steps:

8.2. Unemployment Insurance Fund Registration Process – UI 19 Forms

Step 1: Get the forms

Get the UI-8 and UI-19 (for business employers) or the UI-8D and UI-19 (for domestic employers) from the website or any Labour Centre.

Step 2: Fill in the forms

Employers must complete the forms for both themselves and their workers. The form for the registration of workers asks for an employer reference number. Employers who do not have a reference number yet, can leave this part open. The UIF will create a reference number and send it to you. Also ignore the part asking for a signature.

Step 3: E-Mail the forms

Domestic Employers:

E-mail the forms to the UIF at webmaster@uif.gov.za.
Commercial Employers:
E-mail the forms to the UIF at webmaster@uif.gov.za.

8.3. Compensation Fund Registration Process

- All **applicable** items must be completed on both pages of the WA.s 2. This document **MUST** be signed and dated.
- A copy of the CK1/2 OR CM1 + CM29 Close Corporations and Companies, Trust documents or N.P.O certificates **MUST** be attached.
- A copy of ID-document(s) **MUST** be attached in respect of sole proprietors/owners/partners.

WITHOUT THE ABOVE-MENTIONED DOCUMENTS ATTACHED, THE REGISTRATION CANNOT BE PROCESSED.

FRONT PAGE:

Mark with "X" in the relevant space to indicate whether the employer is a sole proprietor (farmers included), close corporation, company, partnership, public -/local authority, organisation/association or a trust etc.

8.3.1. PART 1 - Particulars of the Organisation/ Trust

8.3.2. PART 2 - Particulars of trustees / Board of directors

8.3.3. PART 3 - Particulars of the nature or type of activities in the organisation

- Give a detailed description of nature of the activities. **A detailed description** is of utmost importance to enable this Office to determine the rate.

8.3.4. PART 4 - Particulars of responsible person/ Director

8.3.5. PART 5

This part should only be completed if the employee(s) has/have been employed during the **current assessment year, (**1 March the current year to 28 February next year) or any in between period within that assessment year.

If the first employee was employed prior to this period, this part should not be completed. This Office will mail the Return of Earnings document(s) (WA.s 8)

for the relevant years to the employer to be completed and returned to this Office.

Write the average number of employees expected to be employed per month during the current assessment year. In other words March this year to February next year or any in between period.

8.3.6. If the employees estimated earnings might be **less than this maximum amount per person per year, the amount estimated** must be declared. Those employees who might earn in excess of this maximum amount per year, earnings **up to that maximum amount must be declared per person per year as estimated earnings.** A **Provisional assessment** will be raised on this estimated amount. The reason for the maximum earnings is that compensation for injuries on duty is calculated and paid up to that maximum amount.

8.3.6.1. Estimate the earnings expected to be paid to all the employees expected to be employed during this current assessment year (March this year to February next year or any in between period).

8.3.6.2. Estimate the cash value of food and lodging for the same period if applicable

8.3.6.3. Estimate the cash value of other in-kind benefits if applicable

8.3.6.4. Estimate the earnings of working members of organisation up to the same maximum earnings indicated under section 8.3.6.

8.3.6.5. Add up the estimated totals from item 8.3.6.1 to 8.3.6.4 and write it in the available space. Indicate for what period the estimation was done by writing the dates in the available space.

8.3.7. PART 6

- Complete item if applicable.
- Complete bank details for the purpose of electronic deposits to your bank account if applicable

DECLARATION MUST be completed, signed and dated BY EMPLOYER OR AUTHORISED PERSON.

8.4. Letter of good standing

LETTER OF GOOD STANDING can be obtained once the employer has complied with the requirements of the Act, inter alia:

8.4.1. Submitting the latest return of earnings.

8.4.2. Assessment has been paid or instalments have been arranged. **If arrangements made for instalments attached copy of receipt (Proof of Payment)**

8.4.3. **To arrange for instalments : Fax 012 357 1783 Tel : 012 3199 347**

8.4.4. Application should be made in good time, **5 working days before it is required**, preferably on a letterhead, in writing.

8.4.5. Please quote the registration number, as well as telephone and fax numbers with dialling code.

8.4.6. **APPLICATION FOR LETTER OF GOOD STANDING CAN BE FAXED5 WORKING DAYS IN ADVANCE TO FAX NO: 012 323 0262 or 323 5433**

GLOSSARY OF TERMS

Accounts	-	Refers to all necessary financial records and administrative processes in possession of the service provider
Beneficiary	-	Any person actively working in the EPWP programme and receiving wage subsidy
EPWP	-	Is a term that defines the origin and roots of Expanded Public Works Programme articulated in the first phase of this programme
DC's	-	Data centres
DPW	-	Department of Public Works in custody of the Expanded Public Works Programme
DSD	-	Department of Social Development
Executive	-	is any top structure with final authority
EPWP	-	Expanded Public Works Programme is a work opportunity creating programme run by Department of Public Works through incentive scheme for the unemployed
Financial Year	-	Period of 1st April – 31 March
FTE	-	Full Time Equivalence
IDT	-	Independent Development Trust
ID	-	Identity Document a proof of document used by all

		South African citizens to prove the citizenship status
Municipalities	-	A local authority established under Act (108) of 1993
M&E	-	Monitoring & Evaluation a systematic tool used to track daily, weekly, monthly and quarterly progress on programme/project implementation
Ministerial Determination	-	Conditions of employment for the Expanded Public Works Programme beneficiaries
Non Profit Organisation	-	An organisation established in terms of non profit making Act, whose purpose is not to make profit.
Non State Sector (NSS)	-	One of the sector programmes in the Expanded Public Works Programme
NEDLAC	-	A Community Constituency representing various communities, youth, women, disabled and other formations in NEDLAC
National Team	-	both IDT and Public Works Non State Sector officials based at their respective national offices
Partners	-	Any party involved in the NSS programme
Proposal	-	A proposal is a document that talks to the work NPO is doing and what is the expected beneficiaries that they can contract should they be appointed. The proposal also includes documents of registration with the Dept. Social Development and confirmation from DSD that the particular organisation is still in operation.
PMT	-	Project Management Team

PIM	-	Project Implementation Manager
PM	-	Programme Manager
PFMA	-	Public Financial Management Act 1999
Stakeholders	-	Interested parties affected by the NSS programme implementation
Systems	-	Electronics, manual reporting and Monitoring processes
Service Providers	-	Parties assigned or contracted on programme activities beyond IDT and DPW capacity
TAC	-	Tender Adjudication Committee, an internal IDT Adjudication Committee set to evaluate and approve submitted proposals for tender
TEC	-	IDT provincial team set to evaluate and recommend to TAC proposed tender submissions
Work opportunity	-	Any period of paid employment that was project Bound
WBS	-	Web Based System

Annexure A: EPWP Non-State Sector NGO Application Guide

public works
Department:
Public Works
REPUBLIC OF SOUTH AFRICA

idt
independent development trust

EXPANDED PUBLIC WORKS PROGRAMME

EPWP NON-STATE SECTOR NGO APPLICATION GUIDE

REQUIREMENTS

Your Application must include/attach:		Plese tick to Confirm
a)	NPO REGISTRATION CERTIFICATE	
b)	SARS LETTER OF ACCEPTANCE/TAX EXEMPTION	
c)	SOUND FINANCIAL ACCOUNTING SYSTEMS	
d)	NPO CONSTITUTION	
e)	PROJECT IMPLEMENTION PLAN	
f)	PROOF OF NPO EXISTANCE FOR A 1 YEAR AND BEYOND	

CHOOSE THE RELAVENT SECTOR CATEGORY	
Home Based Care	
Early Childhood Development	
Agriculture/Food security	
HIV/AIDS	
Waste Management	
If Other, Please specify	

FOR OFFICE USE	
Date received	
Complete	
Documents outstanding	
Date Evaluated	
Approval Status	

SECTION 1: NPO/NGO DETAILS

Please Complete the Sections required below and
where applicable tick the relevant option your NPO registration status

TYPE OF INSTITUTION	CBO		NPO Reg No.	
	Section 21		Registration Date	
	NGO		Tax Reference No.	
	Other (Sepcify)		VAT Reg No. If Applicable	

SECTION 2: PROJECT SPECIFICATION

NAME OF THE NPO	
OBJECTIVES OF THE NPO	

CONTACT DETAILS:

Contact Person	
Telephone	
Email Address	
Address	
Date of Registration	
Building rented/Owned/Other	

MANAGEMENT STRUCTURE: GENDER

	NAME OF OFFICE BEARERS	POSITION	MALE	FEMALE
1				
2				
3				
4				
5				
6				
9				
8				

NPO EMPLOYEES	Administration	HR	Project Satff	Other
Part Time				
Full Time				
Volunteers				
Total				

ACTIVITY DATA:

No.of years effective/operation since registration
Location- Area of operation (Province/Municipality/Villages)
Activities/Projects completed and work opportunity created:

SOURCE OF FUNDING:

Name of Donor	Date funded	Project Name	Project Status

SECTION 3:

1. ORGANIZATIONAL CAPACITY

1.1 Is the organization registered as a legal entity?	When?

1.2 Does the organization have basic infrastructure?(office space,computer, etc.) Specify

1.3 Does the NPO have sufficient human resources?, provide details

1.4 Does the NPO have adequate financial resources? Please Name them

1.5 Does the NPO have proper financial systems?	Please mention the type of systems	

1.6 Does the NPO have a good track record in Community initiatives? Please the give example

1.7 Has the NPO benefited from the EPWP-CWP,NSS or any programme of the Government in the past three years? Please specify

2. COMMITMENT

2.1 Does the NPO programmes focus on development of the poor in your area? Please provide details

2.2 Is the NPO working predominantly with vulnerable groups ? Specify

	MALE	FEMALE
Women		
Youth		
People with Disability		
Unemployed		

2.3 Indicate how your organization can expand from the current projects to create

more jobs over 3 year cycle starting from the 2014/15 financial year?

2.4 Provide current/recent EPWP Work Opportunities Created by the NPO, if applicable

3. COMPETENCY

3.1 Proof of Capacity to Generate increased Work Opportunities,Provide examples of activites

3.2 Does the NPO network with relevant institutions in the sector? Mention the name and nature of support received.

3.3 Does the NPO Participate and Prioritise the IDP identified needs in your area? Please Give example.

3.4 Is the NPO able to market the products and services rendered?, Please give details below

4. SUSTAINABILITY

4.1 How stable has the NPO been since it was established?

4.2 What is the potential for the NPO to grow over the next two years? Please demonstarte

4.3 Is the NPO financially viable? If so how does the NPO generates its funds?

5. GOVERNANCE

5.1 Does the management run the NPO efficiently, transparent and accountable? Please demonstrate

6.SECTION 4: PROJECT IMPLEMENTATION PLAN

This application Guide must be accompanied by Comprehensive Project Implementation Plan.
The Project Implementation plan need to include the following:

1.Activity
2. Time frame/Duration
3. Responsible Person
5. Activities and costs (Itemised Budget)

NB: **NPO must complete and attache additional typed pages with information if the space provided is not enough, ALL additional pages should be marked with relavent section number.**

7. SECTION 5: DECLARATION

I,.....(Name and Surname) of RSA Identity number.....in

my capacity as.....acknowledge that I have read the contenets of the application form and confirm that I have provided correct and accurate information.

Signed at.....(Place) on the .....day of.....(month) of 2014

Annexure B: DRAFT EPWP Report Template

PART A: Example of the Beneficiary Information part of the Template

Province Department Name Beneficiary and Implementation Data														
Details of beneficiary of the Conditional Grant								Details of employing NPO				Apr-10		
Name	Surname	Nationality [Choose from drop down list]	RSA ID Number	Date of Birth [Format: 7 June 1965]	Gender [Choose from drop down list]	Disability Status [Choose from drop down list]	Number of months employed prior to April 2010	NPO Name	Physical Address	Contact Person	Contact Number	Days of Work	Days of Training	Daily Wage

Annexure C: Beneficiary Payment Claim Form







BENEFICIARY PAYMENT CLAIM FORM

Section A: To be completed by the Programme Manager/Site Supervisors on site

Project Name	
Supervisor Name	
Payment Month	
Date of Payment	

Section B: To be completed and signed by the beneficiary

BENEFICIARY DETAILS	
Full Names	
Surname	
Identity Number	
Date of Birth	
Gender	
Number of days worked	
Amount Paid	R

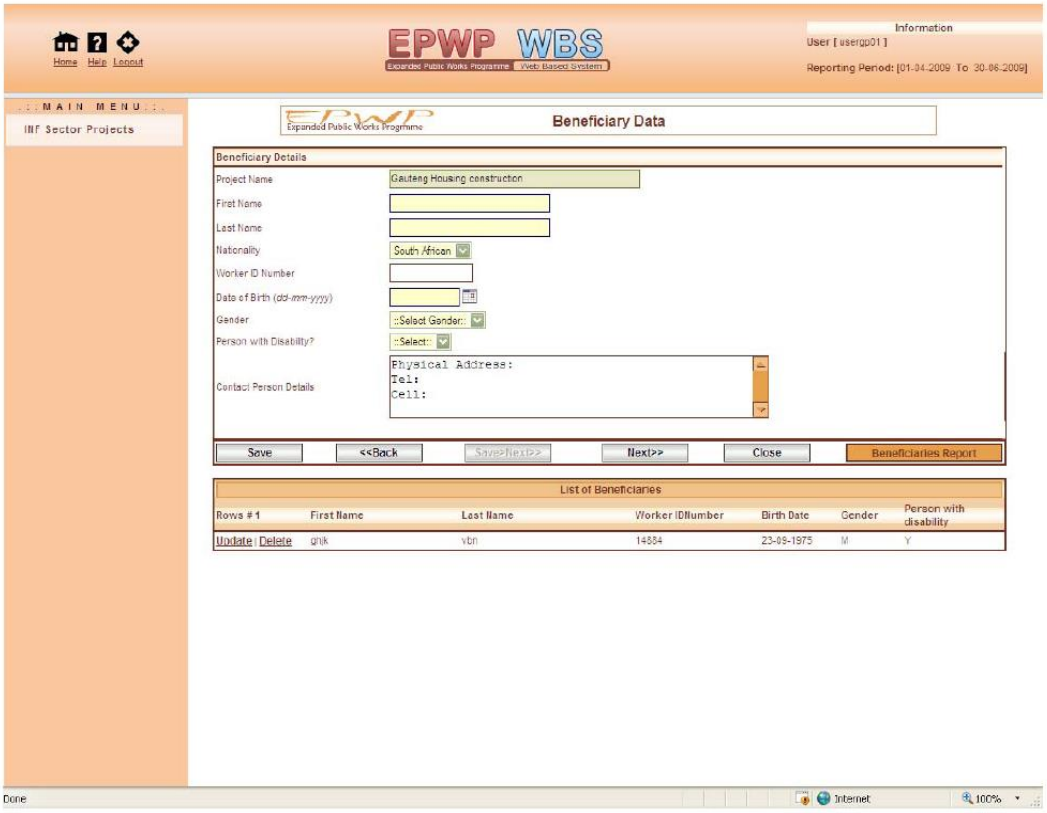
Beneficiary Signature: _____

Date: _____

Annexure D: Beneficiary Registration Form

2.6.5. Beneficiaries

If you clicked **save>next** from the project outputs the system will take you directly to this screen. If you clicked only **save** then select **Beneficiaries** to get to this screen.



The name project of the project selected for updating will be displayed as initially captured. Enter the first and the last name of the beneficiary, worker identity number and date of birth using the calendar method. Use dropdown arrow to select gender and disability.

You can in this screen enter basic information for all beneficiaries before proceeding to the next screen by clicking **Save** only. The list of beneficiaries will appear at the bottom of the screen.

To proceed click **save>next** or **save.**

Annexure E: Beneficiary agreement

AGREEMENT
ENTERED INTO BETWEEN

Employer's Name
Of (*Employer's Address)*

And

Name: _____
(Beneficiary full names)

Identity Number: _____

PREAMBLE

I **…… (Beneficiary name)……** of ID number **……**offers my services in the EPWP Non-State Sector (NSS) Programme based in **……(Area where site is based……** The agreement is as a result of**……..(NPO name)……..**managing the project under the Expanded Public Works Programme (EPWP) and its terms, as governed by the Ministerial Determination no. 949 and a code of good practice, a copy which is held by the**…….. (Name of NPO responsible for this project)……**

The contract is subject to the following conditions:

1. The contract is valid from **(starting date)** to **(ending date)**.
2. The beneficiary can choose to terminate the agreement at any time.
3. (NPO name) may terminate the agreement should the participant not meet the deliverables as stated in the task description per project.
4. (NPO name) will pay the beneficiary a wage subsidy of R60 per day for each day worked completed for up to a maximum (no of days) between (starting date) and (ending date).
5. The definition of 'a day worked' is eight hours.
6. If a beneficiary is absent from work for any reason, including if a beneficiary worked on a public holiday, no payment will be done.
7. A beneficiary attending training offered by the EPWP NSS during working days will paid the same rate of R60 per day for a day worked.
8. There are no benefits attached to this contract, except for the legal obligations set out in the Ministerial Determination.
9. Each day the beneficiary is expected to report to the site supervisor and sign the attendance register.

I **…… (beneficiary name)**……signed at **……(place)……** on this **……(date)……..**accept the terms and conditions set out above and confirm that this the only Expanded Public Works Programme for which I am registered.
Beneficiary Signature: _____

Annexure F: Ministerial Determination

GOVERNMENT NOTICE

DEPARTMENT OF LABOUR

No. R. 347 **4 May 2012**

BASIC CONDITIONS OF EMPLOYMENT ACT, 1997

MINISTERIAL DETERMINATION 4: EXPANDED PUBLIC WORKS PROGRAMMES

I, Nelisiwe Mildred Oliphant, Minister of Labour, hereby in terms of section 50 of the Basic Conditions of Employment Act, 1997, make a Ministerial Determination establishing conditions of employment for employees in Expanded Public Works Programmes, South Africa, in the Schedule hereto and determine the second Monday after the date of publication of this notice as the date from which the provisions of the said Ministerial Determination shall become binding.

All the provisions of the Ministerial Determination: Expanded Public Works Programmes published under Government Notice R949 in Government Gazette 33665 of 22 October 2010 will be superseded by this ministerial determination with effect from the date of implementation.

NM OLIPHANT, MP
Minister of Labour
10/04/2012

SCHEDULE

MINISTERIAL DETERMINATION NO: 3 : EXPANDED PUBLIC WORKS PROGRAMMES

Index

1. Definitions
2. Application of this determination
3. Sections not applicable to public works programmes
4. Conditions

1. **Definitions**

1.1 In this determination –

"expanded public works programme" means a programme to provide public or community assets or services through a labour intensive programme initiated by government and funded from public resources.

1.2 Without limiting subsection (1), the following programmes constitute Expanded Public Works Programmes:

(a) Environment and Culture Sector Programmes including: Working for Water, Working on Fire, Working for Wetlands, People and Parks, Working for Energy, Working for Woodlands, Working for the Coast, Landcare, Working on Waste, Working for Tourism, Investing in Culture Programmes

(b) Infrastructure Sector Programmes and Projects declared part of EPWP which may include the construction, rehabilitation and maintenance of: rural and low-volume roads, storm-water drains, water reticulation, basic sanitation, footpaths, sidewalks, bicycle paths, schools and clinics.

(c) Social Sector Programmes including Early Childhood Development, Home, Community Based Care, Community Safety and other community based programmes

(d) All projects and programmes accessing the EPWP wage incentive including those implemented by Non Governmental organisations (NGO) and Community Based Organisations (CBO) and the Community Works Programme.

(e) Any other programme deemed to be part of the EPWP as determined by the Department of Public Works

2. **Application**

This Determination applies to all employers and employees engaged in expanded public works programmes.

3. **The following provisions of the Basic Conditions of Employment Act do not apply to public works programmes –**

3.1	Section 10(2)	[Overtime rate]
3.2	Section 14(3)	[Remuneration required for meal intervals of longer than 75 minutes]
3.3	Section 29(h) to (p)	[Written particulars of employment]
3.4	Section 30	[Display of employee's rights]
3.5	Section 41	[Severance pay]
3.6	Section 37	[Notice of termination]
3.7	Sections 51 – 58	[Sectoral Determinations]

4. **Conditions**

As set out in the ANNEXURE:

Annexure G: Code of Good Practice

ANNEXURE

CONDITIONS OF EMPLOYMENT FOR EXPANDED PUBLIC WORKS PROGRAMMES

1. **Introduction**

1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on an Expanded Public Works Programme (EPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.

1.2 In this document –

(a) "department" means any department of the State, implementing agent or contractor;

(b) "employer" means any department, implementing agency or contractor that hires workers to work in elementary occupations on a EPWP;

(c) "worker" means any person working in an elementary occupation on a EPWP;

(d) "elementary occupation" means any occupation involving unskilled or semi-skilled work;

(e) "management" means any person employed by a department or implementing agency to administer or execute an EPWP;

(f) "task" means a fixed quantity of work;

(g) "task-based work" means work in which a worker is paid a fixed rate for performing a task;

(h) "task-rated worker" means a worker paid on the basis of the number of tasks completed;

(i) "time-rated worker" means a worker paid on the basis of the length of time worked.

2. **Terms of Work**

2.1 Workers on an EPWP are employed on a temporary basis or contract basis.

3. **Normal Hours of Work**

3.1 An employer may not set tasks or hours of work that require a worker to work–

(a) more than forty hours in any week;

(b) on more than five days in any week; and

(c) for more than eight hours on any day.

3.2 An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.

3.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

4. **Meal Breaks**

4.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.

4.2 An employer and worker may agree on longer meal breaks.

4.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.

4.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

5. **Special Conditions for Security Guards**

5.1 A security guard may work up to 55 hours per week and up to eleven hours per day.

5.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

6. **Daily Rest Period**

Every worker is entitled to a daily rest period of at least twelve consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

7. **Weekly Rest Period**

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

8. **Sick Leave**

8.1 Only workers who work more than 24 hours per month have the right to claim sick-pay in terms of this clause.

8.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.

8.3 A worker may accumulate a maximum of twelve days' sick leave in a year.

8.4 Accumulated sick-leave may not be transferred from one contract to another contract.

8.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.

8.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.

8.7 An employer must pay a worker sick pay on the worker's usual payday.

8.8 Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –

(a) absent from work for more than two consecutive days; or

(b) absent from work on more than two occasions in any eight-week period.

8.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.

8.10 A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

9. **Maternity Leave**

9.1 A worker may take up to four consecutive months' unpaid maternity leave.

9.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.

9.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.

9.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.

9.5 A worker may begin maternity leave –

(a) four weeks before the expected date of birth; or

(b) on an earlier date –

(i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or

(ii) if agreed to between employer and worker; or

(c) on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.

9.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

10. Family responsibility leave

10.1 Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -

(a) when the employee's child is born;

(b) when the employee's child is sick;

(c) in the event of a death of –

(i) the employee's spouse or life partner;

(ii) the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

11. Statement of Conditions

11.1 An employer must give a worker a statement containing the following details at the start of employment –

(a) the employer's name and address and the name of the EPWP;

(b) the tasks or job that the worker is to perform; and

(c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;

(d) the worker's rate of pay and how this is to be calculated;

(e) the training that the worker will receive during the EPWP.

11.2 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.

11.3 An employer must supply each worker with a copy of these conditions of employment.

12. Keeping Records

12.1 Every employer must keep a written record of at least the following –

(a) the worker's name and position;

13. **Payment**

13.1 An employer must pay all wages at least monthly in cash or by cheque or into a bank account.

13.2 A worker may not be paid less than the minimum EPWP wage rate of R63.18 per day or per task. This will be adjusted annually on the 1st of November in-line with inflation (available CPI as provided by StatsSA six (6) weeks before implementation).

13.3 A task-rated worker will only be paid for tasks that have been completed.

13.4 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.

13.5 A time-rated worker will be paid at the end of each month.

13.6 Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.

13.7 Payment in cash or by cheque must take place –

(a) at the workplace or at a place agreed to by the worker;

(b) during the worker's working hours or within fifteen minutes of the start or finish of work;

(c) in a sealed envelope which becomes the property of the worker.

13.8 An employer must give a worker the following information in writing –

(a) the period for which payment is made;

(b) the numbers of tasks completed or hours worked;

(c) the worker's earnings;

(d) any money deducted from the payment;

(e) the actual amount paid to the worker.

13.9 If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it.

13.10 If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

14. **Deductions**

14.1 An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.

14.2 An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.

14.3 An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.

14.4 An employer may not require or allow a worker to –

(a) repay any payment except an overpayment previously made by the employer by mistake;

(b) state that the worker received a greater amount of money than the employer actually paid to the worker; or

(c) pay the employer or any other person for having been employed.

15. Health and Safety

15.1 Employers must take all reasonable steps to ensure that the working environment is healthy and safe.

15.2 A worker must –

(a) work in a way that does not endanger his/her health and safety or that of any other person;

(b) obey any health and safety instruction;

(c) obey all health and safety rules of the EPWP;

(d) use any personal protective equipment or clothing issued by the employer;

(e) report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

16. Compensation for Injuries and Diseases

16.1 It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on a EPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.

16.2 A worker must report any work-related injury or occupational disease to their employer or manager.

16.3 The employer must report the accident or disease to the Compensation Commissioner.

16.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

17. **Termination**

17.1 The employer may terminate the employment of a worker for good cause after following a fair procedure.

17.2 A worker will not receive severance pay on termination.

17.3 A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.

17.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available.

17.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available.

Certificate of Service

18.1 On termination of employment, a worker is entitled to a certificate stating –

(a) the worker's full name;

(b) the name and address of the employer;

(c) the EPWP on which the worker worked;

(d) the work performed by the worker;

(e) any training received by the worker as part of the EPWP;

(f) the period for which the worker worked on the EPWP;

(g) any other information agreed on by the employer and worker.

Appendix D: Geotechnical Report

LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM

Enq: Ngoasheng TR **Tel:** 015 293 8424 / 082 041 3223 **E-mail:** NgoashengTR@ledet.gov.za **Ref:** 12/1/9/E-W1264

Mokopane Biodiversity Conservation Centre
South African National Biodiversity Institute (SANBI)
Route R101
MOKOPANE
0601

Attention: Mark Howitt **E-mail:** M.howitt@sanbi.org.za

RE: CONFIRMATION OF UNLISTED ACTIVITY FOR THE PROPOSED UPGRADEOF MOKOPANE BIODIVERSITY CONSERVATION CENTRE ON PORTION 30 OF THE FARM PIET POTGIETERSRUS AND TOOWNLANDS 44KS WITHIN MOGALAKWENA LOCAL MUNICIPALITY

1. The enquiry letter and additional information received by the Department on 30 June 2019 and 14 August 2019 respectively refer.

2. The information provided indicates that the proposed activity entails the refurbishment of existing ablution facilities, entrance gate, stormwater management infrastructure, animal enclosure and the construction of parking area, private lapa and new office building on the Portion 30 of the farm Piet Potgietersrus and Townlands 44 KS, at geographical co-ordinates 24° 10' 15.05" South and 29° 01' 08.8" East.

3. The activities will cover an area of 1900m² on land leased by SANBI from Mogalakwena Local Municipality. The existing structures were constructed between the years 1979 and 1992.

4. Based on the above information, the Department hereby informs you that the proposed activity is not listed in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act (NEMA) (Act No. 107 of 1998) (as amended).

5. The proposed activity does not require an environmental authorisation from the Department prior the commencement of the activity on site.

If you have any queries with regard to the above, please do not hesitate to contact the Department.

Yours faithfully

DEPARTMENT OF ...
ENVIRONMENTAL IMPACT MANAGEMENT
04 -09- 2019
P.O. BOX ...

DIRECTOR
ENVIRONMENTAL IMPACT MANAGEMENT
DATE: 4/09/2019

Cc: Tshambila Env Consultant **Fax:** 086 523 8879 **Email:** info@tshambila.co.za

CONTRACT NO.: G306/2018

ASSESSMENT, DESIGN AND PROJECT MANAGEMENT OF REQUIRED NEW BUILDINGS & REPAIRS, RENOVATIONS & UPGRADES TO VARIOUS INFRASTRUCTURE ASSETS IN THE THOHOYANDOU BOTANICAL GARDEN, THOHOYANDOU, & NATIONAL ZOOLOGICAL GARDEN CAMPUSES BASED IN PRETORIA & MOKOPANE

ENVIRONMENTAL MANAGEMENT PROGRAMME

FOR

MOKOPANE BIODIVERSITY CONSERVATION CENTRE

OCTOBER 2019

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QUALITY CONTROL

Valid from	OCTOBER 2019 TO FINAL COMPLETION			
	Name	**Org.-unit**	**Date**	**Signature**
Approved				
Released	Tshuma, B.	PJN_PM	2019-10-14	
Revised	Dlamini, S.	PJN_EIA	2019-10-14	
Reviewed	Willis, C,	SANBI	2019-10-12	
Released	Tshuma, B.	PJN_PM	2019-09-22	
Reviewed	Tshuma, B.	PJN_PM	2019-09-20	
Prepared	Dlamini, S.	PJN_EIA	2019-09-16	

REVISION LOG

Doc ID	**Rev**	**Rev Date**	**By**	**Revision Notes**
ZA2018_2008_SANBI_MBCC_EMP001	01	2019-10-14	BT	SANBI comments incorporated.
ZA2018_2008_SANBI_MBCC_EMP001	00	2019-09-22	BT	Issued for review.

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DECLARATION

I the undersigned in my capacity as designated below do hereby undertake to ensure that the conditions and recommendations in terms of this Environmental Management Programme (EMPr) for the Construction phase are implemented and assume full responsibility and accountability in all aspects thereof.

I further understand that officials from the Limpopo Department of Economic Development, Environment and Tourism and/or Department of Water and Sanitation may during any phase of the project, conduct an inspection of the development in order to ensure compliance with the conditions and recommendations as outlined in the EMPr.

CONTRACTOR

Company:

Name:

Designation:

Signature:

Date:

ACRONYMS

ACRONYM	MEANING
CARA:	Conservation of Agricultural Resources Act
CITES:	Convention of International Trade in Endangered Species of Wild Fauna and Flora
DEFF:	Department of Environment, Forestry and Fisheries
DWS:	Department of Water and Sanitation
EA:	Environmental Authorisation
ECO:	Environmental Control Officer
EIA:	Environmental Impact Assessment
EMPr:	Environmental Management Programme report
EMS:	Environmental Management System
ESO:	Environmental Site Officer
I &/or APs:	Interested and/or Affected Parties
IEC:	Independent Environmental Consultant
IEM:	Integrated Environmental Management
ISO:	International Standards Organisation
LEDET:	Limpopo Department of Economic Development, Environment and Tourism
NEMA:	National Environmental Management Act
SAHRA:	South African Heritage Resources Agency

GLOSSARY OF TERMS

Alien Vegetation: *Alien vegetation is defined as undesirable plant growth which shall include, but not be limited to all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act (CARA) regulations. Other vegetation deemed to be alien shall be those plant species that show the potential to occupy in number, any area within the defined construction area and which are declared to be undesirable*.

Construction Camp: *Construction camp (site camps) refers to all storage and stockpile sites, site offices, container sites, workshops and testing facilities and other areas required undertaking construction activities.*

Environmental Site Officer (ESO): *An ESO is the site-based designated person responsible for implementing the environmental provisions of the Construction Contract and is appointed by the service provider that carries out construction activities. The ESO shall be the designated responsible person, for implementing any remedial measures as required from time to time and for any authorisations/licences that are required in terms of the service contract. The ESO shall record and communicate environmental issues (as they occur) to the Contractor and maintain records thereof. The ESO shall report concurrently to the contractor and the ECO.*

Environmental Control Officer (ECO): *A suitably qualified and experienced person or entity appointed for the Construction Works, to perform the obligations specified in the environmental authorisation.*

Environment: *Environment means the surroundings within which humans exist and that could be made up of: -*

- *The land, water and atmosphere of the earth;*
- *Micro-organisms, plant and animal life;*
- *Any part or combination of (i) and (ii) and the interrelationships among and between them; and*
- *The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.*

Environmental Aspect: *An environmental aspect is any component of a contractor's construction activity that is likely to interact with the environment.*

Environmental Authorisation (formerly known as, Record of Decision): *A written statement from the relevant environmental authority, with or without conditions, that records its approval of a planned undertaking to build or upgrade a section of road and the mitigating measures required to prevent or reduce the effects of environmental impacts during the life of a contract.*

Environmental Impact: *An impact or environmental impact is the change to the environment, whether desirable or undesirable, that will result from the effect of a construction activity. An impact may be the direct or indirect consequence of a construction activity.*

Environmental Impact Assessment*: The process of examining the environmental effects of a proposed development. The assessment requires detailed/specialist studies of significant issues that have been identified during the environmental scoping.*

Environmental Management Programme: *An environmental management tool used to ensure that undue or reasonably avoidable adverse impacts of the construction, operation and decommissioning of a project are prevented; and that the positive benefits of the projects are enhanced.*

Environmental Management System: *The internationally accepted and recognized environmental management system (EMS) which enables companies, organizations and operations to systematically manage, prevent and reduce environmental problems and associated costs. In terms of ISO 14001 and EMS is defined as,* "***that part of the overall management system includes organizational structure, planning activities, responsibilities, procedures, processes and resources for developing, implementing, reviewing and maintaining the environmental policy.***"

Environmental Policy: *A statement by the organisation of its intentions and principles in relation to its overall environmental performance which provides a framework for action and for the setting of its environmental objectives and targets.*

Independent Environmental Consultant: *A suitably qualified and experienced independent environmental consultant (IEC) appointed by the Engineer to perform the obligations specified in the Contract. The IEC shall provide reports to the regulatory authority, the Engineer and any other parties as specified by the regulatory authority.*

Interested and Affected Party: Refers to an interested and affected party contemplated in section 24(4)(d) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and which in terms of that section includes –
a) Any person, groups of persons, organization interested in or affected by an activity, and;
b) Any organ of state that may have jurisdiction over any aspect of the activity.

ISO 14001 Environmental Management System (ISO 14001): The internationally accepted and recognised Environmental Management System as reflected in the document SABS ISO 14001: 1996.

Method Statement: *A written submission by the Contractor in response to the Specification or a request by the Engineer, setting out the plant, materials, labour and method the Contractor proposes using to carry out an activity, identified by the relevant specification or the IEC when requesting the Method Statement, in such detail that the IEC is enabled to assess whether the Contractor's proposal is in accordance with the EMPr and associated specifications.*

Mitigate: *The implementation of practical measures to reduce the adverse impacts, or to enhance beneficial impacts of a particular action.*

No-Go Area: *Areas where construction activities are prohibited*.

Pollution: *According to the National Environmental Management Act, No. 107 of 1998, pollution can be defined as, "Any change in the environment caused by (i) substances; (ii) radioactive or other waves; or (iii) noise, odours, dust or heat emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future"*

Rehabilitation: *To re-establish or restore to a healthy, sustainable capacity or state.*

Site: *The area in which construction is taking place*.

Species of Special Concern: *Those species listed in the Rare, Indeterminate, or Monitoring categories of the South African Red Data Books, and/or species listed in Globally Near Threatened, Nationally Threatened or Nationally Near Threatened categories (Barnes, 1998).*

Threatened species: *Threatened species are defined as: a) species listed in the Endangered or Vulnerable categories in the revised South African Red Data Books or listed in the Globally Threatened category; b) species of special conservation concern (i.e. taxa described since the relevant South African Red Data Books, or whose conservation status has been highlighted subsequent to 1984); c) species which are included in other international lists; or d) species included in Appendix 1 or 2 of the Convention of International Trade in Endangered Species (CITES).*

Topsoil: *The top 100mm of soil and may include top material e.g. vegetation and leaf litter*

PREFACE

This Environmental Management Programme report (EMPr) was compiled to address the potential environmental, social and economic impacts associated with the proposed project, by prescribing meaningful and practical mitigation measures through specialist consultation and adherence to relevant environmental legislation, and to prevent the occurrence of irreversible environmental degradation. These mitigation measures must be made binding to all contractors during all the project phases. In addition to the EMP, contractors must be compliant with the requirements set out in the Occupational Health and Safety Act (Act No. 85 of 1993), as well as all other laws and by laws, including the Construction Regulations and the SANS set of standards.

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1 INTRODUCTION

1.1 Purpose of the Environmental Management Programme

This Environmental Management Programme (EMPr) is prepared as part of the requirements of the Environmental Impact Assessment (EIA) Regulations (December 2014, as amended in April 2017) promulgated under the National Environmental Management Act (NEMA) (Act 107 of 1998, as amended).The purpose of this EMPr is to ensure "good environmental practice" by taking a holistic approach to the management and mitigation of environmental impacts during the "construction"/clearing and operation phase of the proposed new buildings and repairs, renovations and upgrading of various infrastructure assets of Mokopane Biodiversity Conservation Centre. This EMPr therefore sets out the methods by which proper environmental controls are to be implemented by management. The EMPr is to be submitted to the Limpopo Department of Economic Development, Environment and Tourism (LEDET) as part of the Application for Environmental Authorisation for the proposed new buildings and repairs, renovations and upgrading of various infrastructure/ assets of Mokopane Biodiversity Conservation Centre. This EMPr is considered as a document that can be updated as new information becomes available during the "construction", operational and decommissioning phases, if applicable, of the proposed development. Mitigation measures need to be implemented as addressed in this EMPr, except where they are not applicable, and additional measures should be considered when necessary. The EMPr identifies the following:

Construction and Operation activities that will impact on the environment;

- Specifications with which the Engineers and any Contractors involved in all phases of the project lifecycle shall comply in order to protect the environment from the identified impacts; and
- Actions that shall be taken in the event of non-compliance.
- This EMPr incorporates management plans for the "construction" and operation phases of the project, which consist of the following components:
- **Impact**: The potential positive or negative impact of the development that needs to be enhanced, mitigated or eliminated.
- **Objectives**: The objectives necessary in order to meet the goal; these take into account the findings of the specialist studies.
- **Mitigation/Management Actions**: The actions needed to achieve the objectives, taking into consideration factors such as responsibility, methods, frequency, resources required and prioritisation.

- **Monitoring**: The key monitoring actions required to check whether the objectives are being achieved, taking into consideration responsibility, frequency, methods and reporting.

1.2 Phases of the project

There are three key phases of the proposed project, as covered by the EMPr:

1.2.1 Planning Phase

This phase relates to the period leading up to and prior to commencement of construction activities. The EMPr offers an ideal opportunity to incorporate pro-active environmental management measures with the goal of attaining sustainable development. Pro-active environmental measures minimize the chance of impacts taking place during construction and operational phase. There is still the chance of accidental impacts taking place; however, through the incorporation of contingency plans (e.g. this EMPr) during the planning phase, the necessary corrective action can be taken to further limit potential impacts.

1.2.2 Construction Phase

Construction phase relates to all construction and its operation-related activities that will occur within the approved area, until the project is completed. The EMPr contains specific mitigation requirements and requested contractor method statements stipulated where required. The bulk of the impacts during this phase will have immediate effect (e.g. noise, dust, surface and ground water quality). If the site is monitored on a continual basis during this phase, it is possible to identify these impacts as they occur. These impacts will then be mitigated through the contingency plans identified in the planning phase, together with a commitment to sound environmental management from the proponent.

1.2.3 Post-Construction, Rehabilitation and operational phase

By taking pro-active measures during the planning and construction phases, potential environmental impacts emanating during the operational phase will be minimized. This in turn will minimize the risk and reduce the monitoring effort, but it does not make monitoring obsolete.

1.3 Contents of the EMPr

This EMPr specifies the management actions necessary to ensure minimal environmental impacts, as well as procedures for monitoring these impacts associated with the proposed activity. In terms of legal compliance,

this EMPr aims to satisfy Appendix 4 of Government Notice Regulation 326 of 7 April 2017, presented in the Table 1:

Table 1: Compliance with Appendix 4 of Government Notice Regulation 326 of 7 April 2017 and Section 24N of the National Environmental Management Act 107 of 1998.

Requirements of the EMPr
1) An EMPr must comply with section 24N of the Act and includes details of - (i) the EAP who prepared the EMPr; and (ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;
b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;
c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers;
d) a description of the impact management objectives, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including-
(i) planning and design;
(ii) pre-construction activities;
(iii) construction activities;
(iv) rehabilitation of the environment after construction and where applicable post-closure; and
(v) where relevant, operation activities;
e) a description and identification of impact management outcomes required for the aspects contemplated in paragraph (d);
f) a description of proposed impact management actions, identifying the way the impact management objectives and outcomes contemplated in paragraphs (d) and (e) will be achieved, and must, where applicable, include actions to – (i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
ii) comply with any prescribed environmental management standards or practices;
(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and
(iv) comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable;

g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);
h) frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);
i) an indication of the persons who will be responsible for the implementation of the impact management actions;
j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;
k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);
l) a Programme for reporting on compliance, considering the requirements as prescribed by the Regulations;
m) an environmental awareness plan describing the manner in which- (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and (ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and
n) Any specific information that may be required by the competent authority.

2. PROJECT DESCRIPTION AND LOCALITY

The proposed upgrade of the Mokopane Biodiversity Conservation Centre on Portion 30 of the Farm Piet Potgietersrus and Townlands 44ks within Mogalakwena Local Municipality. The activities will cover an area of 1900m^2 on land leased by SANBI from Mogalakwena Local Municipality. The existing structures were constructed between the years 1979 and 1992.

Table 2: Geographical Co-ordinates

Latitude (S)			**Longitude(E)**		
24°	**10'**	**15,0"**	**29°**	**01'**	**08.8"**

Table 3: Property Details

ID TOKS00000000004400080
DATE_STAMP 2010/11/23
PROVINCE LIMPOPO
MAJ_REGION KS
MAJ_CODE TOK S0000
PARCEL_NO 44
FARM_NAME POTGIETERSRUST TOWN AND TOWNLANDS 44

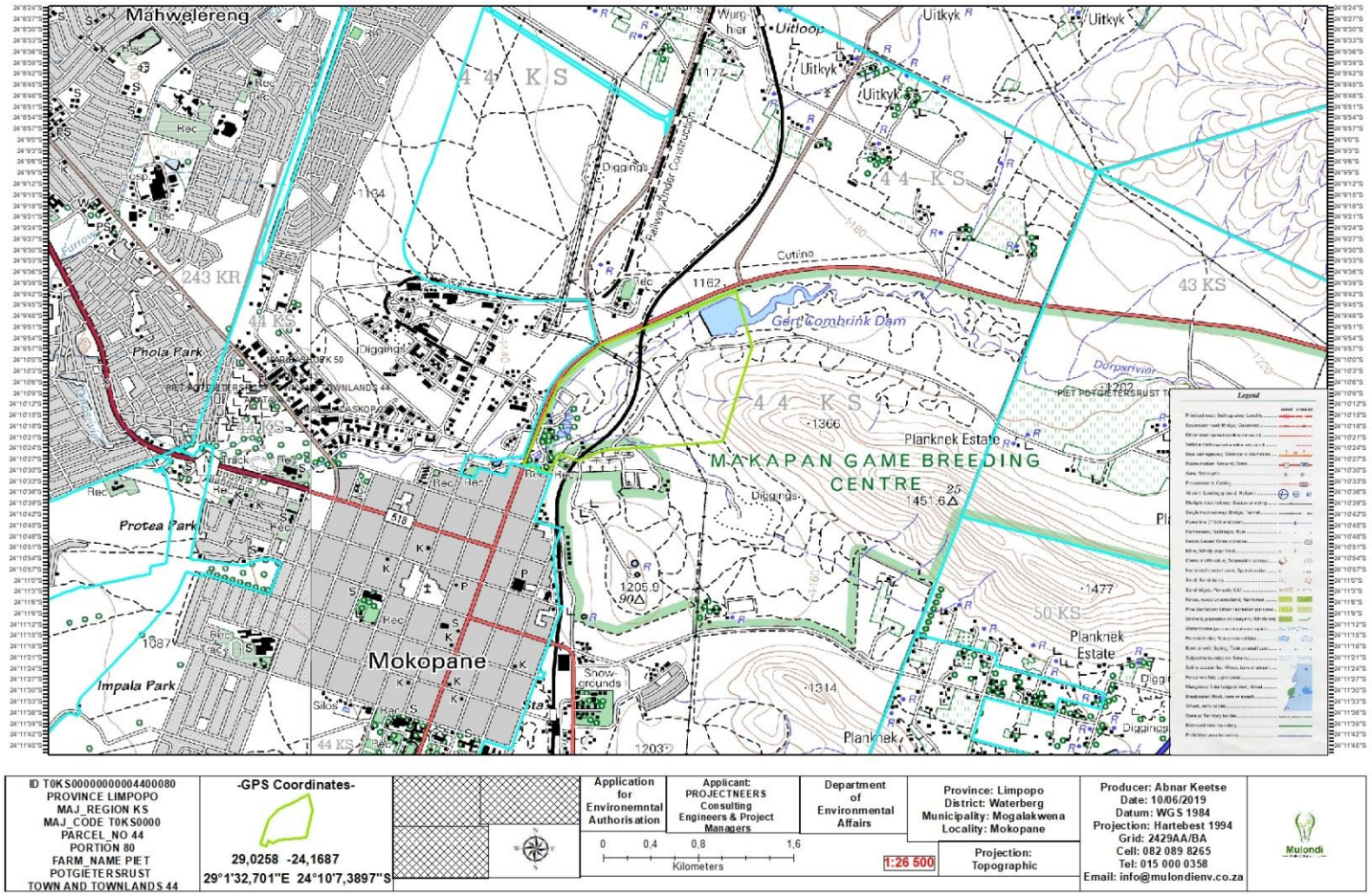


Figure 1:Locality Map

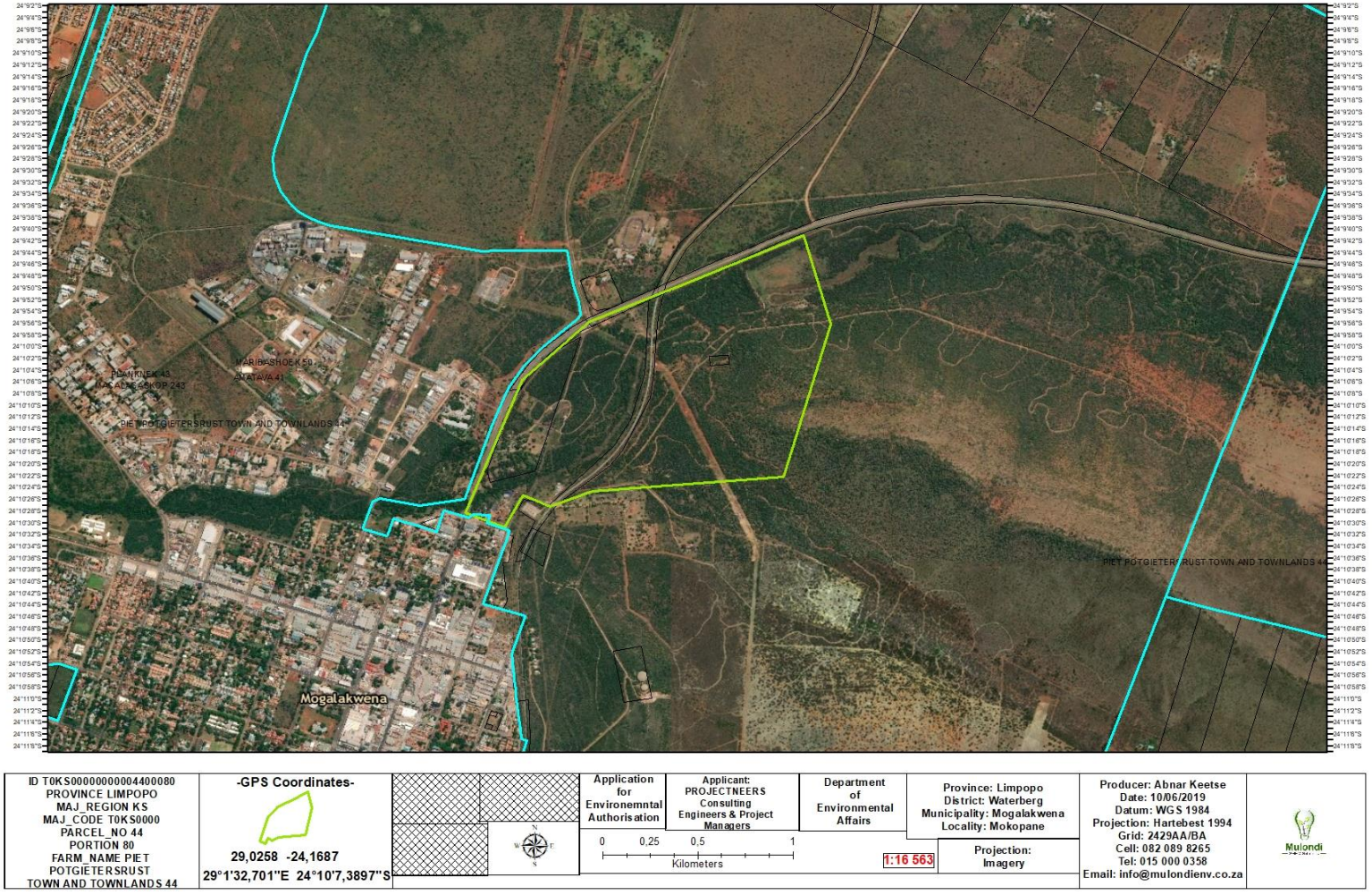


Figure 2: Satellite Photographic Image

2. Project`s Biophysical Environment

2.1 Climate

The temperature and rainfall are important climatological parameters in sustaining the physical environment and plays a significant role in determining the biotic environment of a specific area. Temperature and precipitation data are included for a better understanding and interpretation of the natural environment of Mogalakwena Local Municipality.

Temperature

Mogalakwena generally experiences a hot semi-arid climate. Summer days are hot with temperatures varying between 28°-34° C in October to March. Summer night temperatures are hot to mild varying between 16°-21°C. The winter day temperatures are mild to warm varying between 19.6°-25.2° C in April to September. Winter nights are cold with temperatures of 4.3°-12.1° C.

Rainfall

The Mogalakwena Local Municipality area falls within the summer rainfall region of Limpopo, with the rainy season lasting from November to March. Average rainfall is 600-650 mm. The rainfall period occurs from November to February. The highest rainfall occurs in January and December. The average rainfall declines from east to west. Thunderstorms are recorded often. Hail and fog are infrequent.

2.2 Biodiversity

Topography

Mogalakwena Local Municipal area forms the central part of the Waterberg District and is occupied by the Waterberg Mountain range forming a central mountain plateau. It is linked to the Sebetiela Mountains in the south-eastern part of the Waterberg District, which in turn is linked to the Great Escarpment of the Drakensberg Mountain range by the Strydpoort Mountains. Secondary drainage lines, mostly occurring along valleys in a northerly direction, bisect the central topography. From the central plateau there is a marked drop in altitude to the south towards the Springbok Flats that extend from neighbouring Bela-Bela LM to north of Mokopane. In the north the terrain becomes undulating and slopes down towards the Limpopo Valley while flat plains occur to the west.

Vegetation The primary producer in the natural environmental energy cycle is vegetation. Vegetation also fulfils the role of soil stabilizers e.g. soil erosion and is a renewable resource of nature that is used the most. It is, therefore, of the utmost importance that the natural vegetation is used in a sustainable manner, and to do so, it is necessary to know the status and extent of this resource. There is a total of 7 veld types in the Mogalakwena LM. The largest veld types are as follows: Arid Sweet Bushveld, Mixed Bushveld, Sourish Mixed Bushveld, Sourish Bushveld, Pietersburg Plateau False Grassveld, Springbok Flats Turf Thornveld, North-Eastern Mountain Sourveld. The condition of veld refers to the current production ability, health and stability of the veld in comparison to the optimal potential. Vegetation is not static and tends to change over time (improve or deteriorate). The main causes for these changes are climatic changes (e.g. rainfall) and over utilization (overgrazing).

Within veld types unique plant communities and/or plant species are found. Some of these are endemic (only known distribution) like the *Encephalartos eugene-maraisii.* Vegetation forms the basis of a stable habitat for other life forms.

3. ENVIRONMENTAL MANAGEMENT STRUCTURE

The management of **SANBI** will develop an Environmental Management Structure, in line with this EMPr, that is appropriate to the size and scale of the project to develop and implement roles and responsibilities with regards to environmental management.

3.1 Roles and Responsibilities

Key roles and responsibilities in order to meet the overall goal for environmental management of the Development are as follows:

3.1.1 SANBI/Contractors (hereinafter referred to as "Management")

Management is responsible for the overall environmental monitoring and implementation of the EMPr and ensuring compliance thereof with the specifications of the Environmental Authorisation (EA) issued in terms of NEMA. Management should also ensure that any other permits or licences required as part of this project are obtained and complied with. The Management may, however, at their own costs, render the services of an external environmental consultant to oversee the implementation of the documented mitigation measures of this EMPr. It is also expected that management will appoint an Environmental Control Officer, Environmental Health and Safety Officer, and "Construction" Manager.

3.1.2 The Contractor

The contractor is bound to the EMPr conditions through contract and is responsible for ensuring that they adhere to all conditions to the EMPr. The Contractor must thoroughly study the EMPr requirements before establishing on site and must request clarification on any aspect of the document, should they be unclear.

- The contractor must implement all the requirements of the EMPr daily. The contractor must comply with all instructions (whether verbal or written) given by the Engineer and ECO, in terms of the EMP.
- Keeping a copy of the EMP and EA on site and implementing the EMP
- Maintaining a register of complaints and queries by members of the public at the site office. This register is forwarded to the ECO on a monthly basis.
- Maintaining all approved infrastructure in good working order to effectively fulfil its intended purpose and to prevent negative environmental impacts
- Immediately remedying any factors that contribute to negative environmental impacts
- Removing non-functional structures

- Ensuring waste disposal at a suitable, permitted waste disposal facility
- Ensuring that suitable arrangements are made to protect the environment against long term negative impacts arising from construction
- Minimizing negative visual impacts
- Cleaning up contaminants of the environment immediately
- Preventing erosion through regular monitoring and rehabilitation of degraded areas and implementation of erosion controls
- Rehabilitating the site and maintaining it for a minimum of 6 months thereafter.

3.1.3 The Engineer

The Engineer (or project manager) is the appointed role player responsible for coordinating and integrating activities across multiple, functional lines. The Engineer is responsible for ensuring that the contractor considers environmental matters seriously by compelling the contractor to comply. The Engineer is responsible for the following:

- Keeps copy of EA and EMPr
- Ensures that all designs and layout take consideration of sensitive areas and no-go zones and that these are excluded from development where possible (including recommendations made in the EIA and EMPr)
- Arranging meetings or consulting with IAPs about the impending construction activities and assists in communication throughout the project;
- Assessing the Contractor's environmental performance in consultation with the ECO from which a brief monthly statement of environmental performance is drawn up for record purposes;
- Documenting in conjunction with the Contractor, the state of the site prior to construction activities commencing. This documentation will be in the form of photographs or video.
- Negotiate with/community members as required.
- May on the recommendation of the Environmental Control Officer order the Contractor to suspend any or all works on site if the Contractor or his Subcontractor/ supplier fails to comply with the Environmental Management Programme;
- Ensure that the ECO has their full backing regarding environmental matters
- Requesting amendments to the EMPr when needed, on behalf of contractor or applicant
- Ensure that all problems identified during environmental inspections, are addressed and rectified by the contractor as soon as possible.

3.1.5 Environmental Control Officer

The Environmental Control Officer (ECO) will be appointed by the applicant as a monitor of the implementation of, and compliance with, the EMP. The ECO must be involved in all aspects of the project that can influence environmental conditions on the site. The Environmental Control Officer (ECO) will be the responsible person for ensuring that the provisions of the EMPr as well as the EA are always complied with. The ECO must fully communicate the environmental management processes associated with the project, particularly the EMPr, as well as review and ensure compliance with the conditions of the EMPr. The ECO will be responsible for issuing instructions to contractors and employees in terms of actions required with regards to environmental considerations. The ECO shall, on a regular basis, prepare and submit written reports to Management and the Competent Environmental Authority (LEDET) as required.

The ECO:

- Is to be the representative of the LEDET
- Monitors contractor and applicant compliance with the EMPr and EA
- Takes baseline photos of site
- Reviews method statements from the contractor for various aspects of work and environmental components such as invasive alien plant control and rehabilitation plans
- Liaises with all relevant authorities and departments regarding environmental matters, especially the LEDET
- Liaises with the engineer and contractor regarding environmental management
- Undertakes monitoring and auditing as per prescribed period and frequency
- Records all findings, non-compliances and recommendations in an objective and transparent manner in an audit report, submitted to all parties
- Makes recommendation for additional mitigation and improvements to the EMPr as required; the authority to stop work in emergency situations in conjunction with the engineer.

3.1.6 Environmental Site Officer (ESO)

The contractor must appoint an internal Environmental Site Officer (ESO) to assist with day-to-day monitoring of the construction activities. The ESO shall ensure and enforce the implementation of the EMPr and EA and specialist studies, if any, daily, which would extend to identification, protection and documentation of biodiversity on the site and their preservation, as well as application for permits. Any issues raised by the ECO will be routed to the Engineer and ESO for the contractors' attention. The ESO must be permanently on site during the construction phase to ensure daily environmental compliance with the EMPr and should ideally be a senior and respected member of the construction crew, with a suitable environmental management qualification and experience. Experience has revealed that ESO's that can relate to the work force are the most effective for

information transfer and ensuring compliance with the EMPr. However, the ESO must have a full qualification and some experience in onsite environmental management.

The ESO:

- Opens an environmental file and maintains this on site
- Opens and maintains an incident register (complaints, non-compliances, etc)
- Keeps EA and EMPr and reports on site and on company website
- Remain full time on site during construction and rehabilitation
- Ensures, implements and enforces contractor's daily compliance with the EMPr and EA
- Takes baseline photos of the site
- Provides method statements as requested by the ECO
- Applies for permits when required, may request assistance of the ECO
- Identify, protect and document biodiversity on the site and ensure their preservation. May request assistance from ECO
- Undertake daily monitoring and auditing.
- Records all findings, non-compliances and recommendations in a daily checklist and weekly report, which is also sent to ECO.
- Consults with ECO in conjunction with Engineer before an aspect of work can proceed
- Follows all instructions from the ECO and closes out all items

3.1.7 Environmental Health & Safety (EHS) Officer

The responsibility of the EHS Officer includes overseeing the implementation of the EMPr during the construction and operational phases, monitoring environmental impacts, record-keeping and updating of the EMPr as and when necessary. During "construction", the EHS Manager will be responsible for the following:

- Meeting on site with the Construction Manager prior to the commencement of construction activities to confirm the construction procedure and designated activity zones.
- Daily or weekly monitoring of site activities during "construction" to ensure adherence to the specifications contained in the EMPr and Environmental Authorisation using a monitoring checklist that is to be prepared at the start of the "construction" phase.
- Preparation of the monitoring report based on the daily or weekly site visit.
- Reporting of any non-conformances within 48 hours of identification of such non-conformance to the relevant agents.
- Conducting an environmental inspection on completion of the construction period and 'signing off' the construction process with the Construction Manager.

During operation, the EHS Officer will be responsible for:

- Reviewing the findings of the monitoring and highlight concerns to management where necessary.
- Ensuring compliance with the Environmental Authorisation conditions and related permits.
- Ensuring that the necessary environmental monitoring takes place as specified in the EMPr.
- Updating the EMPr and ensuring that records are kept of all monitoring activities and results.
- At the time of preparing this EMPr, the EHS Manager appointment is still to be made by the applicant.

The appointment of the EHS Officer is dependent upon the project proceeding to the "construction" phase.

3.2 General Items:

- Proper and continuous liaison between all parties is required to ensure that everyone is always informed.
- The IAPs shall be informed of the starting date of construction as well as the phases in which the construction shall take place, by the contractor and engineer
- The Contractor(s) must adhere to all conditions of contract, including the EMPr and landowner/IAP special conditions.
- The work must be confined to demarcated areas and the approved location and no encroachment beyond will be permitted
- The natural environment must be protected, and damage rectified
- All manmade structures and natural environments shall always be protected against damage and any damage shall be rectified immediately.
- The Contractor shall ensure that all damaged areas are rehabilitated to the satisfaction of the ECO. This includes rehabilitation of the camp sites etc, as applicable.
- Effective document management and record keeping of all complaints and steps taken must be undertaken.
- Regular site inspections and good control over the construction process throughout the construction period.
- Effective environmental control on site
- Environmental audits to be carried out monthly during the construction phase, and upon completion of the works for a period as prescribed by the LEDET.

4. MONITORING, COMMUNICATION AND REPORTING

4.1 Responsibilities for Environmental Management

The Contractor and / or its agents will be responsible for environmental management on site during the construction period. A pre-construction meeting is recommended in order to reach agreement on specific roles of the various parties and penalties for non-compliances with the EMPr. In addition, surrounding residents must be notified in advance of any potentially disturbing activities.

4.2 Environmental Awareness Training for Site Personnel

The EMPr shall be part of the Terms of Reference (ToR) for all Contractors, Sub-contractors and Suppliers. All the people involved in this project are to be briefed on their obligations towards environmental controls and methodologies in terms of this EMPr prior to work commencing. The briefing will take the form of an on-site presentation by the ECO. The education / awareness programme should be aimed at all levels of the contractor team. New site personnel must attend an environmental awareness presentation. The ESO must also conduct daily toolbox talks.

4.3 Complaints Register and Environmental Incident Register

Any complaints received from the community must be registered and recorded by the contractor on site. The complaint must be brought to the attention of the engineer and contractor, who will respond accordingly. The following information will be recorded:

- Time, date and nature of the complaint;
- Response and investigation undertaken; and
- Close Actions taken, success and closure date. All complaints received will be investigated and a response (even if pending further investigation) is to be given to the complainant within 7 days.

Incidents

Within 8 hours the ESO will report to the Engineer and ECO the occurrence or detection of any incident at the site, or incidental to the operation of the site which has the potential to cause, or has caused, water pollution, damage to the environment, health risks or nuisance conditions, or which is a contravention of the Environmental Management Plan. Within 5 days (or shorter period) from the occurrence or detection of any incident, an action plan must be submitted with a detailed time schedule for implementation:

- To correct the impacts of the incident,

- To prevent the incident from causing any further impacts and
- To prevent the recurrence of a similar incident. The non-compliance forms and complaints register, together with actions taken or to be taken, are to be kept on file by the ESO and made available to the ECO and engineer.

4.4 Site Instruction Entries

The site instruction book entries will be used for the recording of general site instructions as they relate to the construction/ upgrade works. It will also be used for the issuing of stop work orders for the purposes of immediately halting any particular activities of the contractor in lieu of the environmental risk that they may pose.

4.5 ESO Diary Entries

The purpose of these entries will be to record the comments of the ESO as they relate to activities on the site. Each of these books must be available in duplicate, with copies for the project manager and ECO. These books should be available to the authorities for inspection or on request. Minutes of all the meetings that reflect environmental queries, agreed actions and dates of eventual compliance must be available and form part of the official environmental record.

4.6 Method Statements

Method statements from the contractor will be required for specific sensitive actions on request of the authorities or ECO. A method statement forms the base line information on which sensitive area work takes place and is a "live document" in that modifications are negotiated between the Engineer, contractor and ECO as circumstances unfold. All method statements will include items from the EMPr. A method statement describes the scope of the intended work in a step by step description for the ECO to understand a contractor's intentions. This will enable them to assist in devising any mitigation measures, which would minimize environmental impact during these tasks. For each instance wherein it is requested that the contractor submit a method statement to the satisfaction of the ECO, the format should clearly indicate the following:

- **What? -** a brief description of the work to be undertaken;
- **How?** - a detailed description of the process of work, methods and materials; as well proposed controls and mitigation
- **Where?** - a description/sketch map of the locality of work (if applicable); and
- **When?** - the sequencing of actions with due commencement dates and completion date estimates.

The contractor must submit method statements before any construction activity is due to start. Work may not commence until the method statement has been approved by the ECO and engineer. Allow a minimum of 14 days for approval of method statements. The following detailed and comprehensive method statements are likely to be required as relevant:

- Erosion control and run off control (storm water control); erosion rehabilitation
- Materials management
- Invasive alien plant control and eradication
- Waste management, storage, handling and disposal
- Noise and dust control
- Social control
- Spill Contingency and Emergency Response
- Rehabilitation
- Should changes to the above occur, the ECO and engineer will then need to approve these again

4.7 Record Keeping

All records related to the implementation of this management plan (e.g. complaints register and incident book, site instruction book; ESO diary; method statements) must be kept together in an office where it is safe and can be retrieved easily. These records should be available for scrutiny by any relevant authority at any time.

4.8 Photographs

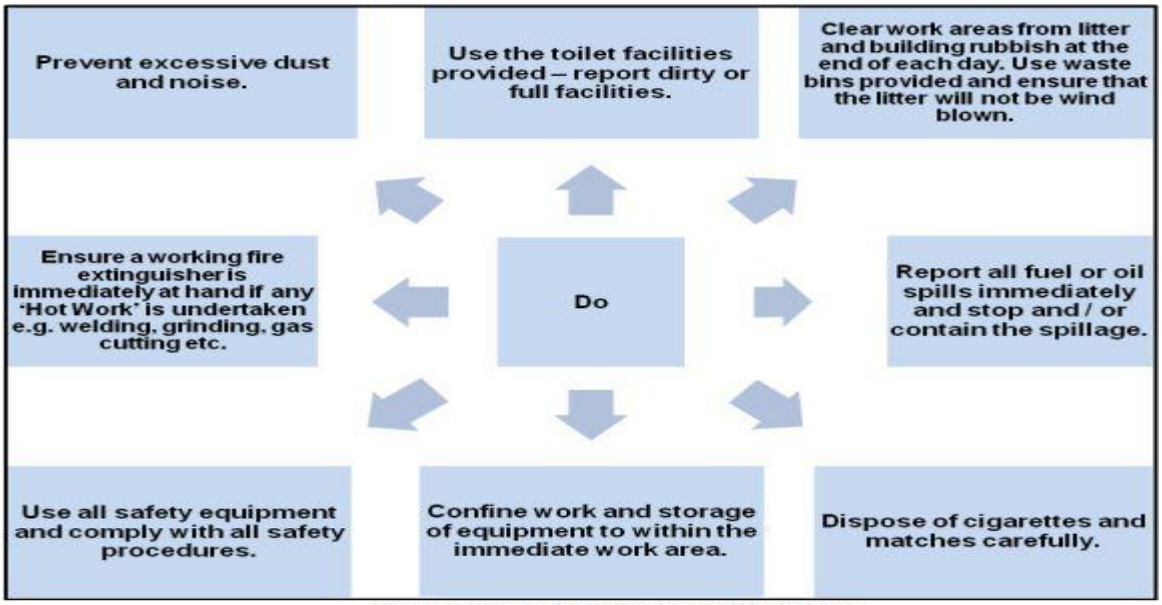
Photographs must be taken of the site prior to, during and immediately after construction as a visual reference, by the contractor. These photographs should be stored with other records related to this EMPr. If captured in digital format, hard copies must be kept with all other records relevant to the implementation of this EMPr.

4.9 Environmental Close Out Report

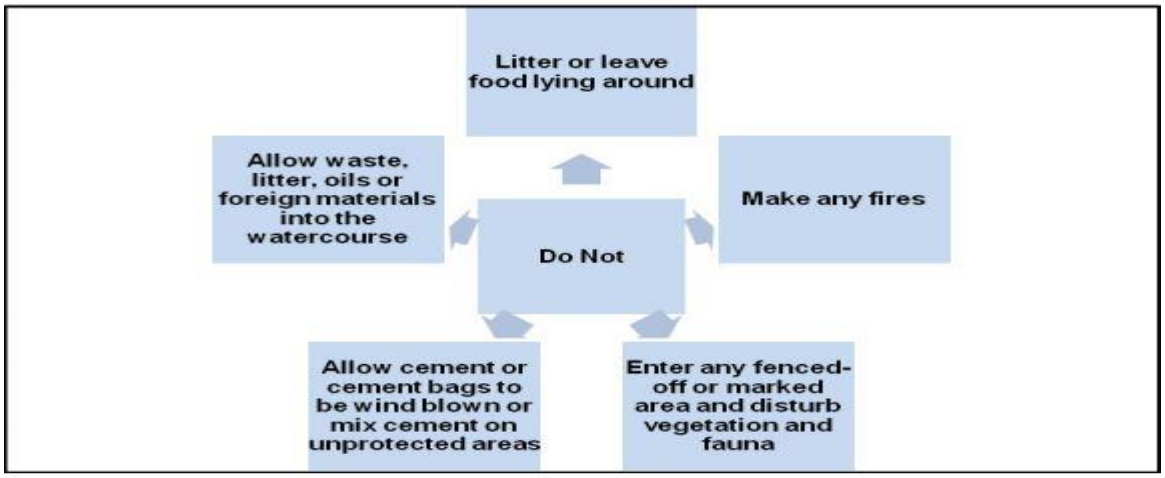
An environmental close out report is a report by the ECO to the relevant authorities stating completion of the project and overall compliance levels. This report will also comment on the impacts arisen during construction vs impacts predicted.

4.10 Basic Rules of Conduct

The following figures represent the do's and don'ts towards environmental awareness that all participants in this project must consider whilst carrying out their tasks. These are not exhaustive and serve as a quick reference aid:



Basic Rules of Conduct on Site (Do's)



Basic Rules of Conduct on Site (Dont's)

4.11 Environmental Monitoring Auditing, and reporting mechanism

Environmental monitoring will be undertaken by the Environmental Control Officer (ECO) on a monthly basis. Monitoring will be undertaken to ensure compliance with all aspects of the EMP. In order to facilitate communication between the ECO, Engineer and Contractor, it is important that a suitable chain of command is structured that will ensure that the ECO's recommendations have the full backing of the project team before being conveyed to the Contractor. In this way, penalties as a result of non-compliance's with the EMP may be justified as a failure to comply with instruction from the highest authority. It is recommended that communication be via the Engineer. All findings will be presented in a written report and distributed to all parties, including the LEDET. The following auditing and monitoring and reporting protocol will be used:

- Determine audit scope
- Onsite opening meeting
- Review documentation (ESO file)
- Walk through site to observe construction-related activity
- Stop at active work sites for in depth monitoring
- Onsite closing meeting
- Discuss findings on site with the Engineer and contractor's ESO and specify mitigation or management measures
- Discuss significant issues of concern with the Engineers where relevant
- Prepare audit report for submission to client, contractor, and LEDET
- Recommend measures and opportunities for improvement
- Comment briefly on the various aspects on the affected environment including effectiveness of mitigation, method statements and plans.

Non-Compliance with the EMPr

Difficulties may be encountered with carrying out mitigation measures that could result in future non-compliance. The Contractor shall put in place procedures to motivate staff members to comply with the EMPr, and to deal with acts of non-compliance, or malicious damage to the environment. Penalties for non-compliance need to be discussed with the Contractor at the earliest stage (during the Pre-Construction meeting). The Contractor is deemed not to have complied with the Environmental Management Plan if:

- within or without the boundaries of the site, site extensions and haul/ access roads there is evidence of contravention of clauses;
- if environmental damage ensues due to negligence or otherwise; the Contractor fails to comply with corrective or other instructions issued by the Engineer within a specified time,
- The Contractor fails to respond adequately to complaints from the public and calls for environmental mitigation

Amendments / Instructions

No EMPr amendments (relaxation or revision of any mitigation measure) shall be allowed without approval from the relevant authority (LEDET). Motivations for amendments to the EMPr may be discussed with ECO. However, the ECO may provide onsite input where required with regard to the mitigation measures required as per EMPr.

5. ENVIRONMENTAL MANAGEMENT OBJECTIVES AND MEASURABLE TARGETS

This section outlines management measures, objectives and measurable targets:

Table 4: Legislative Context

Title of legislation, policy or guideline	Administering authority	Date
National Environmental Management Act (NEMA)	Department of Environment, Forestry and Fisheries	2014
National Environmental Management: Waste Act	Department of Environment, Forestry and Fisheries	2010
National Environmental Management: Biodiversity Act	Department of Environment, Forestry and Fisheries	2004
National Water Act	Department of Water and Sanitation	1998
Integrated Environmental Management (IEM) (Department of Environmental Affairs: DEAT, 1992). IEM is a philosophy, which prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development process. This philosophy aims to achieve a desirable balance between conservation and development.	Department of Environment, Forestry and Fisheries	1992
National Heritage Resources Act, 1999, (Act No. 25 of 1999).	South African Heritage Resources Agency and the Provincial Limpopo Heritage Resources Agency (LIHRA).	28 April 1999
Constitution of the Republic of South Africa, Bill of Rights, Chapter 2: 7-39	The Constitutional Court (CC) of South Africa.	4 February 1997
National Water Act, 1998 (Act No. 36 of 1998)	Department of Water and Sanitation	1998

National Environmental Management: Waste Act (NEMWA), 2008 (Act No. 59 of 2008).	Department of Environment, Forestry and Fisheries	2008
Environment Conservation Act, 1989 (Act No. 73 of 1989)	Department of Agriculture	1989
Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965)		1965
Air quality Act, 2004 (Act No. 39 of 2004)		2004
Occupational Health and Safety Act (OHSA), Act No. 85 of 1993	Department of Labour	1993
Municipal By-Laws	Local	

5.1 IMPACT MANAGEMENT ENVIRONMENTAL MANAGEMENT PROGGRAMME

Impact/Aspect Description	Environmental objective	Management/Mitigation Measures	Monitoring Compliance and Reporting	Monitoring Frequency	Responsibility
Planning Phase					
Contractual matters and construction Programme	• Contingencies for minimizing negative impacts • Ensuring environmental awareness and formalising environmental responsibilities	• The EMPr must be included as part of the tender documentation, enforceable under the general conditions of contract. • A copy of the EMPr must be held on site. The contractor must ensure that all the personnel on site, sub-contractors and their team, suppliers, etc. are familiar with and understand the	Contract documents -Permits for materials	Contractor appointment, site establishment and ongoing as required	Management/Contractor

		specifications contained in the EMPr. • Contractors shall prepare a source statement indicating the sources of all materials (including topsoil, sands, natural gravels, crushed stone, asphalt, clay liners etc), and submit these to the Engineer for approval prior to commencement of any work. This must also be filed. • Where possible, a signed document from the supplier of natural materials should be obtained confirming that they have been obtained in a sustainable manner and in compliance with relevant legislation			

		• workforce near the or on the crossings may not commence without a Water Use License from the Department of Water and Sanitation			
Method statements	Contingencies for minimizing negative impacts -Ensuring environmental awareness and formalising environmental responsibilities	• Method statements as stated in this EMPr must be provided by the contractor. All activities which require method statements may only commence once the method statements have been approved by the engineer and/or ECO as applicable. • It is vital that detailed construction method statements be compiled and submitted to the engineer and ECO for review, detailing method		Site establishment and as required	Contactor/ Environmental Control Officer/ Environmental Site Officer

		of working in the watercourses, diversion if any and mitigation for this; as well as method statements for road construction upgrade, spill contingency and emergency response			
Emergencies	Contingencies for minimizing negative impacts	The contractor must provide method statements on the protocols to be followed, and contingencies to be put in place for the following potential incidents before construction may begin: Contamination of natural water resources from spills; contamination of soils from spills; and fire		Site establishment and as required	Environmental Site Officer/Contractor
Construction/Clearing Phase					

Loss of natural vegetation and habitats within the Critical Biodiversity Area	To minimise loss of vegetation, specifically in sensitive areas.	• Development planning must ensure loss of vegetation and disturbance is restricted to within the recommended site layout footprint. • Avoid the Critical Biodiversity Area (CBA)	The Management to ensure development layout adheres to the proposed mitigation measures of this EMPr.	During planning and clearing phase	Construction Manager/Environmental Control Officer
Removal of flora (including species of conservation importance)	To prevent loss of species of conservation concern.	• Obtain permit removal/ relocation of listed and protected species • Conduct a search and rescue operation to recover and relocate suitable wildflowers/ herbs • Avoid the lower portion of the site based on the 135m aquatic buffer to retain a portion of the available habitat on-site • Avoid disturbance /activities outside of the direct footprint	• SANBI to verify implementation of the mitigation measures proposed in this EMPr.	During planning	Environmental Control Officer/ Environmental Site Officer and the appointed Ecologist

Faunal mortality and Disturbance (including possible conservation important species)	To prevent the mortality of species.	• Restrict and control the movement of people/vehicles outside of designated areas • As far as possible, the ECO should relocate fauna to suitable nearby habitat as and when encountered during earthworks	SANBI Management to verify implementation of the mitigation measures proposed in this EMPr.	During planning and clearing phase	Environmental Control Officer/Environmental Site Officer
Loss of riparian habitat and buffer zone for the River	To prevent the disturbance to the riparian habitat and river.	• Avoid all riparian areas and adjacent land up to a minimum of 20m from the riparian boundary • Extent the minimum buffer area up to 135m to maximise the buffering functions and processes for the watercourses (high ecological importance; very high ecological sensitivity)	SANBI to ensure cultivation layout verifies the proposed mitigation measures of this EMPr.	During planning and clearing phase	Environmental Site Officer/Engineer

Disturbance to fauna from noise, light and other disturbances	To prevent disturbance to fauna	• Minimise lighting on-site, use pressure sodium vapour lights/or LED lights, and angle/face into working areas. Infrared and/or sensor lights and security systems should be used as far as possible to limit need for permanent lighting. • Ensure minimal or no disturbance outside of footprint areas	SANBI to verify implementation of the mitigation measures proposed in this EMPr.	During planning and clearing phase	Engineer/Environmental Site Officer
Impact Description **Loss of habitat integrity due to spread of IAPs**	To prevent the spreading and increase of alien invasive species.	Develop and implement and invasive alien plant control Programme, with routine follow-ups, monitoring, and should be implemented by a competent contractor (special care is essential when working within the riparian/aquatic environments)	SANBI to ensure that this is taken into consideration during the planning of the proposed development.	All phases	Environmental Site Officer/Engineer

Loss of ecological connectivity and dispersal/movement	To prevent the disturbance to the ecological system	• Avoid all riparian areas and adjacent land up to a minimum of 20m from the riparian boundary • Extend the minimum buffer area up to 135m to maximise the buffering functions and processes for the nearby watercourses (high ecological importance; very high ecological sensitivity)	SANBI to ensure cultivation layout verifies the proposed mitigation measures of this EMPr.	Planning and construction	Environmental Site Officer
Water quality impacts (including sedimentation) to the nearby watercourses	To prevent the loss and minimise the disturbance of natural habitats, and ultimately prevent the loss of ecosystem function on site.	• Method statements are required for waste management, hazardous material/waste management, spill contingency and protection, soil surface and groundwater protection	• SANBI to verify implementation of the mitigation measures proposed in this EMPr. • ECO to ensure compliance.	During planning and construction	Engineer/Environmental Control Officer/Environmental Site Officer

		• Disposing of hazardous materials or any other type of material or waste stream into the watercourse, near the watercourse or riparian area, in the open/natural environment, (including all types of rubble, spoil, waste rock, spills, waste, litter, garbage, plastics, excess material from blasts etc) is strictly prohibited. • Treat oil and chemical spills/residues immediately with an absorbent • Contractor must ensure that spill kit and drip drays are available on site			

		• Contractor must ensure that an emergency response plan is available • Contractor must ensure that disposal slips are obtained after waste disposal has taken place at registered, legal disposal sites. These slips/receipts must be filed. **Ablutions** • Chemical toilets must be provided and are to be maintained in a clean state and should be sufficient in number to ensure that they adequately service the work area.			

		• If chemical toilets are used, then the waste should be serviced regularly with proof of servicing being retained on file. Care must be taken during servicing to avoid contamination of soils and water pollution and nuisance to adjoining areas. • A registered chemical waste company is to be used to remove waste from chemical toilets. Servicing slips are required. • If a septic tank will be used, this must be located at least 100m away from the watercourse and encased in an			

		impermeable liner and bunded area. • The Contractor is to ensure that open areas, the surrounding areas, and especially the watercourses are not being used as a toilet facility or washing purposes (personal, effects, implements). • Under no circumstance may sewage/waste from toilets be disposed of in the watercourse. **Wastewater management** • All concrete mixing must take place on a designated, impermeable and bunded surface			

		• A designated, bunded area or workshop is to be set aside for vehicle washing and maintenance. • No polluted runoff or stormwater must be allowed to enter the river • Provision should be for all polluted runoff to be treated to the Engineer's approval before being discharged. • No form of secondary pollution should arise from the disposal of sewage, waste and refuse. If any problems should arise, these must be addressed immediately. **Hazardous materials**			

		The contractor must provide and maintain a method statement for cement and concrete handling. The method statement must provide information on proposed storage, washing & disposal of cement, packaging, tools and plant. • Mixing of concrete on site is not recommended, however if unavoidable, it must be conducted only in specifically selected sites on mortar boards or similar structures, on a designated, impermeable and bunded surface or on a metal drip tray and must occur out of the flood line or further than 32m away			

		from watercourses, to contain run-off into soil, rocky outcrops, and watercourses. • Cleaning of cement mixing and handling equipment must be done using proper cleaning trays. • All empty cement bags are to be treated as hazardous waste and must not be discarded on the ground and the river; and must not be allowed to become windblown • All empty containers must be stored in a dedicated area and later removed from the site for appropriate disposal at a licensed facility.			

		• Any spillage of cement that may occur must be investigated and immediate remedial action must be taken. • The visible remains of concrete, either solid, or from washings, must be physically removed immediately and disposed of as waste to a registered landfill site • No vehicle transporting concrete may be washed on site • Vehicle servicing must occur in a bunded area or workshop area, further than 100m from site • All substances required for vehicle maintenance and repair must be stored in sealed containers until			

		they can be removed from site. • Storage of hazardous substances within bunded area, and away from buffer areas. • Hazardous waste disposal must be carried out by an approved waste contractor. • Storage areas that contain hazardous substances must be bunded with an approved impermeable layer. • A sump (earth or other) must be created for concrete waste. This is to be desludged regularly and the cement waste is to be removed to a tip site as approved, by the local			

		solid waste company that oversees that area. • Disposing of hazardous materials or any other type of waste into the watercourse, near the watercourse or riparian area, in the open/natural environment, (including all types of rubble, spoil, waste rock, spills, waste, litter, garbage, plastics, excess material from blasts etc) is strictly prohibited. **Surface water managemen**t • No vehicle transporting concrete may be washed on site • Treat oil and chemical spills/residues			

		immediately with an absorbent to prevent seepage into the soil, groundwater or being washed into the watercourse • Care must be taken to ensure that runoff from vehicle or plant washing does not enter the groundwater. • Should any pollution of groundwater or surface water occur then the regional DWS office should be contacted urgently. Hazardous substances, handling, storage, and incident response • Storage areas for hazardous substances, materials and chemicals			

		must be located at least 100m away from watercourse, under lock and key in a ventilated store, or a fenced, secure, bunded area which is adequately labelled. • Store potential contaminants appropriately within the site camp area. • Hazardous storage areas must be bunded with an impermeable liner to protect soil, surface and groundwater quality. • Preparation of shutter boards or other required construction effects must be done on an impermeable surface. • Storage areas containing hazardous			

		substances/materials must be clearly signed. • Safety Data Sheets (SDSs) should be readily available on site for all chemicals and hazardous substances to be used on site. Where possible and available, SDSs should additionally include information on ecological impacts and measures to minimise negative environmental impacts during accidental spill releases or escapes. • Emergency numbers should be put up on site and consulted should any accidents / spillages of hazardous substances and / or materials take place.			

		• The Contractor is to outline a method statement for the dealing of accidents / spillages of hazardous materials or substances. This statement must be handed to the Engineer as well as to DWS should the incident occur near a watercourse • Treat oil and chemical spills/residues immediately with an absorbent • Spills in bunded areas must be cleaned up, removed and disposed of safely from the bunded areas as soon as possible after detection in order to minimise the risk of			

		pollution and reduced bunding capacity. • A designated bunded area is to be set aside for vehicle washing and maintenance. • Materials in this bunded area must be disposed of to a suitable waste site or as directed by the engineer. • Provision should be made during set up for all polluted runoff to be treated to the Engineer's approval before being discharged into the stormwater system **Chemical spills** • Contain chemical spills and arrange for clean-up / control by the supplier or			

		by professional pollution control personnel or use of a spill kit by trained personnel Oil and Fuel spills • No vehicle transporting concrete may be washed on site • A spill kit must be held on site. • Store potential contaminants appropriately within the site camp area. Drip trays are required for all plant / machinery / equipment that uses hydrocarbons. • Check vehicles for leaks regularly. If left standing near the river over night or for more than 8 hours, ensure a drip tray is			

		placed under the vehicle's engine • Servicing should be done ideally off site, but if unavoidable • The area that houses the construction camp is to be checked for spills of substances such as oil, paint etc. and these should be cleaned up. • Immediately clean up any accidental oil or fuel spills or leakages Do not hose oil or fuel spills into the surrounding natural environment or watercourse • Clean small oil or fuel spills with an approved absorbent material, such as 'Drizit' or 'Spill-sorb'.			

		• Contain oil or fuel spills in water using an approved oil absorbent fibre. • Treat soil contaminated by oil or fuel using one of the following approved methods, as per instruction of the Engineer: • Remove the soil to the depth of the contamination and dispose of it at a registered Hazardous **Waste Disposal Site**. Remove the soil to the depth of the contamination and regenerate it by using approved bio-remediation methods. In the event of a			

		spillage/incident that cannot be contained and which poses a serious threat to the local environment, and human health, the following Departments must be informed of the incident in accordance with Section 30 of NEMA, 1998: to the Local Authority; DWS; LEDET and the local Fire Department.			
Waste generated from Construction	To prevent Environmental pollution and contamination	**Green waste** • Green waste, vegetation cleared as part of this project, must be stored in a container that is wind, water and scavenger proof. **General waste** • To ensure that waste generated does not detract from the	• SANBI to verify implementation of the mitigation measures proposed in this EMPr. • ECO to ensure compliance.	During construction and Planning	Engineer/Environmental Site Officer

		aesthetics of the surrounding environment, general waste must be stored in containers that are wind, water and scavenger proof. These containers must be located on a level surface that is in excess of 32m from water resources. **Building rubble** • Building rubble and spoil material from excavations should be stored in a skip or screened and roofed area, on a level surface that is visually unobtrusive. The Environmental Site Officer must monitor the skip and ensure that enough capacity exists for the			

		waste to be generated by immediate construction activities. **Effluent** • A chemical toilet must be provided for every 15 workers on site. This toilet must be secured to the ground on a level surface that is sheltered from the elements in order to prevent it from toppling over. A maintenance schedule for the removal and cleaning of these toilets must be established in order to ensure that enough ablution facilities for the construction staff are always maintained. These toilets must be locked at			

		the end of each day, and every effort must be taken to ensure that animals cannot gain access to these toilets. Sufficient toilet paper must be made available.			
Noise disturbance as a result of tractor and/or machinery activities.	To prevent noise generation on site.	• Activities that will generate the most noise should be limited to during the day in order to minimise disturbance to the neighbours. • The noise created by the proposed activities is not expected to be significant, given the agricultural nature of the area. If required, noise reduction measures will have to be implemented in compliance with the Noise Regulations.	ECO to ensure compliance and reporting thereof.	During the clearing phase	Engineer/Environmental Site Officer

		• No sound amplification equipment to be used on site, except in emergency situations. • Limit vehicles travelling to and from the site to minimise traffic noise to the surrounding environment. • A complaints register should be kept on site, with records of complaints received and way the			
Degradation of ambient air quality as a result of dust and other emissions generated.	To minimise the impact on the ambient air quality as a result of development activities.	• Implement effective and • Environmentally friendly dust control measures, such as mulching or periodic wetting of the exposed areas. • Clearing should be done in a strategic manner to avoid large areas of nonstratified soils.	• Air emissions to be monitored throughout the construction phase. • Ensure regular maintenance of construction vehicles to allow for 'cleaner' emissions from these vehicles,	Daily during the clearing phase	Engineer/Environmental Site Officer

			including equipment maintenance.		
Impact on features of Heritage importance.	To protect heritage resources.	• Should any features of heritage be identified on site, these should not be disturbed; all development should cease until further notice and would be immediately reported to a Heritage specialist and LIHRA • No structures older than sixty years or parts thereof are allowed to be demolished altered or extended without a permit from LIHRA	Report any features of Heritage significance.	N/A	Environmental Site Officer/Appointed Heritage Specialist
Operational Phase					
Faunal mortality and	To minimise mortality and disturbance to fauna.	Restrict and control the movement of people/vehicles	SANBI to verify implementation of the mitigation measures.	When necessary During operation	Construction Manager/Environmental Control Officer

Disturbance including possible conservation important species)		outside of operational/working areas	Proposed in this EMPr.		
Disturbance to fauna from noise, light and other disturbances	To prevent the loss and Minimise the disturbance of natural habitats, and ultimately prevent the loss of ecosystem function on site.	• Minimise lighting on-site, use pressure sodium vapour lights/or LED lights, and angle/face into working areas. Infrared and/or sensor lights and security systems should be used as far as possible to limit need for permanent lighting. • Ensure minimal or no disturbance outside of footprint areas	SANBI to verify implementation of the mitigation measures proposed in this EMPr. ECO to develop a management plan to prevent faunal disturbance and displacement. An assessment should be undertaken to determine and monitor sensitive	Regular inspection every six months	Construction Manager/Environmental Control Officer
Loss of habitat integrity due to spread of IAPs	To prevent the spreading and increase of alien invasive species.	Develop and implement and invasive alien plant control Programme, with routine follow-ups, monitoring, and should be implemented by a competent contractor (special care is essential when working	ECO to verify that mitigation measure proposed in this EMPr are implemented and submit a report thereof on a monthly basis.	When necessary during operation	Construction Manager/Environmental Control Officer

		within the riparian/aquatic environments).			
Water quality impacts (including sedimentation) to the Watercourses system	The avoidance of water quality detriment.	• Avoid all riparian areas and adjacent land up to a minimum of 20m from the riparian boundary • Extent the minimum buffer area up to 135m to maximise the buffering functions and processes for the Watercourses (high ecological importance; very high ecological sensitivity) • Limit earthworks to the winter season	Regular monitoring and site inspections to be conducted and ensure adherence to this EMPr.		Engineer/Environmental Control Officer/Environmental Site Officer
Noise disturbance as a result of tractor/loader and/or Machinery activities.	To minimise noise generation on site.	• Activities that will generate the most noise should be limited to during the day in order minimise disturbance to the neighbours.	• ECO to ensure compliance and reporting thereof. • A complaints register must be kept on the farm, in which any noise complaints	Daily during the operation phase	Engineer/Environmental Control Officer/Environmental Site Officer

		• The noise created by the proposed activities is not expected to be significant, given the agricultural nature of the area. If required, noise reduction measures will have to be implemented in compliance with the Noise Regulations. • No sound amplification equipment to be used on site, except in emergency situations. • Limit vehicles travelling to and from the site to minimise traffic noise to the surrounding environment. • A complaints register should be kept on site, with records of complaints	from the public must be logged.		

		received and way the complaint was addressed.			
Degradation of ambient air quality as a result of dust and other emissions generated.	To minimise the impact on the ambient air quality as a result of development activities.	• Implement effective and environmentally friendly dust control measures, such as mulching or periodic wetting of the exposed areas. • Clearing should be done in a strategic manner to avoid large areas of non-stratified soils.	• Air emissions to be monitored throughout the operation phase. • Ensure regular maintenance of construction vehicles to allow for 'cleaner' emissions from these vehicles, including equipment maintenance. • Monitor traffic control measures and report noncompliance. • A complaints register must be kept on the farm, in which any dust complaints from the public must be logged.	Daily during the operation phase	Engineer/Environmental Control Officer/Environmental Site Officer

Potential injury to workers and safety being compromised due to handling equipment, machinery, and health issues as a result of smoke emissions.	To protect workers' safety.	Worker to wear Personal Protective Equipment (PPE).	EHS to create safety awareness and monitor noncompliance.	Daily during all phases	Safety Officer/Engineer

6: POTENTIAL IMPACTS AND SIGNIFICANCE

6.1: Construction Phase

Identified Impacts Construction Phase			
Impact	**Significance Rating Before Mitigation**	**Proposed Mitigation**	**Significance Rating after Mitigation**

Direct Impacts			
1. Invasion and establishment of alien and/or invasive vegetation	**Medium Negative (-)**	• Immediate revegetation of all bare soil areas must take place. The species utilized must be determined by a suitably qualified specialist. • A monitoring programme should be implemented to enforce continual eradication of alien and invasive species, especially on wetland and open space systems.	**Low Negative (-)**
2. Increased sediment load in the valley bottoms due to soil and dust runoff as well as storm water being released into the environment.	**Medium Negative (-)**	• Immediate revegetation of all bare soil areas must take place. The species utilized must be determined by a suitably qualified specialist. • Where possible, storm water must be conveyed through grassed swales rather than concrete channels to aid infiltration and reduce run-off. • Berms and/or drainage channels must be constructed around all infrastructures and must be checked regularly for any structural damage or blockages.	**Low Negative (-)**

3. Noise generation and disturbance during construction activities	**Medium Negative (-)**	• Limit construction activities, as far as practically possible, to normal working hours, i.e. 7am to 5pm weekdays. • Should work take place after hours, nearby residents should be notified. • Signage with the contact details of the responsible person should be provided at the site for residents with complaints in this regard. • A complaints register should be kept to document complaints and the corrective action taken. • No loud music to be allowed on site.	**Very Low Negative (-)**
4. Increase in dust during construction	**Medium Negative (-)**	• Limit vegetation disturbance outside the site/construction footprint. • Topsoil should be cleared in a phased manner to avoid large areas of unconsolidated soils. • Soil stockpiles should be covered, wetted or otherwise stabilized to prevent wind erosion and dust generation. • Topsoil should be replaced on undeveloped portions of the site and the footprints re-vegetated immediately after construction. • A water cart or enough watering equipment should be available to wet soils during windy days if wind-blown sand and dust becomes a problem. • Speed limits on the access road should be limited to 25 km/h and strictly enforced	**Low Negative (-)**

5. Soil erosion of disturbed and unconsolidated soil in construction footprints	**Medium Negative (-)**	• Site offices, storage area, construction areas, material lay-down areas, access routes, infrastructure footprints and No-Go areas should be clearly demarcated. • Limit vegetation disturbance outside the construction area. • Storm water on the site must be controlled for the duration of construction by employing appropriate temporary storm water control structures e.g. cut-off berms. • Topsoil should be cleared in a phased manner to avoid large areas of unconsolidated soils. • Topsoil should be removed and stockpiled in an appropriate manner: Stockpiled separately from subsoil, monitored for- and protected from erosion and kept clear from exotic vegetation. • Topsoil should be replaced on undeveloped portions of the site and the footprints revegetated immediately after construction. • Re-vegetated areas should be watered until vegetation has become established. • Should erosion scars begin to form on the landscape, erosion counter measures should be implemented immediately. • Erosion control and construction disturbance should be an important monitoring facet falling under the control of the Environmental Control Officer (ECO), who should be appointed to implement the Environmental management Programme (EMPr) during the construction and site rehabilitation phases of the project.	**Very Low Negative (-)**

6. Soil compaction	**Medium Negative (-)**	• Site offices, storage area, construction areas, material lay-down areas, access routes, infrastructure footprints and No-Go areas should be clearly demarcated. • Vehicles should only move in those areas clearly demarcated as roads. • All areas outside the demarcated areas must be ripped and revegetated. • Revegetation species must be determined by a suitably qualified specialist. • A monitoring Programme for the revegetated areas must be put in place.	**Low Negative** (-)
7. The outbreak of fire on the site during construction.	**Medium Negative** (-)	• Open fires used for cooking should be avoided where possible. • If such a fire is truly necessary, it should be made in demarcated areas (within the construction camp) that have little vegetation or other flammable substances in close proximity. • Cigarette butts must be disposed of in one of the litter bins provided. • Exotic vegetation on the site must be eradicated.	**Very Low Negative (-)**
8. Generation of waste during construction.	**Medium Negative (-)**	• Construction waste (e.g. packaging material, unused materials) must be disposed of at a registered waste disposal facility. • No construction waste should be stockpiled on site. • Adequate litter bins should be provided at the site for waste generated by construction personnel. • Litter bins should be emptied on a regular basis and waste disposed of at a registered waste disposal facility.	**Very Low Negative (-)**

9. Pollution of surface and groundwater due to chemical, oil and fuel spills.	**Medium Negative (-)**	• Generators and fuel supply needed during construction must be placed on trays, which rest on clean soil. • If generators are to be used throughout the operational phase, they should be placed on dripping trays on cement blocks. • No cement/concrete mixing is to take place on the soil surface. Cement mixers should be mixed on plastic sheets or large trays to prevent accidental spills from coming into contact with the soil surface. • Vehicles and construction equipment should be serviced at a demarcated workshop area that is properly roofed and has a concrete floor. • Vehicles should be checked for leaks to ensure no fuel, oil or other similar pollutants pollute the soils. • Ensure secure, bunded storage of materials on site, particularly hazardous materials such as chemicals and fuels. • Already established chemical toilets on the site should be suitably maintained.	**Very Low Negative**
10. Several temporary employment and skills development opportunities will be created during the construction phase.	**Medium Positive (+)**	• Source local labour as far as possible. • Employ previously disadvantaged people as far as possible.	**High Positive (+)**

Indirect Impacts			
11. Risk to human health and safety due to moving construction machinery.	**High Negative (-)**	• Construction footprints, including site offices, storage areas, materials lay-down areas, stockpile area, and workers rest areas should be clearly demarcated. • All construction activities should be limited to the demarcated area. • Access to the demarcated construction area should be strictly controlled. • Entry points and access routes to the site must be clearly marked and traffic limited to those areas. • Suitable information and warning signage should be erected before construction commences. • Speed travelled by vehicles must be kept to a minimum and speed limits enforced. • Ensure that there is a first aid facility and trained first aiders at the site.	**Low Negative (-)**
Cumulative impacts			
None anticipated.	**N/A**	**N/A**	**N/A**

6.2 Operational Phase

Identified Impacts Operation Phase			
Impact	**Significance Rating Before Mitigation**	**Proposed Mitigation**	**Significance Rating after Mitigation**
Direct Impacts			
1. Pollution of surface and groundwater due to chemical, oil and fuel spills.	**Medium Negative (-)**	• If generators are to be used throughout the operational phase, they should be placed on dripping trays on cement blocks. • Vehicles and construction equipment should be serviced at a demarcated workshop area that is properly roofed and has a concrete floor. • Vehicles should be checked for leaks to ensure no fuel, oil or other similar pollutants pollute the soils. • Ensure secure, bunded storage of materials on site, particularly hazardous materials such as chemicals and fuels. • Already established chemical toilets on the site should be suitably maintained.	**Very Low Negative (-)**
2. Invasion and establishment of alien and/or invasive vegetation	**Medium Negative (-)**	• Immediate revegetation of all bare soil areas must take place. The species utilized must be determined by a suitably qualified specialist.	**Low Negative (-)**

		• A monitoring Programme should be implemented to enforce continual eradication of alien and invasive species, especially on wetland and open space systems.	
3. Increased sediment load in the valley bottoms due to soil and dust runoff as well as storm water being released into the environment.	**Medium Negative (-)**	• Immediate revegetation of all bare soil areas must take place. The species utilized must be determined by a suitably qualified specialist. • Where possible, storm water must be conveyed through grassed swales rather than concrete channels to aid infiltration and reduce run-off. • Berms and/or drainage channels around all infrastructures must be checked regularly for any structural damage or blockages.	**Low Negative (-)**
4. Generation of waste from day-to-day activities.	**Medium Negative (-)**	• Adequate litter bins should be provided at the site for waste generated by construction personnel. • Litter bins should be emptied on a regular basis and waste disposed of at a registered waste disposal facility.	V**ery Low Negative (-)**
5. Employment opportunities (long term).	**Medium Positive (+)**	• Source local labour as far as possible. • Employ previously disadvantaged people as far as possible.	**High Positive (+)**
6. Potential contamination of groundwater due to sewage leaks and spills.	**Medium Negative (-)**	• Ensure that the conservancy tanks and associated infrastructure are designed and constructed in accordance with DWAS and municipal standards. • Conduct pressure tests on the infrastructure in order to detect and repair any leaks before the infrastructure is commissioned.	**Low Negative (-)**

		• No industrial, trade or manufacturing waste, refuse or effluent shall be discharged into any conservancy tanks. • Provide proper training to maintenance personnel in the management and operation of conservancy tanks. • Ensure that a reputable service provider with a proven track record is appointed to empty conservancy tanks. • The access road to the conservancy tanks must be maintained in order to provide access for vacuum tankers. • Groundwater should be tested every six months for potential contamination and remedial action taken if necessary.	
Indirect impacts			
7. Potential impact on the character and —sense of place of the surrounding area.	**Neutral (o)**	**None proposed**	**Neutral (o)**
Cumulative impacts			
None Anticipated	**N/A**	**N/A**	**N/A**

6.3 Decommissioning Phase

Identified Impacts Decommissioning Phase
It is not anticipated that this project will be decommissioned soon. Should the facility be decommissioned in the future, the Environmental Procedures and statutory requirements applicable at the time must be complied with, and the area restored to its original condition.

6.4 No Go Alternative

Identified Impacts Construction Phase			
Impact	**Significance Rating Before Mitigation**	**Proposed Mitigation**	**Significance Rating after Mitigation**
Direct Impacts			
1. Continued and increased invasion by exotic weeds	Medium Negative (-)	None Proposed	N/A
2. Continued soil erosion.	Medium Negative (-)	None Proposed	N/A

3. Persistence of the remaining indigenous vegetation patches may be compromised if the site is left vacant (alien plant invasion, fire risk, dumping).	Medium Negative (-)	None Proposed	N/A
Indirect impacts			
4. Several potential employment opportunities will not be realised.	High Negative (-)	None proposed.	**N/A**
D3.4.6 Cumulative impacts			
4. None anticipated.	**N/A**	**N/A**	**N/A**

7. ENVIRONMENTAL AWARENESS AND TRAINING PLAN

SANBI must appoint an independent Environmental Control Officer (ECO) whose duties are to also implement an effective environmental awareness plan aimed to educate workers and contractors in terms of the biodiversity on site, environmental risks associated with the proposed development and land management of the site. Training and/or awareness should be raised and effectively communicated prior to the commencement of the clearing phase. Training sessions should incorporate the management plans addressed in this EMPr as well as any new information and documentation provided by the ECO, as well as that of the Environmental Health & Safety (EHS) Officer. The ECO would be the most suitable person to conduct these training sessions, identifying sensitive environments as well as all the risks and impacts associated with the sugar cane development and the methods in which to deal with the impacts in order to avoid environmental degradation. Training sessions can be monitored by providing an attendance register indicating the workers that received training as well as evidence of the training and/or awareness received. These sessions would also need to be carried out throughout the operational phase of the development, at least once a year, as new information becomes available or new staff appointed.

8. CONCLUSIONS

This EMPr is ensuring that impacts associated with the development are kept to a minimum level. This EMPr has been prepared as “stand alone” document to be used as the basis for actively managing the activities as projects progress. This document outlines the overarching performance criteria, control strategies and corrective actions proposed accordingly. On balance, the benefits of the potential positive project impacts for the local community and beyond, namely vegetation conservation and protection of endangered species; scenery improved and cost savings to the facility users, are considered to outweigh the disadvantages of the potential minimum negative impact.

SANBI
Biodiversity for Life
South African National Biodiversity Institute

CONTRACT NO.: G306/2018

ASSESSMENT, DESIGN AND PROJECT MANAGEMENT OF REQUIRED NEW BUILDINGS & REPAIRS, RENOVATIONS & UPGRADES TO VARIOUS INFRASTRUCTURE ASSETS IN THE THOHOYANDOU BOTANICAL GARDEN, THOHOYANDOU, & NATIONAL ZOOLOGICAL GARDEN CAMPUSES BASED IN PRETORIA & MOKOPANE

GEOTECHNICAL INVESTIGATION REPORT

FOR

MOKOPANE BIODIVERSITY CONSERVATION CENTRE

OCTOBER 2019

PREPARED FOR:

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QUALITY CONTROL

Valid from	DECEMBER 2018 TO FINAL COMPLETION			
	Name	**Org.-unit**	**Date**	**Signature**
Approved				
Released				
Revised				
Reviewed				
Released	Tshuma, B.	PJN_PM	2019-10-12	
Reviewed	Msipa, V.	PJN_ENG	2019-10-12	
Prepared	Bloem, J.	GEOTHETA	2019-10-11	

REVISION LOG

Doc ID	**Rev**	**Rev Date**	**By**	**Revision Notes**
ZA2018_2008_SANBI_MBCC_GIR001	00	2019-10-12	BT	Issued for information.

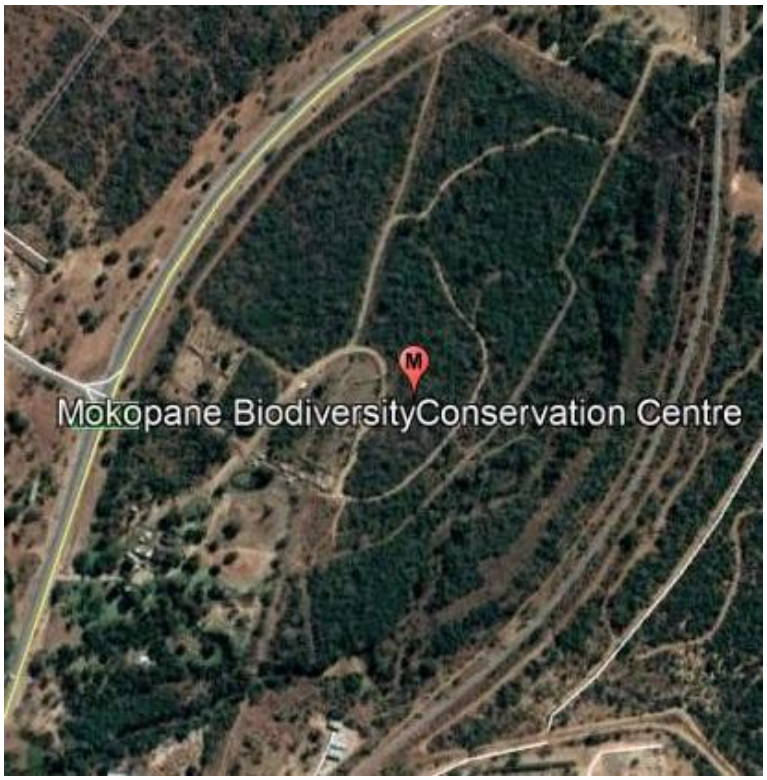
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GEOTHETA CONSULTING ENGINEERS AND SCIENTISTS

Proposed New Parking areas, Private Lapa, Office Building and Staff Parking at the Biodiversity Conservation Centres, Mokopane, Limpopo

GEOTECHNICAL INVESTIGATION REPORT



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1908543/01 Oct 2019

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Geotechnical Investigation and report

Report Reference Number: 1908543/01

Revision date: Oct 2019

1. Executive Summary

Projectneers Consulting commissioned Geotheta (Pty) Limited to prepare a geotechnical investigation report for the proposed new parking areas, private lapa, office building and staff parking at the Biodiversity Conservation Centre in Mokopane, Limpopo.

A near-surface geotechnical investigation was done and representative soil samples were retrieved.

The soils at the site comprise of fill (in some areas), consisting of builder's rubble, underlain by reworked residual (sandy silty clay) underlain by residual Shale (clayey silty gravel).

Due to the presence of the highly active clay to a depth of 2.0 m below surface, the construction of raft foundations is recommended above the residual to soft rock Shale.

No groundwater seepage was encounter during the investigations. However the presence of the ferricrete nodules below 1.1m could indicate the presence of a perched water level during the rainy season.

Sub-soil drainage needs to be constructed on site to protect the foundations from moisture ingress.

Laboratory results indicate that the material on site classify as MEDIUM TO HIGH according to the Van Der Merwe activity diagram.

Material excavation will be classed as *soft* to *Intermediate*.

Excess material from the foundation excavations will not be suitable as backfill material, therefore all construction material will have to be imported from a suitable source.

2. Disclaimer

2.1 Data provided to Geotheta

The opinions expressed in this Report have been based on the information supplied to Geotheta (Pty) Ltd (Geotheta) by Projectneers Consulting. The opinions in this report are provided in response to a specific request from Projectneers Consulting to do so. Geotheta has exercised all due care in reviewing the supplied information. Whilst Geotheta has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. Geotheta does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them.

2.2 Data obtained by Geotheta

Opinions presented in this report apply to the site conditions and features as they existed at the time of Geotheta's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this report, about which Geotheta had no prior knowledge nor had the opportunity to evaluate.

3. Statement of Geotheta Independence

Neither Geotheta nor any of the authors of this report have any material present or contingent interest in the outcome of this report, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of Geotheta.

Geotheta has no beneficial interest in the outcome of the technical assessment being capable of affecting its independence.

Geotheta's fee for completing this report is based on its normal professional rates and/or fees plus incidental expenses. The payment of that professional fee or expense is not contingent upon the outcome of the report.

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5. Introduction

5.1 Projectneers Consulting commissioned Geotheta (Pty) Limited to prepare a geotechnical investigation report for the proposed new parking areas, private lapa, office building and staff parking at the Biodiversity Conservation Centre in Mokopane, Limpopo.

5.2 A near-surface geotechnical investigation was undertaken to measure upper soil conditions and to provide geotechnical parameters for the design of the surface infrastructure and to be able to specify the construction excavations.

5.3 The near-surface investigation comprised of a series of test pits and the retrieval of samples for laboratory testing. This was then analysed to determine the foundation conditions and soil classification.

5.4 The site investigation work commenced on 10 September 2019, and the laboratory testing results were received by 30 September 2018.

6. Terms of reference

6.1 Geotheta submitted proposal reference 1908543 – Projectneers – Thohoyandou Geotech - P01 13 Aug 2019.

6.2 Based on the proposal, Projectneers Consulting appointed Geotheta on 20 September 2019.

7. Scope of work

The accepted scope of work is:

7.1 Site geotechnical investigation

The following was done to determine the foundation geotechnical characteristics of the area

7.1.1 Test Pits

7.1.2 A Tractor Loader Backhoe (TLB) excavator was deployed to site to excavate test pits.

7.1.3 The test pits were profiled by an engineering geologist to determine the strata layers and soil characteristics. Soil samples were retrieved as necessary for laboratory testing.

7.2 Laboratory testing

The samples were sent to a SANAS certified geotechnical soils laboratory for testing and analysis. Foundation indicator tests were done.

7.3 Report

This geotechnical report was written.

8. Site Location and Description

8.1 The site is located on the northern outskirts of Mokopane just of the R101 (see Figure 1).

8.2 The proposed facilities are located around the main entrance into the Biodiversity Conservation Centre. These areas are mostly covered with grass and trees.



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Figure 1 : Location of the site

9. GEOLOGY

9.1 Figure 2, below, indicates the regional geology of the area.

9.2 From the 1:250 000 geological map 2428 Nylstroom the site is underlain by Valian age hornfels, carbonaceous and calcareous shale, limestone and quartzite (Vst) of the Silverton Formation, Pretoria Group.

9.3 During the investigation a layer of fill was encountered underlain by clayey reworked residual material underlain by residual shale.



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Figure 2: Regional Geology

10. Engineering Geology

10.1 The influence of climate on weathering is expressed by the N-value (H.H. Weinert 1980). The most important is where N=5. Where N is more than 5, disintegration is dominant, and where N is less than 5, decomposition is dominant.

10.2 The Weinert N-value is 3.5 for this region, indicating that decomposition is the overriding process.

10.3 Weinert also mentions that where N is between 2 and 5, weathering profiles develop upwards from fresh rock to residual soil.

11. Method of Investigation

11.1 Desk study

11.1.1 The site location was submitted to the Council for Geosciences in Pretoria. It was confirmed that the site was most likely not underlain by dolomites.

11.1.2 The local geology was determined from the geological maps. The results of this study are discussed in section 11 and 12 above.

11.2 Test Pit

11.2.1 No formal grid spacing was used in setting out the test pit positions. Sites were selected instead to adequately cover the site, and to determine any variations in the site geology. The placement of the test pits was also determined by the placement of the previous foundations and structures on the site.

11.2.2 A total of 6 test pits were excavated. The positions of the test pits excavated are indicated on Figure 3.



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Figure 3: Test Pit Positions

11.2.3 The test pits were excavated with a Tractor Loader Backhoe (TLB) and soil profiles were logged according to the standard method of Jennings, Brink and Williams (1973). Test pit profiles and photographs are included in Appendices A and B respectively.

11.3 Soil Sampling

11.3.1 Samples were taken from test pit TP 1 to determine the material classification and the soil parameters of the soil present on site.

11.4 Laboratory Testing

11.4.1 The retrieved sample was submitted to Civilab in Hennopspark, Centurion, for testing.

11.4.2 Foundation Indicators tests were conducted on the samples.

11.4.3 The laboratory test results are included as Appendix C.

11.4.4 The results are discussed below.

12. Results

12.1 Site soils

12.1.1 The soil profiles of the different test pits encountered on the site are as follows

Test Pit No	Fill	Alluvial	Reworked residual	Residual to soft rock Shale	Test pit depth (m)
TP1	0.0 – 0.2	0.2 – 1.1	1.1 – 2.0	2.0– 2.6	2.6 – Partial Refusal
TP2	0.0 – 0.2	0.2 – 1.1	1.1 – 1.7	1.7 – 2.3	2.3 – Partial Refusal

TP3		0.0 – 0.8	0.8 – 1.7	1.7 – 2.4	2.4 – Partial Refusal
TP4		0.0 – 0.9	0.9 – 1.7	1.7 – 2.3	2.3 – Partial Refusal
TP5		0.0 – 0.8	0.8 – 1.1	1.1 – 1.7	1.7 – Partial Refusal
TP6		0.0 – 0.9	0.9 – 1.7	1.7 – 2.3	2.3 – Partial Refusal

12.2 Laboratory Results

12.2.1 The alluvial material classified as sandy clayey silt. The Plasticity Index is 25, the Liquid Limit 50 and the Linier Shrinkage 12.5. The value of the Grading Modulus is 0.35. The soil is HIGH activity on the van der Merwe Activity Diagram

12.2.2 The reworked residual material classified as sandy silty clay. The Plasticity Index is 25, the Liquid Limit 48 and the Linier Shrinkage 12.5. The value of the Grading Modulus is 0.37. The soil is HIGH activity on the van der Merwe Activity Diagram

12.2.3 The residual Shale classified as clayey silty gravel. The Plasticity Index is 25, the Liquid Limit 50 and the Linier Shrinkage 12.5. The value of the Grading Modulus is 1.76. The soil is MEDIUM activity on the van der Merwe Activity Diagram

13. Discussion of results

13.1 Soil profiles

13.1.1 The site is underlain by fill, consisting of builder's rubble, underlain by alluvial material, reworked residual and then by residual Shale. The typical soil profiles present on site can be summarised as follows:

- 0.0 – 0.2 m Fill (TP 1 and 2)
- 0.8 – 1.5 m Alluvial
- 0.8 – 1.5 m Reworked Residual (Pedogenic)
- 1.5 – 2.5 m Residual Andesite.

13.1.2 No groundwater seepage was encounter during the investigations. However the presence of the ferricrete could indicate the presence of a perched water level during the rainy season.

13.2 Construction material

13.2.1 The material on site cannot be used as engineered fill.

13.3 Foundation conditions

13.3.1 Due to the presence of the highly active clay to a depth of 2.0 m below surface, the construction of raft foundations is recommended above the residual to soft rock Shale.

13.3.2 All foundation excavations should be box cut to the depth of the foundation base.

13.3.3 The excavated material must be cut to spoil and replaced with a suitable G6 material and compacted in maximum 150mm thick layers to minimum density of 95% MOD AASHTO at -1% OMC

13.3.4 Lightly reinforced foundations can be used for foundation construction.

13.3.5 Maximum bearing capacity to be 150kPa.

13.3.6 The in-situ material tested have a MEDIUM to HIGH activity on the Van Der Merwe diagram. Therefore precautions must be taken to protect the foundations from moisture ingress.

13.4 Excavatability

13.4.1 The excavatability of the material on site was in the *Soft* to *Intermediate* range.

14. Summary, conclusions and recommendations

14.1 The site is underlain by fill, consisting of builder's rubble, underlain by alluvial material, reworked residual and then by residual Shale.

14.2 Six test pits were excavated using a TLB to determine the subsoil conditions on the site.

14.3 The excavatability of the material on site was *Soft* to *Intermediate*.

14.3.1 No groundwater seepage was encountered during the investigations. The presence of the ferricrete could indicates a possible perched water level during the rainy season.

14.4 Sub-surface drainage will therefore need to be constructed to prevent the accumulation of water in and/or against the foundations.

14.5 The foundations should also be protected from moisture ingress by constructing a concrete or paved apron around buildings and ensuring that all pipes are flexible and water tight.

14.6 Adequate storm water control needs to be implemented to direct the water away from the foundations.

14.6.1 Due to the presence of the highly active clay to a depth of 2.0 m below surface, the construction of raft foundations is recommended above the residual to soft rock shale.

14.6.2 All foundation excavations must be box cut to the depth of the foundation base.

14.6.3 The excavated material must be cut to spoil and replaced with a suitable G6 material and compacted in maximum 150mm thick layers to minimum density of 95% MOD AASHTO at -1% OMC

14.6.4 Lightly reinforced concrete can be used for foundation construction.

14.6.5 Maximum bearing capacity to be 150kPa.

Prepared by



Jaco Bloem – Pr Sci Nat

Reviewed by



_____

Ian Hammond Pr Eng

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

15. References

15.1 WEINERT, HH. 1980. The natural road construction materials of southern Africa. Pretoria: Academica.

15.2 JENNINGS JE, BRINK ABA, and WILLIAMS AAB. 1973. Revised guide to soil profiling for civil engineering purposes in southern Africa, The Civil Engineer in South Africa, Jan 1973 Trans SAICE, Vol 15 No 1.

15.3 VAN DER MERWE, DH. 1964. The prediction of heave from the plasticity index and the percentage clay fraction of soils. The Civil Engineer in South Africa. June 1964, pp 103-107.

15.4 UNIFIED SOIL CLASSIFICATION SYSTEM. CALTRANS

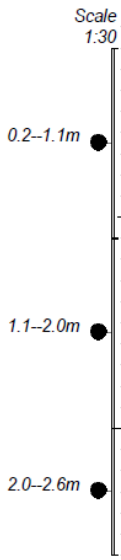
APPENDICES

Appendix A: Test Pit Profiles

Projectneers Consulting
Biodiversity Conservation Centre, Mokopane

HOLE No: TP 1
Sheet 1 of 1

JOB NUMBER: 1908543



0.00 Dry, Light brown, LOOSE, voided, SILTY SAND with rubble and tree roots. FILL.

0.20 Moist, Black and brown, FIRM, intact, SANDY CLAYEY SILT with roots and well rounded pebbles. Alluvial.

1.10 Moist, Red brown speckled white, FIRM TO STIFF, intact, SANDY SILTY CLAY with ferricrete nodules and roots. Pedogenic - Reworked Residual.

2.00 Moist, Orange and white, VERY DENSE, intact, CLAYEY SILTY GRAVEL. Residual to soft rock Shale.

2.60 Partial Refusal on soft rock Shale.

NOTES

1) No Groundwater seepage.
2) Partial Refusal at 2.6m.
3) Disturbed Sample taken at 0.2--1.1m.
4) Disturbed Sample taken at 1.1--2.0m.
5) Disturbed Sample taken at 2.0--2.6m.

CONTRACTOR : DotAfri
MACHINE : TLB
DRILLED BY :
PROFILED BY : J Bloem
TYPE SET BY : JB
SETUP FILE : STANDARD.SET

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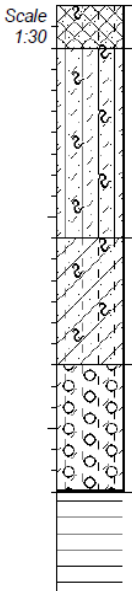
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X-COORD :
Y-COORD :

HOLE No: TP 1

Projectneers Consulting
Biodiversity Conservation Centre, Mokopane

HOLE No: TP 2
Sheet 1 of 1

JOB NUMBER: 1908543



0.00	Dry, Light brown, LOOSE, voided, SILTY SAND with rubble and tree roots. FILL.
0.20	Moist, Black and brown, FIRM, intact, SANDY CLAYEY SILT with roots and well rounded pebbles. Alluvial.
1.10	Moist, Red brown speckled white, FIRM TO STIFF, intact, SANDY SILTY CLAY with ferricrete nodules and roots. Pedogenic - Reworked Residual.
1.70	Moist, Orange and white, VERY DENSE, intact, CLAYEY SILTY GRAVEL. Residual to soft rock Shale.
2.30	Partial Refusal on soft rock Shale.

NOTES

1) No Groundwater seepage.

2) Partial Refusal at 2.3m.

CONTRACTOR : DotAfri
MACHINE : TLB
DRILLED BY :
PROFILED BY : J Bloem

TYPE SET BY : JB
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : TRENCH
DATE : 10.09.2019
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Y-COORD :

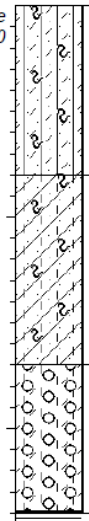
HOLE No: TP 2

Projectneers Consulting
Biodiversity Conservation Centre, Mokopane

HOLE No: TP 3
Sheet 1 of 1

JOB NUMBER: 1908543

Scale 1:30



0.00 Moist, Black and brown, FIRM, intact, SANDY CLAYEY SILT with roots and well rounded pebbles.
Alluvial.

0.80 Moist, Red brown speckled white, FIRM TO STIFF, intact, SANDY SILTY CLAY with ferricrete nodules and roots.
Pedogenic - Reworked Residual.

1.70 Moist, Orange and white, VERY DENSE, intact, CLAYEY SILTY GRAVEL.
Residual to soft rock Shale.

2.40 Partial Refusal on soft rock Shale.

NOTES

1) No Groundwater seepage.

2) Partial Refusal at 2.6m.

CONTRACTOR : DotAfri
MACHINE : TLB
DRILLED BY :
PROFILED BY : J Bloem
TYPE SET BY : JB
SETUP FILE : STANDARD.SET

INCLINATION :
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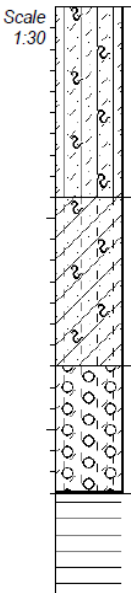
ELEVATION :
X-COORD :
Y-COORD :

HOLE No: TP 3

Projectneers Consulting
Biodiversity Conservation Centre, Mokopane

HOLE No: TP 4
Sheet 1 of 1

JOB NUMBER: 1908543



0.00 Moist, Black and brown, FIRM, intact, SANDY CLAYEY SILT with roots and well rounded pebbles.
Alluvial.

0.90 Moist, Red brown speckled white, FIRM TO STIFF, intact, SANDY SILTY CLAY with ferricrete nodules and roots.
Pedogenic - Reworked Residual.

1.70 Moist, Orange and white, VERY DENSE, intact, CLAYEY SILTY GRAVEL.
Residual to soft rock Shale.

2.30 Partial Refusal on soft rock Shale.

NOTES

1) No Groundwater seepage.

2) Partial Refusal at 2.3m.

CONTRACTOR : DotAfri
MACHINE : TLB
DRILLED BY :
PROFILED BY : J Bloem
TYPE SET BY : JB
SETUP FILE : STANDARD.SET

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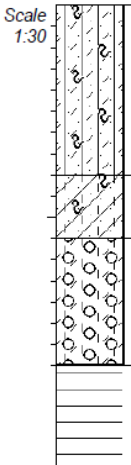
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X-COORD :
Y-COORD :

HOLE No: TP 4

Projectneers Consulting
Biodiversity Conservation Centre, Mokopane

HOLE No: TP 5
Sheet 1 of 1

JOB NUMBER: 1908543



0.00	Moist, Black and brown, FIRM, intact, SANDY CLAYEY SILT with roots and well rounded pebbles. Alluvial.
0.80	Moist, Red brown speckled white, FIRM TO STIFF, intact, SANDY SILTY CLAY with ferricrete nodules and roots. Pedogenic - Reworked Residual.
1.10	Moist, Orange and white, VERY DENSE, intact, CLAYEY SILTY GRAVEL. Residual to soft rock Shale.
1.70	Partial Refusal on soft rock Shale.

NOTES

1) No Groundwater seepage.

2) Partial Refusal at 1.7m.

CONTRACTOR : DotAfri
MACHINE : TLB
DRILLED BY :
PROFILED BY : J Bloem
TYPE SET BY : JB
SETUP FILE : STANDARD.SET

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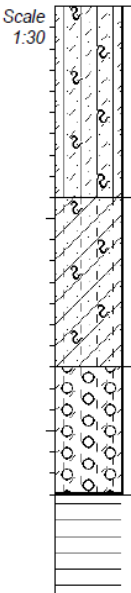
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X-COORD :
Y-COORD :

HOLE No: TP 5

Projectneers Consulting
Biodiversity Conservation Centre, Mokopane

HOLE No: TP 6
Sheet 1 of 1

JOB NUMBER: 1908543



0.00 Moist, Black and brown, FIRM, intact, SANDY CLAYEY SILT with roots and well rounded pebbles.
Alluvial.

0.90 Moist, Red brown speckled white, FIRM TO STIFF, intact, SANDY SILTY CLAY with ferricrete nodules and roots.
Pedogenic - Reworked Residual.

1.70 Moist, Orange and white, VERY DENSE, intact, CLAYEY SILTY GRAVEL.
Residual to soft rock Shale.

2.30 Partial Refusal on soft rock Shale.

NOTES

1) No Groundwater seepage.

2) Partial Refusal at 2.3m.

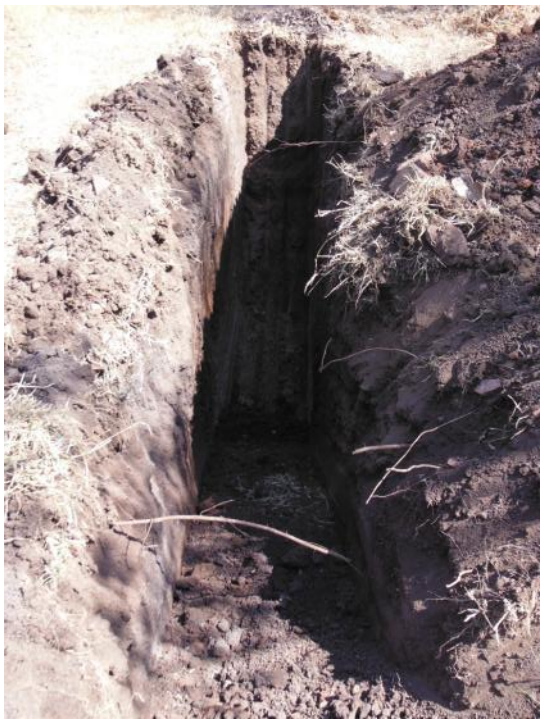
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DATE : 11/10/2019 13:53
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ELEVATION :
X-COORD :
Y-COORD :

HOLE No: TP 6

Appendix B: Test Pit Photos



TP1



TP2



TP3



TP4



TP5



TP6

Appendix C: Laboratory Results

144 Edward Street, Hennopspark, Centurion 0157
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E-mail: adminhennops@civilab.co.za
Website: www.civilab.co.za

sanas T0661

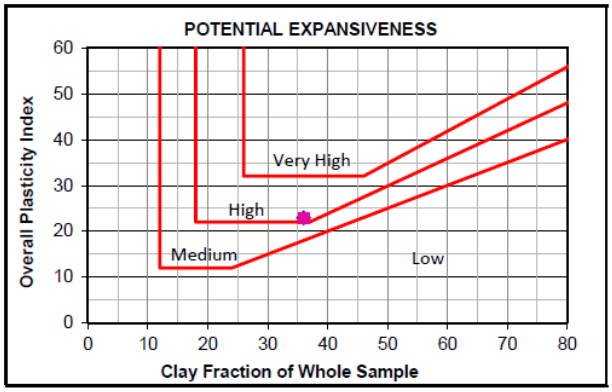
Civilab

Civil Engineering Testing Laboratories

Client	:	GEOTHETA (PTY) LTD	Date Received:		19/09/2019
Project	:	Mokopane	Date Reported:		10/10/2019
Project No	:	2019-H-715	Page No.	:	2 of 3

FOUNDATION INDICATOR

Laboratory Number		1 ◆	2 ■
Field Number		TP 1	TP 1
Client Reference			
Depth (m)		0.2 - 1.1	1.1 - 2.0
Position			
Coordinates	X		
	Y		
Description			
Aditional Information			
Calcrete / Crushed Stabilizing Agent			

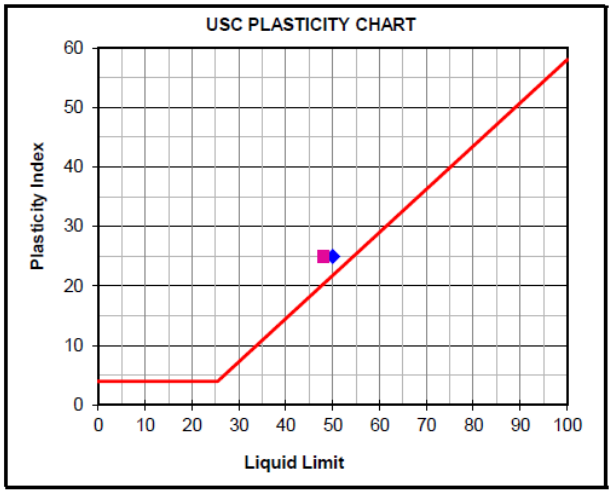


Moisture Content & Relative Density

Moisture Content (%)			
Relative Density (S.G.)			

Sieve Analysis (Wet Prep) — SANS 3001 GR1

Percentage Passing	100 mm	100	100
	75 mm	100	100
	63 mm	100	100
	50 mm	100	100
	37.5 mm	100	100
	28 mm	100	100
	20 mm	100	100
	14 mm	100	100
	5 mm	97	98
	2 mm	95	97
	1 mm	94	95
	0.425 mm	93	93
	0.250 mm	87	87
	0.150 mm	82	78
	0.075 mm	77	73
Grading Modulus		0.35	0.37

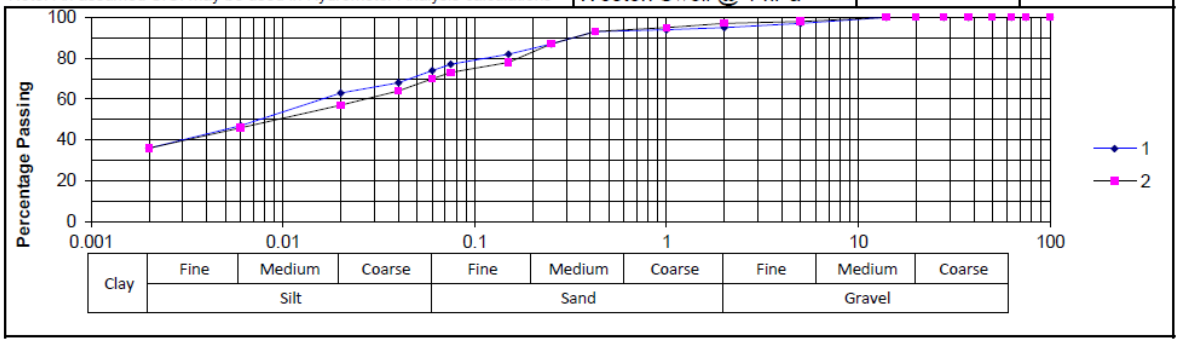


Hydrometer Analysis — SANS 3001 GR3

Percentage Passing	0.060 mm	74	70
	0.040 mm	68	64
	0.020 mm	63	57
	0.006 mm	47	46
	0.002 mm	36	36
Gravel	%	5	3
Sand	%	21	27
Silt	%	38	34
Clay	%	36	36

Note: An assumed S.G. may be used in Hydrometer Analysis calculations

Laboratory Number		1 ◆	2 ■
Atterberg Limits -425µ		**SANS 3001 GR10**	
Liquid Limit	%	50	48
Plasticity Index	%	25	25
Linear Shrinkage	%	12.5	12.5
Overall PI	%	23	23
Classifications			
HRB (AASHTO)		A-7-6(20)	A-7-6(18)
Unified (ASTM D2487)		CH	CL
Weston Swell @ 1 kPa			



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Website: www.civilab.co.za

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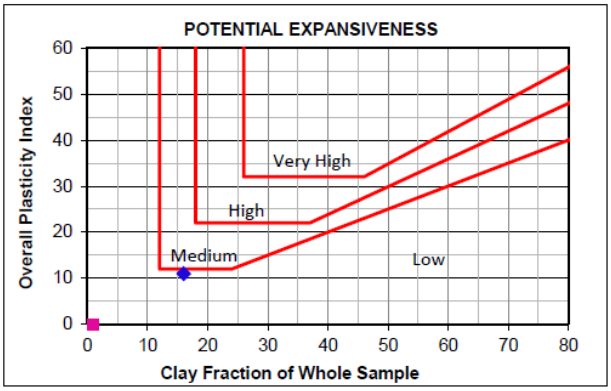
Civilab

Civil Engineering Testing Laboratories

Client	:	GEOTHETA (PTY) LTD	Date Received:		19/09/2019
Project	:	Mokopane	Date Reported:		10/10/2019
Project No	:	2019-H-715	Page No.	:	3 of 3

FOUNDATION INDICATOR

Laboratory Number		3 ◆	■
Field Number		TP 1	
Client Reference			
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Position			
Coordinates	X		
	Y		
Description			
Aditional Information			
Calcrete / Crushed Stabilizing Agent			

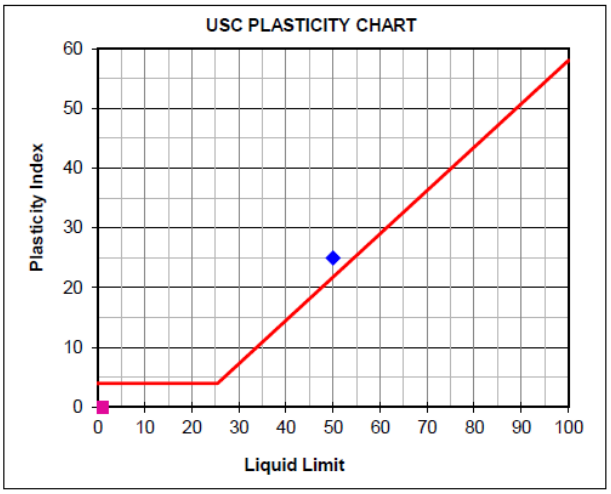


Moisture Content & Relative Density

Moisture Content (%)		
Relative Density (S.G.)		

Sieve Analysis (Wet Prep) — **SANS 3001 GR1**

Percentage Passing	100 mm	100	
	75 mm	100	
	63 mm	100	
	50 mm	100	
	37.5 mm	100	
	28 mm	100	
	20 mm	100	
	14 mm	100	
	5 mm	91	
	2 mm	46	
	1 mm	44	
	0.425 mm	42	
	0.250 mm	40	
	0.150 mm	38	
	0.075 mm	36	
Grading Modulus		1.76	

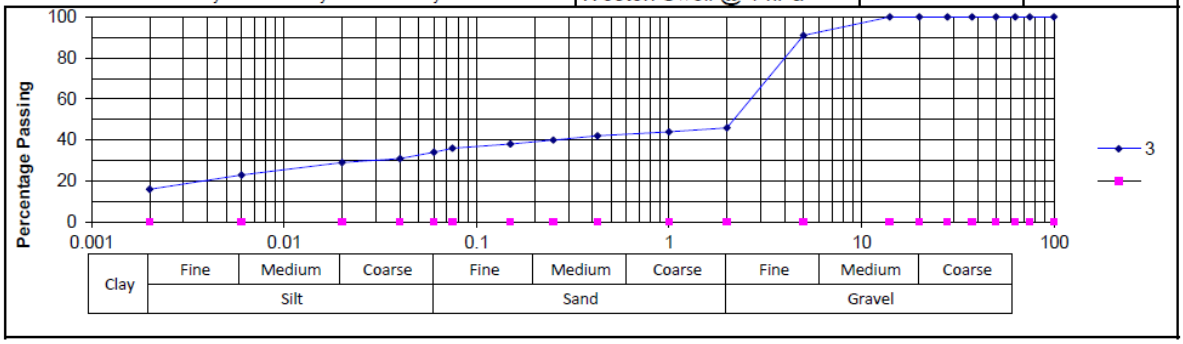


Hydrometer Analysis — **SANS 3001 GR3**

Percentage Passing	0.060 mm	34	
	0.040 mm	31	
	0.020 mm	29	
	0.006 mm	23	
	0.002 mm	16	
Gravel	%	54	
Sand	%	12	
Silt	%	18	
Clay	%	16	

Note: An assumed S.G. may be used in Hydrometer Analysis calculations

Laboratory Number		3 ◆	■
Atterberg Limits -425µ		**SANS 3001 GR10**	
Liquid Limit	%	50	
Plasticity Index	%	25	
Linear Shrinkage	%	12.5	
Overall PI	%	11	
Classifications			
HRB (AASHTO)		A-7-6(3)	
Unified (ASTM D2487)		SC	
Weston Swell @ 1 kPa			



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