SANBI
Biodiversity for Life
South African National Biodiversity Institute

THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI)

Contract No: SANBI: NZG427 / 2022

APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA

PROCUREMENT DOCUMENT

July 2022

Issued by:

The South African National Biodiversity Institute
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Name of tenderer: .....

Address: .....

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PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

Advertising date:	29 July 2022	**Closing date:**	22 August 2022
Closing time:	11:00	**Validity period:**	**90 days**

T1.1 Tender Notice and Invitation to Tender

- It is estimated that tenderers should have a **CIDB contractor grading of 5GB or higher**.
- Tender documents will be available as from 29 July 2022 and will be available ONLINE ONLY on the SANBI website www.sanbi.org (click on “Opportunities”).
- A **compulsory** site briefing session will take place on site on 04 August 2022 starting from 09:00 at the National Zoological Garden (Pretoria). To comply with the COVID-19 pandemic lockdown social distancing guidelines and protocols, only one representative per service provider will be allowed to attend the scheduled compulsory site briefing session. Bidders are advised that the compulsory briefing session will have one time slot, 09:00 – 10:00. Bidders who wish to attend are advised to make a booking with the **Principal Agent**, Ms. Dominique Fourie – dominique@gt.ebesa.co.za. Failure to make a booking will lead to non-entry into the garden. Bidders are encouraged to direct all technical and bidding procedure enquiries to the email addresses below.

Department:	Supply Chain Management
Email:	sanbi.tenders@sanbi.org.za
cc:	dominique@gt.ebesa.co.za
Cut-off date for enquiries:	**15 August 2022**

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. Dominique Fourie Tel: +27 11 327 6097 E-mail: dominique@gt.ebesa.co.za
SANBI Supply Chain Management:	sanbi.tenders@sanbi.org.za

The closing time and date for the receipt of Tenders is **11:00** on **22 August 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.

PART T: TENDER INFORMATION
Part T1: Tendering Procedures

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
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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	**The Employer is:** The South African National Biodiversity Institute Biodiversity Centre 2 Cussonia Avenue Brummeria Pretoria Private Bag X101 Silverton 0184
C.1.2	The Tender Documents issued by the Employer comprise the following documents: **PART T: TENDER INFORMATION** **Part T1: Tendering procedures** T1.1 - Tender notice and invitation to tender T1.2 - Tender data **Part T2: Returnable documents** T2.1 - List of returnable documents T2.2 - Returnable documents/Schedules **PART C: THE CONTRACT** **Part C1: Agreements 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)

Clause number	Tender Data
	Part C2: Pricing Data C2.1 - Pricing Instructions C2.2 - Bill of Quantities **Part C3: Scope of Works** C3.1 - Description of the works C3.2 - Design and Construction C3.3 - Drawings Annexure B: Set of Drawings *(provided separately)* **Part C4: Site Information** C4.1 - General site information C4.2 - Annexure F: Occupational Health and Safety Specification for Contractors who are on Contract with SANBI C4.3 - Annexure G: General Environmental Specification C4.4 - Annexure H: Geotechnical Information (N/A)
C.1.4	The employer's agent is: **EBESA ARCHITECTS (PTY) LTD** Ground floor, 34 6th street, Parkhurst, Johannesburg, 2193 Contact person: Dominique Fourie Tel: +27 11 327 6097 Email: dominique@gt.ebesa.co.za
C.1.6.1	Contract will be awarded to the tenderer who achieved highest number of evaluation points.
C.1.6.2	A competitive negotiation procedure will not be followed.
C.1.6.3	A two stage-system will be followed.
C.2.1	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, 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 **5GB** class of construction work; and 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 **5GB** 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.2.7	The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender.
C.2.8	The last date for request for clarifications will be on the 15 August 2022.
C.2.12	Replace contents Alternative offers will not be permitted
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 (files in PDF format) 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 IN THE COPY WILL LEAD TO THE BID BEING DISQUALIFIED. The original document will be placed in one envelope and the one copy 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. The financial envelope must contain the words NOT TO BE OPENED WITH THE TECHNICAL ENVELOPE.
C.2.13.9	Telephonic, telegraphic, telex, facsimile or e-mailed 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, Pretoria National Botanical Garden, 2 Cussonia Ave, Brummeria, Pretoria, Gauteng Province Identification details: Tender number: SANBI: NZG427 / 2022 Title of Tender: APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
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.

Clause number	Tender Data
C2.16.3	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 or C.2.18 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.2.17	Provide clarification of a tender offer to a request to do so from the employer during the evaluation of tender offers.
C.2.18	Any additional information requested under this clause must be provided within 5 working days of the date of request. 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 tenderers
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)** 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. **4)** An undertaking on the bidding company's letterhead that only locally produced cement will be used. **5)** A valid certified copy or original Broad-Based Black Economic Empowerment **(B-BBEE) Status Level 1 certificate or a sworn affidavit.** . 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 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 a consolidated B-BBEE certificate or sworn affidavit, as well as a joint venture agreement that clearly outlines each party's percentage involvement or role. 4) In the case of a Joint Venture/Consortium the tax Compliance status Pin must be submitted for each member of the Joint Venture/Consortium."
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.3.5.1	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**.

Clause number	Tender Data
C.3.13	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; d) the tenderer has not : a. abused the Employer's Supply Chain Management System; or b. 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 with 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 (refer to T2.1.17). h) A copy of Tax Compliance Status Pin i) A valid certified copy or original Broad-Based Black Economic Empowerment (B-BBEE) Status Level 1 certificate or sworn affidavit. 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.**

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 Bill 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 tenderers, 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-criterion are indicated in brackets.

FUNCTIONALITY CRITERIA		
ID	**CRITERIA**	**POINTS**
1	**Implementation method and project plan or programme** • Method to be followed in delivering this project • Realistic Implementation Plan with Timeframes	**30** (20) (10)
2	**Contractor's Experience** • List three projects with similar scope of work completed in the last five years, completion certificate attached 1. Each Completion Certificate is equivalent to **5 points** • Provide four reference letters on the Client's Letterhead for both past and current projects of similar value or higher. 1. Each positive Reference letter is equivalent to **5 Points**	**35** (15) (20)

3	**Contractor's Capability** Proposed personnel: 1. Site Agent 2. Health and Safety Personnel 3. Construction Manager / Supervisor • Provide CVs for proposed key personnel (as above) indicating: o Previous work experience o Total number of years' working experience in construction o Individual experience of similar work in last five years	**35** (25)
	Note: Each CV with 10 years or more experience will receive a maximum of 10 points. o Qualifications or artisan's certification or other recognised training courses completed o Membership of professional bodies or guilds (e.g. SACPCMP / ECSA) (5 Points)	(5)
	Availability of Plant & Equipment o Equipment owned by Contractor (Proof of Registration papers) or o Equipment to be rented (if any) (Letter of Intent from the Supplier) – with preferred rental companies	(5)
TOTAL		**100**

Sub-Criteria	Points
Combined CV experience of less than 5 years	5
Combined CV experience of 5 years or more	10
Combined CV experience of 10 years or more	15
Combined CV experience of 15 years or more	20
Combined CV experience of 20 years or more	25

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 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

3.2 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
(1) The scorecard shall be submitted as a certificate attached to Returnable Schedule Form T2.1.06; and
(2) 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

(3) The Verification Certificate must be valid at the tender closing date; and
(4) 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
(5) Compliance with any other information requested to be attached to Form T2.1.06; and
(6) 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
(7) Failure to submit a valid verification certificate will result in the award of 0 (zero) points for preference; and
(8) In the event of a joint venture (JV), a consolidated B-BBEE verification certificate in the name of the JV shall be submitted.

3.3 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 B

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 in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or

   iii) incompatibility or contradictory interests exist between an employee and the 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 complies 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.

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.

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 2: Returnable Documents

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 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 (T2.1.01)	1 Page	■ Yes □ No
Resolution of Board of Directors to enter into consortia or JV's (T2.1.02) (If Applicable)	2 Pages	■ Yes □ No
Special Resolution of Consortia or JV's (T2.1.03) (If Applicable)	3 Pages	■ Yes □ No
Schedule of proposed sub-contractors (T2.1.04)	1 Page	■ Yes □ No
Capacity of Tenderer (T2.1.05)	3 Pages	■ Yes □ No
Preference Point System (T2.1.06)	6 Pages	■ Yes □ No
Schedule of Key Personnel (T2.1.07)	1 Pages	■ Yes □ No
Compensation of Occupational Injuries and Disease Act (COIDA) (T2.1.09)	1 Page	■ Yes □ No

2. OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Tender document name	Number of pages issued	Returnable document
Declaration of Interest (T2.1.10)	2 Pages	■ Yes □ No
Medical Certificate for the confirmation of permanent disabled status (T2.1.11)	1 Page	■ Yes □ No
Proof of registration with Construction Industry Development Board (T2.1.12)	1 Page	■ Yes □ No
Copy of CSD Registration Certificate (T2.1.13)	1 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 (T2.1.14)	1 Page	■ Yes □ No
Compulsory Enterprise Questionnaire (T2.1.15)	3 Pages	■ Yes □ No
Declaration certificate for local production and content for designated sectors (SBD 6.2)	8 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 Bill of Quantities	79 Pages	■ Yes □ No

C1.1 Form of Offer and Acceptance
C1.2 Contract Data
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
T2.1.01	Resolution of Board of Directors	
T2.1.02	Resolution of Board of Directors to enter into consortia or JV's (If Applicable)	
T2.1.03	Special Resolution of Consortia or JV's (If Applicable)	
T2.1.04	Schedule of proposed sub-contractors	
T2.1.05	Capacity of Tenderer	
T2.1.06	Preference Point System	
T2.1.07	Schedule of Key Personnel	
T2.1.09	Compensation of Occupational Injuries and Disease Act (COIDA)	
T2.1.10	Declaration of Interest	
T2.1.11	Medical Certificate for the confirmation of permanent disabled status	
T2.1.12	Proof of registration with Construction Industry Development Board	
T2.1.13	Copy of CSD Registration Certificate	
T2.1.14	Record of Addenda to tender documents	
T2.1.15	Compulsory Enterprise Questionnaire	

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
Form C1.1	Form of Offer and Acceptance	
Form C1.2	Contract Data – Part 1	
Form C2.2	Priced Bill of Quantities	
SBD 6.2	Declaration certificate for local production and content for designated sectors	

PART 2: RETURNABLE DOCUMENTS

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

T2.2 Returnable documents/Schedules

T2.1.01: 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

T2.1.02: 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

T2.1.03: SPECIAL RESOLUTION OF CONSORTIA OR JOINT VENTURES

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.*

T2.1.04: SCHEDULE OF PROPOSED SUBCONTRACTORS

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

We notify you that it is our intention to employ the following Subcontractors 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 Subcontractors 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 Subcontractor	**Nature and extent of work**	**Previous experience with Subcontractor**
1			
2			
3			
4			

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

Name of organisation:	

T2.1.05: CAPACITY OF TENDERER

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 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 artisans employed		**Unskilled employees employed**	
Categories of artisans	**Number**	**Categories of employees**	**Number**

1.1. Provide full particulars of:

Machinery	**Plant**	**Workshops**

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”.

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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								

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”.

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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**

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”.

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T2.1.06: PREFERENCE POINT SYSTEM

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2011

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 equal to or above R30 000 and up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 The value of this bid is estimated to be below R50 000 000.00 (all applicable taxes included) and therefore the 80/20 system shall be applicable.

1.3 Preference points for this bid shall be awarded for:

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

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

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

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

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

2. DEFINITIONS

2..1 **"all applicable taxes"** includes value-added tax, pay as you earn, income tax, unemployment Insurance fund contributions and skills development levies;

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

2.3 "**B-BBEE status level of contributor"** means the B-BBEE status received by a measured entity Based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;

2.4 **"bid"** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;

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

2.6 **"comparative price"** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;

2.7 **"consortium or joint venture"** means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract;

2.8 **"contract"** means the agreement that results from the acceptance of a bid by an organ of state;

2.9 **"EME"** means any enterprise with annual total revenue of R5 million or less.

2.10 **"Firm price"** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;

2.11 **"functionality"** means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;

2.12 **"non-firm prices"** means all prices other than "firm" prices;

2.13 **"person"** includes a juristic person;

2.14 **"rand value"** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;

2.15 **"sub-contract"** means the primary contractor's assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;

2.16 **"total revenue"** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the *Government Gazette* on 9 February 2007;

2.17 **"trust"** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and

2.18 **"trustee"** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

3. ADJUDICATION USING A POINT SYSTEM

3.1 The bidder obtaining the highest number of total points will be awarded the contract.

3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;.

3.3 Points scored must be rounded off to the nearest 2 decimal places.

3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.

3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.

3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. POINTS AWARDED FOR PRICE

4.1 THE 80/20 OR 90/10 PREFERENCE 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 comparative price of bid under consideration

Pt = Comparative price of bid under consideration

Pmin = Comparative price of lowest acceptable bid

5. Points awarded for B-BBEE Status Level of Contribution

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

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

5.2 Bidders who qualify as EMEs in terms of the B-BBEE Act must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EMEs with B-BBEE Status Level Certificates.

5.3 Bidders other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.

5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

5.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.

5.6 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.

5.8 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any Other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

6. BID DECLARATION

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

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

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

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

8 SUB-CONTRACTING

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

8.1.1 If yes, indicate:
(i) what percentage of the contract will be subcontracted? ..... %
(ii) the name of the sub-contractor? .....
(iii) the B-BBEE status level of the sub-contractor?.....
(iv) whether the sub-contractor is an EME? ..... YES / NO (delete which is not applicable)

9 DECLARATION WITH REGARD TO COMPANY/FIRM

9.1 Name of company/firm : .....

9.2 VAT registration number : .....

9.3 Company registration number : .....

9.4 TYPE OF COMPANY/ FIRM

Partnership/Joint Venture / Consortium
One person business/sole propriety
Close corporation
Company
(Pty) Limited
[TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....
.....
.....

9.6 COMPANY CLASSIFICATION

Manufacturer
Supplier
Professional service provider
Other service providers, e.g. transporter, etc.
[TICK APPLICABLE BOX]

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

9.8 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-BBE status level of contribution indicated in paragraph 7 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

(i) The information furnished is true and correct;

(ii) The preference points claimed 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 paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;

(iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any of the conditions of 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) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution

WITNESSES:

1. ……

2. ……

SIGNATURE(S) OF BIDDER(S)

……..

DATE:……..

ADDRESS: .....

.....

.....

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".

T2.1.07: SCHEDULE OF KEY PERSONNEL

The Tenderer shall list below the key personnel who will be engaged on the Contract by completing this schedule.

Key Contract Personnel Name	Job Title	Qualifications	Professional Registration	Proposed Project Position

- **T2.1.09: COMPENSATION OF OCCUPATIONAL INJURIES AND DISEASE ACT (COIDA)**

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

The tenderer is registered and in good standing with the compensation fund issued by the Department of Labour (Letter of good standing with COIDA).

T2.1.10: DECLARATION OF INTEREST

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 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 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 the _____ day of _____ (month)

   _____ (year)

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

COMMISSIONER OF OATHS

T2.1.11: MEDICAL CERTIFICATE FOR THE CONFIRMATION OF PERMANENT DISABLED STATUS

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 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 _____.

_____

Signature

_____

Date

OFFICIAL STAMP OF MEDICAL PRACTITIONER

T2.1.12: PROOF OF REGISTRATION WITH CONSTRUCTION INDUSTRY DEVELOPMENT BOARD

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 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:

T2.1.13: COPY OF CSD REGISTRATION CERTIFICATE

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

A copy of Central Suppliers Database (CSD) Registration Certificate must be included for evaluation purposes.

T2.1.14: RECORD OF ADDENDA TO TENDER DOCUMENTS

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 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

T2.1.15: COMPULSORY ENTERPRISE QUESTIONNAIRE

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

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: CIDB 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 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 official of any municipality or municipal 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:.....

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:

Description of services, works or goods	Stipulated minimum threshold
2.1. Steel Value-added Products - Fasteners	**100%**
2.2. Cement	**100%**

NB: For cement to be used as a component (e.g aggregate, premix, slab) and not in bag/bulk form, the bidder must attach an undertaking on the bidding company's letterhead that only locally produced cement will be used. (Failure to attach the undertaking will lead to disqualification).

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 are accessible on
https://www.resbank.co.za/en/home/what-we-do/statistics/key-statistics/selected-historical-rates

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):

.....

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.thedtic.gov.za/sectors-and-services-2/industrial-development/industrial-procurement/. 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.**
(C2) **Tender description:**
(C3) **Designated product(s)**
(C4) **Tender Authority:**
(C5) **Tendering Entity name:**
(C6) **Tender Exchange Rate:** USD ____ EU ____ GBP ____
(C7) **Specified local content %**

Note: VAT to be excluded from all calculations

		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)*

(C20) **Total tender value**	
(C21) **Total Exempt imported content**	
(C22) Total **Tender value net of exempt imported content**	
(C23) **Total Imported content**	
(C24) **Total local content**	
(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.**	
(D2)	**Tender description:**	
(D3)	**Designated Products:**	
(D4)	**Tender Authority:**	
(D5)	**Tendering Entity name:**	
(D6)	**Tender Exchange Rate:**	USD 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	Calculation of imported content: Foreign 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	Summary: Tender Qty	Exempted imported value
(D7)	*(D8)*	*(D9)*	*(D10)*	*(D11)*	*(D12)*	*(D13)*	*(D14)*	*(D15)*	*(D16)*	*(D17)*	*(D18)*

(D19) **Total exempt imported value**

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	Calculation of imported content: Foreign 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	Summary: Tender Qty	Total imported value
(D20)	*(D21)*	*(D22)*	*(D23)*	*(D24)*	*(D25)*	*(D26)*	*(D27)*	*(D28)*	*(D29)*	*(D30)*	*(D31)*

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

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

				Calculation of imported content						Summary	
Description of imported content	**Unit of measure**	**Local supplier**	**Overseas Supplier**	**Foreign 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**

D. Other foreign currency payments

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

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

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

This total must correspond with Annex C - C 23

Signature of tenderer from Annex B

Date:

SATS 1286.2011

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	**Tender No.**	
(E2)	**Tender description:**	
(E3)	**Designated products:**	
(E4)	**Tender Authority:**	
(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)*
		***(E9)* Total local products (Goods, Services and Works)**	R 0

(E10)	**Manpower costs**	(Tenderer's manpower cost)	R 0
(E11)	**Factory overheads**	(Rental, depreciation & amortisation, utility costs, consumables etc.)	R 0
(E12)	**Administration overheads and mark-up**	(Marketing, insurance, financing, interest etc.)	R 0
		***(E13)* Total local content**	R 0

This total must correspond with Annex C - C24

Signature of tenderer from Annex B

Date: _____

SATS 1286.2011

Annex F

Local Content Declaration - Summary Schedule

(C1)	**Tender No.**	
(C2)	**Tender description:**	National Zoological Gardens
(C3)	**Designated product(s)**	Cement
(C4)	**Tender Authority:**	South African National Biodiversity Institute
(C5)	**Tendering Entity name:**	
(C6)	**Tender Exchange Rate:**	Pula ____ EU ____ GBP ____
(C7)	**Specified local content %**	

Note: VAT to be excluded from all calculations

		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)*

(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: _____

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

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 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 APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA.

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: .....

.....

.....

Name & signature of witness ..... 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”.

Acceptance

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

The terms of the Contract are contained in

Part C1 Agreements and Contract Data *[which includes this 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 5.3.2 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 .....

.....

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".

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

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

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

C.1.2 Contract Data

C.1.2 Contract Data

The Conditions of Contract are the *General Conditions of Contract for Construction Works (Third Edition,2nd print, 2015)* published by the South African Institution of Civil Engineering. Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering (Tel: 011-805 5947).

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

Part 1: Data provided by the Employer

Clause	Data
1.1.1.13	**Clause 1.1.1.13: Defects Liability Period** The Defects Liability Period is **12 months,** measured from the date of the Certificate of Completion
1.1.1.14	**Clause 1.1.1.14: Due Completion Date** The time for achieving Practical Completion is as follows: **5 Months** after the Commencement date
1.1.1.15	The name of the Employer is **The South African National Biodiversity Institute,** represented by Mr Tanaka Mupudzi and/or such persons or person duly authorised thereto be the Employer in writing.
1.2.1.2	The Employer's address for receipt of communications is: **Delivery Address:** **Attention:** Deputy Director: Supply Chain Management Pretoria National Botanical Garden Biodiversity Centre, 2 Cussonia Avenue Brummeria, Pretoria **Postal Address:** **Attention:** Deputy Director: Supply Chain Management South African National Biodiversity Institute Private Bag X101 Silverton, Gauteng 0184

1.1.1.16	The name of the Engineer is **EBESA ARCHITECTS (PTY) LTD**
1.2.1.2	The address of the Engineer is: Ground floor, 34 6TH Street, Parkhurst, Johannesburg 2193
1.1.1.26	**Clause 1.3.: Pricing Strategy** The Pricing Strategy is a re-measurement contract.
3.1.3	**Clause 3.1.3: Specific Approval of the Employer Required** The Engineer is required to obtain the specific approval of the Employer before executing any of the following functions or duties: 1 Clause 6.3: Variations 2 Clause 5.11.1: Suspension of the Works 3 Clause 5.12: Extension of Time for Practical Completion
3.2.3	**Clause 3.2.3: Specific Approval of the Employer Required** The Employer's Agent is required to obtain the specific approval of the Employer before executing any of the following functions or duties: 1 Clause 6.3: Variations 2 Clause 5.11.1: Suspension of the Works 3 Clause 5.12: Extension of Time for Practical Completion
5.3.1	**Clause 5.3.1: Commencement of the Works** The documentation required before commencement with Works execution are: Health and Safety Plan (Refer to Clause 4.3) Initial programme (Refer to Clause 5.6) Security (Refer to Clause 6.2) Insurance (Refer to Clause 8.6) Cash flow projection
5.3.2	**Clause 5.3.2: Timeframe to deliver documentation** The time to submit the documentation required before commencement with Works execution is twenty-one (21) days.
5.3.3	**Clause 5.3.3: Time to instruct commencement of the Works** *Add the following to Clause 5.3.3 after the last sentence:* "The Contractor shall not commence working until they have an approved project specific health and safety plan in terms of the Occupational Health and Safety Act, 1993: Construction Regulations, 2014 and complied with the initial requirements thereof."
5.4.2	The access and possession of Site shall not be exclusive to the Contractor but as set out in the Site Information.

5.8.1	**Clause 5.8.1: Non-Working Times** The non-working days are Saturdays and Sundays. The special non-working days are: 1. All gazetted public holidays falling outside the year end break. 2. The year-end break
5.12.2.	**Clause 5.12.2.: Some reasons for extension of time** **Clause 5.12.2.2: Abnormal climatic conditions.** *Add the following:* Regardless of the cause of any delay an extension of time will only be considered if it can be shown that the activity delayed is on the critical path indicated on the Programme of Works (Clause 5.6.1). No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal Climatic Conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working days listed below for each month, then abnormal climatic conditions shall be deemed to exist, and an extension of time shall be granted in accordance with the provisions of that Clause. The number of days quoted below shall be regarded as a fair estimate of the delays to be anticipated and allowed for under normal climatic conditions where inclement weather prevents or disrupts work on the critical path. January 3 days May 1 days September 1 days February 6 days June 1 days October 2 days March 7 days July 1 days November 2 days April 5 days August 1 days December 4 days Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day delay is experienced. Should an extension of time be granted by the Engineer such extension of time will be added to the Time for Completion. It shall be further noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be entertained. Rainfall of 10mm or less per day shall be deemed to be normal climatic conditions.
5.13.1	**Clause 5.13.1: Penalty for Delay** The penalty for failing to complete the Works is R5 500 per day.
5.14.1	**Clause 5.14.1: Practical completion** The requirements for achieving Practical Completion are: Works to reach a state of readiness fit for intended purpose and occupation without danger/undue inconvenience to the Employer/public.
5.14.2	**Clause 5.14.2: Issue of Certificate of Practical Completion** *Replace* "the Employer's Agent" *in the second and third lines with the following*:

	", the Contractor shall notify the Employer's Agent, who shall inspect the Works and the Employer's Agent"
5.14.4	**Clause 5.14.4: Certificate of Completion** *Replace* "the Employer's Agent" *in the third line of the first paragraph with*: ", the Contractor shall notify the Employer's Agent, who shall inspect the works and the Employer's Agent"
5.16.3	**Clause 5.16.3: Latent defect liability** The latent defect period is five (5) years for building works.
6.2	**Clause 6.2: Security** The Form of Guarantee is to contain the wording of the pro-forma document as per the contract document. The liability of the guarantee shall be for 10% of the Approved Contract Sum.
6.8.2	**Clause 6.8.2: Contract Price Adjustment** Contract Price Adjustment **<u>is not applicable</u>**
6.8.3	**Clause 6.8.3: Variation in Cost of Special Materials** Price adjustments for variations in the costs of special materials are not allowed
6.10.1.5	**Clause 6.10.1.5: Interim Payments - Materials on Site** No percentage advance on materials on site but not yet built into the Permanent Works is allowed for, or will be paid.
6.10.3	**Clause 6.10.3: Retention Money** The percentage retention on the amounts due to the Contractor is 10% (ten percent). The limit of retention is 10% of the Contract Sum, including allowances for contingencies. This reduces to 5% upon the issue of the Certificate of Completion. The remaining 5% retention will be released upon the issue of the Final - Approval Certificate upon lapse of the defects liability period. Security plus Retention amount will not exceed 15% of the Contract Sum
6.10.4	**Clause 6.10.4: Delivery, dissatisfaction with and payment of payment certificate** *Replace* "28 days" *in the second last sentence with* "30 days"
6.10.6	**Clause 6.10.6: Set-Off and Delayed Payments** A guarantee in lieu of retention is not permitted
6.10.6.2	**Clause 6.10.6.2: Set-Off and Delayed Payments** *Replace the words* "prime overdraft rate certified by the Contractor's banker" *with the words* "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), will apply"
6.10.8	**Clause 6.10.8: Contractor's completion statement** *Replace* "28 days" *in the last sentence with* "30 days"
6.10.9	**Clause 6.10.9: Final payment certificate** *Replace* "28 days" *in the last sentence with* "30 days"

6.12	**Clause 6.12: Additional** *Add Clause 6.12 as follows:* In respect of any amount owed by the Contractor to the Employer, the Contractor shall pay the Employer 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), will apply
8.6.1	**Clause 8.6.1: Insurance** *Add the following:* **Damage to the Works** (a) Without in any way limiting the Contractor's obligations in terms of the Contract, the Contractor shall bear the full risk of damage to and/or destruction of the Works by whatever cause during construction of the Works and hereby indemnifies and holds harmless the Employer against any such damage. The Contractor shall take such precautions and security measures and other steps for the protection and security of the Works, as he may deem necessary. (b) The Contractor shall at all times proceed immediately to remove or dispose of any debris arising from damage to or destruction of the Works and to rebuild, restore, replace and/or repair the Works. (c) The Employer shall carry the risk of damage to or destruction of the Works and material paid for by the Employer that is the result, whether direct or indirect or proximate or remote, of the excepted risks as set out in Clause 8.6.2. (d) Where the Employer bears the risk in terms of this Contract, the Contractor shall, if requested to do so, reinstate any damage or destroyed portions of the Works and the costs of such reinstatement shall be measured and valued in terms of Clause 6.7 hereof. .
8.6.1.1.2	**Clause 8.6.1.1.2: Insurance** The value of the materials supplied by the Employer to be included in the insurance sum is -Nil.
8.6.1.1.3	**Clause 8.6.1.1.3: Insurance** The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is -Nil.
8.6.1.3	**Clause 8.6.1.3: Insurance** The limit of indemnity for liability insurance is R10 000 000.00 for any single claim – the number of claims to be unlimited during the construction.
8.6.1.5	**Clause 8.6.1.5: Additional Insurance** Additional Insurance is required for the following: a) Where the contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor's Policies of Insurance. .
10.1.5	**Clause 10.1.5: Employer's Agent's ruling on Contractor's Claim** *Add the following to Clause 10.1.5 before the last sentence*:

	"If the Employer's Agent does not respond in accordance with the foregoing procedure and timetable, either Party may consider that the claim has been rejected by the Employer's Agent and either Party may submit the dispute by issuing a Dispute Notice in terms of Clause 10.3.1.'
10.3.1	**Clause 10.3: Dispute Notice** *Replace Clause 10.3.1.1 with the following* "The dispute arises from any ruling.":
10.5, 10.6, 10.7	**Clause 10.5, 10.6, 10.7: Dispute Resolution** Dispute resolution shall be by **Arbitration**.
11	**Clause 12: Confidentiality** The Contractor shall treat the details of the Works comprised in this Contract as private and confidential (save in so far as may be necessary for the purposes hereof) and shall not publish or disclose the same or any particulars thereof in any trade or technical paper elsewhere without prior written consent of the Engineer.
12	**Clause 13: Amendments in writing** No amendments of this Contract or of any provisions or terms hereof and no waiver or relaxation or suspension of any of the provisions or terms of this Contract shall be of any force or effect unless reduced to writing and signed by both the parties hereto.

PART 2: DATA PROVIDED BY THE CONTRACTOR

Clause

1.1.1.9 The Contractor is ……

1.2.1.2 The Contractor's address for receipt of communications is:

Physical address:	Postal address:
.....	.....
.....	.....
.....	.....
.....	.....

Telephone: .....

Fax: .....

Email: .....

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

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

C1.3 FORM OF CONSTRUCTION GUARANTEE

C1.3.1 PRO FORMA PERFORMANCE GUARANTEE

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: .....

Physical address: .....

"Employer" means: .....

"Contractor" means: .....

"Engineer" means: .....

"Works" means: .....

"Site" means: .....

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

"Contract Sum" means: The accepted amount inclusive of tax of R .....

Amount in words: .....

"Guaranteed Sum" means: The maximum aggregate amount of R .....

Amount in words: .....

"Expire Date" means: .....

CONTRACT DETAILS

Engineer issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

1 The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2 The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

3 The Guarantor hereby acknowledge that:

3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;

3.2 its obligation under this Performance Guarantee is restricted to the payment of money.

4 Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:

4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Engineer in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

4.2 A first written demand issued by the Employer to the guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;

4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.

5 Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:

5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or

5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and

5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.

7 Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded

monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

8 Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

9 Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.

10 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

11 The Guarantor chooses the physical address as stated above for the service of all notices for al purposes in connection herewith.

12 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

13 This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

14 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at .....

Date.....

Guarantor's signatory: (1) .....

Capacity .....

Guarantor's signatory: (2) .....

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

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

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

AGREEMENT MADE AND ENTERED INTO BETWEEN THE

.....

(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 am / we 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 MANDATORY

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

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

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C2.2	Bill of Quantities	88

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”.

PART C: THE CONTRACT
Part C2: Pricing Data

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

C2.1 Notes to Tenderer

C2.1.1 Project Description

The scope of works includes but is not limited to the following:
Refurbishments to existing:

1. Flamingo Restaurant
   - Replacement of main building roof sheeting, inclusive of gutters and downpipes.
   - Safe removal of existing barrel vaulted roof and replaced with new lean-to roof structure, inclusive of ceilings.
   - Refurbishment of existing exposed roof trusses.
   - Safe removal of existing ceilings and replaced with new suspended ceilings in the male and female ablutions as indicated.
   - Safe removal of the existing carpet tiles and replaced with new floor tiles in the existing Bar.
   - Cleaning of existing face brick walls and repainting of existing walls.
   - Replacement and refurbishment of existing doors and existing windows as indicated.
2. Duku Duku Restaurant
   - Refurbishment of existing male and female ablutions inclusive of wall-, floor- and ceiling finishes, toilets, basins, urinals, sanitary accessories, basin counters, door frames and doors
3. Waterhole Building:
   - Refurbishment of existing concrete roof waterproofing and rainwater disposal system.
   - Safe removal of existing thatch of thatched roof and replacement with new thatch appearance roof tiles.
4. Mountain Kiosk:
   - Safe removal of existing thatch of thatched roof and replacement with new thatch appearance roof tiles.
   - Refurbishment of kiosk counters as indicated.
5. Picnic Kiosk:
   - Safe removal of existing thatch of thatched roof and replacement with new thatch appearance roof tiles.
   - Safe removal of broken glazing in window and replaced with new safety glazing as indicated.

C2.1.2. General Notes

2.1 The tenderer's attention is drawn to, inter alia, the following as contained in this document:

2.1.1 The agreement is to be the JBCC® Principal Building Agreement (May 2018 Edition 6.2) prepared by the Joint Building Contracts Committee ® - NPC shall be the applicable building agreement, amended as

hereinafter described, together with the associated documentation as prepared by the Joint Building Contracts Committee (JBCC)

2.1.2 The Bills of Quantities have been drawn up in accordance with the "Standard System of Measuring Building Work Seventh Edition (Revised 2015)" published by the Association of South African Quantity Surveyors

2.1.3 The General 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 General Preambles, will be entertained

2.1.4 "Supplementary Preambles" are incorporated in the bills of quantities to satisfy the requirements of the project and shall take precedence over the provisions of the said General Preambles

2.1.5 Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the said General Preambles

2.1.6 The units of measurement described in the Bills of Quantities are metric units. Abbreviations which may be used in the Bills of Quantities are as follows:

mm	=	millimetre	m	=	linear metre
m2	=	square metre	m3	=	cubic metre
km	=	kilometre	ha	=	hectare
h	=	hour	kg	=	kilogram
t	=	ton	L	=	litre
kl	=	kilolitre	kN	=	kilonewton
MN	=	meganewton	MPa	=	megapascal
kW	=	kilowatt	%	=	percent
No	=	number	sum	=	lump sum
PC Sum	=	Prime Cost Sum			
Prov Sum	=	Provisional Sum			

PART C: THE CONTRACT
Part C2: Pricing Data

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
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C2.2 Bills of Quantities

Please refer to unpriced Bills of Quantities in Annexure A.

PART C: THE CONTRACT
Part C3: Scope of Work

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
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Status

Should any requirement or provision in the parts of the Scope of Work conflict with any requirement of any Standardised Specification, Particular Specification or any drawings, the order of precedence, unless otherwise specified, is:

Drawings

Scope of Work

Standardised Specifications

PART C: THE CONTRACT
Part C3: Scope of Work

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

C 3.1. Description of the Works

C3.1.1 Background

"The National Zoological Garden of South Africa is an 80-hectare zoo located in Pretoria, South Africa. It is the national zoo of South Africa, and was founded by J. W. B. Gunning in 1899. Pretoria Zoo is one of the eight largest zoos in the world and one of the most highly rated" – source Wikipedia

The Zoo operated as an independent entity until it was absorbed into SANBI (the South African National Biodiversity Institute) and this umbrella body allowed for the creation of a much-needed budgetary allocation for the execution of many projects that were sorely needed by the NZG (National Zoological Garden). The NZG is not only considered a national heritage resource, it is also considered by many as a World Heritage Resource.

In March of 2021, Ebesa Architects (Pty) Ltd with sub-consultants Endecon Ubuntu Gauteng (Pty) Ltd and Idnil Professional Consultants CC were appointed MULTIDISCIPLINARY TEAM AS THE PRINCIPAL AGENT FROM THE SANBI PANEL OF PROFESSIONALS G360/2020 FOR THE ASSESSMENT, DESIGN AND PROJECT MANAGEMENT OF RENOVATIONS TO SELECTED BUILDINGS, INCLUDING FOOD AND BEVERAGE OUTLETS, for the South African National Biodiversity Institute (SANBI) at the National Zoological Garden in Pretoria.

C3.1.2 Scope of Works

The scope of works per phase includes, but is not necessarily limited to, the following:

Note: All works to be carried out according to SANS standards

Refurbishments to existing:

1. Flamingo Restaurant
   - Replacement of main building roof sheeting, inclusive of gutters and downpipes.
   - Safe removal of existing barrel vaulted roof and replaced with new lean-to roof structure, inclusive of ceilings.
   - Refurbishment of existing exposed roof trusses.
   - Safe removal of existing ceilings and replaced with new suspended ceilings in the male and female ablutions as indicated.
   - Safe removal of the existing tiles and carpet tiles and replaced with new floor tiles in the existing Bar.
   - Cleaning of existing face brick walls and repainting of existing walls.
   - Replacement and refurbishment of existing doors and windows as indicated.
2. Duku Duku Restaurant

- Refurbishment of existing male and female ablutions inclusive of wall-, floor- and ceiling finishes, toilets, basins, urinals, sanitary accessories, basin counters, door frames and doors.

3. Waterhole Building
   - Refurbishment of existing concrete roof waterproofing and rainwater disposal system.
   - Safe removal of existing thatch of thatched roof and replacement with new thatch appearance roof tiles.
4. Moutain Kiosk
   - Safe removal of existing thatch of thatched roof and replacement with new thatch appearance roof tiles.
   - Refurbishment of kiosk counters as indicated.
5. Picnic Kiosk
   - Safe removal of existing thatch of thatched roof and replacement with new thatch appearance roof tiles.
   - Safe removal of broken glazing in window and replaced with new safety glazing as indicated.

C3.1.3 Location of the Works

The project is located at the National Zoological Garden in Pretoria, Gauteng.

Part C3: Scope of Work

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

C3.2. Design & Construction

This project is for the appointment of a contractor for the renovation of the following facilities: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA

All designs for all structures have been completed and attached to this tender document to enable a calculation of an overall price for this project.

C3.2.1 Initial Basic Structural Information: (To be provided)

All structural designs and relevant documentations are provided for in this tender document.

C3.2.2 Site Camp

No major site camp is envisioned for this project, and should there be a need, the area must be kept to an absolute minimum. There are open areas around the Zoo which may be used for a small site camp. No large containers will be allowed for offices or storage. Water and electricity area available on site. Security of the site and materials is the sole responsibility of the Contractor.

C3.2.3 Equipment / Plant

No large plant is envisioned for the project. The majority of work should be labour intensive with hand operated tools. Should there be a need to bring large machinery on to the work site, it should be as per the arrangement with the Employer or Employer's representative. Any damage or disturbance of the site/infrastructure by large machinery will have to be remediated at the cost of the Contractor.

C3.2.4 Applicable Project Specifications

<u>Refer to the both the Scope of Work and the attached Designs</u>

PART C: THE CONTRACT

Part C3: Scope of Work

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

C3.3. DRAWINGS

C3.3.1 Drawings List:

ARCHITECTURAL:

Drawing Number:	Building:
01_221	FLAMINGO RESTAURANT
01_211	FLAMINGO RESTAURANT
01_212	FLAMINGO RESTAURANT
01_251	FLAMINGO RESTAURANT
01_203	FLAMINGO RESTAURANT
01_204	FLAMINGO RESTAURANT
01_301	FLAMINGO RESTAURANT
01_521	FLAMINGO RESTAURANT
01_531	FLAMINGO RESTAURANT
01_206	FLAMINGO RESTAURANT
03_201	DUKU DUKU RESTAURANT
02_202	WATERHOLE BUILDING
05&06_201	MOUNTAIN & PICNIC KIOSKS

ENGINEERING:

EG/3190/C/11/001	GENERAL CONSTRUCTION NOTES
EG/3190/C/5/001	FLAMINGO RESTAURANT
EG/3190/C/8/001	WATERHOLE BUILDING
EG/3190/SW/3/001	STORMWATER DETAILS
EG/3190/G/2/001	FLAMINGO RESTAURANT
EG/3190/G/2/002	FLAMINGO RESTAURANT

The drawings are contained in Annexure B provided separately.

PART C: THE CONTRACT
Part C4: Site Information

PROJECT TITLE:	APPOINTMENT OF A CONTRACTOR FOR THE RENOVATION OF THE FOLLOWING FACILITIES: FLAMINGO RESTAURANT, DUKU DUKU RESTAURANT, WATERHOLE BUILDING, MOUNTAIN KIOSK AND PICNIC KIOSK FOR THE SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE AT THE NATIONAL ZOOLOGICAL GARDEN IN PRETORIA
CONTRACT NO:	**SANBI: NZG427 / 2022**

C4.1. General Site Information

The proposed construction is to take place within the National Zoological Garden in Pretoria.

FIGURE 1: SITE LOCALITY PLAN - AERIAL PHOTO FROM CSG SHOWING CADASTRAL LAYOUT OF THE NZG

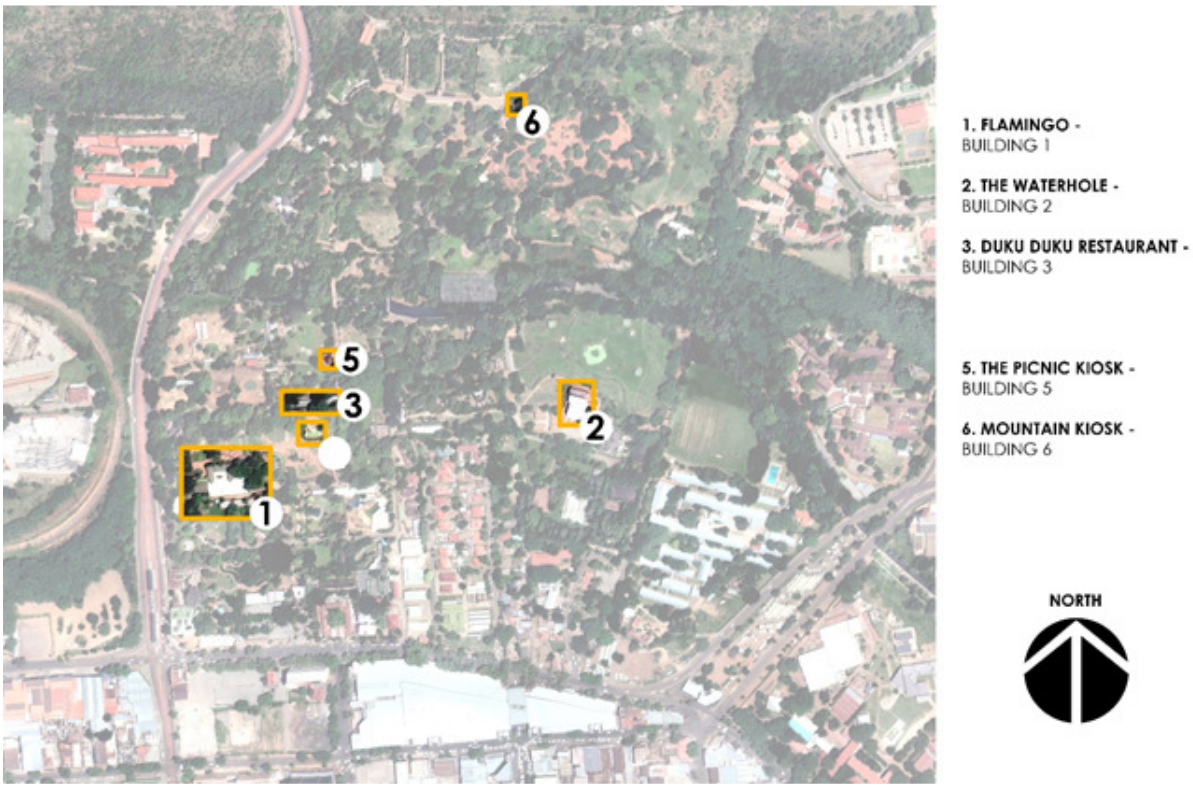

FIGURE 2: NATIONAL ZOOLOGICAL GARDENS (NZG) OVERALL LAYOUT WITH AFFECTED EXHIBITS HIGHLIGHTED.

C4.2. Annexure F

OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION FOR CONTRACTORS WHO ARE ON CONTRACT WITH SANBI

C4.2.1 Scope

This specification establishes general requirements to enable SANBI and the Contractors to satisfy the requirements of Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Construction Regulations, 2014 as amended.

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 to be a threat to the health and safety of persons.

This specification establishes generic health and safety requirements for health and safety as stated in the scope of work associated with a contract and

- provides the overarching framework within which the Contractor is required to demonstrate compliance with certain requirements for occupation health and safety established by the Occupational Health and Safety Act of 1993;
- establishes the manner in which the Contractor is to manage the risk of health and safety incidents in the execution of the contract; and
- establishes the manner in which the Employer's health and safety agent will interact with the Contractor.

C4.2.2 Requirements

C4.2.2.1 General requirement

The Contractor shall:

- create and maintain a safe and healthy work environment,
- 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; and
- respond to the notices issued by the SANBI's Health and Safety Agent as follows:
    - Improvement Notice: improve health and safety performance over time so that repeat notices are not issued;
    - Contravention Notice: rectify contravention as soon as possible;
    - Prohibition Notice: terminate affected activities with immediate effect and only recommence activities when it is safe to do so.

Any incident occurring as a result of the contractors 'negligence which may affect SANBI employees will be claimed against the contractor.

C4.2.3 Administration

C4.2.3.1 Application and Notification of intention to commence construction work

C4.2.3.1.1 Application for construction work permit

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:

- exceed 180 days;
- will involve more than 1800 person days of construction work; or
- the works contract is of a value equal to or exceeding thirteen million rand or Construction Industry Development Board (CIDB) grading level 6.

An application must be done in a form similar to Annexure 1 in the Regulation and a site-specific number assigned by the Provincial Director must be displayed on site.

C4.2.3.1.2 **Notification of construction work**

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:

- include excavation work;
- include working at a height where there is risk of falling;
- include the demolition of a structure; or
- include the use of explosives to perform construction work.

The Contractor shall ensure that no work commences on an electrical installation which requires a new supply or an increase in electricity supply before the person who supplies or contracts or agrees to supply electricity to that electrical installation has been notified of such work.

The Contractor shall ensure that no asbestos work is carried out before the Provincial Director of the Department of Labour has been notified in writing.

C4.2.3.2 **Copy of the Act**

The Contractor shall ensure that a copy of the Act and relevant regulations is available on site for inspection by any person engaged in any activity on the site.

Good standing with the compensation fund or a licensed compensation insurer
The Contractor shall, before commencing with any works on the site, provide the SANBI with proof of good standing with the compensation fund or with a licensed compensation insurer.

C4.2.3.3 **Emergency procedures**

The Contractor shall submit for acceptance to the SANBI 's Health and Safety Agent an emergency procedure which include but are not limited to fire, spills, accidents to employees, exposure to hazardous substances, which:

- identifies the key personnel who are to be notified of any emergency;
- sets out details including contact particulars of available emergency services; and
- the actions or steps which are to be taken during an emergency.

The Contractor shall within 24 hours of an emergency taking place notify the SANBI's Health and Safety Agent in writing of the emergency and briefly outline what happened and how it was dealt with.

C4.2.3.4 Health and safety file

The Contractor shall maintain on site a health and safety file which contains copies of the following;

C4.2.3.4.1 Documents required before the contractor commences with construction activities

- the Contractor's health and safety policy, signed by the chief executive officer, which outlines the Contractor's objectives and how they will be achieved and implemented by the Contractor
- the notification made to the Provincial Director of Labour, and if relevant, the notification of the person who supplies or contracts or agrees to supply electricity to that electrical installation;
- the letters of appointment, as relevant, of the construction supervisor for the site in respect of construction works covered by the Construction Regulations and the registered person responsible for the electrical installation covered by the Electrical Installations Regulations;
- a copy of the certificate of registration of the registered person responsible for the electrical installation covered by the Electrical Installations Regulations where applicable;
- the approval of the design of the part of an electrical installation which has a voltage in excess of 1 kV by a person deemed competent in terms of the Electrical Installations Regulations;
- proof of registration of the electrical contractor who undertakes the electrical installation in terms of the Electrical Installations Regulations where applicable;
- the preliminary hazard identification undertaken by a competent person;
- the organogram which outlines the roles and responsibilities of the construction supervisor's assistants and safety officers; and
- the contractor's health and safety plan;
- the emergency procedures;
- the procedure for the replacement of lost, stolen, worn or damage personal protective clothing and
- proof that the contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer;

C4.2.3.4.2 Documents required after construction activities have commenced

- the letters of appointments, if relevant, of:
  - persons who are required to assist the construction supervisor;
  - safety officers;
  - health and safety representatives;
  - replacement construction supervisor, and
  - assistants of construction supervisor.
- any revisions to the organogram which outlines the roles and responsibilities of the construction supervisor's assistants and safety officers;
- each and every subcontract agreement;
- proof that every subcontractor is registered and in good standing with the compensation fund or with a licensed compensation insurer;
- proof of all subcontractor's induction training whenever it is conducted;
- copies of the minutes of the Contractor's subcontractors health and safety meetings;

- copies of each of the Contractor's subcontractors' health and safety policy, signed by the Chief executive officer, which outlines the Contractor's objectives and how the will be achieved and implemented by the Contractor;
- the health and safety plans of all the Contractor's subcontractors who are required to provide such plans;
- a comprehensive and updated list of all the subcontractors employed on site by the contractor, indicating the type of work being performed by such sub-contractors;
- the outcomes of the monthly audits for compliance with the approved health and safety plan of each and every sub-contractor working on the site;
- any report made to an inspector by the health and safety committee;
- the minutes of all health and safety meetings and any recommendations made to the Contractor by the health and safety committee;
- the findings of all audit reports made regarding the implementation of the Contractor's or a subcontractor's health and safety plan;
- the inputs of the safety officer, if any, into the health and safety plan;
- details of induction training conducted whenever it is conducted including the list of attendees;
- proof of the following where suspended platforms are used:
    - a certificate of system design issued by a professional engineer, professional certificated engineer or a professional engineering technologist;
    - proof of competency of erectors;
    - proof of compliance of operational design calculations with requirements of the system design certificate;
    - proof of performance test results;
    - sketches indicating the completed system with the operational loading capacity of the platform;
    - procedures for and records of inspections having been carried out;
    - procedures for and records of maintenance work having been carried out;
    - proof that the prescribed documentation has been forwarded to the provincial director;
- letters of appointments for competent persons to supervise the activities which law requires to be so supervised;
- A copy of risk assessments made by competent person;
- 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;
- the names of the first aiders on site and copies of the first aid certificates of competency;
- the names of the persons the persons who are in possession of valid certificate of competency in first aid and copies of such certificates;
- details of all incidents together with the Contractor's report on such incident; and
- the record of inspections carried out by the designers of structures to ensure compliance with designs.

The health and safety file shall be made available for inspection by any inspector, subcontractor, the Project Manager, the SANBI's Health and Safety Agent or employee of the Contractor upon the request of such persons.

The Contractor shall hand over the health and safety file to the SANBI's Health and Safety Agent upon completion of the contract and if relevant, a certificate of compliance accompanied by a test report for the electrical installation in accordance with the provisions of the Electrical Installation Regulations.

C4.2.3.5 Health and safety committee

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 persons nominated by the Contractor. Such meetings shall be convened at least once every month to:

- make recommendations to the Contractor regarding any matter affecting the health or safety of persons on the site; and
- discuss any incident on the site in which or in consequence of which any person was injured, became ill or died.

The Contractor shall consult with the health and safety committee on the development, monitoring and review of the risk assessment.

The Contractor shall ensure that minutes of the health and safety committee meetings are kept.

SANBI Health and Safety Agent shall be invited to attend such meetings as an observer.

C4.2.3.6 Inspections, formal enquires and incidents

The Contractor shall inform the relevant safety representative:

- beforehand of inspections, investigations or formal inquiries of which he has been notified by an inspector and
- as soon as reasonably practicable of the occurrence of an incident on the site.

The Contractor shall record all incidents and notify the SANBI's Health and Safety
Agent of any incident, except in the case of a traffic accident on a public road, as soon as possible after it has occurred and reports such incidence to an inspector.

The Contractor shall investigate all incidents and issue the SANBI's Health and Safety Agent with copies of such investigations.

C4.2.3.7 Personal protective equipment and clothing

The Contractor shall ensure that:

- all workers are issued with the necessary personal protective clothing;
- all workers are identifiable at all times by having the company for which they work for printed on the back or front of their overalls; and
- clear procedures are in place for the replacement of lost, stolen, worn or damage personal protective clothing.

C4.2.4 Appointments

C4.2.4.1 Health and safety representatives

The Contractor shall appoint in writing one health and safety representative for every 50 employees working on the site, whenever there are more than 20 employees on the site, to:

- review the effectiveness of health and safety measures;
- identify potential hazards and potential major incidents;
- in collaboration with his employer, examine the causes of incidents;
- investigate complaints by any employee of the Contractor relating to that employee's health or safety on the site;
- 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;
- inspect the site with a view to, the health and safety of employees, at regular intervals;
- participate in consultations with inspectors at the workplace and accompany inspectors on inspections of the workplace; and
- participate in any internal health or safety audit.

The Contractor shall provide the health and safety representatives with the necessary assistance, facilities and training to carry out the functions established in 4.3.1

C4.2.4.2 Appointment of construction supervisor and safety officers

The Contractor shall, prior to commencing the work, appoint a full-time competent employee 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.

The 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.

The Contractor shall compile and maintain an organogram which outlines the roles and responsibilities of the construction supervisor’s assistants and safety officers.

C4.2.4.3 Competent persons

The Contractor shall appoint in writing competent persons to supervise or inspect, as relevant, any of the following:

- formwork and support work operations;
- excavation work;
- demolition work;
- scaffolding work operations;
- suspended platform work operations;
- material hoists;

- operation of batch plants;
- explosive power tools;
- vehicles and mobile equipment;
- fire equipment; and
- the stacking and storage of articles on the site.

The Contractor shall appoint in writing competent persons to:

- induct employees in health and safety; and
- prepare a fall protection plan.

C4.2.5 Creating and maintaining a safe and healthy work environment

C4.2.5.1 General

The Contractor shall with respect to the site and the construction works that are contemplated:

- cause a preliminary hazard identification to be performed by a competent person before commencing any physical construction activity;
- 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 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.

The Contractor shall ensure that:

- 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;
- no structure or part of a structure is loaded in a manner which would render it unsafe; and
- account of information, if any, provided by the designer of the structure is taken into account in the risk assessment;

Note: The information 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.

The Contractor shall carry out regular inspections and audits to ensure that the works are being performed in accordance with the requirements of this specification

C4.2.5.2 Risk assessment

The Contractor shall before the commencement of any work on site 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:

- identify the risks and hazards to which persons may be exposed to;
- analyse and evaluate the identified risks and hazards;
- document a plan of safe work procedures, including the use of any personal protective equipment or clothing and the undertaking of periodic “toolbox talks” or inductions before

undertaking hazardous work, to mitigate, reduce or control the risks and hazards that have been identified;

- provide a monitoring plan; and
- provide a review plan.

C4.2.5.3 **Health and safety plans**

The Contractor shall prior to commencing the works to which this specification applies, submit to SANBI's Health and Safety Agent 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 must be specific to the current project and shall as a minimum provide:

- the information about hazards associated with the task to be performed; and
- an outline of the manner in which the Contractor intends complying with the requirements of this specification.
- The arrangements to ensure the safety of all SANBI staff affected by the activities of the project/work.
- The manner in which hazards will be communicated to all staff/including SANBI employees.

C4.2.5.4 **Responsibilities towards employees and visitors**

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 respect to those hazards or safe work procedures. Safety for SANBI employees must be considered throughout the project life cycle.

The Contractor shall provide suitable on-site signage to alert workers and visitors to health and safety requirements. Such signage shall include but not be limited to:

- unauthorized entrance prohibited;
- signage to indicate what personal protective equipment is to be worn; and
- activity related signs.

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.

C4.2.6 Subcontractors

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 safely perform the work falling within the scope of the contract.

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 any work specific information which might be pertinent to the sub-contract.

C4.2.7 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.

C4.2.8 Facilities for workers

The Contractor shall provide and keep clean and fit for use at or within reasonable access of the site:

- at least one shower facility for every 15 workers
- at least one sanitary facility for every 30 workers;
- changing facilities for each sex; and
- sheltered eating areas.

2.5.4.2 A contractor shall provide reasonable and suitable living accommodation for the workers at construction sites which are remote from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available

C4.2.9 Waste management

Construction will result in waste generation although in different scales depending on the nature and size of the project.
The goal for construction waste management is primarily the reduction of waste generated. Waste reduction is the responsibility of all on site, as it relates to materials procurement, handling, storage and use. Waste generated during construction will be reused, recycled or disposed to landfill.

Waste collection during building works will be appropriately managed through the staged nature of construction and the use of known quantities of materials. The majority of recyclable material that could be recovered during construction is likely to be off cuts and discards of concrete reinforcement (steel), metal off cuts, drainage pipes, telecommunication and electrical cabling, plastics, paint and timber.
No uncontrolled hazardous materials or dangerous goods will be stored on site.
Principal contractor will be required to provide waste management plan before construction work commences.

C4.2.10 Points to remember - Legal
C4.2.10.1 **Requirements**

- Application for construction work permit
- Notice of construction work
- Letter of good standing from the Department of Labour/ Insurance
- Risk assessment and safe working procedures
- Appointment letter of Principal contractor and other legal appointments
- Health and safety plan
- Valid medical certificates of fitness for employees
- Fall protection plan

- Health and safety inductions.
- Notice boards and display of site specific number assigned to the project.
- Management of plant & Noise
- Management of premises
- Management of Plant, labour & materials on site
- Management of safety file

C4.3. Annexure G

GENERAL ENVIRONMENTAL SPECIFICATIONS

Index to Environmental Specifications

Clause	Description
E1	Location of camp and depot
E2	Demarcation of the site
E3	Refuse
E4	Protection of fauna and flora
E5	Defacement of natural features
E6	Protection of archaeological and palaeontological Sites
E7	Effluent and storm-water management
E8	Run off from construction camps
E9	Discharge of construction water
E10	Servicing/fuelling of construction equipment
E11	Fuels and chemicals
E12	Dust control
E13	Noise control
E14	Materials use, handling, storage and transport
E15	Use of cement/concrete
E16	Fuel storage and use
E17	Hazardous materials
E18	Transport of materials outside the site
E19	Fire
E20	Removal of topsoil
E21	Stabilisation of steep slopes
E22	Site Rehabilitation
E23	Landscaping and preparation for re-vegetation

E1 Location of camp and depot

The Contractor's Camp and Materials Storage Area shall be located at a position approved by the Responsible Person. No site staff other than security personnel shall be housed on site. The Contractor's Camp and Materials Storage Area shall be kept neat and tidy and free of litter.

E2 Demarcation of the site

It is important that activities are conducted within a limited area to facilitate control and to minimise the impact on the existing natural environment, existing tenants and other construction activities in the vicinity and public thoroughfares.

The Contractor shall demarcate the boundaries of the site in order to restrict his construction activities to the site. The method of demarcation and the location of the demarcated area shall be determined by the Contractor and approved by the Responsible Person before any work being undertaken. The Contractor shall ensure that all plant, labour and materials remain within the boundaries of the site. Failure to do so may result in the Contractor being required to fence the boundaries of the site at his/her own expense to the satisfaction of the Responsible Person.

If additional areas (e.g. for lay down, rest areas) are required, these must be approved in writing by the Responsible Person. The Contractor is advised that it may take approximately one week to obtain such permission from the Responsible Person.

Suitable temporary fencing may need to be erected during construction to minimise the risk of injury to the public, and animals.

E3 Refuse

Refuse refers to all solid waste, including construction debris (e.g. wrapping materials, timber, cans etc.) waste and surplus food, food packaging etc.

The Contractor shall institute an on-site waste management system that is acceptable to the Responsible Person to prevent the spread of refuse within and beyond the site. The Contractor is reminded that wind velocities on the construction site can be high.

All waste shall be collected and contained immediately. The Contractor shall institute a weekly clean up of the site if so instructed by the Responsible Person. This daily/weekly clean up shall be for the Contractor's account.

The Contractor shall not dispose of any waste and/or construction debris by burning or burying. The use of waste bins and skips is recommended. The bins shall be provided with lids and an external closing mechanism to prevent their contents from blowing out. The Contractor shall ensure that all waste is deposited by his employees in the waste bins for removal by the Contractor. Bins shall not be used for any purposes other than waste collection and shall be emptied on a regular basis. All waste shall be disposed of off site at approved landfill sites.

Hazardous waste, including waste oil and other chemicals (e.g. paints, solvents) shall be stored in (an) enclosed area(s), and shall be clearly marked. If deemed necessary by the Responsible Person, the Contractor shall obtain the advice of a specialist waste expert concerning the storage of hazardous waste. Such waste shall be disposed of off site by a specialist waste contractor, at a permitted hazardous waste disposal site.

E4 Protection of fauna and flora

All fauna within and around the site shall be protected. Birds and animals shall not be caught or killed by any means, including poisoning, trapping, shooting or setting of snares. Offenders may be prosecuted in terms of the Animals Protection Act 71 of 1962.

E5 Defacement of natural features

Defacement of any features outside of the construction site shall not occur without the prior written permission of the Responsible Person. Any features defaced by the Contractor shall be restored to the satisfaction of the Responsible Person.

E6 Protection of archaeological and palaeontological Sites

If any possible palaeontological /archaeological material is found during excavations, the Contractor shall stop work immediately and inform the Responsible Person. The Responsible person will inform the South African Heritage Resource Agency (SAHRA) and arrange for a palaeontologist/archaeologist to inspect, and if necessary excavate, the material, subject to acquiring the requisite permits from the National Monuments Council. Costs incurred will be for the Employer's account.

E7 Effluent and storm-water management

The Contractor must ensure that pollution of the ground or surface water does not occur as a result of site activities. Pollution could result from the accidental release of contaminated run-off from construction camps, discharge of contaminated construction water, chemicals, oils, fuels, sewage, run-off from stockpiles, solid waste, litter, etc.

E8 Run off from construction camps

The Contractor shall ensure that polluted run-off (excluding silt "pollution"), such as run-off from construction camps where equipment is cleaned and/or serviced, fuel stores, workshops, etc. is not discharged overland. The Contractor shall erect an earth/brick berm 0,5 m high around such areas and shall collect all run-off from these areas and store it in a conservancy tank for removal from the site. The Contractor shall ensure that silt-laden water is not discharged directly into any surface watercourses (i.e. vleis, etc.), and shall take suitable measures to prevent this.

Natural run-off shall be diverted away from any camps towards the storm-water drains where these are available. Special care must be taken in areas susceptible to erosion, e.g. steep slopes. The Contractor shall ensure that excessive quantities of sand, silt and silt-laden water do not enter the storm-water drain system, or any surface watercourse. The Contractor shall take appropriate measures, e.g. the erection of silt traps, or drainage retention areas, to prevent silt and sand entering drainage or watercourses. Any partial or complete blockage of the storm-water drainage system shall be cleared by the Contractor at his / her own expense.

E9 Discharge of construction water

Construction water refers to all water dirtied as a result of construction activities.

The Contractor may discharge silt laden water overland and allow this water to filter into the ground. However, s/he shall ensure that he does not cause erosion as a result of any overland discharge.

The Contractor may not discharge cement-laden water overland, i.e. washings from trowels, wheelbarrows and the like.

Trucks delivering concrete shall not wash the trucks or the chutes on the site. All washing operations shall take place off site at a location where wastewater can be disposed of in the correct manner.

E10 Servicing/fuelling of construction equipment

Servicing and fuelling should preferably occur off site.

However, if these activities occur on site, the Contractor shall ensure that all servicing of vehicles and equipment takes place in designated areas agreed upon by the Responsible Person. All waste shall be collected and disposed of off site at an appropriately licensed landfill site. All equipment that leaks onto the ground shall be repaired immediately or removed.

Similarly, no vehicles or machines shall be refuelled on site except at designated refuelling locations, unless otherwise agreed with the Responsible Person. The Contractor shall not change oil or lubricants anywhere on site except at designated locations, except if there is a breakdown or an emergency repair. In such instances, the Contractor shall ensure that he has Drizit pads (or equivalent) and/or drip trays available to collect any oil, fluid, etc.

E11 Fuels and chemicals

The Contractor shall take all reasonable precautions to prevent the pollution of the ground and/or water resources by fuels and chemicals as a result of his activities.

The Contractor shall keep the necessary materials and equipment on site to deal with ground spills of any of the materials used or stored on site.

The Contractor shall ensure that no oil, petrol, diesel, etc. is discharged onto the ground. Pumps and other machinery requiring oil, diesel, which is intended to remain in one position for longer than two days shall be placed on drip trays. The drip trays shall be emptied regularly and the contaminated water disposed of off site at a facility capable of handling such wastewater. Drip trays shall be cleaned before any possible rain events that may result in the drip trays overflowing, and before long week ends and holidays.

The Contractor shall remove all oil-, petrol-, and diesel-soaked sand immediately and shall dispose of it as hazardous waste.

Should the Responsible Person/ECO and/or the relevant authorities deem it necessary to institute a programme for the removal of contaminated ground resulting from the non-compliance of the controls detailed above, these costs will be for the Contractor's account. Remedial action shall be approved by the ECO and relevant authorities, if appropriate.

E12 Dust control

The Contractor shall be responsible for the continued control of dust arising from his/her operations, through measures including, but not limited to, spraying of water on bare areas, rotovating straw bales into the soil surface and the scheduling of dust-generating activities to times when wind velocity is low. Overhead sprayers shall not be used in windy conditions, due to water loss through evaporation. The use of water carts is preferred.

The Contractor shall inform the Responsible Person 48 hours in advance of anticipated “unavoidable” dust-generating activities. The Responsible Person and/or ECO may inform adjacent land users, tenants and communities about the possibility of dust pollution, and the approximate duration of the problem.

E13 Noise control

The Contractor shall take all reasonable precautions to minimise noise generated on site as a result of his operations, especially when working in areas or on activities that may impact on neighbouring land users.

The Contractor shall comply with the applicable regulations with regard to noise.

The Contractor shall inform the Responsible Person 48-hours in advance of anticipated "unavoidable" noise-generating activities. The Responsible Person and/or Environmental Officer may inform adjacent land users, tenants and communities about the possibility of noise pollution and the approximate duration of the problem.

E14 Materials use, handling, storage and transport

Procedure for material handling must be discussed with and approved by the Responsible Person prior to commencement of this activity.

E15 Use of cement/concrete

The Contractor is advised that cement and concrete are regarded as highly hazardous to the natural environment on account of the very high pH of the material, and the chemicals contained therein. Therefore the Contractor shall ensure that:

- concrete is mixed on mortar boards, and not directly on the ground;
- visible remains of concrete, either solid, or from washings, are physically removed immediately and disposed of as waste. Washing visible signs into the ground is not acceptable; and
- all aggregate is also removed.

E16 Fuel storage and use

Tanks containing fuels shall have lids and shall remain firmly shut. Only clean, empty tanks may be stored on the bare ground. Fuel stores shall be placed on a bunded sealed base - the bunds shall have a volume of 110% of the volume of the largest tank in the storage area. Any waste-water or spilled fuel collected within the bund shall be disposed of as hazardous waste.

The Contractor shall take all the necessary precautions to prevent fires or spills. No smoking shall be allowed in the vicinity of the fuel stores. Failure to adhere to this specification shall be cause for a spot fine being imposed on the offender.

The Contractor shall ensure that there is adequate fire-fighting equipment at the fuel stores.

E17 Hazardous materials

The Contractor shall comply with all relevant national, regional and local legislation with regard to the transport, use and disposal of hazardous materials. If necessary, the Contractor shall obtain the advice of the manufacturer with regard to the safe handling of hazardous materials. Any claims against the Contractor shall be for his/her account.

The Contractor shall provide the Responsible Person with a list of hazardous substances on site, together with storage procedures for these materials.

The Contractor shall ensure that there is an emergency procedure to deal with accidents and incidents (e.g. spills) arising from hazardous substances. The Contractor shall report major incidents (spills in excess of 50 litres) to the Responsible Person immediately.

The Contractor shall maintain a register of spills or incidents involving hazardous materials, as well as measures taken.

The Contractor shall ensure that information on all hazardous substances is available to all personnel on site. The Contractor shall furthermore be responsible for the training of all personnel on site who will be handling the material about its proper use, handling and disposal.

E18 Transport of materials outside the site

The Contractor shall comply with all the applicable local, regional and national by-laws with regard to road safety and the transport of materials, especially hazardous and/or toxic materials. Any claims against the Contractor shall be for his account.

The Responsible Person shall provide the Environmental Officer with a schedule of the proposed transportation of significant quantities of hazardous material onto the site, before commencing work on site. The Environmental Officer may request further details or notifications of specific material movements if considered necessary.

E19 Fire

The Contractor shall take all the necessary precautions to ensure that fires are not started as a result of his/her activities on site, and shall also comply with the requirements of the Occupational Health and Safety Act 85 of 1993.

No open fires shall be permitted on or off site. Closed fires or stoves shall only be permitted at designated safe sites in the construction camps. Fires shall also not be permitted near any potential sources of combustion, such as fuel stores, stockpiles of plant material etc.

The Contractor is advised that sparks generated during welding, cutting of metal or gas cutting can cause fires. Every possible precaution shall therefore be taken when working with this equipment near potential sources of combustion. Such precautions include having an approved fire extinguisher immediately available at the site of any such activities.

The Contractor shall be liable for any expenses incurred by any organisations called to assist with fighting fires, and for any costs relating to the rehabilitation of burnt areas.

E20 Removal of topsoil

Following removal of vegetation from the site, all topsoil shall be removed (up to a maximum of 30-cm depth) and stock-piled for re-use in subsequent rehabilitation and landscaping activities. The stockpiles shall not be higher than 2-m in order to minimise composting. The stockpiles of topsoil shall be located in an area agreed with the Responsible Person.

E21 Stabilisation of steep slopes

The disturbance of steep slopes, for example by the removal of vegetation, may result in slope instability and erosion by rain and surface run off. The Contractor shall ensure that slopes that are disturbed during construction are stabilised to prevent erosion occurring. Where re-vegetation of slopes is undertaken, this shall be in accordance with the specification provided in EP6.

Slopes that are susceptible to accidental damage during construction shall be protected to reduce the risk of disturbance.

Any erosion that does occur must be reinstated at the Contractor's cost.

E22 Site rehabilitation

The Contractor shall be responsible for rehabilitating any areas cleared or disturbed for construction purposes that are to be incorporated into open space or buffer zones. The Contractor shall re-vegetate such areas in accordance with the specification provided below.

The Contractor shall stabilise, by straw rot ovation or other means, any areas that are cleared or disturbed for construction purposes which are not going to be incorporated into open space or buffer zones (i.e. areas that will be subsequently developed by another party).

All construction equipment and excess aggregate, gravel, stone, concrete, bricks, temporary fencing and the like shall be removed from the site upon completion of the work. No discarded materials of whatsoever nature shall be buried on the site or on any other land not owned by ACSA.

E23 Landscaping and preparation for re-vegetation

Areas that require reshaping shall be cut, filled and compacted so as to follow the contours of the surrounding landscape. Topsoil removed from the area initially shall be replaced. Care must be taken not to mix the topsoil with the subsoil during shaping operations. Should a crust form on the soil before re-vegetation is commenced, the Contractor shall, at his own cost, loosen the crust by scarifying to a depth of 150-mm.

C4.4. Annexure H

GEOTECHNICAL INFORMATION (N/A)

ANNEXURE A

BILL OF QUANTITIES

FOR

THE RENOVATIONS TO SELECTED BUILDINGS, INCLUDING FOOD AND BEVERAGES OUTLETS

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (SANBI)

MARCH 2022

PRELIMINARIES
Cover Page

Item No		Quantity	Rate	Amount R

SECTION NO. 1

BILL NO. 1

PRELIMINARIES

BUILDING AGREEMENT AND PRELIMINARIES

The **JBCC** Principal Building Agreement (Edition 6.2 - May 2018) prepared by the Joint Building Contracts Committee shall be the applicable building agreement, amended as hereinafter described

The **JBCC** Principal Building Agreement **contract data** form an integral part of this **agreement**

The **JBCC** General Preliminaries (May 2018) published by the Joint Building Contracts Committee for use with the **JBCC** Principal Building Agreement (Edition 6.2 - May 2018) shall be deemed to be incorporated in these **bills of quantities**, amended as hereinafter described

The **contractor** is deemed to have referred to the abovementioned documents for the full intent and meaning of each clause

The clauses in the abovementioned documents are hereinafter referred to by clause number and heading only

Where any item is not relevant to this **agreement** such item is marked N/A signifying "not applicable"

Where standard clauses or alternatives are not entirely applicable to this **agreement** such amendments, modifications, corrections or supplements as will apply are given under each relevant clause heading and such amendments, modifications, corrections or supplements shall take precedence notwithstanding anything to the contrary contained in the abovementioned documents

Carried Forward R

Brought Forward		R	

PREAMBLES FOR TRADES

The General Preambles for Trades 2017 published by the Association of South African Quantity Surveyors shall be deemed to be incorporated in these **bills of quantities** and no claims arising from brevity of description of items fully described in the said General Preambles will be entertained

Supplementary preambles and/or specifications are incorporated in these **bills of quantities** to satisfy the requirements of this project. Such supplementary preambles and/or specifications shall take precedence over the provisions of the General Preambles

The **contractor's** prices for all items throughout these **bills of quantities** shall take account of and include where applicable for all of the obligations, requirements and specifications given in the General Preambles and in any supplementary preambles and/or specifications

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

Section C : Any special clauses to meet the particular circumstances of the project

PRICING OF PRELIMINARIES

Should the **contractor** select Option A in the **contract data** 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)

SECTION A: PRINCIPAL BUILDING AGREEMENT

Carried Forward		R	

	Brought Forward		R	
	Interpretation (A1-A7)			
1	Clause 1.0 - Definitions and interpretation			
	Pricing of bills of quantities			
	The **contractor** is to allow opposite each item for all costs in connection therewith. All prices to include, unless otherwise stated, for all materials, fabrication, conveyance and delivery, unloading, storing, unpacking, hoisting, labour, setting, fitting and fixing in position, cutting and waste (except where to be measured in accordance with the standard system of measurement), patterns, models and templates, plant, temporary works, returning of packaging, duties, taxes (other than Value Added Tax), imposts, establishment charges, overheads, profit and all other obligations arising out of this **agreement**. Value Added Tax (VAT) is to be separately stated on the summary page of these **bills of quantities**			
	Items left unpriced will be deemed to be covered in prices against other items throughout these **bills of quantities** and no claim for any extras arising out of the **contractor's** omission to price any item will be entertained			
	Prices for all **construction equipment**, temporary works, services and other items shall include for the supply, maintenance, operating cost and subsequent removal and making good as necessary			
	Abbreviated descriptions			
	The items in these **bills of quantities** utilise abbreviated descriptions. It is the intention that the abbreviated descriptions be fully described when read with the applicable measuring system and the relevant preambles and/or specifications. However, should the full intent and meaning of any description not be clear, the **contractor** shall, before submission of his tender, call for a written directive from the **principal agent**, failing which it shall be assumed that the **contractor** has allowed in his pricing for materials and workmanship in terms of international best practice			
	Legal status of contractor			
	Carried Forward		R	

	Brought Forward		R	
	If the **contractor** constitutes a joint venture, consortium or other unincorporated grouping of two or more persons then: 1. These persons are deemed to be jointly and severally liable to the **employer** for the performance of this **agreement** 2. These persons shall notify the **employer** of their leader who has assigned authority to bind the **contractor** and each of these persons 3. The **contractor** shall not alter its composition or legal status without the prior written consent of the **employer** F:..... V:..... T:.....	Item		
2	Clause 2.0 - **Law**, regulations and **notices** / **NHBRC levies** The **employer** shall allow for and pay any levies required by the National Home Builders Registration Council (NHBRC). The **contractor** warrants that he is registered and will maintain registration with the NHBRC for the duration of this **agreement** [2.1] N/A F:..... V:..... T:.....	Item		
3	Clause 3.0 - Offer and acceptance F:..... V:..... T:.....	Item		
4	Clause 4.0 - Cession and assignment F:..... V:..... T:.....	Item		
5	Clause 5.0 - Documents			
	Carried Forward		R	
	PRELIMINARIES Bill No. 1 Preliminaries			

	Brought Forward		R	
	Value Added Tax Provision is made in the summary page of these **bills of quantities** for the inclusion of Value Added Tax (VAT) **Priced document as specification** Clause 5.4 is deemed to be deleted The **principal agent** shall decide which portion of the **priced document** may be used as a specification of **materials and goods** or methods, if any. **Electronic issue of drawings** All drawings for this project will be issued electronically and the **contractor** shall be deemed to have received such drawings on the date that such drawings have been dispatched electronically [5.6] YES F:..... V:..... T:.....	Item		
6	Clause 6.0 - **Employer's agents** **Delegated authority - EBESA Architects** Physical Address: 34 Sixth Street Parkhurst 2193 Tel: (011) 327 6097 Email: dominique@ebesa.co.za The authority of the **principal agent** to issue **contract instructions** [17.1] and perform duties for specific aspects of the **works** is delegated to **agents** as follows [6.2]. This does not preclude the **principal agent** from issuing such **contract instructions**: Yes			
	Carried Forward		R	

Brought Forward		R	
1. **Architect**			
EBESA Architects			
Physical Address: 34 Sixth Street Parkhurst 2193			
Tel: (011) 327 6097			
Email: dominique@ebesa.co.za			
1.1 Duties [6.2] :			
The architect is responsible for the architectural design, functional design and quality inspection of the **works**			
1.2 **Contract instructions** [6.2; 17.1] :			
1.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the **agreement** other than in the **JBCC** Principal Building Agreement			
1.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**			
1.2.3 The **site** [13.0]			
1.2.4 Compliance with the **law**, regulations and bylaws [2.1]			
1.2.5 Provision and testing of samples of **materials and goods** and/or of finishes and assemblies of elements of the **works**			
1.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]			
1.2.7 Removal or re-execution of work			
1.2.8 Removal or substitution of any **materials and goods**			
Carried Forward		R	

Brought Forward		R	
1.2.9 Protection of the **works**			
1.2.10 Making good physical loss and repairing damage to the **works** [23.2.2]			
1.2.11 Rectification of **defects** [21.2]			
1.2.12 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion**, a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**			
2. **Quantity surveyor**			
IDNIL Professional Consultants			
Physical address: 16 Baker Street Rosebank 2196			
Tel: (011)783 5454			
Email: thembile@idnil.co.za			
2.1 Duties [6.2] :			
The quantity surveyor is responsible for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions of the **works**			
2.2 **Contract instructions** [6.2; 17.1] :			
2.2.1 No **contract instructions** delegated to the quantity surveyor			
Carried Forward		R	

Brought Forward		R	
3. Civil and Structural Engineer			
Endecon Ubuntu Engineering Consultants			
Physical adress: 257 Jean Avenue, Block 6 Central Office Park Centurion 0046			
Tel: (012) 664 6770			
Email: derick@endeconubuntu.co.za			
3.1 Duties [6.2] :			
The civil and structural engineer is responsible for all aspects of civil and structural engineering design and quality inspection of the **works**			
3.2 **Contract instructions** [6.2; 17.1] :			
3.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the **agreement** other than in the **JBCC** Principal Building Agreement			
3.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**			
3.2.3 The **site** [13.0]			
3.2.4 Compliance with the **law**, regulations and bylaws [2.1]			
3.2.5 Provision and testing of samples of **materials and goods** and/or of finishes and assemblies of elements of the **works**			
3.2.6 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]			
3.2.7 Removal or re-execution of work			
Carried Forward		R	
PRELIMINARIES Bill No. 1 Preliminaries			

	Brought Forward		R	
	3.2.8 Removal or substitution of any **materials and goods**			
	3.2.9 Protection of the **works**			
	3.2.10 Making good physical loss and repairing damage to the **works** [23.2.2]			
	3.2.11 Rectification of **defects** [21.2]			
	3.2.12 A **list for practical completion** specifying outstanding or defective work to be rectified to achieve **practical completion**, a **list for completion** and a **list for final completion** specifying outstanding or defective work to be rectified to achieve **final completion**			
	F:..... V:..... T:.....	Item		
7	Clause 7.0 - Design responsibility			
	F:..... V:..... T:.....	Item		
	<u>Insurances and securities (A8-A11)</u>			
8	Clause 8.0 - **Works** risk			
	F:..... V:..... T:.....	Item		
9	Clause 9.0 - Indemnities			
	F:..... V:..... T:.....	Item		
10	Clause 10.0 - Insurances			
	F:..... V:..... T:.....	Item		
11	Clause 11.0 - **Securities**			
	Guarantee for payment			
	Carried Forward		R	

	Brought Forward		R	
	The **employer** shall provide to the **contractor** a **guarantee for payment** in the amount of .....Rand (R.....) [11.5.1]. The **contractor** shall consequently waive his lien or right of continuing possession of the **works** [11.10] N/A **Extension of waiver of lien** The **contractor** shall ensure that a waiver of lien is included in all subcontracts and that the **works** executed on the **site** are kept free of all liens and other encumbrances at all times [11.10] YES F:..... V:..... T:.....	Item		
	<u>Execution (A12 - A17)</u>			
12	Clause 12.0 - Obligations of the **parties**			
	Office accommodation The **contractor** shall provide, maintain and remove on **practical completion** air conditioned office accommodation with suitable tables and chairs for meetings to be held on the **site**. Such offices shall be kept clean and fit for use at all times [12.2.18]			
	Notice board The **contractor** shall erect in a position approved by the **principal agent**, maintain and remove on **practical completion** a notice board recommended by the South African Institute of Architects and as approved by the **principal agent** listing the names and logos of the **employer**, the **contractor** and the professional consultants. No subcontractor or supplier notice boards may be erected unless permission is granted by the **principal agent** for such notice boards to be erected [12.2.18]			
	Carried Forward		R	

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	Brought Forward		R	
	Statutory and other notices The **contractor** shall submit and/or comply with all statutory and other notices that may be required by any local or other authority in order not to cause any delay to the commencement of the **works** by the **contractor**. The **contractor** shall pay all deposits or fees in this regard It is, however, specifically recorded that the **employer** shall be responsible for the timeous approval of building plans by any local or other authorities and the payment of any fees or charges related thereto F:..... V:..... T:.....	Item		
13	Clause 13.0 - Setting out F:..... V:..... T:.....	Item		
14	Clause 14.0 - Nominated **subcontractors** F:..... V:..... T:.....	Item		
15	Clause 15.0 - Selected **subcontractors** F:..... V:..... T:.....	Item		
16	Clause 16.0 - **Direct contractors** **Attendance on direct contractors** In respect of **direct contractors** the **contractor** shall: 1. Designate an area for the **direct contractor** to establish a temporary office and workshop and storage of equipment and materials 2. Allow the use of personnel welfare facilities, where provided			
	Carried Forward		R	

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	Brought Forward			R	
	3. Provide water, lighting and single phase electric power to a position within 50m of the place where the direct contract work is to be carried out, other than fuel or power for commissioning of any installation				
	4. Permit the **direct contractor** to use erected scaffolding, hoisting facilities, etc provided by the **contractor**, in common with others having the like right, while it remains erected on the **site** [16.1]				
	F:..... V:..... T:.....	Item			
17	Clause 17.0 - **Contract instructions**				
	Site instructions				
	Instructions issued on **site** are to be recorded in a site instruction book which is to be supplied and maintained on **site** by the **contractor**				
	F:..... V:..... T:.....	Item			
	<u>Completion (A18 - A24)</u>				
18	Clause 18.0 - Interim completion		N/A		
19	Clause 19.0 - **Practical completion**				
	F:..... V:..... T:.....	Item			
20	Clause 20.0 - Completion in **sections**				
	F:..... V:..... T:.....	Item			
21	Clause 21.0 - **Defects** liability period and **final completion**				
	F:..... V:..... T:.....	Item			
	Carried Forward			R	
	PRELIMINARIES Bill No. 1 Preliminaries				

				R	
	Brought Forward				
22	Clause 22.0 - **Latent defects** liability period F:..... V:..... T:.....	Item			
23	Clause 23.0 - Revision of the date for **practical completion** **Substitution of materials and goods** The removal or substitution of any **materials and goods** which do not conform to the specification or the **contract drawings** shall not constitute grounds for the extension of the **construction period** nor for the adjustment of the **contract value** [17.1.8; 23.1 & 2] F:..... V:..... T:.....	Item			
24	Clause 24.0 - **Penalty** for late or non-completion F:..... V:..... T:..... 0.085% of the Contract Amount (excluding VAT) per calendar day	Item			
	Payment (A25 - A27)				
25	Clause 25.0 - Payment **Prices submitted** Where prices are submitted by the **contractor** or **subcontractor** during the progress of the **works** in respect of **contract instructions** or in regard to a claim under the terms of this **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			
	Carried Forward			R	

	Brought Forward		R	
26	Clause 26.0 - Adjustment of the **contract value** and **final account** **Fluctuations in costs** All fluctuations in costs, with the exception of fluctuations in the rate of Value Added Tax, shall be for the account of the **contractor** [26.9.5] No **Tenant installation/user requirements delayed** There is a possibility that certain works related to tenant installation/user requirements may have to be delayed and may consequently not be executed prior to **practical completion** Should the **contractor** be instructed to do so he shall execute this work under the conditions pertaining to this **agreement** on the basis that a separate amount for **preliminaries** appurtenant to this work (if applicable) is agreed to between the **contractor** and the **principal agent** and on condition that instruction to proceed with such work is given to him within a period of three (3) calendar months after the date of **practical completion** of the **works** The **employer** reserves the right to omit such work without compensation to the **contractor** for loss of profit or any other loss which the **contractor** may suffer as a result of such omission **Cost of claims** All costs incurred by the **contractor** in the preparation of claims shall be borne by the **contractor**. This provision shall not preclude an adjudicator or an arbitrator appointed in terms of this **agreement** [30.6 & 7] from making a determination on costs			
	Carried Forward		R	

	Brought Forward		R	
	Claims from subcontractors The **contractor** shall review, assess and adjudicate any claims received by him from any **subcontractor** and thereafter submit same to the **principal agent** with a recommendation in order to assist the **principal agent** in adjudicating the claim [26.6] F:..... V:..... T:.....	Item		
27	Clause 27.0 - Recovery of expense and/or loss F:..... V:..... T:.....	Item		
	Suspension and termination (A28 - A29)			
28	Clause 28.0 - Suspension by the **contractor** F:..... V:..... T:.....	Item		
29	Clause 29.0 - Termination F:..... V:..... T:.....	Item		
	Dispute resolution (A30)			
30	Clause 30.0 - Dispute resolution F:..... V:..... T:.....	Item		
31	**Agreement** The required information of the **parties** and the amount of the **contract sum** shall be inserted in the **agreement** for signature of the **agreement** by the **parties** F:..... V:..... T:.....	Item		
32	**Contract data**			
	Carried Forward		R	

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	Brought Forward		R	
	Insert under the above heading, with suitable sub-headings, any amendments, modifications, corrections or supplements to the contract data			
	Tenderer's selections			
	Before submission of his tender the **contractor** is to complete the tenderer's selections in the **contract data**			
	F:..... V:..... T:.....	Item		
	SECTION B: GENERAL PRELIMINARIES			
	Definitions and interpretation (B1)			
33	Clause 1.1 - Definitions			
	F:..... V:..... T:.....	Item		
34	Clause 1.2 - Interpretation			
	F:..... V:..... T:.....	Item		
	Documents (B2)			
35	Clause 2.1 - Checking of documents			
	F:..... V:..... T:.....	Item		
36	Clause 2.2 - Provisional **bills of quantities**			
	Multiple procurement			
	These **bills of quantities** are in multiple procurement format ie the "wet trades" - earthworks, concrete, formwork and reinforcement, precast concrete, masonry, waterproofing and sub-surface drainage - are provisionally measured and the subsequent trades are **budgetary allowances** and/or **provisional sums**			
	F:..... V:..... T:.....	Item		
	Carried Forward		R	

	Brought Forward			R	
37	Clause 2.3 - Availability of **construction information** F:..... V:..... T:.....	Item			
38	Clause 2.4 - Ordering of **materials and goods** F:..... V:..... T:.....	Item			
	Previous work and adjoining properties (B3)				
39	Clause 3.1 - Previous work - dimensional accuracy F:..... V:..... T:.....	Item			
40	Clause 3.2 - Previous work - **defects** F:..... V:..... T:.....	Item			
41	Clause 3.3 - Inspection of adjoining properties F:..... V:..... T:.....	Item			
	The site (B4)				
42	Clause 4.1 - Handover of **site** in stages F:..... V:..... T:.....	Item			
43	Clause 4.2 - Enclosure of the **works** F:..... V:..... T:.....	Item			
44	Clause 4.3 - Geotechnical and other investigations F:..... V:..... T:.....	Item			
	Carried Forward			R	

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	Brought Forward			R	
45	Clause 4.4 - Encroachments				
	F:..... V:..... T:.....		Item		
46	Clause 4.5 - Existing premises occupied				
	F:..... V:..... T:.....				
		No	Item		
47	Clause 4.6 - Services - known				
	F:..... V:..... T:.....		Item		
	Management of contract (B5)				
48	Clause 5.1 - Management of the **works**				
	F:..... V:..... T:.....		Item	1.00	
49	Clause 5.2 - Progress meetings				
	F:..... V:..... T:.....		Item		
50	Clause 5.3 - Technical meetings				
	F:..... V:..... T:.....		Item		
	Samples, shop drawings and manufacturer's instructions (B6)				
51	Clause 6.1 - Samples of materials				
	F:..... V:..... T:.....		Item		
52	Clause 6.2 - Workmanship samples				
	F:..... V:..... T:.....		Item		
	Carried Forward			R	
	PRELIMINARIES Bill No. 1 Preliminaries				

	Brought Forward		R	
53	Clause 6.3 - Shop drawings F:..... V:..... T:.....	Item		
54	Clause 6.4 - Compliance with manufacturer's instructions F:..... V:..... T:.....	Item		
	Deposits and fees (B7)			
55	Clause 7.1 - Deposits and fees F:..... V:..... T:.....	Item		
	Temporary services (B8)			
56	Clause 8.1 - Water F:..... V:..... T:.....	Item		
57	Clause 8.2 - Electricity F:..... V:..... T:.....	Item		
58	Clause 8.3 - Ablution and welfare facilities F:..... V:..... T:.....	Item		
59	Clause 8.4 - Communication facilities F:..... V:..... T:.....	Item		
	Prime cost amounts (B9)			
60	Clause 9.1 - Responsibility for **prime cost amounts**			
	Carried Forward		R	
	PRELIMINARIES Bill No. 1 Preliminaries			

	Brought Forward		R	
	Where details of materials for which prime cost amounts are to be allowed <u>are</u> readily available, the quantity surveyor may elect to insert the relevant prime cost amounts in measured items, which measured items shall contain sufficient detail for the contractor to price for fixing and installation, waste, etc			
	F:..... V:..... T:.....	Item		
	<u>Attendance on subcontractors (B10)</u>			
61	Clause 10.1 - General attendance			
	General attendance is defined as being the duties of the contractor in terms of clause 12.2 of the JBCC n/s subcontract agreement			
	F:..... V:..... T:.....	Item		
62	Clause 10.2 - Special attendance			
	It is important to note that general attendance only requires the contractor to "permit the subcontractor to use erected scaffolding, hoisting facilities, etc provided by the contractor, in common with others having the like right while it remains erected on the site" (refer to 12.2.13 of the JBCC n/s subcontract agreement). Many n/s subcontractors qualify their tenders to exclude scaffolding and/or hoisting facilities. Especially scaffolding could be an expensive item and it may be necessary in order to avoid claims to require the contractor to provide for the extended use of scaffolding for specific subcontracts within a description of "special attendance" in the applicable bill			
	F:..... V:..... T:.....	Item		
	<u>General (B11)</u>			
63	Clause 11.1 - Protection of the **works**			
	F:..... V:..... T:.....	Item		
	Carried Forward		R	

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	Brought Forward			R	
64	Clause 11.2 - Protection/isolation of existing **works** and **works** occupied in **sections** F:..... V:..... T:.....	Item			
65	Clause 11.3 - Security of the **works** F:..... V:..... T:.....	Item			
66	Clause 11.4 - Notice before covering work F:..... V:..... T:.....	Item			
67	Clause 11.5 - Disturbance *The following clause may be used should "disturbance" [11.5] need to be extended* **Disturbance** All work is to be carried out in such a manner as to cause no unacceptable or unreasonable dust, noise, vibrations, nuisance, inconvenience, annoyance and the like to the public, others, other properties and traffic in so far as they exceed the permissible limitations set by government legislation or by the local authority. Any delays, stoppages and the like arising from or in order to comply with the above will not constitute grounds for an adjustment to the **construction period** or **contract value** whatsoever F:..... V:.....T:.....	Item			
68	Clause 11.6 - Environmental disturbance **Controlling all forms of pollution** The **contractor** shall be responsible for and take all precautions in controlling by whatever means necessary all forms of pollution emanating from the **site** during the **construction period** due inter alia to noise, artificial light, wind-blown sand, dust, deposits of mud, etc				
	Carried Forward			R	

	Brought Forward			R	
	The **contractor** is to ensure that all roads which border the **site** and are used by the **contractor** during the execution of the **works** are kept clean and free of any dirt or debris caused by the execution of the **works**				
	Environmental management plan				
	The **employer** has prepared an environmental management plan (EMP). The **contractor** shall price opposite this item for compliance with all the requirements of such EMP				
	F:..... V:.....T:.....	Item			
69	Clause 11.7 - **Works** cleaning and clearing				
	F:..... V:..... T:.....	Item			
70	Clause 11.8 - Vermin				
	F:..... V:..... T:.....	Item			
71	Clause 11.9 - Overhand work				
	F:..... V:..... T:.....	Item			
72	Clause 11.10 - Tenant installations				
	F:..... V:..... T:.....	Item			
73	Clause 11.11 - Advertising				
	F:..... V:..... T:.....	Item			
	Carried Forward			R	
	PRELIMINARIES Bill No. 1 Preliminaries				

	Brought Forward			R	
	SECTION C: SPECIFIC PRELIMINARIES				
74	Warranties for materials and workmanship Where warranties for materials and/or workmanship are called for, the **contractor** shall obtain a written warranty, addressed to the **employer**, from the entity supplying the materials and/or executing the work and shall deliver same to the **principal agent** on **final completion** of the contract The warranty shall state that workmanship, materials and installation are warranted for a specific period from the date of **practical completion** and that any **defects** that may arise during the specified period shall be made good at the expense of the entity supplying the materials and/or doing the work, upon written **notice** to do so The warranty will not be enforced if the work is damaged by **defects** in the execution of the **works**, in which case the responsibility for replacement shall rest entirely with the **contractor** F:..... V:..... T:.....	Item			
75	Overtime Should overtime be required to be worked for any reason whatsoever, the cost of such overtime is to be borne by the **contractor** unless the **principal agent** has specifically authorised, prior to execution thereof, that costs for such overtime are to be borne by the **employer** F:..... V:.....T:.....	Item			
	Carried Forward			R	

PRELIMINARIES
Bill No. 1
Preliminaries

				R	
	Brought Forward				
76	Cooperation of the **contractor** for cost management It is specifically agreed that the **contractor** accepts the obligation of assisting the **principal agent** in implementing proper cost management. The **contractor** will be advised by the **principal agent** of all cost management procedures which will be implemented to ensure that the **contract value** does not exceed the budget F:..... V:.....T:.....	Item			
77	Overloading The **contractor** shall take all necessary steps to ensure that no damage occurs due to overloading of any portion of the **works** or temporary works eg scaffolding, etc. The **contractor** shall submit details of his proposed loading, storage, plant erection, etc to the **principal agent** for approval prior to proceeding with such loading, storing or erecting and shall comply with and pay for the **principal agent's** requirements in connection with the provision of temporary support work, etc. Any damage caused to the **works** by overloading shall be made good by the **contractor** at his sole expense F:..... V:.....T:.....	Item			
78	Propping of floors below The **contractor** is advised that propping of floors below may be required if he wishes to use any areas of completed suspended reinforced concrete slabs for vehicle access, storage of **materials and goods** and location of plant, scaffolding, etc. The location of these areas and any necessary propping shall be approved by the **principal agent** and the cost thereof shall be borne by the **contractor** F:..... V:.....T:.....	Item			
	Carried Forward			R	

PRELIMINARIES
Bill No. 1
Preliminaries

	Brought Forward			R	
79	Testing of flat roof waterproofing for watertightness Flat roof waterproof areas shall be flooded and kept "ponded" for at least forty eight (48) hours as a test to ensure the watertightness of the waterproofing and before any further construction work is carried out above the waterproofing F:..... V:.....T:.....	Item			
80	Health and safety Without limiting the generality of the provisions of clause 2.0, the **contractor's** attention is drawn to the provisions of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended. 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 specification [2.1] Health and safety Without limiting the generality of the provisions of clause 2.0, the **contractor's** attention is drawn to the provisions of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended. 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 provisions of the aforementioned health and safety specification [2.1]				
	Carried Forward			R	

PRELIMINARIES
Bill No. 1
Preliminaries

	Brought Forward		R	
	The **contractor** shall: 1. Comply with the health and safety specification for the **works** 2. Prepare and agree with the health and safety consultant the health and safety plan for the **works** 3. Cooperate with the health and safety consultant in all respects 4. Manage the compliance of all subcontractors with the regulations and with the health and safety plan and specification 5. Conform to the conditions contained in the **employer's** health and safety specification F:..... V:..... T:.....	Item		
81	Broad based black economic empowerment (BBBEE) Tenders submitted will be evaluated taking into account their empowerment rating The **employer** will be monitoring the broad based black economic empowerment (BBBEE) status of the **contractor** throughout the execution of the **works** The **contractor** is to submit to the **principal agent** on an annual basis a schedule of spend, split into vendors engaged as **subcontractors** and suppliers indicating their BBBEE rating including proof of the said rating F:..... V:.....T:.....	Item		
	Carried Forward		R	

	Brought Forward		R	
82	Advertising rights The **employer** may elect to contract with advertising agencies for the erection of advertising hoardings, banners, wraps or the like for the duration of the contract. The **contractor** shall not prevent such an arrangement and will assist in the facilitation of same. The position and type of advertising structure to be agreed with the **principal agent** so as not to hinder the **contractor** in meeting his obligations under this **agreement** F:..... V:.....T:.....	Item		
83	Confidentiality The **contractor** undertakes to maintain in confidence any and all information regarding this project and shall obtain appropriate similar undertakings from all **subcontractors** and suppliers. Such information shall not be used in any way except in connection with the execution of the **works** No information regarding this project shall be published or disclosed without the prior written consent of the **employer** F:..... V:.....T:.....	Item		
84	Media releases All rights of publication of articles in the media, together with any advertising relating thereto or in any way connected with this project, shall vest with the **employer** The **contractor** together with his **subcontractors** shall not, without the prior written consent of the **employer**, cause any statement or advertisement connected with this project to be printed, screened or aired by the media F:..... V:.....T:.....	Item		
	Carried Forward		R	

PRELIMINARIES
Bill No. 1
Preliminaries

	Brought Forward		R	
	SECTION C: SPECIFIC PRELIMINARIES			
	Any special items to meet the parrtcular circumstances of a specific project are embodied in this section. Where required for an aspect of the works to be executed according to a design by a consulting engineer, a recital of the headings to the individual clauses of the JBCC Engineering General Conditions are included			
85	**PROPRIETARY BRANDED PRODUCTS** The contractor shall take delivery of, handle, store, use apply and/or fix all proprietary branded products in strict accordance with the manufacturers' instruction after consultation with the manufacturer's authorised representative			
	F:..... V:..... T:.....	Item		
86	**OVERTIME**			
	Should overtime be required to be worked for any reason whatsoever, the costs of such overtime are to be borne by the contractor unless the principal agent has specifically authorised in writing, prior to the execution thereof, that costs for such overtime are to be borne by the employer.			
	F:..... V:..... T:.....	Item		
87	**AS BUILT DRAWINGS**			
	The position of construction breaks and the extent of individual concrete pours are to be recorded by the contractor on the structural engineer's drawings and are to be submitted to the principal agent and the structural engineer for their records.			
	F:..... V:..... T:.....	Item		
	Carried Forward		R	

	Brought Forward			R	
88	**SITE INSTRUCTIONS** Site instructions issued on site are to be recorded in triplicate in a site instruction book which is to be maintained on site by the contractor F:..... V:..... T:.....	Item			
89	**<u>LABOUR DESK</u>** The contractor shall establish a labour desk on site with a dedicated office of maximum 9m2 with a desk 2 chairs and electricity. From the labour desk, the contractor will appoint a dedicated community laison officer at a minimum monthly gross remuneration of R 7500.00, subject to all statutory deductions. The community laison officer will be employed by and will report to the contractor, who will in turn forward such reports to the Principal Agent	Item			
90	**LABOUR RECORD** At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all subcontractors on the works each day. F:..... V:..... T:.....	Item			
91	**PLANT RECORD** At the end of each week the contractor shall provide the principal agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works. F:..... V:..... T:.....	Item			
	Carried Forward			R	

PRELIMINARIES
Bill No. 1
Preliminaries

	Brought Forward			R	
92	**NON CESSION OF MONIES**				
	The contractor shall not cede nor assign his rights or claims to any monies due or to become due under this contract				
	F:..... V:..... T:.....	Item			
93	**GENERAL SPECIFICATION**				
	The general specification for the works is the Model Preambles For Trades 1999 as published by the Association of Quantity Surveyors. Tenderers are to avail themselves of the full contract thereof and the document will be deemed to be part of the conditions of of tender and contract				
	F:..... V:..... T:.....	Item			
	<u>SECTION D: HEALTH & SAFETY PRELIMINARIES</u>				
	Total cost of "Health and Safety Measures"				
94	Preparation of the contractor's site specific health and safety plan stipulated by the project SHE specification	Item			
95	Principal contractor's initial obligation in respect to the Occupational Health and Safety Act and Construction Regulations	Item			
96	Principal contractor's time related obligations in respect of Occupations Health and Safety Act and Construction Regulations	Item			
	<u>Provision of Personal Protective Equipment (PPE)</u>				
97	Reflective vests	Item			
98	Hard hats	Item			
99	Earplugs	Item			
100	Protective steel toed foot wear	Item			
	Carried Forward			R	

PRELIMINARIES
Bill No. 1
Preliminaries

	Brought Forward			R	
101	Hand gloves	Item			
102	High visibility overalls to SARTSM chapter 13 level 3	Item			
103	Thermal jackets	Item			
104	Dust masks	Item			
105	Safety goggles	Item			
106	Gumboots	Item			
107	Fall protective equipment	Item			
108	Provisional of full time construction health and safety officer (SACPCMP registered)	Item			
109	Health and safety representative	Item			
110	Health and safety file	Item			
	SUMMARY OF CATEGORIES				
	Category : Fixed R.....				
	Category : Value R.....				
	Category : Time R.....				
	Carried to Final Summary			R	

PRELIMINARIES
Bill No. 1
Preliminaries

Item No			Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 1				
	DEMOLITIONS				
	General				
	Water supply pipes and other piping in ground that may be encountered and found necessary to disconnect or cut, shall be effectually stopped off or grubbed up and removed, and any new connections that may be necessary shall be made with proper fittings to the satisfaction of the principal agent				
	Unless otherwise described all materials are to become the property of the contractor and are to be removed from the site				
	Demolishing and removing				
1	Breakdown and demolish existing walkway complete with roof coverings, digging out and removal of concrete footings and cart away of all rubble and prepare the surface for a new structure.	m²	81		
2	Breakdown and demolish existing water tank structure completely and cart away of all rubble and leave no visible sign of the structure	No	1		
	Carried Forward to Summary of Section No.			R	

BUILDING WORKS
Bill No. 1
Demolitions

Item No		Quantity	Rate	Amount R
	SECTION NO. 2			
	BILL NO. 2			
	ALTERATIONS			
	REMOVAL OF EXISTING WORK			
	SUPPLEMENTARY PREAMBLES			
	View site			
	Before submitting his tender the tenderer shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials salvageable from the alterations. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained			
	Explosives			
	No explosives whatsoever may be used for alteration purposes unless otherwise stated			
	General			
	The contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to tenants in the building and to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the principal agent			
	Doors, fanlights, windows, fittings, frames, linings, etc which are to remain the property of the employer shall be carefully taken out, temporarily stored, transported over a distance of approximately 5km to store and handed over to the employer			
	Carried Forward		R	

				R	
	Brought Forward				
	Doors, fanlights, windows, fittings, frames, linings, etc which are to be re-used shall be thoroughly overhauled before refixing including taking off, easing and rehanging, cramping up, re-wedging as required and making good cramps, dowels, etc, and oiling, adjusting and repairing ironmongery as necessary, replacing any glass damaged in removal or subsequently and stopping up all nail and screw holes with tinted plastic wood to match timber, unless otherwise described. Re-painting or re-varnishing is given separately				
	Prices for taking out of doors, windows, etc shall include for removal of all beads, architraves, ironmongery, etc				
	Prices for taking out and removing doors and frames shall include for removing door stops, cabin hooks, etc				
	With regard to building up of openings in existing walls, cement screeds and pavings, granolithic, tops of walls, etc, shall be levelled and prepared for raising of brickwork				
	Making good of finishes shall include making good of the brick and concrete surfaces onto which the new finishes are applied, where necessary				
	The contractor will be required to take all dimensions affecting the existing buildings on the site and he will be held solely responsible for the accuracy of all such dimensions where used in the manufacture of new items (doors, windows, fittings, etc)				
	Demolishing and removing				
	Lift up and set aside for re-use				
1	Paving	m²	81		
	Taking up and removing wood block floor coverings, vinyl floor coverings, carpets, etc and preparing screeds for new floor coverings				
2	Carpet floor covering	m²	20		
	Carried Forward			R	

BUILDING WORKS
Bill No. 2
Alterations

	Brought Forward			R	
	Taking out doors, windows, etc, including thresholds, sills, etc, setting aside for re-use and later refixing in similar new position				
3	Timber doors	No	14		
4	Timber / aluminium framed windows	No	26		
	Taking down and removing roofs, floors, panelling, ceilings, partitions, etc				
5	Ceilings	m²	281		
6	Roof coverings	m²	2 458		
7	Box gutters	m	471		
8	225 x 45mm Timber beams	m	139		
9	Steel cladding on columns	m²	56		
	Hacking up/off and removing ceramic tiles including removing mortar bed or adhesive from concrete or brickwork and preparing surfaces for new screed, plaster, tile finish, etc				
10	Ceramic floor tiles	m²	69		
11	Ceramic wall tiles	m²	205		
	Taking out and removing sanitary fittings, tanks, geysers, etc, including disconnecting from pipes, traps, etc and making good floor and wall finishes (making good tiling and paintwork elsewhere)				
12	Remove existing WC	No	4		
13	Remove existing paraplegic WC	No	2		
14	Remove existing paraplegic wash hand basin	No	2		
15	Remove existing urinals	No	4		
16	Remove existing drop-in wash hand basin	No	5		
	Carried Forward			R	

BUILDING WORKS
Bill No. 2
Alterations

	Brought Forward			R	
	Taking out/off and removing glass and mirrors				
17	Mirrors	No	24		
	CLEANING OF EXISTING FINISHES				
	Wash down with approved cleaning detergent				
18	Clean existing internal and external facebrick	m²	1 317		
19	Steel windows	m²	22		
20	Allow for trimming of trees and removal of roots where specified	Item	1.00		
21	Allow for inspection of roof ventilators and sealing them with necessary waterproofing material	Item	1.00		
	BUDGETARY ALLOWANCES				
22	Allow an amount of R50 000 (Fifty Thousand Rands) nett for work or costs which cannot entirely be foreseen, defined or detailed, to be measured and priced in accordance with thisBill of Quantities and omitted in part or as a whole as instructed by Principal Agent	Item	1.00	50 000.00	50 000.00
	Carried Forward to Summary of Section No.			R	
	BUILDING WORKS Bill No. 2 Alterations				

Item No		Unit	Quantity	Rate	Amount R

SECTION NO. 2

BILL NO. 3

EARTHWORKS (PROVISIONAL)

Nature of ground

The nature of the ground is assumed to be loose sandy material, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"

The nature of the ground is assumed to be gravel, therefore "earth", but possibly interspersed with "soft rock" or "hard rock"

The nature of the ground is assumed to be silty clay with loose river boulders varying in size up to approximately 450mm diameter, all of which will be deemed as "earth", but possibly interspersed with "hard rock"

Trial holes indicate that the nature of the ground is silty clay to a depth of approximately 500mm with fine to medium loose sandy material below, therefore "earth"

A soils investigation has been carried out on the site by the engineer and the report is annexed to these bills of quantities. The soils report indicates that the ground varies between silty sand, reworked soil of mixed origin and residual shale, all of which will be deemed as "earth". All very hard unweathered shale, ironstone, etc, the removal of which necessitates the use of explosives or heavy duty hydraulic percussion hammers (peckers), will be classified as "hard rock"

Subterranean water

No subterranean water is expected

The water table is expected to vary between approximately 2m and 3m below natural ground level. The removal of subterranean water is given separately

	Carried Forward			R	

	Brought Forward			R	
	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				
	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				
	Prices for filling are to include for all necessary density and other tests				
	EXCAVATIONS ETC				
	Excavation in earth not exceeding 2m deep				
1	Holes	m³	4		
	Extra over bulk excavations in earth for excavation in				
2	Soft rock	m³	0.4		
3	Hard rock	m³	0.2		
	Extra over all excavations for carting away				
4	Surplus material from excavations and/or stock piles on site, to a dumping site to be located by the contractor	m³	4		
	Risk of collapse of excavations				
5	Sides of trench and hole excavations not exceeding 1,5m deep	m²	14		
	Carried Forward			R	

BUILDING WORKS
Bill No. 3
Earthworks (provisional)

	Brought Forward			R	
	Keeping excavations free of water				
6	Keeping excavations free of all water other than subterranean water	Item	1.00		
	FILLING ETC				
	Earth filling obtained from the excavations and/or prescribed stock piles on site, compacted to 95% Mod AASHTO density				
7	Backfilling to trenches, holes, etc	m³	2		
	Earth filling of G6 material supplied by the contractor, compacted to 95% Mod AASHTO density				
8	Under floors, steps, pavings, etc	m³	26		
	Compaction of ground surfaces				
9	Compaction of natural or excavated 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	251		
	WEED KILLERS, INSECTICIDES, ETC				
	Soil insecticide in accordance with SANS 5859				
10	Under floors etc, including forming and poisoning shallow furrows against foundation walls etc, filling in furrows and ramming	m²	239		
11	To bottoms and sides of trenches etc	m²	26		
	Carried Forward to Summary of Section No.			R	

BUILDING WORKS
Bill No. 3
Earthworks (provisional)

Item No		Quantity	Rate	Amount R

SECTION NO. 2

BILL NO. 4

CONCRETE, FORMWORK AND REINFORCEMENT

SUPPLEMENTARY PREAMBLES

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 architect. The testing shall be undertaken by an independent firm or institution nominated by the contractor and to the approval of the architect. (Test cubes are measured separately)

Breeze concrete

Breeze concrete shall consist of twelve parts clean dry furnace ash, free from coal or other foreign matter, to one part cement (12:1), the ash graded up to particles which will pass a 16,5mm ring from a minimum which fails to pass a 4,75mm mesh. The finer materials from the screening are to be first mixed with the cement into a mortar and the ash added afterwards and thoroughly incorporated

Formwork

Description of formwork shall be deemed to include use and waste only (except where described as "left in" or "permanent"), for fitting together in the required forms, wedging, plumbing and fixing to true angles and surfaces as necessary to ensure easy release during stripping and for reconditioning as necessary before re-use

	Carried Forward		R	

	Brought Forward			R	
	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				
	Formworks to soffits of solid slabs etc shall be deemed to be slabs not exceeding 250mm thick unless otherwise described				
	Formwork to soffits of slabs, beams, etc shall be deemed to be propped up exceeding 1,5m and not exceeding 3,5m high unless otherwise described				
	Formwork to sides of bases, pile caps, ground beams, etc will only be measured where it is prescribed by the engineer for design reasons. Formwork necessitated by irregularity or collapse of excavated faces will not be measured and the cost thereof shall be deemed to be included in the allowance for taking the risk of collapse of the sides of the excavations, provision for which is made in "Earthworks"				
	REINFORCED CONCRETE				
	25MPa/19mm concrete				
1	Bases	m³	4		
	SUPERSTRUCTURE				
	TEST CUBES				
2	Making and testing 150 x 150 x 150mm concrete strength test cube (Provisional)	No	2		
	SMOOTH FORMWORK (DEGREE OF ACCURACY I)				
	Smooth formwork to sides				
3	Bases (Provisional)	m²	11		
	Carried Forward to Summary of Section No.			R	
	BUILDING WORKS Bill No. 4 Concrete, formwork and reinforcement				

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 5				
	MASONRY				
	BRICKWORK				
	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				
	Bagged and sealed walls				
	Walls in two skins described as "bagged and sealed" shall be deemed to include having the outer face of the inner skin bagged with 1:6 cement and sand mixture and sealed with two coats bitumen emulsion waterproofing coating				
	Face bricks				
	Bricks shall be ordered timeously to obtain uniformity in size and colour				
	Pointing				
	Descriptions of recessed pointing to fair face brickwork and face brickwork shall be deemed to include square recessed, hollow recessed, weathered pointing, etc				
	SUPERSTRUCTURE				
1	One brick walls	m²	12		
	2,5mm Brickwork reinforcement				
2	150mm Wide reinforcement built in horizontally	m	40		
	PAVING				
	Carried Forward			R	

	Brought Forward			R	
	60mm Thick double zig-zag (shape S-A) interlocking precast concrete paving blocks complying with SABS 1058 laid with butt joints on 20mm thick washed river sand bed with sand swept into joints including preparation of ground or filling				
3	Paving on 20mm thick mortar bed	m²	158		
4	Garden kerb as per the engineer's specification	m	24		
	LABOUR ONLY				
5	Paving	m²	81		
	Carried Forward to Summary of Section No.			R	

BUILDING WORKS
Bill No. 5
Masonry

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 6				
	WATERPROOFING				
	SUPPLEMENTARY PREAMBLES				
	Waterproofing				
	Waterproofing of roofs, basements, etc shall be laid under a ten year guarantee by an approved applicator. Waterproofing to roofs shall be laid to even falls to outlets etc with necessary ridges, hips and valleys. Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn-downs				
	WATERPROOFING TO ROOFS ETC				
	Waterproofing to exposed concrete roofs with bituminous aluminium paint finish.Apply one coat a.b.e. bituprime to all surfaces including all verges and around outlets and protrusions.Apply one layer of Derbigum SP4 waterproofing membrane, fully bonded by means of "torch on fusion", with 75mm side laps and 100mm end laps. Flashing strip 150mm girth at turn-ups using a.b.e. super laykold. Apply two coat of a.b.e. silvakote bituminous aluminium protective coating, all in accordance with manufacturer's recommendations.				
1	On flat roofs	m²	719		
	Two coats Roofcote bituminous aluminium paint				
2	On waterproofing to roofs	m²	719		
	Two layers mastic asphalt trafficable trowelled-on waterproofing with coarse building sand or fine stone chips evenly spread and well rolled in				
3	30 x 30mm Triangular fillets	m	112		
	Carried Forward to Summary of Section No.			R	

BUILDING WORKS
Bill No. 6
Waterproofing

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 7				
	ROOF COVERINGS, CLADDINGS, ETC				
	SUPPLEMENTARY PREAMBLES				
	All items are measured net unless otherwise described				
	Flashings, trimming plates, etc.				
	Prices to include for all cutting and waste and relevant fixing material, unless otherwise described				
	All rates for flashings, trimmings, etc., to include for forming drips and closed ends to troughs of sheet steel roof covering where applicable				
	All items are unless otherwise described measured net				
	PROFILED METAL SHEETING AND ACCESSORIES				
	"Safintra" 0.53mm Saflock 700 profiled interloclocking concealed fix roof sheeting or similar approved, complete including flashings, caps, etc, fixed to timber purlins				
1	Roof covering with pitches not exceeding 25 degrees	m²	2 539		
	ROOF AND WALL INSULATION				
	135mm Thick flexible , non-combustable , lightweight Aerolight insulation				
2	Insulation between trusses and over brandering /purlins in a complete roof and ceiling system	m²	2 497		
	Carried Forward to Summary of Section No.			R	

BUILDING WORKS
Bill No. 7
Roof coverings, claddings, etc

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 8				
	CARPENTRY AND JOINERY				
	Fixing				
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins, or to be shot-pinned, to brickwork or concrete				
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 500mm centres, and where described as "bolted", the bolts have been given elsewhere				
	Decorative thermosetting plastic laminate covering				
	Laminate covering shall be glued under pressure and edge strips of same shall be butt jointed at junctions with adjacent similar finish				
	ROOFS ETC				
	Laminated timber				
1	225 x 45mm Beams	m	139		
	EAVES, VERGES, ETC				
	"Everite FC77" pressed fibre-cement				
2	Everite medium density plain ungrooved Nutec fascia boards, size 225 x 6mm thick, fixed to timber rafters twice screwed with 12 x 40mm countersunk brass screws with Chromaprep H-profile fascia joiner between boards	m	251		
	DOORS ETC				
	44mm Semi solid masonite door				
3	Door size 900 x 2115mm high (D2)	No	4		
	Carried Forward			R	

	Brought Forward			R	
4	Door size 1000 x 2125mm high (D1)	No	4		
	44mm Solid core masonite door with hardwood edge coverstrips on both sides				
5	Door size 877 x 2100mm high (D4)	No	3		
6	Door size 1500 x 2400mm high (D12)	No	1		
7	Door size 1500 x 2100mm high (D11)	No	2		
	FITTINGS				
8	20mm Caesarstone tops on sleek concrete (code: 4003) with 100mm high splashbacks and 450mm downward front and side facia)	m²	9		
9	20mm Caesarstone tops on sleek concrete (code: 4003) with 100mm high splashbacks and 50mm downward front, back and side facia)	m²	5		
	JOINERY SUNDRIES				
10	Standard timber weather bar	No	3		
	Carried Forward to Summary of Section No.			R	
	BUILDING WORKS Bill No. 8 Carpentry and joinery				

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 9				
	CEILINGS, PARTITIONS AND ACCESS FLOORING				
	SUPPLEMENTARY PREAMBLES				
	Descriptions:				
	Items described as "nailed" shall be deemed to be fixed with hardened steel nails or pins or shot pinned to brickwork or concrete				
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres, and where described as "bolted" the bolts have been given elsewhere				
	CEILINGS ETC				
	NAILED UP CEILINGS				
	6mm thick "Everite Nutec" fibre-cement boards with aluminium "epoxy coated" H-type pressed steel jointing strips				
1	Wall cladding	m²	56		
2	Ceilings	m²	59		
3	Extra over ceiling for 500 x 500mm opening for door trap	No	1		
	12.5mm Gyproc rhinoboard skimmed ceiling system fixed to Gypframe D34/32K				
4	Ceilings	m²	39		
5	Extra over ceiling for 500 x 500 mm trap door	No	1		
	SUSPENDED CEILINGS				
	Carried Forward			R	

	Brought Forward			R	
	12.5mm Gyproc Gyprex white vinyl finish ceiling boards size 600 x 600mm suspended with 19mm Gyproc hanger strap or suspension wire at 1200mm centres and fixed to the mail tee web using 2 steel pop rivets or oneo of Gyproc 13mm wafer-head tek screws.				
6	Ceilings suspended not exceeding 1m below steel/timber trusses	m²	242		
	BUDGETARY ALLOWANCES				
7	Allow an amount of R5 000 (Five Thousand Rands) for bulkheads at Dukuduku building, to be omitted in part or as a whole as instructed by Principal Agent	Item	1.00	5 000.00	5 000.00
	Carried Forward to Summary of Section No.			R	
	BUILDING WORKS Bill No. 9 Ceilings, partitions and access flooring				

Item No		Unit	Quantity	Rate	Amount R

SECTION NO. 2

BILL NO. 10

IRONMONGERY

SUPPLEMENTARY PREAMBLES

Descriptions

Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs

SUPPLEMENTARY PREAMBLES

Proprietary items

Where applicable the manufacturers' names or product catalogue titles are given in sub-headings preceding the items

Prices are to be based on the specific products/articles specified. If tenderers wish to offer alternative products/articles for certain items, these items are to be clearly marked and the alternative specification given with supporting brochures etc clarifying the features of the products/articles offered

On request returnable samples are to be provided to the principal agent for consideration

Carried Forward R

	Brought Forward			R	
	Finishes to ironmongery				
	Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list: BS Satin bronze lacquered CH Chromium plated SC Satin chromium plated SE Silver enamelled GE Grey enamelled AN Anodised natural AS Anodised silver AB Anodised bronze AG Anodised gold ABL Anodised black PB Polished brass PL Polished and lacquered PT Epoxy coated SD Sanded				
	HINGES, BOLTS, ETC				
	"Dorma"				
1	100mm Brass hinge	No	73		
	LOCKS				
	"Dorma" or similar approved				
2	Cylinder sashlock code: D036S-SS	No	1		
3	Round cylinder escutcheon (Stainless Steel) DCE-002-SS	Pairs	8.0		
4	Built-in flush bolts BFBDM	No	2		
5	65mm Five pin euro-profile double cylinder keyed to differ (Satin Nickel) code: DDC056501KD	No	1		
6	66mm Five pin euro-profile double cylinder grand master keyed (Satin Nickel) code: DDC106601GMK	No	6		
7	65mm Five pin euro-profile knob cylinder keyed to differ (Satin Nickel) code: DKC056501KD	No	8		
	Carried Forward			R	

	Brought Forward			R	
8	Narrow stile cylinder escutcheon (Stainless Steel) DCE-105 SS	Pairs	12.0		
9	Cylinder deadlock code: D037D SS	No	7		
10	Disabled WC indicator bolt (Red & White) and turnknob code: DWC-006	Sets	4.0		
11	Rebate conversion kit D038R NP	No	4		
12	153mm Flush bolt with heel (Satin chrome) code: DFBSC-180	No	4		
13	305mm Flush bolt with heel (SS finish) code: DFB-SC-181	No	4		
14	Dust proof strike (Stainless steel) code: DPS-SS-032	No	5		
15	Adjustable roller bolt (Stainless Steel) code: DBC-SS-022	No	7		
16	Narrow Stile dead lock operating with european profile cylinder D02735 SS	No	7		
17	Narrow stile hook lock operating with european profile cylinder D02935 SS	No	11		
18	40mm Half knob cylinder DHK004000	No	11		
19	Bathroom deadlock (Stainless steel) code: D032D SS	No	4		
	HANDLES				
	"Dorma" or similar approved				
20	120 X 40mm Rectangular flush pull handle DFP-SS-025	No	22		
21	325 x 25mm Stainless Steel Straight tubular pull handle DPH301A BTB	Pairs	12		
22	149 x 19mm Stainless Steel Straight tubular pull handle BTB code: DPH301C BTB	Pairs	6		
23	325 x 25mm Stainless Steel Straight tubular pull handle flange DPH301A BT	No	4		
	Carried Forward			R	
	BUILDING WORKS Bill No. 10 Ironmongery				

	Brought Forward			R	
24	325 x 25mm Stainless Steel Straight tubular pull handle flange DPH301 BT	No	2		
25	Lever handles on rose with cylinder escutcheons (Stainless steel) code: TH125 SS	Sets	1.0		
	PUSH PLATES AND KICKING PLATES				
	"Dorma" or similar approved				
26	300 x (width of door) x 1,2mm thick stainless steel kick plate code:DKP-430-SF 300	No	30		
27	150 x 400 x 1,2mm thick stainless steel BLANK plate DPP-430-BL	No	6		
	DOOR CLOSERS				
	"Dorma" or similar approved				
28	Floor mounted door stop (Nikel Plated) code: DDS-SS-017	No	21		
29	TS73V PA - PAB - SL Parallel Arm NON HOLD OPEN door closer including parallel arm brackets	Sets	2.0		
30	TS73V PA - DC-PAB-SL Parallel Arm DELAYED ACTION push side fixing door closer including parallel arm brackets	Sets	2.0		
	LETTERS, NAMEPLATES, ETC				
	"Dorma" or similar approved				
31	150 x 150mm stainless steel male sign DSS-130 M	No	4		
32	150 x 150mm stainless steel female sign DSS-131 F	No	4		
33	150 x 150mm stainless steel DISABLED PERSONS sign DSS-133 P	No	3		
	BATHROOM FITTINGS				
	Carried Forward			R	

	Brought Forward			R	
	"Franke" or similar approved				
34	"Franke" Stratos STRX 600 1,2/1,5mm thick grade 304 18/10 satin stainless steel paper towel dispenser size 305 x 300 x 134mm high, with stainless steel screws with spindle system and cylinder lock with standard Franke key, plugged and screwed to the wall with stainless steel screws	No	4		
35	"Franke" Stratos STRX 605 1,2/1,5mm thick grade 304 18/10 satin stainless steel waste disposal bins, size 300 x 270 x 520mm high, plugged and screwed to the wall with stainless steel screws.	No	4		
36	"Franke" Stratos STRX 615 1,2/1,5mm thick grade 304 18/10 satin stainless steel sanitary bag dispenser, size 250 x 156 x 90mm high, plugged and screwed to the wall with stainless steel screws.	No	4		
37	"Franke" Stratos STRX 618 1,2/1,5mm thick grade 304 18/10 satin stainless steel soap dispenser, size 304 x 100 x 134mm deep with a replacement and refillable 1 litre container, cylinder lock with standard Franke key, plugged and screwed to the wall with stainless steel screws.	No	6		
38	"Franke" Stratos STRX 611 1,2/1,5mm thick grade 304 18/10 satin stainless steel recessed sanitary towel disposal bins, size 232 x 135 x 331mm deep, plugged and screwed to the wall with stainelss steel screws	No	4		
39	"Franke" Stratos HDTX 674 2mm thick grade 304 18/10 satin stainless steel toilet roll holders, size 130 x 415 x 150mm deep for 3 rolls maximum 115mm diameter with spindle system and cylinder lock with standard Franke key, plugged and screwed to the wall with stainless steel screws	No	6		
40	"Franke" CNTX 600 32mm diameter Grade 304 18/10 stainless steel grab rails (code: 359872), size 600mm x 95mm deep with Franke Fine Grip surface, plugged and screwed to the wall with stainless steel screws.	No	2		
	Carried Forward			R	

BUILDING WORKS
Bill No. 10
Ironmongery

	Brought Forward			R	
41	"Franke" CNTX 700 A 32mm diameter Grade 304 18/10 stainless steel angle bars (code: 359877), size 256 x 618 x 95mm deep with Franke Fine Grip surface, plugged and screwed to the wall with stainless steel screws.	No	2		
	SUNDRIES				
	"Dorma" or similar approved				
42	Stainless steel Hat and Coat Hook with rubber buffer code: DHC-SS-031B	No	4		
43	Standard aluminium weather bar	No	3		
44	1.2mm high Stainless steel cladding	No	2		
45	300 x 200mm aluminium louvre	No	1		
	BUDGETARY ALLOWANCES				
46	Allow an amount of R35 000 (Thirty Five Thousand Rands) for ironmongery, to be omitted in part or as awhole as instructed by Principal Agent	Item	1.00	35 000.00	35 000.00
	Carried Forward to Summary of Section No.			R	
	BUILDING WORKS Bill No. 10 Ironmongery				

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 11				
	STRUCTURAL STEELWORK				
	Descriptions				
	Descriptions of bolts shall be deemed to include nuts and washers				
	Descriptions of L-shaped and U-shaped anchor bolts shall be deemed to include bending, threading, nuts and washers and embedding in concrete				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete				
	STEEL COLUMNS AND BEAMS				
	Welded columns in single lengths with flat base, cap, bearer and connection plates, bolted to concrete				
1	75 x 75mm x 2.5kg/m I-section columns	t	1.00		
2	125 x 75 x 20 x 2 CFLC Rafters	t	0.08		
	STEEL PURLINS, GIRTS, BRACING, ETC				
	GALVANISED STEEL PURLINS, GIRTS, BRACING, ETC				
	Purlins and girts, bolted to steel				
3	75 x 50 x 20 x 2mm Thick cold-formed lipped channel purlins	t	0.18		
	Welded bracing, anti-sag rails, etc with flat connection plates, bolted to steel				
4	50 x 50 x 3 L Bracing	t	0.04		
	Carried Forward			R	

	Brought Forward			R	
	BOLTS, FASTENERS, ETC				
5	M12 chemical anchor	No	36		
	Carried Forward to Summary of Section No.			R	
	BUILDING WORKS Bill No. 11 Structural steelwork				

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 12				
	METALWORK				
	Descriptions of bolts, anchors, etc				
	Descriptions of bolts shall be deemed to include nuts and washers				
	Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete				
	Items described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described				
	Items described as "plugged" shall be deemed to include screwing to fibre, plastic or metal plugs at not exceeding 600mm centres				
	Aluminium doors, windows, etc				
	Doors and windows shall comply with AAAMSA design criteria				
	Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed				
	The following certificates shall be provided prior to commencement of site work:				
	1 A copy of the relevant AAAMSA Performance Test Certificate from the manufacturer/contractor supplying the architectural aluminium product				
	2 A Certificate of Conformance confirming that anodising or powder coating has been processed in accordance with SANS 999 and SANS 1796 respectively				
	Carried Forward			R	

	Brought Forward			R	
	3 A powder guarantee of not less than 15 years issued by the powder manufacturer. The specific conditions contained in this guarantee shall form part of the powder coating process				
	4 A Certificate of Conformance confirming that glazing has been installed in accordance with SANS 0137, ensuring that safety glazing materials have been installed in the mandatory areas and that each individual pane of safety glazing materials has been permanently marked				
	5 A warranty from the manufacturer of the laminated safety glass and/or hermetically sealed glazing units guaranteeing the products against delamination and colour degredation for a period of not less than five years				
	PRESSED STEEL DOOR FRAMES				
	1,2mm Double rebated frames suitable for one brick walls				
1	Frame for double door 1500 x 2100mm high	No	2		
	ALUMINIUM WINDOWS, DOORS, ETC				
	Note: Tenderers are referred to architect's drawings numbered 01-531 annexed to these bill of quantities/ accompanying these bills of quantities for tender purposes				
	"Interpon" (Code:YW206F) Matt white Metallic or similar approved powder coated aluminium windows glazed with 6.38mm thick laminated clear toughened glass fitted in all panes with glazing putty and plugged to brickwork or concrete.				
2	Window size 3020 x 1555mm (W16)	No	8		
3	Window size 2970 x 2000mm (W17)	No	2		
4	Window size 3200 x 1500mm (W19)	No	1		
5	Window size 3965 x 1500mm (W20)	No	1		
	Carried Forward			R	

BUILDING WORKS
Bill No. 12
Metalwork

	Brought Forward			R	
6	Window type size 1020 x 1500mm (W21)	No	1		
7	Window size 4130 x 1500mm (W22)	No	1		
	"Interpon" (Code:YW206F) Matt white Metallic or similar approved powder coated aluminium windows glazed with 6.38mm thick laminated clear toughened glass fitted in all panes with glazing putty and plugged to brickwork or concrete. With new ironmongery				
8	Window size 1900 x 1245mm (W13)	No	2		
9	Window size 4000 x 1500mm (W18)	No	8		
10	Window size 5160 x 1320mm (W23)	No	1		
	"Interpon" (Code:YW206F) Matt white Metallic or similar approved powder coated aluminium windows glazed with 6.38mm thick laminated clear toughened glass fitted in all panes with glazing putty and plugged to brickwork or concrete. With frosted vinyl				
11	Window size 920 x 1530mm (W14)	No	1		
12	Window size 6650 x 1890mm (W25)	No	1		
13	Window size 8700 x 1760mm (W26)	No	1		
	"Interpon" (Code:YW206F) Matt white Metallic or similar approved powder coated purpose made aluminium doors, sidelights and fanlights with 8mm LOW Eclear laminated safety glass, as per smartglass intruderprufe with clip-on glazing beads and neoprene gasket seals as per manufacturer or similar approved plugged to brickwork or concrete				
14	Double door size 1890 x 2390mm (D14)	No	1		
15	Double door size 1910 x 2175mm (D17)	No	1		
	Carried Forward to Summary of Section No.			R	
	BUILDING WORKS Bill No. 12 Metalwork				

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 13				
	PLASTERING				
	SUPPLEMENTARY PREAMBLES				
	Plastering of concrete soffits				
	The plasterer should make sure that the surface to be plastered does not deviate from the required plane by more than 10mm. All high areas should be removed by hacking or cutting. Fill low areas by applying undercoats of plaster not exceeding 15m in thickness, apply one coat plaster to surface, leave to stiffen, strike off with a striker board, and wood float to an even surface and to a thickness of 10 - 15mm thick.				
	SCREEDS				
	3:1 Cement plaster screeds wood floated on concrete				
1	Average 30mm thick on floors to falls	m²	719		
	INTERNAL PLASTER				
	12-15mm Thick one coat plaster (4:1) of sand/cement smooth plaster finished with a steel float.Note: All plaster splashes, loose material and surface contamination to be removed by brushing or scrapping. Using approved filler, all defects to be made good. Remove powdery residues once dry.				
2	On walls	m²	217		
3	On narrow widths	m²	15		
	Carried Forward to Summary of Section No.			R	

BUILDING WORKS
Bill No. 13
Plastering

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 14				
	TILING				
	WALL TILING				
	300 x 600 "Lime Green Sourcing Solutions (Code LG2222SP)" Apex white matt or similar approved porcelain wall tiles, (PC R350/m2 VAT incl. delivered to site), fixed with TAL tile adhesive with 5mm joints continuous in both directions and grouted with TAL grout " or equal approved epoxy grouting, colour to architect				
1	On walls	m²	205		
2	On narrow widths, etc.	m²	15		
	FLOOR TILING				
	600 x 600mm "Lime Green Sourcing Solutions (Code LG 2221SP) Damstone medium grey or similar approved matt porcelain tile, (PC R450.00/m2 VAT excl. delivered to site) fixed to internal floor screed with TAL tile adhesive with 5mm joints continuous in both directions and grouted with TAL tile grout or equally epoxy grouting, colour to architect				
3	On floors	m²	89		
	Carried Forward to Summary of Section No.			R	

BUILDING WORKS
Bill No. 14
Tiling

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO 2				
	BILL NO. 15				
	PLUMBING AND DRAINAGE (PROVISIONAL)				
	Wire gratings				
	Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings				
	Stormwater channels				
	Descriptions of channels shall be deemed to include necessary excavation, surface preparation, compaction, etc, and disposal of surplus material on site				
	French drains				
	Descriptions of french drains shall be deemed to include excavation, stone filling graded from 300mm diameter at bottom to 75mm diameter at top, geofabric filter blanket over stone, 300mm earthfilling over and disposal of surplus material on site				
	Septic tanks				
	Descriptions of proprietary type septic tanks shall be deemed to include excavation, bedding and jointing, concrete base slabs, jointing to drains and backfilling, compaction, etc all in accordance with the manufacturer's instructions and disposal of surplus material on site				
	Carried Forward			R	

Brought Forward			R	
Stainless steel basins, sinks, wash troughs, urinals, etc Stainless steel for economy basins, domestic sinks and worktops shall be Type 430 (17/0) Stainless steel for urinals, basins, quality sinks, wash troughs, institutional equipment, etc shall be Type 304 (18/8) Stainless steel for laboratory sinks, photographic equipment, etc shall be Type 316 (18/8) Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable				
Sealing of edges Outer edges of sinks, basins, baths, urinals, etc are to be sealed against adjacent surfaces with approved silicone				
PVC-U pipes and fittings Sewer and drainage pipes and fittings shall be jointed and sealed with butyl rubber rings Soil, waste and vent pipes and fittings shall be solvent weld jointed or sealed with butyl rubber rings				
PVC-U pressure pipes and fittings Pipes of 50mm diameter and smaller shall be plain ended with solvent welded PVC-U loose sockets and fittings Pipes of 63mm diameter and greater shall have sockets and spigots with push-in type integral rubber ring joints. Bends shall be PVC-U and all other fittings shall be cast iron, all with similar push-in type joints				
High density polyethylene (HDPe) pipes and fittings Pipes shall be type IV and of the class specified with compression fittings				
Carried Forward			R	

BUILDING WORKS
Bill No. 15
Plumbing and drainage

Brought Forward			R	
Polypropylene pipes Polypropylene pipes 54mm diameter and smaller shall be seamless copper coloured Class 16 pipes jointed with heat welded thermoplastic or where so described compression fittings Pipes shall be firmly fixed to walls, etc with coloured nylon snap-in pipe clips with provision for accommodating thermal movement and jointed and fixed strictly in accordance with the manufacturer's instructions				
Copper pipes Pipes shall be hard drawn and half-hard pipes of the class described. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin walled half-hard), Class 2 (half-hard) and Class 3 (heavy walled half-hard) pipes shall only be bent with benders with inner and outer formers. Fittings to copper waste, vent and anti-syphon pipes, capillary solder fittings and compression fittings shall be "Cobra Watertech" type. Capillary solder fittings shall comply with ISO 2016 Copper pipes are to be installed in accordance with the latest revision of the Code of Practice for Copper Plumbing soldering techniques. Flux, solder, etc to be strictly in accordance with the manufacturer's requirements with special attention to copper flux composition				
Reducing fittings Where fittings have reducing ends or branches they are described as "reducing" and only the largest end or branch size is given. Should the contractor wish to use other fittings and bushes or reducers he may do so on the understanding that no claim in this regard will be entertained				
Fixing of pipes Unless specifically otherwise stated, descriptions of pipes shall be deemed to include fixing to walls, etc, casting in, building in or suspending not exceeding 1m below suspension level				
Carried Forward			R	

BUILDING WORKS
Bill No. 15
Plumbing and drainage

Brought Forward			R	
Paper wrapping to pipes Pipes chased into brickwork must be wrapped with two layers of stout brown paper tied with wire. Rates are to include for wrapping around joints and fittings **Disinfection of water pipework** Water pipework is to be disinfected at completion **"Densyl petrolatum anti-corrosion tape** Pipes to be taped shall be coated with the appropriate primer and the tape shall be applied in the appropriate widths and with 15mm overlaps Couplings and fittings to pipes shall be taped in strict accordance with the manufacturer's instructions Prices for wrapping of pipes shall include for all work as described to couplings in the length **Laying, backfilling, bedding, etc of pipes** Pipes shall be laid and bedded in accordance with manufacturers' instructions and trenches shall be carefully backfilled Where no manufacturers' instructions exist, pipes shall be laid in accordance with the relevant section of SANS 2001 **General** Descriptions of cast iron roof outlets shall be deemed to include joints to pipes and casting into concrete (adaptors for joints to PVC pipes, etc are given separately) Descriptions of overflow pipes where measured in number, shall be deemed to include joints to cisterns and splay cut ends				
Carried Forward			R	

BUILDING WORKS
Bill No. 15
Plumbing and drainage

	Brought Forward			R	
	Descriptions of pipes laid in and including trenches and of inspection chambers, catchpits, etc shall be deemed to include excavation, bedding, backfilling, compaction to a minimum of 95% Mod AASHTO density and disposal of surplus material on site				
	Descriptions of service pipes and flexible connecting pipes shall be deemed to include connections to taps, cisterns, etc and to steel pipes (adaptors for connections to copper pipes, etc are given separately)				
	Descriptions of WC pans, slop hoppers, etc shall be deemed to include for joints to soil pipes (pan connectors are separately measured)				
	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)				
	RAINWATER DISPOSAL				
	Galvanised sheet iron				
1	300 x 300 Box gutters	m	315		
2	300 x 300mm Rainwater down pipes	m	112		
3	Extra over gutter for bracket	No	105		
4	Extra over for stopped end	No	10		
5	Extra over rainwater pipe for bend	No	35		
6	Extra over rainwater pipe for shoe	No	35		
	SANITARY FITTINGS ETC				
	Carried Forward			R	

	Brought Forward			R	
	"Grohe" or similar approved				
7	Grohe Pneumatic actuation chrome (Code: GRO-G-37059000)	No	2		
8	Grohe Skate cosmopolitan wall plates - dual (Code: GRO-G-38732000)	No	4		
9	Grohe uniset for WC without support feet (Code: GRO-G-38643001)	No	6		
	"Cobra" or similar approved				
10	"Welcome" white toilet pan wall hung (Code: COB-439800WH) with "welcome"toilet seat (Code: COB-C-CCSEAT/WEL)	No	6		
11	"Shelter" round wall hung basin 495mm long x 430mm wide with 1 pre-punched tap hole in the centre of the basin. Overflow, expansion bolts and installation included	No	2		
12	"Snug" top inlet wall hung urinal white (Code: COB-705600WH) anti splash flushing design with an effecient 1.9L flush. Versatile top or back entry installation. Compact concealed trapway	No	4		
	"Vaal" or similar approved				
13	Vaal weaver rectangular countertop basin with one taphole 335 x 290 (Code: VAA-706601WH) with fixing bolt set (Code: COB-8448Z000)	No	5		
	TRAPS ETC				
	"Cobra Watertech" or similar approved				
14	Cobra waste basin (Code: COB-303/N) slotted with flanged back nut, washer and plug. 62mm diameter flange, 77mm long shank and 1/1/4BSP male iron connection end	No	7		
15	Cobra bottle trap (Code: COB-340/N) with 75mm deep seal type with adjustable telescopic waste connection pipe with 1/4BSP female inlet connection and 1 1/4BSP male iron outlet connection. Brass only	No	7		
	Carried Forward			R	

BUILDING WORKS
Bill No. 15
Plumbing and drainage

	Brought Forward			R	
16	Cobra Junior flushmaster (COB-F-J6-000/N) exposed flush valve chrome, Non-hold open feature with ball o stop control inlet, wall flange, additional screw and piston for large bowl and urinals. 3/4BSP female iron connection end with offset urinal flush pipe 215 x 15mm diameter chrome outlet with 27mm offset. For junior flushmaster urinal flush, including inlet adaptor for urinal flush valves 110mm x 77mm x 230mm	No	4		
17	Cobra offset urinal flush pipe (Code: COB-FJT5-5) 215 x 15mm diameter chrome outlet with 27mm offset	No	4		
	SANITARY PLUMBING				
	SANITARY PLUMBING				
	Extra over uPVC, soil and vent pipes for fittings				
18	110mm Access bend	No	6		
19	110mm Pan connector	No	6		
20	110mm Access junction	No	6		
21	110mm Junction	No	6		
22	110mm Access bend with anti-syphon horn	No	6		
23	110mm Access double junction	No	6		
24	110mm Air vent cowl	No	6		
25	110mm GI vent valve	No	6		
	TAPS, VALVES, ETC				
	"Cobra Watertech" similar approved				
26	Cobra angle valve (Code: COB-232-10/N) angle regulating valve with durable ABS handle, DZR body, flow regulating spindle type headpart G1/2 X G1/2 BSP connections	No	7		
	Carried Forward			R	

BUILDING WORKS
Bill No. 15
Plumbing and drainage

	Brought Forward			R	
27	Cobra Medical elbow action pillar tap (Code: COB-503-21B/N) with 1/4 turn ceramic disk headparts, flanged backnut and blue indice for cold water application. 1/2BSP male iron connection end	No	2		
28	Cobra pillar type single lever basin mixers flow rate restricted to 5 ltrs/min G1/2 female connection ends (Code: COB-AM-951)	No	5		
	BUDGETARY ALLOWANCES				
29	Allow an amount of R20 000 (Twenty Thousand Rands) for any other additional plumbing work and testing, to be omitted in part or as a whole as instructed by Principal Agent	Item	1.00	20 000.00	20 000.00
30	Allow an amount of R60 000 (Sixty Thousand Rands) for Waterhole roof drainage as per Engineer's specification, to be omitted in part or as a whole as instructed by Principal Agent	Item	1.00	60 000.00	60 000.00
	Carried Forward to Summary of Section No.			R	
	BUILDING WORKS Bill No. 15 Plumbing and drainage				

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 16				
	GLAZING				
	GLAZING TO STEEL WITH PUTTY				
	4mm Clear toughened safety glass				
1	Panes not exceeding 0,1 m2	m²	0.2		
	MIRRORS, ETC				
	4mm Thick glass mirror with 4 visible fixing points with stainless steel screws and chrome caps				
2	Mirror 400 x 600mm high	No	24		
	Carried Forward to Summary of Section No.			R	

BUILDING WORKS
Bill No. 16
Glazing

Item No		Unit	Quantity	Rate	Amount R
	SECTION NO. 2				
	BILL NO. 17				
	PAINTWORK				
	PAINTWORK ETC TO PREVIOUSLY PAINTED WORK				
	ON FLOATED PLASTER				
	One coat Professional Gypsum & plaster primer (PP700) and two coats "Professional Superior Low Sheen" (PEM 1000/TLS) to external walls				
1	On walls	m²	177		
	ON METAL				
	One coat Plascoprime 170 primer with Professional all purpose undercoat (PU800) and two coats "Velvaglo"				
2	On door frames	m²	21		
3	On windows	m²	22		
4	On gates	m²	21		
5	On roller shutter doors	m²	5		
	ON WOOD				
	One coat Woodcare water based interior varnish and one coat "Woodcare water based interior varnish"				
6	On frame	m²	4		
7	On doors	m²	46		
	One coat Woodcare sunproof (WSP (1-16)) and two coats "Woodcare Sunproof "				
8	On frame	m²	7		
	Carried Forward			R	

	Brought Forward			R	
	One coat wood primer (UC2) and two coats "Professional Super Matt" (PEM 900/TSA)				
9	On trusses	m²	423		
	PAINTWORK ETC TO NEW WORK				
	ON FIBRE-CEMENT				
	One coat Professional Gypsum with plaster primer and two coats "Professional Contractors Matt White" (PEM 600)				
10	On ceilings and cornices	m²	116		
	One coat Professional Gypsum with plaster primer (PP700) and two coats "Professional Superior Low Sheen" (PEM 1000)				
11	On fascias and barge boards	m²	220		
	ON WOOD				
	One coat wood primer (UC2) with Professional all purpose undercoat '(PU800) and two coats "Plascon Velvago" (VLW/TVW))				
12	On doors	m²	54		
13	On beams	m²	89		
	Prepare surface and apply three coats clear matt varnish plascon polyurethane matt varnish, suede x 44 or similar approved				
14	On doors	m²	32		
	Carried Forward to Summary of Section No.			R	

BUILDING WORKS
Bill No. 17
Paintwork

Item No		Unit	Quantity	Rate	Amount R

SECTION NO. 2

BILL NO. 18

PROVISIONAL SUMS

General

Work for which budgetary allowances are provided will be measured and valued in accordance with the relevant building agreement and deducted in whole or in part if not required without any compensation for loss of profit on the said allowances

Prime cost amounts and provisional sums are net. Prime cost amounts shall include for delivery to site of all articles concerned

Provisional sums are for material and equipment supplied and installed complete by firms of specialists

Profit

Where stated, the contractor may allow for profit if required

General attendance on nominated/selected subcontractors

The item "attendance" which follows each provisional sum for nominated/selected subcontractors' work, shall be deemed to cover all the contractor's costs incurred in providing free of charge to the nominated/selected subcontractors the contractor's duties as described in clause 12.2 of the JBCC N/S Subcontract Agreement

Carried Forward R

	Brought Forward			R	
	Special attendance on nominated/selected subcontractors				
	Where "special attendance" such as unloading, storing, placing in position, providing special power supplies, specific hoisting, cranage and scaffolding requirements, provision of temporary casing and/or other specific protection of the works, special security and clearing away rubbish is required, a separate item describing the specific requirements in detail is to be provided for the pricing of such requirements				
	Builder's work				
	Builder's work in connection with specialist services is given elsewhere in these bills of quantities				
	BUDGETARY ALLOWANCES				
	PROVISIONAL SUMS FOR NOMINATED/SELECTED SUBCONTRACT WORKS				
	HARVEY THATCH TILES				
1	Provide the sum of R 280,000.00 (Two Hundred and Eighty Thousand Rands) for the stripping off of the old thatch grass from the roof and installing Harvey thatch tile complete with Cape reed ceilings and Alububble insulation on the existing roof structure (Waterhole building) as per specifications, to be omitted in part or as a whole as instructed by Principal Agent				
		Item	1.00	280 000.00	280 000.00
2	Profit			%	
3	Attendance			%	
	Carried Forward			R	

BUILDING WORKS
Bill No. 18
Provisional sums

	Brought Forward			R	
	HARVEY THATCH TILES				
4	Provide the sum of R 265,000.00 (Two Hundred and Sixty Five Thousand Rands) for the stripping off of the old thatch grass from the roof and installing Harvey thatch tile complete with Cape reed ceilings and Alububble insulation on the existing roof structure (Mountain & Picnic Kiosks) as per specifications, to be omitted in part or as a whole as instructed by Principal Agent	Item	1.00	265 000.00	265 000.00
5	Profit			%	
6	Attendance			%	
	TIMBER ROOF STRUCTURE				
7	Provide the sum of R 828,957.00 (Eight Hundred and Twenty Eight Thousand, Nine Hundred and Fifty Seven Rands) for the removal and replacement of timber roof structure, to be omitted in part or as a whole as instructed by Principal Agent	Item	1.00	828 957.00	828 957.00
8	Profit			%	
9	Attendance			%	
	ELECTRICAL WORK				
10	Provide the sum of R 100,000.00 (One Hundred Thousand Rands) for the supply and installation of electrical work complete,to be expended as the Agent/Representative may direct or deduct in whole or in part, if not required	Item	1.00	100 000.00	100 000.00
11	Profit			%	
12	Attendance			%	
	Carried Forward to Summary of Section No.			R	
	BUILDING WORKS Bill No. 18 Provisional sums				

Section No. 2

BUILDING WORKS

SECTION SUMMARY - BUILDING WORKS

Bill No		Page No		Amount R
1	Demolitions	33		
2	Alterations	37		
3	Earthworks (provisional)	40		
4	Concrete, formwork and reinforcement	42		
5	Masonry	44		
6	Waterproofing	45		
7	Roof coverings, claddings, etc	46		
8	Carpentry and joinery	48		
9	Ceilings, partitions and access flooring	50		
10	Ironmongery	56		
11	Structural steelwork	58		
12	Metalwork	61		
13	Plastering	62		
14	Tiling	63		
15	Plumbing and drainage	71		
16	Glazing	72		
17	Paintwork	74		
18	Provisional sums	77		
	Carried to Final Summary		R	
	BUILDING WORKS			

FINAL SUMMARY

Section No		Page No		Amount R
1	PRELIMINARIES	32		
2	BUILDING WORKS	78		
	SUB TOTAL		R	
	ADD: Value added Tax at 15%		R	
	TOTAL CARRIED TO FORM OF TENDER		R	

ANNEXURE B

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For and on behalf of:

ebesa architects

Document Approval	
Checked By: Director / Manager	
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Date:	29/03/2022
Total Pages:	14
APPROVED BY CLIENT:	
Name:	
Sign:	
Date:	

ProjectNo._**GS 03 01**
Document Ref. **GS03 01_SANBI-SOW_STAGE 4 (DF)**
Rev.1

South African National Biodiversity Institute (SANBI)

Renovations to selected buildings, including food and beverage outlets, for (SANBI) at the National Zoological Gardens (NZG) of South Africa, Boom Street, Pretoria

232 Boom Street
Daspoort 319-Jr, Pretoria
Gauteng

FOR APPROVAL

STAGE 4: TECHNICAL DOCUMENTATION
PROJECT REPORT

DIRECTORS
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SABS ISO 9001

MEMBER 2021 GREEN BUILDING COUNCIL SOUTH AFRICA

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2. The Site 3
3. Known site constraints 4
4. Constraints during the Construction Phase 4
5. Demolition Work 4
6. The Existing Buildings To Be Renovated 5
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Figure 8. The Picnic Kiosk - Building 5 11
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1. Introduction

EBESA ARCHITECTS has been instructed to facilitate and supervise the renovation of selected existing food and beverage outlet buildings at the National Zoological Gardens of South Africa located in Pretoria.

The Principal Agent must consider the provisional project list provided as well as other possible projects and prepare an overall feasibility report in consultation with SANBI and the appointed Programme Manager in order to ensure cost-effective execution in accordance with the available budget.

Following this process, the Principle Agent must draw up the Terms of Reference and bid documentation for implementation of the works, assist and advise SANBI in the procurement of the construction contractor(s) and supervise, project manage and administer the construction works.

Ebesa Architects is mandated to carry out the necessary inspections at appropriate stages to verify that the refurbishment is carried out in accordance with the specification and design as per the architect's and other consultants' drawings.

All projects indicated above will require a Bill of Quantities, full design drawings (where applicable), and associated council, environmental and regulatory approvals (where applicable). All construction must be done in accordance with acceptable industry standards.

The designer will, in the 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 practical, declare the structure safe for use, all required before a Completion Certificate can be issued to the client and a copy thereof to the Contractor.

The Architectural drawings must be read in conjunction with the Structural and Civil Engineers' drawings as well as the BOQ. The Geotechnical aspect, if applicable and the loading that the structure is designed to withstand is as per the Consulting Structural Engineer. All Health and Safety issues will be as per the Specialist and be subject to their approval.

The Principle Agent will be responsible for supplying and managing the proposed multidisciplinary team that is required in respect of the appointment.

2. The Site

The site is situated at 232 Boom Street, in Daspoort 319-Jr, a suburb of Pretoria in the province Gauteng, South Africa. Bordered and mainly accessed by Paul Kruger Street to the West; and defined by its Southern border in the form of Boom Street which also serves as the main entrance to the site. To the North the NZG zone is defined by the mountain range with the Apies River running through the heart of the zoo (*refer to Fig.1*).

The National Zoological Garden (NZG) of South Africa is the largest zoo in the country. More than 600 000 people visit the NZG annually. The total length of the walkways in the NZG in Pretoria is approximately 6km. The NZG was previously an agency of the Department of Science and Technology. It was incorporated into SANBI on the 1st of April 2018 in terms of the National Environmental Management: Biodiversity Act (NEMBA).

The 85-hectare Zoo in Pretoria houses various mammal, bird, fish, invertebrate, reptile, and amphibian species. An aquarium and reptile park also form part of the NZG. The aquarium is the largest inland aquarium in the country. The third largest collection of exotic trees in South Africa can be found at the NZG.

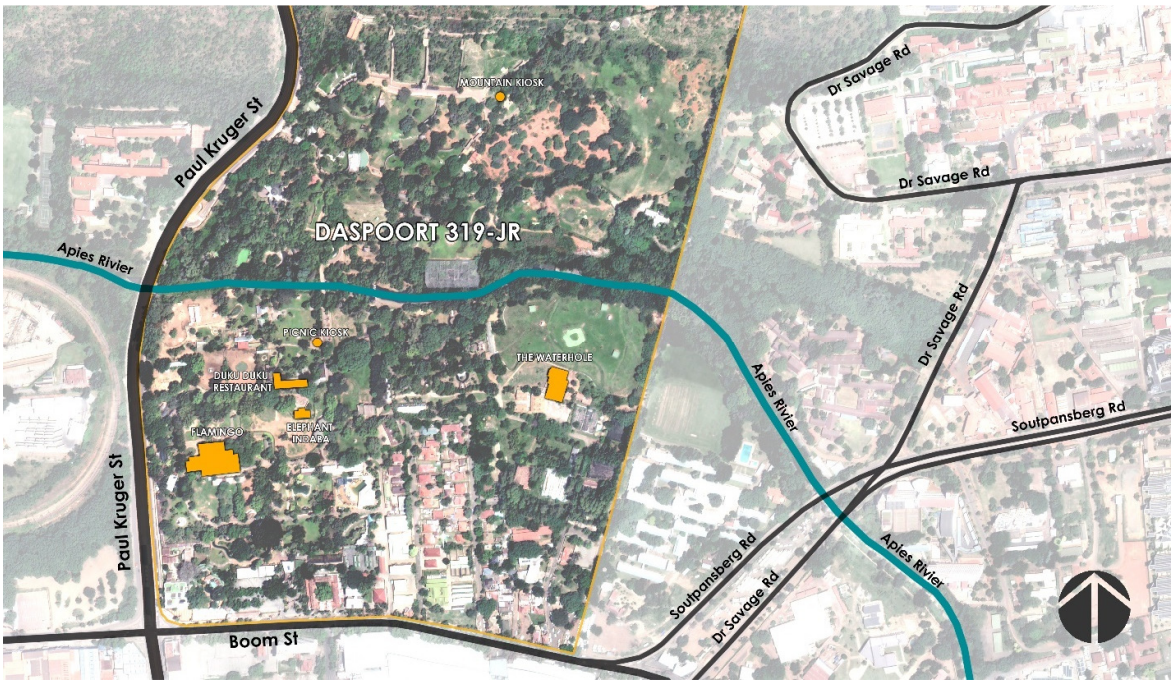


Figure 1. Aerial Map of Site indicating main roads, river, food & beverage building positions on site

3. Known site constraints

Boom Street to the South of the site, where the main entrance to the site is located, is an active road during peak times with numerous vehicles parked in the street due to the surrounding amenities in the area. There are large quantities of public transport in the form of combi taxis located throughout the street causing an influx in traffic congestion and occupying the street edge of the zoo entrance. This should be taken cognisance of when planning material deliveries and/ or removals.

The service entrance (De Waal Road) is relatively narrow for larger vehicles with the width at a maximum of 5 meters. The service entrance does not have clearly defined height restrictions other than the street trees. Timeous co-ordination and planning should be arranged with the employer in advance.

4. Constraints during the Construction Phase

The zoo will potentially be in full operation, excluding the areas that are under construction, and this will bring about restriction in terms of the level of noise that will be allowed as well as vehicular movement in some circumstances.

Site demarcations are to be agreed upon and approved by the employer prior to any work being carried out.

5. Demolition Work

All demolition work to be read in conjunction with the plans and sections. Any unclear demolition order must be clarified by the various consultants prior to any demolition work being undertaken.

All demolition works to be safely and securely disposed of on a timeous basis and no rubble left lying around on site will be entertained. Common areas must always be free and clear of any obstructions and all fire escape routes must be fully operational at all times. Common areas, where affected, must be cleaned daily.

Any hazardous material discovered upon demolition work to be safely identified and marked to be dealt with by specialists in a safe environmentally friendly manner.

6. The Existing Buildings To Be Renovated

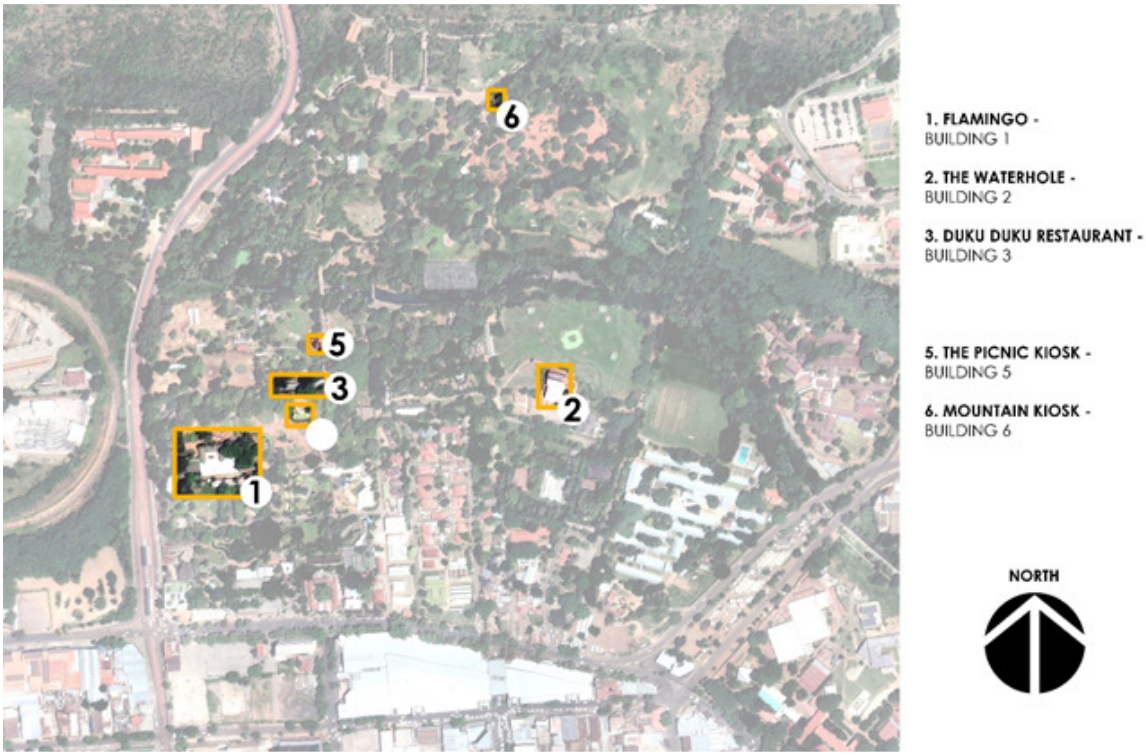


Figure 2. Locations of the selected food & beverage buildings on site

FLAMINGO - BUILDING 1

THE WATERHOLE - BUILDING 2

DUKU DUKU RESTAURANT - BUILDING 3

Figure 3. Aerial view of the buildings concerned

THE PICNIC KIOSK - BUILDING 5

MOUNTAIN KIOSK - BUILDING 6

Figure 4. Aerial view of the buildings concerned

FLAMINGO – BUILDING 1

The Flamingo building is a single storey building with the largest building footprint of all buildings in the scope and comprises of a large open dining space. The service spaces such as the kitchen, ablutions and cold rooms are located on the southern edge of the courtyard; with the private lounge to the south-western corner.

The informal entrance is located to the north-western corner of the building at the Main Kiosk. The main entrance leads directly to the centre of the northern open space and in the form of a paved ramp (also suitable for wheelchair use).

Figure 5. Flamingo - Building 1

THE WATERHOLE – BUILDING 2

The Waterhole building is situated to the far eastern side of the NZG. It comprises of a large concrete roof area with a thatched roof covered open plan space. The main access to the first storey is a concrete angled staircase that leads to a wrap-around walkway. The large thatch roofed space serves as a multipurpose hall with secondary service spaces leading from the hall. The functions of the building ranges from a wedding chapel to accommodation, from conference rooms to large catering kitchen areas.

Figure 6. The Waterhole - Building 2

DUKU DUKU RESTAURANT – BUILDING 3

The Duku Duku Restaurant is a large open plan, linear face brick building that is oriented east to west. The restaurant is in the centre of the NZG.

The restaurant has a large gravel area just beyond its northern façade. The building is a single storey structure with its utilities situated at opposite ends of the building; the kitchen on the west and the bathrooms on the east, the restaurant is the residual space in between.

Figure 7. Duku Duku Restaurant - Building 3

THE PICNIC KIOSK – BUILDING 5

The Picnic Kiosk is situated in close proximity to the Duku Duku Restaurant. The kiosk is built in the likeness of a traditional rondavel. The kiosk houses a few fridges, snacks shelves and sink. The entire façade is covered with stone cladding to match its surroundings.

Figure 8. The Picnic Kiosk - Building 5

MOUNTAIN KIOSK – BUILDING 6

The kiosk is built in the likeness of a traditional rondavel. The kiosk houses a few fridges, snacks shelves and sink. The entire façade is covered with stone cladding to match its surroundings.

Figure 9. Mountain Kiosk - Building 6

7. Scope of Work for the Proposed Renovations of the Existing Buildings.

FLAMINGO – BUILDING 1

Description of Renovations:

1. Replacement of main building roof sheeting, inclusive of gutters and downpipes as indicated on the Architectural- and Engineering drawings.
2. Safe removal of existing barrel vaulted roof and replaced with new lean-to roof structure, inclusive of ceilings as indicated on the Architectural- and Engineering drawings.
3. Refurbishment of existing exposed roof trusses as indicated on the Architectural- and Engineering drawings.
4. Safe removal of existing ceilings and replaced with new suspended ceilings in the Male and Female Ablutions as indicated on the Architectural drawings.
5. Safe removal of the existing tile and carpet tiles and replaced with new floor tiles in the existing Bar and existing VIP toilets as indicated on the Architectural drawings.
6. Cleaning of existing face brick walls and repainting of existing walls as indicated on the Architectural drawings.
7. Replacement and refurbishment of existing doors and windows as indicated on the Architectural drawings.

THE WATERHOLE – BUILDING 2

Description of Renovations:

1. Refurbishment of existing concrete roof waterproofing and rainwater disposal system as indicated on the Architectural- and Engineering drawings.
2. Safe removal of existing thatch of thatched roof and replacement new thatch appearance roof tiles as indicated on the Architectural drawings.

DUKU DUKU RESTAURANT – BUILDING 3

Description of Renovations:

1. Refurbishment of existing Male and Female Ablutions inclusive of wall-, floor- and ceiling finishes, toilets, basins, urinals, sanitary accessories, basin counters, door frames and doors as indicated on the Architectural drawings.

THE PICNIC KIOSK – BUILDING 5

Description of Renovations:

1. Safe removal of existing thatch of thatched roof and replacement new thatch appearance roof tiles as indicated on the Architectural drawings.
2. Safe removal of broken glazing in window and replaced with new safety glazing as indicated as indicated on the Architectural drawings.

MOUNTAIN KIOSK – BUILDING 6

Description of Renovations:

1. Safe removal of existing thatch of thatched roof and replacement new thatch appearance roof tiles as indicated on the Architectural drawings.
2. Refurbishment of kiosk counters as indicated on the Architectural drawings.

Additional Construction Materials.

All materials should be built, applied and installed in accordance with the manufacturer's specifications. Where conflict and/ or queries arise, the relevant professional must be consulted in order to obtain clarification and a clear methodology and way forward.

General

This SOW must be read in conjunction with the Architectural Drawings and Specifications. BOQ and relevant Structural and Civil Drawings and Specifications. Health and Safety as per specialist consultant appointed.

8. Applicable Drawings and Specifications

The following Architectural- and Engineering Drawings and Specifications should be read in conjunction with the Scope of Work descriptions:

1. ARCHITECTURAL:

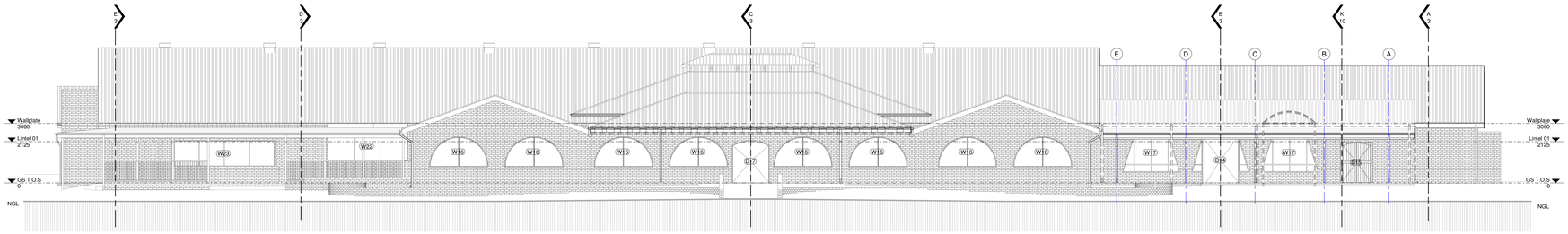
Drawing Number:	Building:
01_221	FLAMINGO RESTAURANT
01_211	FLAMINGO RESTAURANT
01_212	FLAMINGO RESTAURANT
01_251	FLAMINGO RESTAURANT
01_203	FLAMINGO RESTAURANT
01_204	FLAMINGO RESTAURANT
01_301	FLAMINGO RESTAURANT
01_521	FLAMINGO RESTAURANT
01_531	FLAMINGO RESTAURANT
01_206	FLAMINGO RESTAURANT
03_201	DUKU DUKU RESTAURANT
02_202	WATERHOLE BUILDING
05&06_201	MOUNTAIN & PICNIC KIOSKS
SPECIFCATIONS	ALL BUILDINGS

2. ENGINEERING:

Drawing Number:	Building:
EG/3190/C/11/001	GENERAL CONSTRUCTION NOTES
EG/3190/C/5/001	FLAMINGO RESTAURANT
EG/3190/C/8/001	WATERHOLE BUILDING
EG/3190/SW/3/001	STORMWATER DETAILS
EG/3190/G/2/001	FLAMINGO RESTAURANT
EG/3190/G/2/002	FLAMINGO RESTAURANT

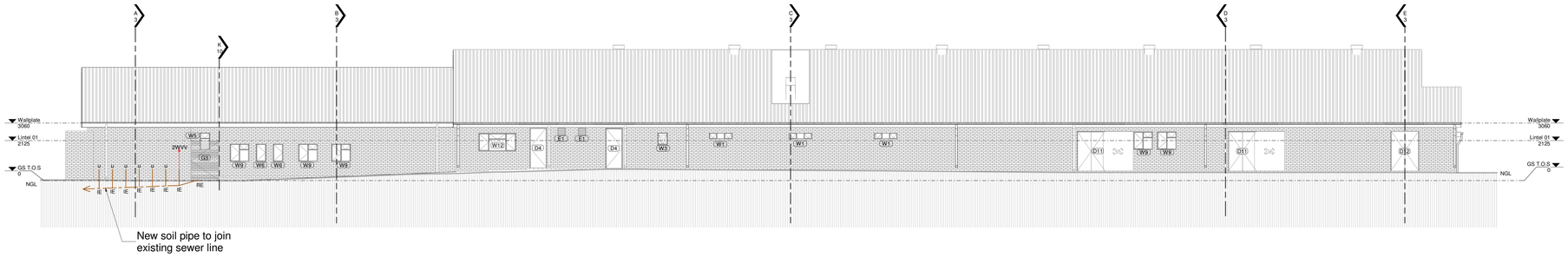
9. Annexures

NOTE: REFER TO **ANNEXURE A** FOR THE QUANTITY SURVEYOR'S DOCUMENTATION
NOTE: REFER TO **ANNEXURE B** FOR ARCHITECTURAL DRAWINGS AND SPECIFICATIONS
NOTE: REFER TO **ANNEXURE C** FOR ENGINEERING REPORT, DRAWINGS AND SPECIFICATIONS



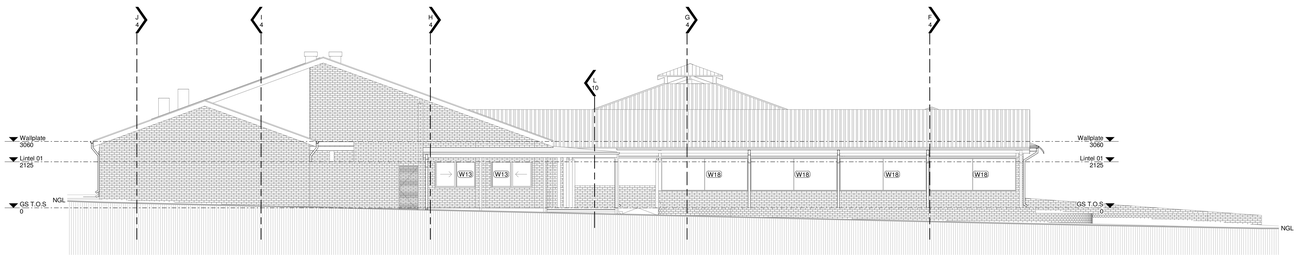
North Elevation

Scale 1 : 100



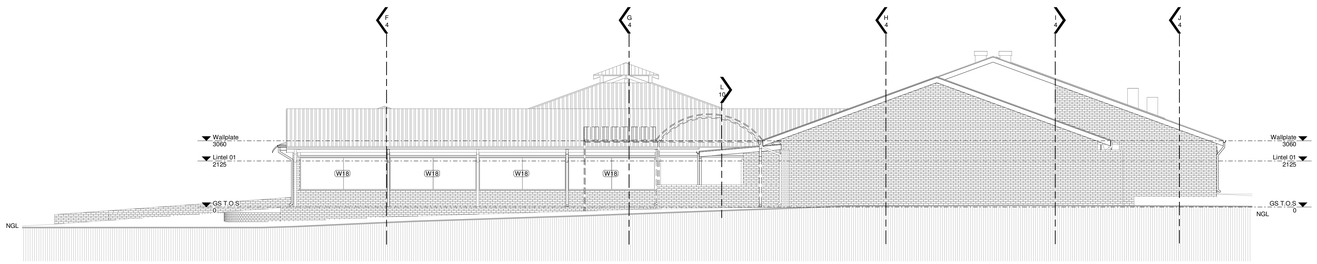
South Elevation

Scale 1 : 100



East Elevation

Scale 1 : 100



West Elevation

Scale 1 : 100

REVISIONS

No.	Date	Description	Rev. by
1	17/08/2021	FOR INFORMATION	RFS
2	14/09/2021	ISSUED FOR APPROVAL	RFS
3	19/01/2022	ISSUED FOR APPROVAL	RFS
4	03/03/2022	ISSUED FOR TENDER	WFL

SANS 10400, Municipal requirements and those of other authorities must be adhered to. Contractors and sub-contractors are to check all dimensions and levels on the building site before commencing work. Figured dimensions to be taken in preference to scaled measurements and large scale details supercede small scale drawings. The design on this drawing is the property of Ebesa Architects (pty) ltd and copyright is reserved by them.

CONTRACTOR RESPONSIBILITY:
CONTRACTORS TO ACQUAINT THEMSELVES WITH THE SITE CONDITIONS, PRIOR TO SETTING OUT AND CONSTRUCTION. ALL DETAILS AND ANYTHING WHICH IS NOT CLEAR, MUST BE CLARIFIED WITH THE ARCHITECT TIMEOUSLY BEFORE PUTTING ANY WORK IN HAND. THE CONTRACTOR SHALL REMAIN LIABLE FOR THE SAFETY OF THEIR OWN WORKMEN, DURING THE DURATION OF THE CONTRACT.

CLIENT / DEVELOPER

SANBI
Biodiversity for Life
South African National Biodiversity Institute

PROJECT DETAILS
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL
ZOOLOGICAL GARDENS

PROJECT NAME
SANBI - RENOVATION OF
FOOD & BEVERAGE
OUTLETS

SHEET NAME
ELEVATIONS

FOR TENDER

APPROVAL		
CLIENT	SIGNATURE	DATE
ARCHITECT / LM	SIGNATURE	DATE
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.	6049	
WORK STAGE:	4 - TENDER DOCUMENTATION	

DATE	03/03/2022		DF	DESIGN
SCALE	1 : 100	A0	RFS	DOCUM.
DRAWN	RFS		PRC	CHECKED

architects | interiors
ebesa
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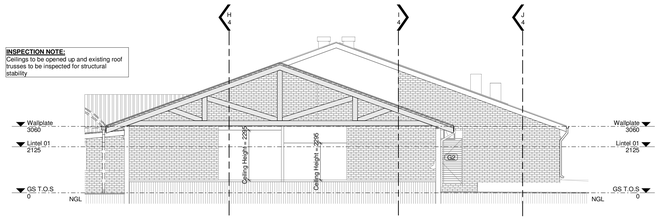
JOB NUMBER
GS03 01

DRAWING NUMBER
01_221

SHEET NUMBER
2

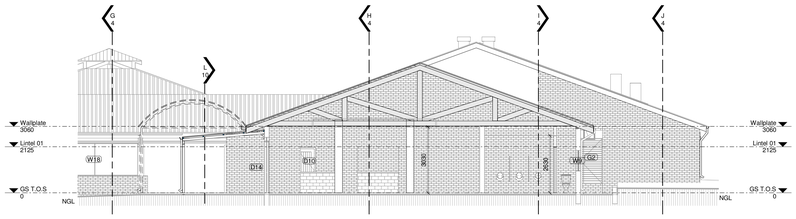
REV.NO.
4

THIS PLAN SHOULD BE READ IN CONJUNCTION WITH ALL PROJECT PAGES



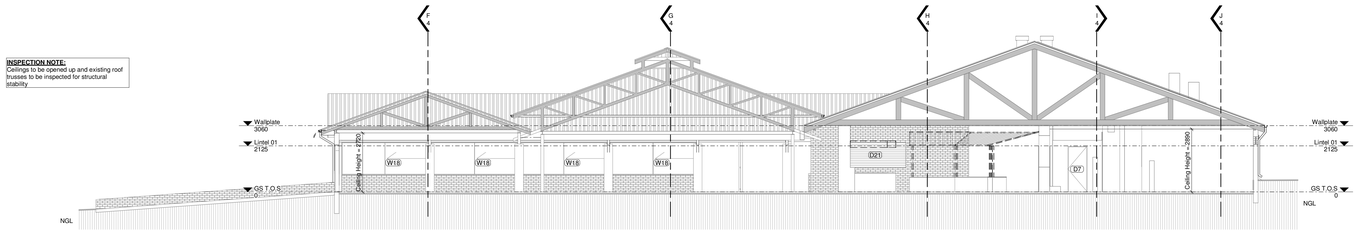
Section A-A

Scale 1 : 100



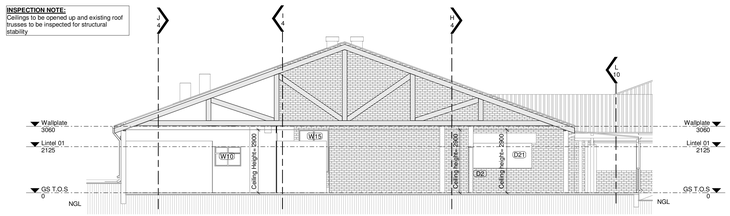
Section B-B

Scale 1 : 100



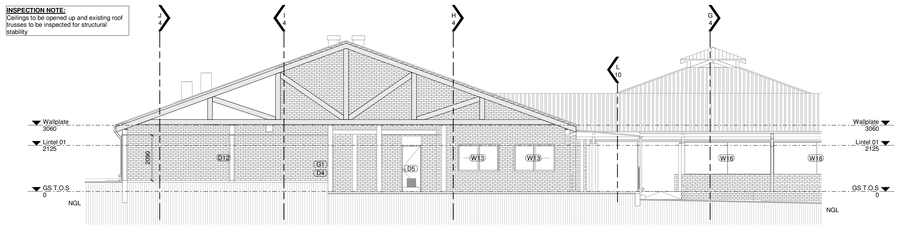
Section C-C

Scale 1 : 100



Section D-D

Scale 1 : 100



Section E-E

Scale 1 : 100

THIS PLAN SHOULD BE READ IN CONJUNCTION WITH ALL PROJECT PAGES

REVISIONS

No.	Date	Description	Rev. by
1	17/08/2021	FOR INFORMATION	RFS
2	14/09/2021	ISSUED FOR APPROVAL	RFS
3	19/01/2022	ISSUED FOR APPROVAL	RFS
4	03/03/2022	ISSUED FOR TENDER	WFL

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CLIENT / DEVELOPER

SANBI
Biodiversity for Life
South African National Biodiversity Institute

PROJECT DETAILS
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL
ZOOLOGICAL GARDENS

PROJECT NAME
SANBI - RENOVATION OF
FOOD & BEVERAGE
OUTLETS

SHEET NAME
SECTIONS A-A TO E-E

FOR TENDER

APPROVAL		
CLIENT	SIGNATURE	DATE
ARCHITECT / LM	SIGNATURE	DATE
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.	6049	
WORK STAGE:	4 - TENDER DOCUMENTATION	

DATE	03/03/2022		DF	DESIGN
SCALE	1 : 100	A0	RFS	DOCUM.
DRAWN	RFS		PRC	CHECKED

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JOB NUMBER

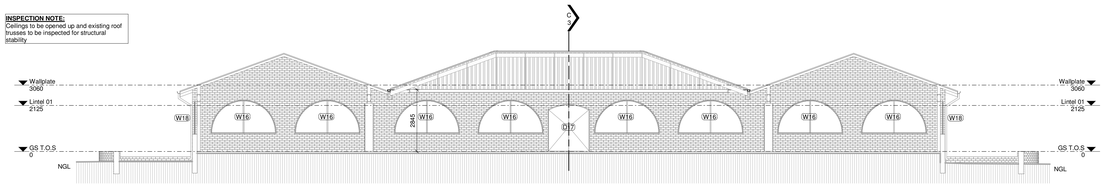
GS03 01

DRAWING NUMBER
01_211

REV.NO.
4

SHEET NUMBER
3

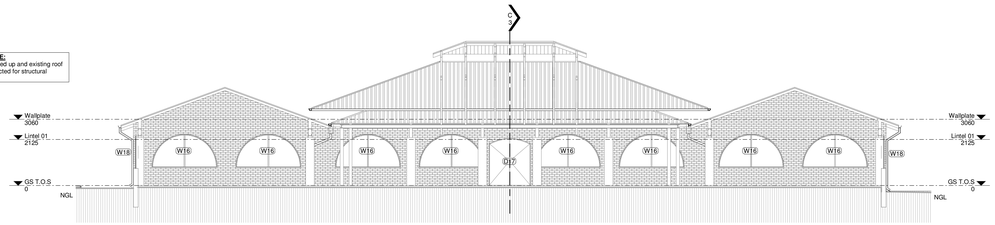
INSPECTION NOTE:
Ceilings to be opened up and existing roof trusses to be inspected for structural stability



Section F-F

Scale 1 : 100

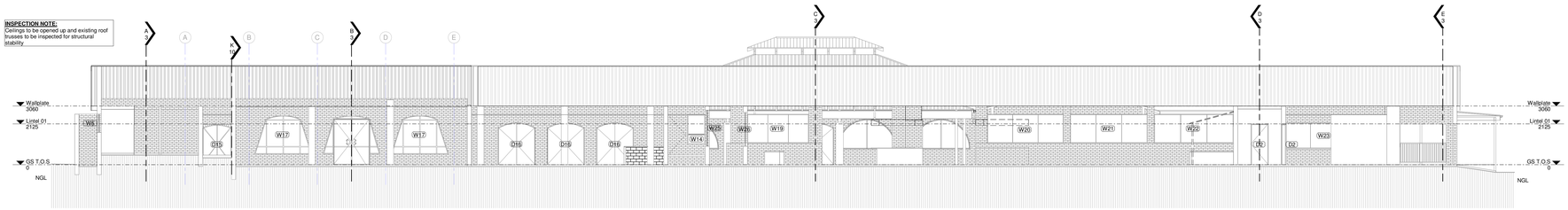
INSPECTION NOTE:
Ceilings to be opened up and existing roof trusses to be inspected for structural stability



Section G-G

Scale 1 : 100

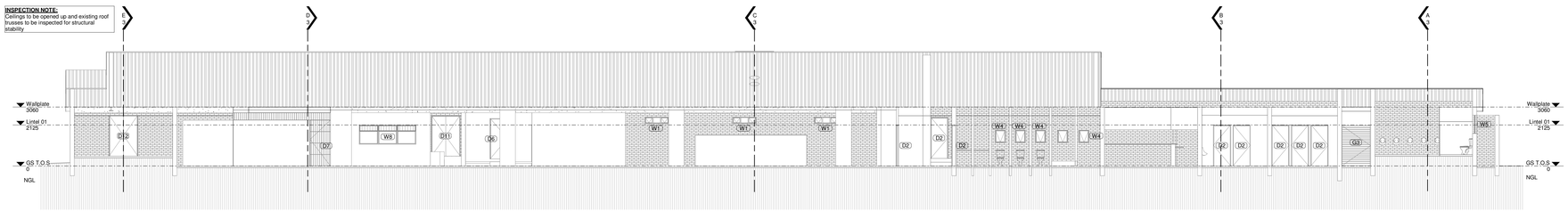
INSPECTION NOTE:
Ceilings to be opened up and existing roof trusses to be inspected for structural stability



Section H-H

Scale 1 : 100

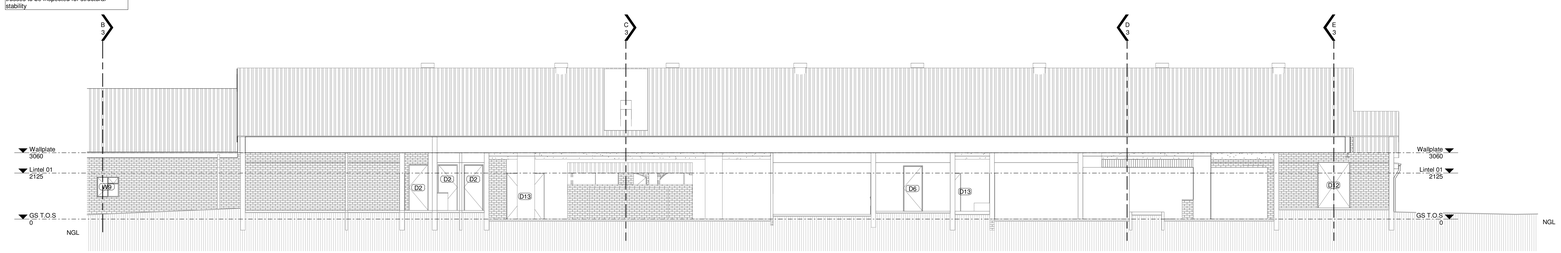
INSPECTION NOTE:
Ceilings to be opened up and existing roof trusses to be inspected for structural stability



Section I-I

Scale 1 : 100

INSPECTION NOTE:
Ceilings to be opened up and existing roof trusses to be inspected for structural stability



Section J-J

Scale 1 : 100

THIS PLAN SHOULD BE READ IN CONJUNCTION WITH ALL PROJECT PAGES

REVISIONS

No.	Date	Description	Rev. by
1	17/08/2021	FOR INFORMATION	RFS
2	14/09/2021	ISSUED FOR APPROVAL	RFS
3	03/03/2022	ISSUED FOR TENDER	WFL

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Biodiversity for Life
South African National Biodiversity Institute

PROJECT DETAILS
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL
ZOOLOGICAL GARDENS

PROJECT NAME
SANBI - RENOVATION OF
FOOD & BEVERAGE
OUTLETS

SHEET NAME
SECTIONS F-F TO J-J

FOR TENDER

APPROVAL		
CLIENT	SIGNATURE	DATE
ARCHITECT / LM	SIGNATURE	DATE
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.	6049	
WORK STAGE:	4 - TENDER DOCUMENTATION	

DATE	03/03/2022		DF	DESIGN
SCALE	1 : 100	A0	RFS	DOCUM.
DRAWN	RFS		PRC	CHECKED

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JOB NUMBER
GS03 01

DRAWING NUMBER
01_212

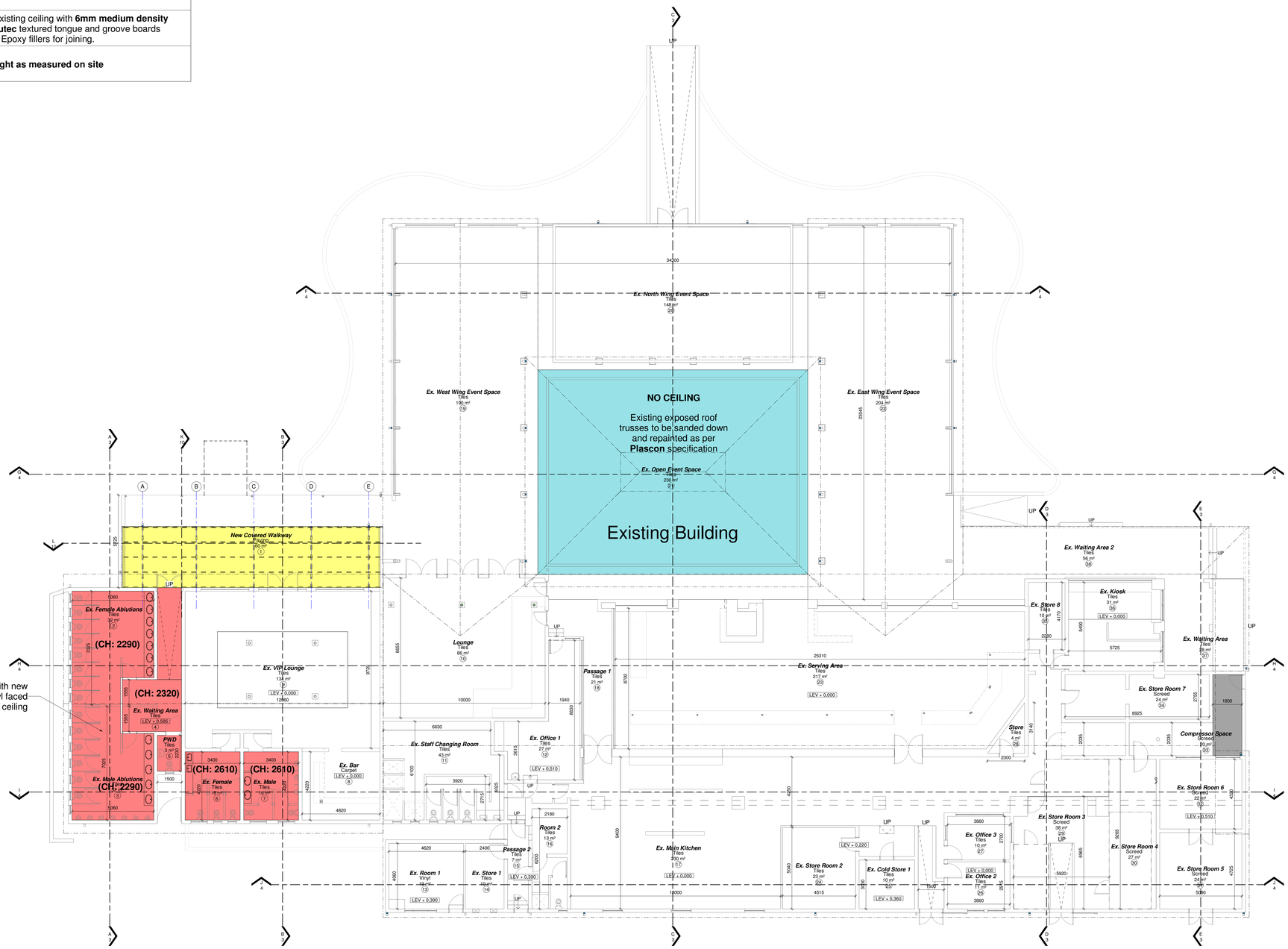
REV.NO.
3

SHEET NUMBER
4

ALTERATION EXTENT - CEILINGS

CE.1		No ceiling
CE.3		Replace existing ceiling with **new 600 X 600mm White Vinyl Faced** suspended ceiling
CE.8		Existing exposed roof trusses to be sanded down and repainted
CE.9		Replace existing ceiling with **6mm medium density Everite Nutec** textured tongue and groove boards nailed-up. Epoxy fillers for joining.

NOTE: (CH: ....) Refers to Ceiling Height as measured on site



GS - Ceiling - ALTERATIONS

Scale 1 : 100

THIS PLAN SHOULD BE READ IN CONJUNCTION WITH ALL PROJECT PAGES

REVISIONS

No.	Date	Description	Rev. by
1	17/08/2021	FOR INFORMATION	RFS
2	14/09/2021	ISSUED FOR APPROVAL	RFS
3	03/03/2022	ISSUED FOR TENDER	WFL

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PROJECT DETAILS
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL
ZOOLOGICAL GARDENS

PROJECT NAME
SANBI - RENOVATION OF
FOOD & BEVERAGE
OUTLETS

SHEET NAME
GS - CEILING ALTERATIONS

FOR TENDER

APPROVAL		
CLIENT	SIGNATURE	DATE
ARCHITECT / LM	SIGNATURE	DATE
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.		6049
WORK STAGE:	4 - TENDER DOCUMENTATION	

DATE	03/03/2022		DF	DESIGN
SCALE	1 : 100	A0	RFS	DOCUM.
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JOB NUMBER

GS03 01

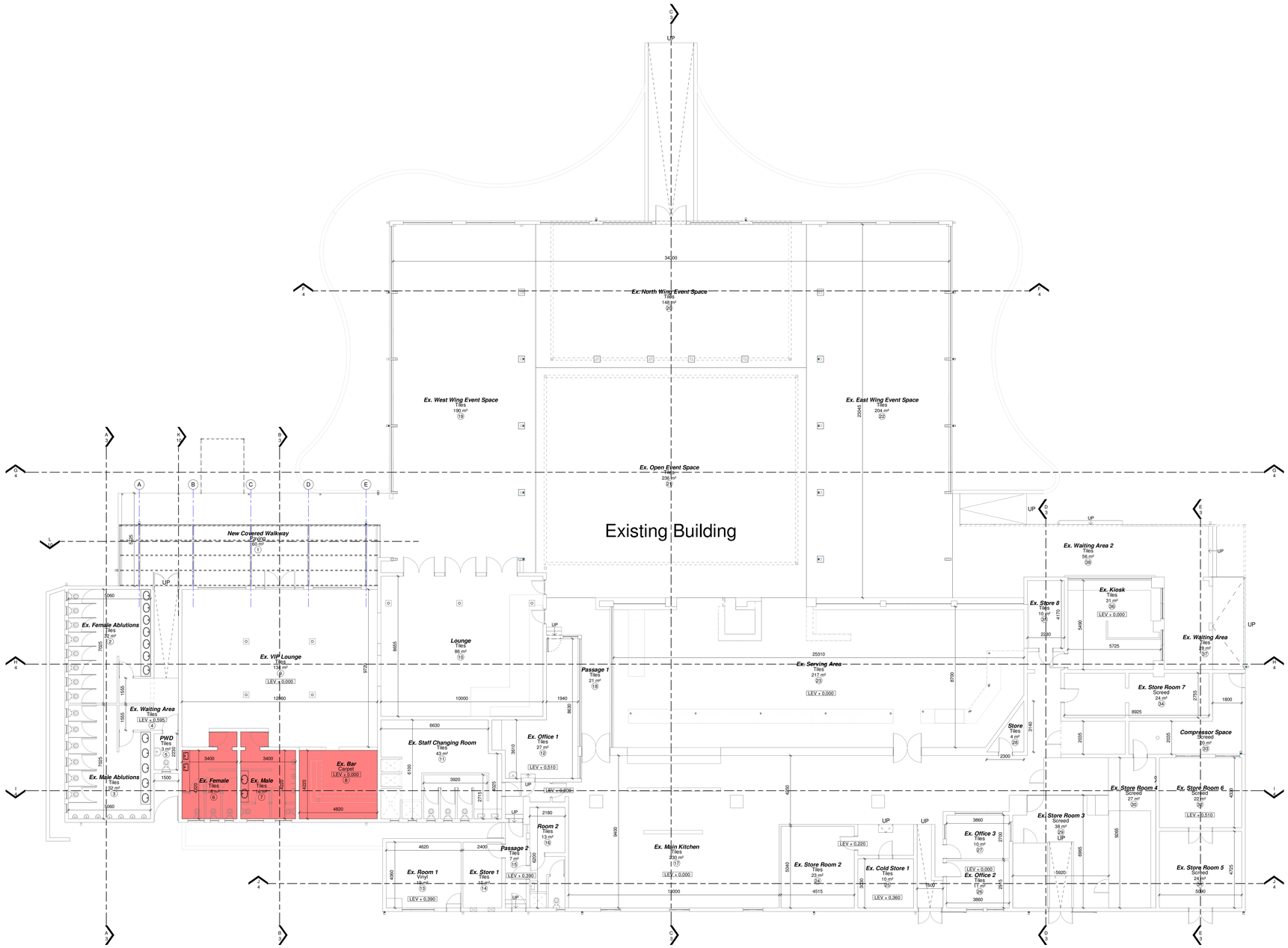
DRAWING NUMBER
01_251

REV.NO.
3

SHEET NUMBER
6

ALTERATION EXTENT - FLOORS

FL. 2		Replace existing tiles and carpets with new floor tiles



GS - Floor Finish - ALTERATIONS

Scale 1 : 100

THIS PLAN SHOULD BE READ IN CONJUNCTION WITH ALL PROJECT PAGES

REVISIONS

No.	Date	Description	Rev. by
1	17/08/2021	FOR INFORMATION	RFS
2	14/09/2021	ISSUED FOR APPROVAL	RFS
3	03/03/2022	ISSUED FOR TENDER	WFL
4	29/03/2022	ISSUED FOR TENDER	WFL

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PROJECT DETAILS
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL
ZOOLOGICAL GARDENS

PROJECT NAME
SANBI - RENOVATION OF
FOOD & BEVERAGE
OUTLETS

SHEET NAME
GS - FLOOR FINISH
ALTERATIONS

FOR TENDER

APPROVAL		
CLIENT	SIGNATURE	DATE
ARCHITECT / LM	SIGNATURE	DATE
D. FOURIE		29/03/2022
ARCHITECTS SACAP NO.		6049
WORK STAGE:	4 - TENDER DOCUMENTATION	

DATE	29/03/2022		DF	DESIGN	
SCALE	1 : 100	A0	RFS	DOCUM.	
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JOB NUMBER

GS03 01

DRAWING NUMBER
01_203

REV.NO.
4

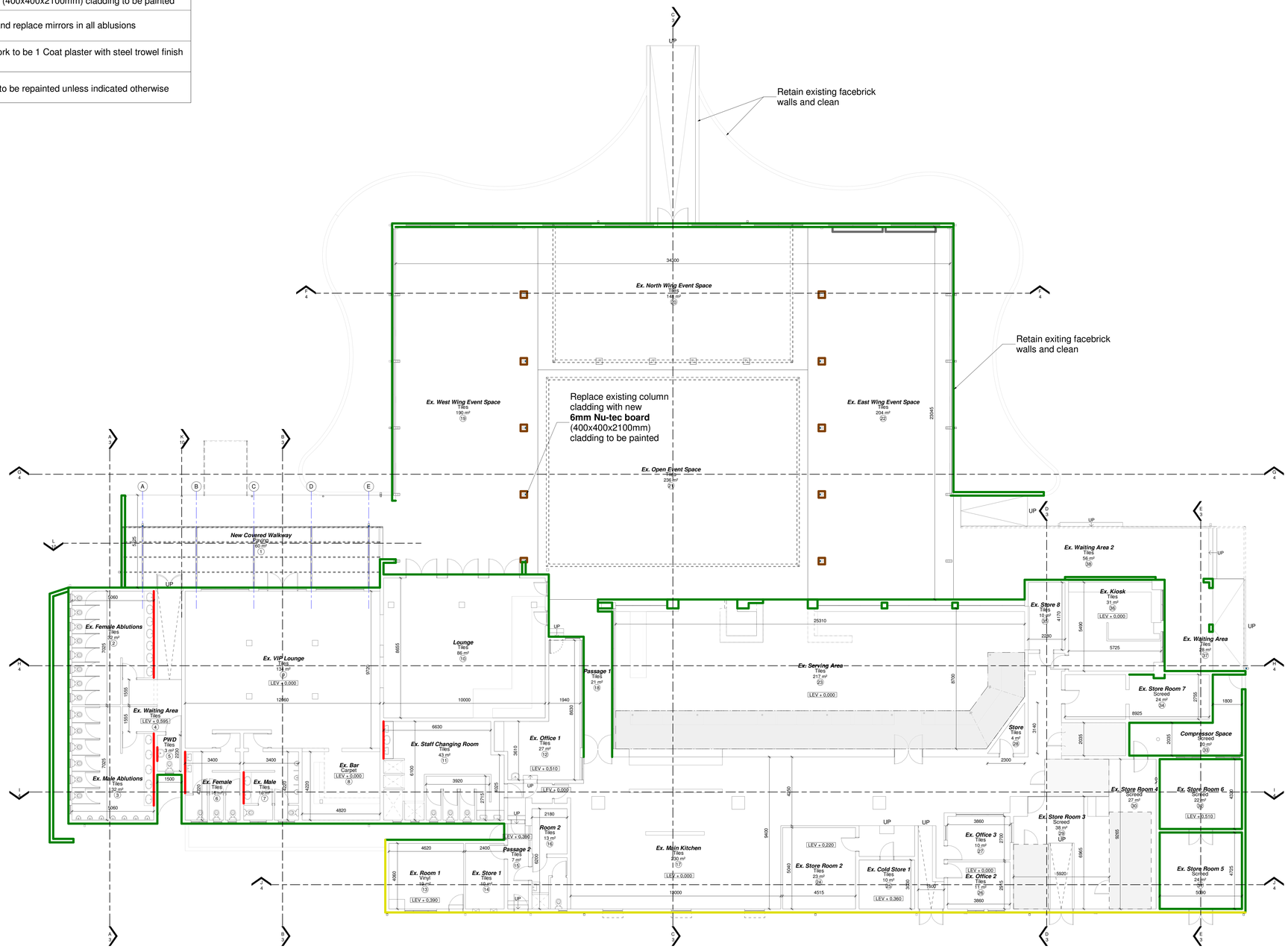
SHEET NUMBER
7

ALTERATION EXTENT - WALL ALTERTIONS

WA.1		Retain and clean existing **facebrick**
WA.6		Repaint existing wall / wall cladding / structure
WA.11		Replace existing column cladding with **new 6mm Nu-tec board** (400x400x2100mm) cladding to be painted
WA.12		Remove and replace mirrors in all ablusions

PLASTER & PAINT NOTE: All plasterwork to be 1 Coat plaster with steel trowel finish and paint

REPAINT NOTE: All exisiting paintwork to be repainted unless indicated otherwise



GS - Wall - ALTERATIONS

Scale 1 : 100

THIS PLAN SHOULD BE READ IN CONJUNCTION WITH ALL PROJECT PAGES

REVISIONS

No.	Date	Description	Rev. by
1	17/08/2021	FOR INFORMATION	RFS
2	14/09/2021	ISSUED FOR APPROVAL	RFS
3	30/11/2021	ISSUED FOR PRESENTATION	RFS
4	03/03/2022	ISSUED FOR TENDER	WFL
5	11/03/2022	ISSUED FOR TENDER	WFL

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PROJECT DETAILS
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL
ZOOLOGICAL GARDENS

PROJECT NAME
SANBI - RENOVATION OF
FOOD & BEVERAGE
OUTLETS

SHEET NAME
GS - WALL ALTERATIONS

FOR TENDER

APPROVAL

CLIENT	SIGNATURE	DATE
ARCHITECT / LM	**SIGNATURE**	**DATE**
D. FOURIE		11/03/2022
ARCHITECTS SACAP NO.	6049	
WORK STAGE:	4 - TENDER DOCUMENTATION	

DATE	11/03/2022		DF	**DESIGN**
SCALE	1 : 100	**A0**	RFS	**DOCUM.**
DRAWN	RFS		PRC	**CHECKED**

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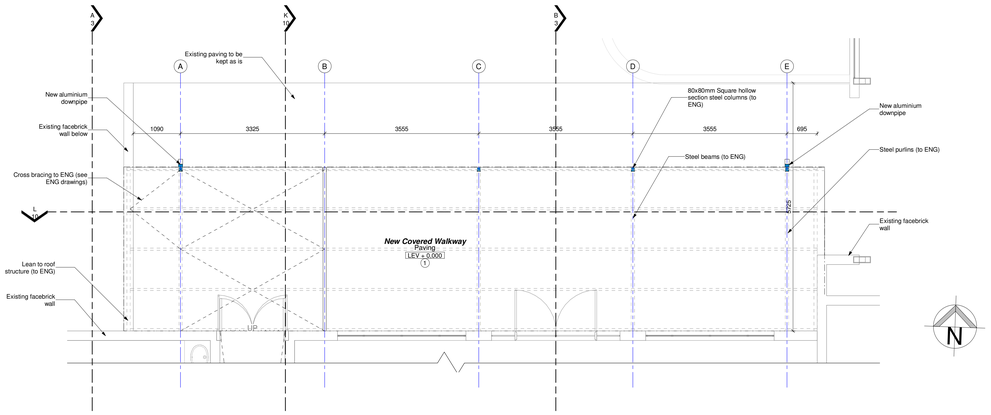
JOB NUMBER

GS03 01

DRAWING NUMBER
01_204

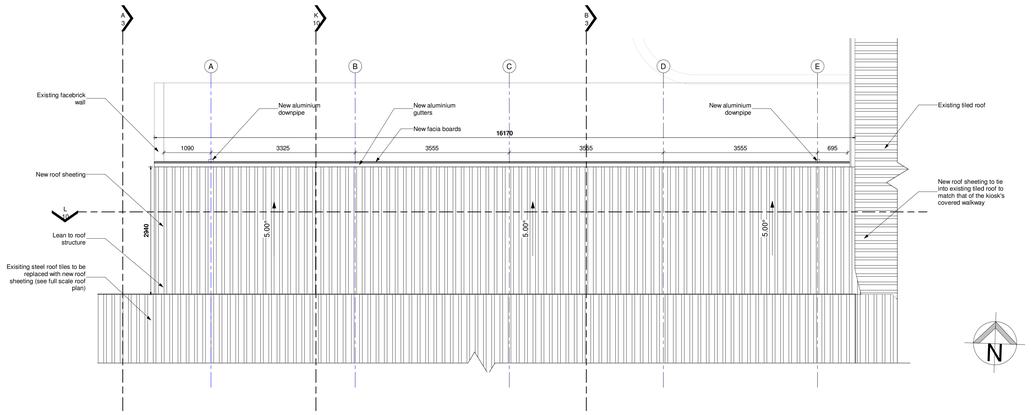
REV.NO.
5

SHEET NUMBER
8



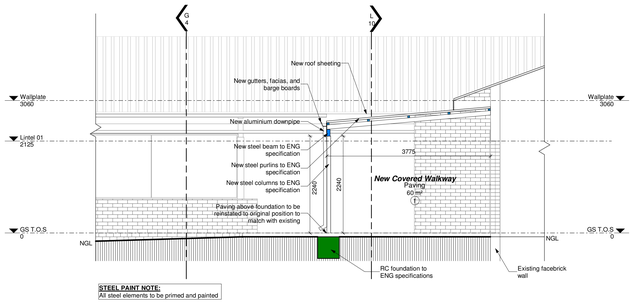
Ground Storey - New Covered Walkway

Scale 1 : 50



Roofplan - New Covered Walkway

Scale 1 : 50



Section K-K

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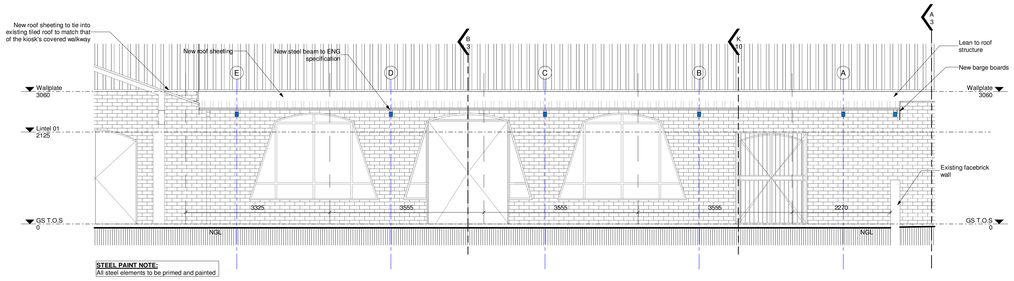
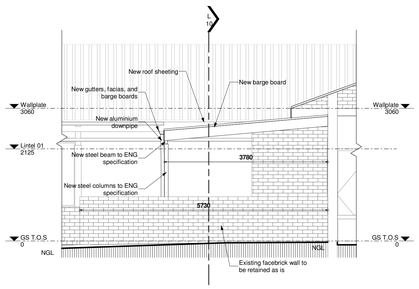


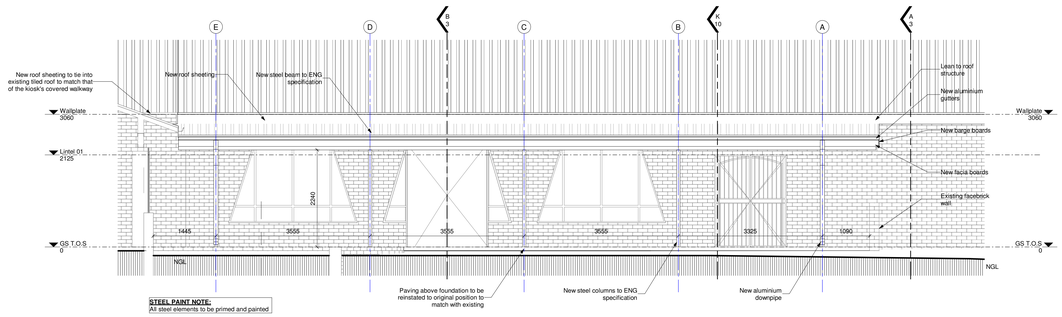
Section L-L

Scale 1 : 50



West Elevation - Veranda

Scale 1 : 50



North Elevation - Veranda

Scale 1 : 50

REVISIONS

No.	Date	Description	Rev. by
1	17/08/2021	FOR INFORMATION	RFS
2	02/08/2021	FOR CO-ORDINATION	RFS
3	14/09/2021	ISSUED FOR APPROVAL	RFS
4	03/03/2022	ISSUED FOR TENDER	WFL

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South African National Biodiversity Institute

PROJECT DETAILS
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL
ZOOLOGICAL GARDENS

PROJECT NAME
SANBI - RENOVATION OF
FOOD & BEVERAGE
OUTLETS

SHEET NAME
GS - NEW COVERED WALKWAY

FOR TENDER

APPROVAL

CLIENT	SIGNATURE	DATE
ARCHITECT / LM	**SIGNATURE**	**DATE**
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.		6049
WORK STAGE:	4 - TENDER DOCUMENTATION	

DATE	03/03/2022		RFS	**DESIGN**
SCALE	1 : 50	**A0**	RFS	**DOCUM.**
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10

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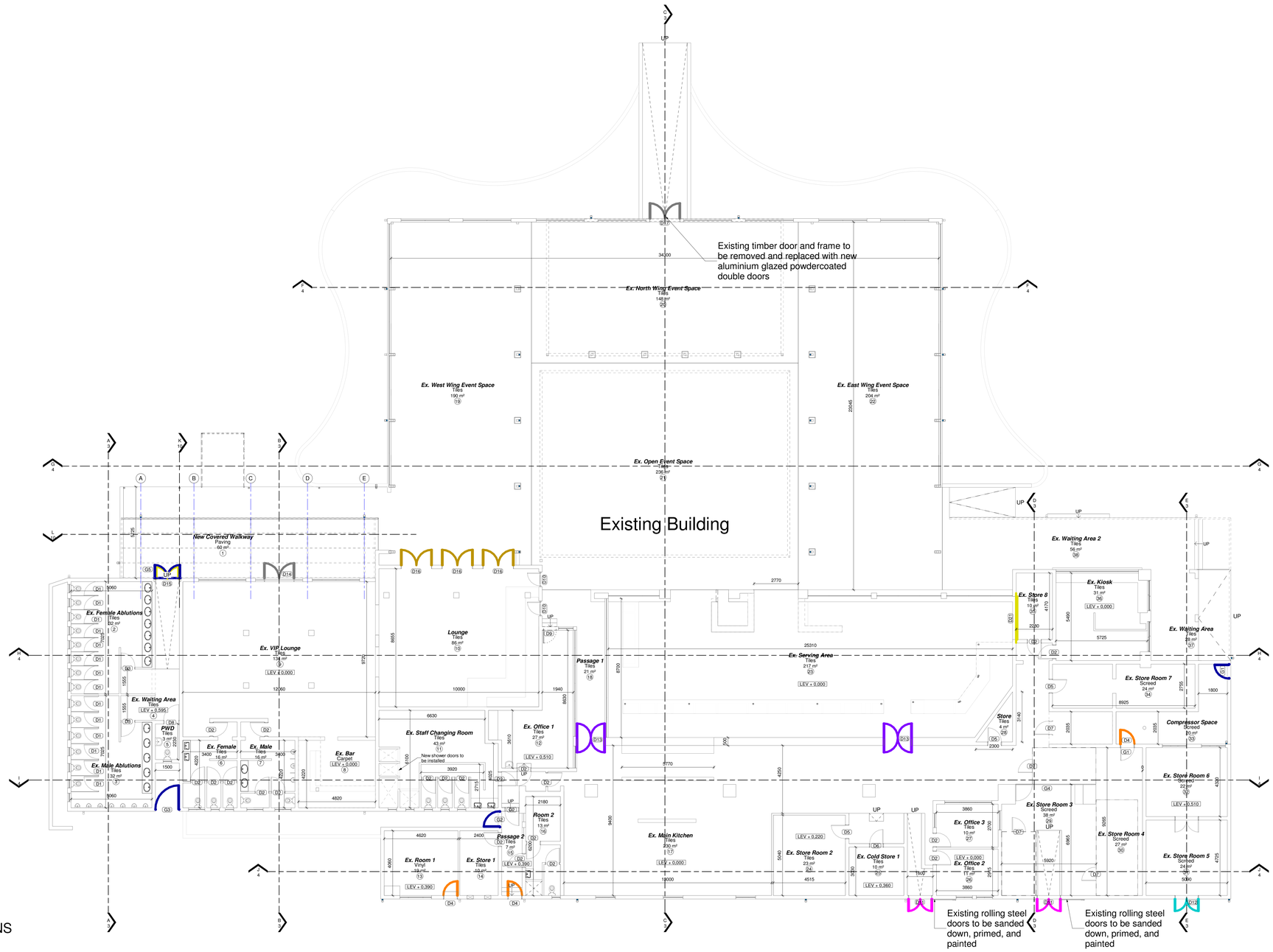

GS - Door - ALTERATIONS

Scale 1 : 100

DOOR SCHEDULE

	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14
Top of uFFL	900 / 2125	900 / 2125	900 / 2125	900 / 2125	900 / 2125	900 / 2100	900 / 2100	990 / 2125	900 / 2095	930 / 2090	1500 / 2100	1500 / 2125	1760 Glazed panels / 2125	555 / 555 / 1800 / 2390 / 2590 / 1830 / 560
Door Code	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14
Colour														
Description	Remove existing partitioning and replace with T2 framed glass field partitions from **Prevision Systems**	Existing steel frame to be painted and new semi-solid door to be installed, painted, and new ironmongery to be installed	Paint existing timber door and steel frame. Replace ironmongery	Existing frame to be painted and new solid hardwood door to be installed with new weatherbar, to be varnished. New ironmongery to be installed.	Existing steel door frame to be retained and repainted. New solid doors to be painted in **aluminium louvre** to be installed, with new ironmongery	Existing steel door and steel panels to be sanded down and painted	Existing steel door and steel panels to be sanded down and painted	Existing door frame to be replaced with new **steel** door frame. Existing timber door to be retained and reinstated, with new ironmongery	Remove existing timber door and frame and install new glazed **aluminium** powdercoated door and **aluminium** frame with new ironmongery	Existing steel door frame and timber door to be sanded down and finished. Existing bottom rail to be repaired and new **timber** weather bar to be installed with new ironmongery	Existing door and frame to be removed and new solid hardwood doors with stainless steel sheet cladding (1.2m high) to be installed, with new ironmongery.	Existing steel door frame to be retained and repainted. New solid hardwood doors to be varnished and **aluminium** louvre (300x200mm) to be installed, with new ironmongery	Existing frame and doors to be sanded down and revarnished, with new ironmongery to be installed	Existing timber doors and timber frame to be replaced with new glazed powdercoated aluminium double doors, **aluminium** side panels and **aluminium** frame with new ironmongery
Quantity	14	22	2	3	3	1	4	1	1	2	2	1	2	1
ALUMINIUM					YES				YES			YES		YES

OMITTED

DIMENSIONS NOTE:
All existing door and window opening sizes to be confirmed on site before installation

PAINT NOTE:
All painted items to be sanded down, primed and painted to Architect's specifications

DOOR SCHEDULE

	D15	D16	D17	D18	D19	D20	D21	D22	D23	G1	G2	G3	G4	G5
Top of uFFL	1500 / 2080 / 1820 / 2860	1930 / 2100 / 1830	1910 / 2175 / 1830	700 / 2000	800 / 2000	1220 / 2100	3105 / 455 / 1150 / 2700	2770	3645	900 / 2100	1000 / 2100	1500 / 2100	380 / 3935 / 2760	1660 / 2125
Door Code	D15	D16	D17	D18	D19	D20	D21	D22	D23	G1	G2	G3	G4	G5
Colour														
Description	Paint existing timber door and timber frame. Replace ironmongery	Existing timber frame and timber doors to be sanded down and varnished. Existing bottom rail to be repaired and new timber weather bar to be installed with new ironmongery	Existing timber door and frame to be removed and replaced with new **aluminium** glazed powdercoated double doors with new ironmongery	New glazed **aluminium** powdercoated shower doors	New glazed **aluminium** powdercoated shower doors	New glazed **aluminium** powdercoated shower doors	Paint existing roller shutter door and frame	New powdercoated glazed **aluminium** swing stacking doors with new ironmongery	New powdercoated glazed **aluminium** swing stacking doors with new ironmongery	Existing steel gates to be sanded down and repainted. Replace ironmongery	Existing steel gates to be sanded down and repainted. Replace ironmongery	Existing steel gates to be sanded down and repainted. Replace ironmongery	Existing steel gates to be sanded down and repainted. Replace ironmongery	Existing steel gate to be sanded down and painted. Replace ironmongery
Quantity	1	3	1	1	2	1	1	1	1	2	1	1	1	1
ALUMINIUM			YES	YES	YES	YES		YES	YES					

OMITTED

DIMENSIONS NOTE:
All existing door and window opening sizes to be confirmed on site before installation

PAINT NOTE:
All painted items to be sanded down, primed and painted to Architect's specifications

GS - Door Schedule - ALTERATIONS

Scale 1 : 100

THIS PLAN SHOULD BE READ IN CONJUNCTION WITH ALL PROJECT PAGES

REVISIONS

No.	Date	Description	Rev. by
1	17/08/2021	FOR INFORMATION	RFS
2	14/09/2021	ISSUED FOR APPROVAL	RFS
3	30/11/2021	ISSUED FOR PRESENTATION	RFS
4	03/03/2022	ISSUED FOR TENDER	WFL

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CLIENT / DEVELOPER

SANBI
Biodiversity for Life
South African National Biodiversity Institute

PROJECT DETAILS
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL
ZOOLOGICAL GARDENS

PROJECT NAME
SANBI - RENOVATION OF
FOOD & BEVERAGE
OUTLETS

SHEET NAME
GS - DOOR ALTERATIONS

FOR TENDER

APPROVAL

CLIENT	SIGNATURE	DATE
ARCHITECT / LM	**SIGNATURE**	**DATE**
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.		6049
WORK STAGE:	4 - TENDER DOCUMENTATION	

DATE	03/03/2022		DF	**DESIGN**	
SCALE	1 : 100	A0	RFS	**DOCUM.**	
DRAWN	RFS		PRC	**CHECKED**	

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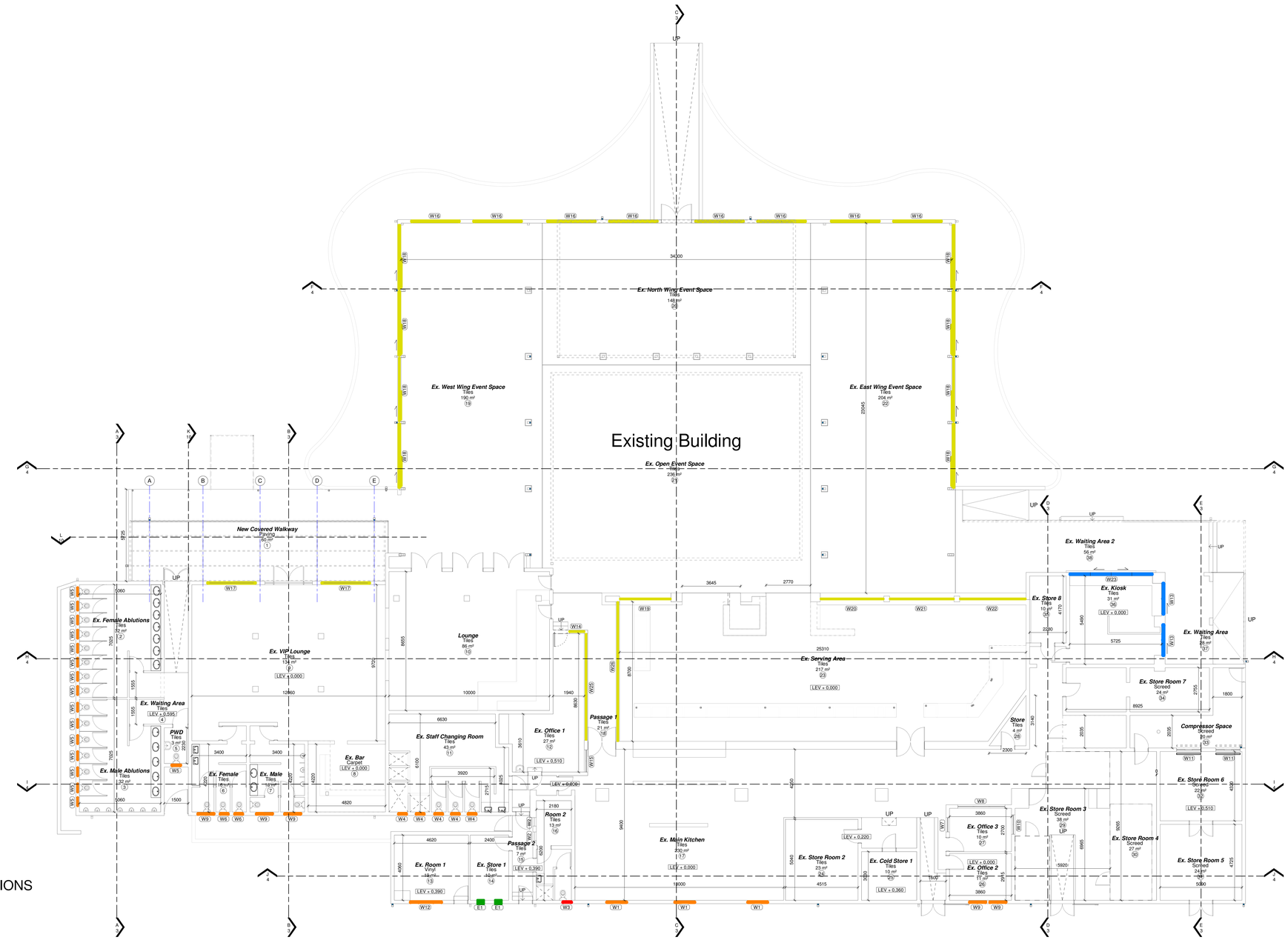
JOB NUMBER

GS03 01

DRAWING NUMBER
01_521

REV.NO.
4

SHEET NUMBER
11



GS - Window - ALTERATIONS

Scale 1 : 100

		1240		535	535	535	535			1020			1980	1900
		380		655	655	950	950			950			950	1345
Window Code	E1	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13
Colour														
Description	Existing extractor fans and louvres to be retained and cleaned	Repaint existing steel windows	Existing window to be retained and cleaned	Existing steel window to be painted, glazing to be replaced with **new obscured glass**	Repaint existing steel window	Repaint existing steel window	Repaint existing steel window	Existing window to be retained and cleaned	Existing window to be retained and cleaned	Repaint existing steel windows	Existing window to be retained and cleaned	Repaint existing steel windows	Repaint existing steel windows	Existing **aluminium** windows to be replaced with new sliding panel and fixed panel powdercoated **aluminium** windows with new ironmongery
Quantity	2	3	2	1	5	16	2	1	1	5	1	2	1	2
ALUMINIUM														YES

OMITTED

DIMENSIONS NOTE:
All existing door and window opening sizes to be confirmed on site before installation

	920 / 1530	1380 / 1950	1555 / 1010 / 3020	1745 / 2090 / 1775 / 610 / 2970 / 610 / 380	4000 / 1500 / 2000 / 2000	3200 / 1500 / 1065 / 1065 / 1065	3965 / 1500 / 1320 / 1320 / 1320	4020 / 1500 / 1340 / 1340 / 1340	4130 / 1320 / 1375 / 1375 / 1375	5160 / 1320 / 1290 / 1290 / 1290 / 1290	5770 / 1460 / 1140 / 1140 / 1140 / 1140	6650 / 1950 / 1110 / 1110 / 1110 / 1110 / 1110	8700 / 1760 / 1245 / 1245 / 1245 / 1245 / 1245 / 1245 / 1245
Window Code	W14	W15	W16	W17	W18	W19	W20	W21	W22	W23	W24	W25	W26
Colour													
Description	Existing timber framed windows to be removed and replaced with new powdercoated **aluminium** windows with **frosted vinyl**	Existing timber framed windows to be removed and replaced with new powdercoated **aluminium** windows	Existing timber framed windows to be removed and replaced with new powdercoated **aluminium** windows	Existing timber framed windows to be removed and replaced with new powdercoated **aluminium** windows	Existing timber framed windows to be removed and replaced with new sliding panel and fixed panel powdercoated **aluminium** windows with new ironmongery	Existing timber framed windows to be removed and replaced with new powdercoated **aluminium** windows	Existing timber framed windows to be removed and replaced with new powdercoated **aluminium** windows	Existing timber framed windows to be removed and replaced with new powdercoated **aluminium** windows	Existing timber framed windows to be removed and replaced with new powdercoated **aluminium** windows	Existing aluminium framed windows to be removed and replaced with new powdercoated **aluminium** windows with new ironmongery	New glazed **aluminium** powdercoated window to be installed with new ironmongery	Existing timber framed windows/doors to be removed and replaced with new powdercoated **aluminium** windows with **frosted vinyl**	Existing timber framed windows to be removed and replaced with new powdercoated **aluminium** windows with **frosted vinyl**
Quantity	1	1	8	2	8	1	1	1	1	1	1	1	1
ALUMINIUM	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

OMITTED

DIMENSIONS NOTE:
All existing door and window opening sizes to be confirmed on site before installation

GS - Window Schedule - ALTERATIONS

Scale 1 : 100

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REVISIONS

No.	Date	Description	Rev. by
1	17/08/2021	FOR INFORMATION	RFS
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3	30/11/2021	ISSUED FOR PRESENTATION	RFS
4	03/03/2022	ISSUED FOR TENDER	WFL

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CLIENT / DEVELOPER

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PROJECT DETAILS
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL
ZOOLOGICAL GARDENS

PROJECT NAME
SANBI - RENOVATION OF
FOOD & BEVERAGE
OUTLETS

SHEET NAME
GS - WINDOW ALTERATIONS

FOR TENDER

APPROVAL

CLIENT	SIGNATURE	DATE
ARCHITECT / LM	**SIGNATURE**	**DATE**
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.	6049	
WORK STAGE:	4 - TENDER DOCUMENTATION	

DATE	03/03/2022		DF	**DESIGN**	
SCALE	1 : 100	**A0**	RFS	**DOCUM.**	
DRAWN	RFS		PRC	**CHECKED**	

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JOB NUMBER
GS03 01

DRAWING NUMBER
01_531

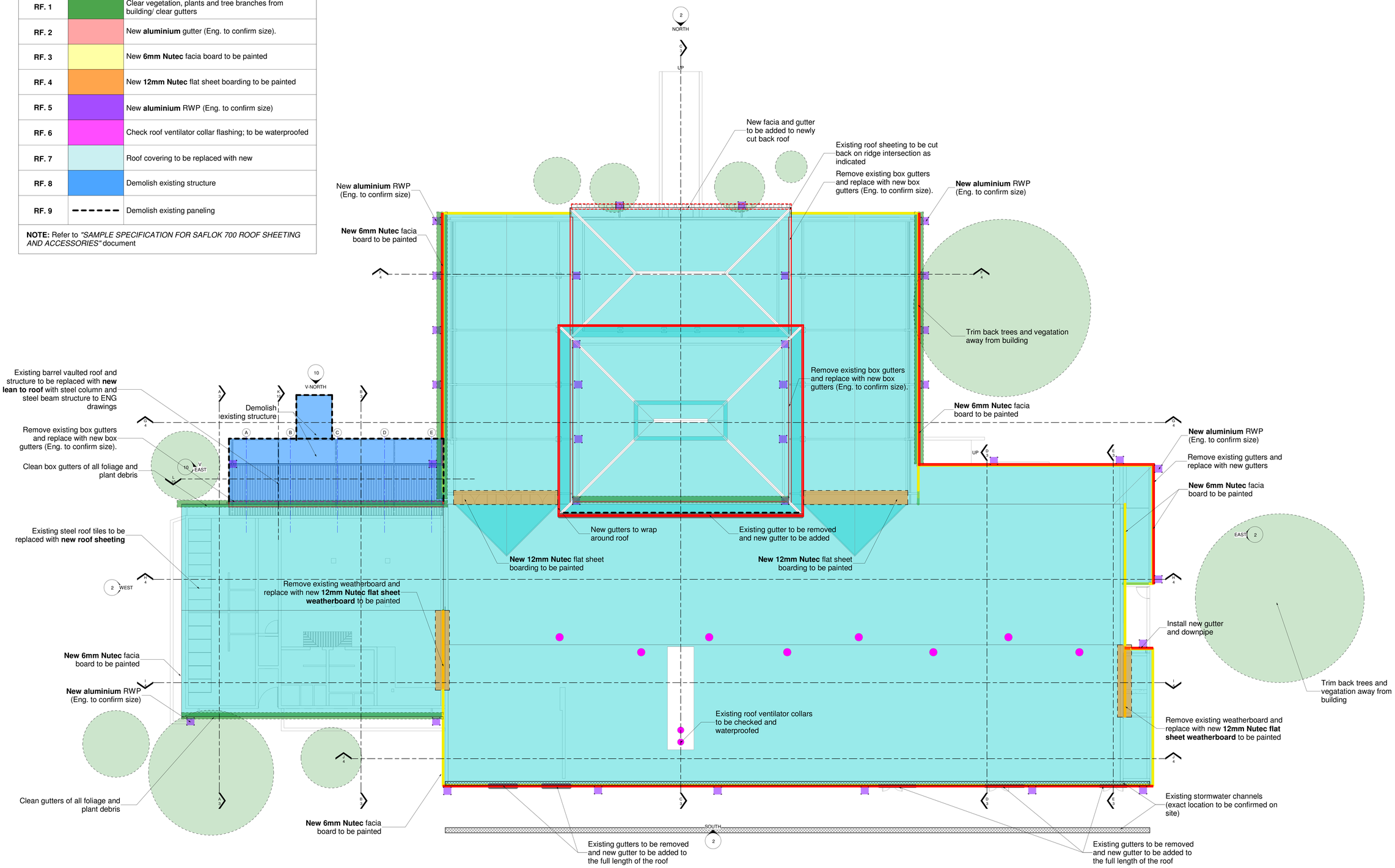
REV.NO.
4

SHEET NUMBER
12

ALTERATION EXTENT - ROOF

RF. 1		Clear vegetation, plants and tree branches from building/ clear gutters
RF. 2		New **aluminium** gutter (Eng. to confirm size).
RF. 3		New **6mm Nutec** facia board to be painted
RF. 4		New **12mm Nutec** flat sheet boarding to be painted
RF. 5		New **aluminium** RWP (Eng. to confirm size)
RF. 6		Check roof ventilator collar flashing; to be waterproofed
RF. 7		Roof covering to be replaced with new
RF. 8		Demolish existing structure
RF. 9	- - - - - -	Demolish existing paneling

NOTE: Refer to *"SAMPLE SPECIFICATION FOR SAFLOK 700 ROOF SHEETING AND ACCESSORIES"* document



GS - Roofplan - ALTERATIONS

Scale 1 : 100

THIS PLAN SHOULD BE READ IN CONJUNCTION WITH ALL PROJECT PAGES

REVISIONS

No.	Date	Description	Rev. by
1	12/11/2021	ISSUED FOR ESTIMATE	PRC
2	30/11/2021	ISSUED FOR PRESENTATION	RFS
3	03/03/2022	ISSUED FOR TENDER	WFL

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CLIENT / DEVELOPER

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PROJECT DETAILS
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL
ZOOLOGICAL GARDENS

PROJECT NAME
SANBI - RENOVATION OF
FOOD & BEVERAGE
OUTLETS

SHEET NAME
ROOFPLAN - ALTERATIONS

FOR TENDER

APPROVAL

CLIENT	SIGNATURE	DATE
ARCHITECT / LM	**SIGNATURE**	**DATE**
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.	6049	
WORK STAGE:	4 - TENDER DOCUMENTATION	

DATE	03/03/2022		DF		**DESIGN**
SCALE	1 : 100	**A0**	RFS		**DOCUM.**
DRAWN	RFS		PRC		**CHECKED**

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JOB NUMBER

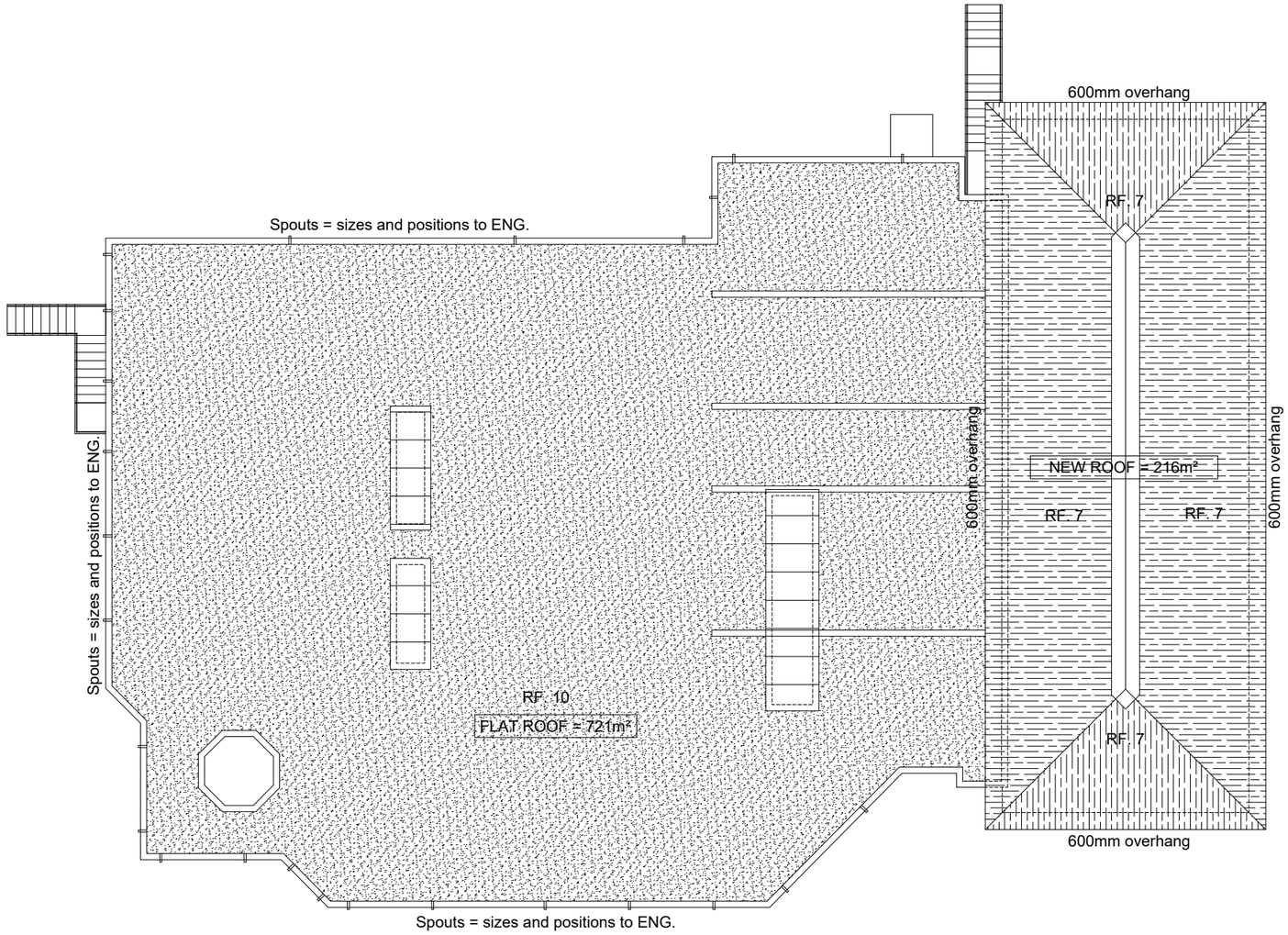
GS03 01

DRAWING NUMBER
01_206

REV.NO.
3

SHEET NUMBER
13

ALTERATION EXTENT - **ROOF**		
RF. 7		New **Harvey tile roof** by specialist
RF. 10		Refer to *"Concrete Roofs"* specification document



Roof Plan

Scale 1 : 200

REVISIONS

R.No	DETAILS	DATE	I.D.
01	ISSUED FOR ELEMENTAL ESTIMATE	12/11/2021	PRC
02	REVISIONS TO THATCH ROOF - HARVEY TILES	15/12/2021	PRC
03	ISSUED TO CLIENT FOR APPROVAL	19/01/2022	RFS
04	ISSUED FOR TENDER	03/03/2022	WFL

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SANBI - RENOVATION OF FOOD
& BEV. OUTLETS

WATERHOLE - BUILDING 02

ROOFPLAN

FOR TENDER

APPROVAL		
CLIENT	SIGNATURE	DATE
ARCHITECT / LM	SIGNATURE	DATE
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.		Pr.Arch 6049
WORK STAGE: 4 - FOR TENDER		

DATE	03/03/2022		PRC	DESIGN
SCALE	1:200	A3	PRC	DOCUM.
DRAWN	PRC		PRC	SUPERV.

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JOB NUMBER

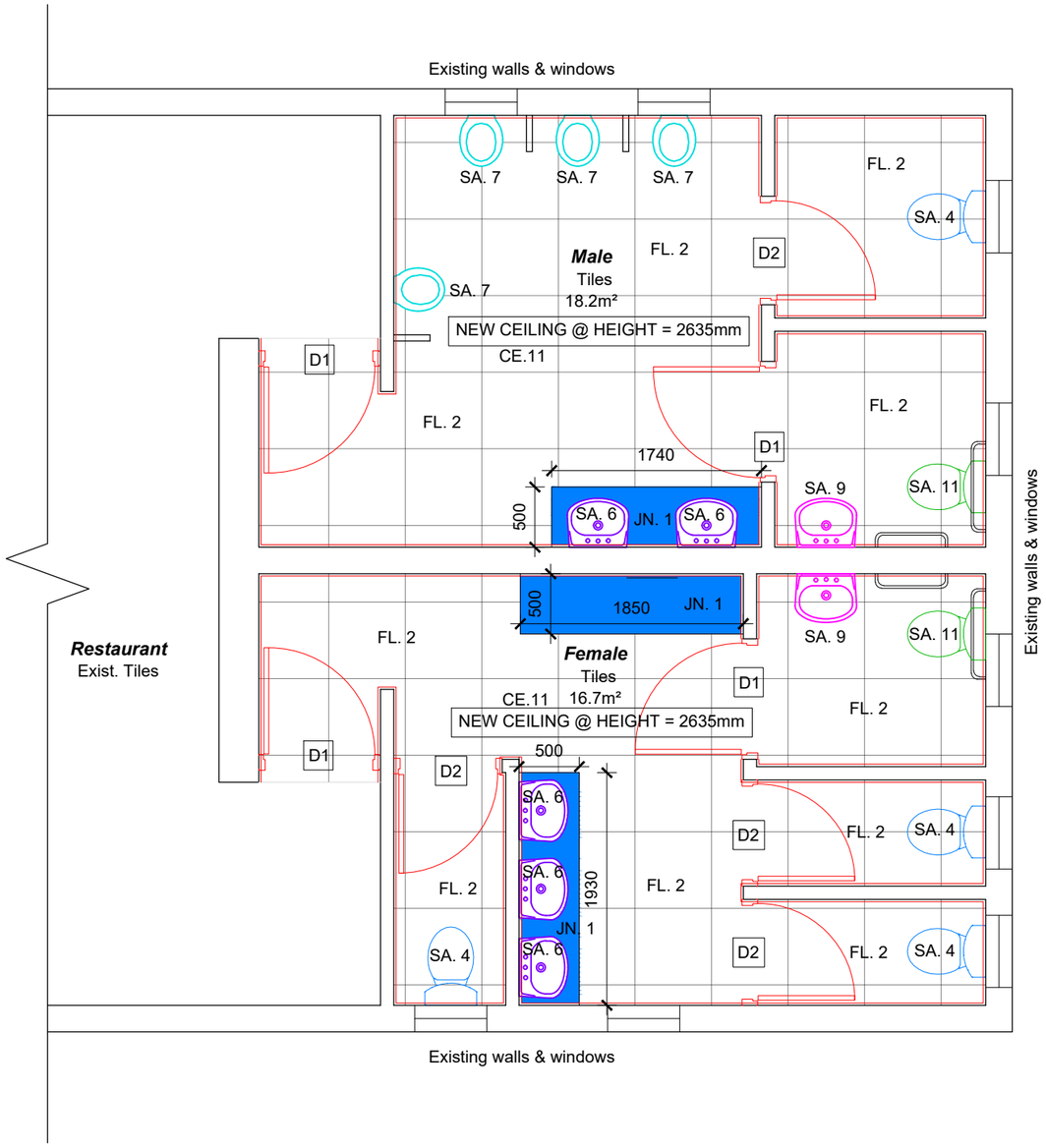
GS03 01

DRAWING NUMBER

02_202

REV.NO.
04

EBESA_15-11-2018



Renovation Floor Plan

Scale 1 : 50

ALTERATION EXTENT - CEILINGS

CE.11	Replace suspended ceilings, add skimmed bulkheads with downlights

ALTERATION EXTENT - FLOORS

FL. 2		Replace existing floor finish with new floor tiles

NOTE: Provisional Sum for new floor tiles are **R500/m²** excl. VAT

ALTERATION EXTENT - WALL ALTERATIONS

WA. 4		Replace existing wall tiles with **new wall tiles** (PC amount **R300/m²** excl. VAT)

ALTERATION EXTENT - SANITARYWARE

SA. 4		Replace existing toilet with new: PC amount **R5200** per toilet excl. VAT
SA. 6		Replace existing basin with new: PC amount **R5600** per basin excl. VAT
SA. 7		Replace existing urinal with new: PC amount **R7400** per urinal excl. VAT - include urinal screens
SA. 9		Replace existing basin with new paraplegic basin: PC amount **R4000** excl. VAT - Include grab rails
SA. 11		Replace existing paraplegic toilet with new : PC amount **R2200** excl. VAT - Include grab rails

ALTERATION EXTENT - JOINERY

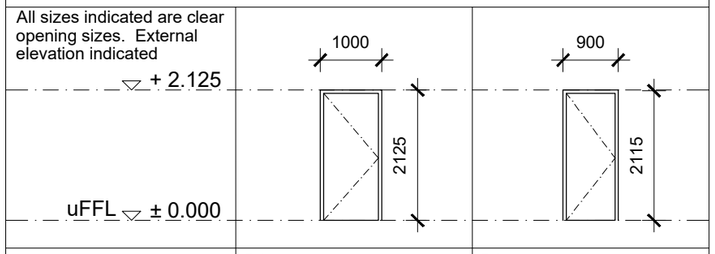
JN. 1		New **30mm Ceasarstone** countertop with **20mm** splashback, 100mm high, and 20mm facia 450mm high

ALTERATION EXTENT - ACCESSORIES

Provisional Sum to be made for bathroom accessories to include toilet paper holders, soap dispensers, paper towel holders, mirrors

Door Schedule Scale 1 : 100

All sizes indicated are clear opening sizes. External elevation indicated



Door Code	D1	D2
Colour		
Description	Existing steel frame to be painted and new semi-solid door to be installed, painted, new ironmongery to be installed	Existing steel frame to be painted and new semi-solid door to be installed, painted, new ironmongery to be installed
Quantity	4	4

REVISIONS

R.No	DETAILS	DATE	I.D.
01	ISSUED FOR ELEMENTAL ESTIMATE	12/11/2021	PRC
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03	ISSUED FOR TENDER	03/03/2022	WFL

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PRETORIA NATIONAL ZOOLOGICAL GARDENS
SANBI - RENOVATION OF FOOD & BEV. OUTLETS

DUKU DUKU RESTAURANT BUILDING 03

BATHROOM RENOVATIONS FLOOR PLAN

FOR TENDER

APPROVAL		
CLIENT	SIGNATURE	DATE
ARCHITECT / LM	SIGNATURE	DATE
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.		Pr.Arch 6049
WORK STAGE: 4 - FOR TENDER		

DATE	03/03/2022		PRC	DESIGN
SCALE	1:200	A3	PRC	DOCUM.
DRAWN	PRC		PRC	SUPERV.

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JOB NUMBER

GS03 01

DRAWING NUMBER

03_201

REV.NO.
03

EBESA_15-11-2018

ALTERATION EXTENT - **JOINERY**

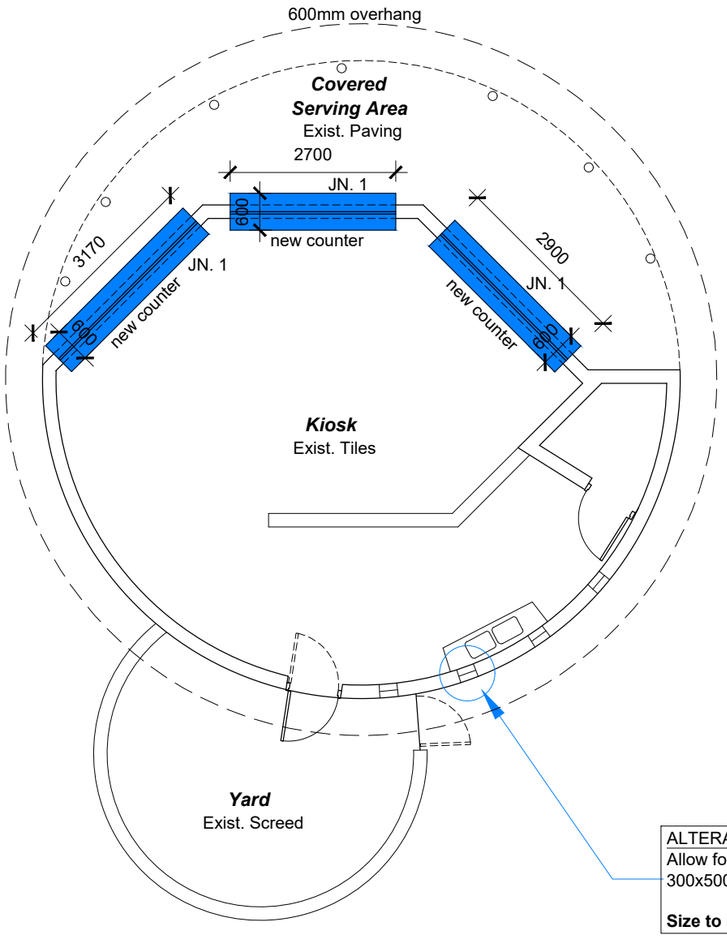
JN. 1		New **30mm Ceasarstone** countertop with and 20mm facia around edges 50mm high

NOTE: Joinery alteration only applicable for **MOUNTAIN KIOSK**

ALTERATION EXTENT - **ROOF**

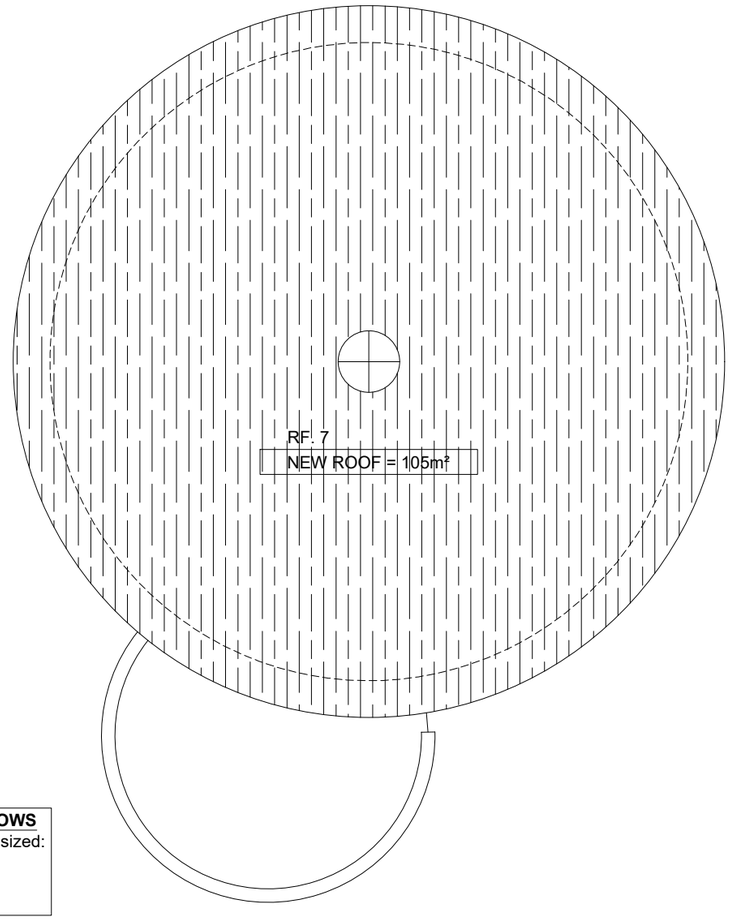
RF. 7		New **Harvey tile roof** by specialist

NOTE: Roof alteration applicable to both **MOUNTAIN KIOSK & PICNIC KIOSK**



ALTERATION EXTENT - **WINDOWS**
Allow for 1xpane of safety glass sized: 300x500mm for **PICNIC KIOSK**

Size to be confirmed on site



Ground Storey
Scale 1 : 100

Roof Plan
Scale 1 : 100

ALTERATION EXTENT - **ELECTRICAL WORKS**

Provisional Sum to be made for allowance of Electrical Works.

NOTE: Electrical Works only applicable for **MOUNTAIN KIOSK**

REVISIONS

R.No	DETAILS	DATE	I.D.
01	ISSUED FOR ELEMENTAL ESTIMATE	12/11/2021	PRC
02	REVISIONS TO THATCH ROOF - HARVEY TILES	15/12/2021	PRC
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ZOOLOGICAL GARDENS
SANBI - RENOVATION OF FOOD
& BEV. OUTLETS

PICNIC KIOSK - BUILDING 05 &
MOUNTAIN KIOSK - BUILDING 06

GROUND STOREY &
ROOF PLAN

FOR TENDER

APPROVAL

CLIENT	SIGNATURE	DATE
ARCHITECT / LM	SIGNATURE	DATE
D. FOURIE		03/03/2022
ARCHITECTS SACAP NO.		Pr.Arch 6049
WORK STAGE: 4 - FOR TENDER		

DATE	03/03/2022		PRC	DESIGN
SCALE	1:200	A3	PRC	DOCUM.
DRAWN	PRC		PRC	SUPERV.

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DESCRIPTION
WATERHOLE BUILDING:
CONCRETE ROOFS -
WATERPROOFING SPECIFICATION

REVISION
01 – STAGE 4: ISSUED FOR TENDER

Ebesa Architects project number:
GS03 01 SANBI

AT
Daspoort 319-JR, Gauteng, Pretoria National Zoological Gardens

FOR
SANBI
Biodiversity for Life
South African National Biodiversity Institute

Document Approval

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Date: 03/03/2022 Total Pages: **8**

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Location – WATERPROOFING SPECIFICATION

The below specifications are only applicable to the Waterhole Building. Please refer to the relevant architectural drawings for detailed locations.

General

This section refers to general low-slope (less than 5° pitch) concrete roofs screeded to falls and crossfalls to outlets where the roofing membrane is exposed to the elements and temperature fluctuations.

The waterproofing membrane, correctly selected, installed and properly maintained, is now considered as a permanent structural element with a life expectancy equal to that of the building it is protecting.

Substrates & Surface Preparation
General

Design and detail together with proper preparation of the substrate are key elements to successful roofing. It is good practice to ensure that ponding of water does not occur. Whilst the Derbigum membranes are unaffected by standing water, it should be noted that ponding, besides being unsightly, could result in deterioration of the final painted finish if painted finish was specified.
The substrate shall be to falls and cross falls of 1:80 to outlets. The substrate shall be surface dry, clean and smooth; free of voids, protrusions and contaminants. The area is then to be primed using a bituminous primer. Internal corners shall be filleted and external corners rounded. Most waterproofing materials are bonded or applied to surfaces that are installed by other trades. It is essential to the performance of the waterproofing system that these substrates be structurally sound and free from excessive cracks, holes or projections. Certain curing compounds and finishes may affect or interfere with the performance of the waterproofing material. The use of oils, waxes and other surface contaminants should be avoided or the contaminants must be removed prior to waterproofing. The waterproofing contractor should visually inspect the substrate surfaces before the application of waterproofing materials and report any deficiencies so that they may be corrected by the responsible trade.

Concrete

Form release agents and concrete curing compounds must be compatible with the waterproofing materials being used or must be removed from the concrete surface by the responsible trade. Honeycombs, tie-wire holes and other voids in the concrete substrate must be cut out and re-pointed with a non-shrinking concrete patching compound.

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Concrete fins or other projections should be removed to provide a smooth surface. Horizontal concrete slabs should be free from cracks, voids, depressions, ridges and concrete droppings.

Sand & Cement Screeds

A sand/cement screed is the most widely used and acceptable substrate. It provides a firm and even surface to which the Waterproofing membrane can be properly sealed. It should be free of voids and protrusions, dry and clean, free of contaminants. The substrate should be stable and inert. Falls to outlets etc. should be formed in the substrate and not in the loading layer.

Priming

Generally all surfaces to receive Derbigum modified-bitumen membranes are to be primed with a bitumen primer. Allow solvents in the primer to flash off prior to application. Surfaces primed too far in advance which have gathered dirt and dust must be lightly re-primed prior to application of the membrane. Priming procedures for other systems, such as acrylics, self-adhesives, flashings etc. are referred to in each particular section and/or datasheet.

Specification
Bituminous Aluminum Paint

It is the most widely used protective coating, with the particular advantage of excellent solar reflective properties.

Specification
One layer Derbigum SP4 waterproofing membrane, with 75mm side laps and 100mm end laps, sealed to primed surface to falls and crossfalls by 'torch-fusion' finished with two coats bituminous aluminum paint. Waterproofing to be installed by an Approved Derbigum Contractor under a ten year guarantee.

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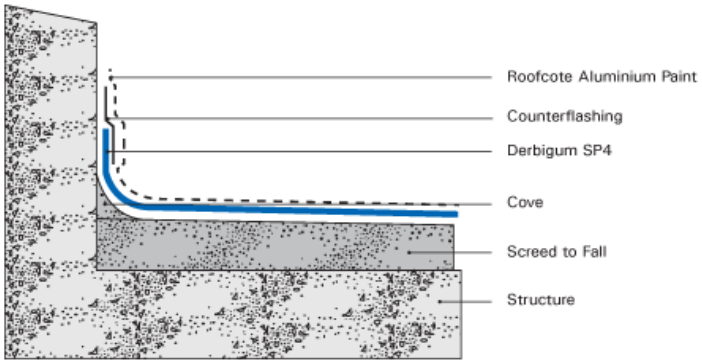
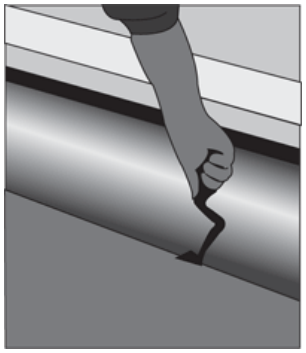


Coves and Rounded Edges

All angles, internal and external, should be rounded. Provide a min. of 35 mm radius rounded cove at all internal angles. Horizontal and vertical surfaces are usually of different materials and are subject to different heat transference rates and thus differential movement. The waterproofing membrane is subject to unnecessary stresses and practical installation problems if it is sealed into or over a 90° angle. Sharp edges and angles are to be avoided. The cove will greatly reduce these stresses and provide a neat finish.



The basic principles to be followed:

- A sand/cement cove with a 35mm radius is to be formed at all internal angles.
- The surface to receive the Derbigum is to be fully primed with a bitumen primer.

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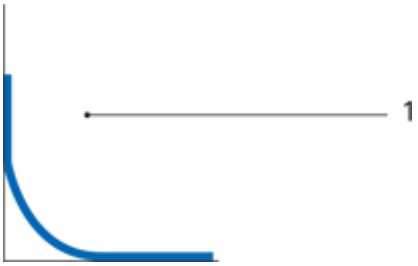
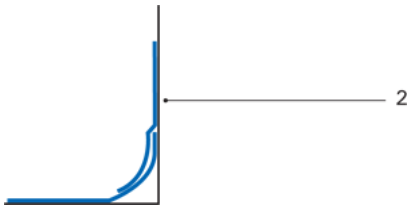


Derbigum is sealed by 'torch-on' fusion over the cove and to the vertical surface to a minimum height of 100mm. (Sketch 1)



Turn-ups greater than 200mm high should be treated as turn-up and capping. (Sketch 2)

It is good waterproofing practice that all exposed terminations on vertical surfaces are either flashed or counterflashed. A variety of flashing methods and systems are available. The nature of vertical surface and aesthetic requirements will determine the flashing type.

Parapets & Kerbs

Attention to detail is important. The general principles involved are noted in the example sketches.
It is recommended that brick parapets be rendered and protected with one layer of Derbigum SP3 or SP4.

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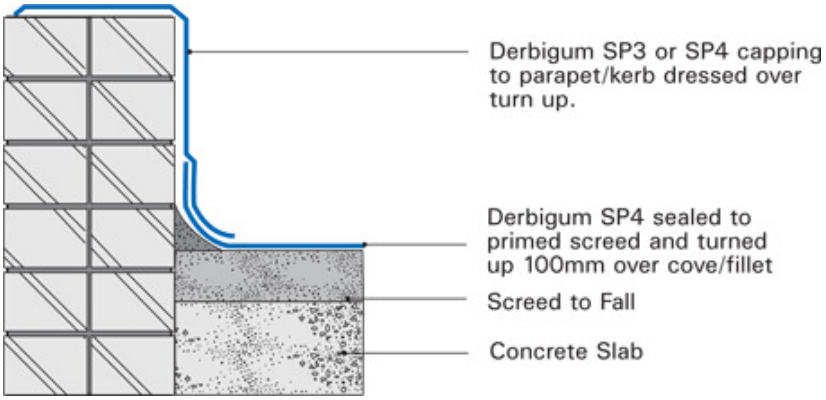

Specification

One layer Derbigum SP3 or SP4 waterproofing membrane, with 75mm side laps, sealed by 'torch-fusion' to side and top of parapet wall to receive paint (elsewhere)

Plinths

Ensure that double or multiple concrete supports are constructed to such a height to allow adequate access both for the Waterproofing Contractor at the time of installation and for cleaning and maintenance at some future date.
Plinths or bases built on the waterproofing membrane are to be placed on an additional layer of SP4 and not directly to the waterproofing membrane.

Specification

One layer Derbigum SP4 fully sealed (as described for roof areas), up and over plinths with a sheet metal capping detail over the plinths to serve as protection to the membrane. Allow sufficient height for maintenance purposes (600mm).

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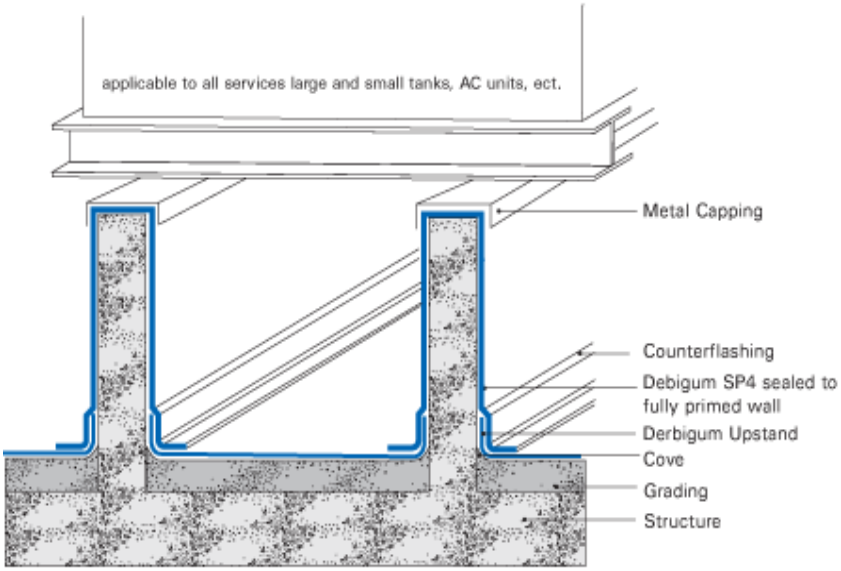

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DESCRIPTION
FLAMINGO BUILDING:
ROOF COVERING -
ROOF SHEETING SPECIFICATION

REVISION
01 – STAGE 4: ISSUED FOR TENDER

Ebesa Architects project number:
GS03 01 SANBI

AT
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Installation Diagram 5
Fixing Clip 5

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Location – ROOF SHEETING SPECIFICATION

The below specifications are only applicable to the Flamingo Building. Please refer to the relevant architectural drawings for detailed locations.

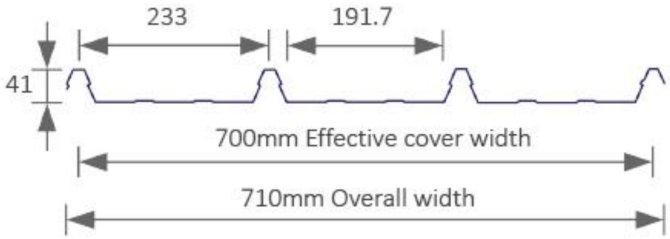
Specification

Safintra produced, SAFLOK 700® profiled interlocking concealed fix roof sheeting with a total coated thickness (TCT) of 0.53mm.

Said profile to be pre-painted in a Colorplus® "RainCloud" AZ 150 finish, fixed on to a 0.8mm Clip 35 Concealed fix Clip and in return be fixed on to intermediate steel purlins at 1900mm centres, and to ridge and eave purlins at 1700mm centres, with a FixTite® Metalfix 10 x 22mm wafer head screw, or suitable Safintra approved wafer head self-drilling fastener, all in accordance with the manufacturer's recommendations.

The Sheeting shall be SAFLOK 700® profiled roof sheeting as manufactured by Safintra. The profile shall be roll formed in continuous lengths from G 550 ZincAl® Steel, in a Colorplus® "RainCloud" finish. The profile shall have 4 ribs at 233mm centres and a covering width of 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum prescribed rib height shall be 41mm. Two stiffening ribs incorporated in the pan, and shall be fixed in accordance with the manufacturers recommendations, by a Safintra approved installer.

Female Rib Male Rib



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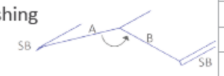
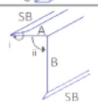
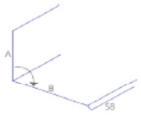
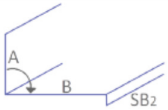
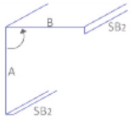
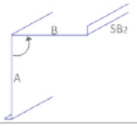
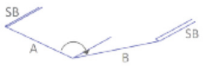
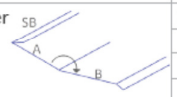
Flashing Guidelines

CONCEALED FIX		SAFLOK 700 concealed fix roofing	SAFLOK 410 concealed fix roofing	NEWLOK standing seam roofing
Ridge Flashing 	Dimensions	330 x 330		
	Angle	Calculation: 180° (2 x Roof pitch)		
	Girth	660		
	Comment	Use with broad flute closures + poly closures and sliding brackets (F10, 2-Piece slider)		
Hip Cap	Dimensions	330 x 330		
	Angle	Calculation: 180° (1.5 x Roof pitch)		
	Girth	660		
	Comment	Use with blank closures notched + poly blocks		
Drip Flashing	Dimensions	111 x 60 x 25 x 35		
	Angle	92°		
	Girth	231		
Counter Flashing 	Dimensions	SB 13 x 30 x 142		
	Angle	i)157.5° ii)88°		
	Girth	185		
Headwall Flashing 	Dimensions	94 x 368		
	Angle	Calculation: 90° + Roof Pitch		
	Girth	462		
	Comment	Use with broad flute closures + poly closures and sliding brackets (F10, 2-Piece slider)		
Sidewall Flashing 	Dimensions	94 x 330 x 38 SB² = 38mm at 90°	94 x 330 x 38 SB² = 38mm at 90°	132 x 282 x 48 SB² = 48mm at 90°
	Angle	90°		
	Girth	462		
	Comment	Sliding Brackets (F10 or Clip-on)		
External Corner 	Dimensions	292 x 292 x 38 x 38 SB² = 38mm at 90°	292 x 292 x 38 x 38 SB² = 38mm at 90°	282 x 282 x 48 x 48 SB₂ = 48mm at 90°
	Angle	90°		
	Girth	660	660	660
Internal Corner 	Dimensions	292 x 292 x 38 x 38 SB² = 38mm at 90°	292 x 292 x 38 x 38 SB² = 38mm at 90°	282 x 282 x 48 x 48 SB² = 48mm at 90°
	Angle	90°		
	Girth	660	660	660
Valley Flashing 	Dimensions	330 x 330		
	Angle	Calculation: 180° (1.5 x Roof pitch)		
	Girth	660		
	Comment	Stiffener Bend at 158° degree angle		
Under-Over Flashing 	Dimensions	330 x 330		
	Angle	Calculation: 180° (i-ii)		
	Girth	660		
	Comment	Use with sliding Brackets (F10 or 2-Piece slider)		
Broad Flute Closure	Profile			
	Length	705	820 (2 x 410)	466
	Comment	One closure per Roofsheet	One closure per 2 Roofsheets	One closure per Roofsheet

All dimensions given in millimetres.
Diagrams are for illustrative purposes only.
Note:0.8mmZ-supportflashingsisrecommendedforusewithNewlok™.

Note

SB = Stiffener Bend is 15mm included at 15°, unless otherwise stated

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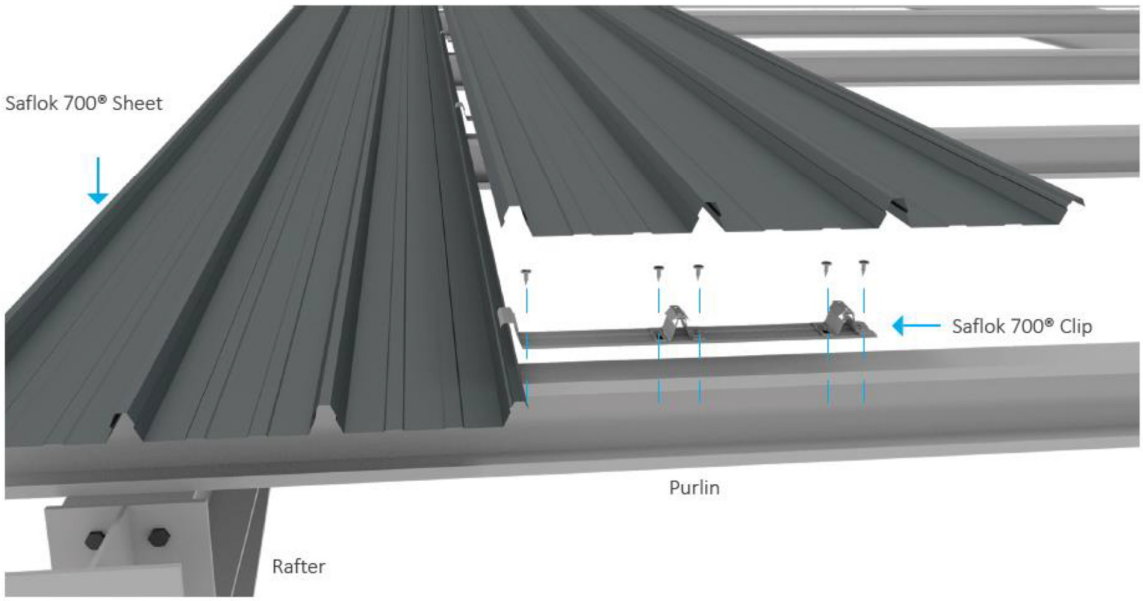
Fastener Selection

FASTENERS FOR SAFLOK 700®		
	ROOF	FLASHINGS
Steel	#10 x 22mm Metalfix wafer head	#14 x 22mm Metalfix stitching screw, hex head, tapered
Timber	#10 x 45mm Timberfix wafer head	

Installation Diagram



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DESCRIPTION
MOUNTAIN- & PICNICS KIOSKS &
WATERHOLE BUILDING:
ROOF COVERING -
ROOF TILE SPECIFICATION

REVISION
01 – STAGE 4: ISSUED FOR TENDER

Ebesa Architects project number:
GS03 01 SANBI

AT
Daspoort 319-JR, Gauteng, Pretoria National Zoological Gardens

FOR
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Biodiversity for Life
South African National Biodiversity Institute

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Location – ROOF TILE SPECIFICATION

The below specifications are applicable to the Mountain- & Picnic Kiosks as well as the Waterhole Building. Please refer to the relevant architectural drawings for detailed locations.

Specification

Harvey Thatch Tile galvanized steel roof tile colour Natural Stone, size 369 x 1625mm long, laid in with a minimum 75mm side lap, fixed at a pitch of 45° (Confirm on Site) with each tile fixed using non-corrosive nails to 38 x 38mm sawn softwood battens at maximum 350mm centres fixed to 50 x 38mm counter batten fixed to gum poles.

- Roof tile: Thatch Tile
- Tile type: galvanized steel
- Tile width: 369mm
- Tile length 1625mm
- Tile colour: Natural Stone.

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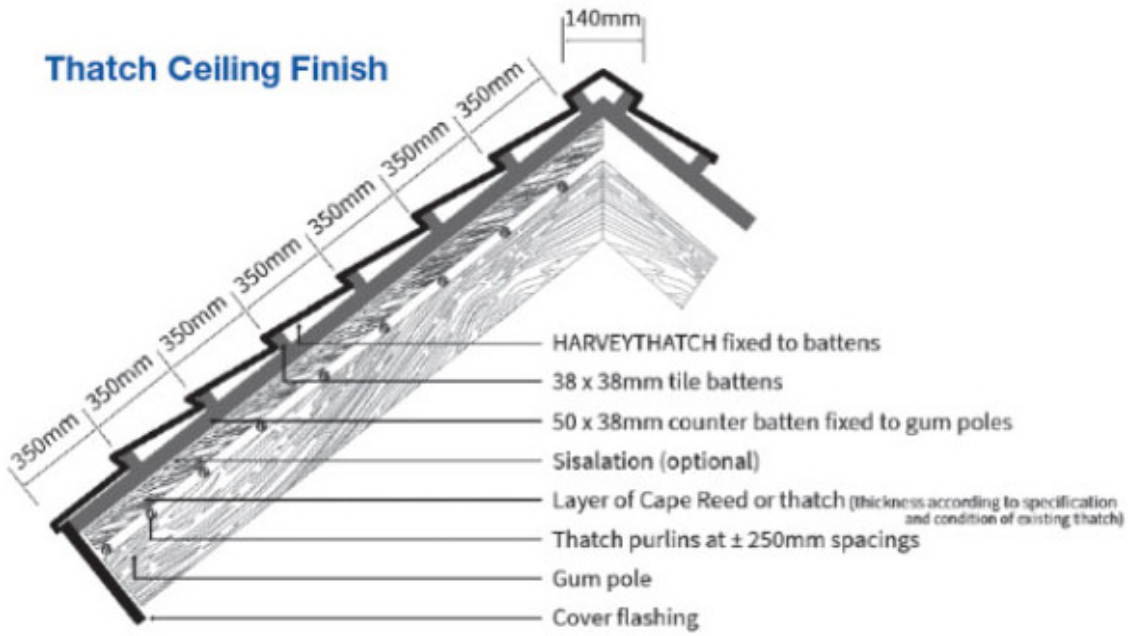
Re-roofing Diagram



Fire Rating Requirement

In order to comply to the A-Class Fire rating as tested in accordance to SANS 1077 – part 12 (CSIR), Harvey Thatch Tiles has to be installed in accordance to the prescribed installation specification

PRODUCT	SPECIFICATION
Timber truss / support frame / 'gum poles'	Micon Coating: Pacsyf™ treated
Thatch grass layer / Cape Reed	Inside as well as outside to be treated with Micon coatings: Thatchsayf™
Pink Aerolite 50mm	Ensure all ridges, eaves and bottom edges are covered with Pink Aerolite. Do not use as 'fill' - has to cover the battens
Harvey Thatch Tile coated with natural stone	Galvanised substrate for inland application (10km plus) and zinc-aluminium substrate for coastal application (not suitable for proximity closer than 1km from breaking surf)

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DESCRIPTION
FLAMINGO BUILDING:
ALUMINIUM FRAMING -
POWDER COATING SPECIFICATION

REVISION
01 – STAGE 4: ISSUED FOR TENDER

Ebesa Architects project number:
GS03 01 SANBI

AT
Daspoort 319-JR, Gauteng, Pretoria National Zoological Gardens

FOR
SANBI
Biodiversity for Life
South African National Biodiversity Institute

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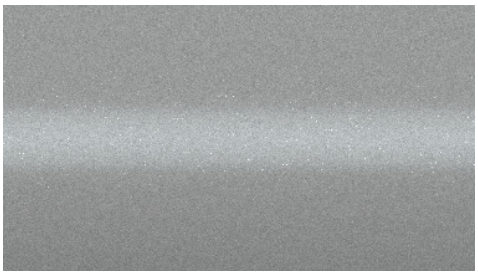
Location – POWDER COATING SPECIFICATION

The below specifications are only applicable to the Flamingo Building. Please refer to the relevant architectural drawings for detailed locations.

Specification

- All new aluminium window and door framing to be powder coated in colour Interpon (Code: YW206F) Matt White Aluminium Metallic.



Sample

- Aluminium window & door contractor so supply colour samples to the architect for approval prior to order and manufacturing.

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DESCRIPTION
DUKU DUKU BUILDING:
CEILINGS -
CEILING SPECIFICATION

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01 – STAGE 4: ISSUED FOR TENDER

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AT
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Location – CEILING SPECIFICATION

The below specifications are only applicable to the Duku Duku Building. Please refer to the relevant architectural drawings for detailed locations.

Specification

Gyproc Skimmed Ceiling System 12.5 mm - Gypframe® D37/32K

System Overview

1x RhinoBoard® 12.5 mm (locally manufactured, ISO 9001 & 14001 certification, recycled paper content, Greentag Level B) fixed to Gypframe® D32K Cross Tee (Locally manufactured, recycled content, ISO 9001 & 14001 certification) using Gyproc Sharp-point Screws 25 mm at maximum 150 mm centres. Gypframe® D37K Main Tee installed at 1200 mm centres and suspended using Gyproc Galvanised Angle 25 mm x 25 mm hangers at 1200 mm centres. Gypframe® D32K Cross Tee at 600 mm centres. Hanger to be maximum 400 mm from perimeter wall. Apply Gyproc RhinoTape® to all joints. Cover Gyproc RhinoTape® with 1 layer of Gyproc RhinoLite® Multipurpose/ RhinoLite® Natural Plus®/ RhinoLite® CreteStone® (locally manufactured, Greentag Level B). Install Gypframe® Corner Bead to all external corners. Gyproc Plaster Trim 12.5 mm (locally manufactured) to the wall using fixings at 300 mm centres. Install 135 mm thick flexible, non-combustible, lightweight Aerolite insulation material between the roof trusses and over brandering/purlins in a completed roof and ceiling system. Install in accordance with the manufacturers detail and specification.

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DESCRIPTION
FLAMINGO BUILDING:
CEILINGS -
CEILING SPECIFICATION

REVISION
01 – STAGE 4: ISSUED FOR TENDER

Ebesa Architects project number:
GS03 01 SANBI

AT
Daspoort 319-JR, Gauteng, Pretoria National Zoological Gardens

FOR
SANBI
Biodiversity for Life
South African National Biodiversity Institute

Document Approval

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Location – CEILING SPECIFICATION

The below specifications are only applicable to the Flamingo Building. Please refer to the relevant architectural drawings for detailed locations.

Specification

Gyproc Gyprex® White 12.5 mm - 600 mm x 600 mm GYPFRAME® T suspended with Gyproc Hanger Strap 19 mm or Gyproc Suspension Wire

System Overview

Lay Gyprex® White Tiles (Size: 600 mm x 600 mm. Thickness: 12.5 mm) into the framework. Install Gypframe® T Main Tees , suspended using Gyproc Hanger Strap/ Gyproc Suspension Wire at 1200 mm centres and fixed to the Main Tee web using 2 steel pop-rivets or one Gyproc Wafer-head Tek Screws 13 mm. Hangers to be at maximum 400 mm from perimeter wall. Install Gypframe® T Cross Tee (1200 mm long) at 600 mm c/c to create a 1200 mm x 600 mm ceiling grid. Install Gypframe® T Cross Tee (600 mm long) into the 1200 mm long cross tee to create a 600 mm x 600 mm ceiling grid. Install Gyproc Hold down clips per tile in areas susceptible to draught (2x per 1200 mm Cross Tee). Perimeter - Fix Gypframe® T Shadow Line Wall Angle to the wall using fixings at 300 mm centres. Fix Main Tee's to the wall using Gyproc Angle Cleats to ensure straight grid and stability.

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DESCRIPTION
DUKU DUKU BUILDING:
WALL FINISH -
WALL TILE SPECIFICATION

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01 – STAGE 4: ISSUED FOR TENDER

Ebesa Architects project number:
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Location – WALL TILE SPECIFICATION

The below specifications are only applicable to the Duku Duku Building. Please refer to the relevant architectural drawings for detailed locations.

Specification

Lime Green Sourcing Solutions porcelain tiles (Code: LG2222SP), size 300 x 600mm white matt wall tile – Apex white, fixed horizontally to internal wall plaster backing with TAL tile adhesive (see below Adhesive System) with 5mm joints continuous in both directions and grouted with TAL tile grout (see below Grouting), excess grout on the surface to be cleaned with water as work proceeds.

Adhesive System

- Apply TAL GOLDSTAR 6 rapid-setting adhesive to the background using a notched trowel. In this tiling situation it is imperative that there is a solid bed of adhesive at least 6mm thick beneath each tile. Use a notched FLOOR TROWEL.
- At no time spread more adhesive than can be tiled onto in 10 – 15 minutes. Depending on atmospheric conditions, this will normally be around 1 square metre. This prevents the adhesive from drying or "skinning" before the tiles are applied.
- Bed dry tiles (do not soak) firmly into the wet adhesive with a twisting action to ensure full contact between the background, tiles and adhesive. Tiles should be well tapped home with a rubber mallet or the wooden handle of a trowel. It is sound practice to remove the occasional tile to ensure that good contact has been achieved.
- Clean off any surplus adhesive remaining on the face of tiles and between the joints with a damp sponge before the adhesive dries.
- Never butt joint tiles. Joints are required to allow the individual tiles to move with respect to each other and thus avoid a compressive stress build-up. They are also required as vents for the tile adhesive to cure. The joints between these tiles must be a minimum of 5mm wide.

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- Pot life of the adhesive will vary with climatic conditions. Under no circumstances should adhesive which has been left standing for too long be reconstituted by adding more liquid.
- Do not tile over structural, expansion or cold joints in the background. These joints must be extended through the various layers to the surface.

Grouting

- Grouting must not be carried out until sufficient bond has developed between the bedding mix and the tiles to preclude disturbance of the tiles during the grouting operation. Allow a minimum of 4 hours before grouting.
- Dry Areas: Use white TAL WALL & FLOOR GROUT for filling the 5mm wall tile joints.
- Wet Areas, ie Splashbacks: Use white TAL WALL & FLOOR GROUT mixed 20kg with 6 litres of TAL BOND (replacing the water in the mix) for filling wall tile joints up to 8mm wide.
- Alternatively, TAL BOND POWDER may be added to the grout mixing water, at a ratio of 1 x 1kg sachet per 20kg TAL WALL & FLOOR GROUT.
- Particular care must be taken to clean the grout off the tile face before it hardens completely. This is especially important when an additive such as TAL BOND or TAL BOND POWDER has been used.
- A sample of the tiles to be used should be tested beforehand to ensure that no grout is absorbed into the tile body, causing permanent staining of the tiles.
- It is important to use the stipulated amount of liquid in the TAL Grout mixture. When cleaning, a damp, not wet, sponge must be used. Over hydration (too much water) of the mix, or in cleaning, causes colour variations in the grout joints, and also affects the integrity of the grout, resulting in a friable product.

Movement Joints

- It should be noted that the lack of movement joints in a tile panel is a major cause of tile failure. They should be specified at the design stage to avoid placing them in heavy traffic areas and spoiling the visual effect of the tiles.
- Movement joints should be located in both directions at maximum 5 metre centres for interior surface bed applications.
- Movement joints should also be located around the perimeter of all floors, in all vertical corners, against obstructions fixed to the structural background and over all discontinuities in building materials, e.g. at interfaces of concrete and brickwork. In addition, movement joints should be located around any fixtures protruding through the tiled surface such as columns or stairs.
- The joints should be at least 5mm wide and extend through the adhesive and tile layers. All construction / cold joints and structural joints in the background must be extended through the adhesive and tile layers to the surface in the form of tile panel movement joints. With regards to structural joints, the full width of the structural joints must be respected and extended through the adhesive and tile layers to the surface.

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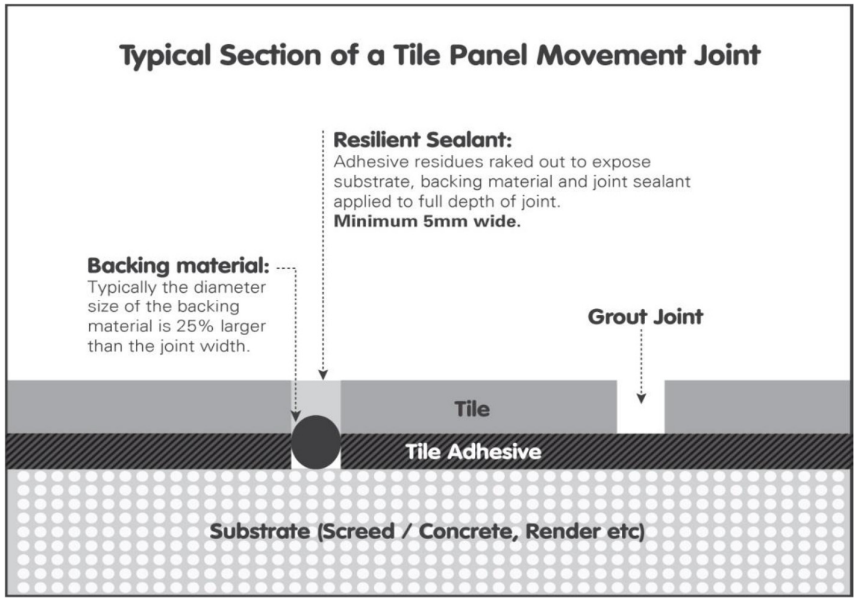
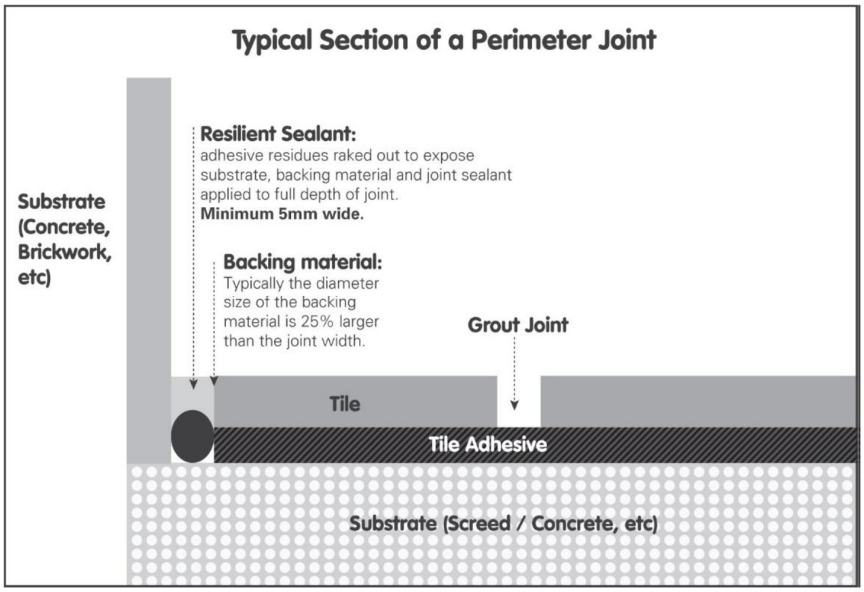
- Where practical, the bulk of the depth of the movement joint can be filled with TAL SEALMASTER CORD.
- Seal the joint using TAL GOLDSTAR SEALMASTER 1000 polyurethane joint sealant in accordance with the manufacturer's instructions. It is important that the joint sealant bonds only to the sides of the movement joint.
- For the key requirements common to all tiling situations please refer to SANS 10107-2011, Code of Practice for the Design and Installation of Ceramic Tiling.





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DESCRIPTION
FLAMINGO & DUKU DUKU BUILDING:
FLOOR FINISH -
FLOOR TILE SPECIFICATION

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Location – FLOOR TILE SPECIFICATION

The below specifications are applicable to both the Flamingo Building and Duku Duku Building. Please refer to the relevant architectural drawings for detailed locations.

Specification

Lime Green Sourcing Solutions full bodied porcelain tiles (Code: LG2221SP), size 600 x 600mm Damstone medium Grey matt, fixed to internal floor screed with TAL tile adhesive (see below Adhesive System) with 5mm joints continuous in both directions and grouted with TAL tile grout (see below Grouting), excess grout on the surface to be cleaned with water as work proceeds.

Provide a 150mm high tile skirting around the perimeter of the area to be tiled in the same tile specification as above only when the surrounding wall finish is plastered and painted.

Adhesive System

- Apply TAL GOLDSTAR 6 rapid-setting adhesive to the background using a notched trowel. In this tiling situation it is imperative that there is a solid bed of adhesive at least 6mm thick beneath each tile. Use a notched FLOOR TROWEL.
- At no time spread more adhesive than can be tiled onto in 10 – 15 minutes. Depending on atmospheric conditions, this will normally be around 1 square metre. This prevents the adhesive from drying or "skinning" before the tiles are applied.
- Bed dry tiles (do not soak) firmly into the wet adhesive with a twisting action to ensure full contact between the background, tiles and adhesive. Tiles should be well tapped home with a rubber mallet or the wooden handle of a trowel. It is sound practice to remove the occasional tile to ensure that good contact has been achieved.

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- Clean off any surplus adhesive remaining on the face of tiles and between the joints with a damp sponge before the adhesive dries.
- Never butt joint tiles. Joints are required to allow the individual tiles to move with respect to each other and thus avoid a compressive stress build-up. They are also required as vents for the tile adhesive to cure. The joints between these tiles must be a minimum of 5mm wide.
- Pot life of the adhesive will vary with climatic conditions. Under no circumstances should adhesive which has been left standing for too long be reconstituted by adding more liquid.
- Do not tile over structural, expansion or cold joints in the background. These joints must be extended through the various layers to the surface.

Grouting

- Grouting must not be carried out until sufficient bond has developed between the bedding mix and the tiles to preclude disturbance of the tiles during the grouting operation. Allow a minimum of 4 hours before grouting.
- Use grey TAL WALL & FLOOR GROUT for filling the 5mm tile joints.
- Particular care must be taken to clean the grout off the tile face before it hardens completely. This is especially important when an additive such as TAL BOND or TAL BOND POWDER has been used.
- A sample of the tiles to be used should be tested beforehand to ensure that no grout is absorbed into the tile body, causing permanent staining of the tiles.
- It is important to use the stipulated amount of liquid in the TAL Grout mixture. When cleaning, a damp, not wet, sponge must be used. Over hydration (too much water) of the mix, or in cleaning, causes colour variations in the grout joints, and also affects the integrity of the grout, resulting in a friable product.

Movement Joints

- It should be noted that the lack of movement joints in a tile panel is a major cause of tile failure. They should be specified at the design stage to avoid placing them in heavy traffic areas and spoiling the visual effect of the tiles.
- Movement joints should be located in both directions at maximum 5 metre centres for interior surface bed applications.
- Movement joints should also be located around the perimeter of all floors, in all vertical corners, against obstructions fixed to the structural background and over all discontinuities in building materials, e.g. at interfaces of concrete and brickwork. In addition, movement joints should be located around any fixtures protruding through the tiled surface such as columns or stairs.
- The joints should be at least 5mm wide and extend through the adhesive and tile layers. All construction / cold joints and structural joints in the background must be extended through the adhesive and tile layers to the surface in the form of tile panel

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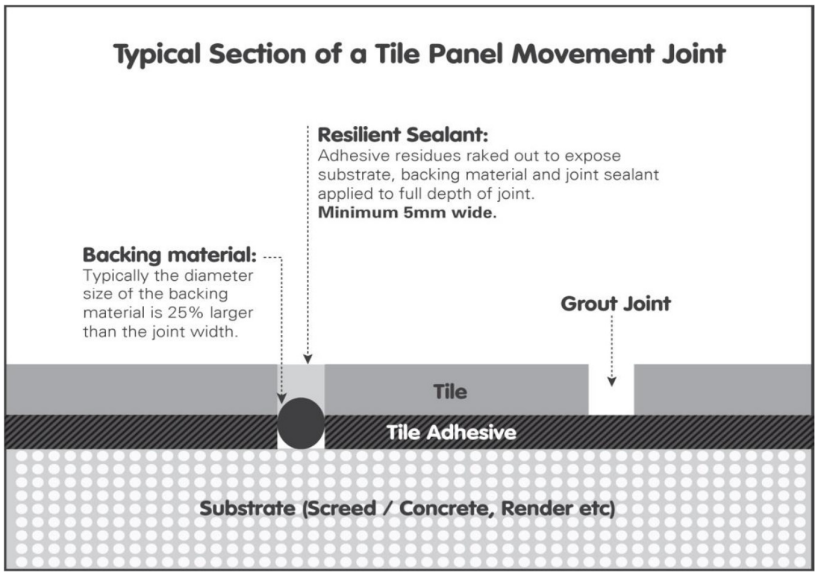
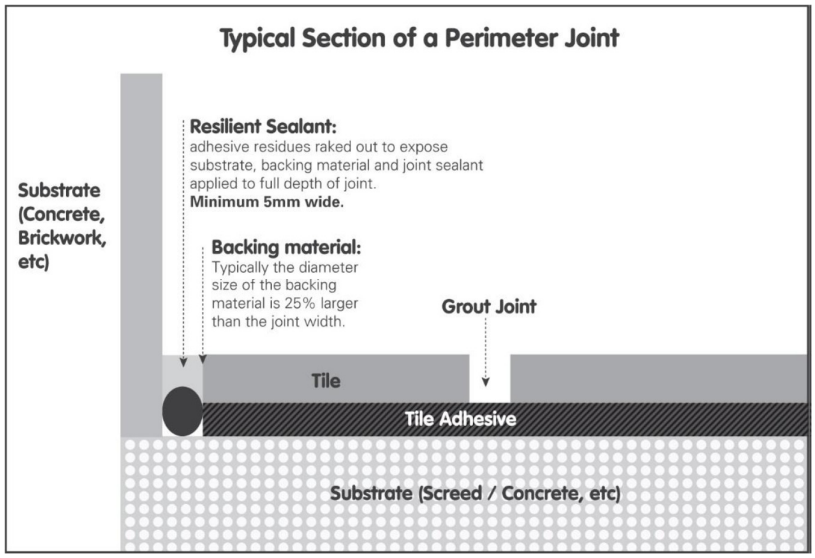
movement joints. With regards to structural joints, the full width of the structural joints must be respected and extended through the adhesive and tile layers to the surface.

- Where practical, the bulk of the depth of the movement joint can be filled with TAL SEALMASTER CORD.
- Seal the joint using TAL GOLDSTAR SEALMASTER 1000 polyurethane joint sealant in accordance with the manufacturer's instructions. It is important that the joint sealant bonds only to the sides of the movement joint.
- For the key requirements common to all tiling situations please refer to SANS 10107-2011, Code of Practice for the Design and Installation of Ceramic Tiling.





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DESCRIPTION
FLAMINGO & DUKU DUKU BUILDING:
PAINT -
PAINT SPECIFICATION

REVISION
01 – STAGE 4: ISSUED FOR TENDER

Ebesa Architects project number:
GS03 01 SANBI

AT
Daspoort 319-JR, Gauteng, Pretoria National Zoological Gardens

FOR
SANBI
Biodiversity for Life
South African National Biodiversity Institute

Document Approval

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Location – PAINT SPECIFICATION

The below specifications are applicable to both the Flamingo & Duku Duku Building. Please refer to the relevant architectural drawings for detailed locations.

Reference Table

SPEC NO	SUBSTRATE	SPECIFICATION TYPE	PRODUCT	FINISH	LIFE EXPECTANCY	LOCATIONS	BUILDING ELEMENTS
1	Brickwork	Previously Decorated	Professional Superior Low Sheen (PEM 1000/TLS) / Professional Gypsum & Plaster Primer (PP700) / Professional All Purpose Undercoat (PU 800) / Professional Waterproofing Compound (PWC520)	Smooth/Water Based	Moderate: 6 years	Exterior Brickwork	Walls
2	Wood	Previously Decorated	Professional Super Matt (PEM 900/TSA) / Wood Primer (UC2)	Smooth/Water Based	Moderate: 3 years	Exterior Wood	Trusses
3	Mild Steel	Previously Decorated	Velvaglo Water Based (VLW/TVW) / Plascoprime 170 Primer (UC170) / Professional All Purpose Undercoat (PU 800)	Smooth/Water Based	C1: 8 years	Interior Mild Steel	Door frames
4	Wood	Previously Decorated	Woodcare Water Based Interior Varnish (Gloss: X45-50 range/WUT 3000 tint base Suede X51/WUB 3000 tint base) / Woodcare Water Based Interior Varnish (X45-51)	Smooth/Water Based	Moderate: 3 years	Interior Wood	Door frames D13 Doors
5	Wood	Previously Decorated	Woodcare Sunproof (WSP (1-16)) / Woodcare Sunproof (WSP)	Smooth/Solvent Based	Moderate: 2 years	Exterior Wood	Door frames Doors D15, D16
6	Mild Steel	Previously Decorated	Velvaglo Water Based (VLW/TVW) / Plascoprime 170 Primer (UC170) / Professional All Purpose Undercoat (PU 800)	Smooth/Water Based	C1: 8 years	Exterior Mild Steel	G1, G2, G3, G5 Window frames Gates
7	Mild Steel	Previously Decorated	Velvaglo Water Based (VLW/TVW) / Plascoprime 170 Primer (UC170) / Professional All Purpose Undercoat (PU 800)	Smooth/Water Based	C1: 8 years	Interior Mild Steel	Roller shutter doors
8	Wood	New Work	Velvaglo Water Based (VLW/TVW) / Wood Primer (UC2) / Professional All Purpose Undercoat (PU 800)	Smooth/Water Based	Moderate: 8 years	Exterior Wood	Doors D4, D11, D12
9	Mild Steel	New Work	Velvaglo Water Based (VLW/TVW) / Plascoprime 170 Primer (UC170)	Smooth/Solvent Based	C1: 8 years	Exterior Mild Steel	Verandah Columns Beams
10	Fibre Cement	New Work	Professional Contractors Matt White (PEM 600) / Professional Gypsum & Plaster Primer (PP700)	Smooth/Water Based	Moderate: 3 years	Exterior Fibre Cement	Ceilings
11	Fibre Cement	New Work	Professional Superior Low Sheen (PEM 1000) / Professional Gypsum & Plaster Primer (PP700) / Professional Waterproofing Compound (PWC520)	Smooth/Water Based	Moderate: 6 years	Exterior Fibre Cement	Fascia boards Cladding

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Specification 1: Exterior brickwork - Walls

APPLICABLE LOCATIONS: Exterior brickwork - Walls
REPAINT: Exterior
SUBSTRATE: Brickwork
PAINT FINISH : Professional Superior Low Sheen
(Smooth Finish - Waterbased superior low sheen acrylic, durable, washable)
PRODUCT CODE: PEM 1000
COLOUR : White plus Plascon colour system and other fan decks
MAINTENANCE CYCLE: 6 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Spot Primer: Professional Gypsum & Plaster Primer (PP700)	brush, roller or airless spray	@ 40 µm Theo: 8.80m^2/litre Prac: 5.10m^2/litre	WFT: 100/129 microns DFT: 35/45 microns	Mineral Turpentine	1	16 hours		423
Undercoat: Professional All Purpose Undercoat (PU800)	brush, roller or airless spray	@ 30 µm Theo: 14.30m^2/litre Prac: 7.90m^2/litre	WFT: 58-93 DFT: 25-40	Mineral Turps (AZH1)	1	16 hours		300
ONLY EXTERIOR: Window sills, ledges, parapets, plaster bands, protruding plaster detail, etc. Professional Waterproofing Compound (PWC520)	brush or roller	@ 250 µm Theo: 2.00m^2/litre Prac: 1.50m^2/litre	WFT: 400-600 per coat DFT: 200-300 per coat	Water	3	4 hours		10
Topcoat: Professional Superior Low Sheen (PEM 1000/TLS)	brush, roller or airless spray	@ 30 µm Theo: 12.70m^2/litre Prac: 7.00m^2/litre	WFT: 66/92 microns DFT: 25/35 microns	Water	2	1 hour	5850	< 5 white & pastel tinted <16 deep & transparent bases tinted

SURFACE PREPARATION:

After a full site assessment has been conducted, select the appropriate surface preparation required from Surface Preparation clauses for remedial procedure.

APPLICATION:

Spot Primer: Spot prime bare and repaired areas with Professional Gypsum & Plaster Primer (PP700). Allow 16 hours to dry. (water based topcoat)

Undercoat: Apply one coat of Professional All Purpose Undercoat (PU 800) to achieve a continuous film. Allow 16 hours to dry.

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Intermediate Coats for Selected Substrates: 3 Coats only exterior Window sills, ledges, parapets, plaster bands, protruding plaster detail, etc. Apply three full coats of Plascon Professional Waterproofing Compound (PWC 520) at a spreading rate of approximately 1.5m²/litre per coat. Allow 4 hours drying between coats. Stipples should be smoothed out while still wet using a water-wet brush.

Finishing Coats: Apply two coats of Plascon Professional Superior Low Sheen (PEM 1000/TLS) to achieve complete obliteration, allowing 1 hour drying between coats.

Specification 2: Exterior wood – Trusses

APPLICABLE LOCATIONS: Exterior wood - Trusses
REPAINT: Exterior
SUBSTRATE: Wood
PAINT FINISH : Professional Super Matt
(Smooth Finish - Waterbased, high cover, durable matt acrylic)
PRODUCT CODE: PEM 900
COLOUR : White plus Plascon colour system and other fan decks
MAINTENANCE CYCLE: 3 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Spot Primer: Wood Primer (UC2)	brush, roller or airless spray	@ 30 µm Theo: 15.00m^2/litre Prac: 8.30m^2/litre	WFT: 56/78 microns DFT: 25/35 microns	Mineral Turpentine	1	16 hours		422
Topcoat: Professional Super Matt (PEM 900/TSA)	brush, roller or airless spray	@ 30 µm Theo: 11.30m^2/litre Prac: 6.30m^2/litre	WFT: 74/103 microns DFT: 25/35 microns	Water	2	1 hour	8148	< 5 white & pastel tinted <16 deep & transparent bases tinted

SURFACE PREPARATION:

After a full site assessment has been conducted, select the appropriate surface preparation required from Surface Preparation clauses for remedial procedure.

APPLICATION:

Spot Primer: Spot prime bare and repaired areas with Plascon Wood Primer (UC 2). Allow 16 hours to dry. (water based topcoat)

Finishing Coats: Apply two full coats of Professional All Purpose Matt (PEM 900/TSA) to achieve complete obliteration, allowing 1 hour drying between coats.

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Specification 3: Interior mild steel - Door frames

APPLICABLE LOCATIONS: Interior mild steel - door frames
REPAINT: Interior
SUBSTRATE: Mild Steel
PAINT FINISH : Velvaglo Water Based
(Premium Quality Satin Finish Non Drip Waterbased Enamel)
PRODUCT CODE: VLW
COLOUR : White plus Plascon colour system and other fan decks
MAINTENANCE CYCLE: 8 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Spot Primer: Plascoprime 170 Primer (UC170)	brush, roller or airless spray	@ 45 µm Theo: 11.80m^2/litre Prac: 7.00m^2/litre	WFT: 76/94 microns DFT: 40/50 microns	Mineral Turpentine	1	12 hours		388
Undercoat: Professional All Purpose Undercoat (PU 800)	brush, roller or airless spray	@ 30 µm Theo: 14.30m^2/litre Prac: 7.90m^2/litre	WFT: 58-93 DFT: 25-40	Mineral Turps (AZH1)	1	16 hours		300
Topcoat: Velvaglo Water Based (VLW/TVW)	brush, roller or airless spray	@ 30 µm Theo: 9.70m^2/litre Prac: 5.50m^2/litre	WFT: 88/118 microns DFT: 30/40 microns	Water	2	4 hours	7419	46-50 white, pastel tinted < 53-60 deep & transparent bases tinted

SURFACE PREPARATION:

After a full site assessment has been conducted, select the appropriate surface preparation required from Surface Preparation clauses for remedial procedure.

APPLICATION:

Spot Primer: Spot prime bare and repaired areas with Plascoprime 170 Primer (UC170) . Allow 12 hours to dry. (water based topcoat)

Undercoat: Apply one coat of Professional All Purpose Undercoat (PU 800) to achieve a continuous film. Allow 16 hours to dry.

Finishing Coats: Apply two full coats of Plascon Velvaglo Water Based (VLW/TVW) to achieve complete obliteration, allowing 4 hours drying between coats.

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Specification 4: Interior wood - Door frames, D13, Doors

APPLICABLE LOCATIONS: Interior wood - Door frames, D13, Doors
REPAINT: Interior
SUBSTRATE: Wood
PAINT FINISH : Woodcare Water Based Interior Varnish
(Premium quality, smooth, water based, low odour, stain resistant, low build finish)
PRODUCT CODE: X45-51
COLOUR : Standard colour range: WSP 23 Clear Tint base WSB03000
MAINTENANCE CYCLE: 3 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Spot Prime: Woodcare Water Based Interior Varnish (Gloss: X45-50 range/WUT 3000 tint base Suede X51/WUB 3000 tint base)	brush	@ 25 µm Theo: 18.00m^2/litre Prac: 9.50m^2/litre	WFT: 44/67 microns DFT: 20/30 microns	Water	1	4 hours		50
Topcoat: Woodcare Water Based Interior Varnish (Gloss: X45-50 range/WUT 3000 tint base Suede X51/WUB 3000 tint base)	brush	@ 25 µm Theo: 18.00m^2/litre Prac: 9.50m^2/litre	WFT: 44/67 microns DFT: 20/30 microns	Water	1	4 hours	8118	50

SURFACE PREPARATION:

After a full site assessment has been conducted, select the appropriate surface preparation required from Surface Preparation clauses for remedial procedure.

APPLICATION:

Spot Prime: Spot prime bare and repaired areas with Plascon Woodcare Water Based Interior Varnish (X 45-51 range). Allow 4 hours drying time. Sand with 150-220 grit fine paper to denib. Remove dust.

Finishing Coats: Apply two coats of Plascon Woodcare Water Based Interior Varnish (X 45-51 range). Allow 4 hours drying time between coats. Sand with 150-220 grit fine paper to denib between coats. Remove dust.

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Specification 5: Exterior wood - Door frames, Doors , D15, D16

APPLICABLE LOCATIONS: Exterior wood - Door frames, Doors , D15, D16
REPAINT: Exterior
SUBSTRATE: Wood
PAINT FINISH : Woodcare Sunproof
(Smooth, premium translucent coloured gloss or suede varnish)
PRODUCT CODE: WSP (1-6)
COLOUR : Standard colour range in gloss (WSP 1-6) and suede (WSP 11-16)
MAINTENANCE CYCLE: 2 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Spot Prime: Woodcare Sunproof (WSP (1-16))	brush, roller or airless spray	@ 25 µm Theo: 21.00m^2/litre Prac: 11.00m^2/litre	WFT: 39/58 microns DFT: 20/30 microns	Mineral Turpentine	1	24 hours		341-400
Topcoat: Woodcare Sunproof (WSP (1-16))	brush, roller or airless spray	@ 25 µm Theo: 21.00m^2/litre Prac: 11.00m^2/litre	WFT: 39/58 microns DFT: 20/30 microns	Mineral Turpentine	2	24 hours	8114	341-400

SURFACE PREPARATION:

After a full site assessment has been conducted, select the appropriate surface preparation required from Surface Preparation clauses for remedial procedure.

APPLICATION:

Spot Prime: Spot prime bare and repaired areas with Plascon Woodcare Sunproof (WSP 1-16) thinned 3 parts Plascon Sunproof (WSP 1-16) to 1 part Mineral Turpentine (AZH 1) by volume. Allow 24 hours to dry. Sand lightly with 220 grit sand paper to denib. Remove dust.

Finishing Coats: Apply two further coats of Sunproof (WSP 1-16) allowing 24 hours drying between coats. Sand lightly between coats to denib and dust off.

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Specification 6: Exterior mild steel - G1, G2, G3, G5, Window frames, Gates

APPLICABLE LOCATIONS: Exterior mild steel - G1, G2, G3, G5, Window frames, Gates
REPAINT: Exterior
SUBSTRATE: Mild Steel
PAINT FINISH : Velvaglo Water Based
(Premium Quality Satin Finish Non Drip Waterbased Enamel)
PRODUCT CODE: VLW
COLOUR : White plus Plascon colour system and other fan decks
MAINTENANCE CYCLE: 8 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Spot Primer: Plascoprime 170 Primer (UC170)	brush, roller or airless spray	@ 45 µm Theo: 11.80m^2/litre Prac: 7.00m^2/litre	WFT: 76/94 microns DFT: 40/50 microns	Mineral Turpentine	1	12 hours		388
Undercoat: Professional All Purpose Undercoat (PU 800)	brush, roller or airless spray	@ 30 µm Theo: 14.30m^2/litre Prac: 7.90m^2/litre	WFT: 58-93 DFT: 25-40	Mineral Turps (AZH1)	1	16 hours		300
Topcoat: Velvaglo Water Based (VLW/TVW)	brush, roller or airless spray	@ 30 µm Theo: 9.70m^2/litre Prac: 5.50m^2/litre	WFT: 88/118 microns DFT: 30/40 microns	Water	2	4 hours	7419	46-50 white, pastel tinted < 53-60 deep & transparent bases tinted

SURFACE PREPARATION:

After a full site assessment has been conducted, select the appropriate surface preparation required from Surface Preparation clauses for remedial procedure.

APPLICATION:

Spot Primer: Spot prime bare and repaired areas with Plascoprime 170 Primer (UC170) . Allow 12 hours to dry. (water based topcoat)

Undercoat: Apply one coat of Professional All Purpose Undercoat (PU 800) to achieve a continuous film. Allow 16 hours to dry.

Finishing Coats: Apply two full coats of Plascon Velvaglo Water Based (VLW/TVW) to achieve complete obliteration, allowing 4 hours drying between coats.

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Specification 7: Interior mild steel - Roller shutter doors

APPLICABLE LOCATIONS: Interior mild steel - Roller shutter doors
REPAINT: Interior
SUBSTRATE: Mild Steel
PAINT FINISH : Velvaglo Water Based
(Premium Quality Satin Finish Non Drip Waterbased Enamel)
PRODUCT CODE: VLW
COLOUR : White plus Plascon colour system and other fan decks
MAINTENANCE CYCLE: 8 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Spot Primer: Plascoprime 170 Primer (UC170)	brush, roller or airless spray	@ 45 µm Theo: 11.80m^2/litre Prac: 7.00m^2/litre	WFT: 76/94 microns DFT: 40/50 microns	Mineral Turpentine	1	12 hours		388
Undercoat: Professional All Purpose Undercoat (PU 800)	brush, roller or airless spray	@ 30 µm Theo: 14.30m^2/litre Prac: 7.90m^2/litre	WFT: 58-93 DFT: 25-40	Mineral Turps (AZH1)	1	16 hours		300
Topcoat: Velvaglo Water Based (VLW/TVW)	brush, roller or airless spray	@ 30 µm Theo: 9.70m^2/litre Prac: 5.50m^2/litre	WFT: 88/118 microns DFT: 30/40 microns	Water	2	4 hours	7419	46-50 white, pastel tinted < 53-60 deep & transparent bases tinted

SURFACE PREPARATION:

After a full site assessment has been conducted, select the appropriate surface preparation required from Surface Preparation clauses for remedial procedure.

APPLICATION:

Spot Primer: Spot prime bare and repaired areas with Plascoprime 170 Primer (UC170) . Allow 12 hours to dry. (water based topcoat)

Undercoat: Apply one coat of Professional All Purpose Undercoat (PU 800) to achieve a continuous film. Allow 16 hours to dry.

Finishing Coats: Apply two full coats of Plascon Velvaglo Water Based (VLW/TVW) to achieve complete obliteration, allowing 4 hours drying between coats.

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Specification 8: Exterior wood - Doors , D4, D11, D12

APPLICABLE LOCATIONS: Exterior wood - Doors , D4, D11, D12
NEW WORK: Exterior
SUBSTRATE: Wood
PAINT FINISH : Velvaglo Water Based
(Premium Quality Satin Finish Non Drip Waterbased Enamel)
PRODUCT CODE: VLW
COLOUR : White plus Plascon colour system and other fan decks
MAINTENANCE CYCLE: 8 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Primer: Wood Primer (UC2)	brush, roller or airless spray	@ 30 µm Theo: 15.00m^2/litre Prac: 8.30m^2/litre	WFT: 56/78 microns DFT: 25/35 microns	Mineral Turpentine (AZH 1)	1	16 hours		422
Undercoat: Professional All Purpose Undercoat (PU800)	brush, roller or airless spray	@ 30 µm Theo: 14.30m^2/litre Prac: 7.90m^2/litre	WFT: 58-93 DFT: 25-40	Mineral Turps (AZH1)	1	16 hours		300
Topcoat: Velvaglo Water Based (VLW/TVW)	brush, roller or airless spray	@ 30 µm Theo: 9.70m^2/litre Prac: 5.50m^2/litre	WFT: 88/118 microns DFT:30/40 microns	Water	2	4 hours	8166	46-50 white, pastel tinted < 53-60 deep & transparent bases tinted

SURFACE PREPARATION:

Ensure that surfaces are clean, dry and sound. Moisture content measured with a Doser Hygrometer B 2 scale A1-A5 (or equivalent), depending on the wood type, must be <14 % before painting. Sand wood to a smooth finish with 150 - 220 grit paper in the direction of the grain (depending on the smoothness required). Sharp edges must be rounded off. Dust off. Fill holes and other surface defects with Plascon Polyfilla Mendall 90 (801601) working off smoothly while wet. Allow 6- 8 hours to dry, then sand to a smooth finish. Dust off. Wash knots and resinous areas with Plascon Lacquer Thinner (ILS 1). Apply Plascon Woodcare Knot Seal (PK 2) to all knots and resinous areas. Allow 1 hour to dry.

APPLICATION:

Primer Coat: Apply one coat of Plascon Wood Primer (UC 2) to achieve a continuous film. Allow 16 hours to dry. (water based topcoat)

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Undercoat: Apply one coat of Professional All Purpose Undercoat (PU 800) to achieve a continuous film. Allow 16 hours to dry.

Finishing Coats: Apply two full coats of Plascon Waterbased Velvaglo (VLW/TVW) to achieve complete obliteration, allowing 4 hours drying between coats.

Specification 9: Exterior mild steel - Verandah, Columns, Beams

APPLICABLE LOCATIONS:	Exterior mild steel - Verandah, Columns, Beams
NEW WORK:	Exterior
SUBSTRATE:	Mild Steel
PAINT FINISH :	Velvaglo Water Based (Premium Quality Satin Finish Non Drip Waterbased Enamel)
PRODUCT CODE:	VLW
COLOUR :	White plus Plascon colour system and other fan decks
MAINTENANCE CYCLE:	8 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Primer: Plascoprime 170 Primer (UC170)	brush, roller or airless spray	@ 45 µm Theo: 11.80m^2/litre Prac: 7.00m^2/litre	WFT: 76/94 microns DFT: 40/50 microns	Mineral Turpentine	1	36 hours		388
Topcoat: Velvaglo Water Based (VLW/TVW)	brush, roller or airless spray	@ 30 µm Theo: 9.70m^2/litre Prac: 5.50m^2/litre	WFT: 88/118 microns DFT:30/40 microns	Water	2	4 hours	7419	46-50 white, pastel tinted < 53-60 deep & transparent bases tinted

SURFACE PREPARATION:

Degreaser: Surfaces must be clean, dry and rust free. Remove surface contaminants using Plascon Aquasolv Degreaser (GR 1), scrubbing with bristle brush or broom, or using Scotch Brite pads. Rinse thoroughly with tap water while brushing or hydroblast to remove all traces of Plascon Aquasolv Degreaser (GR 1) to achieve a water break-free surface. Dry surface rapidly to prevent flash rust formation. Cleaned surface must be painted within 4 hours.

Rusted: Rust Grade "B" (Steel surfaces which has begun to rust which the millscale has begun to flake). Rust Grade "C' (Steel surfaces where millscale has rusted away) Rust Grade "D" (Steel surface where millscale has rusted away and pitting is visible to the naked eye). After degreasing sand off rust with coarse emery paper or wire brush to ISO 8501 - 01 : 2007 - St3 to attain a bright metal finish. Remove dust.

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Millscale: Rust Grade "A" steel surface covered completely with adherent millscale and with little or if any rust. Remove millscale and rust by abrasive blast cleaning to ISO 8501 - 01 : 2007 - Sa2½. Remove dust by vacuum cleaning. Prime within 4 hours.

APPLICATION:

Primer Coat: Apply one coat of Plascon Plascoprime 170 Primer (UC170) to achieve a continuous film. Allow 36 hours to dry. (solvent based topcoat)

Finishing Coats: Apply two full coats of Plascon Velvaglo Water Based (VLW/TVW) to achieve complete obliteration, allowing 4 hours drying between coats.

Specification 10: Exterior fibre cement – Ceilings

APPLICABLE LOCATIONS: Exterior fibre cement - Ceilings
NEW WORK: Exterior
SUBSTRATE: Fibre Cement
PAINT FINISH : Professional Contractors Matt White
(Waterbased, medium quality matt acrylic)
PRODUCT CODE: PEM 600
COLOUR : White and pastel only
MAINTENANCE CYCLE: 3 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Primer: Professional Gypsum & Plaster Primer (PP700)	brush, roller or airless spray	@ 40 µm Theo: 8.80m^2/litre Prac: 5.10m^2/litre	WFT: 100/129 microns DFT: 35/45 microns	Mineral Turpentine	1	16hour		423
Topcoat: Professional Contractors Matt White (PEM 600)	brush, roller or airless spray	@ 25 µm Theo: 8.80m^2/litre Prac: 4.70m^2/litre	WFT: 91/136 microns DFT:20/30 microns	Water	2	1 hour	6543	< 5 white and pastel tinted

SURFACE PREPARATION:

Ensure that surfaces are dry, sound and clean. Remove dirt and loose particles. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR 1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR 1), using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3,5 % sodium hypochlorite) - 1 part bleach to 2 parts water by volume.

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Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler - refer Surface Preparation, Crack Repair. Moisture content measured with a Doser Hygrometer (or equivalent) must not exceed the following limits before painting: Fibre-cement : B2 scale - 8 %

APPLICATION:

Primer Coat: Apply one coat of Professional Gypsum and Plaster Primer (PP 700) to achieve a continuous film. Allow 16 hours to dry. (water based topcoat)

Finishing Coats: Apply two full coats of Professional Contractors Matt (PEM 600/TCP) to achieve complete obliteration, allowing 1 hour drying between coats.

Specification 11: Exterior fibre cement - Fascia boards, cladding

APPLICABLE LOCATIONS:	Exterior fibre cement - Fascia boards, cladding
NEW WORK:	Exterior
SUBSTRATE:	Fibre Cement
PAINT FINISH :	Professional Superior Low Sheen (Smooth Finish - Waterbased superior low sheen acrylic, durable, washable)
PRODUCT CODE:	PEM 1000
COLOUR :	White plus Plascon colour system and other fan decks
MAINTENANCE CYCLE:	6 years

Plascon Coating System	Application Method	Spreading Rate (m^2)	WFT/ DFT µm (min & max)	Reducer/Cleaner	No. of Coats	Overcoating time, h @23°C	Technical Data Sheet No	TVOC g/litre
Primer: Professional Gypsum & Plaster Primer (PP700)	brush, roller or airless spray	@ 40 µm Theo: 8.80m^2/litre Prac: 5.10m^2/litre	WFT: 100/129 microns DFT: 35/45 microns	Mineral Turpentine	1	16hour		423
ONLY EXTERIOR: Window sills, ledges, parapets, plaster bands, protruding plaster detail, etc. Professional Waterproofing Compound (PWC520)	brush or roller	@ 250 µm Theo: 2.00m^2/litre Prac: 1.50m^2/litre	WFT: 400-600 per coat DFT: 200-300 per coat	Water	3	4hour		10
Topcoat: Professional Superior Low Sheen (PEM 1000)	brush, roller or airless spray	@ 30 µm Theo: 12.70m^2/litre Prac: 7.00m^2/litre	WFT: 66/92 microns DFT:25/35 microns	Water	2	1 hour	6559	< 5 white & pastel tinted <16 deep & transparent bases tinted

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SURFACE PREPARATION:

Ensure that surfaces are dry, sound and clean. Remove dirt and loose particles. Remove any oil, grease and other contaminants with Plascon Metalcare Aquasolv Degreaser (GR 1) working it well into affected areas with bristle broom or brush. Leave for 20 minutes to react, then rinse thoroughly with fresh water to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR 1), using high pressure water jet or scrubbing with brush or broom. Allow to dry completely. Remove fungi and algae by scrubbing with a solution of household bleach (3,5 % sodium hypochlorite) - 1 part bleach to 2 parts water by volume. Leave for 1 hour, then brush off with a bristle brush. Rinse thoroughly with tap water to remove all traces of bleach and allow to dry. Fill cracks and other surface defects with the appropriate Polycell filler - refer Surface Preparation, Crack Repair. Moisture content measured with a Doser Hygrometer (or equivalent) must not exceed the following limits before painting: Fibre-cement : B2 scale - 8 %

APPLICATION:

Primer Coat: Apply one coat of Professional Gypsum and Plaster Primer (PP 700) to achieve a continuous film. Allow 16 hours to dry. (water based topcoat)

Intermediate Coats for Selected Substrates: 3 Coats only exterior Window sills, ledges, parapets, plaster bands, protruding plaster detail, etc. Apply three full coats of Plascon Professional Waterproofing Compound (PWC 520) at a spreading rate of approximately 1.5m²/litre per coat. Allow 4 hours drying between coats. Stipples should be smoothed out while still wet using a water-wet brush.

Finishing Coats: Apply two full coats of Professional Superior Low Sheen (PEM 1000/TLS) to achieve complete obliteration, allowing 2 hours drying between coats.

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Surface Preparation Glossary – Brickwork

SP2 HEAVY DUTY CLEANING: PLASCON METALCARE AQUASOLV DEGREASER (GR 1) - MASONRY, PLASTER, ETC.: For heavy duty cleaning of surface contaminants on unpainted surfaces or solvent based coatings (older than three months), such as oil, grease and chalkiness, use undiluted Plascon Metalcare Aquasolv Degreaser (GR 1) in conjunction with bristle brooms/brushes working well into affected areas. Allow 20 minutes to react then rinse using a high pressure water jet or with copious amounts of water, scrubbing clean with bristle brooms/brushes to obtain a water break-free surface. Allow to dry completely.

SP6 FUNGAL AND ALGAE GROWTH: SODIUM HYPOCHLORITE TREATMENT - MASONRY, PLASTER, ETC.: Scrub the affected areas using a solution of household bleach (3, 5 % sodium hypochlorite solution) mixed 1 part bleach to 2 parts water, brush onto surface and allow 30 minutes to react. After 30 minutes or a marked colour change (lighter), brush clean using a hard bristle brush. Then rinse thoroughly with fresh water to remove all traces of bleach and allow drying.

SP30A SPOT PRIME WITH PROFESSIONAL GYPSUM AND PLASTER PRIMER (PP700): Spot prime bare and repaired areas with Professional Gypsum and Plaster Primer (PP 700) film. Allow 16 hours to dry.

SP36T OVERCOATING SOLVENT BASED ENAMEL WITH WATER BASED PAINT OR SOLVENT BASED ENAMEL: Remove surface contaminants using Polycell Sugar Soap solution – 500g Polycell Sugar Soap Powder (501703) dissolved in 5 litres water. For stubborn contaminants use hot water in the above mix and a bristle broom or scrubbing brush. Rinse with tap water to remove all traces of sugar soap and allow drying. Sand paint to provide a key for painting. Dust off. Apply a coat of Professional All Purpose Undercoat (PU800) to entire area. Allow 16 hours to dry.

SP41 UNBOUND SURFACES: Limewash: Surfaces must be thoroughly wire-brushed, bristle brushed, scraped and sanded to remove all limewash i.e. until the underlying plaster or brickwork is visible. Distemper: Remove distemper with hot water and scraping. Wash surfaces thoroughly with Polycell Sugar Soap (Powder) solution. Soft underbound surfaces may be restored to a sound surface by brushing off all excess underbound, powdery residue. Allow surface to dry. Once surface is sound, apply a coat of Plascon Bonding Liquid (CVI 14) thinned 20 % by volume with Mineral Turpentine (AZH 1). Allow 16 hours to dry before overcoating. Underbound surface: Scrub entire area with a Sugar Soap (Powder) solution to remove dirt, chalked material and any other contaminants. Rinse thoroughly with fresh water and allow to dry.

SP29 SUBSTRATE CONDITION AND MOISTURE CONTENT: Ensure surfaces are clean, dry and sound. Moisture content on cement plaster must not be more than 8 % when measured

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on a Doser Hygrometer B2 scale (or equivalent) and on concrete, not more than 5 % using a B4 scale.

SP14T BROKEN/DAMAGED CEMENT PLASTER & CONCRETE AREAS (SMALL AREAS) - MASONRY, PLASTER, ETC.: Open damaged area sufficiently to allow repair material to be adequately filled in order to achieve a mechanical bond.Clean away dust, grease and grime from surface. Fill areas with Polycell Polyfilla Masonry Patching Plaster (102003), by using a putty knife or trowel. Smooth off whilst still wet. Allow to dry for 24hours. Patch prime using Professional Gypsum & Plaster Primer (PP 700) and allow 16 hours drying at 23°C. NB: Texture on repaired areas must be finished off to match the existing profile.

SP11 LOOSE AND FLAKING/PEELING PAINT - DRY PREPARATION - MASONRY, PLASTER, ETC.: Remove loose and peeling paint back to a firm edge by scraping, sanding or other suitable means. Feather the edges with 100 grit sandpaper and ensure surface is dust free.

SP8 HYDROBLASTING - MASONRY, PLASTER, ETC.: Hydroblast substrate to remove loose/peeling paint, surface contaminants, friable materials. A rotating nozzle at 200-350 bar pressure should be used (pressure selected depends on substrate condition and paint adhesion). Polycell Polyfilla Masonry Patching Plaster (102003) can be used to repair areas where plaster has been removed. Allow to dry for 24 hours. Feather the edges of tightly adherent paint films.

Surface Preparation Glossary – Mild Steel

SP156 RUST CONVERTER - MILD STEEL: In areas where rust cannot be removed completely, remove all loose rust by scraping and wire brushing. Apply Plascon Polycell Endrust (502102)
copiously, but only to areas where tightly adherent rust remains. Allow coating to turn black (minimum 4 hours) before overcoating. Remove Plascon Polycell Endrust (502102) with water where it has not reacted and turned black.

SP150 GENERAL CLEANING - UNPAINTED SURFACES: PLASCON METALCARE AQUASOLV DEGREASER (GR 1) - MILD STEEL: Surfaces must be clean, dry and rust free. Remove surface contaminants using Plascon Metalcare Aquasolv Degreaser (GR 1) in conjunction with bristle scrubbing brushes or brooms, alternatively Scotch Brite pads. Rinse thoroughly with tap water using medium bristle brooms, bristle scrubbing brushes or hydroblast to remove all traces of Plascon Metalcare Aquasolv Degreaser (GR 1) and achieve a water break-free surface. Dry surface rapidly to prevent flash rust formation.

SP152 PREVIOUSLY PAINTED SURFACES IN SOUND CONDITION: POLYCELL SUGAR SOAP SOLUTION - MILD STEEL: Clean previously painted surfaces using a scrubbing brush with Polycell Sugar Soap solution - 500g Polycell Sugar Soap Powder (501703) dissolved in 5 litres water to remove surface contaminants. Rinse with water to remove all traces of Sugar Soap and allow drying. Sand previously painted gloss surfaces to a matt finish and dust off.

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SP153 RUST - MECHANICAL REMOVAL - WIRE BRUSHING, GRINDING AND COARSE SANDING - MILD STEEL: Remove rust by mechanical wire brushing, grinding or coarse sanding to ISO 8501-01:2007 - St 3 to attain a bright metal finish. Remove dust.

SP154 RUST/MILLSCALE - ABRASIVE BLAST CLEAN - MILD STEEL: Remove millscale and rust by abrasive blast cleaning to ISO 8501-01:2007, Sa 2½. Blast profile 50 to 70µm. Remove dust.

SP155 RUST - CHEMICAL REMOVAL - MILD STEEL: Remove rust using Plascon Removall Rust Remover and Concrete Etcher (RCC 120). Stir thoroughly until product is uniform in colour. Apply a thick, even layer of rust remover onto the rusted areas. Allow to react for 30 minutes then wash off using a scrubbing brush with copious amounts of water. For stubborn rust repeat the process. As soon as the surface is a dry prime bare area immediately using Plascon Plascoprime 170 (UC 170).

SP157A SPOT PRIME WITH PLASCON METAL PRIMER (UC170): Spot prime bare and repaired areas with Plascon Metal Primer (UC 170). Allow 36 hours to dry.

SP162T OVERCOATING SOLVENT BASED ENAMEL WITH WATER BASED PAINT: Remove surface contaminants using Polycell Sugar Soap solution - 500 g Polycell Sugar Soap Powder (501703) dissolved in 5 litres water. For stubborn contaminants use hot water in the above mix and a bristle broom or scrubbing brush. Rinse with tap water to remove all traces of
sugar soap and allow drying. Sand paint to matt finish with 120 grit paper finishing with 220 grit paper. Dust off. Ensure surfaces are clean, dry and sound. Apply a coat of Professional All Purpose Undercoat (PU 800) to entire area. Allow 16 hours to dry.

Surface Preparation Glossary – Wood

SP208RA SPOT PRIME WITH PLASCON WOOD PRIMER (UC2): Spot prime bare and repaired areas with Plascon Wood Primer (UC 2). Allow 16 hours to dry.

SP200 MACHINE SANDING – WOOD: Machine sand deck or floor timber to remove all existing coating, dead cells and stained timber providing a fresh new timber finish. Hand sand areas where the machine sanding cannot reach removing existing coating and all surface contaminants. Dust off. Using mutton cloth to remove wood dust, wipe the entire area with Plascon Universal Reducer (PUR 1).

SP210T OVERCOATING SOLVENT BASED ENAMEL WITH WATER BASED PAINT: Remove surface contaminants using Polycell Sugar Soap solution - 500 g Polycell Sugar Soap Powder (501703) dissolved in 5 litre of water. For stubborn contaminants use hot water in the above mix and a bristle broom or scrubbing brush. Rinse with tap water to remove all traces of
sugar soap and allow drying. Ensure surfaces are clean, dry and sound. To determine the moisture content, use a Doser Hygrometer scale A1-A5 (or equivalent) depending on

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generic wood type. Measurements should be <14 % before painting. Sand paint to matt finish with 120 grit paper finishing with 220 grit paper in direction of grain. Dust off. Apply a coat of Professional All Purpose Undercoat (PU 800) to the entire area. Allow 16 hours drying.

SP207 GENERAL – WOOD: Ensure surfaces are clean, sound and dry. To determine the moisture content, use a Doser Hygrometer scale A1-A5 (or equivalent) depending on generic wood type. Measurements should be <14 % before painting. Sand wood with 120 grit paper and finish off with 220 grit paper in the direction of the grain. Dust off.

SP205 PROVIDING A 'KEY' TO OLD PAINT: POLYCELL SUGAR SOAP AND SANDING – WOOD: Wash surface with Polycell Sugar Soap solution - 500 g Polycell Sugar Soap Powder (501703) dissolved in 5 litres water to remove surface contaminants. Rinse thoroughly with fresh water and allow drying. Sand paint to a matt finish using 120 grit paper, finishing with 220 grit paper. Dust off.

SP202 HOLES AND DEFECTS - INTERIOR AND EXTERIOR – WOOD: Fill holes and defects using Polycell Polyfilla Mendall 90 (801601) working off smoothly while wet. Allow 8 hours to dry. Sand to a smooth finish. (Solid Colour Finish). For a clear varnish finish, mix sawdust from sanded wood and varnish to a stiff paste for filling. Allow at least 16 hours drying.

SP201 KNOTS AND RESINOUS AREAS – WOOD: Wash area thoroughly with Plascon Lacquer Thinner (ILS 1) to remove all traces of resin. Treat knots with Plascon Woodcare Knot Seal (PK 2). Allow 1 hour to dry. (Apply two coats if resin is excessive).

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DESCRIPTION
DUKU DUKU BUILDING:
SANITARY ITEMS -
SANITARY SPECIFICATION

REVISION
01 – STAGE 4: ISSUED FOR TENDER

Ebesa Architects project number:
GS03 01 SANBI

AT
Daspoort 319-JR, Gauteng, Pretoria National Zoological Gardens

FOR
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Biodiversity for Life
South African National Biodiversity Institute

Document Approval

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Location – SANITARY ITEMS SPECIFICATION

The below specifications are only applicable to the Duku Duku Building. Please refer to the relevant architectural drawings for detailed locations.

Paraplegic WC - Specifications

- Grohe - Pneumatic Actuation Chrome. Code: GRO-G-37059000

  Notes: GROHE StarLight chrome finish remote hand actuation push button actuation with escutcheon Ø 100 mm vertical and horizontal installation flush plate Surf 156 x 197 mm pneumatic hose 1.50 m.

- Grohe - Uniset for WC without Support Feet. Code: GRO-G-38643001

  Notes: with flushing cistern GD 2, 6 - 9 l soundinsulating EPS module for masonry-in 830 x 470 x 130 mm rail adaptors for modular fixing for single or rail installation wall rail with fixing accessories for single installation 2 WC fixing bolts distance of fixing bolts 180/230 mm fixing device for ceramic outlet bend Ø 90 mm depth adjustable reducer Ø 90/110 mm inlet and outlet connecting set flushing cistern GD 2, 6 - 9 l, containing following features: adjustment ex factory 6 l and 3 l pneumatic discharge valve offering 3 modes of operation: dual flush or start/stop or single flush water supply from left/right/back or top low noise (group I acc. To German Noise Specification) insulated against condensation 1/2" water supply connection including integrated angle valve and push fit flexible hose union for vertical or horizontal use.

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- Cobra - Welcome - Toilet - Pan-Wall-Hung – White. Code: COB-439800WH

  Notes: Cobra Welcome wall hung toilet pan only.

- Cobra - Welcome - Seat - Toilet – White. Code: COB-C-CCSEAT/WEL

- Cobra - Shelter - Basin - Wall Hung – White. Code: COB-709300WH

  Notes: Cobra Shelter Round wall hung basin. 495mm long X 430mm wide. 1 X pre-punched tap hole in the centre of the basin. Overflow, expansion bolts & installation manual included.

- Cobra - Medical - Tap & Mixer Medical - Pillar Tap – TBC. Code: COB-503-21B/N

  Notes: Elbow action. With 1/4 turn ceramic disc headpart, flanged backnut and blue indice for cold water application. 1/2BSP male iron connection end.

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- Cobra - Waste, Trap & Overflow - Waste Basin – TBC. Code: COB-303/N

  Notes: Slotted. With flanged back nut and washer, and plug. 62mm Ø flange, 77mm long shank. 1 1/4BSP Male iron connection end.

- Cobra - - Waste, Trap & Overflow - Bottle Trap – TBC. Code: COB-340/N

  Notes: 75mm deep seal type. With adjustable telescopic waste connection pipe. 1 1/4BSP female inlet connection. 1 1/4BSP male iron outlet connection. Brass body.

- Cobra - - Valve - Isolating - Angle Valve – TBC. Code: COB-232-10/N

  Notes: Angle regulating valve with durable ABS handle, DZR body, flow regulating spindle type headpart G1/2 X G1/2 BSP connections.

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Urinals – Specifications

- Cobra - Snug - Urinal - Wall-Hung – White. Code: COB-705600WH

  Notes: Anti-splash flushing design with an efficient 1.9L flush. Versatile top or back entry installation. Compact concealed trapway. Suitable for commercial use.

- Cobra - Flush Junior - Valve - Flush - Urinal – TBC. Code: COB-FJ6-000/N

  Notes: Exposed. Non-hold open feature. With 'Ball O Stop control inlet, wall flange, additional screw and piston for large bowl and stall urinals. 3/4BSP female iron connection end. Recommended optimum design pressures: inlet flow pressure 30 - 500kPa: Maximum system pressure 600kPa.

- Cobra - Flush Junior - Urinals - Flush Pipes – Chrome. Code: COB-FJT5-5

  Notes: Offset urinal flush pipe, 215mm long x 15mm outlet with 27mm offset, chrome. For Junior Flushmaster urinal flush, including inlet adaptor for urinal flush valves. 110mm x 77mm x 230mm

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General Toilets – Specifications

- Grohe - Skate Cosmopolitan Wall Plate Chrome. Code: GRO-G-38732000

  Notes: for dual flush or start & stop actuation for pneumatic discharge valve AV1 vertical and horizontal installation 156 x 197 mm made of ABS GROHE StarLight chrome finish GROHE

- Grohe - Uniset for WC without Support Feet. Code: GRO-G-38643001

  Notes: with flushing cistern GD 2, 6 - 9 l soundinsulating EPS module for masonry-in 830 x 470 x 130 mm rail adaptors for modular fixing for single or rail installation wall rail with fixing accessories for single installation 2 WC fixing bolts distance of fixing bolts 180/230 mm fixing device for ceramic outlet bend Ø 90 mm depth adjustable reducer Ø 90/110 mm inlet and outlet connecting set flushing cistern GD 2, 6 - 9 l, containing following features: adjustment ex factory 6 l and 3 l pneumatic discharge valve offering 3 modes of operation: dual flush or start/stop or single flush water supply from left/right/back or top low noise (group I acc. To German Noise Specification) insulated against condensation 1/2" water supply connection including integrated angle valve and push fit flexible hose union for vertical or horizontal use

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- Cobra - Welcome - Toilet - Pan-Wall-Hung – White. Code: COB-439800WH

  Notes: Cobra Welcome wall hung toilet pan only.

- Cobra - Welcome - Seat - Toilet – White. Code: COB-C-CCSEAT/WEL

General Basins – Specifications

- Vaal - Weaver - Basins - Countertop – White. Code: VAA-706601WH

  Notes: Rectangular countertop basin with one taphole. 335X290 450mm x 350mm

- Cobra - Vaal - Basins - Fixations – Chrome. Code: COB-8448Z000

  Notes: Fixing Bolt Set 10mm - Set of 2. Related To: VAA-706601WH

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- Cobra - Amazon - Taps - Basin Mixers – Chrome. Code: COB-AM-951

  Notes: Amazon pillar type single lever basin mixer flow rate restricted to 5 ltrs/ min. G1/2 female connection ends chrome.

- Cobra - Waste, Trap & Overflow - Waste Basin – TBC. Code: COB-303/N

  Notes: Slotted. With flanged back nut and washer, and plug. 62mm Ø flange, 77mm long shank. 1 1/4BSP Male iron connection end.

- Cobra - Waste, Trap & Overflow - Bottle Trap – TBC. Code: COB-340/N

  Notes: 75mm deep seal type. With adjustable telescopic waste connection pipe. 1 1/4BSP female inlet connection. 1 1/4BSP male iron outlet connection. Brass body.

- Cobra - - Valve - Isolating - Angle Valve – TBC. Code: COB-232-10/N

  Notes: Angle regulating valve with durable ABS handle, DZR body, flow regulating spindle type headpart G1/2 X G1/2 BSP connections.

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Location – ACCESSORIES SPECIFICATION

The below specifications are only applicable to the Duku Duku Building. Please refer to the relevant architectural drawings for detailed locations.

Soap Dispenser - Specification

- Bulk Fill Button Type Grade 304 Stainless Steel soap dispenser, size 208x123x100mm or similar approved. 2 x dispensers per Male and Female row of basins and 1 x dispenser per Male and Female PWD basin. Dispensers to be plugged and screwed to wall between 2 or more basins and adjacent to single basin.

Toilet Roll Dispenser – Specification

- 3 Roll Grade 304 Stainless steel lockable toilet roll dispenser, size 380x127x135mm or similar approved. 1 per toilet, wall mounted on opposite side of door swing except for PWD Toilets. Wall mounted adjacent to basin closest to toilet in PWD Toilets.

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Paper Towel Dispenser – Specification

- Flat folded Grade 304 Stainless steel lockable paper towel, size 369x280x120mm or similar approved. 1 x dispenser per Male and Female Public Toilets. 1 x dispenser per Male and Female PWD Toilet. Dispenser to be plugged and screwed to wall.

Wall Bin – Specification

- Wall bin to be Grade 304 Stainless steel, size 385x340x250mm or similar approved. 1 x wall bin per Male and Female Public Toilets. 1 x wall bin per Male and Female PWD Toilet. Wall bin to be plugged and screwed to wall below Paper Towel Dispenser.

Grab Rails (Back) – Specification

- Grade 304 18/10 stainless steel 32mm diameter cistern flush valve back rail with fine grip, size 750 x 260mm, plugged and screwed to the wall with stainless steel screws. 1 back rail per Male and Female PWD Toilet. All PWD toilet facility grab rail installations as per SANS 10400 Part S.

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Grab Rails (Side) – Specification

- Grade 304 18/10 stainless steel 32mm diameter angle bar with fine grip, size 415 x 415 x 95mm deep, plugged and screwed to the wall with stainless steel screws. 1 angle bar per Male and Female PWD Toilet. All PWD toilet facility grab rail installations as per SANS 10400 Part S.

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DESCRIPTION
FLAMINGO & DUKU DUKU BUILDING: SANITARY ACCESSORIES - MIRRORS SPECIFICATION

REVISION
01 – STAGE 4: ISSUED FOR TENDER

Ebesa Architects project number:
GS03 01 SANBI

AT
Daspoort 319-JR, Gauteng, Pretoria National Zoological Gardens

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South African National Biodiversity Institute

Document Approval

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Location – MIRRORS SPECIFICATION

The below specifications are applicable to both the Flamingo Building and Duku Duku Building. Please refer to the relevant architectural drawings for detailed locations.

Specification

- 600mm high x 400mm wide x 4mm thick glass mirror to all new basins (Duku Duku Building) and above all existing basins as indicated (Flamingo Building). Mirror to have 4 visible fixing points with stainless steel screws and chrome caps. Mirror to be plugged and screwed to wall with spacer to allow for tiling above each basin.

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DESCRIPTION
DUKU DUKU BUILDING:
IRONMONGERY -
IRONMONGERY SPECIFICATION

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Location – IRONMONGERY SPECIFICATION

The below specifications are only applicable to the Duku Duku Building. Please refer to the relevant architectural drawings for detailed locations.

Reference Table

Door Number	Hardware Set	Area	Location	Handing	Door Material
D1	01	ABLUTION	MALE ENTRANCE	LH	TIMBER
D1	03	ABLUTION	FEMALE ENTRANCE	RH	TIMBER
D2	02	ABLUTION	MALE CUBICLE	LH	TIMBER
D1	04	ABLUTION	FEMALE PARA	RH	TIMBER
D1	04	ABLUTION	MALE PARA	LH	TIMBER
D2	02	ABLUTION	FEMALE CUBICLE	LH	TIMBER
D2	02	ABLUTION	FEMALE CUBICLE	LH	TIMBER
D2	02	ABLUTION	FEMALE CUBICLE	LH	TIMBER

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Hardware Set 01 – Specification

HARDWARE FOR SET:	01
Hardware Set Quantity :	1
Notes	
Doors (1)	D1

Product Image	Product Code	Description	Finish	Qty	Units
SORRY, NO IMAGE AVAILABLE	HBFM	FRAME MANUFACTURERE HINGES BY FRAME MANUFACTURER		3	EACH
SORRY, NO IMAGE AVAILABLE	DPP-430-BL - 150x400	dormakaba 150X400X1.2 thick grade 430 stainless steel BLANK plate. Stainless steel plate to have x6 countersunk holes for screws.	Stainless Steel	1	Each
	TS73V PA - PAB - SL	dormakaba EN 2-4 Parallel Arm NON HOLD OPEN Door Closer - Adjustable Strength, Hydraulic Speed Control. Push Side Fitting (Parallel Arm Bracket Included) EN2 750-850, EN3 850-950, EN4 950-1100 NOTE: Door closer to be installed on pull side NOTE: Parallel Arm Bracket (Rack & Pinion) to be used for push-side fixing. Please note fixing instructions supplied with the product	Silver	1	Set
	DPH301A BT	dormakaba 325x25mm Straight Tubular Pull Handle BT	Stainless Steel	1	Each
	DDS-SS-017	dormakaba Floor Mounted Door Stop	Stainless Steel	1	Each
	DKP-430-SF 300	dormakaba 300x(width of door)x1.2mm thick Grade 430 stainless steel kick plate. Stainless Steel Kick Plate to have 12 countersunk holes for screw fixing. (List price calculated on 813mm wide door)	430 Brushed Stainless Steel	2	Each
	DSS-130 M	dormakaba 150x150mm MALE sign	Stainless Steel	1	Each

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Hardware Set 02 – Specification

HARDWARE FOR SET:	02
Hardware Set Quantity :	1
Notes	
Doors (4)	D2, D2, D2, D2

Product Image	Product Code	Description	Finish	Qty	Units
SORRY, NO IMAGE AVAILABLE	HBFM	FRAME MANUFACTURERE HINGES BY FRAME MANUFACTURER		3	EACH
	D032D SS	dormakaba Bathroom Deadlock. Case dimensions (mm) 102H x 78D. Forend dimensions (mm) 155H x 22W. Backset 57mm.	Stainless Steel	1	Each
	DWC-006	dormakaba Disabled WC indicator (Red & White) and turnknob for physically impaired	Stainless Steel	1	Set
	DHC-SS-031B	dormakaba Hat and Coat Hook with rubber buffer NOTE: Buffer positioned to prevent handle hitting wall. Mounted accordingly	Stainless Steel	1	Each

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Hardware Set 03 – Specification

HARDWARE FOR SET:	03
Hardware Set Quantity :	1
Notes	
Doors (1)	D1

Product Image	Product Code	Description	Finish	Qty	Units
SORRY, NO IMAGE AVAILABLE	DPP-430-BL - 150x400	dormakaba 150X400X1.2 thick grade 430 stainless steel BLANK plate. Stainless steel plate to have x6 countersunk holes for screws.	Stainless Steel	1	Each
SORRY, NO IMAGE AVAILABLE	HBFM	FRAME MANUFACTURERE HINGES BY FRAME MANUFACTURER		3	EACH
	TS73V PA - PAB - SL	dormakaba EN 2-4 Parallel Arm NON HOLD OPEN Door Closer - Adjustable Strength, Hydraulic Speed Control. Push Side Fitting (Parallel Arm Bracket Included) EN2 750-850, EN3 850-950, EN4 950-1100 NOTE: Door closer to be installed on pull side NOTE: Parallel Arm Bracket (Rack & Pinion) to be used for push-side fixing. Please note fixing instructions supplied with the product	Silver	1	Set
	DPH301A BT	dormakaba 325x25mm Straight Tubular Pull Handle BT	Stainless Steel	1	Each
	DDS-SS-017	dormakaba Floor Mounted Door Stop	Stainless Steel	1	Each
	DKP-430-SF 300	dormakaba 300x(width of door)x1.2mm thick Grade 430 stainless steel kick plate. Stainless Steel Kick Plate to have 12 countersunk holes for screw fixing. (List price calculated on 813mm wide door)	430 Brushed Stainless Steel	2	Each
	DSS-131 F	dormakaba 150x150mm FEMALE sign	Stainless Steel	1	Each

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Hardware Set 04– Specification

HARDWARE FOR SET:	04
Hardware Set Quantity :	1
Notes	
Doors (2)	D1, D1

Product Image	Product Code	Description	Finish	Qty	Units
SORRY, NO IMAGE AVAILABLE	DPP-430-BL - 150x400	dormakaba 150X400X1.2 thick grade 430 stainless steel BLANK plate. Stainless steel plate to have x6 countersunk holes for screws.	Stainless Steel	1	Each
SORRY, NO IMAGE AVAILABLE	HBFM	FRAME MANUFACTURERE HINGES BY FRAME MANUFACTURER		3	EACH
	TS73V PA DC - PAB - SL	dormakaba EN 2-4 Parallel Arm DELAYED ACTION Door Closer. Push Side Fixing (Parallel Arm Bracket Included) EN2 750-850, EN3 850-950, EN4 950-1100 NOTE: Parallel Arm Bracket (Rack & Pinion) to be used for push-side fixing. Please note fixing instructions supplied with the product	Silver	1	Set
	DPH301B	dormakaba 325x25mm Straight Tubular Pull Handle Flange Fixing	Stainless Steel	1	Each
	DDS-SS-017	dormakaba Floor Mounted Door Stop	Stainless Steel	1	Each
	DKP-430-SF 300	dormakaba 300x(width of door)x1.2mm thick Grade 430 stainless steel kick plate. Stainless Steel Kick Plate to have 12 countersunk holes for screw fixing. (List price calculated on 813mm wide door)	430 Brushed Stainless Steel	2	Each
	DSS-133 P	dormakaba 150x150mm DISABLED PERSONS sign	Stainless Steel	1	Each

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DESCRIPTION
FLAMINGO BUILDING:
IRONMONGERY -
IRONMONGERY SPECIFICATION

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Location – IRONMONGERY SPECIFICATION

The below specifications are only applicable to the Flamingo Building. Please refer to the relevant architectural drawings for detailed locations.

Reference Table

Door Number	Hardware Set	Location	Handing	Door Material
D4	01	COMPRESSED SPACE	RH	TIMBER
D4	02	EX ROOM 1	LH	TIMBER
D4	02	PASSAGE 2	RH	TIMBER
D11	09b	DELIVERY/EXIT	DD	TIMBER
D11	09b	DELIVERY/EXIT	DD	TIMBER
D12	10a	EX STORE ROOM 5	DD	TIMBER
D13	11a	PASSAGE 1	DDDS	ALU
D13	11	EXISTING SERVING AREA	DDDS	TIMBER
D14	10	EX VIP LOUNGE	DD	ALU
D15	09	ABLUTION EXIT	DD	TIMBER
D16	09	LOUNGE	DD	TIMBER
D16	09	LOUNGE	DD	TIMBER
D16	09	LOUNGE	DD	TIMBER
D17	09a	EXISTING NORTH WING EVENT SPACE	DD	ALU
W23	12	EX KIOSK SLIDING WINDOW	SDG	WINDOW
W13	12	EX KIOSK SLIDING WINDOW	SDG	WINDOW
W13	12	EX KIOSK SLIDING WINDOW	SDG	WINDOW
G1	13	GATE	LH	GATE
G1	13	GATE	LH	GATE
G1	13	GATE	LH	GATE
G2	13	GATE	RH	GATE
G3	13	GATE	LH	GATE
G5	13	GATE	DD	GATE
W18	12	EVENT SPACE	SDG	WINDOW
W18	12	EVENT SPACE	SDG	WINDOW
W18	12	EVENT SPACE	SDG	WINDOW
W18	12	EVENT SPACE	SDG	WINDOW
W18	12	EVENT SPACE	SDG	WINDOW
W18	12	EVENT SPACE	SDG	WINDOW
W18	12	EVENT SPACE	SDG	WINDOW
W18	12	EVENT SPACE	SDG	WINDOW

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Hardware Set 01 – Specification

HARDWARE FOR SET:	01
Hardware Set Quantity :	1
Notes	
Doors (1)	D4

Product Image	Product Code	Description	Finish	Qty	Units
SORRY, NO IMAGE AVAILABLE	HBFM	FRAME MANUFACTURERE HINGES BY FRAME MANUFACTURER		3	EACH
	TH125 Cyl S.S	dormakaba Lever handle on rose with Cylinder escutcheons	Stainless Steel	1	Set
	D036S SS	dormakaba Cylinder Sash Lock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm. Centres 61mm.	Stainless Steel	1	Each
	DDC056501 KD (65mm)	dormakaba 65mm five pin Euro-profile Double Cylinder Key to Differ	Satin Nickel	1	Each
	DDS-SS-017	dormakaba Floor Mounted Door Stop	Stainless Steel	1	Each
	DKP-430-SF 300	dormakaba 300x(width of door)x1.2mm thick Grade 430 stainless steel kick plate. Stainless Steel Kick Plate to have 12 countersunk holes for screw fixing. (List price calculated on 813mm wide door)	430 Brushed Stainless Steel	2	Each

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Hardware Set 02 – Specification

HARDWARE FOR SET:	02
Hardware Set Quantity :	1
Notes	
Doors (2)	D4, D4

Product Image	Product Code	Description	Finish	Qty	Units
SORRY, NO IMAGE AVAILABLE	HBFM	FRAME MANUFACTURERE HINGES BY FRAME MANUFACTURER		3	EACH
SORRY, NO IMAGE AVAILABLE	DPP-430-BL - 150x400	dormakaba 150X400X1.2 thick grade 430 stainless steel BLANK plate. Stainless steel plate to have x6 countersunk holes for screws.	Stainless Steel	1	Each
	DPH301A BT	dormakaba 325x25mm Straight Tubular Pull Handle BT	Stainless Steel	1	Each
	D037D SS	dormakaba Cylinder Deadlock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm.	Stainless Steel	1	Each
	DKC056501 KD (65mm)	dormakaba 65mm five pin Euro-profile Knob Cylinder Key to Differ	Satin Nickel	1	Each
	DCE-002 S.S	dormakaba Round Cylinder escutcheon	Stainless Steel	1	Pair
	DDS-SS-017	dormakaba Floor Mounted Door Stop	Stainless Steel	1	Each
	DBC-SS-022	dormakaba Adjustable Roller Bolt	Stainless Steel	1	Each
	DKP-430-SF 300	dormakaba 300x(width of door)x1.2mm thick Grade 430 stainless steel kick plate. Stainless Steel Kick Plate to have 12 countersunk holes for screw fixing. (List price calculated on 813mm wide door)	430 Brushed Stainless Steel	2	Each

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Hardware Set 09 – Specification

HARDWARE FOR SET:	09
Hardware Set Quantity :	1
Notes	
Doors (4)	D15, D16, D16, D16

Product Image	Product Code	Description	Finish	Qty	Units
SORRY, NO IMAGE AVAILABLE	HBFM	FRAME MANUFACTURERE HINGES BY FRAME MANUFACTURER		6	EACH
	DPH301A BTB	dormakaba 325x25mm Straight Tubular Pull Handle BTB (BTB Fixing Sets included)	Stainless Steel	2	Pair
	D037D SS	dormakaba Cylinder Deadlock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm.	Stainless Steel	1	Each
	DKC056501 KD (65mm)	dormakaba 65mm five pin Euro-profile Knob Cylinder Key to Differ	Satin Nickel	1	Each
	DCE-002 S.S	dormakaba Round Cylinder escutcheon	Stainless Steel	1	Pair
	D038R NP	dormakaba Rebate conversion kit for Euro Profile locks D036S, D037D.	Nickel Plated	1	Each
	DFB-SC-180	dormakaba 153mm Manual flush bolt with heel	Satin Chrome	1	Each
	DFB-SC-181	dormakaba 305mm Manual flush bolt with heel	Satin Chrome	1	Each
	DPS-SS-032	dormakaba Dust Proof Strike NOTE: Dust Proof socket fitted to prevent dirt collection. To be maintained regularly.	Stainless Steel	1	Each
	DBC-SS-022	dormakaba Adjustable Roller Bolt	Stainless Steel	1	Each

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Product Image	Product Code	Description	Finish	Qty	Units
	DDS-SS-017	dormakaba Floor Mounted Door Stop	Stainless Steel	2	Each
	DKP-430-SF 300	dormakaba 300x(width of door)x1.2mm thick Grade 430 stainless steel kick plate. Stainless Steel Kick Plate to have 12 countersunk holes for screw fixing. (List price calculated on 813mm wide door)	430 Brushed Stainless Steel	4	Each

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Hardware Set 10 – Specification

HARDWARE FOR SET:	10
Hardware Set Quantity :	1
Notes	Please note backset of lock is 78mm and aluminium stile should accomodate the lock
Doors (1)	D14

Product Image	Product Code	Description	Finish	Qty	Units
SORRY, NO IMAGE AVAILABLE	HBFM	FRAME MANUFACTURERE HINGES BY FRAME MANUFACTURER		6	EACH
	DPH301A BTB	dormakaba 325x25mm Straight Tubular Pull Handle BTB (BTB Fixing Sets included)	Stainless Steel	2	Pair
	D02735 SS	dormakaba Narrow Stile Dead Lock Operating with European Profile Cylinder. Case dimentions (mm) 174H x 52D. Forend dimentions (mm) 238H x 22W. Backset 35mm. 20mm Throw	Stainless Steel	1	Each
	DKC056501 KD (65mm)	dormakaba 65mm five pin Euro-profile Knob Cylinder Key to Differ	Satin Nickel	1	Each
	DCE-002 S.S	dormakaba Round Cylinder escutcheon	Stainless Steel	1	Pair
	BFBDM	Built-in flush bolts by door manufacturer		2	Each
	DPS-SS-032	dormakaba Dust Proof Strike NOTE: Dust Proof socket fitted to prevent dirt collection. To be maintained regularly.	Stainless Steel	1	Each
	DBC-SS-022	dormakaba Adjustable Roller Bolt	Stainless Steel	1	Each
	DDS-SS-017	dormakaba Floor Mounted Door Stop	Stainless Steel	2	Each

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Hardware Set 11 – Specification

HARDWARE FOR SET:	11
Hardware Set Quantity :	1
Notes	
Doors (1)	D13

Product Image	Product Code	Description	Finish	Qty	Units
SORRY, NO IMAGE AVAILABLE	Hinges	Existing Hinges to be retained		4	Each
	DPH301A BTB	dormakaba 325x25mm Straight Tubular Pull Handle BTB (BTB Fixing Sets included)	Stainless Steel	2	Pair
	D037D SS	dormakaba Cylinder Deadlock. Case dimensions (mm) 116.5H x 78D. Forend dimensions (mm) 168H x 22W. Backset 57mm.	Stainless Steel	1	Each
	DKC056501 KD (65mm)	dormakaba 65mm five pin Euro-profile Knob Cylinder Key to Differ	Satin Nickel	1	Each
	DCE-002 S.S	dormakaba Round Cylinder escutcheon	Stainless Steel	1	Pair
	DDS-SS-017	dormakaba Floor Mounted Door Stop	Stainless Steel	4	Each

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Hardware Set 12 – Specification

HARDWARE FOR SET:	12
Hardware Set Quantity :	1
Notes	
Doors (11)	W23, W13, W13, W18, W18, W18, W18, W18, W18, W18, W18

Product Image	Product Code	Description	Finish	Qty	Units
SORRY, NO IMAGE AVAILABLE	SGBM	Sliding gear by manufacturer		1	each
	DFP-SS-025	dormakaba 120x40mm Rectangular Flush Pull Handle	Stainless Steel	2	Each
	D02935 SS	dormakaba Narrow Stile Hook Lock Operating with European Profile Cylinder. Case dimentions (mm) 174H x 45D. Forend dimentions (mm) 290H x 22W. Backset 35mm. 18mm Throw	Stainless Steel	1	Each
	DHK004000	dormakaba 40mm Half Knob Cylinder NOTE: NB: Single Cylinder. Do not drill all the way through the door	Brass	1	Each
	DCE-105 S.S	dormakaba Narrow Stile Cylinder escutcheon	Stainless Steel	0.5	Pair

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Hardware Set 13 – Specification

HARDWARE FOR SET:	13
Hardware Set Quantity :	1
Notes	
Doors (6)	G1, G1, G1, G2, G3, G5

Product Image	Product Code	Description	Finish	Qty	Units
	HBGM	Hinges by Gate manufacturer		1	Each
	DPH301C BTB	dormakaba 149x19mm Straight Tubular Pull Handle BTB (BTB Fixing Sets included)	Stainless Steel	1	Pair
	D02735 SS	dormakaba Narrow Stile Dead Lock Operating with European Profile Cylinder. Case dimentions (mm) 174H x 52D. Forend dimentions (mm) 238H x 22W. Backset 35mm. 20mm Throw	Stainless Steel	1	Each
	DDC106601 GMK (66mm)	dormakaba 66mm five pin Euro-profile Double Cylinder Grand Master Keyed	Satin Nickel	1	Each
	DCE-105 S.S	dormakaba Narrow Stile Cylinder escutcheon	Stainless Steel	1	Pair

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DESCRIPTION
MOUNTAIN KIOSK & DUKU DUKU BUILDING:
JOINERY -
COUNTERTOP SPECIFICATION

REVISION
01 – STAGE 4: ISSUED FOR TENDER

Ebesa Architects project number:
GS03 01 SANBI

AT
Daspoort 319-JR, Gauteng, Pretoria National Zoological Gardens

FOR
SANBI
Biodiversity for Life
South African National Biodiversity Institute

Document Approval

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Location – COUNTERTOP SPECIFICATION

The below specifications are applicable to both the Mountain Kiosk and the Duku Duku Building. Please refer to the relevant architectural drawings for detailed locations.

Specification

- 20mm Caesarstone counter tops in colour: Sleek Concrete (Code: 4003) with 100mm high splashbacks and 450mm downward front and side facia (for basin counters at Duku Duku Building, Male & Female Toilets).
- 20mm Caesarstone counter tops in colour: Sleek Concrete (Code: 4003) with 50mm downward front, back and side facia (for counters at Mountain Kiosk).

Design & Supply

- Joinery contractor to submit formal layout and design regarding specification to architect for approval prior to manufacturing.

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ANNEXURE C

SANBI ZOO PRETORIA

CIVIL & STRUCTURAL ENGINEERING SERVICES:
STAGE 4: DETAIL DESIGN

FEBRUARY 2022

PREPARED BY:

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ENDECON UBUNTU GAUTENG (PTY) LTD	**TITLE OF REPORT:** **SANBI ZOO PRETORIA** **CIVIL AND STRUCTURAL ENGINEERING STAGE 4 REPORT** **FEBRUARY 2022**
Report File Name:	***EG 3190 – 20 / D / I / Reports / 01 / Eng. Stage 4 Report***
Client:	**Pretoria Zoo** **232 Boom Street** **Pretoria** **0001**
Report No:	**Rev0**
Prepared by:	**F.A. Markram** **Pr. Eng. (Civil) - 20170134** Signed
Reviewed by:	**B.G.V. Venter** **Pr. Eng. (Civil) - 20100138** Signed
Accepted by:	**SANBI** Signed

DESCRIPTION	REVISION	DATE

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EXECUTIVE SUMMARY

Civil and structural engineering consultants Endecon Ubuntu Gauteng (Pty) Ltd. (hereinafter referred to as Endecon) were appointed by SANBI for the civil and structural design of the proposed renovations and alterations at the Pretoria Zoological Gardens situated in 232 Boom Street, Pretoria, Gauteng.

The National Zoological Gardens of South Africa is located off Bloed Street in Pretoria Gauteng. The project scope entails the refurbishment of the existing building premises with minor structural alterations. From the preliminary design stage, no substantial change in scope has been added to the detail design stage.

No geotechnical report was available for the existing building nor any existing structural plans. Limited as-built architectural plans were however available which we have rationally assessed to determine allowable loadings for which the structure should have been designed for to be in accordance with regulations and the applicable South African National Standards applicable for design of buildings.

Since the major scope of the building entails refurbishments which has a similar occupation to the previous building layout, no major additional strengthening is foreseen to accommodate additional loads as for a different occupation such as retail for example. Some possible strengthening works are however required for the proposed alterations at the Flamingo Restaurant roof structure, depending on further investigations once construction commences. Most buildings are single storey units, except for the Waterhole which is a double storey with a reinforced concrete roof structure.

No additional loading in the form of solar elements is required as the scope of works is fixed and therefore no additional structural alterations required at the various buildings.

SECTION 1: INTRODUCTORY INFORMATION

1.1 APPOINTMENT & SCOPE OF WORK

The SANBI appointed EBESA Architectural consultants with engineering sub-consultants Endecon Ubuntu for the civil and structural design of the refurbishments and alterations at the SANBI Zoological Gardens for 5 no. of buildings which will be discussed further in this design report.

This report will build up on previous reports and discuss the elemental design development proposals proposed to be implemented in this project and identified scope of work.

1.2 PROJECT LOCATION

The National Zoological Gardens of South Africa is located off Bloed Street in Pretoria Gauteng.

Figure 1: Location plan

1.2 SCOPE OF WORKS

<u>The scope of works Endecon is responsible for has been confirmed as:</u>

1. The complete refurbishment of the Mountain – and Picnic Kiosk thatched roof. Endecon does not specialise in said roofs but will be responsible for the oversee and implementation of these roofs as a design and supply item.

2. The complete roof at the Flamingo Restaurant will be replace with SAFINTRA Saflok 700 Roof Sheeting. This may require some structural alteration once the complete roof is removed and a final inspection/investigation is conducted. With this item the complete rainwater gutter system is to be replaced to ensure adequate rainwater runoff is managed and directed away from the building.
3. The domed roof at the Flamingo Restaurant to be replaced by a lean to roof with steel columns and gutters while part of this roof to be demolished.
4. Old water storage tank to be demolished and removed at back of the Flamingo Restaurant, together with some trees and vegetation with the replacement of some masonry bund walls.
5. Stormwater management alterations/additions by means of paving, reinstating concrete hardstand and minor stormwater channels to be implemented at the Flamingo Building.
6. Waterproofing the Waterhole roof with the necessary alterations (screed to fall).

SECTION 2: DATA OBTAINING AND ANALYSIS

2.1 DATA OBTAINING

2.1.1 Status Quo, as-built drawings and report

On the 10th and the 12th of May 2021, site observations pertaining to the existing civil – and structural related infrastructure were made. A photographic record of various items was compiled and will be further discussed in the status quo report. However, the items listed in Section 1.2 was listed as items of priority and only these items will be addressed in this report.

Discussions were held with the active staff working in the specific buildings and the feedback reported was compiled into the status quo report. Due to the fact that this report only deals with the priority listed items, no alterations will be made to the main civil infrastructure (Read: Water and Sewer services as discussed in the Status Quo Report).

EBESA Architects supplied the necessary as-built drawings which was used to indicate our alteration/renovation proposals.

No topographical survey was required due to the priority list not containing any civil infrastructure, as well as no Geotechnical report due to this being an alteration/renovations project and no addition loads will be applied (Read: No abnormal loading in comparison to normal design intent – No previous design reports were supplied).

2.1.2 Analysis

From the lack of information with regards to design information received a basic analysis was conducted form a civil and structural perspective. Most of the scope remained similar to that in the preliminary design intent as visually inspected. Most of the refurbishments entails similar use of the existing buildings with no additional building areas or parking added which would generate additional stormwater runoff or additional parking requirements.

2.1.2.1 Waterhole

The only possible additional roof loading anticipated is the screed load to the Waterhole building. Reference can be made to the drawing data pack for the waterproofing and screed to fall proposal assuming a normal 2KPa loading design intent.

We do recommend that once construction starts, specific identified areas on the concrete slab be chipped off at the Waterhole to implement a rebar survey/scan to ensure the design intent of the slab is understood.

We went with the *Full Flow Catalogue* and used the 1:50yr flood according to rationale method.

2.1.2.2 Flamingo Building

Due to no previous structural plans or details being available the original design of the roof structure is unknown. The proposed sheeting weight is standard in terms of applied load and the only additions foreseen is the introduction of additional battens if the current battens are only 36mm in width and parts of the roof is wood trusses. The SAFINTRA Saflok clips require 50mm substrate to clip onto. It is however believed that the roof truss structure is mostly constructed form steel trusses and therefore an assessment will have to be made once the roof is removed if the purlin spacing is according to the required specifications as required by SAFINTRA.

Other new roofs were designed according to standard structural design standards discussed below.

Most of the gutters and box gutters are to be replaced due to age and previous lack of maintenance. Reference can be made to the drawing data pack for the sizes obtained for said items using a 1:20yr flood occurrence and a time of concentration of 5min for sizing of said elements and a typical rain fall for Gauteng area. *Prokon Design Software* was then used to determine the volume required with the fixed number of rain water down pipe positions indicated on the architects drawing. A safety factor of 1.5 for eaves and gutters was incorporated according to BS 12056-3.

The overhead laminated beam for the canteen entrance found on the North-Eastern corner of the building is proposed to be replaced by same type and size beam due to rotting, believed to be a 225mm x 45mm thick laminated beam.

Reference can be made to the drawing data pack for the minor civil engineering works to be implemented on ground level. A hardstand area in the form of a 60mm interlocking block paved apron is introduced on the South-Western side of the building to ensure that the stormwater runoff is directed away from the building and to prevent soil erosion. Tree routes will have to be removed and an old water storage tank will have to be demolished. Minor cracked masonry retaining walls will have to be reconstructed due to overgrown foliage and tree routes once they are removed.

On the South-Eastern corner of the building, standing water was noted in front of the back door. A small 500mm wide v-drain is introduced to at the delivery door which will be connected to 450mmx450mm catch pit which connects to the main stormwater channel found right East.

Lastly, the entrance found right North to the building via ramp access requires tree routes to be removed and paving reinstated while the overhead beam in the canteen will require further inspection once the plaster is chipped off and inspected.

2.1.3 Structural Designs

Structural designs to various elements were caried out by determining the applicable loading in accordance with the occupancy category supported by the relevant structural element in

accordance with the SANS 10160-2 Structural design basis. The occupancy was applicable was determined in accordance with the supplied architectural as-built plans received to which regulations in accordance with SANS 10160 requires a minimum imposed load applicable to the existing buildings structural design.

These loadings are then applied to the applicable linear elastic and *2nd Order Elastic Analysis* models in *Prokon Design Software* using elastic theory and computational models to determine the applicable member sizes to support the expected design forces caused by the ultimate limit state loadings. Materials used for the structure generally comprise of structural steel of commercial and grade SJ355-JR and Class 25 - and 30/19mm MPa concrete. Reference can be made to our general construction notes accompanied by all drawing proposals with regard to specific structural materials allocations to different positions in the building structure.

The current scope requires minimal localised structural – and civil designs which entail the new lean-to roof, alterations/replacement to the Flamingo Restaurant gutters, box gutters and rain water down pipes and the waterproofing with screed to fall at the Waterhole and minor improvements at the Flamingo building. Details and extents of these designs can be referenced in the drawings data pack attached.

SECTION 4: CONCLUSIONS AND RECOMMENDATIONS, LAST THOUGHTS

During the status quo inspections we found that most of the buildings civil infrastructure appeared to be intact and functional, however there were some concerns raised in the status quo report and we recommend that the critical items listed therein be address in time (future maintenance) to ensure the longevity and structural soundness of the buildings is addressed. We are of the opinion that the general condition and soundness of the structures is acceptable, except for the items highlighted as a concern – especially those related to waterproofing and maintenance in general and items discussed in this design report.

Our design approach and process are as described in the section above. The outcome indicating our detail designs are shown on the applicable drawings which can be referenced in in the attached drawings data pack.

GENERAL CONSTRUCTION NOTES:

CONCRETE:

CONCRETE STRENGTH OF ALL CONCRETE ELEMENTS SHALL BE AS FOLLOWS:

BASES (REINFORCED & UNREINFORCED) = 25MPa
SURFACE BEDS = 30MPa
COLUMNS = 35MPa OR AS NOTED ON COLUMN TABLES
BEAMS = 30MPa
SLABS = 30MPa (FLAT SLABS & COFFER SLABS)
STAIRS = 25MPa
RETAINING WALLS = 25MPa
GROUND BEAMS = 25MPa

CONCRETE COVER TO MAIN STEEL REINFORCING ARE AS FOLLOWS:

1 SURFACE BEDS - AS PER DETAILS
2 COLUMNS - 30mm
3 BASES - 50mm
4 BEAMS - 30mm
5 SLABS - 30mm
6 STAIRS - 30mm
7 RETAINING WALLS - 50mm (FILL SIDE) & 30mm (INTERNAL SIDE)

CURING OF CONCRETE SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH SANS 2001-CC1.

ALL CONCRETE WORK & TESTING THEREOF SHALL COMPLY WITH THE REQUIREMENTS OF SANS 2001-CC1.

ALL 7 & 28 DAYS CONCRETE CUBE RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR HIS APPROVAL

7 DAY CONCRETE CUBE RESULTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN 14 CALENDAR DAYS OF CASTING

28 DAY CONCRETE CUBE RESULTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN 35 CALENDAR DAYS OF CASTING

A 14 DAY CONCRETE CUBE TEST SHALL BE REQUESTED BY THE ENGINEER IF HE FINDS THE 7 DAY CONCRETE CUBE TEST RESULT TO BE UNSATISFACTORY

STRIPPING TIMES OF SHUTTERING AND PROPPING SHALL BE IN ACCORDANCE WITH SANS 2001-CC1.

ALL CASTING PROCEDURES, CONSTRUCTION METHODS AND POSITIONS OF CONSTRUCTION JOINTS SHALL BE SUBMITTED TO THE ENGINEER IN WRITING FOR HIS APPROVAL

NO BRICK WALLS SHALL BE BUILT ON FLOOR SLABS UNLESS THE SLABS HAVE BEEN DESIGNED FOR THE LOAD AND HAVE REACHED THEIR 28 DAY STRENGTH.

THE STRENGTH OF CONCRETE COVER BLOCKS SHALL AT LEAST BE EQUAL TO THE CONCRETE STRENGTH OF THE STRUCTURAL ELEMENT IN WHICH THEY ARE USED. THE SIZE AND FIXING METHOD OF COVER BLOCKS MUST BE APPROVED BY THE ENGINEER.

SHUTTERING SHALL BE FREE FROM SHAVINGS, DUST, DIRT, PIECES OF WIRE ETC. BEFORE CASTING OF CONCRETE.

THE CONTRACTOR MUST TAKE THE NECESSARY MEASURES TO PREVENT CARDBOARD SHUTTERING FROM FLOATING OR MOVEMENT DURING CASTING OF CONCRETE .

PROPPING FOR BEAMS AND ELEVATED SLABS SHALL REMAIN IN POSITION UNTIL THE MIN. SPECIFIED TIME HAS EXPIRED AFTER THE CASTING OF ANY UPSTAND ELEMENTS.

A 25 x 25mm CHAMFER SHALL BE PROVIDED ON ALL CORNERS OF OFF-SHUTTER CONCRETE IN PARKING AREAS ONLY (IN COLLABORATION WITH THE ARCHITECT).

STRUCTURAL DRAWINGS MUST BE READ IN CONJUCTION WITH ARCHITECTURAL DRAWINGS AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

BACKFILLING OF CONCRETE RETAINING WALLS TO TAKE PLACE ONLY AFTER SLABS HAVE BEEN PLACED.

ALL COLUMNS ARE SYMMETRICAL ABOUT GRIDLINES UNLESS OTHERWISE INDICATED.

SAW-CUT JOINTS ARE TO BE CUT BETWEEN 8 - 24 HOURS, TO A MAXIMUM OF 24 HOURS, AFTER THE CONCRETE CASTING.

REINFORCEMENT:

ALL REINFORCEMENT SHALL BE INSPECTED AND APPROVED IN WRITING BY THE ENGINEER BEFORE CASTING OF CONCRETE MAY COMMENCE.

THE CONTRACTOR SHALL GIVE AT LEAST 24 HOURS NOTICE TO THE ENGINEER FOR STEEL INSPECTIONS THAT ARE REQUIRED.

BENDING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH SANS 282 - 2004.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN REINFORCEMENT IN ITS CORRECT POSITION DURING CASTING OF CONCRETE.

ALL REINFORCING ON SITE SHALL BE STORED AND ON TIMBER POLES OR PLANKS (NOT ON THE GROUND) TO PROTECT REINFORCING FROM MUD AND DIRT. REINFORCING MUST BE STORED IN SUCH A MANNER THAT NO PERSONS OR VEHICLES SHALL DAMAGE IT.

CONTRACTOR SHALL INSPECT THE REINFORCING HIM/HERSELF AND CHECK THAT ALL STEEL IS IN PLACE AND CORRECT BEFORE CONTACTING THE ENGINEER FOR INSPECTIONS.

MINIMUM LAP LENGTHS FOR REINFORCING SHALL BE AS FOLLOWS:

1. Y10 BARS = 400mm
2. Y12 BARS = 500mm
3. Y16 BARS = 650mm
4. Y20 BARS = 800mm
5. Y25 BARS = 1000mm
6. Y32 BARS = 1300mm
7. Y40 BARS = 1600mm

REINFORCEMENT SHALL BE FIXED TO COMPLY WITH THE TOLERANCES AS SPECIFIED IN SANS 2001-CC1.

NO HEAT TREATMENT OR CUTTING OF STEEL WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER SHALL BE ALLOWED.

BEND-OUT BARS SHALL BE BENT OUT WITH A SUITABLE PIPE TO THE CORRECT POSITION. NO KINK IN BEND-OUT BARS WILL BE ALLOWED.

REPAIR TO CONCRETE ELEMENTS

THE REPAIR OF CONCRETE DUE TO HONEYCOMBING OR OTHER SUCH DEFECTS:
1. EPIDERMIX 344, WET/DRY CONCRETE ADHESIVE APPLIED TO EXPOSED/CHIPPED CONCRETE SURFACE.
2. DURAGROUT 1000, NON SHRINK CEMENTITIOUS GROUT APPLIED ONTO THE EPOXY SURFACE

BRICKWORK

THE MINIMUM CRUSHING STRENGTH OF ALL LOAD BEARING BRICKWORK SHALL BE 14MPa.

THE MINIMUM CRUSHING STRENGTH OF MORTAR SHALL BE AS FOR CLASS II MORTAR IN ACCORDANCE WITH TABLE 1 SANS 10164 PART 1 - 1980

LOAD BEARING BRICKWORK SHALL BE REINFORCED WITH AN APPROVED BRICK FORCE EVERY THIRD LAYER.

NON-LOAD BEARING BRICKWORK MAY NOT BE BUILT CLOSER THAN 20mm FROM THE SOFFIT OF BEAMS AND SLABS UNLESS OTHERWISE SHOWN

WHERE BRICKWORK ABUTS AGAINST CONCRETE, THE BRICKWORK IS TO BE TIED TO THE CONCRETE WITH GALVANISED HOOP-IRON TIES 1.6mm THICK X 32mm WIDE X 600mm LONG TO EVERY THIRD COURSE OF BRICKWORK. THE HOOP-IRON MUST BE GUN NAILED AGAINST CONCRETE WITH STEEL NAILS NOT LESS THAN 38mm LONG

SEE ARCHITECTS DRAWINGS FOR A GENERAL LAYOUT OF BRICKWORK.

V-JOINTS ARE TO BE MADE IN PLASTER WORK WHERE BRICKWORK AND CONCRETE JOIN.

ANY BRICKWORK ABOVE A CONCRETE SLAB SHALL ONLY BE CONSTRUCTED WHEN THE BRICKWORK UNDER THE SLAB HAS BEEN COMPLETED. THIS SPECIFICALLY REFERS TO ANY PERIMETER BRICKWALLS. IF THIS IS NOT COMPLIED TO, THE CONCRETE SLAB SHALL BE PROPPED UNTIL THE SUPPORTING BRICKWORK HAS BEEN COMPLETED.

NFP - CAN BE USED IN THE INTERNAL WALLS OF THE MALL, PLASTERED ON BOTH SIDES.
NFP - GENERAL BUILDING WORKS - 7MPa.

NFX - MUST BE USED IN ALL THE R.C. CAVITY RETAINING WALLS AS WELL AS ANY OTHER BRICK RETAINING WALLS.

NFX - ALL AREAS BELOW GROUND (ANY FOUNDATION WALLS BELOW DPC LEVEL)
NFX - STRENGTH REQUIRED - 14 MPa.
NFX - ANY LOADBEARING BRICKWORK.

STRUCTURAL STEELWORK

ALL STRUCTURAL STEELWORK SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH SANS 1200H.

WELDS SHALL CONFORM TO SANS 10167-2004.

ALL DIMENSIONS SHALL BE CHECKED ON SITE BEFORE SHOP DRAWINGS COMMENCE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

THE CENTROIDAL AXES OF ALL MEMBERS AT A JOINT TO BE CONCURRENT

A FULL SET OF SHOP DRAWINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE ANY MANUFACTURING MAY COMMENCE

ALL STRUCTURAL STEELWORK SHALL BE GRADE 350W.

ALL STRUCTURAL STEEL ON SITE SHALL BE STORED AND HANDLED SO THAT IT IS NOT SUBJECTED TO DAMAGE OR EXCESSIVE STRESS AND MUST BE KEPT CLEAN.

WHERE BRICKWORK ABUTS AGAINST STRUCTURAL STEEL, THE BRICKWORK IS TO BE TIED TO THE STRUCTURAL STEEL WITH GALVANISED HOOP-IRON TIES 1.6mm THICK × 32mm WIDE × 600mm LONG TO EVERY THIRD COURSE OF BRICKWORK.

BOLTS M12 OR LESS TO BE GRADE 4.8
BOLTS M16 OR GREATER TO BE GRADE 8.8.

CHEMICAL ANCHOR BOLTS TO BE SUPPLIED BY FISCHER UPAT

CORROSION PROTECTION OF STRUCTURAL STEEL

ALL CORROSION PROTECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS OF SABS HC - 1988.

PRIOR TO ANY FORM OF PREPARATION, ALL HARMFULL DEPOSITS ON THE SURFACE OF THE STEELWORK, SUCH AS OIL, GREASE, CHEMICAL DEPOSITS, CLAY, BITUMEN OR MUD, SHALL BE REMOVED.

ALL STEELWORK SHALL BE BRUSHED WITH A ROTARY WIRE BRUSH TO SIS 05 59 00.

APPLY ONE COAT (40 MICRON ± 5 MICRON) SYNCROMATE PRIMER IN ACCORDANCE WITH SABS 679 - 1972.

APPLY ONE COAT (40 MICRON MINIMUM) MULTI PURPOSE UNDRCOAT IN ACCORDANCE WITH SABS 681. USE TYPE II PAINT

APPLY TWO COATS OF ALKYD BASE ENAMEL (40 MICRON) TO THE ARCHITECTS COLOUR SPECIFICATION IN ACCORDANCE WITH SABS 630. USE TYPE I PAINT. THE FIRST COAT MUST BE ALLOWED TO DRY FOR AT LEAST 24 HOURS.

WATERPROOFING SPECIFICATION FOR RETAINING WALLS (DERBIGUM CG4)

INSTALLATION :

DERBIGUM SHALL ONLY BE INSTALLED BY CONTRACTORS IN POSSESSION OF A CURRENT LDC CERTIFICATE ISSUED BY DERBIGUM MANUFACTURING SOUTH AFRICA (Pty) Ltd.

SURFACE PREPARATION :

CONCRETE AND MASONRY SURFACES SHALL BE SURFACE DRY, FIRM, SMOOTH, EVEN, FREE FROM LOOSE AGGREGATE, SHARP PROTRUSIONS AND EDGES, FORMWORK RELEASE AGENTS AND OTHER CONTAMINANTS. HONEYCOMBING AND OTHER UNEVEN PLACES MUST BE MADE GOOD TO A SMOOTH FINISH BY WOOD FLOAT. BRICKWORK MUST BE STRAIGHT WITH FLUSH JOINTS.

PRIMING :

PRIME WITH BITUMEN PRIMER ALL WALL SURFACES, FOOTINGS, ETC. WHEREVER DERBIGUM HAS TO BE APPLIED. ALLOW SOLVENTS TO FLASH OFF.

DAMPPROOFING :

ONE LAYER DERBIGUM CG4 FULLY BONDED TO THE PRIMED SURFACES BY TORCH-ON FUSION. SIDE LAPS 75mm AND END LAPS 100mm SIMILARLY FUSED TOGETHER AND THE MEMBRANE WELL FIXED TO ANGLES AND FILLETS, INCLUDING ALL SQUARE CUTTING AND WASTE. TERMINATING EDGES ARE TO BE FINISHED OFF WITH A BITUMEN MASTIC FILLET.

PROTECTION LAYER :

12mm THICK SOFTBOARD.

RETAINING WALLS

WALL RETAINING FILL UP TO 900mm, A 230mm THICK WALL WITH A 700 x 250mm BASE IS REQUIRED.

WALL RETAINING FILL BETWEEN 900mm & 1300mm, A 345mm THICK WALL WITH A 850 x 250mm BASE IS REQUIRED.

WALL RETAINING FILL BETWEEN 1300mm & 2600mm, A 345mm THICK REINFORCED CONCRETE CAVITY WALL IS REQUIRED. (BASE TO BE DESIGNED)

PAINT SPECIFICATION & PREPARATION FOR ROAD MARKINGS

1. ALL LETTERING, COLOURING, PLACEMENT AND TEXT SIZES TO CONFORM TO THE "SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL" AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ERECTION OF EACH SIGN.

2. PARKING PAINT LINES TO BE A MINIMUM OF 100mm.

3. ALL NON-REFLECTORIZED PAINTS SHALL COMPLY TO THE REQUIREMENTS OF SABS 731. THE PAINT IS TO ARRIVE ON SITE IN SEALED CONTAINERS, MARKED ACCORDING TO SABS731-1.

4. ROAD MARKING PAINT SHALL BE APPLIED AT A NOMINAL RATE OF 0.412/m². IT SHALL FURTHER BE APPLIED IN TOW LAYERS. THE SECOND LAYER SHALL NOT BE APPLIED BEFORE THE FIRST LAYER HAS DRIED PROPERLY.

5. ROAD MARKING PAINT SHALL NOT BE APPLIED TO A DAMP SURFACE OR AT TEMPERATURES BELOW 10 DEGREES CELSIUS.

6. BEFORE THE PAINT IS APPLIED, THE SURFACE SHALL BE CLEAN AND DRY AND COMPLETELY FREE FROM ANY SOIL, GREASE, ACID OR ANY MATERIAL WHICH WILL BE DETRIMENTAL TO THE BOND BETWEEN THE PAINT AND THE SURFACE.

4. WHERE PAINT IS TO BE APPLIED TO A CONCRETE SURFACE, ALL LAITANCE AND LOOSE CURING COMPOUND SHALL BE REMOVED. LAITANCE MUST BE REMOVED BY SAND BLASTING THE CONCRETE, OR SIMILAR APPROVED TECHNIQUE, TO ENSURE THE SURFACE IS FREE FROM ANY LAITANCE.

STORMWATER

ANY PIPEWORK THAT CONNECTS A RAINWATER GUTTER, FULBORE OUTLET, HOPPER BOX, DOWNPIPES AND / OR LAUNDER PIPES WILL BE SEEN AS A CLOSED PIPE SYSTEM. THIS CLOSED PIPE SYSTEM TO BE PRESSURE TESTED TO SANS 1200 L SPECIFICATION AFTER INSTALLATION.

TO BE READ IN CONJUNCTION & CO-ORDINATED WITH ARCHITECTURAL DRAWINGS PRIOR TO EXECUTION OF ANY WORKS

FOR CONSTRUCTION

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Rev	Description	Date	By

AMENDMENTS

SERVICE
STRUCTURES

DESIGNED	
DRAWN	
CAD FILE NAME	
CHECKED	
APPROVED	

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CLIENT
SANBI Biodiversity for Life
South African National Biodiversity Institute
NATIONAL ZOOLOGICAL GARDEN

PROJECT
DASPOORT 319-JR, GAUTENG PRETORIA NATIONAL ZOOLOGICAL GARDENS SANBI-RENOVATION OF FOOD& BEVERAGE OUTLETS

TITLE
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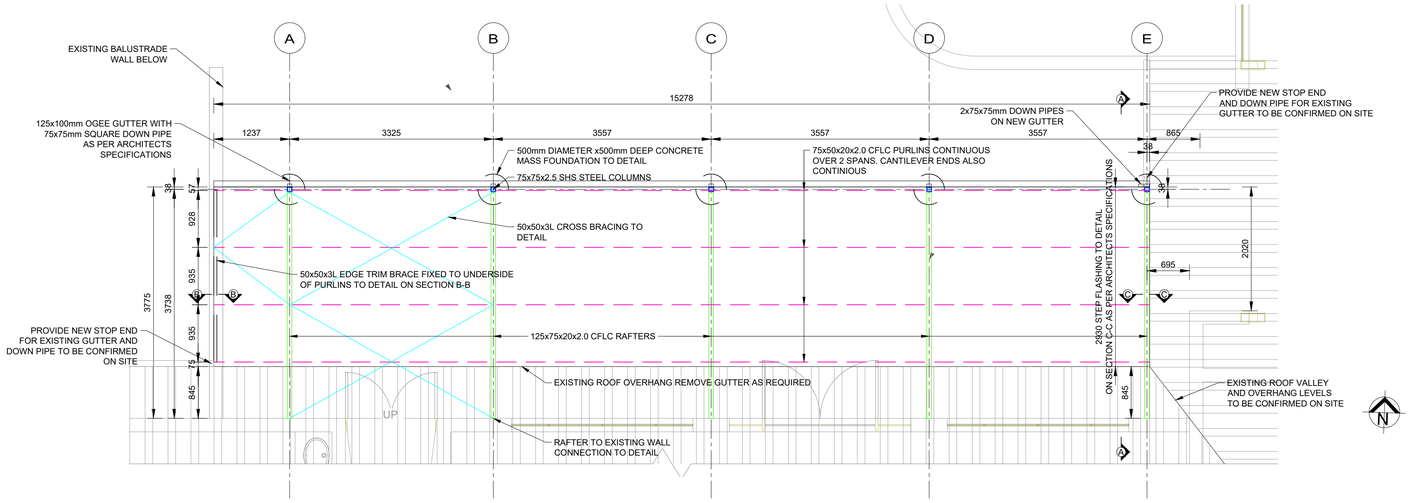
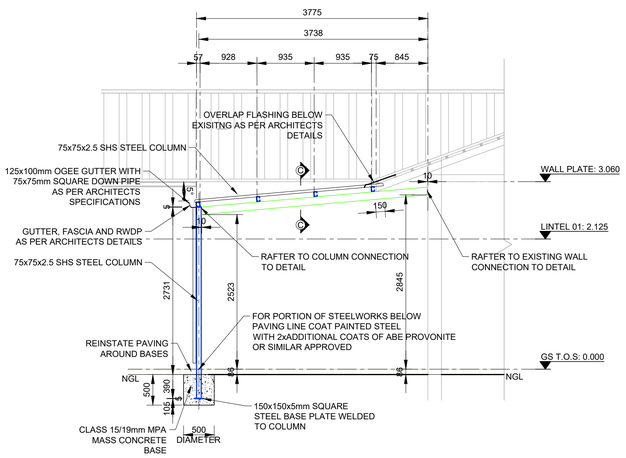
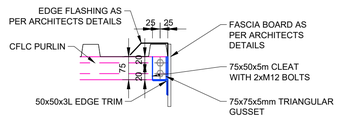


NOTE: CHECK SETTING OUT OF TRUSS AND COLUMN POSITIONS TO NOT CLASH WITH EXISTING BUILDING OVER HANG TRUSS RAFTERS

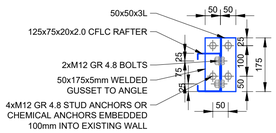
NEW CANOPY ROOF LAYOUT
SCALE 1:50



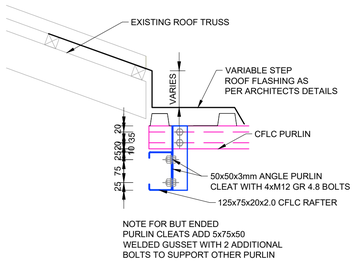
SECTION A-A CANOPY ROOF
SCALE 1:50



SECTION B-B
SCALE 1:10

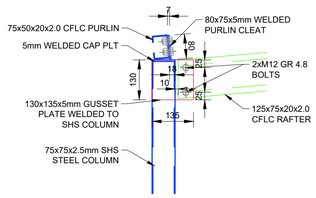


RAFTER TO EXISTING WALL CONNECTION DETAIL
SCALE 1:10

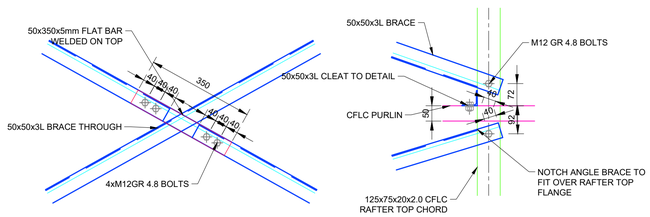


NOTE FOR BUT ENDED PURLIN CLEATS ADD 5x75x50 WELDED GUSSET WITH 2 ADDITIONAL BOLTS TO SUPPORT OTHER PURLIN

SECTION C-C
SCALE 1:10



RAFTER TO 75x75 SHS COLUMN CONNECTION DETAIL
SCALE 1:10



50x50x3L CROSS BRACING DETAIL
SCALE 1:10

NOTES / LEGEND:

REFER TO GENERAL CONSTRUCTION NOTES EG/3190/C/11/001

ROOF DESIGN FOR FOLLOWING DISTRIBUTED LOADS:

- SHEETING = 6 kg/m²
- LIGHTS = 2 kg/m²
- IMPOSED LOAD AND WIND LOAD AS PER SANS 10160

ALL WELDS SHALL BE 5mm CONTINUOUS FILLET WELDS U.O.N

ANY DISCREPANCY SHALL BE IMEDIATLY REPORTED TO THE ENGINEER

FOR CONSTRUCTION

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Rev	Description	Date	By

AMENDMENTS

SERVICE
STRUCTURES

DESIGNED	K STEYN
DRAWN	K STEYN
CAD FILE NAME	EG3190C5001
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SANBI Biodiversity for Life
South African National Biodiversity Institute
NATIONAL ZOOLOGICAL GARDEN

PROJECT
DASPOORT 319-JR, GAUTENG
PRETORIA NATIONAL ZOOLOGICAL GARDENS SANBI-RENOVATION OF FOOD& BEVERAGE OUTLETS

TITLE
NEW COVERED WALKWAY LAYOUTS AND DETAILS, FLAMINGO BUILDING

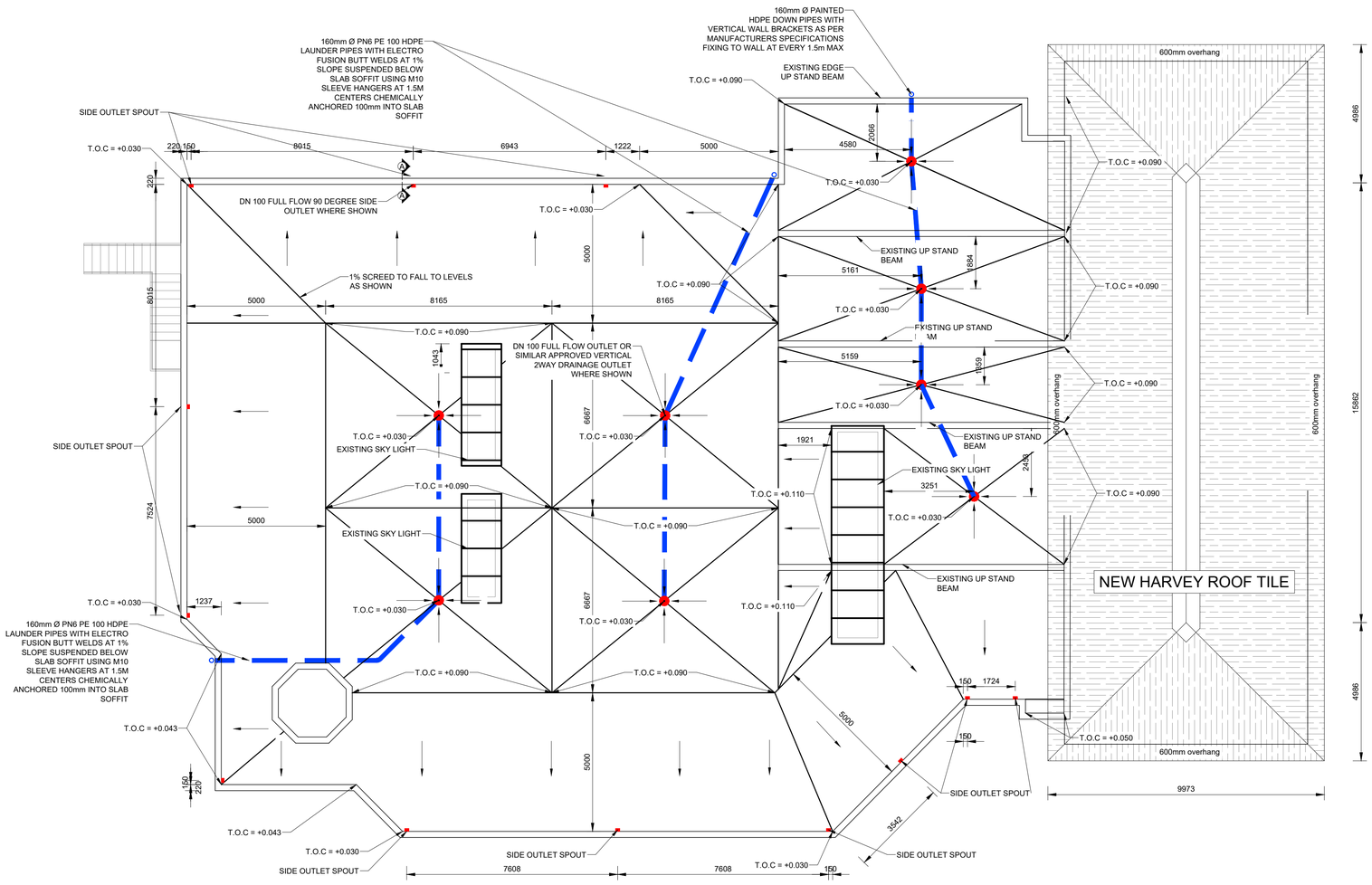
DATE		FEBRUARY 2022	
SCALE	1:250	PAPER SIZE	A1

SCALE REF.
10 5 0 5 10
7.5 2.5 2.5 7.5
METER

CONSULTANT DWG. NO.
EG/3190/C/5/001

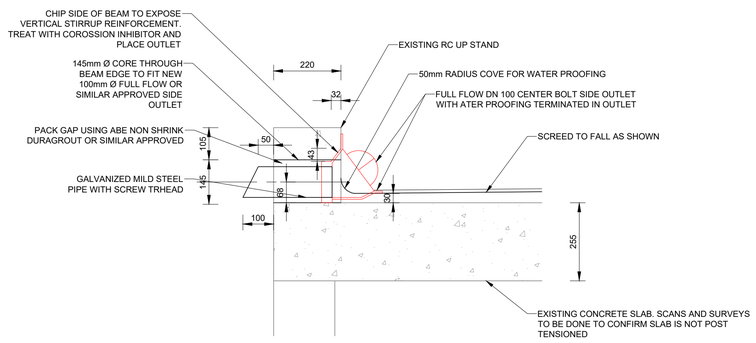
CLIENT DWG. NO.
-

(REF FOLDER: G:\02 GAUTENG\2 PROJECTS\3100 - 3199\EG 3190 - SANBI\01 PRETORIA ZOO CAFETERIA ROOF\1 DESIGN PHASE\F DRAWINGS\5 CONSTRUCTION\G STRUCTURES\EG3190C5001R0-NEW CANOPY ROOF.DWG)



WATERHOLE ROOF DRAINAGE LAYOUT

SCALE 1:100



SECTION A-A

SCALE 1:10

NOTES / LEGEND:

1) REFER TO THE GENERAL CONSTRUCTION NOTES ON DRAWING EG/3190/C/11/001.
2) SURVEY OF THE EXISTING SCREED TO FALLS TO BE COMPLETED FOR REVIEW BY THE ENGINEER.
3) NEW DOWN PIPE POSITIONS TO BE CONFIRMED BY CONTRACTOR AND ARCHITECT TO NOT CLASH WITH EXTERNAL WINDOWS OR SERVICES.
4) ESTIMATED SCREED VOLUME 39m³
5) SCREED TO FALL TO CONSISTS OF MIN 10 MPa SCREED WITH A 1:6 SAND CEMENT RATIO
6) COLUMN LAYOUT TO BE CONFIRMED BY SURVEY OR PLANS FOR INTENDED CENTRAL OUTLET CORES. CORES SHALL ADHERE TO CORING PROCEDURE
7) POINT NUMBER 2 AND 6 REGARDING SCREED SURVEY AND COLUMN POSITION SURVEY SHALL BE COMPLETED AND SUBMITTED TO THE ENGINEER FOR FINAL DESIGN PRIOR TO ANY CORE, SCREED TO FALL OR WATER PROOFING COMMENCING. EXISTING MAXIMUM SCREED THICKNESS SHALL ALSO BE CONFIRMED.

CORING PROCEDURE:

1. SET OUT THE POSITIONS OF THE CORES MARKED TO CONTRACTORS SPECIFIC NUMBERS.
2. SCAN AROUND THE POSITION OF THE CORE MARKING OUT THE POSITIONS OF THE TOP AND BOTTOM REINFORCING MATS AROUND THE CORE. SCANNING SHALL BE SUCH TO INDICATE TOP AND BOTTOM REINFORCEMENT POSITION RELATIVE TO THE MARKED OUT CORE POSITION. SCANS TO SOFFIT MAY BE REQUIRED IF EQUIPMENT IS NOT SUITABLE TO SCAN FROM ABOVE.
3. NOTIFY THE ENGINEER TO INSPECT MARKED OUT CORE POSITIONS AND REINFORCEMENT POSITION. PROVIDE 48 HOURS NOTICE FOR INSPECTION.
4. AFTER APROVAL OBTAINED FROM ENGINEER COMENCE WITH CORING RETREIVING CORE SAMPLE AND MARKING INDICATED CORE NUMBER ON CORE FOR INSPECTION BY THE ENGINEER.
5. INSTALLATION OF SERVICES SHALL ONLY COMMENCE THOUGH CORES AFTER APPROVAL OF SATISFACTORY CORING IS OBTAINED FROM THE ENGINEER.
6. SHOULD REBAR BE STRUC DURING THE CORING PROCEDURE STRUCTURAL STRENGTHENING MAY BE REQUIRED. THE ENGINEER SHALL ISSUE REQUIRED INSTRUCTION. INSTALLATION OF SERVICES THROUGH CORE SHALL ONLY COMMENCE ONCE STRUCTURAL STRENGTHENING HAS BEEN COMPLETED.

FOR CONSTRUCTION

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Rev	Description	Date	By

AMENDMENTS

SERVICE

STRUCTURES

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SANBI Biodiversity for Life
South African National Biodiversity Institute
NATIONAL ZOOLOGICAL GARDEN

PROJECT

DASPOORT 319-JR, GAUTENG PRETORIA NATIONAL ZOOLOGICAL GARDENS SANBI-RENOVATION OF FOOD& BEVERAGE OUTLETS

TITLE

SCREED TO FALL ALTERATIONS TO WATERHOLE BUILDING

DATE		FEBRUARY 2022	
SCALE	1:250	PAPER SIZE	A1

SCALE REF.

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7.5 2.5 2.5 7.5
METER

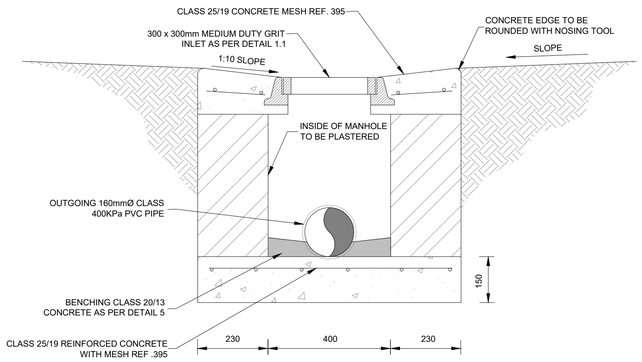
CONSULTANT DWG. NO.

EG/3190/C/8/001

CLIENT DWG. NO.

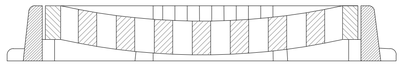
-

(REF FOLDER: G:\02 GAUTENG\2 PROJECTS\3100 - 3199\EG 3190 - SANBI\01 PRETORIA ZOO CAFETERIA ROOF\1 DESIGN PHASE\F DRAWINGS\5 CONSTRUCTION\G STRUCTURES\EG3190C8001-WATERHOLE ROOF SCREED TO FALL AND DRAINAGE.DWG)

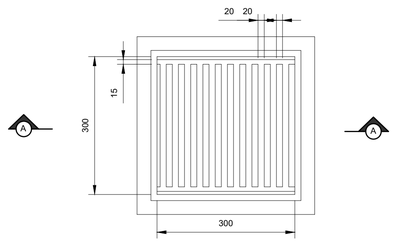


SECTION A-A: TYPICAL STORM WATER GRID INLET MANHOLE STRUCTURE

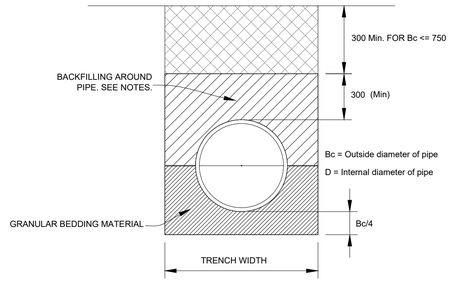
SCALE 1:10



SECTION A-A: TYPICAL SECTION THROUGH GRID



DETAIL 1.1: 300 x 300 MEDIUM DUTY GRID INLET(OR SIMILAR APPROVED)



DETAIL 2: CLASS B BEDDING

NOTE:

A. BEDDING SHALL BE OF AN APPROVED SELECTED GRAVEL MATERIAL WITH A PI NOT EXCEEDING 6.

B. BEDDING MATERIAL SHALL BE COMPACTED TO 93% OF MOD. AASHTO DENSITY IN LAYERS NOT EXCEEDING 150mm.

NOTES:

1. ALL CONSTRUCTION OF WORKS TO BE IN ACCORDANCE WITH SANS1200 SPECIFICATIONS
2. ALL STORMWATER PIPES TO BE LAID SOFIT TO SOFIT UNLESS OTHERWISE SHOWN
3. THE SOFFITS OF PIPES ARE TO BE LAID EITHER LEVEL OR LOWER IN THE DOWNSTREAM DIRECTION.
4. ALL CONCRETE FLOOR AND COVER SLABS TO BE CLASS 25/19 CONCRETE
5. ALL CONCRETE BENCHING TO BE CLASS 20/13
6. ALL BRICKWORK TO BE PLASTERED ON THE INSIDE.
7. ALL STORMWATER PIPES TO BE A MINIMUM NOMINAL DIAMETER OF 300mm, UNLESS SPECIFIED OTHERWISE
10. ALL EXPOSED CONCRETE EDGES TO BE ROUNDED WITH A NOSING TOOL
11. BRICK FORCE TO BE PLACED IN EVERY THIRD COURSE
12. BENCHING TO BE A MINIMUM THICKNESS OF 50mm
13. MINIMUM COVER OF REINFORCING TO BE 30mm
14. ALL PRECAST MANHOLE SECTIONS AND LIDS TO COMPLY WITH THE REQUIREMENTS OF SANS 1294
15. POSITION OF MANHOLES SHALL BE DIRECTLY ABOVE THE PI (POINT OF INTERSECTION) OF ADJOINING STORMWATER PIPES
17. HEAVY DUTY TYPE 1A CAST IRON COVERS TO BE PLACED IN TRAFFICKED AREAS
18. ALL BENCHING TO RECEIVE A STEEL FLOATED FINISH

FOR TENDER PURPOSES

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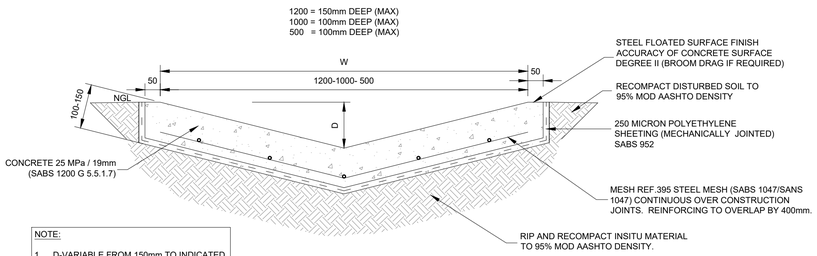
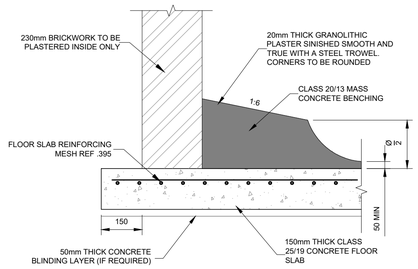


NOTE:

1. D-VARIABLE FROM 150mm TO INDICATED MAXIMUM DEPTH
2. EXPANSION JOINT BETWEEN CANAL AND WALL ONLY IF INDICATED
3. CAST IN ALTERNATIVE SECTIONS 1.5m LONG WITH EXPANSION JOINTS AT 18m. SEE STANDARD DETAIL 6.1

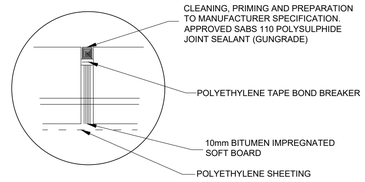
DETAIL 3: STORMWATER CANAL IN AREAS WITH NO VEHICLE TRAFFIC (MESH REF = .395)

SCALE 1:10



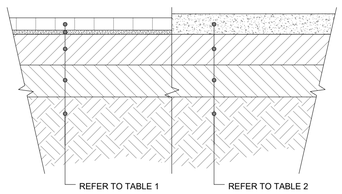
DETAIL 5: CONCRETE BENCHING

SCALE 1:10



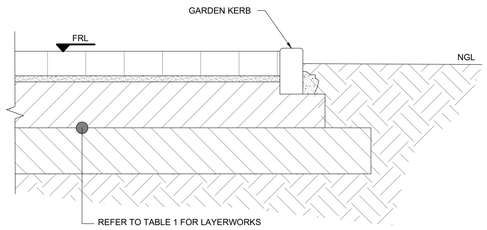
DETAIL 7.1:SAW-CUT JOINT SEAL

SCALE 1:10



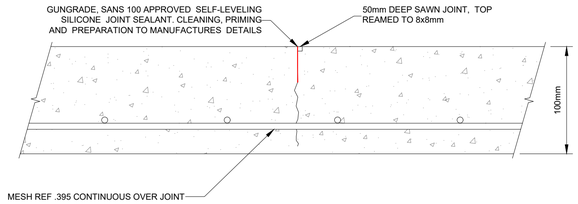
DETAIL 4: 60mm BLOCK PAVING / 100mm CONCRETE APRON LAYERWORKS

SCALE: 1:20



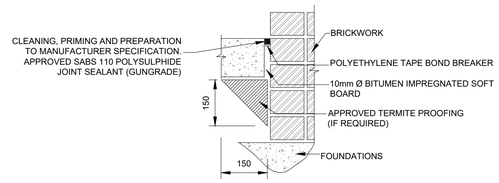
DETAIL 6: TYPICAL SECTION THROUGH GARDEN KERB

SCALE 1:10



DETAIL 7.2: CONSTRUCTION JOINT

SCALE 1:10



DETAIL 7.3: EXPANSION JOINT AGAINST BUILDING

SCALE 1:10

TABLE 1 (LAYERWORKS FOR SANBI)

60mm INTERLOCKING BLOCK PAVING

LAYER No.	LAYER THICKNESS	LAYER DESCRIPTION	COLTO / TRH 4 SPECIFICATION	COMPACTION OF PAVEMENT LAYER TESTED ON ROAD	GEOMECHANICAL PARAMETERS OF ROAD CONSTRUCTION MATERIALS MUST CONFORM TO TRH4 SPESIFICATIONS				
				MINIMUM % COMPACTION EXPRESSED IN MODIFIED AASHTO DENSITY	PI	GM	MINIMUM CBR @ % OF MODIFIED AASHTO DENSITY	MINIMUM UCS @ 100% OF MODIFIED AASHTO DENSITY	MINIMUM ITS @ 100% OF MODIFIED AASHTO DENSITY
1	60mm	Interlocking Block Paving	-	-	-	-	-	Type of block as per Architect specification	
2	20mm	Washed River Sand	-	-	-	-	-		
3	150mm	Lower Selected (imported)	G6	95%	≤ 12 or ≤ (3GM + 10)	2.7 ≥ GM ≥ 0.75	25 @ 95%	-	-
4	150mm	Test with DCP to determine min CBR of 7, if required ripped and re-compacted previously constructed 150mm G6 gravel layer to obtain a min CBR of 7	(In-situ)	95%	-	-	7 @ 95%	-	-
Notes:									

TABLE 2 (LAYERWORKS FOR SANBI)

60mm INTERLOCKING BLOCK PAVING / 100mm CONCRETE APRON

LAYER No.	LAYER THICKNESS	LAYER DESCRIPTION	COLTO / TRH 4 SPECIFICATION	COMPACTION OF PAVEMENT LAYER TESTED ON ROAD	GEOMECHANICAL PARAMETERS OF ROAD CONSTRUCTION MATERIALS MUST CONFORM TO TRH4 SPESIFICATIONS				
				MINIMUM % COMPACTION EXPRESSED IN MODIFIED AASHTO DENSITY	PI	GM	MINIMUM CBR @ % OF MODIFIED AASHTO DENSITY	MINIMUM UCS @ 100% OF MODIFIED AASHTO DENSITY	MINIMUM ITS @ 100% OF MODIFIED AASHTO DENSITY
1	100mm	Reinforced Concrete	-	-	-	-	-		
3	150mm	Lower Selected (imported)	G6	95%	≤ 12 or ≤ (3GM + 10)	2.7 ≥ GM ≥ 0.75	25 @ 95%	-	-
4	150mm	Test with DCP to determine min CBR of 7, if required ripped and re-compacted previously constructed 150mm G6 gravel layer to obtain a min CBR of 7	(In-situ)	95%	-	-	7 @ 95%	-	-
Notes:									

Rev	Description	Date	By

AMENDMENTS

SERVICE

STORMWATER

DESIGNED	F.A MARKRAM
DRAWN	G.P.J LOTTERING
CAD FILE NAME	EG3190SW3001.dwg
CHECKED	B.G.V VENTER
APPROVED	B.G.V VENTER

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SANBI Biodiversity for Life
South African National Biodiversity Institute
NATIONAL ZOOLOGICAL GARDEN

PROJECT

DASPOORT 319-JR, GAUTENG PRETORIA NATIONAL ZOOLOGICAL GARDENS SANBI-RENOVATION OF FOOD& BEVERAGE OUTLETS

TITLE

STORMWATER DETAILS

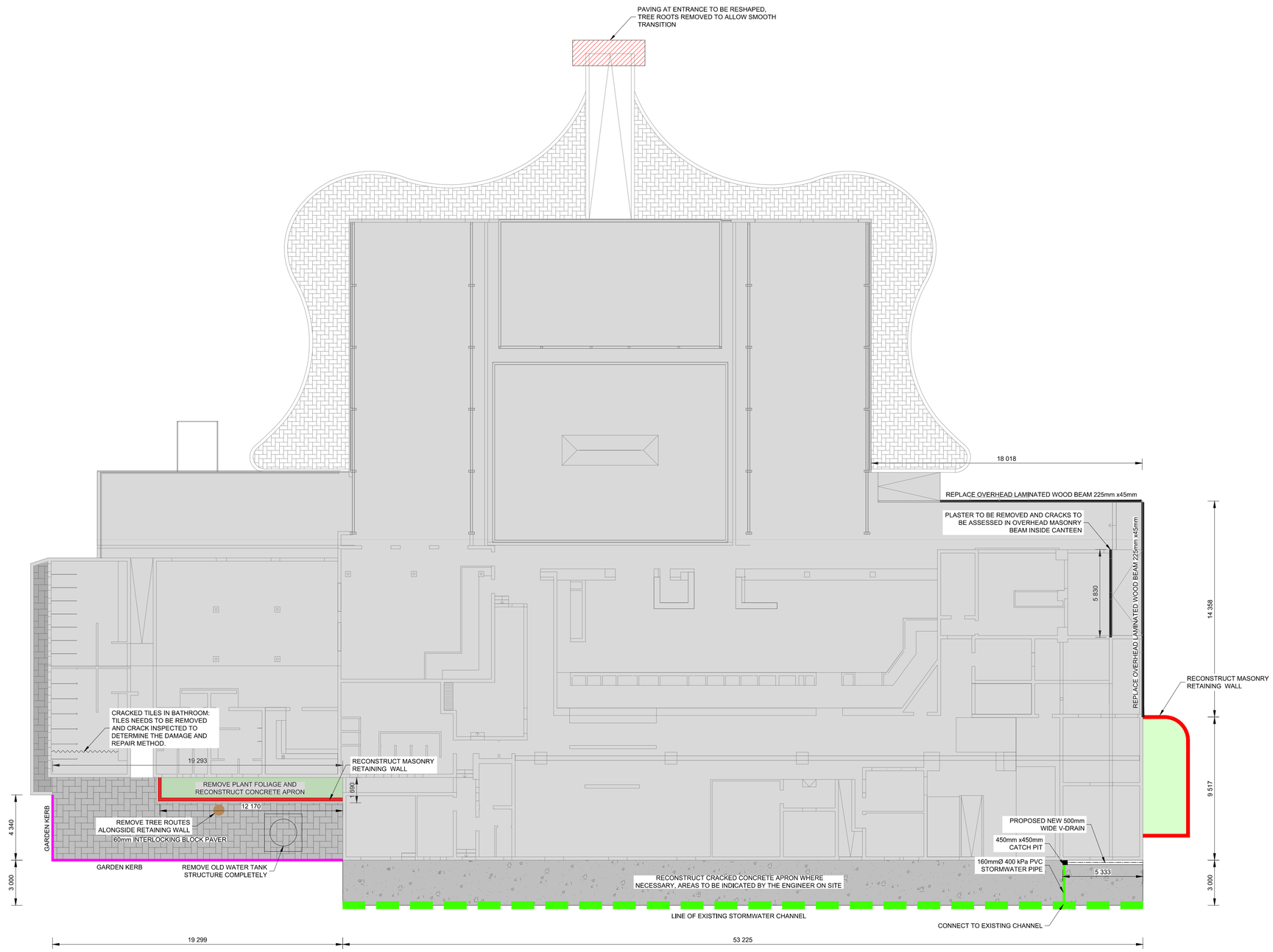
DATE		FEBRUARY 2022	
SCALE	A/S	PAPER SIZE	A1

SCALE REF.
0.04 0.02 0 0.02 0.04
0.03 0.01 0.01 0.03
METER

CONSULTANT DWG. NO.
EG/3190/SW/3/001

CLIENT DWG. NO.
-

(REF FOLDER: G:\02 GAUTENG\2 PROJECTS\3100 - 3199\EG 3190 - SANBI\01 PRETORIA ZOO CAFETERIA ROOF\1 DESIGN PHASE\F DRAWINGS\5 CONSTRUCTION\C STORMWATER\EG3190SW3001.DWG)



FLAMINGO (BUILDING 1)

SCALE 1:150

(REF FOLDER: G:\02 GAUTENG\2 PROJECTS\3100 - 3199\EG 3190 - SANBI\01 PRETORIA ZOO CAFETERIA ROOF\1 DESIGN PHASE\F DRAWINGS\5 CONSTRUCTION\A GENERAL\EG3190G2001-GROUND.DWG)

LEGEND:

- EXISTING BUILDING
- ROOF TRUSSES
- PROPOSED PAVING
- OVERHEAD BEAM
- LOW LEVEL MASONRY WALL
- EXISTING SW CHANNEL
- GARDEN KERB

NOTES:

1. STORMWATER DRAINS AROUND BUILDING TO BE CLEANED.
2. VEGETATIVE GROWTH AROUND BUILDING AND ON ROOF NEEDS TO BE CLEARED.

FOR CONSTRUCTION

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Rev	Description	Date	By

AMENDMENTS

SERVICE

GENERAL

DESIGNED	F.A MARKRAM
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PROJECT

DASPOORT 319-JR, GAUTENG PRETORIA NATIONAL ZOOLOGICAL GARDENS SANBI-RENOVATION OF FOOD& BEVERAGE OUTLETS

TITLE

GENERAL LAYOUT OF SERVICES AND REPAIRS, FLAMINGO BUILDING

DATE		FEBRUARY 2022	
SCALE	A/S	PAPER SIZE	A1

SCALE REF.

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CONSULTANT DWG. NO.

EG/3190/G/2/001

CLIENT DWG. NO.

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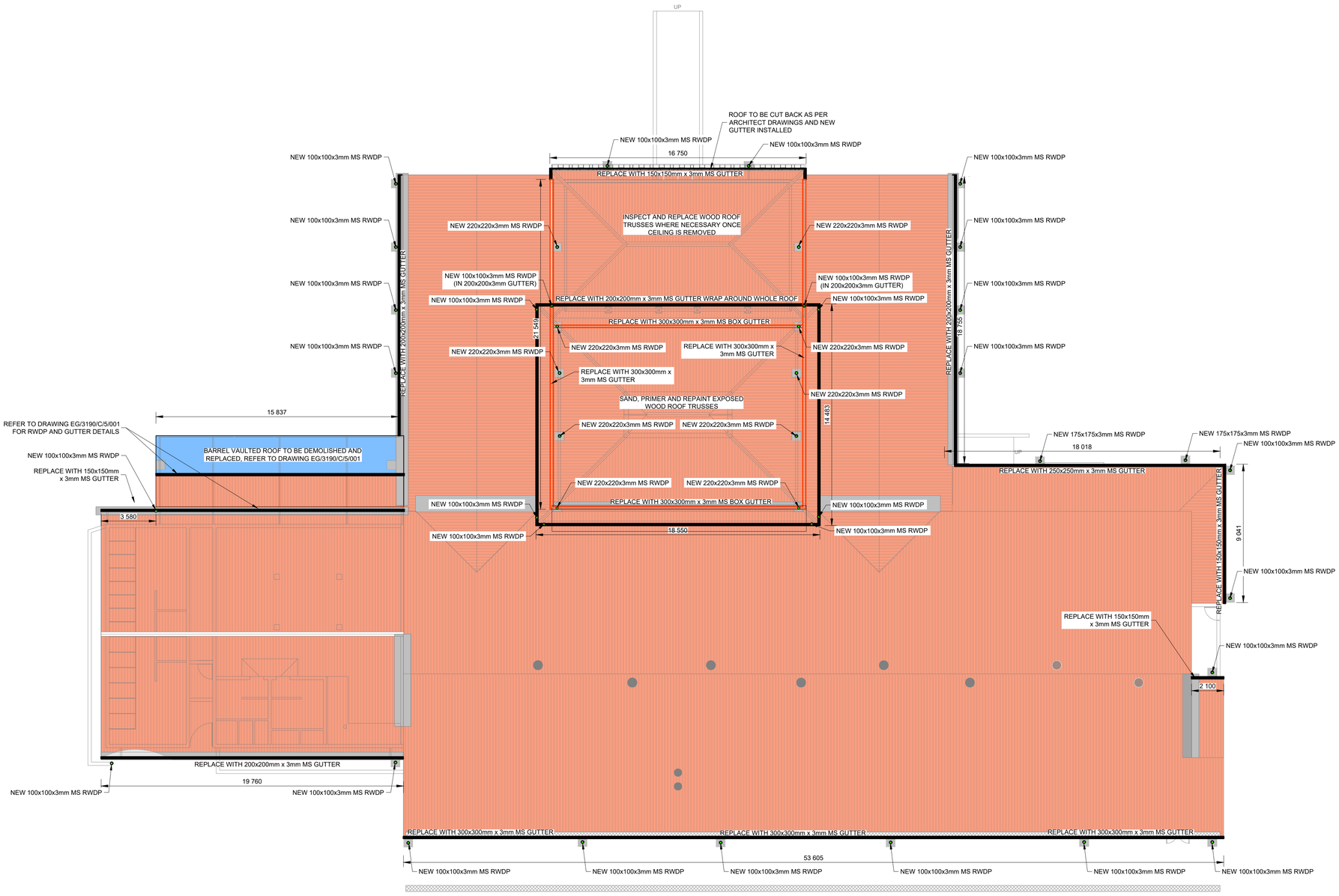

FLAMINGO (BUILDING 1)

SCALE 1:150

(REF FOLDER: G:\02 GAUTENG\2 PROJECTS\3100 - 3199\EG 3190 - SANBI\01 PRETORIA ZOO CAFETERIA ROOF\1 DESIGN PHASE\F DRAWINGS\5 CONSTRUCTION\A GENERAL\EG3190G2002-ROOF.DWG)

LEGEND:

- NEW SHEETING
- RWDP
- BOX GUTTER
- MS GUTTER

NOTES:

1. MOVEMENT JOINTS IN EXTERNAL WALLS TO BE RESEALED.
2. ALL RAINWATER GOODS TO BE POWDER-COATED

ABBREVIATIONS:

MS - MILD STEEL
RWDP - RAIN WATER DOWN PIPE

FOR CONSTRUCTION

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Rev	Description	Date	By

AMENDMENTS

SERVICE

GENERAL

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South African National Biodiversity Institute
NATIONAL ZOOLOGICAL GARDEN

PROJECT

DASPOORT 319-JR, GAUTENG PRETORIA NATIONAL ZOOLOGICAL GARDENS SANBI-RENOVATION OF FOOD& BEVERAGE OUTLETS

TITLE

GENERAL LAYOUT OF SERVICES AND REPAIRS , FLAMINGO BUILDING

DATE		FEBRUARY 2022	
SCALE	A/S	PAPER SIZE	A1

SCALE REF.
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METER

CONSULTANT DWG. NO.
EG/3190/G/2/002

CLIENT DWG. NO.
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