CALL FOR BIDS

BID NO: ECDC /INFRA/17/092023

BID SUBJECT: REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1

Consisting Of:

The Tender (Returnable) - This Document

The Bills of Quantities - This Document

Drawings

Specification Document

Construction Health and Safety Specification

BIDDER NAME: .....

CSD No.:.....

CRS No.: .....

CLOSING DATE:	**6 November 2023**
CLOSING TIME:	**12h00**

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SECTION A: ABBREVIATIONS AND ACRONYMS	
CIDB	Construction Industry Development Board
DTI	Department of Trade and Industry
ECDC	Eastern Cape Development Corporation
EME	Exempt Micro Enterprise
IRBA	Independent Regulatory Board of Auditors
PCCA	Prevention and Combating of Corrupt Activities Act 12 of 2004
PFMA	Public Finance Management Act (Act 1 of 1999)
PPPFA	Preferential Procurement Policy Framework Act (Act 5 of 2000)
QSE	Qualifying Small Enterprise
SABS	South African Bureau of Standards
SANAS	South African National Accreditation System
SARS	South African Revenue Service
SASAE	South African Standard on Assurance Engagements
SCM	Supply Chain Management
SMME	Small, Medium and Micro Enterprises
ToR	Terms of Reference
CSD	National Treasury Central Supplier Database for South African Government
B: DEFINITIONS	
Acceptable tender	Means any tender which, in all respects, complies with the specifications and conditions of tenderas set out in the tender document.
Accreditation Body	Means the South African National Accreditation System or any other entity appointed by theMinister from time to time whose function it is to: Accrediting verification agencies Developing, maintaining and enforcing of Verification Standards
Affordable	Means (in terms of a PPP-Agreement) that the financial commitments to be incurred can bemet by funds: Designated within ECDC's existing budget for the function to which the agreement relates; and Destined for ECDC in accordance with the relevant Treasury's future budgetary projections.
All applicable taxes	Includes value-added tax, pay as you earn, income tax, unemployment insurancefund contributions and skills development levies.
Bid	Means a written offer or proposal to supply goods and/or provide services, submitted in responseto the ECDC's invitation to quote or submit proposals which includes advertised competitive bids,written price quotations or proposals.
Bid Specification	A specification that lays down the characteristics of goods to be procured or their related processes and production methods, or the characteristics of services to be procured or their related operating methods, including the applicable administrative provisions, and a detailed requirement relating to conformity assessment procedures that an entity prescribes and shall

	Include TOR for specialised services.
Black People	means 'African', 'Indian' and 'Coloured' people who are citizens of the Republic of South Africa by birth; or are citizens of the Republic of South Africa by naturalisation before the commencement date of the Constitution of South Africa Act (1993); or became citizens of the Republic of South Africa after the commencement of the of the Constitution of South Africa Act(1993), but who for the Apartheid policy that has been in place to that date, would have been entitled to acquire citizenship by naturalisation prior to that date.
Specific goal	2.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table in SBD 6.1 as may be supported by proof/ documentation stated in the conditions of this tender: 2.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of— (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system, then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.
Close Family Member	Shall mean: - member of the same household, parent (including adoptive parent), parent-in-law, son (including adoptive son), son-in-law, daughter (including adoptive daughter), daughter-in- law, step-parent, step-son, step-daughter, brother, sister, grandparent, grandchild, uncle, aunt, nephew, niece, the spouse or unmarried partner with relation to any of the person's above.
Code of Ethics	refer to the ECDC Code of Ethics for Management and Staff as may be amended from time to time.
Comparative Price	Means the price after the factors of a non-firm price and all the unconditional discounts that can be utilised have been taken into consideration.
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.
Contract	Means the agreement that results from the acceptance of a bid by ECDC.
Designated Sector	Means a sector, sub-sector or industry that has been designated by the DTI in line with national development and industrial policies for local production, where on local produced goods or locally manufactured goods meet the stipulated minimum threshold for local production and content.
Duly Sign	means a document that has been signed by the 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).
Exempt Micro Enterprise (EME)	means an enterprise with a specified total annual revenue as per Department ofTrade and Industry Codes of Good Practice on Broad Based Black Economic Empowerment
Family Member	Means a husband or wife, any partner in a customary union according to indigenous law or any partner in arelationship where the parties live together in a manner resembling a marital partnership or a customary union; and any person related to either one or both persons referred above within the second degree througha marriage, a customary union or a relationship or the third degree of consanguinity.

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.
Fronting	Means a deliberate circumvention or attempted circumvention of the B-BBEE Act and the Codes. Fronting commonly involves reliance on data or claims of compliance based on misrepresentation of facts, whether made by the party claiming compliance or by any otherperson.
Functionality	Means the measurement according to predetermined norms, as set out in the tender documents,of a service or commodity that is designed to be practical or 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 the tenderer.
Imported Content	Means that portion of the tender price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the bidder or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour or intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock dues, import duty, sales dutyor other similar tax or duty at the South African port of entry.
In the serviceof the state	means: an employee of any municipality who has a performance contract with the municipality and isemployed on a permanent, temporary or short-term basis. an employee or public servant of any national or provincial government as defined in terms ofPublic Services Act. a member who – is a councillor of any municipal council as defined in the Local Government Municipal StructuresAct (Act No 117 of 1998); is a politician serving in any provincial legislature; or is a politician serving in the National Assembly or the National Council of Provinces;a member of the board of directors of any municipal entity; an employee and a member of a government owned entity as defined in the Public FinanceManagement Act (Act No 1 of 1999); and / or such other meaning ascribed to it by NationalLegislation from time to time.
Local content	Means a portion of the tender price which is not included in the imported content, provided thatlocal manufacture does take place.
Non-firm prices	Means all prices other than “firm” prices
Person	Includes a juristic person.
Price Quotation	An estimate describing the product, stating its price, time of shipment, and specifies the terms ofthe sale and terms of the payment.
Property	Includes all movable and immovable property and intellectual property belonging to ECDC.

Public Private partnership	Means a commercial transaction between ECDC and a private party in terms of which: the private party either performs a function o.b.o. ECDC for a specified or indefinite period, or acquires the use of state property for its own commercial purposes for a specified or indefinite period; the private party receives a benefit for performing the function or by utilizing state property, either by way of: compensation from a revenue fund charges or fees collected by the private party from users or customers of a service provider to them; or a combination of such compensation and such charges or fees

Qualifying Small Entity	means an enterprise with a specified total annual revenue as per Department of Trade and Industry Codes of Good Practice on Broad Based Black Economic Empowerment

Rand value	means the total estimated value of a contract in South African currency, calculated at the time ofbid invitations, and includes all applicable taxes and excise duties.
Related enterprise	Means an entity controlled by a measured entity whether directly or indirectly controlled by thenatural persons who have direct or indirect control over that measured entity or the immediate family of those natural persons.
Service Level Agreement	Shall have the same meaning assigned as "Contract"
Shareholder	Means a person who owns shares in the company and is actively involved in the management ofthe enterprise or business and exercises control over the enterprise.
State	Means: any national or provincial department, national or provincial public entity or constitutionalinstitution within the meaning of the PFMA any municipality or municipal entity national Assembly or the national Council of Provinces; or parliament
Stipulated minimum threshold	Means that portion of local production and content as determined by the DTI
Sub-Contract	Means the primary contractor's assigning, leasing, making out work to, or employing, anotherperson to support such primary contractor in the execution of part of a project in terms of the contract.
Tender	The same meaning is assigned as 'Bid" above.
Threshold	Shall mean the financial limits on the value of goods or services to be procured as set and prescribed in this policy which shall determine the manner in which these goods and services willbe procured
Total revenue	Means the total income of an entity from its operations as determined under South AfricanGenerally Accepted Accounting Practice.
Trust	Means the arrangement through which the property of one person is made over or bequeathed toa trustee to administer such property for the benefit of another person.
Trustee	Means any person, including the founder of a trust, to whom property is bequeathed in order forsuch property to be administered for the benefit of another person.
Value for Money	Means that the item (public-private partnership agreement) results in a net benefit to ECDCdefined in terms of cost, price, quality, quantity, or risk transfer, or a combination thereof.

Part T1: Tendering Procedures

T.1.1

TENDER NOTICE AND INVITATION TO BID

1. **Invitation to Bid**

Eastern Cape Development Corporation (ECDC) wishes to engage with a suitable contractor with a CIDB Grading of 8GB or Higher for the Refurbishment Of ECDC Properties In Butterworth, Cluster F1

The project Cluster consists of sites are situated in Butterworth Eastern Cape, South Africa.

Bashee Court: -32.32598134198612, 28.138085111608067

Kyalami Flats: -32.33078388407187, 28.139948341659238

Msintsi Court - -32.3359546341742, 28.151213804412922

A Detailed scope of services is described in Scope of Work Section Below.

2. **Eligibility to Bid**

a) Bidders should meet the Mandatory Requirements in in order be evaluated T2.1

b) **It is estimated that bidders should have a CIDB grading of 8GB or Higher.**

c) Only those tenderers who are registered with the CIDB prior to submissions of bid with a contractor grading equal in accordance with the sum tendered, or a value determined in accordance with Regulation **25 (1B) or 25 (7A) ofthe Construction Industry Development Regulations, for the above-mentioned grading classes of construction work, are eligible to have their tenders evaluated.**

3. **Payment of Bid Document**

No payment is due to obtain tender documents.

4. **Collection / Availability of Documents**

Documents will be available for downloading from the ECDC website at **www.ecdc.co.za** .

5. **Queries on Bid Document**

Queries relating to the issue of these documents may be addressed to Ms N Norexe,
E- Mail at **tenders@ecdc.co.za and cc nnorexe@ecdc.co.za**

6. Estimated Timeline

Activity		Date	Time
1.	**Placing of Advert**	Daily Dispatch, Treasury, Load on ECDCWebsite for 30 Days. **6 October 2023**	n/a
2.	**Compulsory Briefing Meeting**	A compulsory briefing session will be held at Bashee Court, Fitzpatrick Rd, Butterworth on the of 17 October 2023 at 11h00AM. Following the main briefing session and Site Inspection at the Bashee Court, additional site visit inspections for the project will proceed as follows: - Kyalami Flats, Scanlen St **(12:15 AM)** - Msintsi Court, McKittrick St, Ext 7 **(12:45 AM)**	
3.	**Last day of questions**	**5 days before closing date**	**16H00**
4.	**Final date of submission ofbids**	**6 November 2023**	**12h00**
5.	**Bid Validity**	**90 days**	

6.1. Briefing Session and Site Location

A compulsory briefing meeting to be held at Bashee Court, Fitzpatrick Rd, Butterworth on the of 17 October 2023 at 11h00AM.

For any enquiries relating to this Bid please email the procurement department at tenders@ecdc.co.za, attention N Norexe.

Communication with the Bidders and any clarity on Queries Bid will be posted on the website at www.ecdc.co.zaand will also be communicated to the bidders via email where the Bidder has indicated to ECDC that they are interested in submitting a bid.

Bidders must visit the sites to ensure that their proper assessment of the sites are done and that the Bill ofQuantities is priced correctly.

Bidders must acquaint themselves of the current site conditions, works complexity and associated safetyrisks.

ECDC will only consider bidders that have attended the briefing meeting.

Telephonic, emailed, telexed, facsimile, and late tenders will not be accepted.

Tenders may only be submitted on the tender documentation that is issued.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the **Tender Data**.

T1.2 Tender Data

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Construction Procurement (January 2019) as published in Government Gazette No 42622, Board Notice 423 of 2019 on the 8th of 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
A.1.1	The employer is **Eastern Cape Development Cooperation (ECDC)**
A.1.2	The Tender Documents issued by the Employer comprise the following documents: **THE TENDER** **Part T1: Tendering procedures** T1.1 - Tender notice and invitation to tender T1.2 - Tender data **Part T2 : Returnable documents** T2.1 - List of returnable documentsT 2.2 - Returnable schedules **THE CONTRACT** **Part C1: Agreements and Contract data** C1.1 - Form of offer and acceptance C1.2 - Contract data C1.3 - Performance Bond C1.4 - Adjudicator's contract **Part C2: Pricing data** C2.1 - Pricing Instructions C2.2 - Bill of Quantities **Part C3: Scope of work** C3 - Scope of work **Part C4: Site information** C4 - Site information

A.1.4	**During Tender stage all communication shall be through the Procurement Department forattention:** **Name: Ms. N Norexe,** Address: ECDC Head Office at ECDC HouseOcean Terrace Park Moore Street Quigney, East London Tel: 043 704 5600 E-mail: tenderes@ecdc.co.za cc nnorexe@ecdc.co.za
A.2.1	Only those tenderers who are registered with the CIDB or are capable of being so prior to the evaluationof submissions, in a contractor grading designation equal to or higher than a contractor gradingdesignation determined in accordance with the sum tendered, or a value determined in accordance withCIDB Regulations 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 **GB (General Building Works (GB)** class of construction work; not lower than one level below the required grading designation in the class of works construction works under considerations and possess the required recognition status. 3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a **GB** class of construction work or a valuedetermined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.
A.2.1	**Not Applicable for this Bid** The following tenderers who are registered with the CIDB, or are capable of being so registered prior tothe evaluation of submissions, are eligible to have their tenders evaluated: a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a 8GB class of construction work; and b) contractors registered as potentially emerging enterprises with the CIDB who are registered in one contractor grading designation lower than that required in terms of a) above and who satisfythe following criteria **
A.2.2	**Not Applicable for this Bid** The employer will compensate the tender as follows

A.2.7	The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender. **Paragraph Below is Not Applicable. Bidder to refer to Tender Notice** Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to and tenders will be received only from those tendering entities appearing on the attendance list.
A.2.12	**Not Applicable for this Bid** Main tender offers are not required to be submitted together with alternative tenders.
A.2.12	No alternative tender offers will be considered
A.2.12	**Not Applicable for this Bid** If a tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrably satisfies the Employer's standards and requirements, the details of which may be obtained from the Employer's Agent. Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal. Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements. The modified Pricing Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the Employer's costs in confirming the acceptability of the detailed design.
A.2.13.3	**One original duly signed (by authorised representative) and completed bid document (hardcopy) MUST be submitted inclusive of the terms and conditions of this bid document with any attachments/annexures /returnable required for this Bid.** A PDF soft copy of the duly signed and completed original bid (e.g., PDF format in Flash drive/disc) should be submitted with the Original duly signed and completed hardcopy bid document however non-submission of a soft copy will not result in the Bid being disqualified. ECDC will not be responsible if your bid is not submitted on time All bid documents are to be **completed in permanent black ink**. **No alterations of the Bid Document will be allowed.** **No correction fluid will be allowed. Corrections should be initialled.**

A.2.13.5 A.2.15.1	Valid originally firmly bound signed complete tender document (by authorized representative) must beplaced in the Bid Box on or before the final date and time of submission. The employer's details and address for delivery of tender offers and identification details that are to beshown on each tender offer package are: a) **Location of tender box:** Bid Reference Number: **ECDC/INFRA/17/092023** Project Name: **REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1** Delivered at Physical Address: **ECDC Head Office at ECDC House, Ocean Terrace Park, Moore Street,Quigney, East London,** Bids/Tender offers must be submitted on or before the final date and time of submission of bids asindicated in the Tender Notice and invitation to Tender. **It is the Bidders responsibility to ensure that all the documents are received on** **time. The bid box is open on weekdays between 08h00 and 16h30**
A.2.13.6A.3.5	**Not Applicable for this Bid** A two-envelope procedure is required.
A.2.13.9	Telephonic, email, telegraphic, telex, email, or facsimile tender offers **will not** be accepted.
A.2.15	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation toTender.
A.2.16	The tender offer validity period is 90 days.
A.2.18	The tenderer shall, when requested by the Employer to do so, submit the names of all management andsupervisory 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. **Tenders to submit the associated names being part of the returnable documents failure to submit can result in the tender being eliminated**
A.2.19	Access shall be provided for the following inspections, tests and analysis: The site is available for viewing the location of the works.
A.2.20	The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Contract Data/Contract of this procurement document
A.2.22	**Not Applicable for this Bid** Return all retained tender documents within 28 days after the expiry of the validity period

A.2.23	The tenderer is required to submit with his tender: **1) Tax Compliance** Bidders must ensure compliance with their tax obligations. In Bids where Consortia/Joint venture/Sub-Contractors are involved; each party must submit a separate proof of Tax Compliance Status. The bidders' Tax status will be verified on the CSD prior to the bid award and where the preferred bidders is not compliant, **7 working days** will be granted for remedy, failing which the bidder will be disqualified
A.3.1.1	The Employer will respond to requests for clarification received up to 5 working days before the tender closing time.
A.3.4	**Opening of the Bids** There will be **NO PUBLIC OPENING** of the Bids received; however, the list of bids received may be published on the ECDC website and will be sent to the Bidders that have submitted bids via email. There will be no discussions with any Bidder/Interested Party that Submitted Proposals/ Bids until evaluation have been complete. Any subsequent discussions shall be at the discretion of ECDC.
A.3.11.1	The financial offer will be reduced to a comparative basis.
A.3.11.2	**Not Applicable for this Bid** The procedure for the evaluation of responsive tenders is Method 1

A.3.11.3 **Evaluation Criteria**

This bid is subject to the Preferential Procurement Policy Framework Act and the Preferential Procurement Regulations 2022 as applicable to provincial government business enterprises as listed under schedule 3(D) ofthe Public Finance Management Act and the ECDC Procurement Policy as amended from time to time.

The procedure for evaluation of tenders is as follows:

Mandatory Tender Returnables	Service Providers are to meet all the Mandatory Requirements in order to beevaluated further. Failure to submit the Mandatory Requirements as requiredwill result in the bid being disqualified.
Stage 1	Involves a valuation of local production and content (goods) only. At this stage Bidders must meet the minimum threshold for local production and content as determined by the DTI for local content before they will be evaluated in terms of preferential procurement points. Bidders to complete the Declaration for Local Production and Content for Designated Sectors and Local Content Declaration: **Summary Schedule (Annex C)**
Stage 2	**Functionality:** Involves an evaluation of Functionality only – At this stage Bidders must scorea minimum score of **60% (42/70)** for functionality (services) in order to be evaluated for Stage 2 (Preferential procurement points).
Stage 3	**Preferential Procurement points:** **Price**: Points will be calculated for price on the relevant prices in accordancewith the preference point system, 90/10.

Functionality Criteria	**Maximumnumber of points**
Completed Similar Projects	30
Experience and Qualifications of the Key Personnel	30
Assessment of Financial Capability	10
Maximum possible score for functionality (M_S)	**70**

A.3.11.3	The evaluation criteria and maximum score in respect of each of the criteria are as follows: (Details onFunctionality Evaluation are on T2.1) Functionality shall be scored by not less than three evaluators in accordance with the FunctionalityCriteria Evaluation below. The minimum percentage to be achieved for functionality is **60% (or 42/70 points)**
A.3.13	Tender offers will only be accepted if: a) the tenderer is Tax Compliant ✓ tenderers must ensure compliance with their tax obligations. ✓ in Bids where Consortia/Joint venture/Sub-Contractors are involved; each party must submita separate proof of Tax Compliance Status. ✓ the tenderer Tax status will be verified on the CSD prior to the bid award and where the preferred bidders is not compliant, **7 working days** will be granted for remedy, failing whichthe bidder will be disqualified. b) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation. c) is not under restrictions, or has principals who are under restrictions, preventing participating in theemployer's procurement. d) the tenderer has not: i) abused the Employer's Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect. e) the tenderer is able, in the opinion of the employer, to perform the contract free of conflicts. f) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2003, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competenciesand resources to carry out the work safely. g) the tenderer can, as necessary and in relation to the proposed contract, demonstrate that he or shepossesses 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. h) the tenderer has the legal capacity to enter into the contract. i) the tenderer 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 acourt or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing; j) the tenderer complies with the legal requirements, if any, stated in the tender data; and

A.3.17	The number of paper copies of the signed contract to be provided by the employer is one (1).

Part T2 : Returnable documents

T2.1 - List of returnable documents

T2.2 - Returnable schedules

T2.1 - List of returnable documents

1. Evaluation Criteria

This bid is subject to the CIDB and Preferential Procurement Policy Framework Act and the Preferential ProcurementRegulations 2022 as applicable to provincial government business enterprises as listed under schedule 3(d) of the Public Finance Management Act and the ECDC Procurement Policy as amended from time to time.

The procedure for evaluation of tenders is as follows:

Mandatory Tender Returnables	Service Providers are to meet all the Mandatory Requirements in order to be evaluated further. Failure to submit the Mandatory Requirements as required will result in the bid beingdisqualified.
Stage 1	Involves a valuation of local production and content (goods) only. At this stage Bidders must meet the minimum threshold for local production and content as determined by the DTI for local content before they will be evaluated in terms of preferential procurement points. Bidders to complete the Declaration for Local Production and Content for Designated Sectors and Local Content Declaration: **Summary Schedule (Annex C)**
Stage 2	**Functionality:** Involves an evaluation of Functionality only – At this stage Bidders must score a minimumscore of **60% (42/70)** for functionality (services) in order to be evaluated for Stage 2 (Preferential procurement points).
Stage 3	**Preferential Procurement points:** **Price**: Points will be calculated for price on the relevant prices in accordance with thepreference point system, **90/10**.

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1.1. MANDATORY LIST OF TENDER RETURNABLES

Service Providers are to meet all the Mandatory Tender Requirements in order to be evaluated further for Stage 1. Failureto submit the Mandatory Requirements as required will result in this bid being disqualified.

Description		Disqualification if not submitted with Bid Document or Bidder is found to be Non- Compliant at theTime of Bid Close	Mandatory Requirement for Award
1.	**Bidders must be registered on the National Treasury Central Supplier Database (CSD).** The following information will be verifiedon the National Treasury Central Supplier Database: • Business Registration including details of directorship and membership, - The bidders' Business Registration Status will be verified on the CSD prior to the bid award and where the preferred bidders status is under deregistration, **7 working days** will be granted for remedy, failing which the bidder will bedisqualified. • ID Number, • Government Employee • Tender Defaulting and Restriction Status. Should the Tender be a restricted supplier or a defaulting supplier they will be disqualified **Onus on the Service Provider** Onus is on the Service Provider to make sure that all these are active and compliant on the CSD at the time of bid closing andtender award. ECDC will verify if the Service Provider has been registered on CSD. Service Provider to submit CSD Number as required in theCover Page. **It is the responsibility of the Service Provider to ensure that the correct CSD Number is provided**.	Yes	Yes

	If Service Provider is not registered on CSD by the time of closing ofthe bid they will not be considered for evaluation. **<u>Directors in the Service of State</u>** Where a person within the Bidding Entity is an Employee of theState, Bidder should a. submit a signed letter on a letter head from their Accounting Officer/Accounting Authority (AO/AA of the Government Institution where they are employed) stating that they are not prohibited from conducting business with the State in terms of Section 8 of the Public Administration Management Act, 2012 (Act No.11 of 2014- "The PFMA") b. submit a signed letter on a letter from their AO/AA granting permission to perform other remunerative work outside of their employment where the PAMA does not apply to suchan employee **ECDC reserves the right to verify such information from their AO/AA.** **<u>JV's and Consortium</u>** Where the Bidder is a JV/Consortium, each firm must be registeredon the CSD.		

2.	**Tax Compliance Requirements:** • Bidders must ensure compliance with their tax obligations. • The bidders' Tax status will be verified on the CSD prior to the bid award and where the preferred bidders is not compliant, **7 working days** will be granted for remedy, failing which the bidder will be disqualified. • **In Bids where Consortia/Joint venture/sub-contractors are involved, each party must submit a separate proof of Tax Compliance Status Certificate/SARS Pin Number/CSD Number.**	No	Yes
3.	**CIDB Requirements:** Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with **Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations**, for a **8GB (General Building)** or higher 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 **GB (General Building)** class of construction work; not lowerthan one level below the required grading designation in the class of works construction works under considerations andpossess the required recognition status. 3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a GB class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations. **ECDC will verify whether the Bidders have an active and valid CIDB registration as required above**	Yes	Yes
4.	**Annexure C** – Supplier Information **(Completed and Signed by the Delegated Authority) AttachDelegation of Authority**	Yes	Yes

5.	**Annexure L.–** C.1.1 Form of Offer and Acceptance Offer; **(Completed and Signed by the Delegated Authority) AttachDelegation of Authority**	Yes	Yes
6.	Annexure E - (SBD 4): Bidders disclosure ; **(Completed and Signed by the Delegated Authority) AttachDelegation of Authority**	Yes	Yes
7.	**Annexure H:** Compulsory Declaration **(Completed and Signed bythe Delegated Authority) Attach Delegation of Authority**	Yes	Yes
8	**Declaration with regards to Company /Firm Location** **Attach** a proof of address to claim points for the Eastern Cape baselocality as the specific goal as advised in the tender / quotation qualifies the company/firm for the PPR of 2022 preference points claim. **Failure to submit the declaration and proof of address for eachJV /Consortium member may result in awarding of 0 (zero) points preference points under Eastern Cape Locality.** This information will be verified from the FICA documents (PhysicalAddress, Utility Bill, Telephone, Tax Clearance, lease agreement submitted by the bidder. **Failure to submit the declaration and proof of address may result in awarding of 0 (zero) points preference points under Eastern Cape locality.**	Yes	No
9	**Annexure I –** (SBD 6.1.): Preferential Points Claim (Signed andCompleted**).** **CSD report will be used to confirm other specific goals listed inTable 1 of the SBD 6.1 document.** **Failure to submit the preference points claim and proof of address may result in awarding of 0 (zero) points preferencepoints under Eastern Cape locality.**		

10	**Duly signed Letter of Authority MUST be submitted authorisingthe individual to sign** on behalf of the bidder if: **a)** If there are more than one Owner/ Director / Shareholder / Member / Trustee etc. **OR** **b)** If there is only one Director / Shareholder / Member / Trustee / Owner etc. and they are not the one completing the bid document. **Note:** The Letter of Authority MUST be signed by all directors of theBidder (or a signed Board Resolution authorising the signatory will be accepted).	Yes	Yes
11.	**ANNEXURE J (which includes annex C) :** Declaration of Local Content (SBD 6.2) **(Completed and Signed by the Delegated Authority) Attach Delegation of Authority**	Yes	Yes
12.	**Annex D – Local Content Declaration (Summary Schedule)** (Completed and Signed by the Delegated Authority) Attach Delegation of Authority	Yes	Yes
13.	**Financial Details of Bidder** **Attach** Bank Account Confirmation Letter and Bank Account Code Report letter from Financial Institution where the bank account is held.	No	No
14.	**Priced Bills of Quantities completed in black ink**.	Yes	Yes
The following will be applicable to Joint Ventures/Consortium			
Consortium/Joint Venture Agreement to enter in a Consortium / JointVenture signed by all Consortium Members who are Duly Authorized.		Yes	Yes
Resolution of the Board of Directors to enter into a Consortium or Joint Venture from each member firm of the Consortium/Joint Venture for thisBid.		Yes	Yes
Letter of Authority of Signatory(individual) authorizing the Signatory to signon behalf of the Consortium/JV. The Letter of Authority should be from each member firm and must be signed by all directors of each member firm (or Board Resolution will beaccepted).		Yes	Yes

KINDLY NOTE THAT, FAILURE TO SUBMIT THE REQUIRED MANDATORY DOCUMENTATION WITH THE BID WILL RESULT IN YOUR BID BEING DISQUALIFIED WITHOUT FURTHER CONSIDERATION.

Bidders shall take note of the following conditions:

1. The successful bidder will be required to submit a Letter of Good Standing from the Compensation Commissionwithin 14 days after award and before the contract can be signed.
2. Performance Guarantee to be submitted within 14 days after award.
3. The Bid Validity period is 90 days.
4. An approved and project specific Health and Safety file within 14 days upon appointment.
5. A Proposed Project Execution Plan & Program to proceed with works with occupied buildings within 14 days upon appointment.
6. Submission of a Construction Works Insurance for all 3 Sites within 14 upon appointment.
7. No correction fluid to be used and all errors to be initialled.

Queries relating to the issue of these documents may be addressed in writing to:
Ms N Norexe
tenders@ecdc.co.za or nnorexe@ecdc.co.za

1.2. STAGE 1: EVALUATION OF LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS AND LOCAL CONTENT DECLARATION

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 ECDC Supply Chain Management Policy, 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 ECDC Supply Chain Management policy makes provision for the promotion of local production and content.

1.2 ECDC Supply Management Policy prescribes that in the case of designated sectors, tenders must be advertised 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 three stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage functionality with a minimum threshold of 60% and third stage of price and specific goals.

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 27

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.

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.

2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid: 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 table 1 below.

   Bidder that fails to meet the minimum stipulated threshold for local production and content will be unacceptable and will not proceed to stage 2.

……..

SIGNATURE(S) OF BIDDERS(S)

DATE: ……..

ADDRESS: ……..

……..

……..

WITNESSES:

1. ……..

2. ……..

1.3. STAGE 2 - FUNCTIONALITY

Involves an evaluation of Functionality only – At this stage Bidders must score a minimum score of **60%** for functionality(services) to be evaluated for stage 3 (Preferential procurement points).

Bidder to note the following for Functionality Evaluation:

a) Adequate proof supporting the points claimed must be provided. (e.g., *documents, agreements, qualifications,previous experience, certifications, etc*.)

b) Failure to submit relevant information with supporting document and adequate proof may result in ECDC not beingable to allocate points for the Evaluation Criteria outlined below.

Table 1: Functionality Evaluation Criteria – Stage 2

EXPERIENCE (Read with Schedule T.2.2.2(a) requirements)	Allocated Points
(Bidder to submit a reference letter for each project completed.)	
5 or more acceptable reference letters	30
4 or less than 5 acceptable reference letters	20
3 or less than 4 reference letters	15
2 or less than 3 acceptable reference letters	10
Less than 2 acceptable reference letters	0
Document to be submitted for points allocation **The Bidder must demonstrate that they have the relevant experience in alterations and renovations of general residential building works submitting completed T.2.2.2 (a) reference forms or reference letters and/or completion certificates of completed Building Works (Read with Schedule T.2.2.2(a) requirements)** Reference letter/ Completion Certificate should indicate the following. • Signature of the client or Client's Letter head or Client Stamp • Company name, contact person, contact details (telephone number and email address) • Value of the project • Description Works carried out • Works have been completed on time /within the stipulated contract period • Good or better quality of workmanship • Assessment of the quality of work performed	
EXPERTISE (CV's & Certified Copies of Qualifications of Key Personnel to be included in Returnable) **Construction Manager with relevant tertiary qualifications from a Built Environment Faculty (National Diploma or Higher)**	
10 years or more experience on building contracts	15
5 years but less than 10 years' experience on building contracts	10
3 years but less than 5 years on building contracts	5
Less than 3 years' experience on building projects	0

Construction Supervisor with relevant Built Environment qualifications (N6 or higher)	
10 years or more experience on building projects	10
5 years but less than 10 years' experience on building projects	5
3 years but less than 5 years' on building projects	3
Less than 3 years' experience on building projects	0
Safety Officer with valid SACPCMP registration as a Construction Health and Safety Officer	
5 years or more experience on building projects	5
3 years but less than 5 years' experience on building projects	3
1 years but less than 3 years' experience on building projects	2
Less than 1 years' experience on building projects	0
BANK RATING	
Bidder to provide a bank stamped/verified letter.	
Bank rating Code A	10
Bank rating Code B	7
Bank rating Code C	5
Bank rating Code D	3
Bank rating Code E to H	0
Note: (to get points here, bidder must submit both required documents)	
TOTAL MAXIMUM ACHIEVEABLE POINTS	**70**
MINIMUM POINTS REQUIRED	**42**

a) Only bids that have achieved the minimum qualifying score for functionality will be evaluated further in terms of preferential procurement points (Stage 3).

b) All bids that fail to achieve the minimum score will be disqualified.

c) The minimum qualifying score (in a percentage) for functionality shall be calculated as follows:

$$Ps = \frac{So}{Ms} x100$$ Where:

Ps = percentage scored for functionality by bid under consideration

So = Total score for bid under consideration

Ms = Maximum possible score

The percentages of each panel member shall be added and divided by the number of panel members to establish theaverage percentage obtained by each bidder for functionality.

1.4. Stage 3 – Preference Procurement Point - Evaluation Criteria

Preference points for this bid shall be awarded for price and the specific goal. The maximum points for this bid areallocated as follows:

CRITERIA	POINTS
Price	90
Specific Goal	10
TOTAL POINTS	100

a) Points awarded for price based will be based on the 90/10 Preference point systems

b) The points scored by the tenderer/bidder for Price will be added to the points scored for ECDC specific goal to obtainthe bidder's total points scored out of 100 points.

c) In the event that two or more bids have scored equal total points, the successful bid will be the one scoring the highest number of preference points for ECDC specific goal

d) However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for specific goal, the successful bid must be the one scoring the highest score for functionality.

e) Should two or more bidders/tenderers be equal in all respects, the award shall be decided by the drawing of lots.

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

g) Points scored will be rounded off to the nearest 2 decimal places.

h) Price

(i) The lowest acceptable bid will score 80 points for price.

(ii) The following formula will be used to calculate the points out of 80 for price in respect of the bid/tender.

(iii) Preference points for price shall be calculated after prices have been brought to a comparative basis taking intoaccount all factors of non-firm prices and all unconditional discounts;

DETAILS	90/10 PREFERENCE POINT SYSTEM
Rand value (competitive bids or quotations)all applicable taxes included.	• Equal and above R50 million, inclusive of all applicable taxes.
Formulae	$Ps = 8 \left(1 - \frac{Pt - P\min}{P\min} \right)$
	Ps = Points scored for comparative price of bid / offer underconsideration Pt = Comparative price of bid / offer under consideration Pmin = Comparative price of lowest acceptable bid / offer

Annex A

Standard Conditions of Tender

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Construction Procurement (January 2019) as published in Government Gazette No 42622, Board Notice 423 of 2019 on the 8th of August 2019 (See www.cidb.org.za).

A.1 General

A.1.1 Actions

A.1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. Intheir dealings with each other, they shall discharge their duties and obligations as set out in A.2 and A.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

A.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 conflictof 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 ofinterest to whoever is responsible for overseeing the procurement process at the start of any deliberationsrelating 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, asappropriate.

Note: 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improperacts 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 orfamily 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.

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

A.1.2 Tender Documents

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

A.1.3 Interpretation

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

A.1.3.2 These conditions of tender, the tender data and tender schedules which are required for tender evaluationpurposes, shall form part of any contract arising from the invitation to tender.

A.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 fulfil his or her duties impartially.

ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way fortheir personal or corporate benefit; or

iii) in compatibility or contradictory interests exist between an employee and the tenderer who employsthat employee.

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

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

d) **fraudulent practice** means the misrepresentation of the facts 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.

A.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 aform 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.

A.1.5 Cancellation and Re-Invitation of Tenders

A.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.

A.1.5.2 The decision to cancel a tender invitation must be published in the same manner in which the originaltender invitation was advertised

A.1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for thesecond time.

A.1.6 Procurement procedures

A.1.6.1General

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

A.1.6.2Competitive negotiation procedure

A.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 A.3.4, the employer shall announce only the names of the tenderers who make a submission.The requirements of A.8 relating to the material deviations or qualifications which affect the competitive position oftenderers shall not apply.

A.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 associatedinformation.

Notwithstanding the provisions of A.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 newrequirements which restrict or distort competition or have a discriminatory effect.

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

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

A.2 Tenderer's obligations

A.2.1 Eligibility

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

A.2.1.2Notify 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 soprior to the closing time for tenders.

A.2.2 Cost of tendering

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

A.2.2.2The 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.

A.2.3 Check documents

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

A.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 theemployer only for the purpose of preparing and submitting a tender offer in response to the invitation.

A.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.

A.2.6 Acknowledge addenda

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

A.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.

A.2.8 Seek clarification

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

A.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 requiredin terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified adviceregarding insurance.

A.2.10 Pricing the tender offer

A.2.10.1Include 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 thoseapplicable fourteen (14) days before the closing time stated in the tender data.

A.2.10.2Show VAT payable by the employer separately as an addition to the tendered total of the prices.

A.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.

A.2.10.4State 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.

A.2.11 Alterations to documents

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

A.2.12 Alternative tender offers

A.2.12.1Unless 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.

A.2.12.2Accept that an alternative tender offer must be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

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

A.2.13 Submitting a tender offer

A.2.13.1Submit 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.

A.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.

A.2.13.3Submit 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.

A.2.13.4 Sign (Signature by authorized personnel) the original and all copies of the tender offer where required interms 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.

A.2.13.5Seal 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.

A.2.13.6Where 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 returnabledocuments 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.

A.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outsideonly the employer's address and identification details as stated in the tender data.

A.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.

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

A.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.

A.2.15 Closing time

A.2.15.1Ensure 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.

A.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.

A.2.16 Tender offer validity

A.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period statedin the tender data after the closing time stated in the tender data.

A.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.

A.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).

A.2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordancewith the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".

A.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 oftender 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 preferredtenderer following a competitive selection process, should the Employer elect to do so.*

A.2.18 Provide other material

A.2.18.1Provide, 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 timefor submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

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

A.2.19 Inspections, tests and analysis

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

A.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.

A.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.

A.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 expiryof the validity period stated in the tender data.

A.2.23 Certificates

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

A.3 The employer's undertakings

A.3.1 Respond to requests from the tenderer

A.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 tenderdocuments.

A.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 submita 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 failsto 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 outcomeof the prequalification process.

A.3.2 Issue Addenda

If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the periodfrom the date that tender documents are available until three (3) working days before the tender closing time statedin 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.

A.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.

A.3.4 Opening of tender submissions N/A

A.3.4.1Unless 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.

A.3.4.2Announce 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 hisprices, number of points ECDC specific goal and time for completion for the main tender offer only.

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

A.3.5 Two-envelope system

A.3.5.1Where 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.

A.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain incontention 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 numberof points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

A.3.6 Non-disclosure

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relatingto 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.

A.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.

A.3.8 Test for responsiveness

A.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.

A.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.

A.3.9 Arithmetical errors, omissions and discrepancies

A.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.

A.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 A.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.

A.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.

A.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.

A.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.

A.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.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

The activities associated with evaluating tender offers are as follows:

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.

A.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.

A.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.

A.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 possessesthe 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 inrespect 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.

A.3.14 Prepare contract documents

A.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employeras 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 other revisions agreed between the employer and thesuccessful tenderer.

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

A.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.

A.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.

A.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 contractas soon as possible after completion and signing of the form of offer and acceptance.

A.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.

ANNEXURE B

ADDITIONAL CONDITIONS OF TENDER OF ECDC

Where the CIDB standard condition of tender does not address the following, clauses on the ECDC standard conditions of tender, the ECDC Standard condition of tender will be additional.

1.1 Alteration or withdrawal of Proposals

Bidders may withdraw their proposal by written notification on or before the date Specified for the evaluation ofBids.

1.2 Alternative Bid

Alternative Bids will not be accepted.

1.3 Costs for preparation of Proposals/presentations

The costs incurred by Bidders in respect of the attendance of any briefing or presentation meetings if necessary orcosts incurred in preparing any proposal will be borne by the Bidder and the ECDC shall in no way be liable to reimburse such costs incurred.

1.4 Ownership of Proposals and presentations

The ECDC shall on receipt of any proposal relating to this request and submitted in accordance with the procedureset out herein, shall become the owner thereof and the ECDC shall not be obliged to return any proposal.

1.5 Tax Clearance Certificate requirement

It is a condition of all bids inclusive of foreign bidders / individuals) that the South African taxes of the successfulbidder must be in order.

The bidders' Tax status will be verified on the CSD prior to the bid award and where the preferred bidders is notcompliant, **7 working days** will be granted for remedy, failing which the bidder will be disqualified.

In Bids where Consortia/Joint venture/Sub-Contractors are involved, each party will be verified separately forproof of Tax Compliance Status.

In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate TaxClearance Certificate. Applications for the Tax Clearance Certificates may also be made via eFiling. In order touse this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za

1.6 Confidentiality

The entire process of calling for Bids was initiated by the ECDC in terms of its procurement policy and is confidential. All deliberations in respect of the acceptability or otherwise of the

proposals shall be conducted in closed sessions and members of the Evaluation and Procurement Committee and prospective service providersare bound to treat all discussions as highly confidential.

The service provider shall not divulge directly or indirectly to any other person than a person employed by ECDC, make copies or extracts of any of the information obtained during this assignment, while they may have access toECDC's trade secrets, confidential information which may include, specifications, plans, drawings, pattern, samples, written instructions, notes, memoranda, technical information, know-how or process or method or any other records of whatsoever nature without the written consent of ECDC and shall surrender all these items to ECDC on termination of the assignment or on demand of ECDC.

The service provider shall not be entitled to make use of the information whether for its own benefit or that of others, to make available or derive any profit from any of the information or knowledge specifically related to thebusiness or affairs of ECDC.

Any document shall remain the property of ECDC and shall be returned (all copies) to ECDC on completion ofthe contract if so required by ECDC.

1.7 Inventions Patent and Copy-Rights

The service provider cedes, assigns and transfers to ECDC all rights, title and interest in and to any and all copyright in all works and inventions which relates to the business of ECDC (which includes, but is not limited to, methodologies and products) which arises within the course and scope of this services will be assigned to ECDC.

The Service Provider shall Provide ECDC the sole and exclusive right to alter and adapt the work.

The service provider shall indemnify ECDC against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by ECDC.

1.8 Ethics

Any attempt by an interested Bidder to obtain confidential information, or enter into unlawful agreements with competitors or influence the various ECDC Procurement Committee's or the ECDC during the process of examining, evaluating and comparing Bids/Proposals or Proposals will lead to the rejection of its bid/quotation/proposal in its entirety.

The Bidder must declare any business or other interests it has with the ECDC or any employee of the ECDC, as per the declaration of interest form annexed hereto marked in Section D; failing which the Bidder shall be automatically disqualified from further participation in the Bid or call for proposals. The disqualification will be applicable at any stage of the bidding and / or engagement process.

1.9 Competition

Bidders and their respective officers, employees and agents are prohibited from engaging in

any collusive action with respect to the bidding process which serves to limit competition amongst bidders.

In general, the attention of bidders is drawn to Section 4(1) (b) (iii) of the Competition Act 1998 (Act No. 89 of 1998)(the Competition Act) that prohibits collusive biding.

An agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder/s is / are or a contractor(s) was / were involved in collusive bidding.

If bidders have reason to believe that competition issues may arise from any submission of a response to this bidinvitation they may make, they are encouraged to discuss their position with the competition authorities before submitting response.

Any correspondence or process of any kind between bidders and the competition authorities must be documentedin the responses to this invitation to bid.

In this regard bidders are required to complete the Certificate of Independence Bid Determination, failing which theBidder shall be automatically disqualified from further

participation in the Bid or call for proposals. The disqualification will be applicable at any stage of the bidding and / or engagement process.

If a bidder (s) or contractor (s), based on reasonable grounds or evidence obtained by ECDC, has /have engagedin the restrictive practice referred to above, ECDC may refer the matter to the Competition Commission for investigation and possible imposition of an administrative penalty as contemplated in Section 59 of the Competition Act 89 of 1998.

If a bidder(s) or contractor(s) has / have been found guilty by the Competition Commission of the restrictive practice referred to above, ECDC may in addition and without prejudice to any other remedy provided for, invalidate the bid(s) for such an item(s) offered, and / or terminate the contract in whole or part, and / or restrict the bidder(s) or contractor(s) for conducting business with the public sector for a period of not exceeding 10 (ten) years and / or claim damages form the bidder(s) / contractor(s) concerned.

1.10 Cancellation of Bid Process

The ECDC shall be entitled, within its sole and entire discretion, to cancel this Bid/Call for Proposals and/or Quotations at any time and shall notify the interested service providers accordingly. The ECDC shall in no way beliable for any damages whatsoever, including, without limitation, damages for loss of profit, in any way connected with the cancellation of this bid. The publication of the bid does not commit the ECDC to appoint any of the qualifying Bidders.

1.11 Interviews

In terms of the bid evaluation process short listed bidders may be interviewed. This will entail the bidder being invited to a venue as determined by the bid committee. All transport and accommodation costs incurred by thebidder will be for the bidders

account and will not be reimbursed in any way. Failure to attend a scheduled interview will lead to immediate disqualification from the bid process. The ECDC reserves the right to appoint abidder without conducting interviews.

1.12 Contract award

The successful bidder will be notified of the bid award in writing by the Procurement Department.

The acceptance of any proposal shall only be confirmed with the conclusion of a final written signed service levelagreement or any other appropriate agreement between the ECDC and the successful Bidder, in terms of which the rights and duties of the parties are recorded, which agreement shall regulate the relationship between the ECDC and the Successful Bidder.

As a guideline regarding the content of the service level agreement, the bidder is referred to the **JBCC Series 2000 Principal Building Agreement Edition 6.2 prepared by the Joint Building Contracts Committee, May 2018**

Until such time that an appropriate agreement has been concluded in writing between the ECDC and the successful Bidder, no rights shall be conferred nor shall any legitimate expectations be conferred to the successful Bidder tocarry out the works or services provided for in this Bid.

The ECDC, the Accounting Officer and the Bid Committee (as the case may be) does not bind itself to accept eitherthe lowest (price),highest (points) or any other bid and reserves the right to accept the bid which it deems to be inthe best interest of the Institution even if it implies a waiver by the ECDC, the Accounting Officer, or the Bid Committee, (as the case may be) of certain requirements which the ECDC, the Accounting Officer, the Bid Committee, (as the case may be) considers to be of minor importance and not complied with by the bidder.

The ECDC will not entertain any request of feedback before the final awarding of the contract.

1.13 Supplier Due Diligence

ECDC reserves the right to conduct supplier due diligence prior to final award or at any time during the contractperiod. This may include site visits and requests for additional information.

1.14 Disclaimer

This Bid document has been prepared for the purpose of providing information to interested Bidders. The provision of any additional information about the organization to Bidders, are disclosed and will be made available to enable the prospective Bidders to submit comprehensive proposals.

Interested Bidders are accordingly required to conduct their own due diligence in respect of the ECDC and its business operations and the nature and scope of the services required.

HOTLINE DETAIL

HOTLINE DETAILS	
Hotline Name:	ECDC Ethics & Fraud Hotline
Contact Number:	0800 116 665
WhatsApp Number:	0860 004 004
Dedicated Email Address:	ecdc@behonest.co.za aidc@behost.co.za
SMS Number:	48691
Free Post	BNT165, Advance Call Pty (Ltd), Brooklyn Square, 0075
Website Link	www.behonest.co.za
Chat	www.behonest.co.za

Whilst all due care has been taken in connection with the preparation of this bid, ECDC makes no representations or warranties that the content of the bid or any information communicated to or provided to Bidder(s) during the bidding process is, or will be, accurate, current or complete. ECDC, and its employees and advisors will not be liable with respect to any information communicated which may not be accurate, current or complete.

If Bidder(s) finds or reasonably believes it has found any discrepancy, ambiguity, error or inconsistency in this bid or any other information provided by ECDC (other than minor clerical matters), the Bidder(s) must promptly notify ECDCin writing of such discrepancy, ambiguity, error or inconsistency in order to give ECDC an opportunity to consider what corrective action is necessary (if any).

Any actual discrepancy, ambiguity, error or inconsistency in the bid or any other information provided by ECDC will, ifpossible, be corrected and provided to all Bidder(s) without attribution to the Bidder(s) who provided the written notice.

All persons (including Bidder(s)) obtaining or receiving the bid and any other information in connection with the Bid orthe Tendering process must keep the contents of the Bid and other such information confidential, and not disclose oruse the information except as required for the purpose of developing a proposal in response to this Bid All persons (including Bidder(s)) obtaining or receiving the bid and any other information in connection with the Bid or the Tendering process must keep the contents of the Bid and other such information confidential, and not disclose or use the information except as required for the purpose of developing a proposal in response to this Bid

T2.2. - Returnable schedules

T2.2.1 – Declarations

T2.2.2 – Functionality Evaluation Schedules

ANNEXURE C: SUPPLIER INFORMATION/COMPANY ENTERPRISE QUESTIONNAIRE Note: Mandatory Requirement. Failure to complete and Sign this document will result in the bid being nonresponsive. Important Note: The following particulars must be furnished. In the case of a joint venture, separateenterprise questionnaires in respect of each partner must be completed and submitted.	
Legal Name of Bidder : (Same as CSD)	
Trading Name of Bidder: (Same as CSD)	
Registration Number (Same as CSD)	
Physical Address	
Postal Address	
Contact Person (of the JV if a the Bidderis a JV)	
Title/Position in the Firm	
Mobile Number (of the JV if a the Bidderis a JV)	
Bidder Telephone Number (of the JV if athe Bidder is a JV)	
Facsimile Number	
Email Address of Contact Person (of theJV if a the Bidder is a JV)	
Email Address of Bidder(of the JV if a theBidder is a JV)	
VAT Registration Number (Same as CSD)	

Central Supplier Database Number	**MAAA**		
CIDB Registration Number (CRS Number)			
Are the Accredited Representative in SouthAfrica for the Goods/Services/Works Offered?	□ Yes □ No (If Yes enclose Proof)	**Are you a foreign basedsupplier for the Goods/Services/Works Offered?**	□ Yes □ No (If Yes, answer the questionnaire Below)

QUESTIONAIRE TO BIDDING FOREIGN SUPPLIERS

Is the Entity a resident of the Republic of South Africa	□ Yes	□ No
(RSA)Does the Entity have a branch in the RSA?	□ Yes	□ No
Does the Entity have a permanent establishment in the RSA?	□ Yes	□ No
Does the Entity have any source of income in the RSA	□ Yes	□ No

If the answer is "No" to all of the above, then it is not a requirement to register for a Tax Compliance Statussystem pin code from the South African Revenue (SARS) and if not register

VERY IMPORTANT

Where a person within the Bidding Entity is an Employee of the State, Bidder should

a. submit a signed letter on a letter head from their Accounting Officer/Accounting Authority (AO/AA of the Government Institution where they are employed) stating that they are not prohibited from conducting business with the State in terms of Section 8 of the Public Administration Management Act, 2012 (Act No.11of 2014- "The PFMA")
b. submit a signed letter on a letter from their AO/AA granting permission to perform other remunerative workoutside of their employment where the PAMA does not apply to such an employee

ECDC reserves the right to verify such information from their AO/AA

SERVICE PROVIDER ACKNOWLEDGEMENT OF REQUEST AND TERMS AND CONDITIONS:

I.....(NAME) HEREBY ACCEPT THE TERMS OF THIS REQUEST FOR BID AND ACKNOWLEDGE THAT I AM APPROPRIATELY DELEGATED TO RESPOND ON BEHALF OF (ATTACH DELEGATION OF AUTHORITY)

.....

(NAME OF BIDDER).

Print Name _____ Date _____

Designation _____ Signature _____

Annexure D: Location		
1	Where is the Bidder's main office?	
	Other offices:	

Annexure G: BIDDER'S DISCLOSURE (SBD4)

Note: Mandatory Requirement. Failure to complete and Sign this document will result in the bid being non responsive.

1. PURPOSE OF THE FORM

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

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

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest[1] in the enterprise, employed by the state? **YES/NO**

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

Full Name	Identity Number	Name of State institution

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

2.2.1 If so, furnish particulars:

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

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

2.3.1 If so, furnish particulars:

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

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

---

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

3 DECLARATION

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

3.1 I have read and I understand the contents of this disclosure;

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and completein every respect;

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture orconsortium[2] will not be construed as collusive bidding.

3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitorregarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly,to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with anyofficial of the procuring institution in relation to this procurement process prior to and during the bidding processexcept to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practicesrelated to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in termsof the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.
I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6

OFPFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE

SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature Date

.....
Position Name of bidder

SIGNATURE OF BIDDER OF DELEGATED AUTHORITY		**DATE**	

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

ANNEXURE H: STATEMENT OF CONSENT TO DATA PROCESSING

In terms of the provisions of the Protection of Personal Information Act, 2013 (Act No. 4 of 2013)

1. I,_____(full names of the **client/applicant**),

   Identity number_____**("the applicant")** do hereby grant my consent to the Eastern Cape Development Corporation ("the ECDC") and its appointed processor to process my personal data for the purpose of any or all of the undermentioned actions, being thelegitimate reasons for processing and/or using my personal data.
2. I accept that my personal information will only be utilized for the purposes it was collected, that the information will only be retained for as long as is necessary and required by law, and that I have the right to view such information at any time, as well as requested correction or deletion of my personal information held by the ECDC.
3. I am aware that I may withdraw my consent at any time by using the relevant Data Subject Consent WithdrawalForm.
4. I herewith consent to the ECDC official / staff member / employee or agent collecting and having access to mypersonal information.
5. I expressly consent to the ECDC official / staff member / employee or agent to collect and process this information for the purpose of **considering my application for funding / leasing / employment alternativelyfor considering our bid document**.
6. I expressly consent to the ECDC or its official / staff member / employee or agent having access to my personalinformation contained in my application for lease, employment, funding, my bid document or any other administrative document required by the ECDC for processing.
7. I expressly consent to the ECDC or its official / staff member / employee or agent using my personal informationto communicate with me in person / via telephone / email / video call / fax / WhatsApp / any form of social media.
8. I expressly consent that the ECDC or its official / staff member / employee or agent may discuss any of my personal information with any of its officials / staff members / employees or agents that may at any stage of myapplication be involved in considering same and forward any such information to any ECDC relevant committeeor forum.
9. I expressly consent to the ECDC or its official / staff member / employee or agent **handing over any outstanding accounts to debt collection third parties (applicable to properties/development finance andbusiness support unit).**
10. I expressly consent to the ECDC or its official / staff member / employee or agent handing over my personal information for purposes of verification of my credit profile or record, references or any purpose required in termsof the law.

SIGNATURE of the DELEGATED AUTHORITY		**DATE**	

Annexure I: Preference Point Claim in terms of the Preferential Procurement Regulations 2022

SBD 6.1

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

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

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

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1. GENERAL CONDITIONS

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

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

1.2 Principle applicable for this tender /quotation is:

a) The value of this bid is estimated not to exceed R50 000 000 (all applicable taxes included) and therefore theapplicable preference point system for this tender is the 80/20 preference point system.

1.3 Points for this tender shall be awarded for:

(a) Price; and

(b) Specific Goals.

1.4 The maximum points for this tender are allocated as follows:

	POINTS
PRICE	90
SPECIFIC GOALS	
51% and above black owned enterprise	5
Eastern Cape Based Supplier	2
51 % and above woman owned enterprises.	2
51 % and above youth owned enterprises	1
Total points for Price and SPECIFIC GOALS	**100**

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

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

2. DEFINITIONS

"tender" means a written offer in the form determined by an organ of state in response to an invitation to

(a) provide goods or services through price quotations, competitive tendering process or any other method envisagedin legislation;

(b) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes lessall unconditional discounts;

(c) **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, andincludes all applicable taxes;

(d) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenuefor the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts,excluding direct sales and disposal of assets through public auctions; and

(e) **"the Act"** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

2.3. POINTS AWARDED FOR PRICE

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

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

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

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

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

2.4.1. POINTS AWARDED FOR PRICE

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

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

$\frac{Ps}{max} = 80\left(1 + \frac{Pt - P}{P\,max}\right)$ or $Ps = 90\left(1 + \frac{Pt - P\,max}{Pmax}\right)$

Where

Ps	=	Points scored for price of tender under consideration
Pt	=	Price of tender under consideration

Pmax = Price of highest acceptable tender

3. POINTS AWARDED FOR SPECIFIC GOALS

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

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

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

(d) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

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

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

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

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
SPECIFIC GOALS				
51% and above black owned enterprises	5			
Eastern Cape Based Supplier	2			
51 % and above woman owned enterprises.	2			
51 % and above youth owned enterprises	1			

DECLARATION WITH REGARD TO COMPANY/FIRM

3.3. Name of company/firm.....

3.4. Company registration number: .....

3.5. TYPE OF COMPANY/ FIRM

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

Company[TICK APPLICABLE BOX]

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

iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that theclaims are correct;

iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contracthave not been fulfilled, the organ of state may, in addition to any other remedy it may have —

(a) disqualify the person from the tendering process;

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

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

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

(e) forward the matter for criminal prosecution, if deemed necessary

.....

SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME: . . . . . .

DATE: . . . . . .

ADDRESS: . . . . . .

. . . . . .

. . . . . .

. . . . . .

ANNEXURE L: SBD 6.2 – Declaration Certificate For Local Production And Content for Designated Sector Note: Mandatory Requirement. Failure to complete and Sign this document will result in the bid being non responsive.

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 ECDC Supply Chain Management Policy, 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 ECDC Supply Chain Management policy makes provision for the promotion of local production and content.

1.2 ECDC Supply Management Policy prescribes that in the case of designated sectors, tenders must be advertised 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 three stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage functionality with a minimum threshold of 60% and third stage of price and specific goals.

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) 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 100

Where

x imported content

y bid price 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, one week (7 calendar days) prior to the closing date of the bid as indicated in paragraph 4.1 below.

The SABS approved technical specification number SATS 1268:2011 is accessible on http:/www.thedti/industrialdevelopment/ip.jsp at no cost

1.6 A bid will 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. Definitions

2.1 "bid" includes advertised competitive bids, written price quotations or proposals

2.2 bid price" price offered by the bidder, excluding value added tax (VAT);

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

2.4 "designated sector" means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production,

2.5 where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;

2.6 "duly sign" means a Declaration Certificate for Local Content that has been signed by the 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).

2.7 "imported content" means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and

2.8 which costs are inclusive of the costs abroad, plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;

2.9 "Local content" means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;

2.10 "Stipulated minimum threshold" means that portion of local production and content as determined by the Department of Trade and Industry; and

2.11 **"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 contractor in the execution part of a project in terms of the contract

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

Table 1

Designated Sector /Sub-sector/ Industries	Minimum threshold for local content
Steel Products and Component for Construction	100%
Electrical Cables	90%
Cement – All	100%
Plastic Pipes	100%

3. **Does** any portion of the services, works or goods 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, one week (7 calendar days) prior to the closing date of the bid.

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

Indicate the rate(s) of exchange against the appropriate currency in the table below:

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 the meeting the stipulated minimum threshold for local content, the DTI must be informed accordingly in order for the DTI to verify and consultation with the AO/AA provide directive in this regard.**

LOCAL CONTENT DECLARATION BY THE 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. ECDC/INFRA/17/092023 .....

ISSUED BY: (Procurement Authority / Name of Institution):

.....

NB
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.

Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on http://www.thdti.gov.za/industial development/ip.jsp

Bidders should first complete Declaration D After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C.

Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph C below.

Declaration D and E should be kept by the Bidder 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:

The facts contained herein are within my own personal knowledge.

I have satisfied myself that

- 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

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 and information contained in Declaration D and E which has been consolidated in Declaration C above :

Bid price, excluding VAT (y)	R
Imported content (x)	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 Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

NAME: _____

SIGNATURE: _____ **DATE:**

WITNESS No. 1 _____ **DATE:**

WITNESS No. 2 **DATE:**

The below listed declarations are attached in the next three pages that follow;

- **Declaration C SATS 1286.2011**
    - Local Content Declaration – Summary Schedule

- **Declaration D SATS 1286.2011**
    - Imported Content Declaration – Supporting Schedule to declaration C
- **Declaration E SATS 1286.2011**
    - Local Content Declaration _- Supporting Schedule to declaration C

- Bidders should first complete annexure D, after completing annexure D, bidders should complete annexure E and then consolidate the information on annexure C.
- Annexure C should be submitted with the with the bid documentation on the closing date in order to substantiate the declaration made on annexure J.
- The successful bidder is required to continuously update annexures C, D and E with the actual for the duration of the contract.
- Bidders should obtain copies of certificates of trading the subject materials from manufactures/suppliers and attach them in the bid document in order to substantiate annexure J above.

Templates of Declarations C, D and E follow:

Annex C

Local Content Declaration - Summary Schedule

(C1)	**Tender No.**	ECDC/INFRA/17/092023					
(C2)	**Tender description:**	Refurbishment of ECDC Properties, Cluster F1					
(C3)	**Designated product(s)**	Steel, Cement, Plastic Pipes, Electrical Products					
(C4)	**Tender Authority:**	Eastern Cape Development Corporation					
(C5)	**Tendering Entity name:**						
(C6)	**Tender Exchange Rate:**	USF		EU		GBP	
(C7)	**Specified local content %**						

Note: VAT to be excluded from all calculations

		Calculation of local content						Tender summary			
Tender item No's (BoQ reference)	**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)*
	STEEL PRODUCTS										
9/44	75mm Wide brickforce						100.00%	185 m			
10/44	150mm Wide brickforce						100.00%	1585 m			
1/51	0,55mm Saflok 410 concealed fix roof sheeting						100.00%	936 m2			
2/51	Ridge/hip capping to suit profile						100.00%	68 m			
4/51	0,53mm IBR roof sheeting						100.00%	1790 m2			
6/51	Headwall/sidewall flashing						100.00%	26 m			
7/51	Counter flashing						100.00%	26 m			
8/51	Barge flashing bent three times with 580mm girth						100.00%	142 m			
19/77	Hot dip Galvanised Steel door lining for half brick						100.00%	108 No.			
20/77	Hot dip Galvanised Steel door lining for one brick						100.00%	174 No.			
21/77	89mm Diameter x 4mm thick x 8,38kg/m column						100.00%	8 No.			
23/78	45 x 45 x 5mm thick Steel angle						100.00%	462 m			
25/78	ClearVu or other approved fencing panels						100.00%	20 No.			
26/78	Wispeco Roll-a-door rollup door						100.00%	8 No.			
27/78	Ditto, but size 2400 x 2200mm high						100.00%	20 No.			
80/116	2100mm High ClearVu fencing						100.00%	677 m			
81/116	2900mm High H-Profile secure post						100.00%	92 No.			
82/116	2900mm High H-Profile corner post						100.00%	40 No.			
83/116	2,5mm Thick x 100mm high sawtooth spikes						100.00%	760 m			
84/117	Steel double gate, size 2200 x 2100mm high						100.00%	1 No.			
85/117	Steel double gate, size 2450 x 2100mm high						100.00%	9 No.			
86/118	Vehicular gate, size 2700 x 2100mm high						100.00%	21 No.			
87/118	Vehicular gate, size 3400 x 2100mm high						100.00%	1 No.			
	PLASTIC PRODUCTS										
1/91	uPVC Pipe 50mm diam						100.00%	604 m			
2/91	uPVC Pipe 110mm diam						100.00%	835 m			
6/91	50mm Bend						100.00%	100 No.			
7/91	110mm Bend						100.00%	167 No.			

Continues on next page

Annex C

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)*
9/91	50mm Access bend						100.00%	140 No.			
10/91	110mm Access bend						100.00%	167 No.			
11/91	50mm Access junction						100.00%	279 No.			
12/91	110mm Access junction						100.00%	167 No.			
20/92	15mm Polycop pipe						100.00%	513 m			
21/92	15mm Polycop pipe chased into walls						100.00%	334 m			
	CEMENT PRODUCTS										
1/81	3:1 Cement screed 25mm thick						100.00%	1384 m2			
2/81	3:1 Cement screed 50mm thick (average)						100.00%	53 m2			
4/81	4:1 Cement pleaster on walls						100.00%	4299 m2			
5/81	4:1 Cement plaster on concrete soffits in patchings						100.00%	400 m2			
7/82	5:1 Cement plaster on walls in patchings						100.00%	194 m2			
50/112	20MPa/19mm concrete in walkways						100.00%	30 m3			
92/119	20MPa/19mm concrete in walkways						100.00%	1 m3			
115/121	25MPa/19mm concrete in strip footings						100.00%	1 m3			
116/121	25MPa/19mm concrete in surface beds						100.00%	0,3 m3			
	ELECTRICAL CABLES										
2.4.1	PVC 3c 600/1000V copper cable 10mm2						90.00%	240 m			
2.4.3	PVC 3c 600/1000V copper cable 6mm2						90.00%	112 m			
2.4.5	Bare copper earth wire 6mm2						90.00%	240 m			
2.4.1	Bare copper earth wire 4mm2						90.00%	112 m			
2.4.3	2.5mm2 BCEW						90.00%	160 m			
2.4.5	1.5mm2 BCEW						90.00%	1600 m			
2.4.7	Insulated wiring 4mm2 Black						90.00%	160 m			
2.4.10	4mm2 Red						90.00%	160 m			
2.4.12	2.5mm2 Black						90.00%	800 m			
2.4.14	2.5mm2 Red						90.00%	800 m			
2.4.16	1.5mm2 Black						90.00%	800 m			
2.4.18	1.5mm2 Red						90.00%	800mm			

Signature of Tenderer from Annex B

Date: _____

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

Annex D

Imported Content Declaration - Supporting Schedule to Annex C

(D1)	**Tender No.**	ECDC/INFRA/17/092023
(D2)	**Tender description:**	Refurbishment of ECDC Properties, Cluster F1
(D3)	**Designated Products:**	As before (Annex C)
(D4)	**Tender Authority:**	ECDC
(D5)	**Tendering Entity name:**	
(D6)	**Tender Exchange Rate:**	Pula

EU R 9.00 GBP R 12.00

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: Forign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Summary: Tender Qty	Summary: 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: Forign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Summary: Tender Qty	Summary: 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

Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Calculation of imported content: Forign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Summary: Quantity imported	Summary: 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

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

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

(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:

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1)	**Tender No.**	ECDC/INFRA/17/092023
(E2)	**Tender description:**	Refurbishment of ECDC Properties, Cluster F1
(E3)	**Designated products:**	As before (Annex C)
(E4)	**Tender Authority:**	ECDC
(E5)	**Tendering Entity name:**	

Note: VAT to be excluded from all calculations

Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
	(E6)	*(E7)*	*(E8)*
	STEEL PRODUCTS		
	75mm Wide brickforce		
	150mm Wide brickforce		
	0,55mm Saflok 410 concealed fix roof sheeting		
	Ridge/hip capping to suit profile		
	0,53mm IBR roof sheeting		
	Headwall/sidewall flashing		
	Counter flashing		
	Barge flashing bent three times with 580mm girth		
	Hot dip Galvanised Steel door lining for half brick		
	Hot dip Galvanised Steel door lining for one brick		
	89mm Diameter x 4mm thick x 8,38kg/m column		
	45 x 45 x 5mm thick Steel angle		
	ClearVu or other approved fencing panels		
	Wispeco Roll-a-door rollup door		
	Ditto, but size 2400 x 2200mm high		
	2100mm High ClearVu fencing		
	2900mm High H-Profile secure post		
	2900mm High H-Profile corner post		
	2,5mm Thick x 100mm high sawtooth spikes		
	Steel double gate, size 2200 x 2100mm high		
	Steel double gate, size 2450 x 2100mm high		
	Vehicular gate, size 2700 x 2100mm high		
	Vehicular gate, size 3400 x 2100mm high		
	PLASTIC PRODUCTS		
	uPVC Pipe 50mm diam		
	uPVC Pipe 110mm diam		
	50mm Bend		
	110mm Bend		
	50mm Access bend		
	110mm Access bend		
	50mm Access junction		
	110mm Access junction		
	15mm Polycop pipe		
	15mm Polycop pipe chased into walls		
	CEMENT PRODUCTS		
	3:1 Cement screed 25mm thick		
	3:1 Cement screed 50mm thick (average)		
	4:1 Cement pleaster on walls		
	4:1 Cement plaster on concrete soffits in patchings		
	5:1 Cement plaster on walls in patchings		
	20MPa/19mm concrete in walkways		
	20MPa/19mm concrete in walkways		
	25MPa/19mm concrete in strip footings		
	25MPa/19mm concrete in surface beds		
	ELECTRICAL PRODUCTS		
	PVC 3c 600/1000V copper cable 10mm2		
	PVC 3c 600/1000V copper cable 6mm2		
	Bare copper earth wire 6mm2		
	Bare copper earth wire 4mm2		
	2.5mm2 BCEW		
	1.5mm2 BCEW		
		Continues on next page	

Annex E

Insulated wiring 4mm2 Black		
4mm2 Red		
2.5mm2 Black		
2.5mm2 Red		
1.5mm2 Black		
1.5mm2 Red		
	(E9) **Total local products (Goods, Services and Works)**	

(E10) **Manpower costs** (Tenderer's manpower cost)

(E11) **Factory overheads** (Rental, depreciation & amortisation, utility costs, consumables, etc.)

(E12) **Administration overheads and mark-up** (Marketing, insurance, financing, interest, etc.)

(E13) **Total local content**

This total must correspond with Annex C - C24

Signature of Tenderer from Annex B

Date: _____

T2.2 .2- Functionality Evaluation Schedules

T2.2.2a: SIMILAR PROJECTS COMPLETED SUCCESSFULLY WITH REFERENCE LETTERS

Note: Mandatory Returnable Schedule. Failure to submit as required will result in the bid being nonresponsive.

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Bidders are required to provide a schedule of similar work in complexity that was successfully completed with contactable references as per the attached forms below.

OR

Submit a reference letter that indicates the following

Signature of the Client

On Clients Letter Head or Client Stamp

Company Name, contact person, contact details (telephone number and email etc)

Value of the Project

Scope of works carried out

Works have been completed on time/within stipulated contract period

Good or better workmanship

Reference No 1

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Sir/Madam,

We are in the process of evaluating_____ for the above project.

Tenderers Company Name

They have listed you as a reference. Please evaluate the contractor's performance on the criteria listed below by ticking the appropriate boxes. This form to be submitted with the bid. If you have any questions, please do not hesitate to contactus.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

1. **KNOWLEDGEABLE IN THE FIELD IN WHICH THIS BID RELATES TO**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

2. **TIME PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

3. **FINANCIAL PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

4. **COMMENTS:**

_____

Project Manager/Principal Agent: _____ **Place company stamp below:**

Tel: _____

E-mail Address _____ _____

Signature:_____ Date: _____

Reference No 2

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Sir/Madam,

We are in the process of evaluating _____ for the above project.

Tenderers Company Name

They have listed you as a reference. Please evaluate the contractor's performance on the criteria listed below by ticking the appropriate boxes. This form to be submitted with the bid. If you have any questions, please do not hesitate to contactus.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

1. **KNOWLEDGEABLE IN THE FIELD IN WHICH THIS QUOTATION RELATES TO**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

2. **TIME PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

3. **FINANCIAL PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

4. **COMMENTS:**

_____

Project Manager/Principal Agent: _____ **Place company stamp below**:Tel: _____

E-mail Address: _____

Signature: _____ Date: _____

Reference No 3

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Sir/Madam,

We are in the process of evaluating_____for the above project.

Tenderers Company Name

They have listed you as a reference. Please evaluate the contractor's performance on the criteria listed below by ticking the appropriate boxes. This form to be submitted with the bid. If you have any questions, please do not hesitate to contactus.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

1. **KNOWLEDGEABLE IN THE FIELD IN WHICH THIS QUOTATION RELATES TO**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

2. **TIME PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

3. **FINANCIAL PERFORMANCE**

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

4. **COMMENTS:**

_____

Project Manager/Principal Agent: _____**Place company stamp here:**

Tel: _____

E-mail Address:_____

Signature:_____ Date: _____

Reference No 4

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Sir/Madam,

We are in the process of evaluating_____for the above project.

Tenderers Company Name

They have listed you as a reference. Please evaluate the contractor's performance on the criteria listed below by ticking the appropriate boxes. This form to be submitted with the bid. If you have any questions, please do not hesitate to contactus.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

1. KNOWLEDGEABLE IN THE FIELD IN WHICH THIS QUOTATION RELATES TO

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

2. TIME PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

3. FINANCIAL PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

4. COMMENTS:

_____

Project Manager/Principal Agent: _____**Place company stamp here:**

Tel: _____

E-mail Address:_____

Signature:_____ Date: _____

Reference No 5

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Sir/Madam,

We are in the process of evaluating _____ for the above project.

Tenderers Company Name

They have listed you as a reference. Please evaluate the contractor's performance on the criteria listed below by ticking the appropriate boxes. This form to be submitted with the bid. If you have any questions, please do not hesitate to contactus.

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

k) KNOWLEDGEABLE IN THE FIELD IN WHICH THIS QUOTATION RELATES TO

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

l) TIME PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

m) FINANCIAL PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

n) COMMENTS:

_____

Project Manager/Principal Agent: _____ **Place company stamp here:**

Tel: _____

E-mail Address: _____

Signature: _____ Date: _____

T2.2.2 b – Construction Method Statement

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Work Organization Program and Scheduling

Bidder to provide a Detailed Gantt Chart (Works Breakdown Structure Program) Showing:

- **Summary tasks**
- **Indicating a Critical Path**
- **Time-lines within the project period**

Work organization program and scheduling to be attached here

T2.2.2 c – Key Personnel Qualifications

(Construction Manager)

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Attach documents & Certified Copies of Qualifications here

T2.2.2 e – Key Personnel Qualifications

(Construction Supervisor)

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Attach documents & Certified Copies of Qualifications here

T2.2.2 e – Key Personnel Qualifications

(Construction Health and Safety Officer)

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Attach documents & Certified Copies of Qualifications here

T2.2.2 e – Key Personnel Qualifications

(Artisan)

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Attach documents & Certified Copies of Qualifications here

T2.2.2 f – Key Personnel Qualifications

(Skilled Staff)

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Attach documents & Certified Copies of Qualifications here

T2.2.2 g – Key Personnel Experience

(Semi-Skilled Support Staff)

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Attach documents & Certified Copies of Qualifications here

T2.2.2 h – Company Experience

(1) Practical Completion Certificate (completed projects)

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Supply and Installation of related projects with similar scope of works and complexity will be considered forevaluation purposes.

Projects with no-related scope of works will score no points for functionallity.

Attach document here

T2.2.2 i – Contactable References

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Provide a schedule of contactable references

Attach document here

T2.2.2 i – Contactable References

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Provide a Bank Reference Letter and Bank Rating Certificate

Attach document here

T2.2.2 j – Scope of Works and Detailed Specifications

Note: **Mandatory Returnable Schedule. Failure to submit as required will result in the bid being non-responsive.**

Project title:	**REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1**
Bid No:	**ECDC/INFRA/17/092023**

Tenderer herewith confirms by signing below that he has read and understand the full scope of works andassociated detailed specifications of this contract.

The client will not entertain any additional amount claimed due to a lack of understanding the full spectrum ofthe works.

Company Name:
.....
.....

Tenderer
Name:.....Signature.....Date.....

Company Authorised/

Accountable Person
Name:.....Signature.....Date.....

Company Stamp:

THE CONTRACT

Part C1: Agreements and Contract data

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

C1.1 - Form of offer and acceptance

Annexure L:

C.1.1 FORM OF OFFER AND ACCEPTANCE OFFER

Note: Mandatory Requirement. Failure to complete and Sign this document will result in the bid being nonresponsive.

OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect ofthe following works:

PROJECT: REFURBISHMENT OF ECDC PROPERTIES IN BUTTERWORTH, CLUSTER F1

Bid No : ECDC/INFRA/17/092023

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, and by submitting this Offer has accepted the Conditions ofTender.

By the representative of the Tenderer, deemed to be duly authorized, 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 bedetermined in accordance with the Conditions of Contract identified in the Contract Data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:

R ..... (in figures)

. . . . . .

. . . . . .

.....

Rand (in words)

This offer may be accepted by the Employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the Tenderdata, whereupon the tenderer becomes the party named as the Service Provider in the conditions of Contract identified in the Contract Data.

THIS OFFER IS MADE BY THE FOLLOWING LEGAL ENTITY: (cross out block which is not applicable)

Company or close corporation:

. . . . . .

. . . . . And:

whose registration number is:

. . . . . .
. . . . . .
And: whose income tax reference number
is:

. . . . . .

Trading under the name and style of:		
AND WHO IS: Represented herein, and who is duly authorized to do so, by: Mr/Mrs/Ms: . . . . In his/her capacity as:	**Note:** A resolution/power of attorney, signed by all the directors/ members/ partners of the legal entity must accompany this offer, authorizing the representative to make this offer.	
SIGNED FOR THE TENDERER:		
Name of Representative	**Signature**	**Date**
SIGNED BY WITNESS:		
Name of Representative	**Signature**	**Date**

The tenderer elects as its *domicilliumcitandi et executandi* in the Republic of South Africa, where any and all legalnotices may be served, as (physical address)

.....
.....

.....

.....

Other contact details of the tenderer are:
Telephone no

:.....
.....
Cellular phone no

:.....
.....
Fax no

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

:.....
.....
Banker

:.....
.....
Branch

:.....
.....

ACCEPTANCE

By signing this part of this form of offer and acceptance, ECDC accepts the bidder's offer. Acceptance of the bidder'soffer shall form an agreement between the ECDC and the bidder 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 the contract to be concluded.

- Agreements and Contract Data, (which includes this Agreement)
- Pricing data
- Scope of work.
- Site information and drawings and documents or parts thereof, which may be incorporated by reference into the volumes above.

Deviations from and amendments to the documents listed in the bid data and any addenda thereto as listed in the bid schedules as well as any changes to the terms of the offer agreed by the bidder and ECDC during this process of offerand acceptance, are contained in the schedule of deviations attached to and forming part of this agreement. No amendments to or deviations from said documents are valid unless agreed by both parties.

The bidder shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the ECDC's Legal Department to arrange documentation to be provided in terms of the conditions of contract identified in the contract. Failure to fulfil any of these obligations in accordance with those termsshall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the bidder receives onefully completed original copy of this document, including the schedule of deviations (if any). Unless the bidder 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.

Signed for the ECDC:

Name of representative	**Capacity**	**Date**
…… …… …… ……		
Address	**Signature**	

Witnessed by:

Name of witness	**Signature**	**Date**

Schedule of deviations

Notes:

1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited tothose permitted in terms of the Conditions of Tender.

2. A Tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid becomes the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.

3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to thetender document and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.

4. Any change or addition to the tender document arising from the above agreements and recorded here, shall also be incorporated into the final draft of the Contract.

1	**Subject**	
	Details	
2	**Subject**	
	Details	
3	**Subject**	
	Details	

By the duly authorised representative signing this agreement, the Employer and the Bidder agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the bid data and addenda thereto as listed in the bid schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Bidder and the employer during this process of acceptance.

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

Signed for the ECDC

Name of Representative	Capacity	Signature

Signed by Bidder:

Name of Representative	Capacity	Signature

C1.2 - Contract data

PART 1: DATA PROVIDED BY THE EMPLOYER

CONDITIONS OF CONTRACT

The JBCC Series 2000 Principal Building Agreement Edition 6.2 prepared by the Joint Building Contracts Committee, May 2018 is applicable to this Contract and is incorporated herein by reference a copy of these.

Copies of these Conditions of Contract may be obtained from the offices of ECDC, Ocean Terrace, Quigney, EastLondon Tel. No. +27 43 704 5600

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

The Contract Data and JBCC Principal Agreement Edition 6.2, May 2018 shall have precedenceover the Drawings, Scope of Work and Standardised Specifications in the interpretation of any ambiguity or inconsistency.

The following contract specific data are applicable to this Contract:

CONTRACT SPECIFIC DATA	
Clause	**Data**
27.1	The Latent Defects Liability Period is: **Five (5) years** commencing at the start of the construction period and ending 5 years fromthe date of final completion.
24.0	The time for achieving Practical Completion for this project is: fifteen (15) calendar months from the Commencement Date. The construction period excludes the period that will be taken for acquiring the construction work Permit. (Contractor to communicate this with theClient)
1.0	The name of the Employer is: **Eastern Cape Development Corporation**
1.0	The name of the Employer's Agent is: **Impendulo Design Architects (Pty) Ltd**
1.0	The address of the Employer for receipt of communications is: Physical address: Eastern Cape Development Corporation Ocean Terrace Park Moore Street Quigney, East London 5201 Tel : +27 43 704 5600 Postal address: P.O Box 11197 Southernwood 5213
CONTRACT SPECIFIC DATA: ADDITIONAL CLAUSES	
	The following additional clause applies:- In the event of any discrepancy or conflict between any parts of the Contract Documents, the

	order of preference shall be as follows: 1. Project Specifications 2. Special Conditions of Contract 3. General Conditions of Contract 4. Conditions of Tender 5. Standardized/Particular Specifications 6. Contract Drawings (No drawings available) 7. Schedule of Quantities
	The following additional clause applies: - The latest guidelines from National Treasury will apply with regards to a cession of contract and/or cession of payments.
	The Employer's Agent shall obtain the specific approval of the Employer before executing any of his functions or duties according to the Contract: • Nomination of Employer's Agent's Representative • Employer's Agent's authority to delegate • Non-working times • Suspension of the Works • Acceleration instead of extension of time
	The following additional clause applies:- The onus rests with the Contractor to raise any item about which the Contractor may be uncertain, with the Employer's Agent's Representative. Any advice given to the Contractorby the Employer's Agent's Representative in response to matters so raised shall not be construed as instructions and shall be held to have been given without prejudice.
	The following additional clause applies:- The Employer or the Employer's Agent under delegated authority, reserves the right to obtain the services of consultants on any matter pertaining to this contract; the employmentof such consultants forms no part of this contract; a consultant's advice and/or documentation is to be followed only if the Employer's Agent or the Employer's Agent's Representative so instructs.

	All references to "design" are deemed to be deleted and the Contractor shall bear no liability in respect of the Projects design, other than the temporary works and items clearlyindicated to design on drawings.
	The following additional clause applies:- The Employer and the Contractor shall enter into an agreement to complete the work required for the construction of the works in terms of the provisions of Section 37(2) of theOccupational Health and Safety Act (Act 85 of 1993) and the Construction Regulations promulgated thereunder. An agreement is included in the Contract Document (C1.1 of Contract Data) and shall be completed and submitted to the Employer together with a letter of good standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer) withinfourteen (14) days after the Commencement Date. The Contractor shall ensure that any letter of good standing shall be timeously renewed in order that it remains in full force for the duration of the Contract.
	The total value of work executed by subcontractors shall be agreed on by the Client andawarded Bidder upon acceptance of appointment.
	The documentation required before commencing with the Works execution are: • Health and Safety Plan • Methodology on how to proceed with work while building is occupied • Initial programme • Security • Insurance • Letter of Good Standing from the Compensation Commissioner (if not insured with aLicensed Compensation Insurer)
	The time to submit the documentation required before commencement of the Works is: **14 calendar days**
	Access and possession of site shall not be exclusive to the Contractor but will be shared bythe Employers management / maintenance and operational staff on site.
	The Contractor shall bear all costs and charges for special and temporary rights of wayrequired by him in connection with access to the Site.
	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 commencing on 15 December 2023 and ending on 8 January 2024 both days included.**
	The following additional clause shall apply: Should the Employer's Agent permit work outside of normal Employer working hours (viz Mondays to Fridays inclusive sunrise to sunset) and on Saturdays, Sundays or on any of the non-working days stated in the Appendix and if he deems the presence of the Employer's Agent's Representative or other duly authorised representative to be necessary, the Contractor will be liable for the cost of such supervision (calculated at a daily rate of 1/130 of the annual salary of such representative). Where the Employer's Agent has ordered such work, the

	salary of the representative will be to the account of the

	Employer. A minimum of 24 hours notification of intent to work outside normal working hours shall beregarded as sufficient notice as set out above.
	The penalty for failing to complete the Works is: 2.00c / R100 of contract value (excl.VAT) per calendar day
	The security to be provided by the Contractor shall be performance guarantee and shall be one of the alternatives scheduled in Part 2: Data Provided by the Contractor. The performance guarantee shall contain the wording of the document included in PART 3 (Pro-forma Forms).
	The percentage allowances to cover overhead charges for day work are as follows: • 15% of the gross remuneration of workmen and foremen actually engaged in the daywork; • 15% on the net cost of materials actually used No allowance will be made for work done, or for materials and equipment for which daywork rates have been quoted at tender stage.
	The following additional clause shall apply: Should the necessity arise the Contractor will have to provide a Bank approved guarantee asa payment guarantee for the sum of materials off site, on proof of order of such materials
	The provisional sums stated in the Schedule of Quantities are net amounts covering theactual expenditure which the Employer may incur.
	The following additional clause shall apply: The Works are measured in accordance withthe current Standard System of in Measuring Building Works South Africa, No claims arising from the method of measurement will be entertained.
	Contract Price Adjustment: **YES** The value of all certificates issued shall be adjusted in accordance with the Contract PriceAdjustment Provision (CPAP) The base month is the month prior to tender closing.

The additional Conditions of Contract are:	
	Public Liability: R 10 million per incident.
	Add new sub clause **Applicable labour laws** The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice No R63

The additional Conditions of Contract are:	
	of 25 January 2002, as reproduced below, shall apply to works described in the scope of workas being labour-intensive and which are undertaken by unskilled or semi-skilled workers. **1 Introduction** 1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms andconditions do NOT apply to persons employed in the supervision and management of a SPWP. 1.2 In this document – (a) "department" means any department of the State, implementing agent or contractor; (b) "employer" means any department, implementing agency or contractor that hiresworkers to work in elementary occupations on a SPWP; (c) "worker" means any person working in an elementary occupation on a SPWP; (d) "elementary occupation" means any occupation involving unskilled or semi-skilledwork; (e) "management" means any person employed by a department or implementing agencyto administer or execute an SPWP; (f) "task" means a fixed quantity of work; (g) "task-based work" means work in which a worker is paid a fixed rate for performing atask; (h) "task-rated worker" means a worker paid on the basis of the number of taskscompleted; (i) "time-rated worker" means a worker paid on the basis of the length of time worked. **2 Terms of work** 2.1 Workers on a Special Public Works Programme (SPWP) are employed on a temporarybasis. 2.2 A worker may NOT be employed for longer than 24 months in any five-year cycle on aSPWP. 2.3 Employment on a SPWP does not qualify as employment as a contributor for the purposesof the Unemployment Insurance Act 30 of 1966. **3 Normal hours of work** 3.1 An employer may not set tasks or hours of work that require a worker to work– (a) more than forty hours in any week; (b) on more than five days in any week; and (c) For more than eight hours on any day. 3.2 An employer and worker may agree that a worker will work four days per week. Theworker may then work up to ten hours per day. 3.3 A task-rated worker may not work more than a total of 55 hours in any week to completethe tasks allocated (based on a 40-hour week) to that worker. **4 Meal breaks** 4.1 A worker may not work for more than five hours without taking a meal break of at leastthirty minutes duration. 4.2 An employer and worker may agree on longer meal breaks.

	4.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannotbe performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.

The additional Conditions of Contract are:	
	4.4 A worker is not entitled to payment for the period of a meal break. However, a worker whois paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break. **5 Special conditions for security guards** 5.1 A security guard may work up to 55 hours per week and up to eleven hours per day. 5.2 A security guard who works more than ten hours per day must have a meal break of atleast one hour or two breaks of at least 30 minutes each. **6 Daily rest period** Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until thetime the worker starts work on the next day. **7 Weekly rest period** Every worker must have two days off every week. A worker may only work on their day offto perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work (“emergency work”).

8 Work on Sundays and public holidays

8.1 A worker may only work on a Sunday or public holiday to perform emergency or securitywork.

8.2 Work on Sundays is paid at the ordinary rate of pay.

8.3 A task-rated worker who works on a public holiday must be paid –

(a) the worker's daily task rate, if the worker works for less than four hours;

(b) Double the worker's daily task rate, if the worker works for more than four hours.

8.4 A time-rated worker who works on a public holiday must be paid –

(a) the worker's daily rate of pay, if the worker works for less than four hours on the publicholiday;

(b) Double the worker's daily rate of pay, if the worker works for more than four hours onthe public holiday.

9 Sick leave

9.1 Only workers who work four or more days per week have the right to claim sick-pay interms of this clause.

9.2 A worker who is unable to work on account of illness or injury is entitled to claim one day'spaid sick leave for every full month that the worker has worked in terms of a contract.

9.3 A worker may accumulate a maximum of twelve days sick leave in a year.

9.4 Accumulated sick leave may not be transferred from one contract to another contract.

9.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sickleave.

9.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sickleave.

9.7 An employer must pay a worker sick pay on the worker's usual pay day.

9.8 Before paying sick pay, an employer may require a worker to produce a certificate statingthat the worker was unable to work on account of sickness or injury if the worker is –

(a) absent from work for more than two consecutive days; or

(b) absent from work on more than two occasions in any eight-week period.**8**

9.9 A medical certificate must be issued and signed by a medical practitioner, a qualifiednurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.

9.10 A worker is not entitled to be paid sick leave for a work-related injury or occupationaldisease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

The additional Conditions of Contract are:	
	10 Maternity leave 10.1 A worker may take up to four consecutive month's unpaid maternity leave. 10.2 A worker is not entitled to any payment or employment-related benefits during maternityleave.
	10.3 A worker must give her employer reasonable notice of when she will start maternity leaveand when she will return to work. 10.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks afterthe birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so. 10.5 A worker may begin maternity leave – (a) four weeks before the expected date of birth; or (b) on an earlier date – (i) if a medical practitioner, midwife or certified nurse certifies that it is necessaryfor the health of the worker or that of her unborn child; or (ii) if agreed to between employer and worker; or (c) On a later date, if a medical practitioner, midwife or certified nurse has certified thatthe worker is able to continue to work without endangering her health. 10.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillbornchild may take maternity leave for up to six weeks after the miscarriage or stillbirth. 10.7 A worker who returns to work after maternity leave, has the right to start a new cycle oftwenty-four months employment, unless the SPWP on which she was employed has ended. **11 Family responsibility leave** 11.1 Workers who work for at least four days per week, are entitled to three days paid familyresponsibility leave each year in the following circumstances: (a) when the employee's child is born; (b) when the employee's child is sick; (c) in the event of a death of (i) the employee's spouse or life partner; (ii) The employee's parent, adoptive parent, grandparent, child, adopted child,grandchild or sibling. **12 Statement of conditions** 12.1 An employer must give a worker a statement containing the following details at the start ofemployment: (a) the employer's name and address and the name of the SPWP; (b) the tasks or job that the worker is to perform; and (c) the period for which the worker is hired or, if this is not certain, the expected durationof the contract; (d) the worker's rate of pay and how this is to be calculated; (e) The training that the worker will receive during the SPWP. 12.2 An employer must supply each worker with a copy of these conditions of employment.

The additional Conditions of Contract are:	
	13 Keeping records 13.1 Every employer must keep a written record of at least the following: (a) the worker's name and position; (b) in the case of a task-rated worker, the number of tasks completed by the worker; (c) in the case of a time-rated worker, the time worked by the worker; (d) Payments made to each worker. 13.2 The employer must keep this record for a period of at least three years after thecompletion of the SPWP.

14 Payment

14.1 An employer must pay all wages at least monthly in cash or by cheque or into a bankaccount.

14.2 A task-rated worker will only be paid for tasks that have been completed.

14.3 An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted aninvoice to the employer.

14.4 A time-rated worker will be paid at the end of each month.

14.5 Payment must be made in cash, by cheque or by direct deposit into a bank accountdesignated by the worker.

14.6 Payment in cash or by cheque must take place –

(a) at the workplace or at a place agreed to by the worker;

(b) during the worker's working hours or within fifteen minutes of the start or finish ofwork;

(c) In a sealed envelope which becomes the property of the worker.

14.7 An employer must give a worker the following information in writing:

(a) the period for which payment is made;

(b) the numbers of tasks completed or hours worked;

(c) the worker's earnings;

(d) any money deducted from the payment;

(e) The actual amount paid to the worker.

14.8 If the worker is paid in cash or by cheque, this information must be recorded on theenvelope and the worker must acknowledge receipt of payment by signing for it.

14.9 If a worker's employment is terminated, the employer must pay all monies owing to thatworker within one month of the termination of employment.

15 Deductions

15.1 An employer may not deduct money from a worker's payment unless the deduction isrequired in terms of a law.

15.2 An employer must deduct and pay to the SA Revenue Services any income tax that theworker is required to pay.

15.3 An employer who deducts money from a worker's pay for payment to another person mustpay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.

15.4 An employer may not require or allow a worker to –

(a) repay any payment except an overpayment previously made by the employer bymistake;

(b) state that the worker received a greater amount of money than the employer actuallypaid to the worker; or

(c) Pay the employer or any other person for having been employed.

The additional Conditions of Contract are:	
	16 Health and safety 16.1 Employers must take all reasonable steps to ensure that the working environment ishealthy and safe. (e) Report any accident, near-miss incident or dangerous behaviour by another personto their employer or manager. 16.2 A worker must – (a) work in a way that does not endanger his/her health and safety or that of any otherperson; (b) obey any health and safety instruction; (c) obey all health and safety rules of the SPWP; (d) use any personal protective equipment or clothing issued by the employer;
	17 Compensation for injuries and diseases 17.1 It is the responsibility of the employers (other than a contractor) to arrange for all personsemployed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993. 17.2 A worker must report any work-related injury or occupational disease to their employer ormanager. 17.3 The employer must report the accident or disease to the Compensation Commissioner. 17.4 An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents athome. **18 Termination** 18.1 The employer may terminate the employment of a worker for good cause after following afair procedure. 18.2 A worker will not receive severance pay on termination. 18.3 A worker is not required to give notice to terminate employment. However, a worker whowishes to resign should advise the employer in advance to allow the employer to find a replacement. 18.4 A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, theworker may be re-engaged if a position becomes available for the balance of the 24- month period. 18.5 A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomesavailable for the balance of the 24-month period.

	19 Certificate of service 19.1 On termination of employment, a worker is entitled to a certificate stating – (a) the worker's full name; (b) the name and address of the employer; (c) the SPWP on which the worker worked; (d) the work performed by the worker; (e) any training received by the worker as part of the SPWP; (f) the period for which the worker worked on the SPWP;

The additional Conditions of Contract are:	
	(g) Any other information agreed on by the employer and worker."

PART 2: DATA PROVIDED BY THE CONTRACTOR

The Contractor is advised to read the **JBCC Series 2000 Principal Building Agreement Edition 6.2 prepared by the Joint Building Contracts Committee, May 2018** in order to understand the implications of this data which is required tobe completed.

Copies of these conditions of contract may be obtained from the Principal Agent

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

<table>
<tr><th>Clause</th><th>Data</th></tr>
<tr><td></td><td>The name of the Contractor is:

. . . . . .
. . . . . .</td></tr>
<tr><td></td><td>The address of the Contractor for receiving notices is:
<u>Physical Address</u>: <u>Postal Address:</u>

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Telephone:. . . . . .
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Facsimile:. . . . . .
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E-mail:. . . . . .</td></tr>
<tr><td></td><td>
<table>
<tr><th>Type of Security</th><th>Contractor’s Choice
Indicate “Yes” or “No”</th></tr>
<tr><td>The security to be provided by the Contractor shall be one of the following:</td><td></td></tr>
<tr><td>1. Variable construction guarantee</td><td></td></tr>
<tr><td>2. Fixed construction guarantee</td><td></td></tr>
<tr><td>3. Advanced payment guarantee</td><td></td></tr>
<tr><td>4. 10% Security Adjustment (Retention)</td><td></td></tr>
</table>
</td></tr>
</table>

C1.3 – Form of Guarantee

Part C2: Pricing data

C2.1 - Pricing instructions

C2.1 - Pricing instructions

C2.1.1 **PREAMBLE TO THE SCHEDULE OF PRICES**

C2.1.1.1 **All** prices shall be quoted in the currency of the Republic of South Africa and will be held to be firm unless otherwise stated, in which case sufficient information must be afforded at the time of tendering to indicate the basis on which payment shall be adjusted.

C2.1.1.2 The Tenderer shall enter a price against each item in the schedule of prices. If the Tenderer fails to enter a price against any item in the schedule of prices the relevant cost for such item shall be regarded as being covered by other prices in the schedule of prices. **Should an item specifically be excluded from the offersubmitted, such tender will be regarded as non-responsive and not be considered.**

C2.1.1.3 The prices quoted against each item of these schedules shall cover the full inclusive cost of everything required for the execution of the work under the item plus an apportionment of any cost involved in meetingthe obligations and liabilities imposed by the conditions of contract and in complying with the specifications.

C2.1.1.4 The prices quoted for the supply of plant and equipment shall include for all handling, loading, transporting and of-loading required for the delivery of the plant and equipment to the site, including in the case of of-sitestorage for double handling at the store.

C2.1.1.5 The prices quoted for erection and installation shall include for all handling, loading, transporting and of- loading, to take plant and equipment to place on site where required, erection, installation, painting, commissioning, operating, testing, adjusting, handing over in proper working order and upholding for a period of 12 months, all as specified.

C2.1.1.6 Any additional charges in connection with of-site storage which there may be over and above the prices quoted in the various sections of these schedules of prices shall be set out in detail by the Tenderer.

C2.1.1.7 The tendered rates and amounts must exclude Value Added Tax (VAT) but must include all levies, other taxes and duties on items to which they apply. Separate provision has been made in the Tender Summaryfor the purpose of VAT.

C2.1.1.8 Amounts allowed for contingencies will be spent in part or as a whole at the sole discretion of the Principal Agent.

C2.1.1.9 Schedule of Prices shall be completed and signed in **black ink**. Corrections must be done by deleting, rewriting and initialling next to the amendment.

C2.1.1.10 **The Bills of Quantities are not to be used for the purpose of ordering materials**

C2.2 - Bill of Quantities

(See Attached)

Item No		Quantity	Amount

SECTION No. 1: PRELIMINARIES

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 above mentioned documents for the full intent and meaning of each clause

The clauses in the above mentioned 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 above mentioned documents

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

If any discrepancy in any of the documents forming part of the contract is found, then the contract data and or amendments within the special conditions of contract and herein shall prevail in cases of conflict between any of the documents

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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

Contractors are required to price all individual items in the preliminary and general section of the bill of quantities and should not lump the items into a single sum or amount. This fully priced schedule must be included as part of the priced bill of quantities returnable with tender submission

In the event that the contractor, due to causes of his own making, fails to achieve the targets set out in his construction programme and his performance is not in accordance with the contract, payment of the time related Preliminaries will be paid in proportion to the value of the monthly progress payment and not in accordance with the projected cash flow for this item. The principal agent shall review the status quo and revert to paying the contractor in accordance with the contract once the contractor has demonstrated improvement of their performance and the principal agent is satisfied that the contractor is performing diligently.

Similarly the full amount of the fixed portion of the Preliminaries will be paid only once the successful contractor has fully complied with deliverables under this section

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

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**

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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

Contractors are reminded that some of the works are to be undertaken under restrictive site conditions, over steep terrain, in dense vegetation, protected environments etc.

In addition to the usual rates priced for standard measured items in the bills of quantities, contractors shall provide for all additional plant, labour, equipment, temporary works, temporary access ways and any additional supervision, transport, security, special plant and equipment to navigate restrictive site conditions and all things necessary for the completion of the works within this bills of quantities. The rates or amounts tendered for these items shall also include for the contractors management, attendance, profit, costs for removal and reinstatement of the ground conditions, vegetation, etc. in the state and condition prior to the works being undertaken.

In addition to the usual rates priced for compliance with law and regulation in relation to inspections, warranties, guarantees, tests, analysis, commissioning and all things necessary for compliance, the contractor is expected to include in the rates, prices and the tendered total of the prices for all inspections, warranties, guarantees, tests, analysis, commissioning and all things necessary for compliance, payable by the contractor.

Such items include but are not limited to: - Electrical Compliance Certificate - Plumbing Compliance Certificate - Structural Steel Compliance Certificate - Lightning Certificate - Soil Protection Certificate - Concrete test results and cube certificates - Compaction Test results and certificates - Waterproofing guarantee certificates - TR1 and TR2 prefabricated roof truss certificates - Roof covering certificate - Soil compaction certificates - Electrical and Mechanical test certificates - Plumbing and drainage pressure test certificates - Fire Compliance Certificate - Entomology Certificate - SANS 10400-A:2010 compliance certificates - Any other requirement as per the latest National Building Regulation

Contractors are reminded and hereby given the opportunity to allow for and price all costs related to the abnormal working conditions referred to herein as no claims for additional costs will be entertained for any omission on the part of contractor

Clause 3.9 amended to read 'The priced document shall not be used as a specification for material and goods and the quantities should not be used for procurement purposes.

All procurement of material will be based on actual site measurements and not on drawings, specifications or the bill of quantities

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

Carried to Collection R

Section No. 1
PRELIMINARIES
Bill No. 1
PRELIMINARIES

	Legal status of contractor 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**		
	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		
	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 Some 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]		
	Carried to Collection	R	

F:..... V:..... T:..... Item

6 Clause 6.0 - **Employer's agents**

Delegated authority

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**:

1. Architect

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**

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**

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1.2.13 Expenditure of **budgetary allowances**, **prime cost amounts** and **provisional sums**

1.2.14 Appointment of a **subcontractor** [14.0; 15.0]

1.2.15 Work by **direct contractors** [16.0]

1.2.16 On suspension or termination, protection of the **works**, removal of **construction equipment** and surplus **materials and goods** [29.0]

2. Quantity surveyor

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

3. Civil and structural engineer

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

3.2.8 Removal or substitution of any **materials and goods**

Carried to Collection R

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**

3.2.13 Expenditure of **budgetary allowances**, **prime cost amounts** and **provisional sums**

4. Mechanical engineer

4.1 Duties [6.2] :

The mechanical engineer is responsible for all aspects of mechanical engineering design and quality inspection of the **works** and, where appointed by the **employer** for quantity surveying services in respect of the mechanical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions

4.2 **Contract instructions** [6.2; 17.1] :

4.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the **agreement** other than in the **JBCC** Principal Building Agreement

4.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

4.2.3 Compliance with the **law**, regulations and bylaws [2.1]

4.2.4 Provision and testing of samples of **materials and goods** and/or of finishes and assemblies of elements of the **works**

4.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

4.2.6 Removal or re-execution of work

4.2.7 Removal or substitution of any **materials and goods**

4.2.8 Protection of the **works**

4.2.9 Making good physical loss and repairing damage to the **works** [23.2.2]

4.2.10 Rectification of **defects** [21.2]

Carried to Collection R

4.2.11 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**

4.2.12 Expenditure of **budgetary allowances**, **prime cost amounts** and **provisional sums**

5. Electrical/Electronics engineer

5.1 Duties [6.2] :

The electrical engineer is responsible for all aspects of electrical and electronics engineering design and quality inspection of the **works** and, where appointed by the **employer** for quantity surveying services in respect of the electrical installations, for all measurements, valuations, financial assessments and all other quantity surveying and cost control functions

5.2 **Contract instructions** [6.2; 17.1] :

5.2.1 Rectification of discrepancies, errors in description or quantity or omission of items in the **agreement** other than in the **JBCC** Principal Building Agreement

5.2.2 Alteration to design, standards or quantity of the **works** provided that such **contract instructions** shall not substantially change the scope of the **works**

5.2.3 Compliance with the **law**, regulations and bylaws [2.1]

5.2.4 Provision and testing of samples of **materials and goods** and/or of finishes and assemblies of elements of the **works**

5.2.5 Opening up of work for inspection, removal or re-execution [23.2.4; 26.4.2]

5.2.6 Removal or re-execution of work

5.2.7 Removal or substitution of any **materials and goods**

5.2.8 Protection of the **works**

5.2.9 Making good physical loss and repairing damage to the **works** [23.2.2]

5.2.10 Rectification of **defects** [21.2]

5.2.11 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**

5.2.12 Expenditure of **budgetary allowances**, **prime cost amounts** and **provisional sums**

6. Health and safety consultant

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	6.1 Duties [6.2] : The health and safety consultant is responsible for all aspects of health and safety of the **works**. Without derogating from the generality thereof, the health and safety consultant will perform the following specific functions and duties in respect of the health and safety aspects of the **works**. He shall: 6.1.1 Act as the **employer's agent** in terms of the Construction Regulations issued in terms of the Occupational Health and Safety Act, 1993 as amended 6.1.2 Prepare and update the health and safety specification for the **works** 6.1.3 Agree with the **contractor** the health and safety plan for the **works** 6.1.4 Carry out regular audits to ensure adherence to the safety plan and compliance with the act and regulations 6.1.5 Stop the execution of the **works** where the agreed specification or plan is not adhered to		
	F:..... V:..... T:.....	Item	
7	Clause 7.0 - Design responsibility		
	F:..... V:..... T:.....	Item	
	Insurances and securities (A8-A11)		
8	Clause 8.0 - **Works** risk		
	F:..... V:..... T:.....	Item	
9	Clause 9.0 - Indemnities		
	F:..... V:..... T:.....	Item	
10	Clause 10.0 - Insurances Clause 10.1.1 - Contracts Works Insurance 'the contractor shall be responsible for effecting and maintaining the contract works insurance for the full duration of the contract period. The insured amount for the full scope of works shall be 120% of the contract amount Clause 10.1.2 - Supplementary Insurance Clause 10.1.3 - Public Liability Insurance Clause 10.1.4 - Removal of Lateral Support Insurance Clause 10.1.5 - Other Insurances - N/A		
	F:..... V:..... T:.....	Item	
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11	Clause 11.0 - **Securities**		
	Clause 11.1 - Guarantee for construction		
	The contractor shall not provide to the employer a **guarantee for construction** within fifteen (15) working days of acceptance of the contractor's tender.		
	Clause 11.5 - Guarantee for payment		
	The employer shall not provide to the contractor a **guarantee for payment**. The contractor shall waive his lien or right of continuing possession of the works [11.10]		
	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]		
	F:..... V:..... T:.....	Item	
	Execution (A12 - A17)		
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]		
	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	
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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**			
	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 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**			
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21	Clause 21.0 - **Defects** liability period and **final completion** A 2.5% retention shall apply. The maintenance period shall be 12 months. F:..... V:..... T:.....	Item	
22	Clause 22.0 - **Latent defects** liability period F:..... V:..... T:.....	Item	
23	Clause 23.0 - Revision of the date for **practical completion** **Adverse weather conditions** The contract duration includes a monthly allowance of 3 working days for adverse weather conditions [23.1.1] during which rainfall exceeds 10mm per day. These days shall be reflected on the critical path of the construction programme. Where the programmed delays for adverse weather conditions exceed the actual delays incurred the date for practical completion will not be adjusted. Where the actual delays incurred for adverse weather conditions exceed the programmed delays and such delays have impacted on the critical path of the construction programme, the date for practical completion will be adjusted should the requirements of Clause 23.0 be satisfied Substitution of materials, goods and or workman **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:.....	Item	
	<u>Payment (A25 - A27)</u>		
25	Clause 25.0 - Payment		
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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

Clause 25 amended to read 'The employer shall pay to the contractor the amount certified in interim payment certificate within thirty (30) calendar days of the date of issue of the payment certificate or the contractors tax invoice whichever is the later date'

Materials and goods stored off site shall not be included in the amount authorised for payment unless the requirements for an Advanced Payment Guarantee are met

F:..... V:..... T:..... Item

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]

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 contractor shall not receive any mark-up for overheads and profit on any omission of tenant installation work or tenant installation work by others. Claims of loss of profit shall not be considered

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

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	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** **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		
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	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, masonry, waterproofing, plumbing and drainage, external works - are provisionally measured and the subsequent trades are budgetary allowances and provisional sums. A portion of the works are also measured in SMME Packages as a separate Section.		
	F:..... V:..... T:.....	Item	
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	
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	The site (B4)		
42	Clause 4.1 - Handover of **site** in stages		
	F:..... V:..... T:.....	Item	
43	Clause 4.2 - Enclosure of the **works**		
	Hoarding will be required to isolate areas; this hoarding has been allowed for in the Bills of Quantities.	Item	
	F:..... V:..... T:.....		
44	Clause 4.3 - Geotechnical and other investigations		
	F:..... V:..... T:.....	Item	
45	Clause 4.4 - Encroachments		
	The contractor shall notify the principal agent if any encroachments of adjoining foundations, buildings, structures, pavements, boundaries, etc. exist in order that the necessary arrangements may be made for the rectification of any such encroachment		
	F:..... V:..... T:.....	Item	
46	Clause 4.5 - Existing premises occupied		
	F:..... V:..... T:.....	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	
49	Clause 5.2 - Progress meetings		
	F:..... V:..... T:.....	Item	
50	Clause 5.3 - Technical meetings		
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	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	
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		
	Clause 8.3 - Ablution and welfare facilities in compliance to the provisions of the Construction Regulations 2014 issued in terms of the Occupational Health and Safety Act, 1993 as amended: Section (30): Sub-section (1)(a) - Shower facilities after consultation with the employees or the employees representatives, or at least one shower facility for every 15 persons; Sub-section (1)(b) - at least one sanitary facility for each sex and for every 30 workers; Sub-section (1)(c) - changing facilities for each sex and Sub-section (1)(d) - sheltered eating areas		
	F:..... V:..... T:.....	Item	
59	Clause 8.4 - Communication facilities		
	F:..... V:..... T:.....	Item	
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Prime cost amounts (B9)

60 Clause 9.1 - prime cost amounts

F:..... V:..... T:..... Item

Attendance on subcontractors (B10)

61 Clause 10.1 - General attendance

F:..... V:..... T:..... Item

62 Clause 10.2 - Special attendance

F:..... V:..... T:..... Item

General (B11)

63 Clause 11.1 - Protection of the **works**

F:..... V:..... T:..... Item

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**

The contractor shall be briefed on the restrictions of movement, servitudes, access control, buildings in use, security requirements and security clearances, working hours due to the right being occupied and under the employers control at all times. The contractor shall not extend his operations into any restricted or undefined areas.

Work shall be carried out during normal working hours. Any extended times or approval or overtime work shall be considered and approved by the PA. The contractor shall comply with the employers rules for the control of delivery of materials and goods into the site and for the removal of such items from the site.

The Contractor will be responsible for ensuring the security and protection of all material, hand tools, power tools, plant, equipment, machinery, etc. stored on the site.

The Contractor will be required to make arrangements with the Employer, through the Principal Agent, for the use of and reimbursement for the security measures currently in force and operational on the site

F:..... V:..... T:..... Item

66 Clause 11.4 - Notice before covering work

F:..... V:..... T:..... Item

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67	Clause 11.5 - Disturbance **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. 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** 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	
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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

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 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 the Pricing schedule for Health, Safety and Environment as per the pricing schedule included in Bill No. 2 as part of the Preliminaries Section.

Provision for pricing of the Occupational Health and Safety Act, Construction Regulations and Health and Safety Specification is made under this clause and under Bill No. 2 and it is explicitly pointed out that all requirements of the aforementioned are deemed to be priced hereunder and no additional claims in this regard shall be entertained.

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	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	
78	Reporting by the Contractor The **Contractor** is required to complete a **CONTRACTOR MONTHLY REPORT** which is to be submitted together with the **Contractor's** payment claim. Payment of the **Contractor** is conditional on this information being accurate and timeously provided. Payment shall be subject to the **Employer** giving the **Contractor** a tax invoice for the amount due. The **Contractor** is to take note of the following requirements - At the bottom of the **CONTRACTOR MONTHLY REPORT**, the **Site Agent**, **Clerk of Works**, **CLO** or **Contractor** must sign the document as proof that the people indicated have worked the number of days. F:..... V:.....T:.....	Item	
79	Administration The **Contractor** must allow for **all costs** (including any profit or attendance) associated with the administration, appointment, training and/or payment of the CLO, Built Environment Interns, Training of Local Labour, Students **as applicable** and included in this tender document (refer **PROVISIONAL SUMS** section). No additional claims in this regard shall be entertained. F:..... V:.....T:.....	Item	
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80	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	
81	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	
82	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	
83	Socio-Economic Deliverables The Tenderer must allow for **all costs** (including any profit or attendance) associated with the administration, appointment, training and/or payment of the CLO, Built Environment Interns, Training of Local Labour, Students, Steering Committee Members **as applicable** and included in this tender document (refer **PROVISIONAL SUMS** section). No additional claims in this regard shall be entertained. F:..... V:.....T:.....	Item	
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84	SMME Contractors as Sub-Contractors to the Principal Contractor *The Tenderer must allow for all costs applicable that they may feel will be associated with the successful integration, mentoring, development of and completion of **SMME Sub-contractors'** work to the approval of the Principal Agent on this project. A minimum of **30%** of the building work needs to be allocated to SMME Sub-contractors. Contractors will be required to supply verified monthly statements/schedules (verified by their auditors) indicating the **%** achieved for that month. A cumulative schedule also needs to be maintained for each month that has passed.* *Any additional costs that the Tenderer may deem applicable due to the use of **30%** of SMME Sub-contractors, should be allowed for in this item (Preliminaries, OHS, Profit and Attendance, etc.), as no claim for any additional costs attributable to the incorporation and development of SMME Sub-contractors on this project will be entertained after the tenders are submitted.* F:..... V:.....T:.....		Item	
	SUMMARY OF CATEGORIES Category : Fixed R..... Category : Value R..... Category : Time R.....			
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SECTION No. 1: PRELIMINARIES

BILL NO. 2 HEALTH AND SAFETY

MODEL PREAMBLES

The tenderer is referred to the "Model Preambles for Trades 2008" for supplementary and comprehensive expansion of descriptions, appropriate provision for which shall be deemed to have been included in all relevant rates.

SUPPLEMENTARY 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.

Prior to pricing the principal contractor must familiarize him/herself with the Occupational Health and Safety Act No. 85 Of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety specifications including any latest amendments.

The items in this Bill do not contain quantities hence the Contractor must insert his own quantities based on his individual requirements to comply with the Health and Safety obligations and demands of the Occupational Health and Safety Act No. 85 of 1993, Construction Regulations 2014, other relevant Regulations and Standards as well as project specific Health & Safety Specifications.

OCCUPATIONAL HEALTH AND SAFETY

General:

1	One full time Construction Health and Safety Officer or Manager (CHSO/M) Full time attendance on site of a SACPCMP-registered CHSO/M from the start of construction until the end of project handover and provisions of telecommunications.	Item		
2	Provision for Health and Safety Management Plans and Primary Health and Safety file together with 3 times secondary files for each Residential Block	Item		

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3	Allow for the necessary Workman's Compensation Fund or approved Insurer contributions for the duration of the project with and including renewals	Item			
4	Medical certificates of fitness. Medical examination of all employees and certification of fitness for Pre-employment is required. Medical examination of all employees and certification of fitness for Exit-employment is required. Allow for annual medicals for employees if the project duration is more than 12 months.	Item			
5	Emergency Equipment based on the risk exposure and emergency rescue. stretchers, neck brace, first aid kits, fire fighting equipment.	Item			
6	Competent inspectors for equipment such as examples scaffolding inspectors and lifting machine inspector.	Item			
7	Mandatory training such as risk assessments, legal liability/OHS Act, awareness, first aid incident investigation.	Item			
	Provide, supply and maintenance for each worker the following SANS approved personal protective equipment & clothing as per the site-specific risk assessments:				
8	Hard hats (High density polyethylene with 6 point lining)	Item			
9	Overall/work suits (100% Cotton)	Item			
10	Reflective vests with visible marking of contractor and proof of induction	Item			
11	Safety boots/shoes (Steel-Toe)	Item			
12	Ear Plugs/Muffs	Item			
13	Dust Mask FFP2	Item			
14	Safety goggles	Item			
15	Safety gloves	Item			
16	Respirators	Item			
17	Safety harness	Item			
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18	Permit board	Item		
19	Weight bearing barricading and hoarding	Item		
20	Personal fall arrest and rescue equipment with and including lifelines and associated equipment	Item		
21	Temporary handrails, toe boards other than for access to scaffolding	Item		
22	Construction information, warning signage, posters	Item		
23	Allow for fire extinguishers and fire fighting equipment	Item		
24	Safe lifting equipment for lifting and lowering pipes, lifting tackles and slings	Item		
25	Rubble shoot to be provided for the discarding of rubble from buildings into a rubble skip	Item		
26	Allow for provision of telecommunication facilities for the appointed OHS officer	Item		
27	Provide for appointment of responsible and competent person/s to manage and supervise the works and administer and enforce health and safety on site	Item		
28	Allow for provision of Basic medical Preparedness and Response equipment & at least Level 2 First Aider/s	Item		
	Environmental:			
29	Dust control measure for the prevention of dust nuisance. Buildings that are partial decanted. Hoarding to be provided for dust control. Hoarding to extend into the ceiling of the buildings.	Item		
30	Provision for spill kits, drip trays	Item		
31	Housekeeping – provide for the waste bins, safe collection and disposal of waste material from site by an approved method (a) Air monitoring (b) Analysing Samples (c) Test on Workers	Item		
	Disease Awareness Education:			
32	Principal contractor's time related obligations in respect of the Disease Management	Item		
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HEALTH AND SAFETY

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Section No. 1
PRELIMINARIES

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SECTION No. 2: BUILDING WORKS

BILL No. 1: ALTERATIONS (PROVISIONAL)

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents

SUPPLEMENTARY PREAMBLES

General

All work described in this bill is to be to be executed in/on existing buildings and prices shall allow for this

All Architectural and Engineering drawings and specifications to be read in conjunction and any discrepancies to be brought to the attention of the Principal Agent.

Descriptions that include the text ".... take out/up/off/down and remove ....." shall indicate that the Tenderer shall allow that these items/materials shall become his property and shall be removed from site, or dumped at a site of disposal that the Tenderer has identified.

Descriptions that include the text "..... make good ....." shall indicate that the Tenderer shall allow for all associated costs of repairing disturbed finishes, costs of disconnecting/removing the items/materials and preparatory work to receive new items/materials.

All costs associated with the above will be deemed to be included in the Tenderer's prices.

The Contractor shall carry out the whole of the works with as little mess and noise as possible and with a minimum of disturbance to adjoining premises and their tenants. He shall provide proper protection and provide, erect and remove when directed, any temporary tarpaulins that may be necessary during the progress of the works, all to the satisfaction of the Principal Agent.

Making good of finishes shall include making good of the brick and/or concrete surfaces onto which the new finishes are applied, where necessary

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The Contractor will be required to take dimensions when fitting new items/elements to existing structures/frames, etc. as there may be some minor adjustments required and it shall be deemed that all prices shall include such minor adjustment work.

Viewing of the site

Before submitting his tender, the Contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained.

Removal and disposal of harmful material

Tenderers are to note that some of the items to be removed, may contain harmful materials/elements:

The items that are measured in this section are described, where applicable, as "asbestos". However, it is the Tenderers' responsibility to assess and decide whether the items identified are all harmful asbestos materials/elements.

Should the Tenderers be of the opinion that the items listed are identified as possible harmful materials/elements and disposal thereof, the onus will be on them to assess the latter on site and define/establish and prices the respective items accordingly. It will be deemed that Tenderers' prices received have fully taken the above requirements into consideration and priced accordingly to allow for the correct procedure of removal and disposal thereof to a designated dumping site in terms of the latest legislation applicable.

No extra cost will be entertained should the Contractor establish at a later stage that some materials/elements are harmful and their pricing did not include for the additional cost applicable due to legislative requirements relating to removal and disposal thereof.

CLEARING OF DEBRIS AND VEGETATION

1	Clear internal floor areas of all vegetation, building rubble and general rubbish for construction purposes B : 1384 C : 0 D : 0 G : 0	m2	1 384		

CLEANING OF EXISTING SURFACES

2	General clearing of burnt materials, debris, etc. from burnt damaged units (ground, first and second floor) and removal from site to an approved dumping site (specific removal of items and remedial work measured elsewhere)		Item		

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Section No. 2
BUILDING WORKS
Bill No. 1
ALTERATIONS (PROVISIONAL)

3	Clean existing facebrick walls by pressure cleaning to remove all algae, discolourations, dirt, etc. B : 4133 C : 0 D : 825 G : 0	m2	4 957		
4	Clean existing concrete floor and etch surface by acid washing with a solution of 1 part hydrochloric acid to 3 parts clean water by volume B : 719 C : 168 D : 287 G : 0	m2	1 174		
5	Clean existing concrete tiled roof by pressure cleaning to remove all algae, discolourations, dirt, etc. B : 0 C : 621 D : 0 G : 0	m2	621		
	GENERAL ALTERATIONS				
	Break down and remove existing brickwork, etc.:				
6	Half brick wall B : 5 C : 0 D : 0 G : 0	m2	5		
7	One brick wall B : 3 C : 0 D : 0 G : 0	m2	3		
8	One brick wall in gables/firewalls B : 100 C : 0 D : 0 G : 0	m2	100		
	Remove damaged concrete breeze blocks and replace to match existing:				
9	Concrete breeze blocks B : 0 C : 0 D : 25 G : 0	m2	25		
	Take out and remove existing floor coverings and make good screeds to receive new:				
10	Vinyl floor tiles including repairing any screed where required B : 192 C : 396 D : 2064 G : 0	m2	2 652		
11	Carpet including removing all adhesive and repairing any screed where damaged or disturbed B : 1899 C : 408 D : 0 G : 0	m2	2 307		
12	Ceramic floor tiles including removing all bedding and repairing any screed where damaged or disturbed B : 0 C : 0 D : 247 G : 0	m2	247		
	Take out and remove existing timber skirtings including making good cement plaster where damaged or disturbed:				
13	Timber skirting and quadrant bead B : 0 C : 1236 D : 0 G : 0	m	1 236		
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Section No. 2
BUILDING WORKS
Bill No. 1
ALTERATIONS (PROVISIONAL)

	Take out and remove existing cills including preparing for new (elsewhere measured):				
14	Fibre cement cill B : 102 C : 0 D : 0 G : 0	m	102		
	Take out and remove existing doors or door frames/linings and fanlights complete with thresholds:				
15	Steel door lining from half brick wall B : 24 C : 0 D : 0 G : 0	No	24		
16	Steel door lining from one brick wall B : 32 C : 0 D : 0 G : 0	No	32		
17	Timber door complete with steel frame size 813 x 2032mm high from half brick wall, including making good opening for new timber door and frame (elsewhere measured) B : 36 C : 24 D : 24 G : 0	No	84		
18	Timber door complete with steel frame size 813 x 2032mm high from one brick wall, including making good opening for new timber door and frame (elsewhere measured) B : 48 C : 8 D : 86 G : 0	No	142		
19	Timber door complete with timber frame size 813 x 2032mm high from one brick wall, including making good opening for new timber door and frame (elsewhere measured) B : 100 C : 32 D : 0 G : 0	No	132		
20	Timber door complete with timber frame size 813 x 2400mm high with and including fanlight from 270mm cavity brick wall, including making good opening for new timber door and frame (elsewhere measured) B : 0 C : 0 D : 26 G : 0	No	26		
21	Timber sliding door complete size 700 x 2032mm high, including sliding door accessories and making good opening for new timber sliding door (elsewhere measured) B : 0 C : 8 D : 0 G : 0	No	8		
22	Timber sliding door complete size 900 x 2032mm high, including sliding door accessories and making good opening for new timber sliding door (elsewhere measured) B : 0 C : 16 D : 0 G : 0	No	16		
23	Timber sliding door complete size 1000 x 2032mm high, including sliding door accessories and making good opening for new timber sliding door (elsewhere measured) B : 12 C : 0 D : 0 G : 0	No	12		
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Section No. 2
BUILDING WORKS
Bill No. 1
ALTERATIONS (PROVISIONAL)

24	Timber shop front with double door size 4070 x 2400mm high from one brick wall, including making good opening for new door (elsewhere measured) B : 0 C : 0 D : 2 G : 0	No	2		
25	Steel double door complete with steel lining size 1500 x 2100mm high from one brick wall, including making good opening for new door (elsewhere measured) B : 0 C : 16 D : 0 G : 0	No	16		
26	Steel verandah enclosure assembly complete, size 2080 x 1840mm high from one brick wall, including making good opening for new enclosure assembly (elsewhere measured) B : 20 C : 0 D : 0 G : 0	No	20		
27	Aluminium shop front with double door size 3000 x 2100mm high from one brick wall, including making good opening for new door (elsewhere measured) B : 20 C : 0 D : 0 G : 0	No	20		
28	Steel garage door complete size 2390 x 2100mm high from one brick wall, including making good opening for new garage door (elsewhere measured) B : 0 C : 8 D : 0 G : 0	No	8		
29	Steel garage door complete size 2400 x 2200mm high from one brick wall, including making good opening for new garage door (elsewhere measured) B : 16 C : 0 D : 0 G : 0	No	16		
	Break down and remove existing partitioning complete with doors, etc.:				
30	89mm Thick assembly 2830mm high B : 0 C : 24 D : 0 G : 0	m	24		
	Take out and remove existing joinery fittings:				
31	Wall mounted cupboards size 1500 x 575 x 600mm high B : 0 C : 4 D : 0 G : 0	No	4		
32	Wall mounted cupboards size 2500 x 575 x 600mm high B : 0 C : 4 D : 0 G : 0	No	4		
33	L-shaped floor mounted worktop and cupboard assembly, 575mm wide x 800mm high, with an overall girth of 4380mm B : 12 C : 0 D : 0 G : 0	No	12		
34	L-shaped floor mounted worktop and cupboard assembly, 575mm wide x 800mm high, with an overall girth of 4830mm B : 0 C : 0 D : 6 G : 0	No	6		
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BUILDING WORKS
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ALTERATIONS (PROVISIONAL)

35	U-shaped floor mounted worktop and cupboard assembly, 575mm wide x 800mm high, with an overall girth of 4915mm B : 0 C : 0 D : 12 G : 0	No	12		
36	U-shaped floor mounted worktop and cupboard assembly, 575mm wide x 800mm high, with an overall girth of 6800mm B : 0 C : 8 D : 0 G : 0	No	8		
	Take out and remove existing windows, burglar bars and prepare opening including fixing damaged reveals, sills and lintols, for new window (elsewhere measured):				
37	Steel window size 600 x 600mm high from one brick wall B : 80 C : 0 D : 0 G : 0	No	80		
38	Steel window size 600 x 900mm high from one brick wall B : 0 C : 64 D : 0 G : 0	No	64		
39	Steel window size 600 x 1200mm high from one brick wall B : 0 C : 0 D : 56 G : 0	No	56		
40	Steel window size 600 x 2100mm high from one brick wall B : 0 C : 16 D : 0 G : 0	No	16		
41	Steel window size 1200 x 1200mm high from one brick wall B : 0 C : 0 D : 19 G : 0	No	19		
42	Steel window size 1500 x 680mm high from one brick wall B : 20 C : 0 D : 0 G : 0	No	20		
43	Steel window size 1500 x 900mm high from one brick wall B : 20 C : 32 D : 0 G : 0	No	52		
44	Steel window size 1800 x 2100mm high from one brick wall B : 0 C : 16 D : 0 G : 0	No	16		
45	Steel window size 2000 x 680mm high from one brick wall B : 20 C : 0 D : 0 G : 0	No	20		
46	Steel window size 2000 x 900mm high from one brick wall B : 60 C : 0 D : 0 G : 0	No	60		
47	Steel window size 2000 x 1200mm high from one brick wall B : 20 C : 0 D : 0 G : 0	No	20		
48	Steel window size 2000 x 1500mm high from one brick wall B : 0 C : 0 D : 72 G : 0	No	72		
49	Steel window size 2400 x 1500mm high from one brick wall B : 20 C : 0 D : 0 G : 0	No	20		
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50	Steel window size 3000 x 1800mm high from one brick wall B : 0 C : 0 D : 18 G : 0	No	18		
51	Timber window size 4070 x 510mm high from one brick wall B : 0 C : 0 D : 1 G : 0	No	1		
52	Timber window size 4070 x 900mm high from one brick wall B : 0 C : 0 D : 1 G : 0	No	1		
	Carefully take up existing roofing (to be re-use elsewhere)				
53	Concrete tile roof covering and accessories, including timber battens B : 0 C : 203 D : 0 G : 0	m2	203		
	Examine existing roofs, floors, panelling, ceilings, partitions, etc.:				
54	Concrete tile roof covering for damage and cracks, replace damaged or cracked tiles from stock piled tiles (elsewhere measured) to the approval of the Architect B : 0 C : 580 D : 0 G : 0	m2	580		
55	Concrete tile roof covering at penetrations through roof and apply flashing to prevent water ingress with mastic waterproofing compound and silvacote paint to the approval of the Architect B : 0 C : 8 D : 0 G : 0	No	8		
	Take up and remove existing torch-on waterproofing layer from screed (screed elsewhere repaired):				
56	On flat roof (including all turn-ups) including removal of all debris, plant growth, roots and dirt complete B : 0 C : 0 D : 114 G : 0	m2	114		
	Take down and remove existing roofs, ceilings, fascias, gutters, flashings, etc.:				
57	Profile sheet metal roof covering and accessories, including timber purlins B : 0 C : 0 D : 940 G : 0	m2	940		
58	Sheet metal tiles (Harvey tile) roof covering and accessories, including timber purlins B : 908 C : 0 D : 0 G : 0	m2	908		
59	Fibre cement / Asbestos cement roof covering and accessories, including timber purlins B : 440 C : 0 D : 0 G : 0	m2	440		
60	Remaining fire damaged roof construction and covering B : 150 C : 0 D : 0 G : 0	m2	150		
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61	Fibre cement ceilings complete with cornices, timber brandering, etc. B : 750 C : 318 D : 327 G : 0	m2	1 395		
62	Fibre cement eaves soffit linings complete with timber brandering, etc. B : 0 C : 0 D : 175 G : 0	m2	175		
63	Timber roof assembly consisting of double pitch timber roof trusses (at approximately 900mm centres), timber bracing, etc. (measured on flat) B : 1080 C : 0 D : 0 G : 0	m2	1 080		
64	Fibre cement / Asbestos cement gutters, including accessories B : 0 C : 138 D : 100 G : 0	m	238		
65	Fibre cement / Asbestos cement downpipes and accessories B : 0 C : 131 D : 40 G : 0	m	171		
66	Galvanised steel circular column 90mm diameter x 2380mm high, four times bolted to surface bed and slab, including making good for new (elsewhere measured) B : 0 C : 8 D : 0 G : 0	No	8		
	Hacking up/off and removing existing ceramic tile floor and wall tiles and preparing plaster surfaces for tiling (elsewhere measured)				
67	200 x 200mm Tiles to walls B : 929 C : 212 D : 746 G : 0	m2	1 887		
	Hack up/off and remove existing external plaster and wall finishes including preparing wall surfaces for new plaster (elsewhere measured):				
68	On walls in patchings B : 0 C : 98 D : 57 G : 0	m2	155		
	Hack up/off and remove existing screed on floors and prepare to receive new screed (elsewhere measured):				
69	25mm Thick on floors B : 1384 C : 0 D : 0 G : 0	m2	1 384		
	Take out and remove piping, sanitary fittings, etc. including disconnecting piping from fittings and making good floor and wall finishes (making good tiling and paintwork elsewhere measured):				
70	15mm Polycop/Copper piping including all fittings, brackets, etc. B : 700 C : 280 D : 532 G : 0	m	1 512		
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71	25mm Galvanised piping including all fittings, brackets, etc. B : 21 C : 0 D : 0 G : 0	m	21		
72	40/50mm PVC piping including all fittings, brackets, etc. B : 320 C : 128 D : 203 G : 0	m	651		
73	110mm PVC piping including all fittings, brackets, etc. B : 400 C : 160 D : 275 G : 0	m	835		
74	Curtain tracks B : 494 C : 162 D : 320 G : 0	m	976		
75	Toilet roll holder from brick wall B : 20 C : 8 D : 19 G : 0	No	47		
76	Towel rail from brick wall B : 40 C : 16 D : 19 G : 0	No	75		
77	Shower curtain and rail from brick wall B : 40 C : 16 D : 19 G : 0	No	75		
78	Shower assembly including taps, traps, etc. B : 40 C : 16 D : 19 G : 0	No	75		
79	Cast iron bath including preparing area to received new bath (elsewhere measured) B : 20 C : 8 D : 18 G : 0	No	46		
80	22mm Tap including associated piping, brackets, etc. for brick wall B : 20 C : 16 D : 19 G : 0	No	55		
81	Soup dish holder from brick wall B : 60 C : 24 D : 37 G : 0	No	121		
82	Wash hand basin including taps, traps, etc. B : 40 C : 16 D : 20 G : 0	No	76		
83	Floor mounted WC pan with wall hung cistern B : 40 C : 8 D : 19 G : 0	No	67		
84	Stainless steel double bowl sink unit in kitchen cupboard (elsewhere removed) B : 20 C : 8 D : 18 G : 0	No	46		
85	Wall type sink mixer with swivel outlet B : 20 C : 8 D : 18 G : 0	No	46		
	SUNDRY REPAIRS TO JOINERY FITTINGS				
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ALTERATIONS (PROVISIONAL)

	Sundry work to timber cupboard doors:				
86	Service hinges to timber cupboard doors B : 108 C : 64 D : 222 G : 0	No	394		
	OPENINGS THROUGH EXISTING WALLS, ETC.				
	Form openings:				
87	Form opening in existing one brick wall for new 600 x 600mm high aluminium window (elsewhere measured) by breaking out brickwork including forming new lintol B : 20 C : 0 D : 0 G : 0	No	20		
88	Form opening in existing one brick wall for new 1800 x 1200mm high aluminium window (elsewhere measured) by breaking out brickwork including forming new lintol B : 20 C : 0 D : 0 G : 0	No	20		
	Alter openings:				
89	Alter opening in existing one brick wall where 600 x 900mm high steel window removed to form opening for new window size 600 x 1200mm high overall by breaking out brickwork approximately 300mm high, including forming cill, closing reveals, etc. (new window, fibre cement cills and finishes elsewhere measured) B : 0 C : 64 D : 0 G : 0	No	64		
90	Alter opening in existing one brick wall where 1500 x 900mm high steel window removed to form opening for new window size 1500 x 1200mm high overall by breaking out brickwork approximately 300mm high, including forming cill, closing reveals, etc. (new window, fibre cement cills and finishes elsewhere measured) B : 0 C : 32 D : 0 G : 0	No	32		
91	Alter opening in existing one brick wall where 1800 x 2100mm high steel window removed to form opening for new window size 1500 x 2100mm high overall by building up brickwork approximately 150mm wide on both sides, including precast concrete lintol over, closing reveals, etc. (new window, fibre cement cills and finishes elsewhere measured) B : 0 C : 16 D : 0 G : 0	No	16		
92	Alter opening in existing one brick wall where 3000 x 1800mm high steel window removed to form opening for new window size 3000 x 1400mm high overall by building up brickwork approximately 400mm high on the bottom, including forming cill, closing reveals, etc. (new window, fibre cement cills and finishes elsewhere measured) B : 0 C : 0 D : 18 G : 0	No	18		
	SPALLING CONCRETE REPAIRS				
	Carried to Collection			R	

Preparation

The contractor is to perform an inspection of the site together with the engineer or his representative. Each area of spalling to be repaired must be recorded in terms of position and length/area.
• Areas, where spalling repair is to take place, should be propped before repair work can commence.
• All edges along the length/area to be repaired should receive a square cut, with a minimum depth of 10mm to ensure that no over-breaking can occur. All cuts should be made a minimum of 100mm past the furthest point of oxidation.
• Concrete to be cleared from the entire area and reinforcement exposed in full.
  o Concrete to be cleared from reinforcement in such a way that one would be able to get one's fingers in behind the reinforcement.
  o Concrete surface to have a rough finish.
• Remove all dust and loose material/debris using a wire brush.
• Reinforcement to be cleaned of any oxidants/rust by means of wire brushing.
• Apply SikaTop Armatec 110 EC (or similar approved) to all exposed reinforcement.
• Apply bonding agent, SikaTop Armatec 110 EC (or similar approved), to all exposed concrete surfaces where remedial work is being done.
• Apply cementitious repair mortar.
  o For easily accessible areas use Sika REP LW (or similar approved).
  o For confined sections use Sikacrete-214 (or similar approved).
• As soon as the surface is not able to be marred, apply two coats of approved curing compound (Sika Antisol or similar approved).
• Propping to remain in place until repair products have reached a minimum compressive strength of 30MPa.
• All products used must be installed and used in accordance with the supplier's specifications and details.

Concrete repairs

Thoroughly pre-wet the surface and apply SikaTop-Armatec - 110 EpeCem or other approved cementitious epoxy resin primer strictly in accordance with the manufacturer's specification and recommendations.

Restore original concrete shape and lines using Sika Rep LW or other approved non-sag mortar repair strictly in accordance with the manufacturer's specification and recommendations.

93	Break out and remove 120mm wide x 40mm deep deleterious (weak) concrete, including preparing surfaces to receive concrete repair compounds B : 110 C : 53 D : 144 G : 0	m	307		
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BUILDING WORKS
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ALTERATIONS (PROVISIONAL)

94	Concrete repair comprising 200mm wide Sika ArmaTec - 110 EcoCem or other approved primer and 120mm wide x 40mm deep Sika Rep LW or other approved repair mortar finished to the original shape and lines of the concrete on previously prepared area (elsewhere measured) B : 110 C : 53 D : 144 G : 0	m	307		

GENERAL WALL CRACK REPAIRS

Preparation

Remove all deleterious (weak) plaster to expose brick surface.

Surfaces to be prepared by brushing to remove loose plaster.

Crack repairs

Thoroughly pre-wet the surface and apply SikaTop-Armatec - 110 EpeCem or other approved cementitious epoxy resin primer strictly in accordance with the manufacturer's specification and recommendations.

Restore original plaster using Sika Rep LW or other approved non-sag mortar repair strictly in accordance with the manufacturer's specification and recommendations.

95	Break out and remove 30mm wide x 15mm thick deleterious (weak) plaster, including preparing surfaces to receive concrete repair compounds B : 220 C : 105 D : 295 G : 0	m	620		
96	Plaster repair comprising 60mm wide Sika ArmaTec - 110 EcoCem or other approved primer and 30mm wide x 15mm thick Sika Rep LW or other approved repair mortar finished flush with the surface of the wall on previously prepared area (elsewhere measured) B : 220 C : 105 D : 295 G : 0	m	620		

REPAIRING OF EXISTING EXPANSION JOINTS TO EXTERNAL FACADE OF BUILDING

Sika or other approved bonding agent:

97	Prepare existing expansion joint and apply Sikatop Armatec 110 bonding agent B : 600 C : 540 D : 550 G : 0	m	1 690		
98	Apply Sikarep Repair mortar to reinstate joint corners on bonding agent (elsewhere measured) B : 600 C : 540 D : 550 G : 0	m	1 690		

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99	Fill expansion joint with Sika Boom expanding polyurethane foam for full depth B : 600 C : 540 D : 550 G : 0	m	1 690		
100	Rake out Sika Boom (previously applied) for a depth of 20mm and apply 30 x 20mm deep Sikaflex Construction Joint sealant B : 600 C : 540 D : 550 G : 0	m	1 690		
	JOINT SEALANTS, ETC.				
	Approved polyurethane sealing compound:				
101	Rake out 10mm thick joint for a depth of 15mm and fill with compound B : 30 C : 25 D : 10 G : 0	m	65		
	Approved polysulphide sealing compound including backing cord, bond breaker, primer, etc.:				
102	Ream out 6mm wide saw cut joint to 8mm width for a depth of 15mm and seal with compound B : 90 C : 90 D : 90 G : 0	m	270		
103	10 x 10mm In vertical expansion joint between concrete and brick surfaces including raking out joint filler as necessary B : 90 C : 90 D : 90 G : 0	m	270		
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Bill No. 1
ALTERATIONS (PROVISIONAL)

Section No. 2

Bill No. 1

ALTERATIONS (PROVISIONAL)

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Section No. 2
BUILDING WORKS
Bill No. 1
ALTERATIONS (PROVISIONAL)

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SECTION No. 2: BUILDING WORKS

BILL No. 2: MASONRY

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions

Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted

Types of Bricks:

Unless otherwise stated all brickwork in these Bills of Quantities shall mean approved hard burnt Clay bricks.

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.

Cement mortar

Unless otherwise described, all brickwork shall be built in 5:1 cement mortar.

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.

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	Hollow walls, etc.			
	Descriptions of hollow walls shall be deemed to include leaving every fifth perpend of the bottom course of the external skin open as a weep hole.			
	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 "Brixeal" bitumen emulsion waterproofing coating.			
	BRICKWORK IN SUPERSTRUCTURE			
	Brickwork of NFP bricks in Class II mortar:			
1	Half brick wall B : 0 C : 0 D : 0 G : 35	m2	35	
2	One brick wall B : 140 C : 0 D : 5 G : 0	m2	145	
3	270mm Cavity wall B : 0 C : 0 D : 0 G : 5	m2	5	
	BRICKWORK SUNDRIES			
	Air bricks, etc.:			
4	229 x 152mm Clay vermin proof air brick and building in B : 0 C : 0 D : 0 G : 2	No	2	
	BUILDING UP BRICKWORK			
	Brickwork of NFP bricks in Class II mortar:			
5	Half brick wall in patchings B : 0 C : 0 D : 0 G : 10	m2	10	
6	One brick wall in patchings B : 25 C : 0 D : 0 G : 0	m2	25	
7	Cut, tooth and bond new 110mm wall to existing B : 0 C : 0 D : 0 G : 6	m	6	
8	Cut, tooth and bond new 230mm wall to existing B : 72 C : 0 D : 10 G : 0	m	82	
	Brickwork reinforcement:			
9	75mm Wide reinforcement built in horizontally B : 0 C : 0 D : 0 G : 185	m	185	
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Bill No. 2
MASONRY

10	150mm Wide reinforcement built in horizontally B : 1529 C : 0 D : 56 G : 0	m	1 585		
	Prestressed fabricated lintols including necessary temporary supports:				
11	110 x 70mm Lintol in lengths not exceeding 3m B : 0 C : 0 D : 0 G : 3	m	3		
	FACE BRICKWORK				
	Corobrik Firelight Satin or other approved FBX clay face brickwork, manufactured in accordance with SANS 227:2007, including pointing with 6mm square recessed horizontal and vertical joints as the work proceeds:				
12	Facebrick repairs in patchings to match the type and bond of existing B : 30 C : 0 D : 22 G : 15	m2	67		
	PRESSED FIBRE CEMENT WINDOW CILLS				
	Natural grey cills in single lengths bedded in 4:1 sand cement mortar:				
13	15 x 150mm Cill set sloping and fixed with galvanised fixing lugs at 400mm centres B : 314 C : 125 D : 0 G : 0	m	439		
14	15 x 150mm Cill set flat and fixed with galvanised fixing lugs at 400mm centres B : 90 C : 53 D : 0 G : 0	m	142		
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Section No. 2
BUILDING WORKS
Bill No. 2
MASONRY

Item No		Quantity	Rate	Amount

SECTION No. 2: BUILDING WORKS

BILL No. 3: WATERPROOFING

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions

Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted

TORCH-ON WATERPROOFING

A ten year guarantee on workmanship, material and water tightness is required by the Principal Agent

Descriptions of sheet or membrane waterproofing shall be deemed to include additional labour to turn-ups and turn downs.

ABE Bitu.prime or other approved bituminous priming solution, applied to existing waterproofed areas:

1	On flat roofs B : 0 C : 0 D : 114 G : 0	m2	114	

ABE Index VIS P Reinforced plastometric bitumen-polymer or other approved reinforced plastometric waterproofing bitumen membrane, fully bonded by means of heat fusion, secured to priming solution (elsewhere measured), all in accordance with the manufacturer's instructions:

2	On flat roofs B : 0 C : 0 D : 114 G : 0	m2	114	
3	In turn-ups exceeding 300mm girth B : 0 C : 0 D : 16 G : 0	m2	16	

Carried to Collection R

Section No. 2
BUILDING WORKS
Bill No. 3
WATERPROOFING

	ABE Unigum Dual Reinforced and Mineral Slate bitumen-polymer or other approved reinforced plastomeric waterproofing bitumen membrane, fully bonded by means of heat fusion, secured to priming solution (elsewhere measured), all in accordance with the manufacturer's instructions:			
4	On flat roofs B : 0 C : 0 D : 114 G : 0	m2	114	
5	In turn-ups exceeding 300mm girth B : 0 C : 0 D : 16 G : 0	m2	16	
6	In dressing around rainwater outlet B : 0 C : 0 D : 4 G : 0	No	4	
	ABE Silvakote or other approved bitumen based aluminium paint (two coats) applied in strict accordance with the manufacturers' instructions:			
7	On bitumen waterproofing membrane, turn-ups, etc. B : 0 C : 0 D : 130 G : 0	m2	130	
	Testing:			
8	Allow for flood testing of mastic waterproofing membrane to the satisfaction of the engineer for all roof areas provided.		Item	
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Section No. 2
BUILDING WORKS
Bill No. 3
WATERPROOFING

Section No. 2

Bill No. 3

WATERPROOFING

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Section No. 2
BUILDING WORKS
Bill No. 3
WATERPROOFING

Item No		Quantity	Rate	Amount

SECTION No. 2: BUILDING WORKS

BILL No. 4: ROOF COVERINGS, ETC.

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

PROFILED METAL SHEETING AND ACCESSORIES

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions:

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Fixing

Fixing shall be done according to SABS 1200HB with minimum 225mm end laps

Pricing

Prices for roof covering and cladding are to include for all necessary drive screws, hook bolts, clips, sheet bolts, nuts, washers, etc., for drilling holes for screws and bolts including removing all swarf from the sheeting and all right angle cutting and waste

PROFILED METAL SHEETING AND ACCESSORIES

Safintra 410 concealed fix roofing sheeting must be installed by an approved Roofing Contractor in strict accordance with the manufacturer's instructions. A ten year guarantee on thickness, workmanship, material and water tightness is required by the Principal Agent (to be supplied by Safal Group/Safintra)

The contractor shall include for all raking cutting and waste when pricing this bill section

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	0,55mm Thick Saflok 410 concealed fix Colorplus AZ200 or other approved roof sheeting and accessories, fixed to timber purlins (elsewhere measured) at 1700mm centres with concealed fixing, pierce-fixing through each sheet under the flashings, cappings or along the top of the sheets (for low pitch roofs), 150mm wide flat sheeting strips placed on insulation board (elsewhere measured) over purlin positions, all in accordance with the manufacturer's instructions:				
1	Roof covering with pitch not exceeding 25 degrees B : 0 C : 0 D : 936 G : 0	m2	936		
2	Ridge/hip capping to suit roof profile B : 0 C : 0 D : 68 G : 0	m	68		
3	Broad flute closers B : 0 C : 0 D : 136 G : 0	m	136		
	0,53mm Thick IBR profile galvanised AZ200 (colour to Architects specification) or other approved roof sheeting and accessories, fixed to timber purlins (elsewhere measured) at 1700mm centres in accordance with the manufacturer's instructions:				
4	Roof covering with pitch not exceeding 25 degrees B : 1587 C : 203 D : 0 G : 0	m2	1 790		
	0,8mm Thick concealed fix flashings, etc. finished to same finish as roof sheeting, including fixing to interlocking roofing on steel and/or timber roof trusses:				
5	Broad flute closers B : 0 C : 26 D : 0 G : 0	m	26		
6	Headwall/sidewall flashing B : 0 C : 26 D : 0 G : 0	m	26		
7	Counter flashing B : 0 C : 26 D : 0 G : 0	m	26		
8	Barge flashing bent three times with 580mm girth B : 0 C : 76 D : 66 G : 0	m	142		
9	Flashing around 100mm diameter pipe (Provisional) B : 0 C : 0 D : 1 G : 0	No	1		
	RAINWATER DISPOSAL				
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Section No. 2
BUILDING WORKS
Bill No. 4
ROOF COVERINGS, ETC.

	0,9mm Thick Watertite or other approved seamless aluminium gutters and rainwater pipes with ColourTechG4 finish to Rich Ivory colour, including fixing with heavy duty brackets in accordance with the manufacturer's instructions:				
10	125 x 100mm Ogee eaves gutter B : 280 C : 138 D : 0 G : 0	m	418		
11	Extra over gutter for stopped end B : 90 C : 28 D : 0 G : 0	No	118		
12	Extra over gutter for outlet to suit 110 x 75mm rainwater pipe B : 40 C : 24 D : 6 G : 0	No	70		
13	140 x 150mm Eaves gutter B : 0 C : 0 D : 124 G : 0	m	124		
14	Extra over gutter for stopped end B : 0 C : 0 D : 10 G : 0	No	10		
15	Extra over gutter for angle B : 0 C : 0 D : 2 G : 0	No	2		
16	Extra over gutter for outlet to suit 110 x 110mm rainwater pipe B : 0 C : 0 D : 6 G : 0	No	6		
17	110 x 75mm Rainwater pipe B : 288 C : 0 D : 0 G : 0	m	288		
18	Extra over rainwater pipe for eaves offset to 600mm to 1000mm projection B : 40 C : 24 D : 6 G : 0	No	70		
19	Extra over rainwater pipe for bend or shoe B : 40 C : 24 D : 6 G : 0	No	70		
20	110 x 110mm Rainwater pipe B : 0 C : 131 D : 47 G : 0	m	178		
21	Extra over rainwater pipe for bend or shoe B : 0 C : 0 D : 6 G : 0	No	6		
	ROOF INSULATION				
	Sisalation 430 FR or other approved heavy industrial grade aluminium foil based insulation:				
22	Insulation laid taut over purlins (at approximately 950mm centres) and fixed concurrent with roof covering, including galvanised steel straining wires, laps, etc. B : 1587 C : 203 D : 935 G : 0	m2	2 725		
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Section No. 2
BUILDING WORKS
Bill No. 4
ROOF COVERINGS, ETC.

Section No. 2

Bill No. 4

ROOF COVERINGS, ETC.

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Section No. 2
BUILDING WORKS
Bill No. 4
ROOF COVERINGS, ETC.

Item No		Quantity	Rate	Amount

SECTION No. 2: BUILDING WORKS

BILL No. 5: CARPENTRY & JOINERY

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions

Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted

Prefabricated roof trusses

Prefabricated timber roof trusses shall be constructed of South African pine by a firm of specialist designer manufacturer's as approved by the architect

Prices must include for all cross and wind bracing according to the manufacturer's instruction

Prices must include for the design, plans and approval of all timber trusses including a COC and no further claims shall be considered

Pre-fabricated timber roof trusses shall comply with the requirements of SABS Specification 0163 and be constructed of South African pine as described in clause 8.5 to the designs shown on the Manufacturer's detail drawings. The timber shall be of cross-sectional dimensions shown, cut to correct lengths with ends square or at the required angle

Trusses shall be assembled in truss fabricating jigs with the truss having the proper camber, all tightly clamped together with joints secured using approved connector plates of galvanised steel sheet. Connector plates shall be pressed into the timber simultaneously from both sides of the truss with a hydraulic press capable of exerting such pressure as will ensure complete penetration of the teeth into the timber

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The connector plates shall be of such size as will ensure that the joints so made will adequately withstand the forces exerted on the joints

In coastal areas connector plates in buildings without ceilings shall be painted with two coats of epoxy tar complying with SABS Specification 801 Type 2, or rust neutralising paint

Timber members built into brickwork to be given two coats of carbolineum and wrapped in plastic

Approval of pre-fabricated roofing systems, whether measured as an alternative or not, shall be subject to the following requirements:

(a) The Manufacturer of the pre-fabricated trusses shall hold a certificate of competence issued by the Institute for Timber Construction

(b) A polyester print, size A1 having a minimum thickness of 0,5mm, shall be submitted by the Contractor to the Regional Representative at an early stage for approval by the Directorate: Structural Engineering Services

(c) The drawings shall be signed by a Registered Professional Engineer whose name appears on the Departmental panel for structural work

(d) In the case of systems buildings, approval shall be given with submission of the contract drawings on acceptance of the tender

The following minimum information shall be shown on the drawings:

(a) Details of the roof system with the position of the rafters and purlins indicated thereon as well as typical elevations

(b) Bracing as recommended by the Institute for Timber Construction

(c) Sizes and grading of the timber components

(d) Truss sizes, e.g. height of ridge or angle of pitch

(e) Plate sizes for every construction point (Code numbers only are deemed insufficient)

(f) Separate connection details for hip, valley and jack rafters

(g) Maximum spacing for purlins and brandering to ceilings shall be according to specifications

(h) The type of roof covering as well as the design load. Over and above the supervision undertaken by the Representative/Agent, the Truss Fabricator or his Design Engineer shall inspect the completed roof structure and issue a certificate of confirmation to the Department that:

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Section No. 2
BUILDING WORKS
Bill No. 5
CARPENTRY & JOINERY

"The roof structure(s) has (have) been erected in accordance with the Design Engineer's drawings, as accepted by the Department, and the relevant details given in the manual "THE ERECTION AND BRACING OF TIMBER ROOF TRUSSES" issued by the National Timber Research Institute and the Institute for Timber Construction"

The prefabricated timber roof trusses shall be designed by a Registered Professional Engineer and shall be in accordance with SABS 0160 and 0163, as well as the additional requirements of PW 371, clause 8.10. The wind loading shall be as determined in terms of Clause 5.5 of SABS 0160. The applicable terrain category shall be taken as Category 2.

All prices shall be deemed to include the cost of the Registered Professional Engineer and the issuing of a certificate on completion, certifying the workmanship, erection and materials meeting the stated requirements.

Fixing

All nailing of timber roof trusses, purlins, etc. shall be done with galvanised nails. In coastal areas, copper, aluminium or stainless steel nails shall be used

Items described as "nailed" shall be deemed to be fixed with hardened steel nails or shot pins to brickwork or concrete

Where items are described as "bolted" the bolts have been measured elsewhere

PREFABRICATED ROOF TRUSSES, ETC.

Prefabricated timber roof construction with trusses at maximum 1100mm centres to 20 degree pitch with 600mm eaves overhangs, including 50 x 76mm sawn softwood purlins at 950mm centres (with and including fixing to rafters with hurricane clips), runners, bracing, cleats, brackets, bolts, etc., supplied and fixed complete (wall plates elsewhere measured):

1	Trusses for regular shaped building, size overall 9,40 x 4,65m on plan (Flatlets), (building area 43,71m2 excluding eaves projection) formed of mono pitch rafters at 7 degree pitch and 800mm eaves overhang, including all bracing, wall plates, etc. B : 4 C : 0 D : 0 G : 0	No	4		
2	Trusses for irregular shaped building, size overall 27,55 x 11,03m on plan (Units 1-4 and 17-20), comprising one rectangular section 27,55 x 8,37m and four rectangular projections size 3,85 x 2,66m (building area 271m2 excluding eaves projection) with two gable ends and 800mm eaves overhang, including all bracing, wall plates, etc. B : 2 C : 0 D : 0 G : 0	No	2		

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Section No. 2
BUILDING WORKS
Bill No. 5
CARPENTRY & JOINERY

3	Allow for bracing, cross bracing, connecting clips, fixing brackets, hurricane clips, etc., as required for fixing in position of roof trusses as described in accordance with the manufacturer's instructions		Item		
	STRUCTURAL ROOF TIMBERS				
	Sawn softwood:				
4	38 x 114mm Rafters in single lengths not exceeding 2,4m B : 96 C : 40 D : 21 G : 0	m	157		
5	38 x 114mm Rafters in single lengths exceeding 2,4m and not exceeding 3,9m B : 5 C : 5 D : 5 G : 0	m	15		
	Sawn softwood roof timbers bolted to existing prefabricated trusses for additional loading on roof:				
6	38 x 114mm Roof timbers in single lengths not exceeding 2,4m B : 0 C : 0 D : 60 G : 0	m	60		
7	38 x 114mm Roof timbers in single lengths exceeding 2,4m and not exceeding 3,9m B : 0 C : 0 D : 45 G : 0	m	45		
8	76 x 228mm Beams in single lengths exceeding 3,9 and not exceeding 6,6m B : 0 C : 0 D : 35 G : 0	m	35		
	GENERAL ROOF TIMBERS				
	Sawn softwood:				
9	50 x 76mm Purlins B : 1622 C : 246 D : 765 G : 0	m	2 634		
10	38 x 114mm Wall plates securely fixed to existing brick wall to engineers satisfaction B : 112 C : 0 D : 0 G : 0	m	112		
11	38 x 228mm Gangboarding (Provisional) B : 60 C : 80 D : 36 G : 0	m	176		
	EAVES, VERGES, ETC.				
	Sawn softwood:				
12	38 x 38mm Battens fixed to walls B : 0 C : 259 D : 219 G : 0	m	478		
13	38 x 38mm Battens nailed to rafter ends B : 0 C : 0 D : 219 G : 0	m	219		
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Section No. 2
BUILDING WORKS
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CARPENTRY & JOINERY

Pressed fibre cement:

14 12 x 225mm Fascia fixed vertically to timber battens at end of roof trusses (elsewhere measured) with brass screws, including H-profile PVC joint strips, caps, etc. — m — 718
B : 468 C : 138 D : 112 G : 0

15 80 x 280mm Barge fixed vertically to timber battens at end of roof trusses (elsewhere measured) with brass screws, including H-profile PVC joint strips, caps, etc. — m — 525
B : 299 C : 145 D : 81 G : 0

HOLLOW CORE TIMBER DOORS

Swartland or other approved hardwood commercial doors suitable for painting both sides, hung to steel/timber door linings/frames:

16 40mm Thick door Code HBSTDHI2, size 813 x 2032mm high with two exposed hardwood edges — No — 282
B : 140 C : 32 D : 110 G : 0

SOLID TIMBER DOORS

Solid core doors with commercial veneer suitable for painting both sides and hardwood edge strips all round, sliding door gear (elsewhere measured):

17 40mm Thick purpose made heavy duty sliding door, size 1000 x 2032mm high (sliding gear elsewhere measured) — No — 44
B : 20 C : 24 D : 0 G : 0

Swartland or other approved wrot Meranti timber doors hung to timber/steel frames:

18 44mm Thick door (Code SD2/OB/BR), size 813 x 2032mm high — No — 24
B : 0 C : 24 D : 0 G : 0

19 44mm Thick door (Code PD28), size 813 x 2032mm high — No — 54
B : 20 C : 8 D : 26 G : 0

20 44mm Thick stable door (Code SD2S), size 813 x 2032mm high — No — 80
B : 80 C : 0 D : 0 G : 0

FRAMES, ETC.

Wrot Meranti:

21 44 x 70mm Twice angle rounded bolted into position in existing opening with and including three 8mm diameter x 75mm long rawlbolts per stile, with heads of bolts sunk and pelleted — m — 811
B : 488 C : 156 D : 167 G : 0

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Section No. 2
BUILDING WORKS
Bill No. 5
CARPENTRY & JOINERY

DUCT COVERS/CLOSURES

21mm Thick ShutterPly in duct cover assemblies, fixed complete as described:

22 570mm Wide duct cover twice brass screwed at 400mm centres to and including two 50 x 76mm sawn softwood vertical battens along edges, planted on — m — 27

B : 0 C : 27 D : 0 G : 0

23 740mm Wide duct cover twice brass screwed at 400mm centres to and including two 50 x 76mm sawn softwood vertical battens along edges, planted on — m — 27

B : 0 C : 27 D : 0 G : 0

JOINERY FITTINGS

All components are to be assembled, securely fixed, adjusted, etc. and primed/varnished/painted and/or finished as per the Architects' detail sheets and prices shall include for same.

All 16mm thick chipboard exposed edges, such as cupboard divisions, shelves, doors, etc. are to be fitted with 2mm PVC high impact edging.

All screw holes to be fitted with white pozzie caps.

All cupboards to have 16mm thick chipboard faced with Melamine on both faces as backing, secured to walls, etc. and supported with and including 22 x 44mm wrot softwood and/or chipboard bearers where indicated as such on the Architects' drawings and/or details.

All cupboard units with chipboard and/or glass doors (single or double) to be fitted with an intermediate shelf (except if otherwise described) formed of 16mm thick chipboard faced with Melamine on both faces.

All cupboard and/or drawer units shall be fitted with 16mm thick chipboard faced with Melamine on both faces as base shelving to the units.

Where cupboards are fitted with chipboard on top (closing off the units on top), these are to be formed of 16mm thick chipboard faced with Melamine on both faces.

All prices for the descriptions of joinery fittings that may have doors, drawers, etc. are to be inclusive of all specified furniture, etc. as well as the components described above.

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Section No. 2
BUILDING WORKS
Bill No. 5
CARPENTRY & JOINERY

KITCHEN:

24 32mm Thick U-shaped granite counter top 575mm wide with rounded edges, top secured to floor mounted cupboard units, first section comprising of five drawer unit divided by opening for stove (not included), opening size 760mm long, two open shelving sections, section size, 900 x 575 x 885mm high, second section comprising of one double door cupboard unit and including opening for double sink (elsewhere measured) size, 1450 x 490mm wide, section size, 1275 x 575 x 885mm high, third section comprising of six open shelving sections, size 1510 x 575 x 885mm high, overall girth of unit 4930mm long, as per drawing K-8.100 Room data sheet — No — 12

B : 0 C : 0 D : 12 G : 0

25 32mm Thick L-shaped granite counter top 575mm wide with rounded edges, top secured to floor mounted cupboard units, first section comprising of six open shelving sections and one double door cupboard and including opening for double sink (elsewhere measured) size 1140 x 480mm wide, section size, 2315 x 575 x 885mm high, second section comprising five drawer unit and six open shelving sections, section size, 2550 x 575 x 885mm high, overall girth of unit 4865mm long, as per drawing K-8.101 Room data sheet — No — 6

B : 0 C : 0 D : 6 G : 0

26 32mm Thick L-shaped granite counter top 575mm wide with rounded edges, top secured to floor mounted cupboard units, first section comprising of 5 drawer unit and two open shelving sections, each size 522 x 575 x 885mm high, divided by open section for stove (not included), second section size 3340 x 575 x 885mm high comprising of six open shelving sections and one double door cupboard unit and including opening for double sink (elsewhere measured) size, 1140 x 480mm wide, overall girth of unit 4380mm long, as per drawing B-8.100 Room data sheet — No — 20

B : 20 C : 0 D : 0 G : 0

27 32mm Thick U-shaped granite counter top 575mm wide with rounded edges, top secured to floor mounted cupboard units, first section comprising of 5 drawer unit and four open shelving sections, size 1560 x 575 x 885mm high, second section comprising of four open shelving sections divided by opening for stove (not included), opening size 760mm long, section size including opening 2770 x 575 x 885mm high, third section comprising of six open shelving sections and one double door cupboard unit with and including opening for double sink (elsewhere measured) size, 1450 x 490mm wide, section size 2560 x 575 x 885mm high, overall girth of unit 6690mm long, as per drawing M-8.100 Room data sheet — No — 8

B : 0 C : 8 D : 0 G : 0

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Section No. 2
BUILDING WORKS
Bill No. 5
CARPENTRY & JOINERY

28	Wall mounted shelving unit formed of 22mm thick Melawood, including all required bearers, etc., comprising of seven open shelving sections and one open section for microwave (not included) overall size extreme, 2085 x 575 x 870mm high as per drawing K-8.100 Room data sheet B : 0 C : 0 D : 12 G : 0	No	12		
29	Wall mounted shelving unit formed of 22mm thick Melawood, including all required bearers, etc., comprising of eight open shelving sections and one open section for microwave (not included) overall size extreme, 2550 x 575 x 850mm high as per drawing K-8.101 Room data sheet B : 0 C : 0 D : 6 G : 0	No	6		
30	Wall mounted shelving unit formed of 22mm thick Melawood, including all required bearers, etc., comprising of eleven open shelving sections and one open section for microwave (not included) overall size extreme, 3030 x 575 x 872mm high as per drawing M-8.100 Room data sheet B : 0 C : 8 D : 0 G : 0	No	8		
	LOBBY, LOUNGE & PASSAGE:				
31	Floor mounted cupboard unit formed of 16mm thick chipboard, faced on all exposed surfaces with high pressure laminate, sub-frame formed of three 16mm thick chipboard vertical divisions/ends with Melamine veneer on all exposed surfaces, with bottom and top section, bottom section comprising of one double door cupboard set, bottom section size 1025 x 600 x 2040mm high, top section comprise of one double door cupboard set, top section size 1025 x 600 x 620mm high, with and including closure piece at top, where assembly meets the ceiling, assembly secured together and fixed on and including framed support base formed of 22 x 144mm wrot softwood, overall size 1025 x 600 x 2720mm high B : 24 C : 0 D : 0 G : 0	No	24		
	BEDROOMS:				
32	Floor mounted cupboard unit formed of 16mm thick chipboard, faced on all exposed surfaces with high pressure laminate, sub-frame formed of five 16mm thick chipboard vertical divisions/ends with Melamine veneer on all exposed surfaces, with bottom and top section, bottom section comprising of two double door cupboard set, bottom section size 1980 x 600 x 2040mm high, top section comprise of two double door cupboard set, top section size 1980 x 600 x 620mm high, with and including closure piece at top, where assembly meets the ceiling, assembly secured together and fixed on and including framed support base formed of 22 x 144mm wrot softwood, overall size 1980 x 600 x 2720mm high B : 8 C : 0 D : 0 G : 0	No	8		
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Section No. 2
BUILDING WORKS
Bill No. 5
CARPENTRY & JOINERY

33	Floor mounted cupboard unit formed of 16mm thick chipboard, faced on all exposed surfaces with high pressure laminate, sub-frame formed of seven 16mm thick chipboard vertical divisions/ends with Melamine veneer on all exposed surfaces, with bottom and top section, bottom section comprising of three double door cupboard set, bottom section size 2900 x 600 x 2040mm high, top section comprise of three double door cupboard set, top section size 2900 x 600 x 620mm high, with and including closure piece at top, where assembly meets the ceiling, assembly secured together and fixed on and including framed support base formed of 22 x 144mm wrot softwood, overall size 2900 x 600 x 2720mm high B : 16 C : 0 D : 0 G : 0	No	16		
	FLATLET:				
34	Floor mounted cupboard unit formed of 16mm thick chipboard, faced on all exposed surfaces with high pressure laminate, sub-frame formed of two 16mm thick chipboard vertical divisions/ends with Melamine veneer on all exposed surfaces, with bottom and top section, bottom section comprising of one door cupboard set, bottom section size 600 x 600 x 2040mm high, top section comprise of one door cupboard set, top section size 600 x 600 x 620mm high, with and including closure piece at top, where assembly meets the ceiling, assembly secured together and fixed on and including framed support base formed of 22 x 144mm wrot softwood, overall size 600 x 600 x 2720mm high B : 20 C : 0 D : 0 G : 0	No	20		
35	Floor mounted cupboard unit formed of 16mm thick chipboard, faced on all exposed surfaces with high pressure laminate, sub-frame formed of three 16mm thick chipboard vertical divisions/ends with Melamine veneer on all exposed surfaces, with bottom and top section, bottom section comprising of one double door cupboard set, bottom section size 1200 x 600 x 2040mm high, top section comprise of one double door cupboard set, top section size 1200 x 600 x 620mm high, with and including closure piece at top, where assembly meets the ceiling, assembly secured together and fixed on and including framed support base formed of 22 x 144mm wrot softwood, overall size 1200 x 600 x 2720mm high B : 20 C : 0 D : 0 G : 0	No	20		
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Section No. 2
BUILDING WORKS
Bill No. 5
CARPENTRY & JOINERY

Section No. 2

Bill No. 5

CARPENTRY & JOINERY

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Section No. 2
BUILDING WORKS
Bill No. 5
CARPENTRY & JOINERY

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SECTION No. 2: BUILDING WORKS

BILL No. 6: CEILINGS, PARTITIONS & ACCESS FLOORING

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

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SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions

Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted

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

NAILED UP CEILINGS

6mm Thick Nutec or other approved fibre cement ceiling boarding, laid in staggered pattern with and including H-profile jointing strips, secured to brandering with drywall screws at maximum 150mm centres:

1	Ceiling fixed to and including 38 x 50mm sawn softwood brandering at 600mm centres at joints, against walls, etc. B : 1050 C : 318 D : 327 G : 0	m2	1 695		
2	Eaves soffits B : 597 C : 207 D : 175 G : 0	m2	980		

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Section No. 2
BUILDING WORKS
Bill No. 6
CEILINGS, PARTITIONS & ACCESS FLOORING

3	Extra over ceiling for 600 x 600mm hinged trap door of 19 x 69mm wrot Meranti framing around, with two sawn softwood cross branders covered with ceiling board and fitted flush in opening B : 0 C : 0 D : 6 G : 0	No	6		
	CORNICES				
	Nucornice or other approved cornices:				
4	75mm Nu-doric plain cornice secured to walls around new/existing ceilings B : 0 C : 0 D : 810 G : 0	m	810		
5	Secure existing cornice and apply flexible multipurpose gap filler to fill gaps around cornice B : 0 C : 0 D : 720 G : 0	m	720		
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Section No. 2
BUILDING WORKS
Bill No. 6
CEILINGS, PARTITIONS & ACCESS FLOORING

Section No. 2

Bill No. 6

CEILINGS, PARTITIONS & ACCESS FLOORING

COLLECTION

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Section No. 2
BUILDING WORKS
Bill No. 6
CEILINGS, PARTITIONS & ACCESS FLOORING

Item No		Quantity	Rate	Amount

SECTION No. 2: BUILDING WORKS

BILL No. 7: IRONMONGERY

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions

Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted

Fixing of ironmongery

Descriptions of wall mounted and floor standing ironmongery items shall be deemed to include for fixing in position and all fixing accessories.

Descriptions of proprietary items shall be deemed to include fixing in position and all fixing accessories as specified by the manufacturer.

Finishes to ironmongery

Where applicable finishes to ironmongery are indicated by suffixes in accordance with the following list:

BS Satin bronze lacquered
CP Chromium plated
SC Satin chromium plated
SE Silver enamelled
GE Grey enamelled

AS Anodised silver
AB Anodised bronze
AG Anodised gold
ABL Anodised black
PB Polished brass
PL Polished and lacquered
PT Epoxy coated
SD Sanded Fixing

Carried to Collection R

Section No. 2
BUILDING WORKS
Bill No. 7
IRONMONGERY

	Descriptions of wall mounted and floor standing ironmongery items shall be deemed to include for fixing in position and all fixing accessories Descriptions of proprietary items shall be deemed to include fixing in position and all fixing accessories Unless otherwise described locks shall have two keys each				
	HINGES, BOLTS, ETC.				
	Dormakaba or other approved:				
1	DBB-SS-009 102 x 75 x 3mm Two ball bearing butt hinge B : 60 C : 144 D : 298 G : 0	No	502		
2	Necked bolt 100 x 25mm SC on brass B : 40 C : 0 D : 0 G : 0	No	40		
3	Barrel bolt 100 x 25mm SC on brass B : 40 C : 0 D : 0 G : 0	No	40		
	Alufab (Pty) Ltd. or other approved:				
4	2040 200mm Aluminium sinkless hinge fixed to aluminium door B : 0 C : 32 D : 6 G : 0	Pairs	38		
5	M1519N 150mm Aluminium flush bolt B : 0 C : 32 D : 4 G : 0	No	36		
	LOCKS				
	Dormakaba or other approved:				
6	DO34S SS multiple lever sashlock B : 180 C : 48 D : 110 G : 0	No	338		
7	DO36S SS Cylinder sashlock fixed to new doors (Provisional) B : 20 C : 32 D : 26 G : 0	No	78		
8	DO2935 SS Narrow stile hook lock operating with European profile cylinder B : 20 C : 0 D : 0 G : 0	No	20		
9	DO37D SS Cylinder deadlock B : 0 C : 0 D : 2 G : 0	No	2		
10	DCE-002 SS Round cylinder escutcheon B : 0 C : 8 D : 2 G : 0	Pairs	10		
11	DCE-105 SS Narrow stile cylinder escutcheon B : 10 C : 0 D : 0 G : 0	Pairs	10		
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Bill No. 7
IRONMONGERY

12	DHK204101 41mm euro-profile half knob B : 20 C : 16 D : 0 G : 0	No	36		
13	DKC206301 MK 63mm Five pin euro-profile cylinder master keyed fixed to new doors (Provisional) B : 20 C : 0 D : 28 G : 0	No	48		
14	DDC206301 GMK 63mm five pin euro-profile cylinder grand master keyed B : 0 C : 16 D : 0 G : 0	No	16		
	MASTER KEYS				
	Dormakaba or other approved:				
15	Additional master keys (two per block) B : 2 C : 2 D : 2 G : 0	No	6		
	HANDLES				
	Dormakaba or other approved:				
16	DFP-EP025 120 x 40mm Rectangular flush pull handle B : 0 C : 48 D : 0 G : 0	No	48		
17	DFP-SS025 120 x 40mm Rectangular flush pull handle B : 60 C : 0 D : 0 G : 0	No	60		
18	DPH206 BTB 400 x 30mm offset tubular pull handle (fixing sets included) B : 0 C : 0 D : 4 G : 0	Pairs	4		
19	TH120 Key SS Lever handle on rose with KH escutcheons fixed to new doors B : 180 C : 48 D : 110 G : 0	Pairs	338		
20	TH120 Latch SS Lever handle on rose B : 0 C : 16 D : 0 G : 0	Pairs	16		
21	TH120 Cyl SS Lever handle on rose with cylinder escutcheons B : 20 C : 16 D : 26 G : 0	Pairs	62		
	DOOR CLOSER ASSEMBLIES				
	Dormakaba or other approved:				
22	TS83 PA EN 3-6 parallel arm non hold open door closer fixed to timber, steel or aluminium door lining/frame with and including parallel arm bracket B : 0 C : 0 D : 2 G : 0	Sets	2		
	SLIDING DOOR GEAR ASSEMBLIES				
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IRONMONGERY

	SA Sliding Door Sales or other approved sliding gear assembly:				
23	Modena S3 sliding gear set for single timber door, with bottom channel (93X) fixed to underside of door, including bottom guide (102N/93), top track, end caps, top hanger, side fixing brackets, removable track joint, door stops, woolpile, fascia, etc. including installation in strict accordance with the manufacturer's instructions B : 0 C : 24 D : 0 G : 0	No	24		
24	Modena S4 sliding gear set for single timber door, with bottom channel (93X) fixed to underside of door, including bottom guide (102N/93), top track, end caps, top hanger, side fixing brackets, removable track joint, door stops, woolpile, fascia, etc. including installation in strict accordance with the manufacturer's instructions B : 20 C : 0 D : 0 G : 0	No	20		
	DOOR STOPS, CABIN HOOKS, ETC.				
	Dormakaba or other approved:				
25	DDS-NP-018 Floor mounted door stop B : 160 C : 48 D : 136 G : 0	No	344		
26	DPS-SS-032 Stainless steel dust proof strike mounted to wall B : 0 C : 0 D : 2 G : 0	No	2		
27	DDS-SS-021 floor mounted door stop B : 0 C : 0 D : 2 G : 0	No	2		
28	166 SC 200mm Brass cabin hook and eye, with and including 100 x 100 x 75mm thick chamfered wrot Meranti block twice bolted to wall with anchor bolts B : 40 C : 48 D : 0 G : 0	No	88		
	BATHROOM FITTINGS, ETC.				
	Towel rails:				
29	19mm Diameter chromium plated towel rail 400mm long including two end brackets plugged to wall B : 20 C : 8 D : 18 G : 0	No	46		
30	19mm Diameter chromium plated towel rail 900mm long including two end brackets plugged to wall B : 40 C : 16 D : 19 G : 0	No	75		
	Sensea or other approved extendable shower rail assemblies:				
31	32mm Diameter chromium plated rail 900mm long, with two ends fixed to and including chromium plated end brackets, plugged and screwed to wall, (shower curtain excluded) B : 40 C : 8 D : 19 G : 0	No	67		
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IRONMONGERY

32	32mm Diameter chromium plated L shaped curved shower curtain rod (fixed over bath) 1800mm long, with two ends fixed to and including chromium plated end brackets, plugged and screwed to wall, (shower curtain excluded) B : 0 C : 8 D : 0 G : 0	No	8		
	CURTAIN TRACKS (PROVISIONAL)				
	Curtain tracks:				
33	Double curtain track (medium duty) in various lengths, plugged B : 494 C : 162 D : 320 G : 0	m	976		
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Section No. 2

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IRONMONGERY

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Section No. 2
BUILDING WORKS
Bill No. 7
IRONMONGERY

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SECTION No. 2: BUILDING WORKS

BILL No. 8: METALWORK

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

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General

Descriptions of bolts shall be deemed to include nuts and washers.

Descriptions of expansion anchors and bolts and chemical anchors and bolts shall be deemed to include nuts, washers and mortices in brickwork or concrete.

Metalwork described as "holed for bolt(s)" shall be deemed to exclude the bolts unless otherwise described.

Each window shall be tested for water tightness with water sprayed on by means of a 20mm hosepipe using adequate pressure. If in the opinion of the principal agent, the pressure proves to be inadequate, then the pressure in the hosepipe shall be boosted by means of compressed air or other approved means.

Tenderers are referred to Architect's drawings indicated in the general window layout as annexed to these bills of quantities for tender purposes

Aluminium doors and windows shall comply with AAAMSA design and performance criteria for built up areas.

Glazing shall comply with SAGGA regulations. Glass shall be type 6.38mm laminated performance glass as shown on the window schedules / drawings appended to these bills of quantities.

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Glass thickness shall comply with SAGGA regulations irrespective of thicknesses shown on the schedules/drawings.

Doors and windows shall be supplied with protective tape and plastic and shall be removed only once surrounding trades have been completed.

For purpose made windows and doors, refer to drawings annexed to these bills of quantities.

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

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 degradation for a period of not less than five years including Glazing COC

All windows to be approved by the Architect prior to installation.

Hot dip galvanising

Where hot dip galvanising is specified, it should be executed in accordance with SANS 121:2011 (ISO 1461:2009), unless otherwise described

ALUMINIUM WINDOWS, DOORS, SHOP FRONTS, ETC.

All aluminium windows to be constructed of CrealCo Swift 30.5 casement system components, glazing to be fixed with clip-on glazing beads and including vinyl glazing gaskets, all in accordance with NBR Part N

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Section No. 2
BUILDING WORKS
Bill No. 8
METALWORK

	Natural anodized aluminium windows glazed with 6,35mm thick GSA SmartGlass Intruderpruf clear laminated safety glass plugged to brickwork or concrete, including clear silicone sealant applied around:				
1	Window size 600 x 600mm high overall comprising of one top hung to open out sections, pane size 520 x 520mm high, opening section to include burglar bars, Ref: W04 as per drawing B-7.100 B : 80 C : 0 D : 0 G : 0	No	80		
2	Window size 600 x 1200mm high overall divided in two equal sections with horizontal transome, top and bottom section comprising of top hung to open out sections, pane size 520 x 540mm high, opening sections to include burglar bars (Ref: W02 as per drawings) B : 0 C : 64 D : 56 G : 0	No	120		
3	Window size 1500 x 900mm high overall divided in two unequal sections with 40mm wide vertical mullion, first section comprising of two top hung to open out sections divided by 40mm high transome, panes sizes approximately 520 x 390mm high, second section comprising of fixed pane size approximately, 860 x 820mm high, opening sections to include burglar bars, Ref: W07 as per drawing B-7.100 B : 20 C : 0 D : 0 G : 0	No	20		
4	Window size 1200 x 1200mm high overall divided in two unequal sections with 40mm wide vertical mullion, first section comprising of one top hung to open out section pane size, 520 x 300mm high, bottom section comprising of fixed pane size, 520 x 780mm high, second section comprising of fixed pane size approximately, 560 x 1120mm high, opening sections to include burglar bars, Ref: W04 as per drawing K-7.100 B : 0 C : 0 D : 19 G : 0	No	19		
5	Window size 2000 x 680mm high overall divided in three unequal sections with two 40mm wide vertical mullions, first section comprising of top hung to open out section, pane size approximately 520 x 600mm high, second section comprising of fixed pane size approximately, 800 x 600mm high, third section comprising of top hung to open out section, pane size approximately 520 x 600mm high, opening sections to include burglar bars, Ref: W06 as per drawing B-7.100 B : 20 C : 0 D : 0 G : 0	No	20		
6	Window size 2000 x 900mm high overall divided in two unequal sections with 40mm wide vertical mullion, first section comprising of two top hung to open out sections divided by 40mm high transome, pane sizes approximately 820 x 390mm high, second section comprising of fixed pane size approximately, 1060 x 820mm high, opening sections to include burglar bars, Ref: W05 as per drawing B-7.100 B : 60 C : 0 D : 0 G : 0	No	60		
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Section No. 2
BUILDING WORKS
Bill No. 8
METALWORK

7	Window size 1500 x 1200mm high overall divided in two unequal sections with 40mm wide vertical mullion, first section comprising of two top hung to open out sections divided by 40mm high transome, pane size approximately 520 x 540mm high, second section comprising of fixed pane size approximately, 860 x 1120mm high, opening sections to include burglar bars (Ref: W04 as per drawings) B : 0 C : 32 D : 0 G : 0	No	32		
8	Window size 1800 x 1200mm high overall divided in two equal sections with 40mm wide vertical mullion, first section comprising of two top hung to open out sections divided by 40mm high transome, pane size approximately 820 x 540mm high, second section comprising of fixed pane size approximately, 860 x 1120mm high, opening sections to include burglar bars, Ref: W08 as per drawing B-7.100 B : 40 C : 0 D : 0 G : 0	No	40		
9	Window size 4070 x 510mm high overall divided in four unequal sections with three 40mm wide vertical mullions, first section comprising of fixed pane size 958 x 430mm high, second and third sections identical comprising of fixed pane each size, 978 x 430mm high, last section comprising of fixed pane size 958 x 430mm high, Ref: W06 as per drawing K-7.100 B : 0 C : 0 D : 1 G : 0	No	1		
10	Window size 4070 x 900mm high overall divided in four unequal sections with three 40mm wide vertical mullions, first section comprising of fixed pane size 958 x 240mm high and fixed pane section below size 958 x 540mm high, second and third sections identical comprising of fixed pane each size, 978 x 240mm high and fixed pane section below each size 978 x 540mm high, last section comprising of fixed pane size 958 x 240mm high and fixed pane section below size 958 x 540mm high, Ref: W05 as per drawing K-7.100 B : 0 C : 0 D : 3 G : 0	No	3		
11	Window size 2000 x 1500mm high overall divided in three unequal sections with two 40mm wide vertical mullions, first section comprising of fixed pane size, 600 x 200mm high, two top hung to open out sections divided by 40mm high transome, panes size approximately 600 x 600mm high, second section comprising of fixed pane size approximately, 640 x 1480mm high, third section identical to the first section, all opening sections to include burglar bars, Ref: W03 as per drawing K-7.100 B : 0 C : 0 D : 72 G : 0	No	72		
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Section No. 2
BUILDING WORKS
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METALWORK

12	Window size 2400 x 1500mm high overall divided in two unequal sections with 40mm wide vertical mullion, first section comprising of two top hung to open out sections divided by 40mm high transome, pane size approximately 820 x 600mm high, bottom section in fixed pane size, 820 x 140mm high, second section comprising of fixed pane size approximately, 1460 x 1420mm high, opening sections to include burglar bars, Ref: W01 as per drawing B-7.100 B : 20 C : 0 D : 0 G : 0	No	20		
13	Window size 3000 x 1400mm high overall divided in three unequal sections with two 40mm wide vertical mullions, first section comprising of two top hung to open out sections divided by 40mm high transomes, panes size 560 x 610mm high, second section comprising of one fixed pane size, 1640 x 1340mm high, third section identical to the first section, all opening sections to include burglar bars, Ref: W01 as per drawing K-7.100 B : 0 C : 0 D : 18 G : 0	No	18		
	Natural anodized aluminium door assemblies glazed with 6,35mm thick GSA SmartGlass Intruderpruf clear laminated safety glass plugged to brickwork or concrete, including clear silicone sealant applied around:				
14	Door assembly with double door size 1800 x 2100mm high in two equal leaves, each leaf glazed in two unequal sections divided with one horizontal transome 100mm high, top section in fixed pane size 641 x 970mm high, bottom section in fixed pane size 641 x 769mm high with 130mm high bottom horizontal transome (Ref: D05 as per drawings) B : 0 C : 16 D : 0 G : 0	No	16		
	Natural anodized aluminium shop front assemblies glazed with 6,35mm thick GSA SmartGlass Intruderpruf clear laminated safety glass plugged to brickwork or concrete, including clear silicone sealant applied around:				
15	Shopfront assembly divided with horizontal transome 150mm high, top section comprising of two top hung to open out sections each size approximately 520 x 510mm high separated by 40mm high transome, bottom section comprising of fixed pane size 520 x 810mm high, overall size of assembly 600 x 2100mm high, opening sections to include burglar bars (Ref: W03 as per drawings) B : 0 C : 16 D : 0 G : 0	No	16		
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Section No. 2
BUILDING WORKS
Bill No. 8
METALWORK

16	Shopfront assembly divided with one vertical mullion 65mm wide and one horizontal transome 150mm high, first section comprising of two top hung to open out sections each size approximately 652 x 487mm high separated by 20mm high transome, both bottom sections comprising of fixed pane size 652 x 785mm high, second top section comprising of fixed pane size 652 x 1035mm high, overall size of assembly 1500 x 2100mm high, opening sections to include burglar bars (Ref: W01 as per drawings) B : 0 C : 16 D : 0 G : 0	No	16		
17	Shopfront assembly divided with two vertical mullions 125mm wide and one horizontal transome 100mm high, first section comprising of two fixed panes, one size 1075 x 1020mm high and other size 1075 x 820mm high, second section sliding door size 1200 x 2100mm high, including sliding door accessories, track, hangers, guides and stops (as per manufacturer's specifications) third section comprising of two top hung to open out sections one size, 475 x 460mm high, and other size 475 x 522mm high, and bottom section in fixed pane size, 475 x 820mm high, overall size of assembly 3000 x 2100mm high, opening sections to include burglar bars Ref: D05 as per drawing B-7.100 B : 20 C : 0 D : 0 G : 0	No	20		
18	Shopfront assembly divided with two vertical mullions 53mm wide, first section comprising of fixed pane, size 1095 x 216mm high and separated by horizontal transom from fixed pane size 1095 x 1100mm high, separated by 100mm high transom from fixed pane size 1095 x 769mm high, second section comprising of two equal fixed panes divided by vertical mullion, each size 836 x 216mm high, separated from double door section, both leaves equal and comprising of one fixed pane size 641 x 970mm high and separated by 100mm high transom from bottom fixed pane size 641 x 770mm high, third section comprising of fixed pane size 1095 x 216mm high, separated by horizontal transom from fixed pane size 1095 x 1100mm high, separated by 100mm high transom from fixed pane size 1095 x 770mm high, overall size of assembly 4070 x 2400mm high, Ref: D01 as per drawing K-7.100 B : 0 C : 0 D : 2 G : 0	No	2		
	HOT DIP GALVANISED PRESSED STEEL DOOR LININGS				
	1,6mm Thick single rebated linings suitable for half brick walls, fitted with and including three Dorma DBB-SS-009 or other approved two ball bearing butt hinges welded to rebates in linings:				
19	Lining for door size 813 x 2032mm high (fixed to existing opening) B : 60 C : 24 D : 24 G : 0	No	108		
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METALWORK

	1,6mm Thick single rebated linings suitable for one brick walls, fitted with and including three Dorma DBB-SS-009 or other approved two ball bearing butt hinges welded to rebates in linings:				
20	Lining for door size 813 x 2032mm high (fixed to existing opening) B : 80 C : 8 D : 86 G : 0	No	174		
	HOT DIP GALVANISED STEEL COLUMNS				
	Roof structure post assemblies, including all welding, bolt holes, setting up, adjusting, etc.:				
21	89mm Diameter x 4mm thick x 8,38kg/m column x 2380mm high fitting with and including circular base and end plates, each holed for four holding down bolts (elsewhere measured) B : 0 C : 8 D : 0 G : 0	No	8		
	Bolts to columns, beams, etc. including holes:				
22	M16 Grade 4.8 holding down bolt 75mm long, screwed one end with locknut and washer, complete, all fixed to existing reinforced concrete surface beds, slabs B : 0 C : 64 D : 0 G : 0	No	64		
	HOT DIP GALVANISED STEEL BRICK SUPPORTS (PROVISIONAL)				
	Brick support angle, bolt holes, setting up, adjusting, etc.:				
23	45 x 45 x 5mm thick x 3,38kg/m Steel angle sections including fixing to concrete slab to support brickwork skin with suitable raw bolts at 1m centres B : 0 C : 0 D : 462 G : 0	m	462		
	STEEL SECURITY GATES				
	Sundry repairwork to existing steel security gates:				
24	Labour and material in repairing steel security gates around sliding bolt, including fitting new padlock where required B : 0 C : 32 D : 24 G : 0	No	56		
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	Clearvu or other approved fencing panels and posts complete with all components, setting up, adjusting, etc.:				
25	Verandah enclosure panel high density anti-climbing and anti-cut pressed mesh panel assembly, formed of 4mm diameter horizontal and 4mm diameter vertical high tensile wires galvanised with marine fusion bond coating with aperture size 76,2 x 12,7mm and reinforcing V-section ribs, prices to allow for possible shortening and additional vertical cutting/framing of shortened panel, fitting to existing brickwork with suitable raw bolts, etc., size 1800 x 1840mm high B : 20 C : 0 D : 0 G : 0	No	20		
	ROLLER SHUTTER DOORS				
	Wispeco Roll-A-Door or other approved galvanised rollup door:				
26	Standard manually opening hand operated rollup door complete with and including all fixing brackets, guide channels, locking mechanism, etc. and setting up in position in opening size 2400 x 2100mm high B : 0 C : 8 D : 0 G : 0	No	8		
27	Ditto, but size 2400 x 2200mm high B : 20 C : 0 D : 0 G : 0	No	20		
	GLAZING BEADS				
	Natural anodised aluminium:				
28	12 x 12 x 1,2mm Thick hollow section as glazing bead secured to steel door lining fanlight section with self tapping screws at 300mm centres, including mitred ends B : 0 C : 0 D : 57 G : 0	m	57		
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BUILDING WORKS
Bill No. 8
METALWORK

Section No. 2

Bill No. 8

METALWORK

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Section No. 2
BUILDING WORKS
Bill No. 8
METALWORK

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	BILL No. 9: PLASTERING				
	Building Locations [B] - BASHEE COURT [C] - MSINTSI COURT [D] - KYALAMI FLATS The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents				
	SUPPLEMENTARY PREAMBLES				
	Proprietary products in descriptions Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted				
	SCREEDS				
	3:1 Cement screed (SANS 2001) steel trowelled on concrete:				
1	25mm Thick on floors B : 1384 C : 0 D : 0 G : 0	m2	1 384		
2	50mm Thick (average) on floors to falls B : 39 C : 0 D : 14 G : 0	m2	53		
	TAL Screedmaster or other approved self-levelling screed applied in accordance with the manufacturer's instructions:				
3	3 - 8mm Thick on concrete B : 160 C : 168 D : 42 G : 0	m2	370		
	INTERNAL PLASTER				
	4:1 Cement plaster (SANS 2001) steel trowelled on brickwork/concrete:				
4	On walls B : 4155 C : 122 D : 22 G : 0	m2	4 299		
5	On concrete soffits in pathings B : 400 C : 0 D : 0 G : 0	m2	400		
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6	On narrow widths B : 52 C : 12 D : 0 G : 0	m2	64	
	EXTERNAL PLASTER			
	5:1 Cement plaster (SANS 2001) wood floated on brickwork/concrete:			
7	On walls in patchings B : 29 C : 98 D : 67 G : 0	m2	194	
8	On walls in narrow widths B : 0 C : 20 D : 0 G : 0	m2	20	
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Section No. 2
BUILDING WORKS
Bill No. 9
PLASTERING

Section No. 2

Bill No. 9

PLASTERING

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Section No. 2
BUILDING WORKS
Bill No. 9
PLASTERING

Item No		Quantity	Rate	Amount

SECTION No. 2: BUILDING WORKS

BILL No. 10: TILING

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

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WALL TILING

200 x 200 x 6mm Thick Matt White porcelain tiles fixed to plaster with approved tile adhesive, 2mm wide continuous joints in both directions, pointed with Tal Wall and Floor light grey grout including keying plaster where required (on previously painted surfaces):

1	On walls B : 1556 C : 591 D : 1169 G : 0	m2	3 317		
2	On walls in narrow widths B : 14 C : 33 D : 18 G : 0	m2	65		

Vaal or other approved:

3	170 x 170mm Single soap dish Code 71511084 B : 60 C : 24 D : 37 G : 0	No	121		
4	205 x 160mm Single toilet roll holder Code 71511086 B : 40 C : 8 D : 20 G : 0	No	68		

FLOOR TILING

600 x 600 x 10mm Thick Industrial charcoal porcelain tiles, fixed with TAL Goldstar 6 mixed with TAL Bond tile adhesive, 6mm wide continuous joints at ends pointed with light grey Tal Wall and Floor grout:

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	600 x 600 x 10mm Thick Industria Grey porcelain tiles, fixed with an approved tile adhesive, 4mm wide continuous joints at ends pointed with light grey Tal Wall and Floor grout:				
5	On floors B : 2316 C : 972 D : 2283 G : 0	m2	5 571		
6	On risers of steps not exceeding 300mm high B : 3776 C : 0 D : 160 G : 0	m	3 936		
7	Skirting 100mm high B : 0 C : 1236 D : 0 G : 0	m	1 236		
	300 x 300 Ceramic mosaic sheet with tiles				
8	On floors to falls B : 39 C : 0 D : 14 G : 0	m2	53		
	SUNDRIES				
	Cutting and fitting to all types of tiling:				
9	Fair cutting and fitting around pipe not exceeding 50mm diameter B : 320 C : 144 D : 190 G : 0	No	654		
10	Fair cutting and fitting around pipe exceeding 50mm and not exceeding 110mm diameter B : 120 C : 48 D : 92 G : 0	No	260		
	Kirk or other approved trims, including fixing complete:				
11	10mm High aluminium straight edge trim Code ASE100 B : 288 C : 1361 D : 281 G : 0	m	1 930		
12	10mm High aluminium tile-in stairnosing Code ATIN100 B : 1888 C : 0 D : 160 G : 0	m	2 048		
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Section No. 2

Bill No. 10

TILING

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Section No. 2
BUILDING WORKS
Bill No. 10
TILING

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SECTION No. 2: BUILDING WORKS

BILL No. 11: PLUMBING & DRAINAGE (PROVISIONAL)

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents

Plumbing and drainage installations and all components used are to conform to NBR and SANS standards, as well as local municipal requirements as applicable. All work to be completed by a registered qualified plumber.

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions

Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted

"Polycop" polypropylene pipes:

Polypropylene pipes 54 mm diameter and under shall be seamless copper coloured class 16 pipes jointed with "Fast-fuse" heat welded thermoplastic or brass compression fittings as designed for use with copper pipes as stated.

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.

All pipe diameters are nominal external.

Polypropylene pipes 63 mm diameter and over shall be class 12 pipes jointed with cast iron "Supraclamp" running joints.

Fusion welded bends, once or twice mitred as necessary, and tees shall be factory manufactured.

Fusion welded bends and tees shall include jointing to pipes with PVC rubber ring double Z joint couplers.

Carried to Collection R

Branch tees shall include flanged and bolted joints to "Polycop" branch pipes in addition and for brass compression male iron to copper straight couplers.

Reducers shall include jointing to pipes with PVC rubber ring double Z joint couplers and reducers shall be of sufficient overall length to accommodate same.

All pipes shall be jointed and fixed strictly in accordance with the manufacturer's instructions.

All pipe diameters are nominal external.

Concrete pipes:

Pipes shall be jointed with ogee joints with rubber collars or socket and spigot joints with rubber rings.

uPVC pipes and fittings:

Soil, waste and vent pipes and fittings shall be solvent weld jointed.

uPVC pressure pipes and fittings:

Pipes for water supply shall be of the class stated.

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

Pipes of 50mm diameter and greater shall have sockets and spigots with push in type integral rubber ring joints. Bends shall be uPVC and all other fittings shall be cast iron, all with similar push-in type joints.

Copper pipes:

Pipes shall be hard drawn and half-hard pipes of the class stated. Class 0 (thin walled hard drawn) pipes shall not be bent. Class 1 (thin 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. Only compression fittings shall be used in walls or in ground.

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 to Collection R

Reducing fittings:

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

Wire gratings:

Descriptions of gutter outlets etc shall be deemed to include wire balloon gratings.

Excavations:

No claim for rock excavation will be entertained unless the contractor has timeously notified the quantity surveyor thereof prior to backfilling.

"Soft rock" and "hard rock" shall be as defined in "Earthworks".

Laying, backfilling, bedding, etc. of pipes:

Pipes shall be laid and bedded and trenches shall be carefully backfilled in accordance with manufacturers' instructions.

Where no manufacturers' instructions exist pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following:
SABS 1200 L : Medium-pressure pipelines
LD : Sewers
LE : Stormwater drainage
Pipe trenches etc shall be backfilled in accordance with clauses 3, 5.5, 5.6, 5.7 and 7 of SABS 1200
DB : Earthworks (Pipe trenches)
Pipes shall be bedded in accordance with clauses 3.1 to 3.4.1, 5.1 to 5.3 and 7 of SABS 1200
LB : Bedding (Pipes).
Unless otherwise described bedding of rigid pipes shall be class B bedding.

Flush pans:

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

Stainless steelbasins, sinks, wash troughs, urinals, etc:

Units shall have standard aprons on all exposed edges and tiling keys against walls where applicable.

Carried to Collection R

Waste unions:

Descriptions of waste unions shall be deemed to include rubber or vulcanite plugs and chains fixed to fittings.

Chasing:

Rates for items are to include for chasing pipes into walls where applicable.

Disinfection of water pipework

All pipework is to be disinfected in accordance with SABS 1200L.

Excavation and filling

Excavation and backfilling must be done using hand held tools only.

Flexible connectors

Tenderers are to allow for the pricing of flexible connectors to all instances where deemed necessary. No extra will be entertained in this regard.

Laying, backfilling, bedding, etc. of pipes

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

Internal water supplies

Prices for all piping laid in ground, inspection chambers, etc. shall include for excavations, keeping free of water, distributing surplus material on site (carting away has been separately measured) and backfilling in selected material (imported fill where required will be separately measured).

Holes, chases, etc. are deemed to be included in the descriptions of the pipework.

Testing of installations/reticulation

The Contractor is to allow for testing of the internal water supply and fire supply installations per building as this will be completed as per the beneficial occupation requirements, as elsewhere described.

SANITARY PLUMBING

Carried to Collection R

Section No. 2
BUILDING WORKS
Bill No. 11
PLUMBING & DRAINAGE (PROVISIONAL)

	uPVC piping in accordance with SABS 967, including all straight couplings, cutting and waste, etc.:			
1	50mm Pipe B : 280 C : 152 D : 172 G : 0	m	604	
2	110mm Pipe B : 400 C : 160 D : 275 G : 0	m	835	
3	50mm Pipe chased into walls B : 60 C : 32 D : 38 G : 0	m	130	
4	50mm Pipe laid in filling under floors including cutting into existing surface bed for piping, backfilling, concrete, etc. B : 40 C : 16 D : 19 G : 0	m	75	
5	50mm Pipe to underside of slab including holder bats complete, etc. B : 0 C : 0 D : 30 G : 0	m	30	
	Extra over uPVC piping for the following fittings:			
6	50mm Bend B : 40 C : 24 D : 36 G : 0	No	100	
7	110mm Bend B : 80 C : 32 D : 55 G : 0	No	167	
8	110mm Pan connector B : 40 C : 8 D : 20 G : 0	No	68	
9	50mm Access bend B : 80 C : 24 D : 36 G : 0	No	140	
10	110mm Access bend B : 80 C : 32 D : 55 G : 0	No	167	
11	50mm Access junction B : 140 C : 64 D : 75 G : 0	No	279	
12	110mm Access junction B : 80 C : 32 D : 55 G : 0	No	167	
13	110 x 50mm Access reducing junction B : 20 C : 8 D : 18 G : 0	No	46	
14	50mm Two-way vent valve B : 60 C : 32 D : 37 G : 0	No	129	
15	110mm Two-way vent valve B : 80 C : 32 D : 55 G : 0	No	167	
	Carried to Collection			R

Section No. 2
BUILDING WORKS
Bill No. 11
PLUMBING & DRAINAGE (PROVISIONAL)

	Forming holes through brick walls for pipework, etc.:				
16	40 - 50mm Diameter hole through existing 110mm wall for pipe B : 140 C : 80 D : 114 G : 0	No	334		
	Testing sanitary plumbing installations to the following buildings:				
17	Bashee Court B : 1.00 C : 0.00 D : 0.00 G : 0.00	Item			
18	Kyalami Flats B : 0.00 C : 0.00 D : 1.00 G : 0.00	Item			
19	Msintsi Court B : 0.00 C : 1.00 D : 0.00 G : 0.00	Item			
	WATER SUPPLY				
	Polycop or other approved polypropylene piping, including chasing into brick walls if required:				
20	15mm Pipe B : 240 C : 96 D : 177 G : 0	m	513		
21	15mm Pipe chased into walls B : 160 C : 64 D : 110 G : 0	m	334		
	Extra over Polycop pipes for brass compression fittings:				
22	15mm Pipe fittings B : 480 C : 192 D : 330 G : 0	No	1 002		
	Class 2 copper piping in accordance with SABS 460, including straight couplings, cutting and waste, etc.:				
23	15mm Pipe B : 900 C : 400 D : 576 G : 0	m	1 876		
24	15mm Pipe chased into walls B : 80 C : 40 D : 55 G : 0	m	175		
25	22mm Pipe B : 0 C : 0 D : 36 G : 0	m	36		
26	22mm Pipe chased into walls B : 0 C : 0 D : 8 G : 0	m	8		
27	28mm Pipe B : 0 C : 0 D : 16 G : 0	m	16		
	Carried to Collection			R	

	Extra over copper piping for the following Conex type fittings:			
28	15mm Fittings B : 1080 C : 400 D : 615 G : 0	No	2 095	
29	22mm Fittings B : 0 C : 0 D : 70 G : 0	No	70	
30	28mm Fittings B : 0 C : 0 D : 14 G : 0	No	14	
	Paper lagging:			
31	Thermaflex protective tube around 15mm pipe and couplings B : 440 C : 176 D : 306 G : 0	m	922	
	Testing water supply installations to the following buildings:			
32	Bashee Court B : 1.00 C : 0.00 D : 0.00 G : 0.00		Item	
33	Kyalami Flats B : 0.00 C : 0.00 D : 1.00 G : 0.00		Item	
34	Msintsi Court B : 0.00 C : 1.00 D : 0.00 G : 0.00		Item	
	SANITARY FITTINGS			
	Supply and fit the following sanitary fittings and equipment together with loose ancillary fittings supplied therewith, including unloading, storing, unpacking, hoisting or lowering as required, fixing and building into position, cutting all mortices and chases as required, cutting, brackets, clamps, etc. and connecting up pipework and handing over in perfect working order at completion			
	All gaps between fittings and/or tiles and walls to be filled with white silicone sealer			
	Franke or other approved - Grade 304 (18/10) polished stainless steel:			
35	Cascade CDX 621-120 insert kitchen double sink, fixed in and including matching hole in formica counter (elsewhere measured) with securing clips and sealed with silicone adhesive along edges, 90mm waste fitting including plugs complete with plumbing kit Spazi F/2 double bowl plumbing kit B : 20 C : 8 D : 18 G : 0	No	46	
	Carried to Collection			R

	Lecico or other approved:				
36	Kite Corner Code VAA-700100WH white vitreous china wall hung corner basin with one semi-punched tap hole with integrated overflow B : 0 C : 8 D : 0 G : 0	No	8		
37	H-Line Code HLIBASWHU145OUE white fire clay wall hung basin with one semi-punched tap hole with integrated overflow B : 20 C : 0 D : 0 G : 0	No	20		
38	Amaro 2 Code 037119 white vitreous china wall hung basin with one semi-punched tap hole with integrated overflow B : 20 C : 16 D : 20 G : 0	No	56		
39	Neon WC Code NEOBOXFFLOELFBE box set including close couple pan, cistern, dual push button top flush mechanism complete with seat and lid complete with fixing screws B : 40 C : 8 D : 20 G : 0	No	68		
40	Tuffo Code BATTUFFOOOOOOUS rectangular built-in bath size 1700 x 700 x 440mm high with retaining clips and anchors built onto and supported on brickwork (elsewhere measured) and compacted sand fill 510mm high (waste and overflow set elsewhere measured) B : 20 C : 8 D : 18 G : 0	No	46		
	TAPS, VALVES, ETC.				
	Cobra Watertech or other approved:				
41	15mm Cobra 108 brass hose bibtap with hose union B : 40 C : 16 D : 36 G : 0	No	92		
42	15mm Carina Type 166/041CA wall type sink mixer with aerated overarm swivel outlet and concealed connections B : 20 C : 8 D : 18 G : 0	No	46		
43	15mm Carina Type 294CA basin sink mixer B : 40 C : 24 D : 20 G : 0	No	84		
44	20mm Carina Type 214CA-20 pillar tap with hot and cold indices B : 40 C : 16 D : 36 G : 0	No	92		
45	15mm Carina Type 128CA-15 underwall stop tap with sliding wall flange with hot and cold indices B : 80 C : 32 D : 38 G : 0	No	150		
46	15mm Type 1080 Ball-o-Flo ballcock B : 320 C : 136 D : 205 G : 0	No	661		
47	15 x 15mm Code 83210 angle valve B : 200 C : 88 D : 133 G : 0	No	421		
	Carried to Collection			R	

	Walcro or other approved:				
48	15mm Code CIRS-V2 wall mounted shower head with wall plate including suitable mixing valve B : 40 C : 16 D : 19 G : 0	No	75		
	WASTE UNIONS, TRAPS, ETC.				
	Cobra Watertech or other approved:				
49	32mm Chromium plated 360 bottle trap B : 40 C : 24 D : 20 G : 0	No	84		
50	32mm Chromium plated 316 slotted bath/basin waste union complete with 62mm diameter flange 80mm long shank and plug B : 60 C : 32 D : 38 G : 0	No	130		
51	40mm PVC combination resealing P or S trap B : 40 C : 16 D : 36 G : 0	No	92		
52	40mm Flexi bath trap and overflow B : 20 C : 8 D : 18 G : 0	No	46		
	Splashworks or other approved:				
53	50mm Code STM medium seal trap with seal and round grating for shower B : 40 C : 8 D : 19 G : 0	No	67		
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Section No. 2
BUILDING WORKS
Bill No. 11
PLUMBING & DRAINAGE (PROVISIONAL)

Section No. 2

Bill No. 11

PLUMBING & DRAINAGE (PROVISIONAL)

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SECTION No. 2: BUILDING WORKS

BILL No. 12 GLAZING

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions

Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted

SAFETY GLASS

All safety glass materials are to be permanently marked and all marks to be visible after glazing.

A Certificate of Compliance will be required certifying that the type/quality of the glass (including the glass pre-fitted to aluminium doors, windows or shopfronts - elsewhere) is in accordance with the specified requirements.

6,38mm Thick clear laminated safety glass fixed with timber glazing beads (elsewhere measured):

1	Panes exceeding 0,1m2 and not exceeding 0,5m2 B : 0 C : 0 D : 5 G : 0	m2	5	

TOPS, SHELVES, DOORS, MIRRORS, ETC.

5mm Thick 'GG' quality polished silvered float glass copper backed mirror with polished edges, fixed vertically with mirror tape to and including 10mm thick Supawood backing board concealed fixed to wall:

2	Mirror size 400 x 600mm high B : 40 C : 16 D : 19 G : 0	No	75	

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Section No. 2
BUILDING WORKS
Bill No. 12
GLAZING

Item No		Quantity	Rate	Amount

SECTION No. 2: BUILDING WORKS

BILL No. 13: PAINTWORK

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions

Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted

Previously painted plastered surfaces

Surfaces shall be thoroughly washed down and allowed to dry completely before any paint is applied. Blistered or peeling paint shall be completely removed and cracks shall be opened, filled with a suitable filler and finished smooth

Previously painted metal surfaces

Surfaces shall be thoroughly rubbed and cleaned down. Blistered or peeling paint shall be completely removed down to bare metal

Previously painted wood surfaces

Surfaces shall be thoroughly cleaned down. Blistered or peeling paint or varnish shall be completely removed and cracks and crevices shall be primed, filled with suitable filler and finished smooth

PAINTWORK TO NEW AREAS

ON INTERNAL FLOATED PLASTER

Prepare and apply one coat plaster primer and two coats Plascon low sheen paint on:

1	On walls B : 3567 C : 134 D : 79 G : 0	m2	3 779		

Carried to Collection R

Section No. 2
BUILDING WORKS
Bill No. 13
PAINTWORK

	Prepare and apply one coat plaster primer and two coats Polvin acrylic paint on:				
2	On soffits of slabs B : 800 C : 0 D : 0 G : 0	m2	800		
	ON EXTERNAL FLOATED PLASTER				
	Prepare and apply one coat plaster primer and two coats exterior quality acrylic PVA paint on:				
3	On walls B : 29 C : 117 D : 10 G : 0	m2	156		
	ON FIBRE CEMENT				
	Prepare and apply one coat undercoat and two Polvin acrylic paint on:				
4	Internal ceilings, including priming timber coverstrips (to part areas) B : 1050 C : 318 D : 327 G : 0	m2	1 695		
5	Duct cover planks B : 0 C : 35 D : 0 G : 0	m2	35		
	Prepare and apply one coat undercoat and two coats exterior quality acrylic paint on:				
6	Eaves soffits B : 597 C : 207 D : 197 G : 0	m2	1 002		
7	Fascias and barge boards B : 211 C : 127 D : 50 G : 0	m2	388		
8	Cills, etc. not exceeding 300mm girth B : 404 C : 178 D : 0 G : 0	m	581		
	ON GALVANISED STEEL				
	Clean down galvanised surfaces thoroughly with galvanised iron cleaner, apply one coat calcium plumbate primer and two coats eggshell enamel paint on:				
9	Galvanised steel door linings B : 125 C : 23 D : 111 G : 0	m2	259		
10	Galvanised steel colums B : 0 C : 4 D : 0 G : 0	m2	4		
11	Galvanised steel angles (Provisional) B : 0 C : 0 D : 80 G : 0	m2	80		
	ON WOOD				
	Carried to Collection			R	

	Apply two coats wood primer on:				
12	Backs of timber frames, linings, etc. not exceeding 300mm wide B : 488 C : 156 D : 146 G : 0	m	790		
	Prepare and apply two coats polyurethane wood varnish including sanding between coats on:				
13	Timber frames not exceeding 300mm girth B : 488 C : 156 D : 167 G : 0	m	811		
	Sand down, prepare and apply three coats Plascon Woodcare Ultra varnish, including sanding down between all coats				
14	On timber doors (both sides measured) B : 358 C : 114 D : 93 G : 0	m2	565		
	Prepare and apply one coat pink wood primer and two coats eggshell enamel paint on:				
15	Timber duct closure assembly B : 0 C : 35 D : 0 G : 0	m2	35		
	Prepare and apply one coat wood primer and two coats Plascon Velvaglo paint on:				
16	Timber doors (both sides measured) B : 579 C : 216 D : 387 G : 0	m2	1 182		
	PAINTWORK TO PREVIOUSLY PAINTED SURFACES				
	Wash down soiled surfaces with sugar soap, sand down to remove all flaking paint, fill imperfections with Profill and apply two coats exterior quality acrylic paint on:				
17	External walls (Provisional) B : 295 C : 1860 D : 1405 G : 0	m2	3 559		
18	External breeze block walls (Provisional) B : 0 C : 0 D : 100 G : 0	m2	100		
19	Concrete window cills not exceeding 300mm girth B : 0 C : 0 D : 296 G : 0	m	296		
	Wash down soiled surfaces with sugar soap, sand down to remove all flaking paint, fill imperfections with Mendall and apply (one coat plaster primer) and two coats Plascon Super Acrylic paint on:				
20	On soffits of slabs B : 1200 C : 416 D : 1703 G : 0	m2	3 319		
	Carried to Collection			R	

Section No. 2
BUILDING WORKS
Bill No. 13
PAINTWORK

	Wash down soiled surfaces with sugar soap, sand down, fill imperfections with Profill and apply one coat Plascon universal undercoat and two coats Plascon low sheen paint on:				
21	Internal walls B : 5250 C : 2303 D : 3218 G : 0	m2	10 772		
	Sand down, remove all flaking paint and apply one coat bonding liquid and two coats Polvin acrylic paint on:				
22	Fibre cement ceilings and cornices (to part areas) B : 450 C : 318 D : 327 G : 0	m2	1 095		
	Sand down, remove all flaking paint and apply two coats eggshell enamel paint on:				
23	Timber doors (both sides measured) B : 360 C : 116 D : 275 G : 0	m2	751		
24	Fibre cement cills not exceeding 300mm girth B : 134 C : 86 D : 221 G : 0	m	442		
	Sand down, remove all flaking paint and rust, treat rust spots with anti-rust solution, apply one coat zinc chromate primer and two coats high gloss enamel paint on:				
25	Steel security gates (both sides measured - on flat) B : 0 C : 121 D : 91 G : 0	m2	212		
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Section No. 2

Bill No. 13

PAINTWORK

COLLECTION

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Section No. 2
BUILDING WORKS
Bill No. 13
PAINTWORK

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Section No. 2
BUILDING WORKS

Item No		Quantity	Rate	Amount

SECTION No. 3: EXTERNAL WORKS (PROVISIONAL)

BILL No. 1: EXTERNAL WORKS

Building Locations

[B] - BASHEE COURT
[C] - MSINTSI COURT
[D] - KYALAMI FLATS

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 series documents

SUPPLEMENTARY PREAMBLES

Proprietary products in descriptions

Proprietary products shall be used as specified. Substitute products of similar quality and specification may only be used with prior tender closing written approval by the principal agent

Viewing of the site

Before submitting his tender, the Contractor shall visit the site and satisfy himself as to the nature and extent of the work to be done and the value of the materials contained in the buildings or portions of the buildings to be demolished. No claim for any variations of the contract sum in respect of the nature and extent of the work or of inferior or damaged materials will be entertained.

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 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

Materials described as "Taking out and removing or demolishing" and the like shall become the property of the contractor after handing over any material as may be requested by the school governing body and be removed from site and disposed of at a suitable place all done at the Contractor's expense.

Descriptions which include "Making good" the Contractor shall allow for all costs of disconnecting and removing the said materials and preparatory work to receive new materials.

Carried to Collection R

Maintenance period

Attention is drawn to the maintenance period of twelve (12) months from Practical Completion for last phase of project to which the work relates

Procedure of work

The Principal Agent reserves the right to direct the order in which the contract will be executed, should circumstances necessitate such action.

Lost by theft, fire or otherwise

The risk of loss by theft, fire, storm, riot or otherwise of the buildings to be demolished and the materials therein shall rest entirely with the contractor immediately upon the handing over of the site. He shall take steps as he may deem fit for his own protection against such loss.

Water and other piping

Any water supply or other piping that may be met with and found necessary to disconnect or cut are to be effectually stopped off or grubbed up and removed and any new connections that may be necessary are to be made with proper fittings and to the satisfaction of the Representative/Agent to whom due notice is to be given of all alterations to existing services.

Prices for items of demolitions, are where applicable, to include for taking out and removing all sanitary fittings, plumbing and water supplies.

Electrical and other services

Special care is to be exercised not to unnecessarily interfere with any electric light, bell, power, telephone, or other wires and fittings that may be met with and due notice must be given to the Representative / Agent when any disconnections, removals, diversions, interruptions, etc. are necessary and the Contractor is to afford every facility to the workmen carrying out this work.

Protection, etc

The Contractor must protect all work not removed such as walls, floors, doors, windows, fittings, etc. from damage during the progress of the work and provide all necessary materials for doing so.

Carried to Collection R

Section No. 3
EXTERNAL WORKS (PROVISIONAL)
Bill No. 1
EXTERNAL WORKS

All shoring, etc. of portions of the existing buildings necessary to ensure the stability of the premises while executing the demolitions or alterations is to be provided by the Contractor, who will be held solely responsible for any damage to persons or property and for the safety of the structure throughout the contract period. The contractor will be required to make good at his own expense any damage that may occur.

Noise prevention

The Contractor shall take special care to minimize noisy operations during business hours. Such measures will include, inter alia, the use of silent compressors and strict control of workmen.

Laying, backfilling, bedding, etc. of pipes

Pipes shall be laid in accordance with clauses 5.1 and 5.2 of each of the following:

SABS 1200L : Medium-pressure pipelines
LD : Sewers
LE : Stormwater drainage

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

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

Demolitions, removals and works on site

The whole of old materials from the demolitions and pulling down, unless otherwise specified are to become the property of the Contractor and shall be immediately cleared from the site.

Tenderers are advised to visit the site and to satisfy themselves, in conjunction with the drawings of the nature and extent of the work to be done.

The contractor is advised to check all dimensions and heights on site affecting the existing building against those indicated on plan as he will be responsible for all new work being of the correct sizes. Should any discrepancies be found he is to refer them to the Representative / Agent for correction before proceeding with the work.

Special care is to be exercised not to interfere with any electric light, power or telephone wires and due notice must be given to the Representative / Agent for any disconnection that is necessary, and the Contractor is to afford every facility to the Electrician when making new connections.

Any water supply or soil or waste pipes that may be met with and found necessary to be disconnected or cut are to be traced back to

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the main connection, cut out and plugged with (3-1) cement mortar to a minimum depth of 300mm and any new connections that may be necessary are to be made with proper junction pieces, tees, etc. to the satisfaction of the Representative / Agent, to whom due notice must be given of all alterations to the existing services.

In taking down and removing existing work, the utmost care is to be observed to avoid any structural or other damage to the remaining portion of the building. The Contractor must protect all work not removed, such as walls, floors, doors, windows or other joinery or fittings, etc. from damage during the progress of the work and provide all necessary material for doing so.

The Contractor will be solely responsible for any damage to persons or property and for the safety of the portions of the existing buildings remaining throughout the whole of the Contract, and must make good at his own expense any damage that may occur.

Old materials for re-use are to be carefully taken out, stored and protected from damage and made good as required before being re-fixed into position.

Old materials described to be handed over are to be carefully removed and properly stored by the Contractor until handing over thereof. The remainder of the old materials and all rubbish are to be immediately carted away and the site left clean and unencumbered. None of the old materials from the demolitions are to be re-used for any new work unless otherwise described or directed.

Bricking up openings shall include all preparatory work, cutting toothings and bonding new brickwork to existing surface for raising upon, pinning up new brickwork to underside of existing.

Forming new openings shall include all labour and materials in forming opening, cutting toothings and bonding for and plumbing and flushing reveals, cutting for and forming precast concrete, or reinforced brick lintol over including necessary turning pieces, reinforcement, sills, etc.

Making good shall include all labour and material required to match existing work and is to include making good new work up to existing and labours to plaster, etc.

Shoring is not specifically mentioned in each item, however, prices are to include for all shoring, needling, strutting deadwork, etc. as may be required.

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Excavations

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

Class of excavations will be in accordance with SABS 1200D Clause 3.1. For the purpose of this project "Soft Rock" will have the same meaning as Intermediate excavations as defined in SABS 1200D Clause 3.1

Boulder excavation definitions as stated in SABS 1200D will not apply

Classification of soils and gravel is in accordance with SABS 1200M: 1996 Table 3A & 3B or TRH14

Open face excavation is in accordance with SANS 2001: Part BE1

Carting away of excavated material

All excavated material from the excavations are to be deposited in spoil heaps average 50 - 100mm away from point of excavations

Concrete

All concrete work to be carried out in accordance with SABS 1200G

Cost of tests

The costs of making, storing and testing of concrete test cubes as required under clause 7 'Tests' of SABS 1200G, shall include the cost of providing cube moulds necessary for the purpose, for testing costs and for submitting reports on the tests to the Principal Agent. The testing shall be undertaken by an independent firm or institution nominated by the Contractor to the approval of the Principal Agent (test cubes are measured separately)

Reinforcement

Reinforcement to include 30MPa concrete cover blocks to ensure correct cover to reinforcing

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	Reinforced concrete work				
	All aspects of structural concrete work (plain and reinforced) for civil engineering and building construction shall be in accordance with the requirements of SANS 2001: Part CC1 and SABS 0155 (Accuracy in Building). Any discrepancies are to be referred to the Engineer				
	1.1 Concrete mixes: All concrete mixing shall conform to SANS 2001: Part CC1. Specialised concrete applications will be referred to the Engineer. All aggregates used are to be approved by the Engineer. The water is to be clean as for human consumption				
	1.2 Concreting: Concreting shall conform to SANS 2001: Part CC1. All dirt and trash shall be removed from the formwork before concreting. Concrete shall be thoroughly consolidated by means of tamping of vibration				
	1.3 Maintaining reinforcement in position: The Contractor shall ensure that the correct concrete cover is maintained during the casting of concrete. In order to do this the Contractor shall provide suitable concrete or plastic cover blocks. All reinforcing is to be inspected and approved by the Engineer prior to casting of concrete. The Engineer shall be given 24 hours notice prior to any inspection required				
	1.4 Cure: All new concrete shall be thoroughly cured by means of a resin-based curing compound or as approved by the Engineer				
	TEMPORARY BARRIERS, SCREENS, ETC. AND RELOCATION OF EXISTING STRUCTURES				
	Temporary hoarding including dismantling all hoarding, filling all post holes and compacting and levelling to adjacent ground levels, when phased work is completed:				
1	Hoarding formed of 1,8m high galvanised steel weldmesh type fencing with 50 x 100mm apertures, secured to and including 60mm diameter treated gumpole fencing posts 2400mm long at 2m centres, gumpoles securely bedded 600mm deep in ground, medium grade shade cloth securely fastened to and including four rows of 4mm diameter straining wires, fastened to fencing and posts with 2mm diameter galvanised binding wire at 400mm centres, including all excavations, etc. B : 471 C : 400 D : 189 G : 0	m	1 060		
2	Pedestrian gate size 1000 x 1800mm high complete with all necessary posts, hinges, locking mechanism, etc.	No	8		
3	Vehicular double gate size 4000 x 1800mm high complete with all necessary posts, hinges, locking mechanism, etc.	No	8		
	REMOVAL OF TREES, ETC.				
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	Cut down and remove, grub up roots and fill in holes:				
4	Multi-stem shrub exceeding 1000mm and not exceeding 1500mm girth B : 50 C : 10 D : 0 G : 0	No	60		
5	Tree exceeding 200mm and not exceeding 500mm girth B : 3 C : 0 D : 0 G : 0	No	3		
6	Tree exceeding 500mm and not exceeding 1000mm girth B : 2 C : 0 D : 0 G : 0	No	2		
7	Trees exceeding 1000mm and not exceeding 1500mm girth B : 4 C : 0 D : 0 G : 0	No	4		
8	Trees exceeding 1500mm and not exceeding 2000mm girth B : 2 C : 24 D : 0 G : 0	No	26		
	DEMOLITIONS AND REMOVAL OF EXISTING WORK				
	Breaking up/taking down/lifting up and remove:				
9	100mm Thick concrete surface beds, paving, aprons, etc. B : 248 C : 0 D : 0 G : 0	m2	248		
10	Water tank (2500L) with stand size 1,50 x 1,50 x 0,15m high comprising brickwork sides, concrete slab on top including concrete foundations, filling, etc. B : 8 C : 4 D : 0 G : 0	No	12		
11	Water tank (5000L) with no stand B : 3 C : 0 D : 0 G : 0	No	3		
12	Manhole/chamber complete with all brickwork sides, concrete slab and cast iron cover on top, concrete surface bed, etc. size 1200 x 1250mm wide not exceeding 1m deep B : 5 C : 7 D : 3 G : 0	No	15		
13	Gulley overall size 510 x 640mm wide complete with concrete surround, etc. B : 20 C : 39 D : 3 G : 0	No	62		
	Demolish and remove existing structures including levelling out area[s] where demolitions took place:				
14	Metal spiral staircase complete to external façade of building overall size, 1,60m diameter x 4m high overall B : 0 C : 0 D : 1 G : 0	No	1		
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	Take down and remove existing pipework, etc. including disconnecting where required:				
15	25mm Galvanised steel pipe B : 30 C : 0 D : 0 G : 0	m	30		
16	75mm Galvanised steel pipe B : 30 C : 0 D : 0 G : 0	m	30		
17	Excavate, locate and remove existing water pipe not exceeding 50mm diameter, including backfilling, etc. B : 40 C : 0 D : 0 G : 0	m	40		
18	Excavate, locate and remove existing soil drainage pipe not exceeding 110mm diameter, including backfilling, etc. B : 145 C : 0 D : 0 G : 0	m	145		
19	Excavate, locate and remove existing soil drainage pipe not exceeding 160mm diameter, including backfilling, etc. B : 163 C : 0 D : 0 G : 0	m	163		
	Take down and remove complete with all posts, bases, etc. including filling in post holes:				
20	Steel palisade single gate including removing angles attached to brick walls, etc. complete overall size 1000 x 2000mm high B : 20 C : 0 D : 0 G : 0	No	20		
21	Existing 2100mm high steel palisade fence complete with all steel support posts at approximately 2,5m centres (gates included) B : 221 C : 0 D : 173 G : 0	m	394		
22	Existing 1500mm high fence complete with all steel posts at approximately 3m centres B : 94 C : 180 D : 0 G : 0	m	274		
	CLEANING OF EXISTING CONCRETE WALKWAYS/ROADS				
	Where descriptions refer to "..... clean of existing concrete walkways/roads ....", Tenderers shall allow for the cleaning off of all fungal matter by whatever means and water pressure cleaning the areas				
23	Clean existing concrete walkways/roads by pressure cleaning to remove all algae, discolourations, dirt, etc B : 1800 C : 696 D : 610 G : 0	m2	3 106		
	SOIL DRAINAGE				
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	Class 34 Unplasticised polyvinyl chloride (uPVC) pipes:				
24	110mm Pipe raking to inspection eye B : 12 C : 0 D : 0 G : 0	m	12		
25	160mm Pipe raking to inspection eye B : 3 C : 0 D : 0 G : 0	m	3		
26	110mm Pipe laid in ground or ground filling not exceeding 1m deep on and including bedding cradle and 300mm blanket fill of selected granular material and compact to a minimum of 95% Modified AASHTO dry density in trenches, main fill compacted in layers not exceeding 150mm thick, adjust moisture content to optimum and compact to a minimum of 98% Modified AASHTO dry density in trenches, including excavations, carting and removing surplus material of site, etc. B : 145 C : 0 D : 0 G : 0	m	145		
27	160mm Pipe laid in ground or ground filling not exceeding 1m deep on and including bedding cradle and 300mm blanket fill of selected granular material and compact to a minimum of 95% Modified AASHTO dry density in trenches, main fill compacted in layers not exceeding 150mm thick, adjust moisture content to optimum and compact to a minimum of 98% Modified AASHTO dry density in trenches, including excavations, carting and removing surplus material of site, etc. B : 163 C : 0 D : 91 G : 0	m	254		
	Extra over uPVC piping for:				
28	110mm Access bend B : 6 C : 0 D : 0 G : 0	No	6		
29	110mm Junction B : 4 C : 14 D : 0 G : 0	No	18		
30	160mm Junction B : 4 C : 0 D : 3 G : 0	No	7		
31	110mm Access junction B : 2 C : 0 D : 14 G : 0	No	16		
32	160mm Access junction B : 4 C : 0 D : 3 G : 0	No	7		
33	160 x 110mm Reducer junction B : 4 C : 0 D : 0 G : 0	No	4		
34	110mm Bend B : 16 C : 0 D : 14 G : 0	No	30		
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35	160mm Bend B : 4 C : 0 D : 3 G : 0	No	7	
36	160mm Access slow bend B : 2 C : 0 D : 3 G : 0	No	5	
37	110mm Access rodding eye B : 8 C : 0 D : 0 G : 0	No	8	
38	160mm Rodding eye B : 2 C : 0 D : 1 G : 0	No	3	
	Inspection chamber, gulley traps, manholes, etc.:			
39	110mm Gulley complete with all components including P-trap, etc. not exceeding 1m deep including approved bedding, backfilling and compaction B : 20 C : 13 D : 3 G : 0	No	36	
40	Precast concrete chamber for inspection eye not exceeding 1m deep, including precast concrete base size 500mm diameter x 100mm thick and 170mm diameter cast iron cover and frame (SANS EN 124 Saint Gobian Hydrex), lid to have 'IE' letters cast in with mortar at top joint, overall size 500mm diameter x 300mm deep, including all excavations, backfilling, etc. B : 10 C : 0 D : 1 G : 0	No	11	
41	Sewer manhole size 1300mm diameter not exceeding 1m deep to invert, consisting of reinforced concrete (20MPa/19mm) base, 150mm thick projecting 75mm all round, precast concrete manhole rings (SABS 1294) internally, 100mm thick cover slab with one layers of Ref. 395 mesh reinforcement, tapered and rebated for and fitted with Rocla cast iron manhole cover and frame, including benching, excavations, risk of collapse, backfilling, etc. B : 3 C : 7 D : 6 G : 0	No	16	
42	Sewer manhole size 1300mm diameter exceeding 1m not exceeding 2m deep to invert, consisting of reinforced concrete (20MPa/19mm) base, 150mm thick projecting 75mm all round, precast concrete manhole rings (SABS 1294) internally, 100mm thick cover slab with one layers of Ref. 395 mesh reinforcement, tapered and rebated for and fitted with Rocla cast iron manhole cover and frame, including benching, excavations, risk of collapse, backfilling, etc. B : 2 C : 0 D : 0 G : 0	No	2	
	Extra over trench and hole excavations in earth for excavation in:			
43	Soft rock B : 61 C : 0 D : 14 G : 0	m3	75	
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44	Hard rock B : 30 C : 0 D : 7 G : 0	m3	37		
	Earth filling supplied by the Contractor in backfilling to excavations, etc.:				
45	Over site of G6 material compacted to a minimum of 95% Mod AASHTO dry density in 150mm layers B : 216 C : 75 D : 68 G : 0	m3	359		
	Sundries:				
46	Unblock and clean existing 160mm sewer pipe complete B : 30 C : 185 D : 20 G : 0	m	235		
47	Connection of new 160mm PVC pipe to existing manhole, including breaking through side wall of existing manhole, adjusting existing half round channels to take new branch, adjusting existing benching, making good all finishes or elements disturbed, sealing, etc. B : 1 C : 0 D : 1 G : 0	No	2		
48	Unreinforced concrete (15MPa/19mm) encasing around 110mm vertical or raking drain pipe to cleaning eye including all necessary formwork B : 12 C : 0 D : 0 G : 0	m	12		
49	Unreinforced concrete (15MPa/19mm) encasing around 160mm vertical or raking drain pipe to cleaning eye including all necessary formwork B : 3 C : 0 D : 2 G : 0	m	5		
	Reinforced concrete (20MPa/19mm):				
50	Walkways B : 23 C : 0 D : 7 G : 0	m3	30		
	Finishing top surfaces of concrete with broom/brush finish:				
51	Walkways, etc. to falls B : 231 C : 0 D : 68 G : 0	m2	299		
	Test blocks:				
52	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes	No	6		
	Fabric reinforcement:				
53	Type 245 fabric reinforcement in concrete walkways, etc. B : 231 C : 0 D : 68 G : 0	m2	299		
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	Testing sewer installations to the following buildings:			
54	Bashee Court B : 1.00 C : 0.00 D : 0.00 G : 0.00	Item		
55	Kyalami Flats B : 0.00 C : 0.00 D : 1.00 G : 0.00	Item		
56	Msintsi Court B : 0.00 C : 1.00 D : 0.00 G : 0.00	Item		
	EXTERNAL WATER RETICULATION			
	Class 6 HDPe pressure pipes in accordance with SANS 4427, with spigots and sockets including all straight couplings, cutting and waste, etc.:			
57	25mm Pipe laid in and including trenches not exceeding 1m deep B : 50 C : 120 D : 0 G : 0	m	170	
58	50mm Ditto B : 50 C : 80 D : 0 G : 0	m	130	
	Class 10 HDPe pressure pipes in accordance with SANS 4427, with spigots and sockets including all straight couplings, cutting and waste, etc.:			
59	50mm Pipe laid in and including trenches not exceeding 1m deep B : 100 C : 0 D : 0 G : 0	m	100	
	Extra over HDPe piping for the following Class 6 HDPe fittings:			
60	25mm Fittings B : 32 C : 24 D : 0 G : 0	No	56	
61	50mm Elbow B : 6 C : 0 D : 0 G : 0	No	6	
62	50mm Equal tee B : 0 C : 6 D : 0 G : 0	No	6	
63	50 x 25mm Reducing tee B : 12 C : 0 D : 0 G : 0	No	12	
64	50 x 25mm Reducer B : 12 C : 0 D : 0 G : 0	No	12	
	Taps, valves, etc.:			
65	25mm Fullway gate valve with flange adaptors both sides B : 8 C : 8 D : 0 G : 0	No	16	
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66	50mm Ditto B : 0 C : 2 D : 0 G : 0	No	2		
	Sundries:				
67	Stopcock box for valves not exceeding 1m deep, consisting of unreinforced concrete (25MPa/19mm) base 100mm thick, one brick walls all around, precast concrete cover slab on top, rebated for and fitted with and including 300 x 300mm cast iron type 11A stopcock box cover and frame complete with locking system, size 300 x 300mm internally including excavations, backfilling, etc. B : 0 C : 16 D : 0 G : 0	No	16		
	Testing water installations to the following buildings:				
68	Bashee Court B : 1.00 C : 0.00 D : 0.00 G : 0.00	Item			
69	Kyalami Flats B : 0.00 C : 0.00 D : 1.00 G : 0.00	Item			
70	Msintsi Court B : 0.00 C : 1.00 D : 0.00 G : 0.00	Item			
	STORMWATER DRAINAGE				
	Clean existing open stormwater channels:				
71	Clean existing open stormwater channels by removing all rubble, rubbish, overgrown vegetation, etc. B : 100 C : 100 D : 100 G : 0	m2	300		
	INTERNAL FENCING BETWEEN YARDS				
	Clearing of site:				
72	Allow for clearing site for the width of 1m where fencing runs are to be erected including removing trees, shrubs, etc. not exceeding 200mm girth, grubbing up roots and roughly levelling B : 94 C : 0 D : 0 G : 0	m	94		
	Hot dip galvanised posts of 2mm thickness:				
73	60mm Diameter galvanised steel intermediate fencing post, 2100mm long fitted with a pressed steel mushroom cap, post fitted with 150 x 150 x 3mm flange plate welded to bottom and embedded in 300 x 300 x 700mm unreinforced concrete (15MPa/19mm) base including all excavations in earth, backfilling and ramming, etc. B : 20 C : 0 D : 0 G : 0	No	20		
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74	100mm Ditto as end post, fitted with one 60mm diameter galvanised steel stay set raking and with top end flattened and bolted through post with 2 x M8 galvanised bolts complete with washers, with post and stay both embedded in unreinforced concrete (15MPa/19mm) bases as last B : 20 C : 0 D : 0 G : 0	No	20		
	Extra over trench and hole excavations in earth for excavation in:				
75	Soft rock B : 1 C : 0 D : 0 G : 0	m3	1		
76	Hard rock B : 1 C : 0 D : 0 G : 0	m3	1		
	Galvanised steel (Class A) fencing:				
77	Fencing formed of 50 x 100 x 2,5mm diameter galvanised weldmesh 1800mm high with vertical wires facing outwards, secured with Howgring clips or 1,6mm galvanised binding wire at 300 mm centres to top and bottom straining wires at 700 mm centres and to two intermediate straining wires (straining wires elsewhere measured) including 15mm holes through posts B : 46 C : 0 D : 0 G : 0	m	46		
78	Four strands of 4mm galvanised straining wires secured to fencing posts with doubled 2mm galvanised wire inserted through hole in post and turned a minimum of four turns around straining wire and attached to straining frame at one end with not less than four turns and the other end to straining bolts (elsewhere measured) B : 46 C : 0 D : 0 G : 0	m	46		
	PERIMETER FENCING AND GATES				
	Clearing of site:				
79	Allow for clearing site for the width of 1m where fencing runs are to be erected including removing trees, shrubs, etc. not exceeding 200mm girth, grubbing up roots and roughly levelling B : 150 C : 366 D : 173 G : 0	m	689		
80	Ditto exceeding 200mm and not exceeding 500mm girth, ditto B : 71 C : 0 D : 0 G : 0	m	71		
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Clearvu or other approved fencing panels and posts complete with all components, setting up, adjusting, etc.:

PVC coated high security fencing and gates. All bolts, nuts and washers to be stainless steel Grade 304. Fixators to be stainless steel Grade 304 and PVC coated. Fence system to be maintenance free and shall carry a 10 year insurance underwritten anti-corrosion guarantee for material and workmanship issued for original panels, posts and fixators. The supplier/erector to be ISO 9001 compliant.

Allowance shall be made as required to excavate areas that are too high and to fill depressions with approved filling, carted on site where necessary and well compacted prior to erection of fencing

81	2100mm High ClearVu high density anti climbing and anti-cut pressed mesh panel fencing, formed of 4mm diameter horizontal and 4mm diameter vertical high tensile wires galvanised with marine fusion bond coating with aperture size 76,2 x 12,7mm and reinforcing V-section ribs. Panels with a maximum width of 3305mm (or as determined on site) and laterally strengthened by 4 x 50mm deep V-profiled horizontal stiffener bends to ensure sufficient rigidity, complete with 75mm 70 degree flanges along sides, top and toe and secured to fencing posts (elsewhere measured). Prices to allow for possible shortening and additional vertical cutting/framing of shortened panels, if necessary B : 167 C : 364 D : 146 G : 0	m	677		
82	2900mm High H-profile secure post formed of 70 x 44 x 2mm thick hollow section, PVC coated Anthracite RAL7021 to a minimum thickness of 200 microns using fluidized bed PVC coating machine, complete with required locking recess mechanism (spider fixators and shear nuts) for fixing to panels (elsewhere measured) and embedded in and including unreinforced concrete (15MPa/19mm) base size 400 x 400 x 600mm deep, including excavations, backfilling, etc. B : 56 C : 0 D : 36 G : 0	No	92		
83	2900mm High H-profile corner post formed of 70 x 70 x 1,6mm thick hollow section, PVC coated Anthracite RAL7021 to a minimum thickness of 200 microns using fluidized bed PVC coating machine, complete with required locking recess mechanism (spider fixators and shear nuts) for fixing to panels (elsewhere measured) and embedded in and including unreinforced concrete (15MPa/19mm) base size 400 x 400 x 600mm deep, including excavations, backfilling, etc. B : 27 C : 0 D : 13 G : 0	No	40		
84	2,5mm Thick x 100mm high hot dip galvanised sawtooth spikes formed of toughened steel, fitted to top of fencing with M8 x 30mm cup square bolts B : 221 C : 366 D : 173 G : 0	m	760		

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85	Hot dip galvanised double gate in two equal leaves hung folding, each leaf consisting of 50 x 50 x 2mm hollow section outer framing and one mullion, all mitred and welded at all intersections, internal 30 x 4mm flat section welded onto inside of all outer framing, two cut-outs each size 120 x 200mm high formed of outer framing and flat section as described above, filled in with 4mm diameter horizontal and 4mm diameter vertical high tensile wires galvanised with marine fusion bond coating with aperture size 76,2 x 12,7mm and reinforcing V-section ribs, cut to size and secured tautly around all edges to flat section with 4mm diameter self tapping screws 30mm long at 100mm centres all around, each leaf fitted with a pair of approved hinges, secured to and including 100 x 100 x 3mm hollow section hot dip galvanised gate post 3m long, lower section of post cast into 450 x 450 x 600mm unreinforced concrete (15MPa/19mm) base, including all excavations, filling, etc., fitting one 100mm horizontal sliding and two 200mm drop bolts (complete with two keeps in concrete), one heavy duty brass padlock, etc. overall size 2200 x 2100mm high B : 0 C : 0 D : 1 G : 0	No	1		
86	Hot dip galvanised double gate in two equal leaves hung folding, each leaf consisting of 50 x 50 x 2mm hollow section outer framing and one mullion, all mitred and welded at all intersections, internal 30 x 4mm flat section welded onto inside of all outer framing, two cut-outs each size 120 x 200mm high formed of outer framing and flat section as described above, filled in with 4mm diameter horizontal and 4mm diameter vertical high tensile wires galvanised with marine fusion bond coating with aperture size 76,2 x 12,7mm and reinforcing V-section ribs, cut to size and secured tautly around all edges to flat section with 4mm diameter self tapping screws 30mm long at 100mm centres all around, each leaf fitted with a pair of approved hinges, secured to and including 100 x 100 x 3mm hollow section hot dip galvanised gate post 3m long, lower section of post cast into 450 x 450 x 600mm unreinforced concrete (15MPa/19mm) base, including all excavations, filling, etc., fitting one 100mm horizontal sliding and two 200mm drop bolts (complete with two keeps in concrete), one heavy duty brass padlock, etc. overall size 2450 x 2100mm high B : 0 C : 0 D : 9 G : 0	No	9		
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87	Vehicular sliding gate, consisting of 50 x 50 x 2mm hollow section outer framing and one mullion, all mitred and welded at all intersections, internal 30 x 4mm flat section welded onto inside of all outer framing, one cut-out size 120 x 200mm high formed of outer framing and flat section as described above, filled in with 3mm diameter horizontal and 3mm diameter vertical high core wires with aperture size 76,2 x 12,8mm, cut to size and secured tautly around all edges to flat section with 4mm diameter self tapping screws 30mm long at 100mm centres all around, complete with 500 x 800mm high unreinforced concrete (15MPa/19mm) beam, with 25 x 25 x 3mm angle iron track secured to base, with gate post similar to taper locking post (elsewhere described) complete with base plate 300 x 300 x 5mm thick cast into concrete base, gate rollers, stoppers, guide-rollers, end stops, anti-lift brackets all complete with and including all excavations, filling, etc. one heavy duty brass padlock, etc. overall size 2700 x 2100mm high B : 20 C : 1 D : 0 G : 0	No	21		
88	Vehicular sliding gate, consisting of 50 x 50 x 2mm hollow section outer framing and one mullion, all mitred and welded at all intersections, internal 30 x 4mm flat section welded onto inside of all outer framing, one cut-out size 120 x 200mm high formed of outer framing and flat section as described above, filled in with 3mm diameter horizontal and 3mm diameter vertical high core wires with aperture size 76,2 x 12,8mm, cut to size and secured tautly around all edges to flat section with 4mm diameter self tapping screws 30mm long at 100mm centres all around, complete with 500 x 800mm high unreinforced concrete (15MPa/19mm) beam, with 25 x 25 x 3mm angle iron track secured to base, with gate post similar to taper locking post (elsewhere described) complete with base plate 300 x 300 x 5mm thick cast into concrete base, gate rollers, stoppers, guide-rollers, end stops, anti-lift brackets all complete with and including all excavations, filling, etc. one heavy duty brass padlock, etc. overall size 3400 x 2100mm high B : 0 C : 0 D : 1 G : 0	No	1		
	Centurion or other approved vehicle gate remote capable motors including providing twenty remote control units				
89	Gate motor to suit 3400 x 2100 steel gate including fixing rail, etc. B : 0 C : 0 D : 1 G : 0	No	1		
	Extra over hole excavations in earth for excavation in:				
90	Soft rock B : 2 C : 0 D : 0 G : 0	m3	2		
91	Hard rock B : 1 C : 0 D : 0 G : 0	m3	1		
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	Extra over all excavations for carting off site to a location to be identified by the Contractor:				
92	Surplus material from excavations B : 7 C : 0 D : 0 G : 0	m3	7		
	Reinforced concrete (20MPa/19mm):				
93	Walkways B : 1 C : 0 D : 0 G : 0	m3	1		
	Finishing top surfaces of concrete with broom/brush finish:				
94	Walkways, etc. to falls B : 13 C : 0 D : 0 G : 0	m2	13		
	Test blocks:				
95	Making and testing set of three 150 x 150 x 150mm concrete strength test cubes	No	3		
	Fabric reinforcement:				
96	Type 245 fabric reinforcement in concrete walkways, etc. B : 13 C : 0 D : 0 G : 0	m2	13		
	BRICK WALLS TO BACK YARD ENTRANCE AREAS				
	Remove existing steel gates:				
97	Steel palisade single gate including removing angles attached to brick walls, etc. complete overall size 1000 x 2000mm high B : 20 C : 0 D : 0 G : 0	No	20		
	Brickwork of NFP bricks in Class II mortar:				
98	One brick wall in two half brick skins, the two skins tied together with and including galvanised wire ties B : 40 C : 0 D : 0 G : 0	m2	40		
	Brickwork reinforcement:				
99	150mm Wide reinforcement built in horizontally B : 100 C : 0 D : 0 G : 0	m	100		
	Corobrik Firelight Satin or other approved FBX clay face brickwork, manufactured in accordance with SANS 227:2007, including pointing with 6mm square recessed horizontal and vertical joints as the work proceeds:				
100	Extra over ordinary brickwork for face brickwork B : 80 C : 0 D : 0 G : 0	m2	80		
	Carried to Collection			R	

	Brickwork sundries:				
101	Cut, tooth and bond new one brick wall to existing B : 80 C : 0 D : 0 G : 0	m	80		
	Fencing to top of existing yard wall:				
102	Single strand barded wire fitted to top of existing brick wall with heavy duty galvanised barded wire bracket, 6mm flat profile, twice pre-holed for and including suitable raw bolts for wall fixing, cranked with three slots to secure barbed wire, overall length 825mm long, secured to existing brick wall at 1m centres B : 182 C : 0 D : 0 G : 0	m	182		
	YARD WALLS				
	Wash down soiled surfaces with sugar soap, sand down to remove all flaking paint, fill imperfections with Profill and apply two coats exterior quality acrylic paint on:				
103	External walls B : 0 C : 823 D : 0 G : 0	m2	823		
	RAINWATER TANKS				
	Jojo or other approved rainwater tanks:				
104	2400L Polyethylene rotomoulded vertical water storage tank complete with lid, fitted with and including 15mm brass bibtap (Type 108LK15) with suitable adaptor and setting in position on tank base (elsewhere measured), securely tying down with strap (elsewhere measured) (Note - tank to be filled with water before Practical Completion) B : 1 C : 0 D : 0 G : 0	No	1		
105	Hole through top of tank lid for 100mm diameter pipe B : 1 C : 0 D : 0 G : 0	No	1		
	Gutterguard or other approved rainwater tank filter:				
106	240 x 190 x 190mm PVC leaf catcher filter complete with 110mm adaptor, first flush diverter, adjustable drainage plug, stainless steel leaf screen and insect screen mounted to water tank (water tank elsewhere measured) B : 1 C : 0 D : 0 G : 0	No	1		
	RAINWATER TANK STANDS				
	Excavation in earth not exceeding 2m deep:				
107	Trenches B : 4 C : 0 D : 0 G : 0	m3	4		
	Carried to Collection			R	

Section No. 3
EXTERNAL WORKS (PROVISIONAL)
Bill No. 1
EXTERNAL WORKS

	Extra over trench and hole excavations in earth for excavation in:				
108	Soft rock B : 1 C : 0 D : 0 G : 0	m3	1		
109	Hard rock B : 1 C : 0 D : 0 G : 0	m3	1		
	Risk of collapse of excavations:				
110	Sides of trench and hole excavations not exceeding 1,5m deep B : 10 C : 0 D : 0 G : 0	m2	10		
	Keeping excavations free of water				
111	Keeping excavations free of all water other than subterranean water for all tank bases at all three sites		Item		
	Extra over all excavations for carting off site to a location to be identified by the Contractor:				
112	Surplus material from excavations B : 2 C : 0 D : 0 G : 0	m3	2		
	Earth filling obtained from the excavations and/or prescribed stockpiles on site compacted to a minimum of 93% Mod AASHTO dry density:				
113	Backfilling to trenches, holes, etc. B : 2 C : 0 D : 0 G : 0	m3	2		
	Earth filling supplied by the Contractor under tank bases, etc.:				
114	G5 Material in accordance with SABS 1200DM in 150mm layers compacted to a minimum of 95% Mod AASHTO dry density B : 2 C : 0 D : 0 G : 0	m3	2		
	Compaction of surfaces:				
115	Under surface beds, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to a minimum of 95% Mod AASHTO dry density B : 3 C : 0 D : 0 G : 0	m2	3		
	25MPa/19mm Reinforced concrete cast against excavated surfaces:				
116	Strip footings B : 1 C : 0 D : 0 G : 0	m3	1		
	Carried to Collection			R	

Section No. 3
EXTERNAL WORKS (PROVISIONAL)
Bill No. 1
EXTERNAL WORKS

	25MPa/19mm Reinforced concrete:				
117	Surface beds B : 0.3 C : 0.0 D : 0.0 G : 0.0	m3	0.3		
	Finishing top surfaces of concrete smooth with a wood float:				
118	Surface beds, slabs, etc. to falls B : 3 C : 0 D : 0 G : 0	m2	3		
	Rough formwork to sides:				
119	Edges, risers, ends and reveals not exceeding 300mm high or wide B : 6 C : 0 D : 0 G : 0	m	6		
	Fabric reinforcement:				
120	Type 311 fabric reinforcement in concrete surface beds, etc. B : 3 C : 0 D : 0 G : 0	m2	3		
	Brickwork of NFX bricks (14MPa nominal compressive strength) in Class II mortar:				
121	One brick wall in two half brick skins tied together with and including galvanised wire ties B : 7 C : 0 D : 0 G : 0	m2	7		
	Brickwork reinforcement:				
122	150mm Wide reinforcement built in horizontally B : 13 C : 0 D : 0 G : 0	m	13		
	Galvanised hoop iron cramps, ties, etc.:				
123	30 x 1,6mm Tie secured around water tank (elsewhere measured) with two ends securely cast into concrete B : 5 C : 0 D : 0 G : 0	m	5		
	One layer of 250 micron green polyethylene waterproof sheeting (SANS 952-1985 type C) sealed at laps with PVC self-adhesive tape:				
124	Under surface beds B : 3 C : 0 D : 0 G : 0	m2	3		
	Carried to Collection			R	

	Corobrik Firelight Satin or other approved FBX clay face brickwork, manufactured in accordance with SANS 227:2007, including pointing with 6mm square recessed horizontal and vertical joints as the work proceeds:				
125	Extra over ordinary brickwork for faced brickwork B : 6 C : 0 D : 0 G : 0	m2	6		
	Corobrik Firelight Satin or other approved FBX clay face bricks, pointed with 6mm square recessed horizontal and vertical joints as the work proceeds:				
126	Brick-on-edge coping 220mm wide to top of one brick wall, faced on top and both ends B : 7 C : 0 D : 0 G : 0	m	7		
	APRONS, ETC.				
	Reduce existing levels on site including carting off site to a location to be identified by the Contractor:				
127	Surplus material from reduced areas for aprons B : 23 C : 0 D : 0 G : 0	m3	23		
	Earth filling supplied by the Contractor under aprons, etc.:				
128	G5 Material in accordance with SABS 1200DM in 150mm layers compacted to a minimum of 95% Mod AASHTO dry density B : 23 C : 0 D : 0 G : 0	m3	23		
	Compaction of surfaces:				
129	Under aprons, etc. including scarifying for a depth of 150mm, breaking down oversize material, adding suitable material where necessary and compacting to a minimum of 95% Mod AASHTO dry density B : 150 C : 0 D : 0 G : 0	m2	150		
	25MPa/19mm Reinforced concrete cast against excavated surfaces:				
130	Aprons to falls B : 15 C : 0 D : 0 G : 0	m3	15		
	Finishing top surfaces of concrete smooth with a wood float:				
131	Aprons, etc. to falls B : 150 C : 0 D : 0 G : 0	m2	150		
	Carried to Collection			R	

Section No. 3
EXTERNAL WORKS (PROVISIONAL)
Bill No. 1
EXTERNAL WORKS

	Rough formwork to sides:				
132	Edges, risers, ends and reveals not exceeding 300mm high B : 50 C : 0 D : 0 G : 0	m	50		
	Expansion joints with bitumen impregnated softboard between concrete surfaces:				
133	10mm Joint not exceeding 300mm wide B : 50 C : 0 D : 0 G : 0	m	50		
	Approved polysulphide sealing compound including backing cord, bond breaker, primer, etc.:				
134	10 x 10mm In vertical expansion joint between concrete surfaces including raking out joint filler as necessary B : 50 C : 0 D : 0 G : 0	m	50		
	WASHING LINES				
	Hot dip galvanised washing line posts and rails:				
135	Washing line assembly 4m long, comprising two 76mm diameter x 3mm thick posts 2500mm long, each with 76mm diameter x 3mm thick rail 800mm long welded on; the rail four times holed for M18 hinge loop bolts with nuts and washers and fitted with four strands of galvanised (Class A) rubber coated washing line and the posts cast into and including 400 x 400 x 600mm unreinforced concrete (20MPa/19mm) bases including excavation, formwork, etc. B : 20 C : 8 D : 10 G : 0	No	38		
	LANDSCAPING				
	All landscaping areas/sections (grassed areas and landscaping detail) must be maintained throughout the whole project period, whether that/those sections have achieved Sectional Completion or not. The whole of the landscaping element must, additionally, be maintained for a period of six (6) months after Practical Completion of the whole project has been achieved				
	Cultivation and preparation of areas to be planted				
	Do not proceed with installation of topsoil and planting mix until all work has been completed. Till the sub-soil into the bottom layer of topsoil or planting mix, loosen soil of sub grade to depth of 50 - 75mm. Spread 50mm layer of topsoil and till together. Add topsoil and planting mix over and till together. Do not compact. Add bonemeal, phosphate and fertilizer during soil installation.				
	Carried to Collection			R	

Plants, shrubs, trees, etc.

All trees to be minimum 2m high (planted height). Trees not planted in planters or concrete surrounds are to be planted 1m away from the walkways in 1 x 1 x 1m deep excavated holes.

Trees are to be staked where required and the proposes method shall be approved by the Architect. Stakes shall be of sufficient strength to maintain the tree in the upright position. Where guy wires are attached around the tree, the trunk shall be protected with 20mm diameter rubber hose of sufficient length to extend past the trunk by more than 105mm.

Plants must be set plumb and braced in position until topsoil or plant mix has been placed and tamped around the bases of the root balls. Plants shall be set so that they will be at the same depth and so that the root balls do not shift or move laterally one year later.

All plants to be free from any damage, parasites, fungus or any other plant diseases or insects. No container bound plants will acceptable. All leaves to be dust free.

All plants are to be viewed and approved by the Architect before planting. All plants must be transported to the site in trucks with closed canopies. Plants in transit may not be exposed to wind or any other harmful element.

Prices for watering all newly planted plants/trees/shrubs twice a week for a period of six (6) months after Practical Completion.

Topsoil supplied by the Contractor, including spreading and levelling:

136	In grassed areas, etc. B : 76 C : 0 D : 0 G : 0	m3	76		

Compost, fertilizer, etc.:

137	Compost in grassed areas, etc. B : 76 C : 0 D : 0 G : 0	m3	76		
138	5:1:5 Fertilizer for lawns B : 40 C : 0 D : 0 G : 0	kg	40		

Grassing, ground covers, etc.:

139	Kikuyu sods approximately 900 x 450 x 50mm thick to general areas, etc. B : 760 C : 0 D : 0 G : 0	m2	760		

Carried to Collection R

Section No. 3
EXTERNAL WORKS (PROVISIONAL)
Bill No. 1
EXTERNAL WORKS

	Maintenance:			
140	Maintenance of grassed areas (total area approximately 760m2) including regularly weeding and irrigating as necessary as per phasing plan	Item		
	Carried to Collection		R	

Section No. 3
EXTERNAL WORKS (PROVISIONAL)
Bill No. 1
EXTERNAL WORKS

Section No. 3

Bill No. 1

EXTERNAL WORKS

COLLECTION

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Section No. 3

Bill No. 1

EXTERNAL WORKS

COLLECTION

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Total Brought Forward from Page No.	128		
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	131		
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Section No. 3
EXTERNAL WORKS (PROVISIONAL)
Bill No. 1
EXTERNAL WORKS

Item No		Unit	Quantity	Rate	Amount

SECTION No. 4: PROVISIONAL SUMS

BILL No. 1: PROVISIONAL SUMS

SUPPLEMENTARY PREAMBLES

The Tenderer is referred to the relevant Clauses in the separate Supplementary Preambles hereunder and Department of Public Works PW371 document and SANS 2001 Series documents

General

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

SPECIALIST WORK

ATTENDANCE

General attendance on Nominated Sub-contractors' work shall be deemed to include the following

1. Access to the site and places where the sub-contract work is to be carried out, including the reasonable use of any temporary personnel hoists erected by the contractor;

2. The provision of water and lighting and of single phase electric power to a position within 50 metres of the place where sub-contract work is to be carried out but excluding water, fuel and power for commissioning of the installation for which the sub-contractor shall be responsible;

3. The provision of an area for the sub-contractor to establish office accommodation, temporary workshops and for the storage of plant and material;

4. The use of erected scaffolding belonging to the contractor, in common with others having the like right, whilst it so remains erected upon the site;

5. The use of mess rooms, latrine, health and welfare facilities and the like, where provided.

Carried to Collection R

	6. The use of site telephone and facsimile machine, where provided, subject to the payment by the sub-contractor for all his outgoing calls.				
	PRE-PAYMENT WATER METERS				
1	Provide the sum of R660 000.00 (Six Hundred and Sixty Thousand) for pre-payment water meters	Item			660 000.00
2	Add for profit	Item			
3	Allow for attendance	Item			
	PRE-PAYMENT AND NON-PRE-PAYMENT ELECTRICITY METERS				
4	Provide the sum of R140 000.00 (One Hundred and Forty Thousand) for pre-payment water meters	Item			140 000.00
5	Add for profit	Item			
6	Allow for attendance	Item			
	MONETARY PROVISIONS				
	BASHEE COURT - SECURITY PROVISION				
7	Provide the sum of R100 000.00 (One Hundred Thousand) for Security Provision	Item			100 000.00
	COMMUNITY LIAISON OFFICER				
8	Provide the sum of R120 000.00 (One Hundred and Twenty Thousand) for the employment of a Community Liaison Officer (R8,000.00 per month for the duration of contract plus sundries)	Item			120 000.00
	PLACEMENT OF STUDENTS				
	The following to form part of the Construction Skills Development Goal				
9	Provide the sum of R360 000.00 (Three Hundred and Sixty Thousand) for the Placement/In-Service training of three (3) students within the Built Environment at the Bursary of R8,000.00 (Eight Thousand Rand) each per month, employed by the Principal Contractor for the duration of the contract	Item			360 000.00
	Carried to Collection			R	

Section No. 4

Bill No. 1

PROVISIONAL SUMS

COLLECTION

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	VOLUME 3: MSINTSI COURT: ELECTRICAL / MECHANICAL INSTALLATION		SUM	
	Sub Total		R	

MONETARY PROVISIONS

The following monetary provisions have been made in the contract and must be omitted from the contract sum at the start of the contract and used as directed below.

Please note: These are monetary provisions only and the use, value and payment thereof are subject to adjustment based on actual costs through contractually approved variation orders and escalation costs calculated in terms of the prescribed contractual escalation calculations directives respectively.

CONTINGENCIES

Provide the sum of R2,600,000.00 (Two Million Six Hundred Thousand Rand) for Contingencies to be used or deducted in full at the Principal Agent's discretion — R 2 600 000.00

ESCALATION

Provide the sum of R3,000,000.00 (Three Million Rand) for Building Cost Escalation to be adjusted in terms of the JBCC Contract Price Adjustment Provisions — R 3 000 000.00

Sub Total — R

Carried Forward — R

F I N A L S U M M A R Y

Section No		Page No		Amount
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	VALUE ADDED TAX 15%		R	
	TOTAL BUILDING WORKS INCLUDING VAT		R	
	Carried to C1.1 - Form of Offer and Acceptance		R	

VOLUME 2

ELECTRICAL INSTALLATION

ECDC CLUSTER F1: REFURBISHMENT OF BUTTERWORTH RESIDENTIAL COMPLEXES

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0. PART 0 - INSTRUCTIONS TO TENDERER

0.1 INTRODUCTION

The Employer is **Walter Sisulu University**. These instructions shall be discarded after tender award and shall not form part of the final Contract.

0.2 SCOPE OF CONTRACT

This enquiry is for the **cabling and wiring of new lab and office spaces installation a new supply cable from the existing mini substation to a new distribution board**.

0.3 TENDER DOCUMENTS

A complete set of tender documents comprises:

i) One volume of the bound document

All pages of the tender document are numbered, and Tenderers shall check for omission or duplication and shall satisfy themselves of the clarity, intent and consistency of the tender document, receiving if necessary, corrections or explanations from the Engineer, in writing. No liability will be accepted by the Engineer or Employer in respect of errors in a tender due to the foregoing.

No unauthorised alterations or notes shall be made to the text of the tender document. Any such unauthorised alterations, additions or notes will be ignored, and the text as printed will be strictly adhered to.

Should the Tenderer wish to make any departures from or modifications to the requirements of the tender document or to qualify his tender in any way, he shall set out his proposals in the schedule entitled "Alterations by Tenderer". In the absence of any such qualification the contents of the tender document will be deemed to be unqualified. The tender document shall be completed in it's entirety and returned intact together with the drawings on or before closing date for the submission of tenders.

Tenderers not wishing to submit their quotation shall return all documentation clearly marked "NO RETURN".

0.4 ACCEPTANCE OR REJECTION OF TENDERS

The Employer reserves the right to accept or reject any tender, or to annul the tendering process, or to reject all tenders, without incurring liability to any Tenderer and without giving reasons for the Employer's actions. It shall be understood that neither the lowest nor any tender will necessarily be accepted, and that the Employer accepts no liability for any expenses incurred by any Tenderer in preparing and submitting his tender.

0.5 COMPULSORY SITE INSPECTION

Pre-tender site inspection is required, as per main contract. Refer to main documentation.

0.6 TENDER PRICING

Tenders are to be fully detailed, and all annexures completed in all respects and shall include import surcharges, foreign exchange, withholding taxes, visas, Sub-

Contractor registration fees, etc. where applicable. All prices quoted shall be in the currency of **South African Rands (ZAR)** which currency shall also be used for all payments made under this Contract.

Tenderers are to submit fixed prices, which shall not be subject to escalation. The Works are subject to re-measurement.

0.7 INFORMATION TO BE SUBMITTED WITH TENDER

The Tenderer shall complete the document in full and in black ink. One original signed Letter of Tender shall be submitted with the tender. The Tenderer shall submit with their tender complete technical data and specification sheets for the equipment offered. Schedule of information are to be completed in full. Failure to comply with this requirement may deem the tender incomplete and liable to disqualification. Details regarding alternative offers will only be considered if the Tenderer has complied fully with the basic requirement of this tender.

0.8 MODIFICATIONS

The tender will be presumed to be completely in accordance with the Specification in general and in detail as to quantities, quality, duty, performance and arrangements. Should the Tenderer wish to offer suggestions or alterations which he believes could affect an improvement to the Works (in whole or in part) as specified and would be of interest to the Employer, these will only be considered if the specifications and conditions as detailed in this document have been complied with.

0.9 QUERIES AND DISCREPANCIES

Tenderers are invited to discuss any queries that they may have, or seek the advice of the Engineer in respect of any matters relating to this tender at any time during tendering. Should there appear to be any discrepancies, ambiguities or want of agreement in description, dimensions, qualities or quantities in this contract document, the Tenderer shall refer the matter in writing to the Engineer for his interpretation as to the true intent and meaning thereof.

0.10 ALTERATIONS BY TENDERER

Any alterations to the proposed contract document, drawings or specifications shall be detailed on the following form. Any necessary additional pages shall be numbered and referenced on the signed form.

The Bills of Quantities form part of and must be read in conjunction with the Specification which document contains the full description of the work to be done and material and equipment to be used and reference should be made to the Specification for the full meaning of descriptions of work to be done and materials and equipment to be used in this service. The Bills of Quantities contains pages numbered consecutively in each Schedule as indicated in the master index. Before the Tenderer submits his tender he should check the number of pages, and if any are found missing or duplicated, or the figures or writing indistinct, or the Bills of Quantities contain any obvious errors, he should apply to the Engineer at once and have same rectified, as no liability whatsoever will be admitted by the Engineer in the respect of errors in the tender due to the foregoing.

No alteration, erasure or addition is to be made in the text of the Bills of Quantities. Should any alteration, erasure or addition be made, it will not be recognised but the original wording of the Bills of Quantities will be adhered to.

Any amendment or correction when filling in a tendered amount/sum/rate must be done by deleting the incorrect amount/sum/rate and writing the correct amount/sum/rate just above it. This correction must be initialled by all signatories to the Tender Document. The use of a correcting fluid “Tippex” or similar substance to make corrections is not permitted. The use of correcting fluid may result in the Tender being disqualified.

The responsibility for the accuracy of the quantities written into the Bills of Quantities remains with the person who prepared the Bills of Quantities. The Tenderer shall be relieved of responsibility of measuring quantities at the tender stage, and the tender sum submitted shall be in respect of quantities set out in the Bills, although he will be required to make his assessment of the items such as brackets, fixings, etc., from details stated in the Bills and shall include in the item prices for such small installation materials as are required for the complete installation in accordance with the Specification.

All measurements are nett, unless otherwise stated, and Tenderers shall allow in the rate for wastage.

0.11 ALTERNATIVES TO SPECIFICATION

The Tenderer shall price the Tender Document in accordance with the Specification.

Where the Tenderer wishes to offer alternative materials or equipment, the following shall apply:

The Tenderer shall specify these in their covering letter with prices for the items and full detailed specifications of the alternatives, or

The Tenderer shall submit a separate alternative tender document, with the alternatives offered inclusive of full details of the alternatives including design calculations if applicable.

Should the Tenderer supply materials or equipment that are not as per the Specification, without formal approval of an alternative from the Engineer, these shall be rejected and removed from site at the Tenderer’s cost. The materials or equipment shall be replaced with the specified materials or equipment at no extra cost to the Employer. Any consequential penalties due to late completion will be for the Tenderer’s account.

0.12 SCHEDULE OF ALTERATIONS BY TENDERER

Should the Tenderer desire to make any alterations to the contract document, or to qualify his tender in any way, he shall set out his proposals clearly hereunder, failing which the tender will be deemed to be unqualified.

If no departures are desired, the schedule hereunder is to be marked NIL and signed by the Tenderer.

PAGE	TECHNICAL ALTERATION OR QUALIFICATION

1. PART 1 - GENERAL PROJECT REQUIREMENTS

1.1 GENERAL REQUIREMENTS

The above sub-contract works will be carried out as a domestic Sub-Contractor to the Main Contractor and as such will be required to work in close liaison with the Main Contractor and all other Sub-Contractors. It is important that complete co-ordination is maintained at all times to enable the timely completion, within the specified contract periods, of the Works. The Sub-Contractors will be required to agree with the Main Contractor the full working programme for all elements of the contract. Certain areas are more critical to the completion than others as certain items of plant and equipment, which will be required to be installed and commissioned, may experience long delivery dates.

1.2 EXTENT OF CONTRACT

The Sub-Contractor (electrical Sub-Contractor) shall do everything necessary for the proper execution and completion of the Works according to the true intent and meaning of the Contract.

1.3 PERMITS, LICENSES, LAWS AND REGULATIONS

The Sub-Contractor shall procure without additional compensation all permits (including entry permits, work permits etc.), certificates and licenses required by authorities directly associated and necessary for the completion of the Work.

1.4 GUARANTEES AND MAKING GOOD OF DEFECTS

The Sub-Contractor guarantees that the Contract Work and all materials shall strictly comply with the provisions of this Contract and all specifications and drawings referred to in this Contract or thereafter furnished by Engineer, shall be executed in a proper and workmanlike manner and shall be free from defects in construction and workmanship and shall be executed in accordance with recognized and accepted design and engineering standards which are applicable to the Contract Works. The Sub-Contractor further guarantees that all materials, equipment and supplies furnished by the Sub-Contractor for the Contract Work shall be new, free from faulty design or defects, of the most suitable grade and, where engineered, designed, and supplied by the Sub-Contractor it shall be fit for their intended purposes.

If at any time during the progress of the Work or prior to the Take Over by the Engineer of the Contract Works, the Engineer gives notice in writing that ~~it~~ they are ~~is~~ not satisfied with any part or parts of the Contract Works or with any materials and equipment or workmanship on account of being faulty or of inferior quality and not meeting the specified requirements; or having been unsoundly or improperly executed owing to inferior design, materials or workmanship or inaccurate setting out, or on account of any other similar cause, the Sub-Contractor shall immediately proceed to rectify the defects or deficiencies stated in the notice. Such rectifying steps shall be executed at the cost of the Sub-Contractor, and no extension of the date of completion shall be granted by reason thereof unless agreed to by Engineer in writing. The Sub-Contractor's guarantees set forth above shall extend for a period of 12 (twelve) months after the date of the written notice of Take Over of the Contract Work by Engineer.

All labour, equipment and materials furnished by the Sub-Contractor during the Maintenance period in order to correct defects or deficiencies shall be guaranteed

by the Sub-Contractor in accordance with the guarantees set forth in this Clause for a further period of 12 (twelve) months from the date of acceptance by Engineer of completion of the correction.

1.5 SCHEDULE, CO-ORDINATION AND REPORTING

The Sub-Contractor shall provide the Engineer a schedule and co-ordination plan of all activities and Work to be performed for review and acceptance. The Sub-Contractor shall at all times furnish sufficient labour, material, equipment and facilities necessary to assure compliance with the schedule established for Sub-Contractor's performance of the Work.

In the event that the Sub-Contractor's performance of the Work is not in compliance with the schedule established for such performance, the Engineer may so notify the Sub-Contractor in writing and specify the steps to be taken to achieve compliance with the schedule, without any additional cost to the Engineer. Upon receipt of such notice, the Sub-Contractor shall, at the Sub-Contractor’s expense, take such steps and improve progress so as to comply with the scheduled time for completion of the Work.

Should the Sub-Contractor fail to take such steps and improve progress, the Engineer shall be entitled at the Sub-Contractor's expense and without prejudice to any other rights which the Engineer may have as a result of the Sub-Contractor's failure to perform, to engage the services of others or to perform the Work itself in order to achieve compliance with such schedule.

1.6 SUB-CONTRACTOR’S CONSTRUCTION EQUIPMENT

All construction equipment obtained or furnished by the Sub-Contractor which is to be used by Sub-Contractor on Site, shall be in operating condition, safe, fit for the use for which intended, and suitable for the safe and efficient performance of the Work. Such equipment shall be subject to inspection and approval from time to time by the Engineer. Any such equipment of the Sub-Contractor which is rejected by the Engineer as not conforming with the foregoing, shall be promptly removed by the Sub-Contractor and replaced with equipment acceptable to the Engineer without additional cost and without delaying the schedule for performance to the Work by the Sub-Contractor.

1.7 SUB-CONTRACTOR’S PERSONNEL AND LIAISON

The Sub-Contractor agrees to supply at all times an adequate number of well-qualified and skilled personnel to perform the Work. The Sub-Contractor shall have an experienced, qualified and legally responsible supervisor available at Site at all times during the course of the Work. Such supervisor shall act for and represent the Sub-Contractor and all instructions given to him shall be as binding as if given to the Sub-Contractor. If the Engineer’s Representative requests by written notice to the Sub-Contractor, said supervisor shall be given authority in writing as determined by the Sub-Contractor to act on behalf of, and to bind, the Sub-Contractor with respect to all matters pertaining to performance of the Work and this Contract, and the Engineer shall be furnished with a copy of such written authorisation. The Sub-Contractor shall not transfer or remove any of its supervisory or key personnel from performance of the Work without the prior written approval of the Engineer.

1.8 LABOUR HARMONY / LABOUR RELATIONS

The Sub-Contractor shall maintain workable and harmonious relations with it's employees and between the Sub-Contractor's employees and the employees of it's Sub-Contractors or any other Sub-Contractors on Site and the employees of the Engineer.

The Sub-Contractor shall not recruit and employ personnel from any other Sub-Contractors, Engineer, or other company, operating within in the area. Whenever the Sub-Contractor has knowledge that an actual or potential labour dispute is delaying or threatens to delay the timely performance of the Work, the Sub-Contractor shall immediately give notice thereof including all relevant information to the Engineer.

1.9 SECRECY AND SECURITY

All plans, drawings and specifications and other information obtained by the Sub-Contractor from the Engineer in connection with the Work, shall be held in confidence by the Sub-Contractor and shall not be used by the Sub-Contractor for any purpose other than for the performance of the Work or as authorised in writing by the Engineer.

All such documents furnished by the Engineer to the Sub-Contractor, shall remain the property of the Engineer and upon completion of the Work, the Sub-Contractor shall, if requested by the Engineer either destroy or return to the Engineer all such documents including any copies thereof.

The Sub-Contractor shall not make press releases or issue other advertising pertaining to the Works of this Contract, without first obtaining the written approval of the Engineer.

1.10 CLEAN UP

The Sub-Contractor shall at all times during execution of the Contract Work, and upon completion of the Work, remove from Site, the Engineer's premises and the vicinity thereof and properly dispose of all debris and rubbish caused by the Sub-Contractor's operations. Should the Engineer request the Sub-Contractor to execute such clean-up at any time or from time to time during progress of the Contract Work, the Sub-Contractor shall promptly comply with such request. All clean up by the Sub-Contractor shall be executed in a manner satisfactory to the Engineer.

Upon completion of the Contract Work, the Sub-Contractor shall promptly remove from Site and Employers premises all the Sub-Contractor's equipment, materials, scaffolding, temporary buildings, and like items, leaving the Site and the vicinity clean and ready for use.

1.11 COMPLIANCE WITH ENGINEER'S WORK RULES

The Sub-Contractor shall comply strictly with the Engineer's Work, Safety, Security and Health Rules governing the conduct of the Sub-Contractor and the Sub-Contractor's employees, agents and Sub-Contractors at and about Site and the Engineer's premises. The Sub-Contractor agrees that it shall ensure that its supervisory personnel, employees, agents and Sub-Contractors at the Site and the Engineer's premises comply strictly with such rules as revised in accordance with the foregoing provisions.

1.12 SUPERVISION

The Sub-Contractor shall appoint a Supervisor and advise the Engineer of the name, address and telephone number of the Supervisor so appointed before any work is commenced. Should the Sub-Contractor replace the said Supervisor for any reason, the Sub-Contractor shall within 24 (twenty-four) hours advise the Engineer of the successor's name, address and telephone number.

The Supervisor so appointed shall be responsible for the safety of the Sub-Contractor's and the Sub-Contractor's employees who have to undertake work on site. No works on site shall commence until the above requirements are in place.

1.13 SAFETY EQUIPMENT / PROTECTIVE GEAR

The Sub-Contractor shall ensure that all safety equipment and protective gear to be used for the execution of Work is in an acceptable condition and fit for use for the sole purpose for which it was intended. The Sub-Contractor shall provide at it's own expense all safety equipment and protective gear required for it's employees.

1.14 ELECTRICAL EQUIPMENT

The Sub-Contractor shall ensure that all electrical equipment the Sub-Contractor proposes to use in the execution of work is suitably protected. All portable electric equipment shall be fitted with an on and off switch in an accessible position.

All welding cables, extension cords and other electrical cables shall be free from any damage and suitable for use. Cables shall not be used unless the whole cable has been unwound. Overland cables and/or extension cords shall be suitably routed to prevent hindered access to any part of the Works and be kept free from potential damage caused by site traffic.

1.15 GENERAL

No excess ground, rubble, waste or any excess material is permitted on Engineer's Site. Temporary storage areas will be allocated by the Engineer for this purpose. The Sub-Contractor shall at all times be responsible for the care and tidiness of any such area.

The Engineer is committed to the protection and care of the environment in which he operates, and the Engineer will always ensure that his activities do not overburden the environment. It is expected of Sub-Contractors and/or it's Sub-Contractors to adhere to this policy while they are operating on the Engineer's Site.

Open fires, the burning of paint tins or any other flammable material on Site is strictly prohibited.

1.16 SUB-CONTRACT PERIOD AND PROGRAMME

The Sub-Contractor shall provide within the stipulated period after the acceptance of his Tender, a complete programme for the execution of this contract. This programme shall indicate the expected dates of the commencement and completion of the following specialist contract works: -

(i) Submission of Working Drawings for approval (if applicable)
(ii) Placing of orders with other specialists or Sub-Contractors for Plant and Equipment to be incorporated in the Works
(iii) Receipt by the Sub-Contractor from other specialist or Sub-Contractors of Plant to be incorporated in the Works

(iv) Manufacture by the Sub-Contractor of Plant to be incorporated in the Works;
(v) Inspection and testing by the Engineer
(vi) Shipment from country of supply (if applicable)
(vii) Delivery to Site
(viii) Erection on Site, details for all activities
(ix) Tests on Completion.

Operations shall be commenced when instructed and shall be carried forward to completion with the greatest possible expediency, to the satisfaction of the Engineer, in accordance with the Programme. The Sub-Contractors programme shall be agreed with the Main Contractor, as the Sub-Contractor shall adhere fully to the requirements and timing of the agreed Main Contractor's programme.

1.17 DRAWINGS ACCOMPANYING THE TENDER DOCUMENTS

There are electrical Drawings accompanying this Specification. The Architect's Drawings indicate generally the arrangement of the rooms and are to be referenced for assistance in tendering. The exact positions of new socket outlets and fittings will be agreed with the Engineer before commencement of work. It shall be deemed that the prices entered by the Sub-Contractor include for the repositioning, of the various services, to meet the above requirements. No claims will be entertained.

The Sub-Contractor shall satisfy himself as to correctness of all Architect's Drawings and measurements particularly the dimensions of the works already constructed on site. If the Sub-Contractor finds any discrepancy in the Drawings or between the Drawings and the Specification or between the constructed works and the Drawings, he shall immediately refer the same to the Architect and Engineer who will decide which shall be followed. Figured dimensions shall be taken in preference to the scale mentioned on or attached to any Drawings. Details shown on Drawings shall be read in conjunction with items in the Specification.

1.18 WORKSHOP DRAWINGS

Workshop Drawings are required for main Distribution Boards.

1.19 AS-BUILT DRAWINGS

No As-Built Drawings are required.

1.20 MAINTENANCE MANUALS

No Maintenance manuals are required.

1.21 BUILDER'S WORK AND CIVIL WORKS

All Builder's Work and Civil Works incidental to this section of the contract such as the cutting of holes in walls and ceilings, breaking into the existing plant rooms and duct systems, changes in the protection of existing structures, painting and the re-instatement of the rooms and associated areas to their original standard etc. shall be the responsibility of the Main Contractor. The Sub-Contractor shall however be fully responsible for the preparation of all such details that relate to this sub-contract works, the details being subject to approval by the Engineer prior to submission to the Main Contractor for action. Other items such as the fixing of

brackets, pipe runs, making good, etc. shall be carried out by the Sub-Contractor to suit the installation of all the services.

It is the Sub-Contractor's sole responsibility to ensure that all holes and chases, etc. are in the required position and that any additional ducts, holes and chases necessary for the erection of the installations in situ concrete walls, floor slabs etc., are included in the early stages of construction as appropriate.

The Sub-Contractor shall furnish the Engineer and Main Contractor with all information as to where brackets and fixings are required and shall ensure that such work is done in accordance with such information.

The Sub-Contractor shall include in his tender for all supports, fixings, the plugging of all walls, ceilings and floors to facilitate the fixing of the pipework, accessories, and all other portions of the installations.

The Sub-Contractor is to set out at the earliest opportunity the position of all holes necessary for the passage of ducts, pipe-work and conduits or otherwise required in connection with his work, and should additional holes or openings be required due to failure of the Sub-Contractor to fulfil the conditions of this clause, then he must arrange for the Main Contractor to make such openings, etc. at his own expense. The Sub-Contractor is not to arrange for the cutting of any holes or openings unless specifically authorised to do so and should he do so without approval, he will become liable for any damage to the building or fittings.

It shall be deemed that the prices entered include for any special requirements and that the Sub-Contractor has visited the site during the tender period to ascertain all details.

The Sub-Contractor shall pay particular attention to the fixing and alignment of items. All items shall be installed square, true and perpendicular to ceilings i.e. as may be required on Site to the Engineer’s approval and to suit the existing and new services.

1.22 GUARANTEE

The Sub-Contractor shall guarantee all work for a period of twelve months after acceptance by the Engineer. In the event of a defect arising within the contract defects liability period which, in the opinion of the Engineer, is due to faulty workmanship or materials, the Sub-Contractor shall, at his own expense, make good such defects where instructed to do so, to the satisfaction of the Engineer.

1.23 LAYING OUT OF WORK

The Sub-Contractor will be responsible for laying out his work and shall obtain all necessary information as may be required to carry out the work, and such information shall be obtained sufficiently in advance to avoid any possibility of delay to the works as a whole.

The Sub-Contractor shall be fully responsible, and shall inform himself of, the details of all work being carried out by the various trades on Site, particularly where such trades may interfere one with the other, or where co-ordination is necessary. No claims for extra costs will be met arising from omissions, oversights, or neglect in this regard.

The Sub-Contractor shall arrange for the supply, in advance of the delivery of the fittings, of all necessary nuts, plates, sleeves, saddles, etc., as required and as may be directed by the Engineer or Architect.

1.24 TESTING AND COMMISSIONING

Certificates of Compliance shall be issued for all required infrastructure, namely distribution boards, earthing and Lightning Protection System.

All tests shall be carried out in conjunction with and to the satisfaction of the Local Authority and in the presence of the Engineer. The Sub-Contractor shall make all arrangements for testing and inspection, the costs thereof being included in the Tender Price.

The Sub-Contractor shall ensure that the installation is completed in every respect and that there are no major defects prior to notifying the Engineer's Representative (in writing) for the first delivery inspection. The Sub-Contractor shall give the Engineer in writing seven days' notice of the date of the tests. The Engineer shall accept and confirm the date and time of the test. The certificates of compliance shall be issued to the Engineer at the first delivery inspection.

The Engineer will accept zero minor defects during the final inspection. Should any defects as listed during the first delivery inspection be found not to have been corrected then the Engineer will terminate that inspection and request that an additional final inspection be arranged by the Sub-Contractor.

The Sub-Contractor shall be responsible for arranging all the tests as specified, at the appropriate time.

The Engineer may perform similar tests at any time and the Sub-Contractor shall render all assistance and shall provide all tools and instruments, which may be required for such tests.

The Sub-Contractor shall replace any portion of the installation if it does not meet with the requirements of this specification, as may be found by test or inspection. Such replacement shall be done at his own cost.

The Sub-Contractor shall advise the Engineer's Representative in writing of all results and furnish copies of all certificates.

The Sub-Contractor shall provide all the necessary instruments for the proper testing of the complete installation. If there is a reason to doubt the accuracy of such instruments, the Sub-Contractor shall take the necessary action to prove their accuracy.

1.25 COMMISSIONING TEST RECORDS

The Sub-Contractor shall make all necessary records of the commissioning tests carried out, and when the tests have been successfully completed, he shall provide the Architect and Engineer with test records and reports in a form to be agreed.

The contract installation will be deemed to be complete when the following obligations have been fulfilled by the Sub-Contractor: -

(a) The satisfactory completion of the Performance and Acceptance Tests on Site.
(b) Test records and reports have been received.

1.26 SPARE PARTS AND SPECIAL TOOLS

Panel keys shall be provided to the Engineer. Such tools shall not be used by the Sub-Contractor during the erection of the plant or equipment.

1.27 PROTECTION OF WORKS

The Sub-Contractor shall carefully protect from damage by weather and other Sub-Contractors, all completed work, equipment and materials which may be affected. Protection shall include barriers, tarpaulins etc. necessary for the purpose. All damaged work or equipment shall be removed from site and replaced/made good at his own cost to the satisfaction of the Engineer.

1.28 SUNDRIES

The necessary locks, piping, conduits, lamps and other requisite sundries whether specified in detail or not shall be provided, under the contract and it shall be deemed that the Sub-Contractor's prices, rates and the like include for all such items.

2. PART 2 - PARTICULAR PROJECT SPECIFICATIONS

The Sub-Contractor shall supply all necessary manpower, labour, supervision, equipment, materials (installed and consumable), tools, services and testing devices for all aspects of this Contract as indicated hereunder and the Contract sum shall be deemed to cover all cost and expense thereof:

- Packing, delivery and off-loading of all equipment at site
- Provision of stores facilities which will accommodate the project requirements for an open lay down area and a lockable store area
- Site establishment and removal of site establishment
- Supervision of the positioning and installation of the above equipment
- Painting of galvanized conduit where required
- Supply and installation of all safety equipment (guards, notices, etc.)
- Compilation of test packs with all relevant certification witnessed and signed by the Engineer's Representative
- Cold and Hot Commissioning.

2.1 DESIGN AND ENGINEERING CRITERIA

The equipment sizes supplied shall not be less than those indicated in the specification or attached drawings. Should the Sub-Contractor not agree with the selection, alternative sizes shall be offered with full justification for the change.

The information supplied in this Specification in the form of data, drawings and descriptions, etc., is intended to serve as a guide to the requirements of the Engineer with respect to the design and operation of the installations.

2.1.1 The employer shall supply the following information to the *Sub-Contractor:*

- This specification
- Engineer's drawings
- Bills of Quantities
- Single Line Diagrammes

2.1.2 Parts of the works which the Sub-Contractor is to design:

None.

2.2 PRE-PAYMENT METERING

The installation of pre-payment meters will be Subcontracted by the Main Contractor through a **Nominated Subcontracting** arrangement:

- The scope of this Subcontracting arrangement shall include meter installations, configuration of the vending system and Ceding of the Vending Management System by the Contractor to ECDC on Practical Completion.
- Contractual Provisions of the Cession Agreement will be informed by all relevant ECDC Policy requirements for the direct management of the service by ECDC post Practical Completion.

The Client's procurement policy requires a Vendor Management Service Provider to be tendered for every three years, thus all meters must be compliant with the Standard Transfer Specification (STS) protocol.

2.3 SCOPE OF WORK

Scope of work for the electrical works:

2.3.1 Bashee Court

- Trench cable from existing kiosk to new DB, and to flatlet DB marked on layout
- Install new DBs with switchgear
- Trench cable from new DB to new flatlet DB marked on layout
- Install new DB with switchgear in flatlet
- Replace existing DBs with new DB with switchgear
- Install wall-mounted bulkheads for exterior lighting
- Install interior light fittings as per lighting layouts
- Install plugs as per small power layouts
- Install stove and geyser isolators
- Wire all new circuits as per single line diagramme and electrical layouts
- Install bulk check meter and STS compliant smart prepayment meters
- Install lightning protection system as per LPS layout
- Test and commission entire installation and issue COC per unit
- Remove existing streetlights and post tops and disconnect and isolate cabling safely.

2.3.2 Msintsi Court

- Replace existing DB with new DB with switchgear
- Install wall-mounted bulkheads for exterior lighting
- Install interior light fittings as per lighting layouts
- Install plugs as per small power layouts
- Install stove and geyser isolators
- Wire all new circuits as per single line diagramme and electrical layouts
- Install bulk check meter and STS compliant smart prepayment meters
- Test and commission entire installation and issue COC per unit
- Remove existing post tops, disconnect and isolate cabling safely, and install solar power post tops as per site layout.

2.3.3 Kyalami Flats – Phase 2

- Replace existing DBs with new DB with switchgear as per SLD
- Install new DB with switchgear in garage/ablutions block
- Install wall-mounted bulkheads and floodlights for exterior lighting
- Install interior light fittings as per lighting layouts
- Install plugs as per small power layouts
- Install stove and geyser isolators
- Wire all new circuits as per single line diagramme and electrical layouts
- Install bulk check meter and STS compliant smart prepayment meters
- Install lightning protection system as per LPS layout
- Test and commission entire installation and issue COC per unit and garage/ablutions block.

2.4 AS-BUILT DRAWINGS, OPERATING MANUALS AND MAINTENANCE SCHEDULES

Only as built marked up drawings are required.

2.5 TESTING AND COMMISSIONING

The Sub-Contractor shall test the entire installation. The Sub-Contractor shall provide all the necessary instruments for the proper testing of the complete installation. The Sub-Contractor shall be responsible for arranging all the tests as specified, at the appropriate time.

All tests shall be carried out in conjunction with and to the satisfaction of the Engineer. The Sub-Contractor shall make all arrangements for testing and inspection, the costs thereof being included in the Tender Price.

The Sub-Contractor shall ensure that the installation is completed in every respect and that there are no major defects prior to notifying the Employer's Representative (in writing) for the first inspection. The certificates of compliance shall be issued to the Employer's Representative at the first inspection.

The Employer's Representative will accept zero minor defects during the final inspection. Should any defects as listed during the first delivery inspection be found not to have been corrected then the Employer's Representative will terminate that inspection and request that an additional final inspection be arranged by the Sub-Contractor.

The Sub-Contractor shall advise the Engineer in writing of all results and furnish copies of all certificates. The Sub-Contractor shall replace any portion of the installation if it does not meet with the requirements of the Regulations of this specification, as may be found by test or inspection. Such replacement shall be done at his own cost.

2.6 ACCEPTANCE TESTS

The Sub-Contractor will conduct tests to establish the correct running of appliances without load. Test runs will be carried out in the presence of the Employer's Representative to establish whether the plant meets the stipulated requirements.

Provided that the plant operates satisfactorily and is safe for use, the plant will be Taken Over. This Take-Over shall not be an admission that the plant is complete in every respect nor that the plant meets the Specification requirements. Acceptance of the plant will be subject to a final test run under actual operating conditions.

2.7 MAINTAINABILITY

All equipment shall be designed and installed for ease of operation and Maintenance to ensure operating time efficiencies stated in the specification are achieved and Maintained throughout the lifetime of the equipment.

Materials of construction and finishes shall be selected to withstand all environmental exposure conditions internal and external.

2.8 MARKING, PACKING AND SHIPPING

All plant, equipment, sub-assemblies and packing cases shall be suitably marked and labelled to ensure ease of storage, retrieval, unpacking and assembly on site.

Packaging must be adequate to prevent damage during transport and handling.

2.9 DELIVERIES TO SITE AND OFFLOADING

The Sub-Contractor shall have a responsible representative on site to supervise and arrange offloading of plant or materials. The Sub-Contractor shall supply his own labour and equipment necessary for the offloading and arrange for storage and safekeeping.

The Sub-Contractor shall have a responsible representative on site to supervise and arrange offloading of plant or materials. The Sub-Contractor shall supply his own labour and equipment necessary for offloading and arrange for storage and safekeeping.

2.10 QUALITY CONTROL

The Sub-Contractor shall ensure that a Quality Control System is implemented in accordance with the appropriate sections of ISO 9000.

2.11 INTERCHANGEABILITY OF EQUIPMENT

All material and fittings must be suitable for 415/240VAC + 5% (where applicable) supply voltage, 50 Hz supply frequency and must be approved by the Engineer.

2.12 SUPERVISION & DETAILED PLANNING

The work shall at all times, for the duration of the contract be carried out under the supervision of a skilled and competent representative of the Sub-Contractor, who will be able and authorised to receive and carry out instructions on behalf of the Sub-Contractor. A sufficient number of workmen shall be employed at all times to ensure satisfactory progress of the work.

2.13 GENERAL

The materials shall be new and the best of their respective kinds.

Where proprietary materials are specified, the Sub-Contractor may propose alternatives for the consideration of the Engineer, but the written approval of the Engineer must be obtained prior to the use of such an alternative.

The Sub-Contractor shall be responsible for and shall replace or make good at his own expense, any materials lost or damaged during the whole construction period until the official handing over of the works (and keys) to the Employer or the Employer’s representative.

2.14 GENERAL TECHNICAL SPECIFICATION

2.14.1 Trenching, Excavation and Compaction

2.14.1.1 General

The Contractor shall allow for all excavation and back-filling of cable trenches and holes for planting of poles unless this is stated to be done by others elsewhere in this Specification. In this case the Contractor shall provide the trenching contractor

with details of his requirements in this regard prior to work being commenced and shall be responsible for ensuring that these requirements are met. He shall also be responsible for ensuring that any trenches opened by him or for him do not constitute a hazard to the public. Where necessary he shall provide barriers and warning lights at night, or any other protection of trenches or excavations as required by the Engineer or any statutory or local Authority requirements.

The Contractor shall be responsible for leaving all areas affected by cable trenches, holes in the ground, and any other work done by him or on his behalf, in a clean and tidy state, and for making good all tarmacadam, concrete, paved or grassed surfaces.

It will be the Contractor's responsibility to make good any subsidence that may occur within six months of back-filling trenches, and, in the case of tarred-surfaces, to remove and re-tar with new material.

2.14.1.2 Routing

The routes for the underground cables are shown on the drawings. Any proposed variation of these routes by the Contractor, shall be approved by the Engineer or Clerk of Works before trenching is done.

It shall be the Contractor's responsibility to ensure that the routes of the cables are correct. Where the Contractor is in any doubt regarding peg positions, he shall, after having obtained the approval of the Engineer, employ the services of a registered Surveyor to obtain the correct locations. Re-imbursement for the cost of such services will, subject to granting of approval, be made from the Provisional Sum included for this purpose. Any major deviation considered necessary must be approved by the Engineer. The Employer will make no payment for claims for extra work arising out of the cable trenches being in the wrong place.

Routes shall run generally in road reserves parallel with and 1,0m from plot boundaries. Where no road exists or is not indicated, the route shall run in open ground adjacent to the plots and 1,0m from the plot boundaries.

2.14.1.3 Trenching and Excavation by Others

The Contractor is to co-operate closely with the trenching contractor at all times and is required to be in attendance during backfilling of all trenches, etc., to ensure that cables are not damaged in any way and that poles are correctly aligned.

2.14.1.4 Type of Material

Unless otherwise specified elsewhere in this Specification or Schedule of Quantities, Tenderers shall allow for excavating cable trenches and holes in soft soil.

"Soft soil” shall mean ground that can be removed by hand and includes loose gravel, clay, made-up ground, loose or soft shale, loose ouklip, and boulders less than 75mm in diameter.

2.14.1.5 Verification of Excavation Claims

Notwithstanding any Provisional Amounts for excavation in rock included in the Schedule of Quantities, payment will only be authorised for excavation in ground other than soft soil upon submission of documentary proof of such excavation made and signed as correct at the time trenches or holes were excavated.

It is essential that, in all cases where rock has to be excavated, or where poles, etc., have to be stabilised with concrete or by other means, in loose sand or in soft or waterlogged ground or where substitution of the excavated material is necessary for backfilling, that the Engineer or Clerk of Works be notified before such excavation work is back-filled. This is for the purpose of having the soil conditions encountered noted and confirmed in writing.

The amounts and type of rock encountered shall be measured by the Contractor in the presence of the Engineer or Clerk of Works. This information, together with the date and locality, shall be entered by the Contractor in a suitable triplicate book furnished by him. These entries shall be signed by the above parties. The original sheet shall be submitted to the Engineer and the duplicate copy shall be attached, by the Contractor, to his monthly invoice.

2.14.1.6 Precaution regarding other Services

The Contractor shall exercise extreme caution in his work to avoid damage to existing underground services. Certain services may be indicated on the drawings, but it is not to be assumed that these are the only services nor that their indicated position is entirely accurate. Such information is given as a guide only and does not negate the above responsibility. All excavation in the vicinity of other services must be-undertaken by hand.

Excavation may proceed only once the position of underground services, as far as practically possible, has been located. If possible, electrical services should be disconnected, isolated and marked with warning signs at the applicable switchgear that work is in progress.

Once services have been located, they must be clearly marked as follows:

- On surfaced areas: paint or waterproof crayon.
- On unsurfaced areas: wooden pegs (no steel spikes may be used.)

Trial holes must be dug first using spades and shovels. Excavation must be alongside cables rather than above them, to allow final exposure of the services by horizontal digging rather than above them. Picks may be used only if the soil material is hard to break up, not in soft clay or soils close to the surfaces. Where practically possible, power tools should be avoided to within 500mm of the located line of service. Power tools must not be used above cables. Hand tools should preferably be insulated with wooden handles and power tools with non-conductive material grips to avoid the risk of electrocution.

During excavation, checks must be made for services at regular intervals using the locator until it is exposed. Excavation must continue with care and proper

supervision until the entire service in the applicable area is exposed to allow for the burial of new services.

Mechanical excavations should be used only once the supervisor is satisfied that there are no existing services in the planned path of excavation. The supervisor must plan and peg positions beyond which the operator may not excavate, and where only power tools and hand tools may be used.

Should a cable be struck by a mechanical excavator, the operator must immediately move the bucket away from the point of damage and stop the machine. The supervisor must assess the damage and then take appropriate action to render the area safe before excavation can proceed.

2.14.1.7 Compaction

Particular care shall be taken in compacting pole holes, trenches crossing roads and those crossing or running under or within 1,0m of paved or tarred sidewalks. In trenches, the backfill shall be replaced in 150mm layers and four to six passes with a vibrating pan compactor shall be made per layer. Around poles, a jumping jack shall be used on each 150mm layer. When clay is encountered, the Engineer should be advised and may instruct the Contractor to remove all such excavated material and replace it with more suitable material, which shall then be compacted as above. Where material is too wet for proper compaction, it should be dried out and if too dry, shall be dampened. When rain is likely to occur, all excavated material shall be suitably protected to prevent the necessity for later drying out.

In the case of road crossings, the excavated base and sub-base material shall be mixed and replaced up to the top level of the original sub-base, New material equal in composition to the original base course shall be supplied, this material being used for the full depth of the base course layer.

The degree of compaction required shall be field densities of 95% in respect of poles and road crossings and 90% in respect of sidewalks, of the Modified AASHO density, as measured by the Sand Replacement Method described in the "Standard Method of Testing Materials" issued by the Division of National Roads, Department of Transport, Private Bag 193, Pretoria. The Engineer will, if the compaction is in doubt, arrange to have it independently tested and should the compaction prove to be below standard, the cost of the test will be debited to the Contractor, who will be required, at his own expense, to open and re-fill the trench or pole hole to obtain the specified compaction value.

In all other areas, backfill shall be replaced in 150mm layers and shall be hand tamped, the remaining material being heaped over the trench for later settlement.

2.14.1.8 Sleeves

Sleeves for cables shall be either PVC with single socket joints complying with SABS 791 (heavy duty) or fibre cement complying with SABS 1223 in the case of 50mm and 100mm sleeves (in compliance with SABS 0198: Part VIII) or with SABS 819 for larger sleeves, the sizes being as indicated on the drawings. Sleeves shall be nominal 110mm diameter unless otherwise specified. Pitch fibre sleeves shall NOT be used.

The sleeves shall extend at least 1,0m beyond each side of a road crossing and shall be effectively sealed at the ends. Each sleeve shall be provided with a draw-wire. At least one spare sleeve shall be provided at each crossing.

All sleeves shall be laid in accordance with SABS 1200 (LC) and at a depth of 900mm unless otherwise indicated. The radius of the bends used in the sleeves shall not be less than six times the diameter of the sleeve, and the sleeve not be less than twice the cable diameter unless otherwise specified.

Sleeves shall be laid on a 100mm compacted layer of selected bedding material or, if this is not available, on a 100mm sand bedding. The cover layer shall be hand compacted completely around the sleeves and to a cover of 150mm above the top of them. The sleeves shall be supported along their entire length by the bedding. A further 100mn layer of selected bedding material shall be added, and this shall be compacted using four to six passes of a vibration pan compactor. Thereafter, the trench shall be back-filled and compacted as specified in the sub-Clause "Compaction" elsewhere in this Specification.

Both ends of all sleeved crossings shall be marked by means of cable markers as elsewhere specified, labelled "cable sleeve".

The Contractor shall make all necessary arrangements with the appropriate Authorities for closing sidewalks and/or half the roadway at a time, and he shall comply fully with any statutory requirement applicable and any requirements the Authorities deem necessary. The surfaces shall be made good to the satisfaction of the authorities and the Engineer, but where tarring or paving is to be laid or re-laid, this shall not be done until the Engineer has given the necessary approval.

Where the HV or main LV cables cross over or pass under other services such as water or drainpipes, they shall be run in sleeves. Where these crossings present a hazard to the cable, the Contractor shall draw the attention of the Engineer to any such crossing requiring special attention.

All sleeves for Telkom cables will be 110mm diameter pitch fibre similar to Santar, supplied by the Regional Engineer, unless otherwise specified. These sleeves are to be laid under this Contract and must be kept at a minimum of 0,6m horizontally from and 0,3m vertically above any power cable sleeve. They are to be laid at a depth of 800mm and one end is to be provided with a marker labelled "Telkom".

Where cable enters sleeves in buildings, the ends shall be sealed with expanding foam to prevent moisture ingress.

2.14.2 Cables

2.14.2.1 Description

PVC insulated cables for LV shall be to SABS 1507 and shall consist of PVC insulated conductors, PVC bedding, galvanized steel wire armouring and PVC sheath.

The abbreviation for this type of cable is PVC.

Service cables may be multicore PVC insulated and wire armoured, and PVC served (PVC), concentric neutral or "Airdac" as specified elsewhere in this Specification.

The sizes indicated are for cables with copper conductors unless otherwise specified. For LV systems aluminium conductor cables may be offered as an alternative if a price advantage can be shown. In such cases both the resistance and current carrying capacity of the aluminium cables offered must compare suitably with the sizes of copper conductor indicated. Where cables offered are other than those specified, Scheduled Rates for the supplying, laying, jointing and termination of the cable shall be entered in "Departures from the Specification". The Contractor will be responsible for advising equipment suppliers of the type of cable termination required if a cable other than that specified is accepted.

2.14.2.2 Cable Lengths

All scheduled cable lengths are for tendering purposes only and the Contractor shall measure the actual lengths required before ordering.

The length of all cables will be re-measured after installation and the lengths indicated in the Bill Schedule of Quantities will be adjusted accordingly. The Contractor will be paid for the actual lengths measured on site and any allowance for snaking, joints or ends must be incorporated in the unit price.

2.14.2.3 Handling of Cables

Particular care shall be taken in handling drums of cable. Cable drums shall not be dropped or allowed to roll unchecked. The drums shall, under no circumstances, be rolled in any direction other than that indicated by arrows thereon.

When running cable off a drum it shall be properly and securely mounted so as to rotate without difficulty and the spindle supporting it shall be straight, horizontal, supported at both ends and of adequate strength. Cable shall only be removed from the drum by rotating the drum. The inner end of the cable shall be released before running any cable off the drum.

Care is to be taken to ensure that each length of cable is run off the drum sequentially so that a crossed core situation does not arise at joints.

No cable shall be bent to a radius less than 12 times the overall diameter of the cable, Bending or straightening shall be done slowly.

2.14.2.4 Cables fixed to Surface

Where cables enter flush boards from cable sleeves, the sleeve shall turn up to floor level and a duct shall be forced in the wall to accommodate the cable. Care shall be taken to ensure that the bending tolerance of the cable is not exceeded in drawing the cable into the sleeve. The duct shall be of sufficient size to accommodate the cables. The edges of the duct are to be lined with timber battens

to which a bevel edged metal cover is to be screwed, using countersunk headed screws and cup washers.

Wherever cable saddles or any other items are to be fixed to structural components, the use of dry plugs of wood will not be permitted. 'Rawl plugs' or other plugs to approval only shall be used. Surface mounted cable protection pipes shall be galvanized and shall be fixed with saddles of 32mm x 3mm galvanized strap bolted to the wall using bolts grouted in, 'Rawl bolts' or similar. All cables rising on the outside of buildings or on poles shall be protected by such pipes to a height of 2,0m above ground level. Where a cable is installed fixed to a pole, it shall be attached to the pole using stainless steel "Bandit" strap or equal. Care shall be taken to ensure that the straps are tightened correctly and that they do not distort or indent the cable sheath.

2.14.2.5 Cables laid in Trenches

HV cables shall generally be laid 1000mm and LV cables at 600mm below ground level. Where two HV cables are run in the same trench, they shall be laid a minimum of 300mm apart with separate cable slabs over each cable. Where HV and LV cables are laid in the same trench, the HV cable shall be located on the roadside and the LV cables on the plot side of the trench. A horizontal distance of not less than 400mm shall be maintained between the cables of different voltage groups. Where several LV cables are run in the same trench, they shall be laid with a minimum separation of 100mm. This applies to feeder cables only and not street lighting and service cables which shall be only 25mm apart. Cables shall not cross each other.

Where cables run across even parallel to lateral boundaries, they shall be located 1,0m from the boundary at a depth of 1,0m. If so specified they shall be run in sleeves, otherwise both HV and LV cables shall be protected by cable slabs and a PVC sheet marker laid 300mm, above them.

The trench bottom shall be cleared of all sharp or protruding stones. The trench is then to be refilled with 150mm of soft material and compacted. A further layer of soft material shall be installed after the cables are laid to provide 200mm cover for the cable when compacted. Protective cable slabs a minimum of 50mm thick x 230mm wide shall then be laid in the case of HV cables, and PVC sheet cable marker strip 450mm wide with indelibly printed warnings every 150mm along its length, in the case of LV cables. In cases where HV and LV cables run in the same trench, 100mm of soft bedding for the LV cables shall be situated above the protective cable slabs. Where LV service cables or street lighting cables only are installed, a clean trench bottom and soft material back-fill only is required, and no PVC sheet marker.

The soft material described above may be either sand or back-fill material sifted through a 3,0mm mesh grid. Where the bottom of the trench consists of only soft sandy material, the bedding underneath the cable shall be omitted and the cable shall be laid on the trench bottom at the correct depth. Permission must be obtained from the Clerk of Works or the Engineer for the cable bedding to be omitted in such instances. Where sand must be brought to site, the quantity must be measured and confirmed by the Engineer or Clerk of Works.

The balance of the trench is to be back-filled with excavated material from which all stones, etc. greater than 100mm in size have been extracted. All such extracted material is to be removed from site.

Cable route markers shall be provided for all HV and main LV feeder cables at road, culvert and Telkom cable crossings, at all changes of direction, at joints and at intervals not exceeding 60 metres along the straight. Cable route markers shall comprise concrete blocks in the shape of truncated pyramids 300mm high, 150mm x 150mm at the top and 225mm x 225mm at the base. An aluminium plate 3,0mm thick minimum, with four rods 75mm minimum welded to it on the underside, shall be cast into the top of the concrete block, and the plate shall have stamped on it the cable data and direction arrows, and at a crossing, the crossing shall be indicated.

The cable route markers shall be placed over the cable, in the trench way, and shall protrude 25mm above the finished ground level but not where they are likely to cause an obstruction or be in the way of moving traffic. Joint markers shall indicate as such. The Contractor shall ensure that the ground under and around the cable marker is properly compacted.

2.14.2.6 Laying of Cables with other Services

Where cables are laid in trenches containing water and other pipes, etc., the Contractor shall arrange with the Civil Engineering Contractor and Engineer, to lay the electrical cables along one edge of the trench with the other services occupying the other edge. The cables shall be laid not less than 600mm from such service unless otherwise approved by the Engineer.

At road and services crossings, sleeves as described elsewhere herein shall be provided, one for each HV cable and a separate sleeve for other cables, unless otherwise indicated on the drawings.

At Telkom cable crossings, power cables shall cross 300mm below and at right angles to all such cables or sleeves for future cables. The power cables shall be enclosed in asbestos cement split sleeves with cable slabs over, both of which shall extend 1,0m either side of the crossing. The two sections shall be firmly fastened together with robust stainless-steel straps. The full length of all such sleeves shall be covered by cable slabs installed 150mm above the sleeve. No power cable running parallel with a Telkom cable shall be laid within a distance of 1,0m measured horizontally from the Telkom cable. Wherever existing buried Telkom cables are encountered, strict precautions and care shall be taken and close supervision given. Any damage to, or disturbance of Telkom cables whatsoever shall be immediately reported and confirmed in writing to the Engineer.

2.14.3 Cable Joints and Terminations

2.14.3.1 General

Cable jointing and termination shall be carried out by a qualified cable jointer using only approved standard methods for the particular type of cable. Proof of his training may be required.

Joints in all cables shall only be made at full drum length intervals, but where necessary and when approved by the Engineer cable through joints may be used in other approved positions.

Where a cable has steel wire armouring all strands of armouring shall be through jointed.

Cable connections shall be made by means of crimped or sweated lugs, firmly bolted, one plain and one lock washer being placed under the nut, so that the plain washer is against the lug and there shall be no washer between the lug and the terminal. A plain washer is also required under the bolt head. Alternatively, sweated stems fitting into clamp connections will be acceptable.

Crimped lugs up to 70mm² shall be fitted using manual tools and hydraulic tools from this size upwards. Approved tools are to be used in both cases. An hydraulic tool is to be used on all sizes of aluminium cable. Where a single point hydraulic crimping tool is used, the lug shall be crimped in three places. Where a hexagonal die is used, this shall extend the full length of the lug.

Where aluminium cored cables are to be connected to circuit breakers, the aluminium cable lug shall be bolted to a copper tag or tail which is to be connected to the circuit breaker. The Contractor shall ensure that sufficient Denzel paste is installed on the faces of the lugs.
Where an aluminium cable is to connect to copper, the lug shall be a bi-metal type lug with a copper spade and an aluminium ferrule friction welded to the spade.

Cable connections shall be made using brass bolts, nuts and washers, together with a star lock washer, on all kiosks, fused feeder panels and mini-subs and with cadmium plated steel bolts and nuts on all indoor equipment. All bolted joints shall be taped with self-vulcanising (not adhesive) tape.

Where cable connections are required to the HV and LV terminals of transformers, these shall be made off as follows:

- Red Phase to Terminal A
- White Phase to Terminal B
- Blue Phase to Terminal C.

All transformer connections shall be kept in strict phase rotation and where two or more units are to operate in parallel, the respective connections are to be checked for phase rotation and polarity. In the case of cable terminations to transformer bushings the cable itself shall be clamped substantially to a post adjacent to the transformer, connections to the bushings being puttied and taped.

All connections are to be colour coded.

2.14.3.2 LV Cable Terminations

PVC cables shall be made off using adjustable mechanical glands. Care shall be taken to ensure that armour wires are correctly seated in the gland and that all parts are properly tightened. Outdoors, in damp situations and in all mini-subs and kiosks, neoprene waterproofing shrouds are to be fitted over all glands.

Where cable connections from mini-subs and kiosks to consumers and street lighting are excluded from this Contract, the Contractor shall, nevertheless, ensure that sufficient space is left on the gland plate for the future cables.

Wherever PVC cables are terminated to overhead lines a suitable moulded heat shrinkable glove to affect a watertight seal at the crotch shall be used, in accordance with the manufacturer's instructions. Alternatively, a PVC cable cap may be used.

2.14.4 Distribution Box

The new Distribution box shall be of polyester or polycarbonate type in electric orange colour. It shall be sized such that it has 25% spare capacity for additional circuits.

The distribution box shall be mounted square 1.2m above finished floor level where indicated on the floorplan.

Moulded case circuit breakers shall comply with SABS 156 with time delay tripping on low overloads and high-speed tripping on short circuit. Except where larger rupturing capacity MCBs are elsewhere specified, these shall be Class 6kA 240V or 415V, as applicable, and where various current and breaking capacities are required, all MCBs are to be of one size throughout the installation. All MCBs are to carry the SABS Mark to ensure that they comply with Compulsory Specification VC 8036.

The Engineer will not accept a mixture of circuit breakers from various Manufacturers to meet the various duties required.

2.14.5 Surge Arrestors

Where specified, panels shall be equipped with surge arrestors of approved manufacture and bearing the SANS mark. Surge arrestors shall be suitable to provide both lighting and voltage surge protection and have a minimum rating of 10kA.

The arrestors shall be mounted inside the panel on the incoming unit. The supply side connections shall be made to all three-phase busbars, whilst the earth side connections shall be made to the earth bar of the board.

2.14.6 Wiring in Conduit

PVC insulated wire to SABS 1507 and 1574 shall be used and shall be from full coils of fresh stocks delivered to site with the original packing or seals undisturbed.

Lighting circuits shall be wired with 1,5mm² and socket outlet circuits with 2,5mm² unless otherwise specified. All other circuits shall be wired with the sizes indicated or in accordance with the Wiring Code, as appropriate. All phase conductors shall be coloured red and neutral conductors black.

The ends of all wires, whether single or looped, which have to be connected to the connecting terminals of switches, plugs, holders, fittings and distribution boards, are to be tightly twisted together. Cutting away the wire strands will not be allowed.

The loop-in system is to be adopted throughout any conduit installation and joints will be permitted only in special circumstances and subject to the approval of the Engineer. Such joints shall be made only with approved connectors in approved boxes.

The circuit wiring for different services, e.g. lighting and power, shall be run in separate conduits.

Where switches fed from different phases are mounted adjacent, they must be mounted in separate boxes or a single box with a fixed metal barrier between each switch. Where such switches are on the same circuit, multiple switches in a single box shall be used.

Metal conduit shall be heavy gauge solid lap welded steel to SABS 1065, screwed or plain-end and black enamelled or galvanized, both as specified elsewhere in this Specification. All metallic conduits shall be manufactured from mild-steel with a minimum thickness of 1,6mm in respect of screwed and 0,9mm for plain-end conduit except that when used in concrete slabs, plain-end conduit shall have a minimum wall thickness of 1,2mm and when laid in screed on top of concrete slabs, 1,6mm.

Non-metallic conduit shall comply with to SABS 950. Installation of non-metallic conduit shall be in accordance with Amendment No.2 of SABS 950 Appendix C. Only plastic saddles and compatible fittings shall be used. Earth wires shall be installed with all non-metallic conduits.

All conduit fittings for steel conduit shall be malleable iron or pressed steel except for brass bushes. Plastic fittings shall be used with non-metallic conduit. Conduit fittings shall comply with SABS 950 or 1065 as appropriate. The use of inspection tees or elbow pieces and internally screwed solid bends will not be permitted. However, internally screwed solid bends for 40mm and 50mm dia. conduit may be accepted in certain circumstances if approved by the Engineer.

All conduits shall, wherever possible, be concealed by being cast in concrete slabs, chased in, built in or run in roof spaces. Where black enamel conduit is called for, this shall be substituted with galvanized when run in non-suspended floor slabs such as ground floor or basement floor slabs. When run in surface beds conduit is to be galvanized and is to be laid in concrete on the surface bed so that it is completely covered.

Conduit cast in concrete shall be fixed at intervals to the form work, if such form work is of wood or, if of steel plates, to the steel reinforcing. Where hollow tile slabs are being used in the structure, as indicated elsewhere in this Specification, back entry conduit boxes shall be used. All outlet boxes for lighting points shall be of the long spout, deep type. Where additional depth of box is required, standard conduit box extension rings, firmly screwed to the box, shall be used.

Where structural expansion joints occur, conduits shall, as far as possible, be laid to avoid crossing the joint. When crossings are unavoidable, the following

arrangement shall be made, from a draw box, or the nearest outlet within 4,0m of the joint, conduit of one size larger than necessary for the wire sizes, shall be run straight, and at right angles to the joint, finishing at the joint. Conduit of the required size shall then be passed into this from the other side of the joint, bushed inside the draw-box, but not mechanically connected otherwise. Care shall be taken to prevent concrete from entering the end of the larger conduit. The conduits approaching from both sides of the expansion joint shall be wrapped with two layers of corrugated cardboard from a point 1,0m from the joint. A bare earth wire of the same size as the wiring in the conduit shall be run from the draw box to the next outlet, connecting firmly and solidly to each box. Care shall be taken to exclude the ingress of dirt or moisture to partially completed runs, and all open ends shall be plugged temporarily while work is not actually in progress. The plug may consist of a conduit socket with brass ET plug or conduit fishtail, or purpose made tightly fitting plastic sealing caps. Wooden or paper plugs will not be acceptable.

The Sub-Contractor shall take all possible precautions during the construction Stages of the building to prevent damage to projecting conduits, etc. In vulnerable positions projecting conduits shall be painted in a bright colour or, if necessary, shielded by a large covering. A responsible workman shall always be present during casting of concrete containing conduit work to ensure that the conduit work is not disturbed by the casting or vibration of the concrete.

Conduit in false ceiling spaces shall be run surface. The conduit into the space shall either extend through the decking or shall be terminated in a back-entry box with a coupling inside the box to enable the conduit to be extended when shuttering is removed.

In roof spaces all conduit runs shall be parallel or at right angles to trusses and joists. Where conduits run along trusses and joints, they shall not be run or fixed on the top but on the side. Conduit shall lead into and out of back entry conduit boxes at all fitting positions. All such boxes shall be finished flush with the underside of the ceiling and the lighting fittings shall be screwed directly onto the box. Where necessary, an additional fitting and conduit box shall be provided.

At ceiling positions where conduit runs do not have to continue to the next truss (e.g. last point in a row), the conduit shall be extended beyond the box to the next truss. This conduit extension shall be plugged.

Where conduit is run on the surface, it shall be fixed with stand-off saddles; multiple spacer saddles being used for conduits run together, the maximum distance between the saddles shall not exceed 1,5m. Where a conduit box carries lighting fittings it shall be fixed within 100mm on either side of the box.

Where conduits must run adjacent to gas or cold-water pipes, communication or data circuits, they shall be prevented by spacing or other means from coming into contact with these other services under any condition.

Under canopies, outlets for future signs, etc., which have been terminated in round conduit boxes, are to be blanked off with 75mm dia. galvanized cover plates finished with a zinc plum bate primer. These are to be fitted prior to painting and are to be fixed using cheese-headed brass machine screws.

Where conduit enters boards, trays, etc., all burrs around holes shall be removed before insertion. Locknuts shall be used inside and outside, with female bushes inside. Couplings and male bushes shall not be used. The same arrangement shall be used wherever possible for entry into switch boxes, control gear, etc., provided with clearance holes. Where this arrangement does not allow sufficient wiring space, however, couplings and hexagonal male bushes may be used, but must be very tightly screwed up. In the case of multiple back entries into a conduit box, male bushes and couplings are to be used. Care must be exercised when laying conduit in the vicinity of distribution boards of any type to ensure that conduits radiate from these points in order. Under no circumstances are more than two conduits to cross at any point where cast in concrete and a space of at least 20mm must be left between all conduits both vertically and horizontally after emerging from the distribution point. Careful planning of conduit work can prevent a mass of conduit in the slab, and any re-arrangement necessary to provide an acceptable layout will be at the Sub-Contractor's own expense.

Drops to switch and other high-level outlets shall be from ceiling while conduit to low level outlets shall be run in the floor unless specified to the contrary. In basements and ground floor areas which are below natural ground level, all conduits to any type of outlet shall drop from ceiling level.

No draw boxes which are not, in themselves, outlets shall be permitted except with authority from the Engineer. Notwithstanding the Wiring Code, if it proves necessary to draw conductors round more than two 90□ bends, or the equivalent, or on very long straight runs, draw boxes are required. The maximum length of straight runs between draw boxes shall not exceed 20m. Such draw boxes shall be provided with oversize flat covers fitted flush with the ceiling, fixed with cheese-headed screws.

The Sub-Contractor is responsible for checking with the Building Sub-Contractor by reference to the drawings on site, of the positions where panelling, tiling, tile edging or dados, etc., may affect the exact positioning of outlets. No allowance for extras will be allowed if boxes must be moved to comply with the above unless the details are altered after completion of the conduit work. Exact positioning in general means centre outlets on panels, fitting box edges to tile edges, and dropping or raising switch points below or above dados as close to the specified position as possible. Where any doubt arises, the Engineer shall be consulted before installation of the outlet. The same requirement applies to the positioning of lighting outlets in false ceilings, with particular regard to fixing fittings to correspond to ceiling panel modules. Ceiling light points are normally either on a centreline between walls and/or beams or spaced evenly with half a unit between wall or beam and the first point. Where outlet positions deviate from this scheme the scaled dimensions to the centre of the symbol are to be taken as the centre of the outlet.

All setting of conduit shall be done with approved tools. No kinks will be accepted. Where necessary, boxes with special configurations shall be used to avoid the necessity for too many sets in conduit work.

The conduit shall be run or erected as far as possible in straight or symmetrical lines, with easy sets or bends. Care shall be taken when installing conduit that cut ends are completely free from burrs and sharp edges which might damage the conductors. All open ends shall be fitted with brass bushes. Composition bushes

will not be accepted. All bushes are to be fitted prior to wiring. All running joints shall be fitted with lock-nuts, and lock-nuts shall be provided wherever necessary to ensure that all conduit joints in the installation are tight.

Where flexible conduit connections are required, only "Kopex" or "Adapterflex" flexible conduit or similar approved shall be used.

Where conduit only is required, draw-wires shall be left in each such conduit, irrespective of the service for which it is required. Draw-wires shall be minimum 1,6mm dia. hot dipped galvanized steel.

Conduit run on the surface within ducts shall be painted an approved colour under this Contract. Conduit in false ceilings and roof spaces is not to be painted, except as hereunder. Painting shall be carried out by a qualified painter. Any exposed screw threads or areas where the galvanising or enamel has been damaged shall be painted after erection with two coats of anti-corrosive paint, and, where installed in concrete, before casting, unless otherwise approved by the Engineer.

The Sub-Contractor must ensure that, prior to completion, all openings left at the conduit exit from switch rooms or between floors in rising ducts, are made good.

2.14.7 Isolators and Socket Outlets

Isolators shall have a current rating withstand capability of 20A or more according to application.

All socket outlets shall have a full load current withstand capability of 16A.

All wall-mounted isolators and socket outlets shall be flush mounted in the wall, and within 500mm of the fixed appliance served (for new socket outlets).

2.14.8 Light Fittings

Allowance shall be made for the supply and installation of light fittings as detailed in the Bills of Quantities.

Fittings shall be directly fixed to ceiling or structure in addition to being fixed to the conduit box.

All conduit to be PVC and chased into walls. Strictly no surface-mounted conduit is permitted. For exterior bulkheads holes shall be drilled through double-brick walls for conduit to the bulkheads. Pricing for installation of bulkheads shall allow for this.

All exterior bulkheads shall be controlled by a daylight switch mounted in a discreet position.

2.14.9 Labels

The Sub-Contractor shall arrange for the labelling of all new circuits. Labelling shall be done by entering the circuit designation against the applicable number of the circuit breaker on the labelling card provided in the door pocket. Labelling shall be in clear, neat block letters in black ink.

2.14.10 Lightning Protection System

Aluminium rainwater downpipes shall be used as down conductors and connected to earth electrodes with PVC insulated Copper Conductor or Cladded Steel (CCS) conductor where specified in specific applications. CCS conductor is obtainable from any ARB wholesaler. For Type B earthing installation, the underground earthing conductor shall be bare copper conductor. All copper conductor to distribution boards shall be buried underground where possible (due to risk of copper theft.)

All down conductors shall be installed and securely connected to roof as follows:

1. From existing rainwater downpipes, using 8mm diameter galvanised wire with top securely connected to IBR sheeting or to 8mm diameter galvanised wire mesh on tiled roof, using stainless steel M10 lug connection with stainless steel washers and nuts.
2. Where there are no rainwater downpipes, PVC insulated Copper Conductor shall be used, sleeved in 20mm diameter PVC conduit secured to wall with galvanized steel saddles spaced at most 1m apart.

Connection of down conductor to earth shall be with stainless steel or brass U-bolt clamp securely connected to the earth rod using stainless steel and greased M16 bolts and nuts and washers after thoroughly cleaning conductor ends. Only aluminium or brass materials are permissible. Under no circumstances shall copper straps be used.

Copper cladded steel earth electrodes and Type J1 York boxes with test terminals shall be installed as per Lighting Protection Layout provided.

Earth resistance shall be tested according to the Slope method and resistance shall not be above 10Ω. Should this not be achieved, then additional earth electrodes shall be installed until a reading below 10Ω is achieved.

2.15 TECHNICAL STANDARDS

The entire Contract shall be carried out in accordance with the latest revision and amendments of the following:

- The Standard Regulations for the Wiring of Premises SANS 10142-1 of 2020, 3rd Edition
- The Occupational Health Safety Act No. 85 of 1993
- The Local Fire Office Regulations
- The Municipal by-laws and any special requirements of the local Supply Authorities of the area or district
- The National Building Regulations
- Earthing design and installations SANS 10199
- The protection of structures against lightning SANS 62305
- Interior lighting (artificial) SANS 10114 Part 1
- Exterior security lighting SANS 10389 Part 2.

No claims for extras in respect of failure by the Sub-Contractor to comply with any of the above regulations shall be considered.

Where conflict exists between any of the above regulations and the specifications, the said conflict must be referred to the Engineer in writing for his ruling.

In addition to the above, the Sub-Contractor is advised that only the highest standard of workmanship shall be accepted and that all materials supplied must be strictly in accordance with this specification. If workmanship and/or materials are not suitable, the Engineer will request that the work be repeated, or the materials returned until a satisfactory standard is achieved. No additional payment shall be made in respect of any remedial works.

2.16 SAFETY REQUIREMENTS

Without limiting the Sub-Contractor's obligation to abide by any safety measure and/or hygiene requirement for its personnel whether in terms of the OHS act or other applicable legislation, the Sub-Contractor shall:

Ensure that all personnel have had adequate and suitable training within limits of responsibility.

Provide its personnel with all protective clothing and equipment required for the duration of the contract, including the Defects Liability Period.

Ensure that the required protective clothing and equipment is suitable for the application; correctly worn, used and maintained; and replaced if lost or damaged.

During this contract, particular attention shall be paid to safe construction practices, including:

- All scaffolding used shall comply fully with the relevant legislation.
- All signage shall be correctly displayed and be in accordance with the relevant NOSA requirements.

3. PART 3 - SCHEDULE OF DRAWINGS AND DOCUMENTS

3.1 Drawings provided with Tender Document

Electrical Drawings are provided with this Contract Document. Tenderers should ensure that they are in possession of all relevant Drawings from the Architect.

Description	Size	Drawing Number
Bashee Court - Electrical		
Bashee Court Small Power & Lighting	A1	P10669-3-EED-001
Bashee Court SLD First Floor DB1 and Flatlet DB2	A3	P10669-3-ESL-001
Bashee Court Exterior Lighting Layout	A0	P10669-3-EED-005
Bashee Court Lightning Protection System	A0	P10669-3-ELP-001
Msintsi Court - Electrical		
Msintsi Court Small Power & Lighting	A1	P10669-3-EED-002
Msintsi Court Unit SLD	A3	P10669-3-ESL-002
Msintsi Court Exterior Lighting Layout	A0	P10669-3-EED-006
Kyalami Flats - Electrical		
Kyalami Flats Ground & First Floor Small Power & Lighting	A0	P10669-3-EED-003
Kyalami Flats Second Floor Small Power & Lighting	A1	P10669-3-EED-004
Kyalami Flats DB1, DB2, DB3 & Unit SLD	A3	P10669-3-ESL-003
Kyalami Flats Lightning Protection System	A0	P10669-3-ELP-002

3.2 Drawings and Documents to be supplied by Tenderer

No drawings are required as part of the Tender. Workshop Drawings for all manufactured distribution boxes shall be required for approval by the Engineer once the Tenderer is appointed.

4. PART 4 - PRICE BREAKDOWN

4.1 CONTRACT SUM INCLUSIONS

The contract sum includes all the Sub-Contractor's design, administration, supervision, materials, plant, equipment, auxiliary costs, duties, and profit. Similarly, the unit rates for extra work shall also include all the above costs. This includes, but is not limited to, any error or omission by Sub-Contractor in estimating the cost of Works; any additional compensation for overtime, even when such overtime is required to maintain or recover progress on instruction of the Employer's Representative; and any premium to secure deliveries of construction tools, equipment and materials.

Additionally, the contract sum shall include the Main Contractor's markup, as well as any other costs that the Main Contractor deems to be applicable to this Sub-Contract.

4.2 BILLS OF QUANTITIES – GENERAL

a) An item against which no price is entered will be considered to be covered by the other prices or rates in the Bills of Quantities.

b) Rates are inclusive of waste. The Employer shall not be liable for any costs due to over or under ordering.

c) The rates inserted in the Bills of Quantities are fully inclusive prices for the Works. Such rates include all risks, liabilities and obligations set forth or implied in the Contract.

d) The prices for articles described by trade names or catalogue references must be based on the type and manufacture specified in these Bills of Quantities. Where articles other than of the manufacturer specified are used, an adjustment of the prices will be made, and Variation Orders issued to cover these adjustments. Substitution will be strictly subject to the Employers Representative's approval.

e) The description of each item shall, unless otherwise stated herein, be held to include making, conveying and delivering, unloading, storing unpacking, hoisting, setting, fitting and fixing in position, cutting and waste, patterns, models and templates, plant, temporary works, return of packings, establishment charges, profit and all other obligations arising out of the Conditions of Contract.

f) No alteration, erasure or addition is to be made in the text of the Bills of Quantities. Should any alteration, erasure or addition be made, it will not be recognised but the original wording of the Bills of Quantities will be adhered to.

5. PART 5 - SCHEDULES

5.1 KEY PERSONNEL

The details below refer to the **Contract Engineer** who will be authorised to act as the Sub-Contractor's Representative.

FULL NAME:_____ AGE:_____

DURATION OF EMPLOYMENT WITH SUB-CONTRACTOR: _____

FULL TIME ON THIS CONTRACT: YES/NO

ATTEND ALL REGULAR SITE MEETINGS: YES/NO

QUALIFICATIONS OF CONTRACT ENGINEER:_____

DETAILS OF RELEVANT EXPERIENCE OF CONTRACT ENGINEER - PAST PROJECTS

YEAR	CONTRACT	CLIENT COMPANY	CLIENT NAME	TEL. NO.

The details below refer to the **Construction Manager/Site Supervisor who will be appointed and will be authorised to act as the Sub-Contractor's Representative on Site**.

FULL NAME:_____ AGE:_____

DURATION OF EMPLOYMENT WITH SUB-CONTRACTOR:

FULL TIME ON THIS CONTRACT: YES/NO

ATTEND ALL REGULAR SITE MEETINGS: YES/NO

QUALIFICATIONS OF SITE SUPERVISOR: _____

DETAILS OF RELEVANT EXPERIENCE OF SITE SUPERVISOR - PAST PROJECTS

YEAR	CONTRACT	CLIENT COMPANY	CLIENT NAME	TEL. NO.

_____ _____

DATE SIGNATURE

5.2 LIST OF SUB-CONTRACTORS AND SUPPLIERS

The schedule below shall indicate the names and addresses of Sub-Contractors and suppliers which are to be employed in connection with this contract. If no Sub-Contractors or suppliers will be employed, the schedule below shall be marked NIL and signed.

ITEM	NAME OF SUPPLIER	ESTIMATED VALUE

DATE SIGNATURE

ECDC CLUSTER F1 **BILL OF QUANTITIES**
BASHEE COURT - NEW UNITS **20 UNITS**
SECTION 1: PRELIMINARY & GENERAL

ITEM No	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1.1	**FIXED CHARGED ITEMS**				
1.1.1	Contractual Requirements	Sum	1		
1.1.2	Facilities including offices, stores, workshops, labs, ablution and latrines, tools and equipment, water and electricity supply, access and parking	Sum	1		
1.2	**TIME RELATED ITEMS**				
1.2.1	Supervision	Sum	1		
1.2.2	Company and head office overheads	Sum	1		
1.3	**OCCUPATIONAL HEALTH AND SAFETY ACT COMPLIANCE**				
1.3.1	All obligations to comply with the OHS Act of 1993	Sum	1		
	SECTION 1: P&Gs - Carried Forward to Summary				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
BASHEE COURT - NEW UNITS **8 UNITS**
SECTION 2: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		CARRIED FORWARD				
		BROUGHT FORWARD				
2.1		**BULK METERING AND DISTRIBUTION BOARDS**				
		Install in existing 20-Way Kiosk, including fixtures				
2.1.1		Class 1 DEHN 40kA Surge Arrestors (phases and neutral)	Set	1		
2.1.2		Test and commission Metering Kiosk	No	1		
2.1.3		Supply and install Eskom padlock with three duplicate keys	No	1		
2.1.4		Supply a single phase 60A 44-Way Recessed White powder-coated steel Distribution Box, rated 3kA, IP40, with the following components, including labels and label card:	No	8		
2.1.5		MCB - 60A, 2 pole	No	8		
2.1.6		MCB - 50A, 2 pole	No	8		
2.1.7		MCB - 30A, 1 pole	No	16		
2.1.8		MCB - 20A, 1 pole	No	24		
2.1.9		MCB - 15A, 1 pole	No	24		
2.1.10		Earth Leakage Unit - 60A, 2 pole	No	8		
2.1.11		Battery-powered timer for geyser	No	8		
2.1.12		Install, test and commission DB	No	8		
2.1.13		Supply a single phase 60A 16-Way Recessed White powder-coated steel Distribution Box, rated 3kA, IP40 , with the following components, including labels and label card:	No	8		
2.1.14		MCB - 60A, 2 pole	No	8		
2.1.15		MCB - 20A, 1 pole	No	16		
2.1.16		MCB - 15A, 1 pole	No	8		
2.1.17		Earth Leakage Unit - 60A, 2 pole	No	8		
2.1.18		Class 2 DEHN 25kA Surge Arrestors (phase and neutral)	Set	8		
2.1.19		Install, test and commission DB	No	8		
2.2		**REMOVE EXISTING FITTINGS AND MISCELLANEOUS**				
2.2.1		Remove and dispose of existing flush-mounted DB box in kitchen	No	8		
2.2.2		Arrange access to kiosk for connection of main supply cable	No	8		
2.3		**CIVILS WORKS**				
		Lift grass, excavate, backfill and restore to original state with compacted soil to density 93% MOD AASHTO 450mm wide and 650mm deep trench in the following types of soil:				
2.3.1		Soft Soil	m3	39.6		RATE ONLY
2.3.2		Medium soil	m3	39.6		
2.3.3		Rock	m3	39.6		RATE ONLY
2.4		**CABLING AND WIRING**				
		Supply, install, test and commission PVC 3c Insulated Armoured 600/1000V Copper Cable 10mm²				
2.4.1		Supply	m	240		
2.4.2		Install	m	240		
		6mm²				
2.4.3		Supply	m	112		
2.4.4		Install	m	112		
		Supply and install Bare Copper Earth Wire 6mm²				
2.4.5		Supply	m	240		
2.4.6		Install	m	240		
		4mm²				
2.4.7		Supply	m	112		
2.4.8		Install	m	112		
		CARRIED FORWARD				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
BASHEE COURT - NEW UNITS **8 UNITS**
SECTION 2: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		BROUGHT FORWARD				
		2.5mm² BCEW				
2.4.9		Supply	m	160		
2.4.10		Install	m	160		
		1.5mm² BCEW				
2.4.11		Supply	m	2000		
2.4.12		Install	m	2000		
		Supply and install Insulated Wiring 4mm² Black				
2.4.13		Supply	m	160		
2.4.14		Install	m	160		
		4mm² Red				
2.4.15		Supply	m	160		
2.4.16		Install	m	160		
		2.5mm² Black				
2.4.17		Supply	m	800		
2.4.18		Install	m	800		
		2.5mm² Red				
2.4.19		Supply	m	1000		
2.4.20		Install	m	1000		
		1.5mm² Black				
2.4.21		Supply	m	1000		
2.4.22		Install	m	1000		
		1.5mm² Red				
2.4.23		Supply	m	1000		
2.4.24		Install	m	1000		
2.5		**CABLE TERMINATIONS**				
		Supply, install, test and commission PVC 3c Insulated Armoured 600/1000V Copper Cable 10mm²				
2.5.1		Supply	No	16		
2.5.2		Install	No	16		
		6mm²				
2.5.3		Supply	No	16		
2.5.4		Install	No	16		
		Supply, deliver, install and connect Bare Copper Earth terminations 6mm²				
2.5.5		Supply	No	16		
2.5.6		Install	No	16		
		4mm²				
2.5.7		Supply	No	16		
2.5.8		Install	No	16		
		2.5mm² BCEW				
2.5.9		Supply	No	56		
2.5.10		Install	No	56		
		1.5mm² BCEW				
2.5.11		Supply	No	606		
2.5.12		Install	No	606		
		Supply, deliver, install and connect Two Insulated cores (Black and Red) complete with compression gland 4 mm2				
2.5.13		Supply	No	48		
2.5.14		Install	No	48		
		CARRIED FORWARD				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
BASHEE COURT - NEW UNITS **8 UNITS**
SECTION 2: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		BROUGHT FORWARD				
		2.5 mm2				
2.5.15		Supply	No	600		
2.5.16		Install	No	600		
		1.5 mm2				
2.5.17		Supply	No	1600		
2.5.18		Install	No	1600		
2.6		**LUMINAIRES**				
		Supply, install and test on ceiling/wall including all fixings, brackets, supports, connectors, connections, tail leads and drivers. Type B Rubicon Mediterranean 80/10 Bulkhead 18W, 4000k, White				
2.6.1		Supply	No	136		
2.6.2		Install	No	136		
		Type C1 Rubicon Saxa 11/83/40/36 36W, 4000K, White				
2.6.3		Supply	No	16		
2.6.4		Install	No	16		
		Type C2 Rubicon Saxa 11/83/40/54 54W, 4000K, White				
2.6.5		Supply	No	8		
2.6.6		Install	No	8		
		Type D1 Rubicon Saturn 15W 80/50/15 Bulkhead, 4000K, White				
2.6.7		Supply	No	38		
2.6.8		Install	No	38		
		Type D2 Rubicon Saturn 15W 80/50/15 Bulkhead, 4000K, White, with Built-In Daylight Switch				
2.6.9		Supply	No	39		
2.6.10		Install	No	39		
2.7		**SWITCHES AND OUTLETS**				
		10A, 1 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.1		Supply	No	64		
2.7.2		Install	No	64		
		10A, 2 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.3		Supply	No	32		
2.7.4		Install	No	32		
		10A, 3 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.5		Supply	No	32		
2.7.6		Install	No	32		
		10A, 1 Lever, 2 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.7		Supply	No	32		
2.7.8		Install	No	32		
		10A, 2 Lever, 1 Way and 2 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.9		Supply	No	32		
2.7.10		Install	No	32		
		10A, 3 Lever, 1 Way and 2 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.11		Supply	No	32		
2.7.12		Install	No	32		
		CARRIED FORWARD				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
BASHEE COURT - NEW UNITS **8 UNITS**
SECTION 2: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		BROUGHT FORWARD				
		45A 2-Pole Surface-Mounted Isolator Mounted In Ceiling Void for Geyser				
2.7.13		Supply	No	8		
2.7.14		Install	No	8		
		45A 2-Pole Flush-Mounted Isolator mounted 1400mm AFFL for Stove				
2.7.15		Supply	No	8		
2.7.16		Install	No	8		
		20A 2-Pole Surface-Mounted Isolator Mounted Next To 50l Geyser				
2.7.17		Supply	No	8		
2.7.18		Install	No	8		
		16A Normal and Euro Double Switched Socket outlet enclosed in EXISTING flush mounted metal box complete with white PVC cover and PVC screws or clipped PVC cover, 100mm x 100mm				
2.7.19		Supply	No	104		
2.7.20		Install	No	104		
		16A Normal and Euro Double Switched Socket outlet enclosed in NEW flush mounted metal box complete with white PVC cover and PVC screws or clipped PVC cover, 100mm x 100mm				
2.7.21		Supply	No	24		
2.7.22		Install	No	24		
2.8		**WIREWAYS AND TRUNKING**				
		Install 50mm PVC conduit cored through concrete slab and wall including bends, including making good of all damaged walls/concrete to install new cable from kitchen DB to flatlet DB				
2.8.1		Supply	m	160		
2.8.2		Install	m	160		
		20mm PVC conduit chased in wall, casted into concrete slab and/or installed in ceiling void including all fixtures, including making good of all walls/concrete/roofs damaged by chasing of conduit				
2.8.3		Supply	m	1400		
2.8.4		Install	m	1400		
		50mm Round PVC glandless conduit boxes complete with cover and couples for 2-, 3-, 4- or 5-way application				
2.8.5		Supply	No	120		
2.8.6		Install	No	120		
2.9		**TEST AND COMMISSION**				
2.9.1		Testing and commissioning of complete electrical installation and issuing of Certificate of Compliance	No	8		
2.10		**ADDITIONAL ELECTRICAL WORKS**				
2.10.1		Sum allowed to be utilized as instructed by electrical engineer	Sum	8	R 5 000	R 40 000
		SECTION 2: Building Services - Electrical - Carried Forward to Summary				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
BASHEE COURT - NEW UNITS **12 UNITS**
SECTION 3: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		CARRIED FORWARD				
		BROUGHT FORWARD				
3.1		**DISTRIBUTION BOARD**				
3.1.1		Supply a single phase 60A 44-Way Recessed White powder-coated steel Distribution Box, rated 3kA, IP40, with the following components, including labels and label card.	No	12		
3.1.2		MCB - 60A, 2 pole	No	12		
3.1.3		MCB - 50A, 2 pole	No	12		
3.1.4		MCB - 30A, 1 pole	No	24		
3.1.5		MCB - 20A, 1 pole	No	36		
3.1.6		MCB - 15A, 1 pole	No	36		
3.1.7		Earth Leakage Unit - 60A, 2 pole	No	12		
3.1.8		Battery-powered timer for geyser	No	12		
3.1.9		Install, test and commission DB	No	12		
3.1.10		Supply a single phase 60A 16-Way Recessed White powder-coated steel Distribution Box, rated 3kA, IP40 , with the following components, including labels and label card:	No	12		
3.1.11		MCB - 60A, 2 pole	No	12		
3.1.12		MCB - 20A, 1 pole	No	24		
3.1.13		MCB - 10A, 1 pole	No	12		
3.1.14		Earth Leakage Unit - 60A, 2 pole	No	12		
3.1.15		Install, test and commission DB	No	12		
3.2		**REMOVE EXISTING FITTINGS**				
3.2.1		Isolate, disconnect, remove and dispose of existing flush-mounted DB in kitchen	No	12		
3.2.2		Isolate, disconnect, remove and dispose of existing surface-mounted DB in flatlet	No	12		
3.2.3		Disconnect, remove and dispose of existing surface-mounted cable serving flatlet including all fixtures (cable to be used as draw-wire to install new cable in sleeve under kitchen)	No	12		
3.2.4		Remove and dispose of all existing light fittings	No	321		
3.2.5		Remove and dispose of all light switch covers and yokes	No	336		
3.2.6		Remove and dispose of all existing socket outlet covers including yoke	No	156		
3.2.7		Remove and dispose of 7.5m Wooden poles including streetlight fittings, safely terminate cables, backfill and compact soil to density 93% MOD AASHTO	No	2		
3.2.8		Remove and dispose of 3m Steel poles including post top fittings, safely terminate cables, backfill and compact soil to density 93% MOD AASHTO	No	3		
3.3		**CIVILS WORKS**				
		Lift grass, excavate, backfill and restore to original state with compacted soil to density 93% MOD AASHTO 450mm wide and 650mm deep trench in the following types of soil:				
3.3.1		Soft Soil	m3	20.3		RATE ONLY
3.3.2		Medium soil	m3	20.3		
3.3.3		Rock	m3	20.3		RATE ONLY
3.4		**CABLING AND WIRING**				
		Supply, install, test and commission PVC 3c Insulated Armoured 600/1000V Copper Cable 6mm²				
3.4.1		Supply	m	168		
3.4.2		Install	m	168		
		Supply and install Bare Copper Earth Wire 4mm²				
3.4.3		Supply	m	168		
3.4.4		Install	m	168		
		CARRIED FORWARD				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
BASHEE COURT - NEW UNITS **12 UNITS**
SECTION 3: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		BROUGHT FORWARD				
		2.5mm² BCEW				
3.4.5		Supply	m	240		
3.4.6		Install	m	240		
		1.5mm² BCEW				
3.4.7		Supply	m	480		
3.4.8		Install	m	480		
		Supply and install Insulated Wiring 4mm² Black				
3.4.9		Supply	m	240		
3.4.10		Install	m	240		
		4mm² Red				
3.4.11		Supply	m	240		
3.4.12		Install	m	240		
		2.5mm² Black				
3.4.13		Supply	m	240		
3.4.14		Install	m	240		
		2.5mm² Red				
3.4.15		Supply	m	240		
3.4.16		Install	m	240		
		1.5mm² Black				
3.4.17		Supply	m	240		
3.4.18		Install	m	240		
		1.5mm² Red				
3.4.19		Supply	m	240		
3.4.20		Install	m	240		
3.5		**CABLE TERMINATIONS**				
		Supply, install, test and commission PVC 3c Insulated Armoured 600/1000V Copper Cable 6mm²				
3.5.1		Supply	No	24		
3.5.2		Install	No	24		
		Supply, deliver, install and connect Bare Copper Earth terminations 4mm²				
3.5.3		Supply	No	24		
3.5.4		Install	No	24		
		2.5mm² BCEW				
3.5.5		Supply	No	84		
3.5.6		Install	No	84		
		1.5mm² BCEW				
3.5.7		Supply	No	909		
3.5.8		Install	No	909		
		Supply, deliver, install and connect Two Insulated cores (Black and Red) complete with compression gland 4 mm2				
3.5.9		Supply	No	72		
3.5.10		Install	No	72		
		2.5 mm2				
3.5.11		Supply	No	528		
3.5.12		Install	No	528		
		1.5 mm2				
3.5.13		Supply	No	2274		
3.5.14		Install	No	2274		
		CARRIED FORWARD				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
BASHEE COURT - NEW UNITS **12 UNITS**
SECTION 3: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		BROUGHT FORWARD				
3.6		**LUMINAIRES**				
		Supply, install and test on ceiling/wall including all fixings, brackets, supports, connectors, connections, tail leads and drivers. Type B Rubicon Mediterranean 80/10 Bulkhead 18w, 4000k, White				
3.6.1		Supply	No	204		
3.6.2		Install	No	204		
		Type C1 Rubicon Saxa 11/83/40/36 36W, 4000K, White				
3.6.3		Supply	No	24		
3.6.4		Install	No	24		
		Type C2 Rubicon Saxa 11/83/40/54 54W, 4000K, White				
3.6.5		Supply	No	12		
3.6.6		Install	No	12		
		Type D1 Rubicon Saturn 15W 80/50/15 Bulkhead, 4000K, White				
3.6.7		Supply	No	57		
3.6.8		Install	No	57		
		Type D2 Rubicon Saturn 15W 80/50/15 Bulkhead, 4000K, White, with Built-In Daylight Switch				
3.6.9		Supply	No	58		
3.6.10		Install	No	58		
3.7		**SWITCHES AND OUTLETS**				
		10A, 1 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
3.7.1		Supply	No	96		
3.7.2		Install	No	96		
		10A, 2 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
3.7.3		Supply	No	48		
3.7.4		Install	No	48		
		10A, 3 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
3.7.5		Supply	No	48		
3.7.6		Install	No	48		
		10A, 1 Lever, 2 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
3.7.7		Supply	No	48		
3.7.8		Install	No	48		
		10A, 2 Lever, 1 Way and 2 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
3.7.9		Supply	No	48		
3.7.10		Install	No	48		
		10A, 3 Lever, 1 Way and 2 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
3.7.11		Supply	No	48		
3.7.12		Install	No	48		
		45A 2-Pole Surface-Mounted Isolator Mounted In Ceiling Void for Geyser				
3.7.13		Supply	No	12		
3.7.14		Install	No	12		
		45A 2-Pole Flush-Mounted Isolator mounted 1400mm AFFL for Stove				
3.7.15		Supply	No	12		
3.7.16		Install	No	12		
		CARRIED FORWARD				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
BASHEE COURT - NEW UNITS **12 UNITS**
SECTION 3: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		BROUGHT FORWARD				
		20A 2-Pole Surface-Mounted Isolator Mounted Next To 50l Geyser				
3.7.17		Supply	No	12		
3.7.18		Install	No	12		
		16A Normal and Euro Double Switched Socket outlet enclosed in EXISTING flush mounted metal box complete with white PVC cover and PVC screws or clipped PVC cover, 100mm x 100mm				
3.7.19		Supply	No	156		
3.7.20		Install	No	156		
		16A Normal and Euro Double Switched Socket outlet enclosed in NEW flush mounted metal box complete with white PVC cover and PVC screws or clipped PVC cover, 100mm x 100mm				
3.7.21		Supply	No	36		
3.7.22		Install	No	36		
3.8		**WIREWAYS AND TRUNKING**				
		Install 50mm PVC conduit cored through concrete slab and wall including bends, including making good of all damaged walls/concrete to install new cable from kitchen DB to flatlet DB				
3.8.1		Supply	m	240		
3.8.2		Install	m	240		
		20mm PVC conduit chased in wall, casted into concrete slab and/or installed in ceiling void including all fixtures, including making good of all walls/concrete/roofs damaged by chasing of conduit				
3.8.3		Supply	m	240		
3.8.4		Install	m	240		
		50mm Round PVC glandless conduit boxes complete with cover and couples for 2-, 3-, 4- or 5-way application				
3.8.5		Supply	No	60		
3.8.6		Install	No	60		
3.9		**TEST AND COMMISSION**				
3.9.1		Testing and commissioning of complete electrical installation and issuing of Certificate of Compliance	No	12		
3.10		**ADDITIONAL ELECTRICAL WORKS**				
3.10.1		Sum allowed to be utilized as instructed by electrical engineer	Sum	12	R 5 000	R 60 000
		SECTION 3: Building Services - Electrical - Carried Forward to Summary				

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		CARRIED FORWARD				
		BROUGHT FORWARD				
4.1		**CIVIL WORKS**				
		Lift grass, excavate, backfill and restore to original state with compacted soil to density 93% MOD AASHTO 450mm wide and 500mm deep trench in medium type soil including 500mm wide and 500mm deep pit in medium type soil for earth electrodes				
4.1.1		Soft Soil	m3	1.0		RATE ONLY
4.1.2		Medium soil	m3	189.4		
4.1.3		Rock	m3	1.0		RATE ONLY
		Carefully cut opening in walkway concrete slab and make good concrete after earth wire is buried and backfill soil is compacted				
4.1.4		80mm thick concrete	m2	11.5		
4.2		**CONDUCTOR MESH FOR ROOF**				
4.2.1		Supply and install 8mmΦ (50mm²) solid aluminium conductors for tiled roofing according to Drawing 10669-3-ELP-001				
4.2.2		Supply	m	300		
4.2.3		Install	m	300		
		Supply and install stainless steel M10 lug connection between 8mm² solid aluminium mesh conductor, rainwater downpipe and bonding of solar geyser				
4.2.4		Supply	No	102		
4.2.5		Install	No	102		
4.3		**DOWN CONDUCTORS AND EARTHING**				
		Supply and install 70mm² (copper equivalent size) PVC insulated Copper-Cladded Steel conductor securely attached to base rainwater downpipe, wall and electrod clamp; conductor around rainwater tank to be installed in 20mm PVC conduit				
4.3.1		Supply	m	45		
4.3.2		Install	m	45		
		20mm PVC conduit fixed to wall around rainwater tanks including galvanised saddles				
4.3.3		Supply	m	30		
4.3.4		Install	m	30		
		Supply and install 70mm² Bare Copper conductor buried direct in ground and connecting kitchen DBs with nearest earth electrode				
4.3.5		Supply	m	850		
4.3.6		Install	m	850		
		Supply, install and connect Type J1 york box 87x87x50 mm including test terminals and jumper surface-mounted on wall 300mm AGL				
4.3.7		Supply	No	8		
4.3.8		Install	No	8		
		Supply and install Stainless Steel or Brass U-bolt clamp for clamped connection between down conductor/earth ring and electrode				
4.3.9		Supply	No	30		
4.3.10		Install	No	30		
		Supply and install 16mm diameter Copper-cladded steel electrodes (in 1.5m sections including bar and electrode couplers), installed 500mm deep				
4.3.11		Supply	No	30		
4.3.12		Assemble and Install using mechanical hammer	No	30		
4.4		**MEASURE EARTH RESISTANCE**				
4.4.1		Measure and record earth resistance according to the Slope method (must be 10Ω or less), then reconnect links securely	Sum	1		
4.5		**ADDITIONAL ELECTRICAL EARTH SPIKES AND CLAMPS**				
4.5.1		Provisional Sum allowed for additional earthing to achieve 10Ω or less if necessary	Sum	1	R 5 000	R 5 000
		SECTION 4: Lightning Protection System - Carried Forward to Summary				

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5.1		**REMOVE EXISTING FITTINGS**				
5.1.1		Disconnect, remove and dispose of existing fire hose reel	No	12		
5.1.2		Disconnect, remove and dispose of existing geyser in bathroom	No	12		
5.2		**CIVILS WORKS**				
		Lift grass, excavate, backfill and restore to original state with compacted soil to density 93% MOD AASHTO 450mm wide and 650mm deep pipe trench in the following types of soil:				
5.2.1		Soft Soil	m3	2484.0		RATE ONLY
5.2.2		Medium soil	m3	2484.0		
5.2.3		Rock	m3	496.8		RATE ONLY
5.2.4		Install bedding	m3	621.0		
5.3		**FIRE PROTECTION**				
		Install and glue together Φ63 uPVC Class 9 Pipe in excavated trench on prepared bedding				
5.3.1		Supply	m	150		
5.3.2		Install	m	150		
		Install and glue together Φ32 uPVC Class 9 Pipe in excavated trench on prepared bedding				
5.3.3		Supply	m	80		
5.3.4		Install	m	80		
		Install on wall from and including stop valve to elbow and Φ32 adaptor in ground Φ25 Galvanised Pipe including saddles and elbows				
5.3.5		Supply	m	40		
5.3.6		Install	m	40		
5.3.7		Supply and install all required adaptive T-pieces, elbows and couplers for fire hose reel network	Sum	1		
		Supply and securely mount in Fire Hose Reel with 30m hose as shown in drawing, including couplers to existing pipework				
5.3.8		Supply	No	20		
5.3.9		Install	No	20		
		Supply and securely mount over Fire Hose Reel matching PVC enclosure including fixtures				
5.3.10		Supply	No	20		
5.3.11		Install	No	20		
		Supply and securely mount above Fire Hose Reel 290x290mm PVC Plastic sign Type FB24 (from Reflectosigns) in Aluminium frame				
5.3.12		Supply	No	20		
5.3.13		Install	No	20		
		Supply and fit in kitchen DCP 9kg fire extinguisher on backing board in position as per drawing				
5.3.14		Supply	No	20		
5.3.15		Install	No	20		
5.4		**GEYSERS**				
		Supply and install new solar 200l pressurised geyser on IBR sheeting roof top including plate collector, vacuum breakers, pressure valve, NR valve, lever valves, pipework and fittings for connection to plumbing, lagging and sundries				
5.4.1		Supply	No	20		
5.4.2		Install	No	20		
		Supply and install new 50l pressurised geyser above toilet including geyser tray and tray brackets, valve pack,, pipework and fittings for connection to plumbing, lagging and sundries				
5.4.3		Supply	No	20		
5.4.4		Install	No	20		
		CARRIED FORWARD				

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		BROUGHT FORWARD				
5.5		**TEST AND COMMISSION**				
5.5.1		Pressure testing and commissioning of fire hose installation and issuing of Certificate of Compliance	Sum	20		
5.5.2		Pressure testing and commissioning of geysers	Sum	40		
5.6		**ADDITIONAL MECHANICAL WORKS**				
5.6.1		Sum allowed to be utilized as instructed by mechanical engineer	Sum	20	R 10 000	R 200 000
		SECTION 5: Building Services Mechanical - Carried Forward to Summary				

ECDC CLUSTER F1
BASHEE COURT - NEW UNITS

SUMMARY OF BILL OF QUANTITIES
ELECTRICAL & MECHANICAL

SECTION	DESCRIPTION	SUM
1	P&Gs	
2	Electrical - New Units	
3	Electrical - Existing Units	
4	Electrical - Lightning Protection System	
5	Mechanical	
	SUBTOTAL	
5%	Profit	
5%	Attendance	
VOLUME 1: Electrical & Mechanical: Total carried to Final Summary		

ECDC CLUSTER F1 **BILL OF QUANTITIES**

KYALAMI FLATS **18 UNITS**

SECTION 1: PRELIMINARY & GENERAL

ITEM No	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1.1	**FIXED CHARGED ITEMS**				
1.1.1	Contractual Requirements	Sum	1		
1.1.2	Facilities including offices, stores, workshops, labs, ablution and latrines, tools and equipment, water and electricity supply, access and parking	Sum	1		
1.2	**TIME RELATED ITEMS**				
1.2.1	Supervision	Sum	1		
1.2.2	Company and head office overheads	Sum	1		
1.3	**OCCUPATIONAL HEALTH AND SAFETY ACT COMPLIANCE**				
1.3.1	All obligations to comply with the OHS Act of 1993	Sum	1		
	SECTION 1: P&Gs - Carried Forward to Summary				

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
		CARRIED FORWARD				
		BROUGHT FORWARD				
2.1		**BULK METERING AND DISTRIBUTION BOARDS**				
2.1.1		For the South DB, supply a three phase 66-Way Electric Orange powder-coated surface-mounted steel Distribution Box rated 200A, with the following components rated 6kA, c/w 150x150mm type WW7 Danger sign on front door, including labels and label card. Space to be allowed for 3-Phase Check Meter and CT, SIM card and Data Concentrator to be installed on site by nominated subcontractor.	No	1		
2.1.2		Isolator - 100A, 3 pole	No	1		
2.1.3		MCB - 50A, 2 pole	No	9		
2.1.4		MCB - 20A, 1 pole	No	1		
2.1.5		MCB - 10A, 1 pole	No	11		
2.1.6		MCB - 15A, 1 pole	No	1		
2.1.7		Class 1 DEHN 40kA Surge Arrestors (phases and neutral)	Set	1		
2.1.8		Install, test and commission DB	No	1		
2.1.9		For theNorth DB, supply a three phase 66-Way Electric Orange powder-coated surface-mounted steel Distribution Box rated 200A, with the following components rated 6kA, c/w 150x150mm type WW7 Danger sign on front door, including labels and label card. Space to be allowed for 3-Phase Check Meter and CT, SIM card and Data Concentrator to be installed on site by nominated subcontractor.	No	1		
2.1.10		Isolator - 100A, 3 pole	No	1		
2.1.11		MCB - 50A, 2 pole	No	9		
2.1.12		MCB - 30A, 2 pole	No	1		
2.1.13		MCB - 20A, 1 pole	No	1		
2.1.14		MCB - 15A, 1 pole	No	1		
2.1.15		MCB - 10A, 1 pole	No	11		
2.1.16		Class 1 DEHN 40kA Surge Arrestors (phases and neutral)	Set	1		
2.1.17		Install, test and commission DB	No	1		
2.1.18		Supply and install Discus Padlock with three duplicate keys	No	1		
2.1.19		Supply a single phase 60A 16-Way Recessed White powder-coated steel Distribution Box in kitchen, rated 3kA, IP40, with the following components, including labels and label card:	No	18		
2.1.20		MCB - 60A, 2 pole	No	18		
2.1.21		MCB - 30A, 1 pole	No	36		
2.1.22		MCB - 20A, 1 pole	No	36		
2.1.23		MCB - 15A, 1 pole	No	18		
2.1.24		Earth Leakage Unit - 60A, 2 pole	No	18		
2.1.25		Battery-powered timer for geyser	No	18		
2.1.26		Class 2 DEHN 25kA Surge Arrestors (phase and neutral)	Set	18		
2.1.27		Install, test and commission DB	No	18		
2.1.28		Supply a single phase 60A 16-Way Recessed White powder-coated steel Distribution Box in ablution above garages, rated 3kA, IP44, with the following components, including labels and label card:	No	1		
2.1.29		MCB - 40A, 2 pole	No	1		
2.1.30		MCB - 20A, 1 pole	No	1		
2.1.31		MCB - 15A, 1 pole	No	4		
2.1.32		Install, test and commission DB	No	1		
2.2		**REMOVE EXISTING FITTINGS AND WIRING**				
		CARRIED FORWARD				
		BROUGHT FORWARD				
2.2.1		Isolate, disconnect, remove and dispose of existing surface-mounted DB in LV chamber	No	2		
2.2.2		Disconnect, remove and dispose of existing surface-mounted Telkom box in entrance lobby including all wiring to units	No	1		

2.2.3		Isolate, disconnect, remove and dispose of existing flush-mounted DB in kitchen	No	18		
2.2.4		Remove and dispose of all existing indoor light fittings	No	3438		
2.2.5		Remove and dispose of all existing floodlights including wiring	No	4		
2.2.6		Remove and dispose of all light switch covers and yokes	No	2772		
2.2.7		Remove and dispose of all existing socket outlet covers including yoke	No	2052		
2.2.8		Remove all illegal wiring strung to spaza shops and fittings in them	Sum	1		
2.3		**CABLING AND WIRING**				
		Supply, install, test and commission PVC 3c Insulated Unarmoured 600/1000V Copper Cable 6mm² (Provisional)				
2.3.1		Supply	m	252		RATE ONLY
2.3.2		Install	m	252		RATE ONLY
		Supply and install Bare Copper Earth Wire 4mm² (Provisional)				
2.3.3		Supply	m	252		RATE ONLY
2.3.4		Install	m	252		RATE ONLY
		2.5mm² BCEW				
2.3.5		Supply	m	500		
2.3.6		Install	m	500		
		1.5mm² BCEW				
2.3.7		Supply	m	2065		
2.3.8		Install	m	2065		
		Supply and install Insulated Wiring 4mm² Black				
2.3.9		Supply	m	500		
2.3.10		Install	m	500		
		4mm² Red				
2.3.11		Supply	m	500		
2.3.12		Install	m	500		
		2.5mm² Black				
2.3.13		Supply	m	1500		
2.3.14		Install	m	1500		
		2.5mm² Red				
2.3.15		Supply	m	1500		
2.3.16		Install	m	1500		
		1.5mm² Black				
2.3.17		Supply	m	1000		
2.3.18		Install	m	1000		
		1.5mm² Red				
2.3.19		Supply	m	1000		
2.3.20		Install	m	1000		
2.4		**CABLE TERMINATIONS**				
		Supply, install and commission for 3c Insulated and Bare Neutral 600/1000V Aerial Bundle Conductor 25mm²				
2.4.1		Supply	No	2		
2.4.2		Install	No	2		
		CARRIED FORWARD				

		BROUGHT FORWARD				
		Supply, install and commission for PVC 3c Insulated Armoured 600/1000V Copper Cable 6mm²				
2.4.3		Supply	No	36		RATE ONLY
2.4.4		Install	No	36		RATE ONLY
		Supply, deliver, install and connect Bare Copper Earth terminations 4mm²				
2.4.5		Supply	No	36		RATE ONLY
2.4.6		Install	No	36		RATE ONLY
		2.5mm² BCEW				
2.4.7		Supply	No	74		
2.4.8		Install	No	74		
		1.5mm² BCEW				
2.4.9		Supply	No	9500		
2.4.10		Install	No	9500		
		Supply, deliver, install and connect Insulated core connections (Black and Red) complete with compression gland 4 mm2				
2.4.11		Supply	No	148		
2.4.12		Install	No	148		
		2.5 mm2				
2.4.13		Supply	No	5688		
2.4.14		Install	No	5688		
		1.5 mm2				
2.4.15		Supply	No	14904		
2.4.16		Install	No	14904		
2.5		**LUMINAIRES**				
		Supply, install and test on ceiling/wall including all fixings, brackets, supports, connectors, connections, tail leads and drivers. Type A1 Rubicon Chiron Floodlight 90º Beam 50W, 4000k, with supporting bracket for exterior wall-mounting as per EED-003 layout				
2.5.1		Supply	No	11		
2.5.2		Install	No	11		
		Type A2 Rubicon Chiron Floodlight 90º Beam 50W, 4000k, with pole-top bracket for pole-top mounting as per EED-003 layout				
2.5.3		Supply	No	1		
2.5.4		Install	No	1		
		Type B Rubicon Mediterranean 80/10 Bulkhead 18w, 4000k, White				
2.5.5		Supply	No	166		
2.5.6		Install	No	166		
		Type C1 Rubicon Saxa 11/83/40/36 36W, 4000K, White				
2.5.7		Supply	No	18		
2.5.8		Install	No	18		
		Type D2 Rubicon Saturn 15W 80/50/15 Bulkhead, 4000K, White, with Built-In Daylight Switch				
2.5.9		Supply	No	7		
2.5.10		Install	No	7		
		Supply and install 2m HDG Φ50mm pole with custom-made wall-mount bracket (with workshop drawing approval) for Type A2 Rubicon Chiron Floodlight 50W, 4000k, for pole-top mounting as per EED-003 layout				
2.5.11		Supply	No	1		
2.5.12		Install	No	1		
		CARRIED FORWARD				

		BROUGHT FORWARD				
2.6		**SWITCHES AND OUTLETS**				
		10A, 1 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.6.1		Supply	No	105		
2.6.2		Install	No	105		
		10A, 2 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.6.3		Supply	No	13		
2.6.4		Install	No	13		
		10A, 3 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.6.5		Supply	No	6		
2.6.6		Install	No	6		
		10A, 1 Lever, 2 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.6.7		Supply	No	24		
2.6.8		Install	No	24		
		10A, 3 Lever, 1 Way and 2 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.6.9		Supply	No	6		
2.6.10		Install	No	6		
		45A 2-Pole Surface-Mounted Isolator Mounted In Ceiling Void for Geyser				
2.6.11		Supply	No	18		
2.6.12		Install	No	18		
		45A 2-Pole Flush-Mounted Isolator mounted 1400mm AFFL for Stove				
2.6.13		Supply	No	18		
2.6.14		Install	No	18		
		16A Normal and Euro Double Switched Socket outlet enclosed in EXISTING flush mounted metal box complete with white PVC cover and PVC screws or clipped PVC cover, 100mm x 100mm				
2.6.15		Supply	No	114		
2.6.16		Install	No	114		
		16A Normal and Euro Double Switched Socket outlet enclosed in NEW flush mounted metal box complete with white PVC cover and PVC screws or clipped PVC cover, 100mm x 100mm				
2.6.17		Supply	No	42		
2.6.18		Install	No	42		
		16A Normal and Euro Double Switched Socket outlet enclosed in flush mounted metal box complete with white PVC cover and PVC screws or clipped PVC cover, 100mm x 100mm, enclosed in weatherproof York box, mounted outside Drying Area ablution				
2.6.19		Supply	No	1		
2.6.20		Install	No	1		
		Royce Thompson IP65 daylight photocell switch complete with mounting and screws, wired into Exterior (or Area) Lighting circuit, OR SIMILAR APPROVED				
2.6.21		Supply	No	3		
2.6.22		Install	No	3		
		CARRIED FORWARD				

		BROUGHT FORWARD				
2.7		**WIREWAYS AND TRUNKING AND OVERHEAD FITTINGS**				
		Galvanized M10X280 pigtail assembly with stop plates, bolts and nuts, installed in outer wall 3m AGL				
2.7.1		Supply	No	2		
2.7.2		Install	No	2		
		UV stabilized ABC clamp to support 3c25mm² Aerial Bundle Conductor and Neutral and attached to pigtail bolt				
2.7.3		Supply	No	2		
2.7.4		Install	No	2		
		Galvanized Steel P8000 76x76mm duct, complete with all fixtures installed against soffit as shown on drawing				
2.7.5		Supply	m	4		
2.7.6		Install	m	4		
		Galvanized Steel Medium Duty 76mm perforated cable tray, complete with all fixtures installed against wall in DB chamber up to and between power boxes				
2.7.7		Supply	m	6		
2.7.8		Install	m	6		
		25mm Bosal conduit chased in wall and casted into concrete slab including all fixtures, including making good of all walls/concrete damaged by chasing of conduit				
2.7.9		Supply	m	40		
2.7.10		Install	m	40		
		20mm Bosal conduit surface-mounted on wall or soffit with all fixtures, including making good of all walls/concrete damaged by fixing of conduit				
2.7.11		Supply	m	135		
2.7.12		Install	m	135		
		50mm Round Galvanised glandless conduit boxes complete with cover and couples for 2-, 3-, 4- way application				
2.7.13		Supply	No	30		
2.7.14		Install	No	30		
		50mm PVC conduit cored through walls, including making good of all damaged walls to feed existing overhead cable to main DB				
2.7.15		Supply	m	1		
2.7.16		Install	m	1		
		20mm PVC conduit chased in wall, casted into concrete slab and/or installed in ceiling void including all fixtures, including making good of all walls/concrete/roofs damaged by chasing of conduit				
2.7.17		Supply	m	540		
2.7.18		Install	m	540		
		50mm Round PVC glandless conduit boxes complete with cover and couples for 2-, 3-, 4- or 5-way application				
2.7.19		Supply	No	90		
2.7.20		Install	No	90		
2.8		**VOICE INTERCOM SYSTEM**				
2.8.1		Install, test and commission of the following components	Hours	40		
2.8.2		DR-2AG Apartment Entrance Station in Secure Cabinet	No	2		
2.8.3		PSU 12V, 5 Amp Incl DC Plug / Fig 8 + Plug	No	2		
2.8.4		SMB-UM/US Surface Box For DR-UM/US	No	2		
2.8.5		CCU-232AGF 32-Way Distributor	No	1		
2.8.6		8-Way Distributor	No	4		
2.8.7		PSU 24V 2.5 Amp Incl DC Plug / Fig 8 + Plug	No	4		
2.8.8		AP-2RAG Apartment Handset	No	18		
2.8.9		Comms - 4 Core White / 100m	No	15		
2.8.10		4 Pair Cat 5 Network Cable (Per Meter) Stranded.	m	500		
2.8.11		P&Gs including Sundries	Sum	1		
		CARRIED FORWARD				

		BROUGHT FORWARD				
2.9		**EARTHING**				
2.9.1		Earthing of main DBs according to SANS 10142 regulations, using Copper Cladded Steel material only (supplied by ARB) including installation of 3m earth spike at closest practical point to achieve maximum resistance of 10 ohm	No	2		
2.10		**TEST AND COMMISSION**				
2.10.1		Testing and commissioning of complete electrical installation and issuing of Certificate of Compliance for each unit	No	19		
2.11		**ADDITIONAL ELECTRICAL WORKS**				
2.11.1		Sum allowed to be utilized as instructed by electrical engineer	Sum	19	R 5 000	R 95 000

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		CARRIED FORWARD				
		BROUGHT FORWARD				
3.1		**CIVIL WORKS**				
		Lift grass, excavate, backfill and restore to original state with compacted soil to density 93% MOD AASHTO 500mm wide and 500mm deep pit in medium type soil for earth electrodes				
3.1.1		Soft Soil	m3	1.0		RATE ONLY
3.1.2		Medium soil	m3	1.8		
3.1.3		Rock	m3	1.0		RATE ONLY
		Carefully cut opening in walkway concrete slab and make good concrete after earth wire is buried and backfill soil is compacted				
3.1.4		80mm thick concrete	m2	0.75		
3.2		**DOWN CONDUCTORS AND EARTHING**				
3.2.1		Supply and install 8mmΦ (50mm²) solid aluminium conductors connecting loops between IBR sheeting and rainwater downpipe according to Drawing 10669-3-ELP-002				
3.2.2		Supply	m	12		
3.2.3		Install	m	12		
		Supply and install 70mm² PVC insulated Copper conductor securely attached to IBR roof sheeting according to Drawing 10669-3-ELP-002 and installed in 20mm PVC conduit and connecting loops between rainwater downpipes connecting main DBs with nearest earth electrode				
3.2.4		Supply	m	50		
3.2.5		Install	m	50		
		Supply and install stainless steel M10 lug connection between PVC insulated Copper-Cladded Steel down conductor and roof sheeting and bonding of solar geyser according to Drawing 10669-3-ELP-002				
3.2.6		Supply	No	28		
3.2.7		Install	No	28		
		Supply and install 20mm² PVC conduit including galvanised saddles at 1m intervals fixed to wall 9m high for down conductor where indicated on Drawing 10669-3-ELP-002				
3.2.8		Supply	m	19		
3.2.9		Install	m	19		
		Supply, install and connect Type J1 york box 87x87x50 mm including test terminals and jumper surface-mounted on wall 300mm AGL				
3.2.10		Supply	No	6		
3.2.11		Install	No	6		
		Supply and install Stainless Steel or Brass U-bolt clamp for clamped connection between down conductor/earth ring and electrode				
3.2.12		Supply	No	14		
3.2.13		Install	No	14		
		Supply and install 16mm diameter Copper-cladded steel electrodes (in 1.5m sections including bar and electrode couplers), installed 500mm deep				
3.2.14		Supply	No	14		
3.2.15		Assemble and Install using mechanical hammer	No	14		
		Sundries for connecting DB earthbar to nearest earth spike				
3.2.16		Supply	No	2		
3.2.17		Install	No	2		
3.3		**MEASURE EARTH RESISTANCE**				
3.3.1		Measure and record earth resistance according to the Slope method (must be 10Ω or less), then reconnect links securely	Sum	1		
3.4		**ADDITIONAL ELECTRICAL EARTH SPIKES AND CLAMPS**				
3.4.1		Provisional Sum allowed for additional earthing to achieve 10Ω or less if necessary	Sum	1	R 5 000	R 5 000
		SECTION 3: Lightning Protection System - Carried Forward to Summary				

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		CARRIED FORWARD				
		BROUGHT FORWARD				
4.1		**REMOVE EXISTING FITTINGS**				
4.1.1		Disconnect, remove and dispose of existing geyser in bathroom	No	18		
4.2		**FIRE PROTECTION**				
		Supply and securely mount in Fire Hose Reel with 30m hose as shown in drawing, including couplers to existing pipework				
4.2.1		Supply	No	6		
4.2.2		Install	No	6		
		Supply and securely mount over Fire Hose Reel matching PVC enclosure including fixtures				
4.2.3		Supply	No	6		
4.2.4		Install	No	6		
		Supply and securely mount above Fire Hose Reel 290x290mm ABS Plastic sign Type FB24 (from Reflectosigns) in Aluminium frame				
4.2.5		Supply	No	6		
4.2.6		Install	No	6		
		Supply and fit in kitchen DCP 9kg fire extinguisher on backing board in position as per drawing				
4.2.7		Supply	No	18		
4.2.8		Install	No	18		
		Provisional Sum for Fire Hydrant network including fire booster connection				
4.2.9		Supply & Install	Sum	1	R 100 000.00	R 100 000.00
4.3		**GEYSERS**				
		Supply and install new solar 200l pressurised geyser on IBR sheeting roof top including plate collector, vacuum breakers, pressure valve, NR valve, lever valves, pipework and fittings for connection to plumbing, lagging and sundries				
4.3.1		Supply	No	18		
4.3.2		Install	No	18		
		Supply and install new Circulating Pump including pipework and fittings for connection to plumbing, lagging and sundries				
4.3.3		Supply	No	18		
4.3.4		Install	No	18		
4.4		**TEST AND COMMISSION**				
4.4.1		Pressure testing and commissioning of fire hose installation and issuing of Certificate of Compliance	Sum	18		
4.4.2		Pressure testing and commissioning of geysers	Sum	36		
4.5		**ADDITIONAL MECHANICAL WORKS**				
4.5.1		Sum allowed to be utilized as instructed by mechanical engineer	Sum	18	R 10 000	R 180 000
		SECTION 4: BUILDING Mechanical - Carried Forward to Summary				

ECDC CLUSTER F1
KYALAMI FLATS

SUMMARY OF BILL OF QUANTITIES
ELECTRICAL & MECHANICAL

SECTION	DESCRIPTION	SUM
1	P&Gs	
2	Electrical	
3	Electrical - Lightning Protection System	
4	Mechanical	
	SUBTOTAL	
5%	Profit	
5%	Attendance	
VOLUME 2:Electrical & Mechanical: Total carried to Final Summary		

ECDC CLUSTER F1 **BILL OF QUANTITIES**
MSINTSI COURT **12 UNITS**
SECTION 1: PRELIMINARY & GENERAL

ITEM No	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1.1	**FIXED CHARGED ITEMS**				
1.1.1	Contractual Requirements	Sum	1		
1.1.2	Facilities including offices, stores, workshops, labs, ablution and latrines, tools and equipment, water and electricity supply, access and parking	Sum	1		
1.2	**TIME RELATED ITEMS**				
1.2.1	Supervision	Sum	1		
1.2.2	Company and head office overheads	Sum	1		
1.3	**OCCUPATIONAL HEALTH AND SAFETY ACT COMPLIANCE**				
1.3.1	All obligations to comply with the OHS Act of 1993	Sum	1		
	SECTION 1: P&Gs - Carried Forward to Summary				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
MSINTSI COURT **8 UNITS**
SECTION 2: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		CARRIED FORWARD				
		BROUGHT FORWARD				
2.1		**BULK METERING AND DISTRIBUTION BOARDS**				
		Install in existing 8-Way Kiosk, including fixtures the following:				
2.1.1		Class 1 DEHN 40kA Surge Arrestors (phases and neutral)	Set	1		
2.1.2		Test and commission Metering Kiosk	No	1		
2.1.3		Supply and install Eskom padlock with three duplicate keys	No	1		
2.1.4		Supply a single phase 60A 23-Way Recessed White powder-coated steel Distribution Box, rated 3kA, IP40, with the following components, including labels and label card:	No	8		
2.1.5		MCB - 60A, 2 pole	No	8		
2.1.6		MCB - 30A, 1 pole	No	16		
2.1.7		MCB - 20A, 1 pole	No	24		
2.1.8		MCB - 15A, 1 pole	No	24		
2.1.9		Earth Leakage Unit - 60A, 2 pole	No	8		
2.1.10		Battery-powered timer for geyser	No	8		
2.1.11		Install, test and commission DB	No	8		
2.2		**REMOVE EXISTING FITTINGS**				
2.2.1		Isolate, disconnect, remove and dispose of existing flush-mounted DB in kitchen	No	8		
2.2.2		Remove and dispose of all existing light fittings	No	174		
2.2.3		Remove and dispose of all light switch covers and yokes	No	160		
2.2.4		Remove and dispose of all existing socket outlet covers including yoke	No	88		
2.2.5		Remove and dispose of 3m Steel poles including post top fittings, safely terminate cables, backfill and compact soil to density 93% MOD AASHTO	No	3		
2.3		**CIVILS WORKS**				
		Lift grass, excavate, backfill and restore to original state with compacted soil to density 93% MOD AASHTO 450mm wide and 650mm deep trench in the following types of soil:				
2.3.1		Soft Soil	m3	1.8		RATE ONLY
2.3.2		Medium soil	m3	1.8		RATE ONLY
2.3.3		Rock	m3	1.8		RATE ONLY
2.4		**CABLING AND WIRING**				
		Supply, install, test and commission PVC 3c Insulated Armoured 600/1000V Copper Cable 6mm²				
2.4.1		Supply	m	112		RATE ONLY
2.4.2		Install	m	112		RATE ONLY
		Supply and install Bare Copper Earth Wire 4mm²				
2.4.3		Supply	m	112		RATE ONLY
2.4.4		Install	m	112		RATE ONLY
		2.5mm² BCEW				
2.4.5		Supply	m	160		
2.4.6		Install	m	160		
		1.5mm² BCEW				
2.4.7		Supply	m	1000		
2.4.8		Install	m	1000		
		CARRIED FORWARD				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
MSINTSI COURT **8 UNITS**
SECTION 2: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		BROUGHT FORWARD				
		Supply and install Insulated Wiring 4mm² Black				
2.4.9		Supply	m	160		
2.4.10		Install	m	160		
		4mm² Red				
2.4.11		Supply	m	160		
2.4.12		Install	m	160		
		2.5mm² Black				
2.4.13		Supply	m	500		
2.4.14		Install	m	500		
		2.5mm² Red				
2.4.15		Supply	m	500		
2.4.16		Install	m	500		
		1.5mm² Black				
2.4.17		Supply	m	500		
2.4.18		Install	m	500		
		1.5mm² Red				
2.4.19		Supply	m	500		
2.4.20		Install	m	500		
2.5		**CABLE TERMINATIONS**				
		Supply, install, test and commission PVC 3c Insulated Armoured 600/1000V Copper Cable 6mm²				
2.5.1		Supply	No	16		RATE ONLY
2.5.2		Install	No	16		RATE ONLY
		Supply, deliver, install and connect Bare Copper Earth terminations 4mm²				
2.5.3		Supply	No	16		RATE ONLY
2.5.4		Install	No	16		RATE ONLY
		2.5mm² BCEW				
2.5.5		Supply	No	40		
2.5.6		Install	No	40		
		1.5mm² BCEW				
2.5.7		Supply	No	470		
2.5.8		Install	No	470		
		Supply, deliver, install and connect Two Insulated cores (Black and Red) complete with compression gland 4 mm2				
2.5.9		Supply	No	48		
2.5.10		Install	No	48		
		2.5 mm2				
2.5.11		Supply	No	272		
2.5.12		Install	No	272		
		1.5 mm2				
2.5.13		Supply	No	1180		
2.5.14		Install	No	1180		
		CARRIED FORWARD				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
MSINTSI COURT **8 UNITS**
SECTION 2: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		BROUGHT FORWARD				
2.6		**LUMINAIRES**				
		Supply, install and test on ceiling/wall including all fixings, brackets, supports, connectors, connections, tail leads and drivers. Type A Rubicon Solar Post top 30W, 4000k, Black, with 6m Black powder-coated HDG pole buried 1m BGL, as per Solar Pole Top Layout EED-005				
2.6.1		Supply	No	2		
2.6.2		Install	No	2		
		Type B Rubicon Mediterranean 80/10 Bulkhead 18w, 4000k, White				
2.6.3		Supply	No	104		
2.6.4		Install	No	104		
		Type C1 Rubicon Saxa 11/83/40/36 36W, 4000K, White				
2.6.5		Supply	No	8		
2.6.6		Install	No	8		
		Type C2 Rubicon Saxa 11/83/40/54 54W, 4000K, White				
2.6.7		Supply	No	24		
2.6.8		Install	No	24		
		Type D1 Rubicon Saturn 15W 80/50/15 Bulkhead, 4000K, White				
2.6.9		Supply	No	30		
2.6.10		Install	No	30		
		Type D2 Rubicon Saturn 15W 80/50/15 Bulkhead, 4000K, White, with Built-In Daylight Switch				
2.6.11		Supply	No	30		
2.6.12		Install	No	30		
2.7		**SWITCHES AND OUTLETS**				
		10A, 1 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.1		Supply	No	24		
2.7.2		Install	No	24		
		10A, 2 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.3		Supply	No	40		
2.7.4		Install	No	40		
		10A, 3 Lever, 1 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.5		Supply	No	32		
2.7.6		Install	No	32		
		10A, 1 Lever, 2 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.7		Supply	No	32		
2.7.8		Install	No	32		
		10A, 3 Lever, 1 Way and 2 Way, Flush mounted switch unit in wall box complete with PVC cover and PVC screws or clipped PVC cover, 100mm x 50mm				
2.7.9		Supply	No	32		
2.7.10		Install	No	32		
		45A 2-Pole Surface-Mounted Isolator Mounted In Ceiling Void for Geyser				
2.7.11		Supply	No	8		
2.7.12		Install	No	8		
		45A 2-Pole Flush-Mounted Isolator mounted 1400mm AFFL for Stove				
2.7.13		Supply	No	8		
2.7.14		Install	No	8		
		CARRIED FORWARD				

ECDC CLUSTER F1 **BILL OF QUANTITIES**
MSINTSI COURT **8 UNITS**
SECTION 2: BUILDING SERVICES - ELECTRICAL (VOLUME 1)

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		BROUGHT FORWARD				
		16A Normal and Euro Double Switched Socket outlet enclosed in EXISTING flush mounted metal box complete with white PVC cover and PVC screws or clipped PVC cover, 100mm x 100mm				
2.7.15		Supply	No	88		
2.7.16		Install	No	88		
		16A Normal and Euro Double Switched Socket outlet enclosed in NEW flush mounted metal box complete with white PVC cover and PVC screws or clipped PVC cover, 100mm x 100mm				
2.7.17		Supply	No	24		
2.7.18		Install	No	24		
2.8		**WIREWAYS AND TRUNKING**				
		Install 50mm PVC conduit cored through concrete slab and wall including bends, including making good of all damaged walls/concrete to install new cable to kitchen DB				
2.8.1		Supply	m	80		RATE ONLY
2.8.2		Install	m	80		RATE ONLY
		20mm PVC conduit chased in wall, casted into concrete slab and/or installed in ceiling void including all fixtures, including making good of all walls/concrete/roofs damaged by chasing of conduit				
2.8.3		Supply	m	240		
2.8.4		Install	m	240		
		50mm Round PVC glandless conduit boxes complete with cover and couples for 2-, 3-, 4- or 5-way application				
2.8.5		Supply	No	40		
2.8.6		Install	No	40		
2.9		**TEST AND COMMISSION**				
2.9.1		Testing and commissioning of complete electrical installation and issuing of Certificate of Compliance	No	8		
2.10		**ADDITIONAL ELECTRICAL WORKS**				
2.10.1		Sum allowed to be utilized as instructed by electrical engineer	Sum	8	R 5 000	R 40 000
		SECTION 2: Building Services - Electrical - Carried Forward to Summary				

ITEM NO	SPEC REF.	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
		CARRIED FORWARD				
		BROUGHT FORWARD				
3.1		**REMOVE EXISTING FITTINGS**				
3.1.1		Disconnect, remove and dispose of existing geyser in bathroom	No	8		
3.2		**CIVILS WORKS**				
		Lift grass, excavate, backfill and restore to original state with compacted soil to density 93% MOD AASHTO 450mm wide and 650mm deep pipe trench in the following types of soil:				
3.2.1		Soft Soil	m3	712.8		RATE ONLY
3.2.2		Medium soil	m3	712.8		
3.2.3		Rock	m3	142.6		RATE ONLY
3.2.4		Install bedding	m3	178.2		
3.3		**FIRE PROTECTION**				
		Install and glue together Φ63 uPVC Class 9 Pipe in excavated trench on prepared bedding				
3.3.1		Supply	m	165		
3.3.2		Install	m	165		
		Install and glue together Φ32 uPVC Class 9 Pipe in excavated trench on prepared bedding				
3.3.3		Supply	m	66		
3.3.4		Install	m	66		
		Install on wall from and including stop valve to elbow and Φ32 adaptor in ground Φ25 Galvanised Pipe including saddles and elbows				
3.3.5		Supply	m	16		
3.3.6		Install	m	16		
3.3.7		Supply and install all required adaptive T-pieces, elbows and couplers for fire hose reel network	Sum	1		
3.4		**FIRE PROTECTION**				
		Supply and securely mount in Fire Hose Reel with 30m hose as shown in drawing, including couplers to existing pipework				
3.4.1		Supply	No	8		
3.4.2		Install	No	8		
		Supply and securely mount over Fire Hose Reel matching PVC enclosure including fixtures				
3.4.3		Supply	No	8		
3.4.4		Install	No	8		
		Supply and securely mount above Fire Hose Reel 290x290mm PVC Plastic sign Type FB24 (from Reflectosigns) in Aluminium frame				
3.4.5		Supply	No	8		
3.4.6		Install	No	8		
		Supply and fit in kitchen DCP 9kg fire extinguisher on backing board in position as per drawing				
3.4.7		Supply	No	8		
3.4.8		Install	No	8		
3.5		**GEYSERS**				
		Supply and install new solar 200l pressurised geyser on tiled roof top including plate collector, vacuum breakers, pressure valve, NR valve, lever valves, pipework and fittings for connection to plumbing, lagging and sundries				
3.5.1		Supply	No	8		
3.5.2		Install	No	8		
3.6		**TEST AND COMMISSION**				
3.6.1		Pressure testing and commissioning of fire hose installation and issuing of Certificate of Compliance	Sum	8		
3.6.2		Pressure testing and commissioning of geysers	Sum	16		
3.7		**ADDITIONAL MECHANICAL WORKS**				
3.7.1		Sum allowed to be utilized as instructed by mechanical engineer	Sum	8	R 10 000	R 80 000
		SECTION 3: Building Services Mechanical - Carried Forward to Summary				

ECDC CLUSTER F1
MSINTSI COURT

SUMMARY OF BILL OF QUANTITIES
ELECTRICAL & MECHANICAL

SECTION	DESCRIPTION	SUM
1	P&Gs	
2	Electrical	
3	Mechanical	
	SUBTOTAL	
5%	Profit	
5%	Attendance	
VOLUME 3: Electrical & Mechanical: Total carried to Final Summary		

Part C3: Scope of work
C3 - Scope of work

1 Background To

ECDC Vision

To be an innovative leader in promoting sustainable economic growth and development of the Eastern Cape.

Mission

To promote sustainable economic development in the Eastern Cape through focused:

a) Provision of innovative development finance
b) Leveraging of resources, strategic alliances, investment and partnerships.

Legislative Mandate

ECDC draws its mandate directly from the Eastern Cape Development Corporation Act (Act 2 of 1997) and is led by the economic development priorities of the provincial government, as detailed in the Provincial Growth and Development Plan(PGDP), Eastern Cape Provincial Industrial Development Strategy (PIDS), the policy statement and budget speech of theMember of the Executive Council (MEC) of Economic Development, Environment Affairs and Tourism (DEDEAT)

Section 3 of the ECDC Act states that the Corporation shall "plan, finance, co-ordinate, market, promote and implementdevelopment of the Province and its people in the field of industry, commerce, agriculture, transport and finance".

2 Scope of Works

2.1 General description of the works

The description and scope of works, as described hereunder are a general guide only and may be subject to change. Noliability or claim will be accepted should this information provided change or be regarded as misleading.

The work comprises the following:

Renovations & repairs to three residential properties in Butterworth, namely Bashee Court (Fitzpatrick Rd), Kyalami Flats (Scanlen St) & Msintsi Court (McKittrick St, Extension 7).

BASHEE COURT (3-storey units in blocks of 4 units per block & totalling 20 units):

- Re-building of & structural repairs to 8 no fire-damaged units & outbuildings
- Repairs & renovations to 12 no units & outbuildings
- New internal finishes & fittings to fire-damaged units
- New windows & doors to fire-damaged units
- Repairs & upgrading of finishes & fittings to remaining units
- Replacement of damaged doors & windows to remaining units
- Installation of new electrical & water meters & upgrading of fire fighting equipment for compliance
- Installation of new solar geyser system
- Upgrading of underground sewer system & replacement of missing sections of water supply pipes
- Repairs & upgrading to perimeter fence & boundary walls

KYALAMI FLATS (3-storey block of 18 units):

- Repairs & renovations to 18 units & covered parking
- Replacement of blocked underground sewers & unblocking of main sewer line to municipal connection
- Replacement of sewer stacks & vent valves to all units & surface-mounted on building façade
- Installation of new electrical & water meters & upgrading of fire fighting equipment for compliance
- Replacement of existing perimeter fence
- Structural repairs to building & courtyard slabs

MSINTSI COURT (2-storey duplex units in 4 blocks & totalling 8 units):

- Repairs & renovations to 8 units & garages
- Replacement of doors & windows
- Unblock existing underground sewers
- Installation of new electrical & water meters & upgrading of fire fighting equipment for compliance
- Installation of new solar geyser system

The works on the above-mentioned properties will be undertaken in sequence as detailed in the bid drawings in order to allow for decanting of tenants.

2.1 Variation in the Scope of Work

The Client retains the right to omit specific sections of the work prior to signing the contract and in the event that such omissions are incorporated in the contract it is hereby agreed that no claim for loss of profit will be entertained. In addition,tenderers are required to price all work in a "stand-alone fashion" so that profit/mark-up etc are such that omission of any of the tendered works will NOT render the remaining contract work viable.

2.4 Temporary works, etc.

Tenderers are advised that, in view of the nature and extent of the works temporary works are an essential part of the works. Tenderers must therefore fully examine and understand the nature and extent of the proposed works and must allow in their pricing for all access, structures, hoardings and other temporary works. Refer also to Clause 4.2: Enclosureof the Works in the Preliminaries Section of this document.

3. General

3.1 Damage to other services

The Contractor shall assume full responsibility in the event where he or any person in his service is directly or indirectly responsible for any damages caused to other services already installed (water, sewerage, storm water,roads, surveyors' pegs, etc.) Any such damage shall immediately be reported to the Principal Agent.

The Contractor shall be held fully responsible for the repair of such damage to the satisfaction of the Principal Agent.

The costs for the repair of such damage shall be borne by the Contractor. Claims by the Contractor in this connectionwill not be considered. Should any portion of the works in terms of this Contract, for which the Contractor is responsible, be damaged by other Contractors, the Contractor shall repair such damage at the tendered rate and shall submit full details of such damage to the Principal Agent so that he can recover such costs from the responsible party.

This repair work may only be done on the written instruction from the Principal Agent.
The contractor shall make provision for a full scan of the area to determine the position of services in the area.

3.2 Local labour and local authorities

Local Labour:

It is intended that the project must make maximum possible use of local labour which is presently unemployed in thearea of which the project is performed.
All unskilled labour shall be from the Local Municipal Supply area.
Engagement of local labour shall be controlled in a formal manner through the client's labour liaison body. It isfurthermore expected that the labour liaison body will assist in the monitoring of labour goals.

3.3 Liaison with Local Authorities

The contractor will have to liaise with local authorities regarding the following matters:

3.3.1 Locating of existing underground services.
3.3.2 Protection of existing services during construction.

It is the contractor's onus to immediately contact all these authorities and to accommodate their involvement in hisprogramme of work.

The contractor should also warn the authorities at least 48 hours before the actual work commence.

Compensation for delays, losses or accidents will not be considered should the contractor at any time have failed tokeep the local authorities informed.

The Principal Agent or employer must immediately be notified, should the contractor experience any problemregarding work, which involves a local authority.

3.4 Community Liaison and Community Relation

In all dealings with the community and workers employed from within the community, the Contractor shall take due cognisance of the character, culture and circumstances of the community involved and shall at all times use his bestendeavours to avoid the development of disputes and to foster a spirit of co-operation and harmony towards the project.

The Contractor shall at all times, keep the Principal Agent fully informed on all matters affecting the contractor and thecommunity, and shall attend all community meetings relating to the project as may be reasonably required by the Principal Agent.

All matters concerning the community shall be discussed and where possible, resolved at such meetings. Where any resolution of a community meeting shall be contrary to the terms and provisions of the Contract,the Contractor shall not give effect thereto without a prior written instruction from the Principal Agent.

Where the Contractor is of the opinion that any instruction of the Principal Agent issued in terms of this clause will result in the incurring of additional costs which were not provided for in his tendered rates and/or that a delay in theprogress of the works will result, he shall be entitled to submit a claim in terms of the conditions of contract.

3.5 OCCUPATIONAL HEALTH AND SAFETY ACT (ACT 85 OF 1993)

Contractors shall meet the health and safety requirements as stipulated in health and safety plan, to be prepared by theEmployer's Agent and issued to the contractor.

3.5.1 Safety Precautions

Notwithstanding the fact that the Contractor is solely responsible for the actions of his staff and any duly appointed sub-contractors, the Principal Agent reserves the right for himself, or his nominated representative, to inspect and monitor working methods and materials handling to ensure that safe working practices are being adhered to at all times.

3.5.2 Health and Safety Specifications

Please refer to Annexure A in Part C.4 for the Health and Safety Specification.

4 SMME Sub-contracting requirements

A minimum of 30% of the building work needs to be allocated to SMME Sub-contractors. Contractors will be required to supply verified monthly statements/schedules (verified by their auditors) indicating the % achieved for that month. A cumulative schedule also needs to be maintained for each month that has passed.

4. CONDITIONS SPECIFIC TO THIS BID

4.1 Responsibilities and duties

Notwithstanding the fact that a description of the services has been provided above, ECDC shall be entitled torequest additional services related to deliverables required to ensure the successful completion of the servicesset out above on such further terms and conditions as may be agreed between the parties in writing.

The service provider shall at all times faithfully and timeously carry out and perform the Services and shall use itsbest endeavours to properly conduct, improve, extend and develop the business of ECDC in the provisioning of the services.

The Services Provider shall as part of his duties, attend such meetings as may be required by ECDC from timeto time and submit weekly or monthly progress reports on the services as may be required and requested by ECDC.

4.2 Obligation to perform and sub-contracting

The bidder shall notify ECDC in writing of all subcontracts awarded under this contract if not already specified inthe bid. Such notification, in the original bid or later, shall not relieve the bidder from any liability or obligation under the contract.

The bidder shall not assign, in whole or in part, its obligations to perform under the contract, except with ECDC's prior written consent.

4.3 Performance guarantee

Within fourteen (14) days of receipt of the notification of contract award, the successful bidder shall furnish toECDC the performance security of the amount specified above.

The proceeds of the performance security shall be payable to ECDC as compensation for any loss resulting fromthe bidder's failure to complete his obligations under the contract.

The performance security shall be denominated in the currency of the contract or in a freely convertible currencyacceptable to ECDC and shall be in one of the following forms:

A bank guarantee or an irrevocable letter of credit issued by a reputable bank located in South Africa, acceptableto ECDC, in the form provided in the bid documents or another form acceptable to ECDC; or

A cashier's or certified cheque

The performance security will be discharged by ECDC and returned to the bidder not later than thirty (30) daysfollowing the date of completion of the bidder's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.

Notwithstanding the provisions above, the bidder shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to performhis obligations under the contract is the result of an event of force majeure.

4.4 Anti-dumping and countervailing duties and rights

When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, ECDC is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or anysuch anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to ECDC or ECDC may deduct such amounts from moneys (if any) which may otherwise be due to the contractor inregard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract orany other contract or any other amount which may be due to him.

4.5 ECDC facilities

Unless otherwise agreed in writing by ECDC, the Service Provider will work from its own office and provide its ownfacilities, such as transport, telephone, cell phone, fax and computer facilities to perform the services.

The service provider may use certain facilities made available by ECDC to assist in performing the services, including but not limited to computer facilities, telephone and fax facilities and stationery. In this regard the serviceprovider agrees to:

Abide by the health, safety and security measures as prescribed by ECDC from time to time;

To use such accommodation and facilities entirely at his own risk and ECDC shall not be liable for any loss or damage whatsoever and howsoever caused arising out of or in connection with the use of these items, other thanloss or damage caused as a result of ECDC's own wilful misconduct.

4.6 Force majeure

If a force majeure situation arises, the bidder shall promptly notify ECDC in writing of such condition and the casethereof. Unless otherwise directed by ECDC in writing, the bidder shall continue to perform its obligations under the contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

4.7 Insurance

The contractor shall affect and maintain all required and/or necessary insurances in accordance with Clause 12 ofthe **JBCC Series 2000 Principal Building Agreement Edition 6.2 prepared by the Joint Building Contracts Committee, May 2018**.

4.8 Responsibility to perform

Delivery of the goods and performance of services shall be made by the bidder in accordance with the timeschedule prescribed by ECDC in the contract.

If at any time during performance of the contract, the bidder or its subcontractor(s) should

encounter conditions impeding timely delivery of the goods and performance of services, the bidder shall promptly notify ECDC in writing of the fact of the delay, it's likely duration and its cause(s). As soon as practicable after receipt of the bidder's notice, ECDC shall evaluate the situation and may at his discretion extend the bidder's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the partiesby amendment of contract.

ECDC reserves the right to procure outside of the contract small quantities or to have minor essential servicesexecuted if an emergency arises, the bidder's point of supply is not situated at or near the place where the supplies are required, or the bidder's services are not readily available.

A delay by the bidder in the performance of its delivery obligations may render the bidder liable to the imposition ofpenalties, unless an extension of time is agreed upon without the application of penalties.

ECDC shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the currentprime interest rate calculated for each day of the delay until actual delivery or performance.

Where necessary, ECDC may also consider termination of the contract in accordance to the requirements of the Construction Agreement conditions applicable for administration of this contract.

4.9 Duration of the contract

The construction project duration is **15 Months** from date of appointment.
The successful Bidder shall be required to complete and submit the signed and duly completed **client recommended Construction Contract.**

Upon any delay beyond the delivery period in the case of a supplies contract, ECDC shall, without cancelling thecontract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the bidder's expenseand risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the bidder. (N/A)

4.10 Payment and tax

Payments shall only be made in accordance with the fees as quoted in this documentation. Prices charged by the bidder for goods delivered and services performed under the contract shall not vary from the prices quoted bythe bidder in this bid, except for any price adjustments authorized at ECDC's request for bid validity extension, as the case may be.

ECDC will reimburse the service provider for expenses and disbursements incurred subject to the submission ofsatisfactory proof that such expenses and disbursements have been incurred and subject to it being within the budget as indicated in this documentation.

The service provider shall from time to time during this contract duration furnish ECDC with a VAT compliant taxinvoice accompanied by a copy of the delivery note and upon fulfilment of other obligations stipulated in the contract.

Each invoice must be accompanied by a detailed timesheet and expense claim forms substantiating the amountclaimed.

Payments shall be made promptly by ECDC in Rand, but in no case later than thirty (30) days after submission ofa VAT compliant tax invoice and supporting documentation by the service provider if the services have been properly executed as agreed.

The service provider shall retain all proof of expenditure and maintain such accounts and records as are reasonably necessary, claimed above, should ECDC require an audit to substantiate that expenditure and allowsECDC's own personnel or an independent auditor access to those records.

Should the above audit reveal that ECDC has been overcharged, the Service Provider will re-imburse the ECDCthe amount overcharged within 30 days inclusive of interest calculated at prime plus 2% per annum.

A foreign bidder shall be entirely responsible for all taxes, stamp duties, license fees, and other such leviesimposed outside the Republic of South Africa.
A local bidder shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of thecontracted goods to ECDC.

C3.4 Health and Safety Specification

EASTERN CAPE DEVELOPMENT CORPORATION

PROJECT SPECIFIC OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

ECDC CLUSTER F1: REFURBISHMENT OF RESIDENTIAL PROPERTIES IN BUTTERWORTH FOR THE EASTERN CAPE DEVELOPMENT CORPORATION

CONTRACT NUMBER: ECDC/INFRA/17/092023

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1. INTRODUCTION

1.1. In terms of Construction Regulation 5(1) (*b*) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), EASTERN CAPE DEVELOPMENT CORPORATION, as the Client and/or its Agent on its behalf, shall be responsible to prepare Health & Safety Specifications for any intended construction project and provide any Principal Contractor who is making a bid or appointed to perform construction work for the Client and/or its Agent on its behalf with the same.

1.2. The Principal Contractor and Sub-contractors shall be responsible for the Health & Safety of the project and they will also provide a complete Health and safety file with all relevant documents inside as per the Construction regulation 2014.

1.3. This 'Health and Safety Specifications' document is governed by the "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), hereinafter referred to as 'The Act'. It should be noted that no single Act or its set of Regulations be read in isolation. Furthermore, although the definition of Health and Safety Specifications stipulates 'a documented specification of all health and safety requirements pertaining to associated works on a construction site, so as to ensure the health and safety of persons', it is required that the entire scope of the Labour Legislation, including the Basic Conditions of Employment Act be considered as part of the legal compliance system. With reference to this specification document this requirement is limited to all health, safety and environmental issues pertaining to the site of the project as referred to here-in. Despite the foregoing it is reiterated that environmental management shall receive due attention.

1.4. Prior to drafting the Health and Safety Plan, and in consideration of the information contained here-in, the contractor shall set up a Risk Assessment Program to identify and determine the scope and details of any risk associated with any hazard at the construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard. *This Risk Assessment and the steps identified will be the basis or point of departure for the Health and Safety Plan.* The Health and Safety Plan shall include documented 'Methods of Statement' (see definitions under Regulation 1 of Construction Regulations) detailing the key activities to be performed in order to reduce as far as reasonably practicable, the hazards identified in the Risk Assessment.

1.5. Every effort has been made to ensure that this specification document is accurate and adequate in all respects. Should it however, contain any errors or omissions they may not be considered as grounds for claims under the contract for additional reimbursement or extension of time, or relieve the Principal Contractor and contractors from his responsibilities and accountability in respect of

the project to which this specification document pertains. Any such inaccuracies, inconsistencies and/or inadequacies must immediately be brought to the attention of the Agent and/or Client.

2. SCOPE OF HEALTH AND SAFETY SPECIFICATION DOCUMENT

The Health and Safety Specifications was drafted to include the activities and risks associated with the activities during the **ECDC CLUSTER F1: REFURBISHMENT OF RESIDENTIAL PROPERTIES IN BUTTERWORTH FOR THE EASTERN CAPE DEVELOPMENT CORPORATION**

These specifications include the normal and specific requirements of **Eastern Cape Development Corporation** pertaining to the health and safety matters (including the environment) applicable to the project in question. These Specifications should be read in conjunction with the OHS Act 85, 1993 and its Regulations with specific reference to the Construction Regulations 2014. This will also include any Safety Standards which were or will be promulgated under the Act or incorporated into the Act and be in force or come into force during the effective duration of the project. The stipulations in this specification, as well as those contained in all other documentation pertaining to the project, including contract documentation and technical specifications shall not be interpreted, in any way whatsoever, to cancel or nullify any stipulation of the Act, Regulations and Safety Standards which are promulgated under, or incorporated into the Act.

3. PURPOSE

The purpose of this Health and Safety specification is to provide the **Principal Contractor (and Sub-Contractors)** with all information other than the standard conditions pertaining to construction sites which might affect the health and safety of persons at work, persons in connection with the use of plant and machinery as well as the public, end users and current people occupying the premises. It further aims to protect persons other than its employees against any potential hazards to their health and safety arising out of or in connection with the activities of persons at work during the construction work for **Eastern Cape Development Corporation**

3.1 To brief the Principle Contractor and Sub-Contractor on the significant health and safety Risks identified on the project. This shall include the provision of the following information and requirements namely:

a) safety considerations affecting the site of the project and its environment;
b) health and safety aspects of the associated structures and equipment;
c) required submissions on health and safety matters required from the Principal Contractor (and sub Contractors);
d) and the Principal Contractor's (and Sub - Contractors) health and safety plans.

3.2 To serve to ensure that the Principal Contractor (and Sub Contractors) is fully aware of what is expected from them with regards to the Occupational Health and Safety Act, 85 of 1993 and the Regulations made there-under including the applicable safety standards, and in particular in terms of Section 8 of the Act.

3.3 To inform the Principal Contractor that the Occupational Health and Safety Act, 85 of 1993 in its entirety shall apply to the contract to which this specification document applies. The Construction Regulations promulgated on 7 February 2014 and incorporated into the above Act by Government Notice R 84, published in Government Gazette 37305 shall specifically apply to all persons involved in the construction work pertaining to this project.

4. DEFINITIONS

"Purpose of the Act" –To provide for the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

"the Act" means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

"Agent" –means a competent person who acts as a representative for a client; **"Client" –**

means any person for whom construction work is performed;

"Construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration and management of resources on a construction site;

"Construction site" means a work place where construction work is being performed;

"Construction supervisor" means a competent person responsible for supervising construction activities on a construction site;

"Construction work" means any work in connection with -

(a) the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or

(b) the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work;

"Contractor" –means an employer who performs construction work;

"Designer" means-

(a) a competent person who-

(i) prepares a design;

(ii) checks and approves a design;

(iii) arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or

(iv) designs temporary work, including its components;

(b) an architect or engineer contributing to, or having overall responsibility for a design;

(c) a building services engineer designing details for fixed plant;

(d) a surveyor specifying articles or drawing up specifications;

(e) a contractor carrying out design work as part of a design and building project; or an interior designer, shop-fitter or landscape architect;

"Excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"Fall protection plan" means a documented plan, which includes and provides for—

(a) all risks relating to working from a fall risk position, considering the nature of work undertaken;

(b) the procedures and methods to be applied in order to eliminate the risk of falling; and

(c) a rescue plan and procedures;

"Health and Safety File" –means a file, or other record containing the information in writing required by the Construction Regulations;

“Health and Safety Plan” –means a site, activity or project specific documented plan in accordance with the client’s health and safety specification;

“Health and Safety Specification” –means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work;

“Method Statement” –means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment;

"Principal contractor" means an employer appointed by the client to perform construction work;

“Risk Assessment” –means a program to determine any risk associated with any hazard at a construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard.

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"Structure" means—

(a) any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
(b) any false work, scaffold or other structure designed or used to provide support or means of access during construction work; or
(c) any fixed plant in respect of construction work which includes installation, commissioning, decommissioning or dismantling and where any construction work involves a risk of a person falling;

5. OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

5.1 Organizational Structure of EHSMS Responsibilities

All responsibilities fall under the legal requirement of legal appointment letters – each responsible person must have an appointment letter.

ROLE	RESPONSIBILITIES
Client Client Agent	**The Client and/or its Agent** shall ensure that the Principal Contractor, appointed in terms of Construction Regulation 5(1) (k), implements and maintains the agreed and approved Health and Safety Plan. Failure on the part of the Client or Agent to comply with this requirement will not relieve the Principal Contractor from any duties under the Act and Regulations.
CEO – Principle Contractor	**The Chief Executive Officer** of the Principal Contractor in terms of Section 16 (1) of the OHS Act to ensure that the Employer (as defined in the Act) complies with the Act. The pro forma Legal Compliance Audit may be used for this purpose by the Principal Contractor or his/her appointed contractor.
Person responsible for Health and Safety Section 16(2)	All OHS Act (85 /1993), **Section 16 (2)** appointee/s as detailed in their respective appointment forms shall regularly, in writing, report to management on health and safety matters or deviations identified during routine or ad hoc inspections/ audits. All reports shall be made available to the principal Contractor to become part of their site records (Health & Safety File).
Construction Manager Or Assistant	The Construction Manager and Assistant Construction Supervisor/s appointed in terms of Construction Regulation 8 shall regularly, in writing, report to their managers on health and safety matters or deviations identified during inspections. All reports shall be made available to the principal Contractor to become part of site records (Health & Safety File).
SHE Representatives	All Health and Safety Representatives (SHE-Reps) shall act and report as per Section 18 of the OHS Act. She Representatives shall inspect and monitor activities on a daily basis and report findings to the Client and Health and Safety manager immediately. These safety representatives have the right to stop any unsafe work or work due to unsafe conditions and report findings and reason immediately to Management.
Other Legal Appointees	**Further (Specific) Supervision Responsibilities for OH&S** Several appointments or designations of responsible and /or competent people in specific areas of construction work are required by the OHS Act and Regulations. The following competent appointments, where applicable, in terms of the Construction Regulations are required to ensure compliance to the Act, Regulations and Safety Standards.

LEGAL APPOINTMENTS AS REQUIRED IN THE CONSTRUCTION REGULATIONS			
Item	Construction Regulation	Appointment	Responsible Person
1.	5(1)(h)	Principal contractor for each phase or project	Client / Agent
2.	6	Designer	Client / Agent
3.	7(1)(c)(v)	Contractor	Client / Agent
4.	7(2)(c)	Sub-Contractor	Principal Contractor
5.	8(1)	Construction Manager	Principal Contractor
6.	8(2)	Assistant Construction Manager	Principal Contractor
7.	8(6)	Construction Safety Officer	Principal Contractor & Sub Contractor
8.	8(7)	Construction Supervisor	Construction Manager
9.	8(8)	Assistant Construction Supervisor	Principal Contractor & Contractor
10.	9(1)	Person to carry out risk assessment	Principal Contractor & Contractor
11.	10(1)(a)	Fall protection officer	Principal Contractor & Contractor
12.	11(2)	Competent structure inspector	Principle Contractor
13.	13(1)(a)	Excavation supervisor	Principal Contractor & Contractor
14.	13(2)(b)(ii)(bb)	Professional engineer or technologist	Principal Contractor & Contractor
15.	14	Asbestos Specialist	Principal Contractor & Contractor
16.	16(1)	Scaffold supervisor	Principal Contractor & Contractor
17.	23(1)(d)(i)	Construction vehicle and mobile plant operator	Principal Contractor & Contractor
18.	23(1)(k)	Construction vehicle and mobile plant inspector	Principal Contractor & Contractor
19.	28 (a)	Stacking and storage supervisor	Principal Contractor & Contractor
20.	29 (h)	Fire equipment inspector	Principal Contractor & Contractor

This list may be used as a reference or tool to determine which components of the Act and Regulations would be applicable to a particular site, as was intended under paragraph 3 & 4 of the Chapter "Introduction" (page 4) above. This list shall not be assumed to be exclusive or comprehensive.

5.2 Communication & Liaison

5.2.1 Communication between the Employer, the Principal Contractor, Contractors, Project manager, Architect and other concerned parties shall take place in the SHE Committee or Project meeting;

5.2.2 In addition to the above, communication may be directed to the Client or Client Agent, in writing, as and when the need arises;

5.2.3 The workforce may consult on Health and Safety matters with their Supervisor or She Representative;

5.2.4 The Principal Contractor shall be responsible for the dissemination of all relevant Health and Safety information to Contractors and other Contractors e.g. design changes agreed with the Client and its Agent; instruction issued by the Client agent, exchange of information between Contractors, the reporting of hazardous/dangerous conditions/situations etc.

6. INTERPRETATION

6.1 The Occupational Health and Safety Act and all its Regulations, with the exception of the Construction Regulations, distinguish between the roles, responsibilities and functions of employers and employees respectively. It views consultants and contractors as employees of the "owner" of a construction or operational project, the "owner" being regarded as the employer. Only if formally agreed to by way of the written agreement in this regard between the "owner(s)" and consultant and /or between the "owner(s)" and the contractor(s), will these assumptions be relinquished in favour of the position agreed upon between the relevant parties;

6.2 In terms of the Construction Regulations the **"owner",** in terms of its instructions, operates (has to operate) in the role of client as per relevant definition;

6.3 The **contractors** working for the "client" are seen to be in two categories, i.e. the Principal Contractor and Sub Contractors. The Principal Contractor has to take full responsibility for the health and safety on the site of the relevant project / contract. This includes monitoring health and safety conditions and overseeing administrative measures required by the Construction Regulations from all contractors on the project site;

6.4 **Contractors** are required to operate under the control (in terms of all health and safety measures which are covered in the Construction Regulations) of the Principal Contractor. Where, for the work the **Principal Contractor** will have to execute himself, practical health and safety measures are applicable, he will also be subject to the relevant requirements with which Contractors have to comply. The Principal Contractor will, however, not have to actually fulfill such requirements in respect of any of the work / functions of any Contractors on the site for which he has been appointed as Principal Contractor. However, he has to monitor / oversee such processes, ensuring that the requirements are complied with and that the required appointments / evaluations / inspections / assessments and tests are done and that the records are duly generated and kept as prescribed in the Construction Regulations. This has to feature clearly in the Principal Contractor's Health and Safety Plan.

7. RESPONSIBILITIES

The contractor is referred to the Construction Regulations that clearly stipulate the responsibilities of the Client,, the Contractor as well as the Designer.

It is expected that all parties involved in this project will comply with the Occupational Health and Safety Act as well as all relevant regulations thereto.

8. SCOPE OF WORK

These specifications are applicable to the specific scope of work **ECDC CLUSTER F1: REFURBISHMENT OF RESIDENTIAL PROPERTIES IN BUTTERWORTH FOR THE EASTERN CAPE DEVELOPMENT CORPORATION** as detailed in the tender documents.

Renovations & repairs to three residential properties in Butterworth, namely Bashee Court (Fitzpatrick Rd), Kyalami Flats (Scanlen St) & Msintsi Court (McKittrick St, Extension 7).

BASHEE COURT (3-storey units in blocks of 4 units per block & totaling 20 units):

- Re-building of & structural repairs to 8 no fire-damaged units & outbuildings
- Repairs & renovations to 12 no units & outbuildings
- New internal finishes & fittings to fire-damaged units
- New windows & doors to fire-damaged units
- Repairs & upgrading of finishes & fittings to remaining units
- Replacement of damaged doors & windows to remaining units
- Installation of new electrical & water meters & upgrading of firefighting equipment for compliance
- Installation of new solar geyser system
- Upgrading of underground sewer system & replacement of missing sections of water supply pipes
- Repairs & upgrading to perimeter fence & boundary walls

KYALAMI FLATS (3-storey block of 18 units):

- Repairs & renovations to 18 units & covered parking
- Replacement of blocked underground sewers & unblocking of main sewer line to municipal connection
- Replacement of sewer stacks & vent valves to all units & surface-mounted on building façade
- Installation of new electrical & water meters & upgrading of firefighting equipment for compliance
- Replacement of existing perimeter fence
- Structural repairs to building & courtyard slabs

MSINTSI COURT (2-storey duplex units in 4 blocks & totaling 8 units):

- Repairs & renovations to 8 units & garages
- Replacement of doors & windows
- Unblock existing underground sewers
- Installation of new electrical & water meters & upgrading of firefighting equipment for compliance
- Installation of new solar geyser system

The works on the above-mentioned properties will be undertaken in sequence as detailed in the bid drawings in order to allow for decanting of tenants.

If at any time after commencement of the project changes are brought about to the design or construction, sufficient health and safety information and appropriate resources will be made

available to the Principal Contractor to execute the work safely. **The Principal Contractor and Contractors** –shall for the duration of the project make available Health and Safety Officer registered with the SACPCMP, competent as per the requirements indicated by the board.

According to Construction Regulation 7(1) (c) (ii) all potential contractors submitting tenders must make provision for the cost of health and safety measures during the construction process. When submitting a tender the Principal Contractor shall therefore, make provision for the cost of health and safety measures in terms of their documented Health and Safety Plan and **Eastern Cape Development Corporation** Health and Safety Specifications. The cost shall be clearly specified and quantified within the tender document under a section for health and safety. *The Health and Safety Plan is therefore to be included with the Tender documents when Tenders are invited for the Project.*

9. HEALTH AND SAFETY FILE

The Principal Contractor must, in terms of Construction Regulation 7(2) (b), keep a Main Health & Safety File at an pre- identified site office and an additional 3 (three) secondary files at the relevant active site areas at all times that must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractor and the agreements between the parties and details of work being done. A more detailed list of documents and other legal requirements that must be kept in the Health and Safety File is attached as an addendum to this document.

IMPORTANT:

The Health and Safety Files as well as the sub-contractors Health and Safety Files will remain the property of the Client and/or its Agent on its behalf throughout the period of the project and shall be consolidated and handed over to the Client and/or its Agent on its behalf at the time of completion of the project.

10. OH&S GOALS AND OBJECTIVES AND ARRANGEMENTS FOR MONITORING AND REVIEWING OH&S PERFORMANCE

The Principal Contractor is required to maintain an acceptable disabling incident frequency rate (DIFR) and report monthly on their performance to the Client or its Agent.

11. IDENTIFICATION OF HAZARDS AND DEVELOPMENT OF RISK ASSESSMENTS, STANDARD WORKING PROCEDURES (SWP) AND METHOD STATEMENTS

The Principal Contractor is required to perform risk assessments, compile Standard Working Procedures (SWP) and Method Statements for each activity executed in the contract or project The identification of hazards is over and above the hazards identification program and those hazards identified during the drafting of the Health and Safety Plan.

12. ARRANGEMENTS FOR MONITORING AND REVIEW

12.1 **Periodical Audit by Client or its Agent.**

The Client and/or its Agent on its behalf will be conducting Periodic Audits at times agreed with the Principal Contractor to comply with Construction Regulation 7(1) (*c*) (vii) to ensure that the principal Contractor has implemented, is adhering to and is maintaining the a g r e e d and approved OH&S Plan (audits must be done at least once every 30 days).

12.2 **Other audits and inspections by client or agent.**

The Client or its Agent reserves the right to conduct any ad hoc audits and inspections as it deems necessary.

A representative of the Principal Contractor and the relevant Health and Safety Representative(s) (SHE-Reps) must accompany the Client and/or its Agent on all Audits and Inspections and may conduct their own audit/inspection simultaneously. Each party will, however, take responsibility for the results of his/her own audit/inspection results. The Client or its Agent may request a copy of the Principle Contractor SHE Committee meeting minutes, reflecting possible recommendations made by that committee to the employer for reference purposes.

12.3 **Incident Investigation and Reporting**

12.3.1 The Principal Contractor shall report all incidents where an employee is injured on duty to the extent that he/she:

- Dies;
- becomes unconscious;
- loses a limb or part of a limb;
- is injured or becomes ill to such a degree that he/she is likely either to die or to suffer a permanent physical defect or likely to be unable for a period of at least 14 days either to work or continue with the activity for which he/she was usually employed.

to the Provincial Director of the Department of Labour within seven days and at the same time to the Client or its Agent.

or when:

- a major incident occurred;
- the health or safety of any person was endangered (this could be a near miss);
- where a dangerous substance was spilled;
- the uncontrolled release of any substance under pressure took place;
- machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects;
- machinery ran out of control.

to the Client or its Agent within 24 hours after occurrence.

Refer in this regard to Section 24 of the Act, Construction Regulation 5(3) & General Administrative Regulation 8.

12.3.2 The Principal Contractor is required to provide the Client and/or its Agent on its behalf with copies of all statutory reports required in terms of the Act and the Regulations;

12.3.3 The Principal Contractor is required to provide the Client and/or its Agent on its behalf with a monthly “SHE Risk Management Report”;

12.3.4 The Principal Contractor is required to provide a.s.a.p. the Client and/or its Agent on its behalf with copies of all internal and external accident/incident investigation reports including the reports contemplated in clause 12.7, 12.8.2, 15, 16, 17, 21 and 22 below. As soon as the occurrence of any accident/incident of whatever nature comes to the notice of the Principal Contractor, it shall be reported immediately to any of the following:

- Project Manager / Client / Agent; and
- Health and Safety Manager.

12.4 **Review**

The Principal Contractor is to review the Hazard Identification, Risk Assessments and Standard Work Processes at each Construction Planning and Progress Report meeting as the construction work develops and progresses. Each time changes are made to the designs, plans and construction methods and processes. These items must be reviewed;

The Principal Contractor must provide the Client and/or its Agent on its behalf, other Contractors and

all other concerned parties with copies of any changes, alterations or amendments as contemplated in the above paragraph.

12.5 Site Rules and other Restrictions

12.5.1 Site OH&S Rules

The Principal Contractor must develop a set of site-specific Health and Safety Rules that will be applied to regulate the Health and Safety Plan and associated aspects of the construction project. When required for a site by law, visitors and non-employees upon entering the site shall be issued with the proper Personal Protective Equipment (PPE) as and when necessary.

12.5.2 Security Arrangements

The Principal Contractor must establish site access rules and implement and maintain these throughout the construction period. Access control must include the rule that non-employees shall at all times be provided with fulltime supervision while on site;

Additional Access Rules may be imposed by the Project Manager or Client Agent in the interest of the safety of **Principal Contractor/Contractor** employees, visitors and customers;

The Principal Contractor must develop a set of Security rules and procedures for their allocated site and maintain these throughout the construction period. These security rules must be submitted to the Client for approval. Additional security measures or rules may be specified for risk minimization purposes;

If not already tasked to the H&S Officer appointed in terms of Construction Regulation 8(5), the Principal Contractor must appoint a competent Emergency Controller who must develop contingency plans for any emergency that may arise on site as indicated by the risk assessments. These must include a monthly practice/testing programme for the plans e.g. January: trench collapse, February: flooding etc. and practiced/tested with all persons on site at the time, participating.

12.6 Training

The contents and syllabi of all training required by the Act and Regulations including any other related or relevant training as required must be included in the Principal Contractor's Health and Safety Plan and Health and Safety File.

12.6.1 **General Induction Training**

All employees of the Principal and other Contractors must be in possession of proof of General Induction training;

12.6.2 **Site Specific Induction Training**

All employees of the Principal and other Contractors must be in possession of Site Specific Occupational Health and Safety Induction or other qualifying training.

12.6.3 **Other Training**

- All operators, drivers and users of construction vehicles, mobile plant and other equipment must be in possession of valid licenses and proof of training;
- All employees performing jobs requiring specific training in terms of the OHS Act 85, 1993 and Regulations must submit proof of such training;
- Occupational Health and Safety Training Requirements: (as required by the Construction Regulations and as indicated by the Health and Safety Specification Document & the Risk Assessment/s and recommendations by the Health and Safety Committee):
    - General Induction (Section 8 of the Act & CR 7(5));
    - Site/Job Specific Induction (also visitors) (Sections 8 & 9 of the Act & CR 7(5) &(6));
    - Site/Project Manager;
    - Construction Supervisor;
    - OH&S Representatives (Section 18 (3) of the Act);
    - Training of the Appointees indicated in 12.6.1 & 12.6.2 above;
    - Operation of Cranes (Driven Machinery Regulations 18 (11);
    - Operators & Drivers of Construction Vehicles & Mobile Plant (Construction Regulation 23);
    - Basic Fire Prevention & Protection (Environmental Regulations 9 and Construction Regulation 29);
    - As a minimum basic First Aid to be upgraded when necessary (General Safety Regulations 3);
    - Storekeeping Methods & Safe Stacking (Construction Regulation 28);
    - Emergency, Security and Fire Coordinator.

12.7 **Incident Investigation**

The Principal Contractor is responsible to oversee the investigation of all incidents. This will include first aid, medical treatment by a doctor and hospital or clinic cases. (General Administrative Regulation 9).

All incidents must be recorded in the Accident/Incident Register. (General Administrative Regulation 9).

The Principal Contractor is responsible for the investigation of all incidents as described in Section 24 (1) (b) & (c) of the Act and keeping a record of the results of such investigations including the corrective action to prevent similar incidents in future.

The Principal Contractor is responsible for the investigation of all road traffic accidents relating to the construction site and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

Notwithstanding the requirements of Section 24 of the Act, All incidents shall be investigated and reported on in writing, irrespective of whether such incident gave rise to injury or damage.

12.8 **SHE Representatives and SHE Committees**

12.8.1 **Designation of SHE Representatives**

Where the Principal Contractor employs more than 20 persons (including the employees of the Contractors) he has to appoint a minimum of one SHE Representatives, then he must appoint one for every 50 employees or part thereof. *(OHS Act85, 1993 - Section 17 and GAR 6; 7.);*

These SHE Representatives shall be designated in writing.

12.8.2 **Duties and Functions of the H&S Representatives** *(This is based on the Construction norms and is not an exhaustive list)*

The Principal Contractor must ensure that the designated SHE Representatives conduct a formal weekly inspection of their respective areas of responsibility using a checklist. All findings must be reported to the Principal Contractor. The reports shall be submitted to the Health and Safety Committee for action. Record shall be kept in the form of minutes;
SHE Representatives must take part in incident investigations;
SHE Representatives shall be members of at least one SHE Committee and attend all the SHE Committee meetings.

12.8.3 **Establishment of H&S Committee(s)**

The Principal Contractor must establish H&S Committees consisting of designated H&S Representatives together with a number of Employers Representatives appointed as per Section 19(3) that are not allowed to exceed the number of H&S Representatives on the committee. The persons nominated by the employer on an H&S Committee must be designated in writing for such period as may be determined by him. The H&S Committee shall co-opt advisory (temporary) members (who are not allowed to vote on issues discussed) and determine the procedures of the meetings including the chairmanship.

Legally, the H&S Committee must meet minimum every 3 months but it is advised that they meet at least once a month and consider, at least, the following Agenda for the *first meeting*. Thereafter the H&S Committee shall determine its own procedures as per the previous paragraph.

Agenda:

1) Opening and determining of chairmanship (only when necessary);
2) Facilities and Hygiene;
3) Housekeeping ;
4) Incidents and incident investigation; and
5) Inspection checklists and Registers: a H&S Reports and Inspections;
   b. Matters of First Aid;
   c. Scaffolding;
   d. Ladders;
   e. Excavations;
   f. Portable Electric Equipment;
   g. Fire Equipment;
   h. Explosive Power Tools;
   i. Power Hand tools;
   j. Incident Investigation reports;
   k. Pressure Equipment and vessels under pressure;
   l. Personal Protective Equipment.
6) Safety Statistics;
7) Health and Safety Awareness / Training / Posters and Symbolic signs;
8) First Aiders and First Aid equipment;
9) Demarcation of work- /hazardous-/safe areas/walkways;
10) Safety Suggestions;

11) Environmental Management;

12) General;

13) Date of Next Meeting; and

14) Closing

13. PROJECT/SITE SPECIFIC REQUIREMENTS

The following is a list of specific activities and considerations that have been identified for the project and site and for which Risk Assessments, Standard Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by the Principal Contractor:

13.1 SITE ESTABLISHMENT

13.1.1 WATER, ELECTRICITY AND SEWERAGE

(a) Water supply

The Contractor must ensure that at least 2 liters of clean drinking water are supplied for each worker on site. The contractor is not allowed to provide river water to employees.

(b) Electrical power supply

Electrical Compliance Certificate must be issued by the Electrical Contractor that attended to the connection to the electrical power supply. This document must be available for inspection in the Health and Safety file.

(c) Sewerage connection

Chemical toilets shall be provided to the contractors employees as per the Construction Regulation:

- One chemical toilet per 10 workmen shall be provided and must be screened from public view and its use shall be enforced.
- Facilities to be demarcated for males and female
- Male and Females not allowed to share facilities.

13.1.2 SITE CAMP

The Contractor's construction camp shall be fenced off and shall contain all offices, stores, workshops, toilet facilities, etc. The Principle Contractor will provide a construction camp at each active location for safekeeping of the Health and safety Documents as well as all health and safety Matters that is required by Legislation.

No personnel may reside on the Site. Only one night-watchman may be on the Site after hours."

Stacking and Storage and Parking of Plant and Vehicles will only be allowed inside the identified and barricaded site area.

13.1.2.1 Site to be kept clean

During progress of the work and upon completion thereof, the Site of the Works shall be kept and left in a clean and orderly condition. Building Rubble will be removed on a weekly basis. The rubble will be removed to a registered landfill site and the contractor will provide proof that the rubble was dumped at this registered landfill site available on their Health and Safety file.

13.1.3 EXISTING SERVICES

Eskom and Telkom overhead lines exist on the project. Eskom and Telkom would have been notified by the Engineer of the construction and issued with a set of drawings indicating the area of construction. Eskom and Telkom would be responsible to locate and re-locate if required, their own services.

13.1.4 WATER SAFE FOR CONSUMPTION

It is unknown if potable water is available in all areas along the construction site. Therefore the Contractor will be responsible to ensure that there is potable water available at all times for all persons on site. Rivers are to be treated as contaminated; therefore no water will be provided for use by the employees from rivers.

13.1.5 PUBLIC SAFETY

Construction work taking place while existing building is still occupied by end users as well as members of the public.

Sufficient communication will be necessary between the contractor and the staff and TENANTS of the **ECDC CLUSTER F1: REFURBISHMENT OF RESIDENTIAL PROPERTIES IN BUTTERWORTH FOR THE EASTERN CAPE DEVELOPMENT CORPORATION** occupying the property during construction. Special care will be taken with regards to occupants in building with reference to Dust control, Noise Control, Proper Ventilation and risk factors as identified in this document. The contractor will not be allowed to proceed with the demolishing of walls and structures if the property and belongings of the end user has not yet been moved to a safer area within the same building. All equipment and fixed property that cannot be moved will need to be covered with proper dust sheets before commence of work.

The public are to be protected at all times from construction plant.

13.1.6 ADVERSE WEATHER CONDITIONS

No work will be allowed during rain and/or thunder storms and special precaution to be taken in extreme cold or hot weather

13.2. PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

Before Earthworks or excavation work is carried out, the Contractor shall ascertain the presence and position of all services likely to be damaged or interfered with by his activities. Where necessary, excavation in close proximity to these services shall be carefully carried out with suitable hand tools, excluding picks wherever their use could damage the services.

Eskom and Telkom overhead lines exist on the project. Eskom and Telkom would have been notified by the Engineer and / or DRPW of the construction and issued with a set of drawings indicating the area of construction. Eskom and Telkom would be responsible to locate and re-locate if required, their own services.

13.3 TRAFFIC CONTROL

Traffic accommodation will be required. Contractor to ensure that Flagmen are provided and the required warning signs are displayed at all times.

13.4 DECANTING WILL BE APPLICABLE TO THREE RESIDENTIAL PROPERTIES IN BUTTERWORTH, NAMELY BASHEE COURT (FITZPATRICK RD), KYALAMI FLATS (SCANLEN ST) & MSINTSI COURT (MCKITTRICK ST, EXTENSION 7)

13.5 WORKING AT HEIGHTS, CONCRETE WORK, FORMWORK AND SUPPORT WORK, ROOF WORKS, THE PUBLIC AND EXCAVATIONS.

The active site area where work at heights, concrete work, formwork and support work, roof works and excavations will be barricaded at all times and there will be access control on site.

No one will be allowed to enter the site without reporting to management and the Health and Safety Officer.

With regards to public Safety, the contractor will ensure that the site (including stacking and storage, site offices and other facilities are demarcated with proper hording).

13.5 RE-BUILDING OF STRUCTURES & STRUCTURAL REPAIRS TO 8 NO FIRE –DAMAGE UNITS & OUTBUILDINGS AT BASHEE COURT (3 STOREY UNITS IN BLOCK 4 UNIT PER BLOCK & TOTALLING 20 UNITS

13.5.1 DEMOLITION WORK

Prior to any demolition work being carried out, the Contractor shall submit a Method Statement for approval by client and or client's agent, which includes the Risk Assessment; acceptance will then be issued to the Contractor to proceed with the demolition work. The method statement will include the following, but will not be limited to the list below:
Control Measure required as per CR 14.

- Competent person supervising the demolition work (Name, Competencies and experience) CR 14(1)
- Method statement on the procedure to be followed in demolishing the structure CR 14(2)
- Detailed structural engineering survey of the structure to be demolished is carried out by a competent person CR 14(2)
- Competent person shall check the structural integrity of the structure at intervals determined in the method statement CR 14(3)
- Conduct a Activity-based risk assessment before commence of demolition work CR 14 (4)(a)-(h); (5); (6)

Activity-based risk assessment training and attendance register

13.4.2 POSSIBLE ASBESTOS REMOVAL

Asbestos be identified. The removal of asbestos must be by an asbestos approved Contractor. The H&S specification provided by the PC is to include as much information as possible relative to the requirements relating to asbestos. An asbestos removal plan must be approved by the Department of Labour as well as approval of all general information required of Contractors.

Failure to do so will be considered a serious offence.

13.4.3 EXCAVATIONS

Excavations must be barricaded with orange netting at all times when no work is taking place inside the excavation. Access soil to be placed at least 1 meter away from the excavation edge.
No excavations may be entered by workers without an access ladder and excavations and ladders must be inspected on a daily basis, records of same to be filed in the Health and Safety file.
The Principle Contractor also needs to prevent excavations to be left open for long periods of time.
Excavations to be backfilled and compacted as soon as possible after excavated. Delay in delivery of material will not be accepted as an excuse to leave excavations open for long periods of time and the contractors will be requested to close the excavations. Sufficient signage to be in place at all times

13.4.4 WORK AT ELEVATED POSITIONS

The scope of works includes activities that will be done while in elevated positions. The Principle Contractor must ensure that the correct procedures are followed when erecting scaffolding and edge protection. No work will be allowed on the roof without the Safety Harnesses and/or edge protection depending on the heights. A Risk Assessment and Safe Work Procedure must be available on file and must be approved before commence of work by the client. This activity must also be included in the Health and Safety Plan.

13.4.5 HAZARDOUS CHEMICAL SUBSTANCES (HCS)

In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the H&S Plan that:

- Material Safety Data Sheets (MSDS's) of the relevant materials/hazardous chemical substances are available prior to use by the contractor. Mention should be made how the principal contractor is going to act according to special/unique requirements made in the relevant MSDS's. All MSDS's shall be available for inspection by the agent at all times.
- Risk assessments are to be done when new HCS are introduced on site.
- How the relevant HCS's are being/going to be controlled by referring to:
    - Limiting the amount of HCS
    - Limiting the number of employees
    - Limiting the period of exposure
    - Substituting the HCS
    - Using engineering controls
    - Using appropriate written work procedures
- The correct PPE is being used.
- HCS are stored and transported according to SABS 072 and 0228.
- Training with regards to these regulations is conducted. Proof of training to be available on file.

The H&S plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

The First Aider must be made aware of the MSDS and how to treat HCS incidents appropriately.

The following lists of products or type of substance are those that have been identified as likely to be used on the project. Where the PC is likely to supply the product as the product has not been specified, safer alternatives should be considered. Medical surveillance will be required for those

13.5 ELECTRICITY WORK

13.5.1 LOCKOUT SYSTEMS

A system of control shall be established in order that no unauthorized person can energize a circuit on which people are working or doing maintenance, even if the supply is out of commission for any period, thus eliminating injuries to people as far as is reasonably practicable.

Lock-out procedures shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs.

13.6 STORM WATER MANAGEMENT

13.6.1 DRAINAGE

Construction of drainage systems and structures will be required on the entire project. This will include excavations; formwork and support work with excavations that may exceed 1.3m in depth. Shoring of deep excavations will be required alternatively a letter of approval and confirmation and the soil conditions are stable and safe. All formwork and support work designs must be approved by a competent person and managed by a competent supervisor. Due to the size of the project several of

these activities will include Labour intensive construction methods and the contractor is requested to ensure that the ergonomic risks are identified and dealt with. Rotation of employees to be taken in consideration with Labour Intensive construction methods.

14 OUTLINED DATA, REFERENCES AND INFORMATION ON CERTAIN AND/OR SPECIFIC OBLIGATORY REQUIREMENTS TO ENSURE COMPLIANCE

Administrative & Legal Requirements

OHS Act Section/ Regulation	Subject	Requirements
Construction. Regulation 3	Application for construction work permit	Work permit to be displayed at the entrance if required.
General Admin. Regulation 4	Copy of OH&S Act (Act 85 of 1993)	Updated copy of Act & Regulations available on site. Readily available for perusal by employees.
COID Act Section 80	Registration with Compensation Insurer	Written proof of registration/Letter of good standing available on Site
Construction. Regulation 5(1)	SHE Specification and Program	SHE Spec received from Client and/or its Agent SHE Program developed and
Section 8(2)(d) of the OHS Act and Regulation 5(1) & 7 of the Construction.	Hazard Identification & Risk Assessment	Identifications of hazards/Recorded Risk Assessment and – Plan drawn up/Updated Risk Assessment Plan available on Site Employees/Contractors informed/trained
Section 16(2)	Assigned duties (Managers)	Responsibility of complying with the OH&S Act assigned to other person/s by CEO.
Construction. Regulation 8(1)	Designation of Person Responsible on Site	Competent person appointed in writing as Construction Manager with job
Construction. Regulation 8(2)	Designation of Assistant for above	Competent person appointed in writing as Assistant Construction Manager with job description

Section 17 & 18 General Administrative Regulations 6 & 7	Designation of SHE Representatives	More than 20 employees - one H&S Representative, one additional H&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified in terms of GAR 6 & 7 Meaningful H&S Rep. reports. Reports actioned by
Section 19 & 20 General Administrative Regulations 5	Health & Safety Committee/s	SHE Committee/s established. All SHE Reps shall be members of SHE Committees Additional members are appointed in writing. Meetings held monthly, Minutes
Section 37(1) & (2)	Agreement with Mandatories/ Contractors	Written agreement with Contractors List of Contractors displayed. Proof of Registration with Compensation Insurer/Letter of Good Standing (COID) Construction Manager designated Written arrangements regarding SHE Reps and Committee (OHSA Section 17,18)
Section 24 & General Admin. Regulation 8, Construction Regulation 5(3) & COID Act Sect.38, 39 & 41	Reporting of Incidents (Dept. of Labour)	Incident Reporting Procedure displayed. All incidents in terms of Sect. 24 reported to the Provincial Director, Department of Labour, within 3 days. (Annexure 1?)(WCL 1 or 2) and to the Client and/or its Agent on its behalf Cases of Occupational Disease Reported Copies of Reports available on Site Record of First Aid injuries
General Admin. Regulation 9	Investigation and Recording of Incidents	All injuries which resulted in the person receiving medical treatment other than first aid, recorded and investigated by investigator designated in writing. Copies of Reports (Annexure 1) available on Site Tabled at H&S Committee meeting Action taken by Site Management.
Construction. Regulation 10	Fall Prevention & Protection	Competent person appointed to draw up and supervise the Fall Protection Plan Proof of appointees competence available on Site Risk Assessment carried out for work at heights
Construction. Regulation 10(5)	Roof work	Competent person appointed to plan & supervise Roof work. Proof of appointees competence available on Site Risk Assessment carried out Roof work Plan drawn up/updated Roof work inspect before each shift. Inspection register kept Employees medically examined for physical & psychological fitness. Written proof on site
Construction. Regulation 11	Structures	**Information re. the structure being erected received from the Designer including:** - geo-science technical report where relevant the design loading of the structure the methods & sequence of construction - anticipated dangers/hazards/special measures to construct safely Risk Assessment carried out Method statement drawn up All above available on Site Structures inspected before each shift. Inspections

Construction Regulations 12	Temporary Works	**Competent persons appointed in writing to:** Inspect structures Ensure that design are followed
Construction. Regulation 13	Excavations	Competent person/s appointed in writing to supervise and inspect excavation work Written Proof of Competence of above appointee/s available on Site Risk Assessment carried out Inspected: before every shift after any blasting after an unexpected fall of ground after any substantial damage to the shoring after rain. Inspections register kept Method statement developed where explosives will be/ are used
Construction. Regulation 16	Scaffolding	**Competent persons appointed in writing to:** - erect scaffolding (Scaffold Erector/s) act as Scaffold Team Leaders - inspect Scaffolding weekly and after inclement weather (Scaffold Inspector/s) Written Proof of Competence of above appointees available on Site Copy of SABS 085 available on Site Risk Assessment carried out
Construction. Regulation 24/Electrical Machinery Regulations 9 & 10/ Electrical Installation Regulations	Inspection & Maintenance of Electrical Installation & Equipment (including portable electrical tools)	**Competent person appointed** in writing to inspect/test the installation and equipment. Written Proof of Competence of above appointee available on Site. Inspections: - Electrical Installation & equipment inspected after installation, after alterations and quarterly. Inspection Registers kept Portable electric tools, electric lights and extension leads must be uniquely identified/numbered. Weekly visual inspection by User/Issuer/Storeman. Register kept.
Construction Regulation 25	Use of temporary storage of flammable liquids on construction site	Flammable liquids must be stored in a way that it does not cause a fire or explosion hazard, and that the workplace is well ventilated. Suitable notices to be posted.
Construction Regulation 27	Housekeeping	Suitable housekeeping measures must be implemented to reduce the risk of injuries and damage to the structures, machinery, etc. Debris must be removed with a chute from a high place. Construction area must be
Construction. Regulation 28/ General Safety Regulation 8(1)(a)	Designation of Stacking & Storage Supervisor.	**Competent Person/s** with specific knowledge and experience designated to supervise all Stacking & Storage Written Proof of Competence of above appointee available on Site

Construction. Regulation 29/ Environmental Regulation 9	Designation of a Person to Co-ordinate Emergency Planning and Fire Protection	Person/s with specific knowledge and experience designated to co-ordinate emergency contingency planning and execution and fire prevention measures Emergency Evacuation Plan developed: - Drilled/Practiced - Plan & Records of Drills/Practices available on Site Fire Risk Assessment carried out All Fire Extinguishing Equipment identified and on *register*. Inspected weekly. And inspection register kept. Serviced annually
Construction Regulation 30	Employees Facilities	The contractor must provide and maintain in hygienic condition facilities for employees that include: Showers (1 for every 15 employees) Sanitary facilities for each sex (1 for every 30 employees) Changing facilities for each sex Sheltered eating areas
General Safety Regulation 3	First Aid	Every workplace provided with sufficient number of First Aid boxes. (Required where 5 persons or more are employed) First Aid freely available Equipment as per the list in the OH&S Act. One qualified First Aider appointed for every 50 employees.
		(Required where more than 10 persons are employed) List of First Aid Officials and Certificates Name of person/s in charge of First Aid box/es displayed. Location of First Aid box/es clearly indicated.
General Safety Regulation 2	Personal Safety Equipment (PPE)	PPE Risk Assessment carried out Items of PPE prescribed/use enforced Records of Issue kept Undertaking by Employee to use/wear PPE. PPE remains property of Employer, and is not to be removed from the premises GSR 2(4)
General Safety Regulation 9	Inspection & Use of Welding/Flame Cutting Equipment	**Competent Person/s** with specific knowledge and experience designated to Inspect Electric Arc, Gas Welding and Flame Cutting Equipment Written Proof of Competence of above appointee available on Site All new vessels checked for leaks, leaking vessels NOT taken into stock but returned to supplier immediately Equipment identified/numbered and entered into a register Equipment inspected weekly. Inspection Register kept Separate, purpose made storage available for full and empty vessels
Hazardous Chemical Substances (HCS) Regulations Construction Regulation 25	Control of Storage & Usage of HCS and Flammables	**Competent Person/s** with specific knowledge and experience designated to Control the Storage & Usage of HCS (including Flammables) Written Proof of Competence of above appointee available on Site Risk Assessment carried out Register of HCS kept/used on Site Separate, purpose made storage available for full and

Pressure Equipment Regulations	Pressure Equipment	**Competent Person/s** with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of Pressure Equipment. Written Proof of Competence of above appointee available on Site Risk Assessment carried out Certificates of Manufacture available on Site Register of Pressure Equipment on Site Inspections & Testing by Approved Inspection Authority (AIA): after installation/re-erection or repairs
Construction. Regulation 23	Construction Vehicles and Earth Moving Equipment	Operators/Drivers appointed to: Carry out a daily inspection prior to use Drive the vehicle/plant that he/she is competent to operate/drive Written Proof of Competence of above appointee available on Site. Record of Daily inspections kept
General Safety Regulation 13A	Inspection of Ladders	**Competent person** appointed in writing to inspect Ladders inspected at arrival on site and weekly thereafter. Inspections register kept. Application of the types of ladders (wooden, aluminum etc.) regulated by training and inspections and noted in register

Education & Training

Subject	Requirement
Company OH&S Policy Section 7(1)	Policy signed by CEO and published/Circulated to Employees Policy displayed on Employee Notice Boards Management and employees committed.
Company/Site SHE Rules (Section 13(a)	Rules published Rules displayed on Employee Notice Boards Rules issued and employees effectively informed or trained: written proof Follow-up to ensure employees understand/adhere to the policy
Induction & Task Safety Training (Section 13(a)	All new employees receive SHE Induction Training. Training includes Task Safety Instructions. Employees acknowledge receipt of training.
General SHE Training (Section 13(a)	All current employees receive specified SHE training: written proof Operators of Plant and Equipment receive specified training Follow-up to ensure employees understand/adhere to

Public Safety, Security Measures & Emergency Preparedness

Subject	Requirement

Notices &Signs	Notices & Signs at entrances / along perimeters indicating **"No Unauthorized Entry".** Notices & Signs at entrance instructing visitors and non - employees what to do, where to go and where to report on entering the site/yard with directional signs. e.g. **"Visitors to report to Office"** Notices & Signs posted to warn of overhead work and other hazardous activities. e.g. **General Warning Signs**
Site Safeguarding	Nets, Canopies, Platforms, Fences etc. to protect members of the public passing / entering the site.
Security Measures	Access control measures/register in operation Security patrols after hours during weekends and holidays Sufficient lighting after dark Guard has access to telephone/ mobile/other means of emergency communication
Emergency Preparedness	Emergency contact numbers displayed and made available to Security & Guard Emergency Evacuation instructions posted up on all notice boards (including employees' notice boards) Emergency contingency plan available on site/in yard Doors open outwards/unobstructed Emergency alarm audible all over (including in toilets)
Emergency Drill and Evacuation	Adequate No. of employees trained to use Fire Fighting Equipment. Emergency Evacuation Plan available displayed and practiced.

Personal Protective Equipment

Subject	Requirement
PPE needs analysis	Need for PPE identified and prescribed in writing. PPE remain property of Employer, not to be removed from premises GSR 2(4)
Head Protection 	All persons on site wearing Hardhats including Contractors and Visitors (where prescribed)
Foot Protection 	All employees on site wearing Safety Footwear including Gumboots for concrete / wet work and non-slip shoes for roof work. Visitors to wear same upon request or where prescribed
Eye and Face Protection 	Eye and Face (also Hand and Body) Protection (Goggles, Face Shields, Welding Helmets etc.) used when operating the following: Jack/ Kango Hammers Angle / Bench Grinders Electric Drills (Overhead work into concrete / cement / bricks Explosive Powered tools Concrete Vibrators / Pokers Hammers & Chisels Cutting / Welding Torches Cutting Tools and Equipment Guillotines and Benders Shears Sanders and Sanding Machines CO2 and Arc Welding Equipment Skill / Bench Saws Spray Painting Equipment etc.

Hearing Protection 	Hearing Protectors (Muffs, Plugs etc.) used when operating the following: Jack / Kango Hammers Explosive Powered Tools Wood/Aluminum Working Machines e.g. saws, planers, routers
Hand Protection 	Protective Gloves worn by employees handling / using: Cement / Bricks / Steel / Chemicals Welding Equipment Hammers & Chisels Jack / Kango Hammers etc.
Respiratory Protection 	Suitable/efficient prescribed Respirators worn correctly by employees handling / using: Dry cement Dusty areas Hazardous chemicals Angle Grinders Spray Painting etc.
Fall Prevention Equipment 	Suitable Safety harnesses / Fall Arrest Equipment correctly used by persons working on / in unguarded, elevated positions e.g.: Scaffolding Riggers Lift shafts Edge work Ring beam edges etc. Other methods of fall prevention applied e.g. catch nets
Protective Clothing	All jobs requiring protective clothing (Overalls, Rain Wear, Welding Aprons etc.) Identified and clothing worn.

Housekeeping

Subject	Requirement
Scrap Removal System	All items of Scrap/Unusable Off-cuts/Rubble and redundant material removed from working areas on a regular basis. (Daily) Scrap/Waste removal from heights by chute/hoist/crane. Nothing thrown/swept over sides. Scrap disposed of in designated containers/areas Removal from site/yard on a regular basis.

Stacking & Storage (See Section 1 for Designation & Register)	Stacking: * Stable, on firm level surface/base. Prevent leaning/collapsing Irregular shapes bonded Not exceeding 3x the base Stacks accessible * Removal from top only. Storage: Adequate storage areas provided. Functional – e.g. demarcated storage areas/racks/bins etc. Special areas identified and demarcated e.g. flammable gas, cement etc. Neat, safe, stable and square. Store/storage areas clear of superfluous material. Storage behind sheds etc. neat/under control. Storage areas free from weeds, litter etc.
Waste Control/Reclamation	Re-usable off-cuts and other re-usable material removed daily and kept to a minimum in the work areas. All re-usable materials neatly stacked/stored in designated areas. (Nails removed/bent over in re-usable timber). Issue of hardware/nails/screws/cartridges etc. controlled and return of unused items monitored.
Contractors (Housekeeping)	Contractors required to comply with Housekeeping requirements.

Working at Heights (including roof work)

Subject	Requirement
Openings	Unprotected openings adequately guarded/fenced/barricaded/catch nets installed
Roof work	Roof work discontinued when bad/hazardous weather Fall protection measures (including warning notices) when working close to edges or on fragile roofing material Covers over openings in roof of robust construction/secured against displacement

Scaffolding / Formwork / Support Work

Subject	**Requirement**

Access/System Scaffolding	Foundation firm / stable Sufficient bracing. Tied to Structure/prevented from side or cross movement Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Complying with OH&S Act/SABS 085
Free Standing Scaffolding	Foundation firm / stable Sufficient bracing. Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs Height to base ratio correct Outriggers used /tied to structure where necessary Complying with OH&S Act/SABS 085
Mobile Scaffolding	Foundation firm / stable Sufficient bracing. Platform boards in good condition/sufficient/secured. Handrails and toe boards provided. Access ladders / stairs provided. Area/s under scaffolding tidy. Safe/unsafe for use signs
Mobile Scaffolding	Wheels / swivels in good condition Brakes working and applied. Height to base ratio correct. Outriggers used where necessary Complying with OH&S Act/SABS 085
Formwork / Support Work	All components in good condition. Foundation firm / stable. Adequate bracing / stability ensured. Good workmanship / uprights straight and plumb. Good cantilever construction. Safe access provided.

	Areas under support work tidy. Same standards as for system scaffolding.
Edges & Openings	Edges barricaded to acceptable standards. Manhole openings covered / barricaded. Openings in floor / other openings covered, barricaded/fenced. Stairs provided with handrails. Lift shafts barricaded / fenced off.

Ladders

Subject	Requirement
Physical Condition / Use & Storage	Stepladders - hinges/stays/braces/stiles in order. Extension ladders - ropes/rungs/stiles/safety latch/hook in order. Extension / Straight ladders secured or tied at the bottom / top. No joined ladders used Wooden ladders are never painted except with varnish Aluminum ladders NOT to be used with electrical work All ladders stored on hooks / racks and not on ground. Ladders protrude 900 mm above landings / platforms / roof. Fixed ladders higher than 5 m have cages/Fall arrest system

Electricity (as part of, or additional to the manual "Safety & Switching Procedures for Electrical Installations" - see attached document)

Subject	Requirement
Electrical Distribution Boards & Earth Leakage	Color coded / numbered / symbolic sign displayed. Area in front kept clear and unobstructed. Fitted with inside cover plate / openings blanked off / no exposed "live" conductors / terminals/Door kept close Switches / circuit breakers identified. Earth leakage protection unit fitted and operating. Tested with instrument: Test results within 15 – 30 milliamps Aperture/Opening/s provided for the plugging in and removal of extension leads without the need to open the door Apertures and openings used for extension leads to be protected against the elements and especially rain
Electrical Installations & Wiring	Temporary wiring / extension leads in good condition / no bare or exposed wires. Earthing continuity / polarity correct: **Looking at the open connectors to connect the wiring, the word "Brown" has the letter 'R' in it, so the b'R'own wire connects to the 'R'ight hand connector. "Blue" has the letter 'L' in it, so the b'L'ue wire connects to the 'L'eft hand connector.** Cables protected from mechanical damage and moisture. Correct loading observed e.g. no heating appliance used from lighting circuit etc. Light fittings/lamps protected from mechanical damage/moisture. Cable arrestors in place and used inside plugs
Physical condition of Electrical Appliances & Tools	Electrical Equipment and Tools: (includes all items plugging in to a 16 Amp supply socket) Insulation / casing in good condition. Earth wire connected/intact where not of double insulated design Double insulation mark indicates that no earth wire is to be connected. Cord in good condition/no bare wires/secured to machine & plug. Plug in good condition, connected correctly and correct polarity.

Emergency and Fire Prevention and Protection

Subject	Requirement
Fire Extinguishing Equipment 	Fire Risks Identified and on record <u>The correct and adequate Fire Extinguishing Equipment available for:</u> Offices General Stores Flammable Store Fuel Storage Tank/s and catchment well Gas Welding / Cutting operations Where flammable substances are being used / applied. * Equipment Easily Accessible
Maintenance	Fire equipment checked minimum monthly, serviced yearly
Location & Signs	<u>Fire Extinguishing Equipment:</u> Clearly visible Unobstructed Signs posted including “No Smoking” / “No Naked Lights” where required. (Flammable store, Gas store, Fuel tanks etc.)
Storage Issue & Control of Flammables (incl. Gas cylinders 	Storage Area provided for flammables with suitable doors, ventilation, bund etc. Flammable store neat / tidy and no Class A combustibles. Decanting of flammable substances carried out in ignition free and adequately ventilated area. Container bonding principles applied Only sufficient quantities issued for one task or one day’s usage Separate, special gas cylinder store/storage area. Gas Cylinders stored / used / transported upright and secured in trolley/cradle/structure and ventilated. Types of Gas Cylinders clearly identified as well as the storage area and stored separately. Full cylinders stored separately from empty cylinders. All valves, gauges, connections, threads of all vessels to be checked regularly for leaks. Leaking acetylene vessels to be returned to the supplier **IMMEDIATELY**.
Storage, Issue & Control of Hazardous Chemical Substances (HCS) 	HCS storage principles applied: products segregated Only approved, non-expired HCS to be used Only the prescribed PPE shall be used as the minimum protection Provision made for leakage/spillage containment and ventilation Emergency showers/eye wash facilities provided HCS under lock & key controlled by designated person Decanted/issued in containers as prescribed with information/warning labels Disposal of unwanted HCS by accredited disposal agent No dumping or disposal of any HCS on or inside the storage area or anywhere else on the project site All vessels or containers to be regularly checked for leaks

Excavations

Subject	Requirement
Excavations deeper than 1.5 m. Based on the risk assessment.	Shored / braced to prevent caving / falling in. Provided with an access ladder. Excavations guarded/barricaded/lighted after dark in public areas Soil dumped at least 1 m away from edge of excavation • On sloping ground soil dumped on lower side of excavation • All excavations are subject to daily inspections

Tools

Subject	Requirement
Hand Tools	<u>Shovels / Spades / Picks:</u> • Handles free from cracks and splinters Handles fit securely • Working end sharp and true <u>Hammers:</u> Good quality handles, no pipe or reinforcing steel handles. Handles free from cracks and splinters • Handles fit securely <u>Chisels:</u> No mushroomed heads / heads chamfered Not hardened • Cutting edge sharp and square <u>Saws:</u> Teeth sharp and set correctly * Correct saw used for the job
Explosive Powered Tools.	Only used by trained / authorized personnel. Prescribed warning signs placed / displayed where tool is in use. Work area must be properly isolated/demarcated during use of tool. Inspected at least monthly by competent person and results recorded. Issue and return recorded including cartridges / nails and unused cartridges / nails / empty shells recorded. Cleaned daily after use.

Transport & Materials Handling Equipment

Subject	Requirement
Site Vehicles	All Site Vehicles, Dumpers, Bobcats, Loaders etc.; checked daily before use by driver / operator. Inventory of vehicles used/operated on site Inspection by means of a checklist / results recorded. No persons riding on equipment not designed or designated for passengers. Site speed limit posted, enforced and not exceeded. Drivers / Operators trained / licensed and carrying proof. No unauthorized persons allowed to drive / operate equipment.

Site Plant and Machinery

Subject	Requirement
Brick Cutting Machine	Operator Trained. Only authorized persons use the machine. Emergency stop switch clearly marked and accessible. Area around the machine dry and slip/trip free/clear of off-cuts All moving drive parts guarded/electrical supply cable protected Operator using correct PPE - eye/face/hearing/foot/hands/body.
Electric Arc Welder	Welder Trained. Only authorized / trained persons use welder. Earth cable adequately earthed to work. Electrode holder in good condition/safe Cables, clamps & lugs/connectors in good condition. Area in which welding machine is used is dry/protected from wet. Welder using correct PPE - eye/ face/foot/body/respirator. Correct transparent screens & warning signs placed
Concrete Mixer	Top platform provided with guardrails. Dust abatement methods in use. Operators using correct PPE - eye / hands / respirators. All moving drive parts guarded. Emergency stops identified / indicated and accessible. Area kept clean/dry/and free from tripping and slipping hazards. Operator’s overseer identified and crane signals displayed and used.
Gas Welding / Flame Cutting Equipment	Only authorized/trained persons use the equipment. Torches and gauges in good condition. Flashback arrestors fitted at cylinders and gauges. Hoses in good condition/correct type/all connections with clamps. Cylinders stored, used and transported in upright position, secured in trolley / cradle / to structure. All cylinders regularly checked for leaks, leaking cylinders returned immediately. Fire prevention/control methods applied/hot work permits.

Plant & Storage Yards/Site Workshops Specifics

Subject	Requirements
Section 8(2)(1) General Machinery Regulation 2(1): Supervision of the Use & Maintenance of Machinery	Person/s with specific knowledge and experience designated in writing to supervise the Use & Maintenance of Machinery. Critical items of Machinery identified/numbered/placed on register/inventory. Inspection/maintenance schedules for abovementioned. Inspections/maintenance carried out to above schedules. Results recorded.
General Machinery Regulation 9(2): Notices re. Operation of Machinery	Schedule D Notice posted in Work areas.
Pressure Equipment Regulation 13(1)(b): Supervision of the Use & Maintenance of Vessels under Pressure or Pressure Equipment	Person/s with specific knowledge and experience designated in writing to supervise the Use &Maintenance of Pressure Equipment. Pressure Equipment identified/numbered/placed on register/Manufacturers plate intact. Inspection/maintenance carried out according to schedule. Results recorded/Test certificates available.
Lock-out Procedure	Lock-out procedure in operation
Ergonomics	Ergonomics survey conducted – results on record. Survey results applied.
Demarcation & Color Coding	Demarcation principles applied All services, pipes, electrical installation, stop-start controls, emergency controls etc. colour coded to own published or SABS standard Employees trained to identify colour coding
Portable & Bench Grinders	Area around grinder clear/trip/slip free Bench grinders mounted securely/grinder generally in good condition/No excessive vibration On/Off switch/button clearly demarcated/accessible Adequate guards in place Tool rest – secure/square/max. 2 mm gap, perpendicular to drive shaft Stone/disk - correct type and size/mounted correctly/dressed Use of Eye protection enforced
Battery Storage & Charging	Adequately ventilated, ignition free room/area/no smoking sign/s Batteries placed on rubber/wooden surface Emergency shower/eye wash provided No acid storage in area Prescribed methods in place and adhered to when charging batteries
Presses/Guillotines/ Shears	Only operated by trained/authorised persons Interlocks/lock-outs fitted/PPE worn or used at all times

Workplace Environment, Health and Hygiene

Subject	Requirement
Lighting	Adequate lighting in places where work is being executed e.g. stairwells and basements. Light fittings placed / installed causing no irritating/blinding glare. Stroboscopic effect eliminated (not only reduced) where moving objects or machinery is
Ventilation	Adequate ventilation / extraction / exhausting in hazardous areas e.g. chemicals / adhesives / welding / petrol or diesel/ motors running and in confined spaces /
Noise	Tasks identified where noise levels exceeds 85 dB at any one time. All reasonable steps taken to reduce noise levels at the source.
Heat Stress	Measures in place to prevent heat exhaustion in heat stress problem areas e.g. steel decks, when the WBGT index reaches 30. (See Environmental Regulation 4) Cold drinking water readily available at all times.
Ablutions	Sufficient hygiene facilities provided - 1 toilet per 30 employees (National Building Regulations prescribe chemical toilets for Construction sites) Toilet paper available. Sufficient showers provided. Facilities for washing hands provided. Soap/cleaning agent available for washing hands. Means of drying hands available. Lock-up changing facilities / area provided. Ablution facilities kept hygienic and clean.
Eating / Cooking Facilities	Adequate storage facilities provided. Weather protected eating area provided, separate from changing area. Refuse bins with lids provided. Facilities kept clean and hygienic.
Pollution of Environment	Measures in place to minimize dust generation. Accumulation or littering of empty cement pockets, plastic wrapping / bags, packing materials etc. prevented. Spillage / discarding of oil, chemicals and dieseline into storm water and other drains or into existing or newly dug holes/cavities on site
Hazardous Chemical Substances	All substances identified and list available e.g. acids, flammables, poisons etc. Material Safety Data Sheets (MSDS) indicating hazardous properties and emergency procedures in case of incident on file and readily available. Substances stored safely. Expiry dates meticulously checked where applicable.

15 GENERAL NOTES TO THE PRINCIPAL CONTRACTOR

Legal Framework and obligations

The more important Acts and relevant subordinate/secondary legislation as well as other (inter alia Local Government) legislation that also apply to the project as well as to project owned buildings and premises: -

(i) The latest issue of SABS 0142: "Code of Practice for the Wiring of Premises";

(ii) The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority;

(iii) The Fire Brigade Services Act 1987, Act 99 of 1987 as amended;

(iv) National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378

of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008; (SANS 100400);

(v) The Post Office Act 1958 (Act 44 of 1958) as amended;
(vi) The Electricity Act 1984, Act 41 of 1984;
(vii) The Regulations of Local Gas Board(s), including Publications of the SABS Standards and Codes of Practice, with specific reference to GNR 17468 dated 4th October 1997;
(viii) Legislation pertaining to water usage and the environment;
(ix) Legislation governing the use of equipment, which may emit radiation (e.g. X-Rays etc.)
(x) Common Law

Legal Liabilities

Common Law and Legislation Based

on two main criteria –

- Would the reasonable person have foreseen the hazard?
  That is a reasonable person in that specific position, taking experience, qualifications, authority, position in the organization etc. into consideration

- Would the reasonable person have taken precautionary measures (action) to prevent or limit the hazard?

Negligence can be proven on failure on **any** or **both** of the above criteria (There may not necessarily be a relationship between criminal and civil liability!)

16 **HOUSE KEEPING**

Good housekeeping will be maintained at all times as per Construction Regulation No. 27. Poor housekeeping contributes to three major problems, namely, costly or increased accidents, fire or fire hazards and reduction in production. Good housekeeping will enhance production time.

Particular emphasis is to be placed on the following crucial elements of a construction site:

- Phase priorities and production/plant layout;
- Enclosures;
- Pits, openings and shoring;

- Storage facilities;
- Effective, sufficient and maintained lighting or illumination;
- Principal sources of injuries e.g. stairways, runways, ramps, loose building material;
- Oil, grease, water, waste, rubble, glass, storm water;
- Color coding;
- Demarcations;
- Pollution;
- Waste disposal;
- Ablution and hygiene facilities; and
- First aid.

This list must not be taken to be exclusive or exhaustive!

In promotion of environmental control all waste, rubble, scrap etc, will be disposed of at a registered dump site and records will be maintained. Where it is found to be impractical to use a registered dump site or it is not available, the Principal Contractor will ensure that the matter is brought to record with the client or his representative, after which suitable, acceptable alternatives will be sought and applied.

Dross and refuse from metals, and waste matters or by-products whose nature is such that they are poisonous or capable of fermentation, putrefaction or constituting a nuisance shall be treated or disposed of by methods approved of by an inspector.

No employer (Principal Contractor) shall require or permit any person to work at night or after hours unless there is adequate, suitable artificial lighting including support services in respect of Health and Safety.

17 LOCKOUT SYSTEMS - ELECTRICAL

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.
Physical/mechanical lock-out systems shall be part of the safety system and included in training.
Lockouts shall be tagged and the system tested before commencing with any work or repairs.

18 **INCIDENT INVESTIGATION**

Inspection and reporting is the best way in which a responsible contractor can control his area of responsibility. All incidents therefore, irrespective of whether it gave rise to loss, injury, damage or not, shall be investigated and the results recorded in the Health and Safety File.

19 **GENERAL**

The project under control of the Principal Contractor shall be subject to periodic health and safety audits that will be conducted by the client at intervals agreed upon between the Principal Contractor and the client, provided such intervals will not exceed periods of one month. The Principal Contractor is to ensure that he/she and all persons under his control on the construction site shall adhere to the above specifications, as non-conformance will lead to the client taking action as directed by Construction Regulation 5.1(q). The Principal Contractor should note that he/she shall be held liable for any anomalies including costs and resulting deficiencies due to delays caused by non-conformance and/or non-compliance to the above Health and Safety Specifications and the Health and Safety Plan based on these specifications.

20 **IMPORTANT LISTS AND RECORDS TO BE KEPT**

The following are lists of several records that are to be kept in terms of the Construction Regulations. The lists are:

- List of appointments;
- List of record keeping responsibilities; and
- Inspection checklist.

These lists and documents are to be used as a point of reference to determine which components of the Act would be applicable to a particular site or task or project, as was intended under paragraph 1 (“Preamble”) above.

LIST OF APPOINTMENTS

See clause 5.1 of appointments needed

LIST OF RECORD KEEPING RESPONSIBILITIES

ITEM	CR	RECORD TO BE KEPT	SPONSIBLE PERSON
1.	3(2)	Application for construction work permit to Provincial Director – Annexure 1, where applicable Available on site	Client
2.	5(1)(m)	Copy of Principal Contractor's Health & Safety Plan Available on request	Client
3.	7(d)	Copy of Principal Contractor's Health & Safety Plan As well as each Contractor's Health & Safety Plan Available on request	Principal Contractor
4.	7(b)	Health and Safety File opened and kept on site (including all documentation required i.t.o. OHSA & Regulations Available on request	All Contractor
5.	7(e)	Consolidated Health and Safety File handed to Client on completion of Construction work. To include all documentation required i.t.o. OHSA & Regulations and records of all drawings, designs, materials used and similar information on the structure	Principal Contractor
6.	7(f)	Comprehensive and Updated List of all Contractors on site, the agreements between the parties and the work being done Included in Health and Safety file and available on request	Principal Contractor
7.	8(6)	Keep record on the Health and Safety Officers registration with a statutory body approved by the Chief Inspector.	Contractor
8.	9(1)	Risk Assessment - Available on site for inspection	Contractor
9.	7 (5)	Proof of Health and Safety Induction Training	Every Employee on site
10.	10(3)	Construction Manager [CR 8(1)] has latest updated version of Fall Protection Plan [CR 10(1)]	Contractor
11.	11(2)(b)	Record of inspections of the structure [First 2 years – once every 6 months, thereafter yearly] - Available on request	Owner of Structure
12.	11(2)(c)	Maintenance records - safety of structure - Available on request	Owner of Structure
13.	13(2)(h)	Record of excavation inspection - On site available on request	Contractor
14.	23(1)(k)	Findings of daily inspections (prior to use) of Construction Vehicles and Mobile Plant	Contractor
15.	24(d)	Record of temporary electrical installation inspections [once a week] and electrical machinery [daily before use] in a register and kept on site	Contractor
16.	29(*l*)	Fire Evacuation Plan	Contractor

INSPECTION CHECKLIST

EMPLOYER DETAILS	
Employer:	
Registered Name of Enterprise:	
Trade Name of Enterprise:	
Company Registration No.:	
SARS Registration No.:	
UIF Registration No.:	
COIDA Registration No.:	
Relevant SETA for EEA purposes:	
Industry Sector:	
Bargaining Council:	
Contact Person:	
Address of Premises:	
Postal Address:	
Telephone Number:	
Fax Number:	
E-mail Address:	
Chief Executive Officer:	
Chief Executive Officer Address:	
Competent Person:	
Maximum power demand: in KW	
Health and Safety Representatives:	
Activities, products manufactured and/ services rendered:	
Raw materials, materials and chemical/ biological substances:	
Total Number of Employees:	Male: Female:

CONTRACTOR INFORMATION	
Contractors:	
Site Address:	
Contracts Manager:	
Managing Director:	
Competent Persons:	
CR16: SCAFFOLDING:	
CR10(1)(a): FALL PROTECTION:	
CR13(1)(a): EXCAVATION WORK:	
CR28(a): STACKING	

DOCUMENTS				
GAR 9(1)	Records of Incidents			
GAR 4	Copy of the Act			
GAR 7	Safety Reps Report			
GAR 8	Safety Committee Minutes			
CR 3(3)	Application for construction work permit			
CR 4	Notification of Construction Work			
CR 9(2)	Risk Assessment			
CR 9(9)(e)	Proof of the Health & Safety Induction Training			
CR 13(13)(h)	Inspection of Excavation (Records)			
CR 23(11)	Mobile Plant Operator Medical Certificate			
CR24(d)	Temporary Electrical Installation Record			
CR 7(1)(b)	Health & Safety File			
	Scaffolding Log Book			
CR 7(8)	Medical Certificate of Fitness			
CR 23(1)(I)	Construction Vehicle & Mobile Plant Register			
CR 24(d)	Electrical Installation & Machinery Register			
INCIDENTS				
GAR 8(1) S24	Reported			
GAR 9(1)	Recorded, Investigated and action taken			
PUBLIC SITE				
FR 2(1)	Sanitary Facilities			
NB Notice	Pedestrian warning			
PERSONAL SAFETY EQUIPMENT				
GSR 2(3)	Items Issued:			
GSR 2(3)	Items Required:			
S23	(What is the payment on each item?)			
SAFETY PLANS				
FIRST AID				
GSR 3(6)	Name(s) of First Aider(s):			

CR 5(1)(b)	Client's Health & Safety Specification			
CR7(1)(b)	Principal's contractor H&S Plan			
FIRE HAZARD & PRECAUTIONS				
GSR 4	Flammables used, waste, hot work, diesel, fuel, gas			
ER 9(1)	Portable Extinguishers			
ELECTRICAL INSTALLATIONS & MACHINERY				
CR24	Guarding & PPE to Electrical Installations			
ILLUMINATION				
ER 3(6)	Dangerous Places and signage as well			
ER 3	Housekeeping			
ER6(2)(b),(c),(d)	Clear space storage			
ER6(3)	Disposal of waste			
EXCAVATIONS				
CR 13(3)(l)	Barricades (plus illumination!)			
CR 13(3)(c)	Safe Depth Shoring/Bracing			
CR 13(1)(a)	Monitored			
CR 13(3)(h)	Excavation Inspection Record			
GUARDING				
ER 6(2)(f)	Floor Openings (plus illumination!)			
	Floor slab sides, Shafts (plus illumination!)			
SITE EQUIPMENT				
GSR 13A(a)	Ladders condition, secured			
SANS 10085	Scaffold condition, secured			
SANS 10085	Platforms no. of boards condition Support 1.25. Toe Boards			
SANS 10085	Hand Rails			
SITE MACHINES				
DMR 3(2)(3)	Circulars, guards, riving knives			
GMR 3	Mixers guarded			
ELECTRIC POWER				
EMR 6(1)	Switchboards			
GMR	Condition of Tools, Leads, Plugs, etc			
ROOF WORK				
CR 10(1)	Safety equipment & precautions			
CR 10(2)	Fall protection plan			
CR 10(3)	Updated fall protection plan			
CR 10(5)	Roof Work			
CEMENT				
AR 10(a)	Suitable Tools			

C3.4.1 Baseline Risk Assessment

HAZARD IDENTIFICATION AND RISK ASSESSMENT	BASELINE RISK ASSESSMENT		SAFETY HEALTH ENVIRONMENTAL MANAGEMENT SYSTEM
	PREPARED BY:	Barinda Gretton	
	APPROVED BY:	Mr C Futshane	
	CURRENT REVISSION:	0	
	PREVIOUS REVISSION:	N/A	

PROJECT NAME :

ECDC CLUSTER F1 : REFURBISHMENT OF RESIDENTIAL PROPERTIES IN BUTTERWORTH FOR THE EASTERN CAPE DEVELOPMENT CORPORATION

PROJECT NUMBER:

TBA

DATE OF ASSESSMENT:

30TH OF AUGUST 2023

low	med	high
1	4	12
2	6	18
3	8	27

Risk Rating multiplier: Low = 1; Medium = 2; High = 3

The base line risk assessment is to highlight hazards emanating from project risks identified. This list of risks is therefore not the replacement of the contractor's risk assessment but rather to point the contractor towards some risks he might not be aware of during tendering stage and while conducting his formal risk assessment.

Note, this HIRA is a guide only and does not cover all risks. It must be read in conjunction with the Site Specific OHS Specification in the Contract document. The Contractor must supply a full risk assessment for all activities on site

					Baseline risk					Residual risk				
REF where appropriate	Operation	Hazard	Design Risks identified as present	Describe the obvious control measures to be part of design	Likely consequences of an incident	Frequency of Exposure	Probability of harm	Risk rating and risk category	Extra control measures necessary to reduce risk / Redesign by Client and / or Designer	Likely consequences of an accident	Frequency of Exposure	Probability of harm	Risk rating and risk category	Accountability
DECANTING														
	Decanting of the current tenants	Relocation	Injuries during relocations	Use of the correct equipment and vehicles for the relocation, Proper training of staff	3	3	3	27	Experienced supervision by site staff and P A. Competent Inspection	3	2	2	12	Contractor, Construction Manager, CHSO, Social Developer
			Accidents during relocation	Use of prperly trained people for the driving of vehicles, Porper training of staff	3	2	3	18	Experienced supervision by site staff and P A. Competent Inspection	2	2	2	8	
			Physical and mental wellbeing of the tenants	Communication between the contractor and the tenants	2	1	1	2	Involvement of a Social Developer	2	1	1	2	

			Exposure to HCS during relocation	Erect warning signs, inform workers of Risks, correct measures and protocols in place duing activities	3	2	2	12	Experienced supervision by site staff and P A. Competent Inspection	3	1	2	6	
DECANTING														
		Cultural and social Impact	Disruptions of everyday life	Communication between the contractor and the tenants. Proper Planing	3	1	1	3	Involvement of a Social Developer	3	1	1	3	Contractor, Construction Manager, CHSO, Social Developer
		Legal and Human Rights	Processes not adhering to Legilsation	Communication between the contractor and the tenants. Proper Planing	2	1	2	4	Involvement of a Social Developer	2	1	1	2	Contractor. Construction Manager. CHSO. Social developer
		Communication and Information	Lack of communication	Communication between the contractor and the tenants. Proper Planing	3	2	2	12	Involvement of a Social Developer	3	1	2	6	Contractor, Construction Manager, CHSO, Social Developer
		Vulnerable Groups	Children, elderly and disabled individuals	Communication between the contractor and the tenants. Proper Planing	3	2	2	12	Involvement of a Social Developer	2	2	2	8	Contractor, Construction Manager, CHSO, Social Developer
SITE ESTABLISHMENT														
CR 24	Existing Services	Electrical	Contact with electrical cable overhead	Erect warning signs, inform workers	3	3	3	27	Experienced supervision by site staff and P A. Competent Inspection	3	2	2	12	Contractor, Construction Manager, CHSO
			Contact with underground cable	Erect warning signs, inform workers	3	3	3	27	Experienced supervision by site staff and P A. Competent Inspection	3	2	2	12	
			Use of equipment under HV cable	Erect warning signs, inform workers no work under cable without permission and compliance with ESCOM requirements	3	3	3	27	Experienced supervision by site staff and P A. Competent Inspection	3	2	2	12	
		Water	Underground pipes	Care in excavation	2	2	2	8	Experienced supervision by site staff and P A. Competent Inspection	2	2	1	4	Contractor. Construction Manager. CHSO
		Telephone	Overhead cables	Erect warning signs, inform workers	1	3	2	6	Experienced supervision by site staff and P A. Competent Inspection	1	1	1	1	Contractor, Construction Manager, CHSO
LIFTING EQUIPMENT														
CR22	Lifting Equipment	Uneven ground, loose soft soil, overhead power lines or other obstructions	Machine could tilt or become bogged down and causing a dangerous situation. Resulting in injury/property damage/Death	Correct inspection and evaluation of the working area. Ensure working area is clean and that the machine will be stable	**3**	**3**	**3**	27	Correct inspection and evaluation of the working areaEnsure working area is clean and that the machine will be stable.	**3**	**2**	**2**	12	Contractor, Construction Manager, CHSO, Lifting Operator, Lifring Inspector
		Checking out the machine to ensure that all is in good working order	Controls not functioning correctly, oil leaks. Machine failure causing damage and injury to employees	All operators & employees to be inducted.	**3**	**2**	**3**	18	Daily checklists and Tool Box Talks must be done	**3**	**2**	**2**	12	
		Correct positioniong of equipment ensuring it is level before carrying out the lift	Machine could tip over in on e particular direction. Property/equipment damage/employee injury	Ensure that the machine is correctly positioned and will not be over extended in any particular direction of operation. Barricade the area to prevent unauthorised entry.	**3**	**2**	**3**	18	Ensure competent operators to position machine correctly to ensure maximum usage ar any one lift / Method statements/ Risk Assessments/Safe Work Procedures Tool Box Talks	**3**	**2**	**2**	12	

ROOFWORK														
	Roof Work	Use of scaffolding, working at heights, use of ladders	Roof structure collapse, fall from roof, part of structure falls on worker, fall from scaffold, tools or material falls on worker. Scaffold collapse. Injury to worker	The Principal contractor will be required to submit with health and safety plan the fall prevention plan, including a risk assessment. Include in the fall prevention plan is also a process for the evaluation of the employee's medical fitness. No employee is permitted to work on roofs during inclement weather The plan is to be project specific and provide a systemic approach towards eliminating or reducing the risk of falling from heights and ensuring that all reasonable fall protection measures and methods have been taken prior to the commencement of work. Roof erectors are to be competent to carry the work Safe access to the roof must be carefully planned in order to select the most appropriate method and equipment.	**3**	**3**	**3**	27	The Principal contractor will be required to submit with health and safety plan the fall prevention plan, including a risk assessment. Include in the fall prevention plan is also a process for the evaluation of the employee's medical fitness. No employee is permitted to work on roofs during inclement weather The plan is to be project specific and provide a systemic approach towards eliminating or reducing the risk of falling from heights and ensuring that all reasonable fall protection measures and methods have been taken prior to the commencement of work. Roof erectors are to be competent to carry the work Safe access to the roof must be carefully planned in order to select the most appropriate method and equipment.	**3**	**2**	**2**	12	Contractor, Construction Manager, CHSO
DEMOLISHING														
CR14	Demolishing	Breakdown structure	Break wall from top to bottom. Injury to all body parts can occur	Ensure to break structure from top to bottom. Employees to be trainined.	**3**	**3**	**3**	27	Regular inspection and evaluation of the working area proir to work. Employees to be trainined and regular tool box talks to be conducted.	**3**	**2**	**2**	12	Contractor, Construction Manager, CHSO
		Dust	Inhaling of dust causing sinus	All employees to be inducted correct PPE to be worn: Dust Masks.	**3**	**2**	**3**	18	Correct PPE, Daily checklists and Tool Box Talks must be done. Communication with tenants to ensure minimum dust exposure during work hours	**3**	**2**	**2**	12	
		Working Area	Loose bricks laying around,Workers can fall over bricks - Injuries to all body part can occur	Ensure proper housekeeping is maintained at all times. Work area to be kept clear of loose materials	**3**	**2**	**3**	18	Ensure competent operators to position machine correctly to ensure maximum usage ar any one lift / Method statements/ Risk Assessments/Safe Work Procedures Tool Box Talks	**3**	**2**	**2**	12	
EXCAVATIONS														
CR13	Excavations	Plant & Manual	Injury or death to employees, tenants	Proper training of operator: Medicals, machine in good working order	**3**	**2**	**3**	18	Excavation barricaded/shored as required. Proper supervision	**3**	**2**	**2**	12	Contractor, Construction Manager, CHSO, Excavation Supervisor

BULK EARTHWORKS														
	Bulk Earthworks	Unauthorized entry	Injury/death of employees	Ensure that bulk earthwork area is out of bounds to unauthorized persons. PPE to be worn by all employees	**3**	**3**	**3**	27	Method statements/ Risk Assessments/Safe Work procedures must be adhered to. Control measures must be in place for all	**3**	**2**	**2**	12	Contractor, Construction Manager, CHSO, Earthworks Supervisor
		Unsafe working conditions	Injury/death of employees	All operators & employees to be inducted.	**3**	**2**	**3**	18	Daily checklists and Tool Box Talks must be done	**3**	**2**	**2**	12	
		Unsafe equipment	Property/equipment damage	Operating manual should be adhered to. Operators to be aware at all times	**3**	**2**	**3**	18	Daily checks list/ Method statements/ Risk Assessments/Safe Work Procedures Tool Box Talks	**3**	**2**	**2**	12	
WORKING AT HEIGHTS SCAFFOLDING														
CR 10	Working at Heights Scaffolding	Scaffold not properly erected	Scaffold collapse	calculate load capacity of scaffold. Proper design of scaffold	3	3	3	27	Specification must ensure design is done by competent person. Method statements. Before work commences	3	2	2	12	Contractor, Scaffold Erector, Scaffold inspector
		Scaffold not properly erected	Fall from height	Fall protection Plan by a competent fall planner	3	3	3	27	Experienced supervision by site staff and P A / Scaffold erectors Competent Inspection. Method statements	3	2	2	12	Contractor, Scaffold Erector, Scaffold inspector
		Scaffold not properly erected	Falling objects	Use of toe boards, proper decking, catch nets	3	3	3	27	Experienced supervision by site staff and P A. Competent Inspection. Method statements	3	2	2	12	Contractor, Scaffold Erector, Scaffold inspector
WORKING AT HEIGHTS LADDERS														
GSR 13A	Working at Heights Ladders	Use of ladders	Persons falling	Ladders conform to General Safety regulation 13a	2	3	3	18	Worker training. Experienced supervision by site staff and P A. Competent Inspection. Method statements	2	2	2	8	Contractor, Ladder Inspector
STACKING AND STORAGE														
CR28	Stacking and Storage	Storage of Materials and equipment	Physical injury –tripping and falling	Regular toolbox talks to be done. Stacking and storage is to be maintained at all times. Regular inspection of all stacking is to be conducted and record of this is to be made available in the H&S File.	3	2	2	12	Worker training. Experienced supervision by site staff and P A. Competent Inspection. Method statements	2	2	2	8	Contractor, stacking Supervisor, CHSO
ENVIRONMENTAL														
Environmental and facilities regs	Weather is a factor to be considered, raised temperatures in summer, with high humidity levels. Very cold weather may be encountered with the possiblity of frost	Working in wet, extreme hot conditions Temperature range 2 to 40 deg C	Possible hypo- or hyper-thermia.low efficiency of workers	Work stoppage in rain or following rain that would affect the works. Cold weather protective clothing may become necessary. Hot weather may require work stoppage. Adequate supply of drinking water.	3	3	2	18	Use of weather stations to monitor temperature, Work to be assessed should discomfort index reach 100, work may be stopped at 105 if deemed problematic. Adequate water intake. Sheltered areas for rest and eating	2	3	2	12	Contractor, Construction Manager, CHSO

ENVIRONMENTAL														
Environmental and facilities regs	Office facilities	Working in cramped unventilated or poor lighting conditions	Health issues	Office set-up to be checked for suitability	**2**	**2**	**2**	8	Avoid the use of containers for offices unless properly modified for use as offices	**2**	**1**	**1**	2	Contractor, Construction Manager, CHSO
	Waste Management	Use of temporary toilets	Health Issues	Use of chemical Toilets, at least one per 20 worker's male and female separated	2	2	3	12	No Formaldehyde in chemicals. Serviced and cleaned at least once weekly by competent service providers.	**1**	**2**	**1**	2	Contractor, Construction Manager, CHSO
		Waste disposal	Health and Environmental issues	All waste properly disposed of two certificated rubbish dump	2	2	3	12	No burning of cement bags or other refuse on site. Site to be kept tidy. Removal of all waste at regular intervals by competent service providers.	**2**	**1**	**1**	2	Contractor, Construction Manager, CHSO
ACCESS CONTROL														
	Public Access	Persons in dangerous areas. Public gaining access to construction area	Injury to person's	Separate general public from construction site.Sufficient barricading to be erected. Extra care to be taken to ensure tenants do not gain access to the construction activities	3	2	2	12	Spec to require: Access control. Induction for visitors. Security control. Safety Notices. Extra Observation. Sufficient Barricading.	3	1	1	3	Contractor, Construction Manager, CHSO
	Access Control	Tenants, Public and employees may gain access to site	Fall into excavation, injury from plant, tools or at workplace / construction activities.	Access control to be in place, hoardings erected to separate site from public. Extra hoarding to be in place to ensure tenants are kept out of the construction site.	3	2	2	12	Strict access control, gates locked or manned at all times. Trained security staff on duty. Induction for all visitors. Special care to be taken to ensure pupils are safe.	3	1	1	3	Contractor, Construction Manager, CHSO, Security, Head Master
CONSTRUCTION PLANT AND EQUIPMENT														
CR 23	Use of Construction Plant and Equipment	Struck by vehicle	Injury to persons/tenants	Vehicle fitted with acoustic warning devices, hooter and reverse warning	3	3	3	27	Competent supervision and adequate pre-task training will be required. Competent medically fit operators	3	2	2	12	Contractor,Plant manager
		Vehicle overturns	Injury to persons. Damage to vehicle	Proper operation of vehicle	3	3	3	27	Competent supervision and adequate pre-task training will be required. Competent medically fit operators	3	2	2	12	Contractor,Plant manager
		Untrained operator	Injury to persons. Damage to vehicle	Only employ competent operators	3	3	3	27	Competent supervision and adequate pre-task training will be required. Competent medically fit operators	3	2	2	12	Contractor,Plant manager. CHSO
		Unsilenced plant	Noise induced hearing loss	Fit or repair silencer	**2**	**3**	**3**	18	Proper supervision, operator training, Establishment of noise zones by AIA. Correct PPE including ear defenders/plugs	**2**	**2**	**1**	4	Contractor,Plant manager. CHSO

CONSTRUCTION PLANT AND EQUIPMENT														
N-IH I Regs	Exposure to Noise	Over 85 Db for long period:When activities are in process	Hearing Loss	Avoid exposure to noise where possible	2	3	3	18	Specification to require establishment of noise zones by AIA. Communication with the tenants	2	2	2	8	Contractor,Plant manager. CHSO
	Exposure to Dust	If severe lack of clear vision; Breathing problems.When activities are in process	Loss of Lung Function	Dust prevention	2	3	3	18	Specification to include dust palliative requirements.Communication with the tenants to ensure minimum exposure to tenants	2	2	2	8	Contractor,Plant manager. CHSO
CONCRETE WORK														
CR 20	Outsourced supply	Delivery by truck	Person struck by truck	Reverse warning Driver training	3	2	2	12	Worker training. Experienced supervision	3	1	2	6	Contractor. Batch plant and Concrete Supervisor, CHSO
			Person struck by concrete poured into shuttering	Proper training of employees and supervision	2	2	2	8	Area to be kept clear of all but essential workers	2	1	2	4	
	Machine mixing	Batch Plant	Use of wheel barrows	Proper training	2	2	2	8	Adequate supervision. Well maintained equipment	2	1	2	4	Contractor. Batch plant and Concrete Supervisor, CHSO
			Trapped by machine	Check plant for pinch points	2	2	2	8	Pinch points guarded. Proper supervision	2	1	2	4	
			Use of access ramps	Proper construction of ramp / Worker training	3	2	3	18	Experienced supervision by site staff. Competent Inspection. Use of proper equipment	3	2	2	12	Contractor. Batch plant and Concrete Supervisor, CHSO
	Hand mixing	Use of small tools	Contact with cement	Care in opening cement bags	2	2	2	8	Ensure workers fit for work. Proper supervision	2	1	2	4	
			Inhale cement dust	Care in opening cement bags	2	2	2	8	Ensure workers fit for work. Proper supervision	2	1	2	4	Contractor. Batch plant and Concrete Supervisor, CHSO
			Ergonomic risks	Rotate work	2	3	3	18	Ensure workers fit for work. Proper supervision	2	3	1	6	
	Steel fixing	Use of small tools	Bending; cramped position; injuries from slipping and fixing wire	Care in using tools	2	2	2	8	Experienced supervision by site staff. Competent Inspection. Use of proper equipment	2	1	2	4	Contractor. Concrete Supervisor, CHSO
				Rotate work	2	2	3	12	Experienced supervision by site staff. Competent Inspection. Use of proper equipment	2	2	1	4	

CONCRETE WORK														
CR20	Use of concrete vibrator	Injury to persons	Noise, vibration, contact with vibrating head, contact with wet concrete	Operator training	2	2	3	12	Experienced supervision by site staff. Competent Inspection. Use of proper equipment	2	2	1	4	Contractor. Concrete Supervisor, CHSO
BRICK WORK														
	Delivery by truck	Struck by truck	Injury to persons	Vehicle fitted with acoustic warning devices, hooter and reverse warning. Vehicle checklists to be done	3	3	3	27	Experienced supervision by site staff and P A. Competent Inspection	3	2	2	12	Contractor, Building Supervisor, CHSO
	Moving bricks	Use of wheel barrow	Injury to person's ergonomic risks	Training of workers. Job rotation	2	2	3	12	Experienced supervision by site staff. Competent Inspection. Use of proper equipment	2	2	1	4	Contractor, Building Supervisor, CHSO
		Use of Brick lift	Injury to persons	Training of workers in use of equipment	3	2	2	12	Experienced supervision by site staff. Competent Inspection. Use of proper equipment	3	2	1	6	Contractor, Building Supervisor, CHSO
	Use of support work	Collapse of support work	Injury to persons	Training of workers in use of equipment Method statements	3	2	2	12	Experienced supervision by site staff. Competent Inspection. Use of proper equipment proper calculation of loads involved by competent person	3	2	1	6	Contractor, Building Supervisor, CHSO
	Use of access scaffolding and Ladders	Working with ladders and low scaffolds	Worker Falls, slips	Fall protection plan. Ladders to GSR13A	3	2	2	12	Training, proper supervision. Ladder inspection	3	1	2	6	Contractor, Building Supervisor,, Scaffolding Inspector CHSO
	Working with glass	Glass breaking	Cuts and other injuries	Training of workers in use of equipment	3	2	2	12	Experienced supervision by site staff and P A. Competent Inspection	3	2	1	6	Contractor, Building Supervisor,, Scaffolding Inspector CHSO
PLUMBING														
	Plumbing Contractor	Unregistered, incompetent contractor	Poor work, cost overruns, no municipal connection No Certificate of Compliance	Ensure appointment of registered, competent contractor	3	2	3	18	Project specific H&S Specification and HIRA in tender Document	3	2	2	12	Contractor, Construction Manager, CHSO
PAINTING														
GSR 13A	Painting	Working with ladders and low scaffolds	Worker Falls, slips	Fall protection plan. Ladders to GSR13A	3	2	2	12	Training, proper supervision. Ladder inspection	3	1	2	6	Contractor, Construction Manager, Ladder Inspector, CHSO
		Ingestion of Paint	Gastric irritation, nausea	Training; clean site	2	2	2	8	Tool box talks, proper supervision	1	2	2	4	Contractor, Painting Supevisor, CHSO
		Cleaning Brushes	Use of thinners, benzene, possible carcinogens; highly flammable	Supply MSDS Use alternative brush cleaner Keep away from open flames	2	2	2	8	Use of Turpentine, Proper supervision Training	1	2	2	4	Contractor, Painting Supevisor, CHSO

TILING														
	Tile Cutter and Grinder	Use of Tile Cutter and grinder	Injury to worker	Ensure operator competent	2	2	2	8	Ensure Correct PPE, toolbox talks proper supervision	2	1	2	4	Contractor, Supevisor, CHSO
ELECTRICAL INSTALLATION (see also Electrical installation regulations)														
	Electrical Contractor	Unregistered, incompetent contractor	Poor work, cost overruns, no municipal connection	Ensure appointment of registered, competent contractor	3	2	3	18	Project specific H&S Specification and HIRA in tender Document	1	2	2	4	Contractor, Construction Manager, CHSO, Electrical Supervisor
SMALL ELECTRICAL TOOLS AND HANDTOOLS														
	Use of small electrical tools	Contact with electricity	Electric shock	Certificate of Compliance for electrical supply	3	2	2	12	Ensure all connections secure, no breaks in cable. Proper routing of cables on site	3	2	1	6	Contractor, Construction Manager, CHSO, Electrical Supervisor
	Handtools	Use of Handtools	Injury to worker	Care in using tools	2	2	2	8	Experienced supervision by site staff. Competent Inspection. Use of proper equipment	2	1	2	4	Contractor. Supervisor, CHSO
HAZARDOUS CHEMICALS (see also Hazardous Chemical Regulations)														
HCS Regulations	Use/supply of hazardous Chemicals	improper use/storage of hazardous Chemicals	Fire, explosion poisoning of persons	Supply appropriate materials safety data information (MSDS)	3	2	3	18	Competent person appointed to check stores. Proper storage. Provision of fire extinguishers. Emergency plan.	3	1	2	6	Contractor, Consruction Manager, CHSO HCS supervisor, SMME Contractor(if employed)
	Plastering	Cement Mortar	Used across the project for a range of tasks,	Avoid contact with cement. Supply MSDS	3	3	2	18	Dust control, PPE (eye and respiratory) Use of distributor when stabilizing road. Rotation of workers	2	3	1	6	
	Tiling	Tile grouts and Adhesives	Contact with materials	Avoid contact with grouts and Adhesives. Supply SDS	2	2	2	8	Proper PPE. Worker training	2	1	2	4	
	Carpentry	Wood glue & Varnish	Health Risk to Workers	Avoid over exposure	2	2	2	8	Ensure proper ventilation	2	1	2	4	
	Plastering, Tiling, Carpentry	ergonomic risks	Working in confined areas, bending,	Rotate work	2	2	2	8	Proper supervision, competent trained workers	2	1	2	4	
EXPLOSIVE POWER TOOLS														
	Use of Power Tools	Contact with electricity / Richochet of object	Electric shock / Injury to persons	Only competent operators / Good working equipment / sufficient PPE	3	2	2	12	Ensure competent operators. / Method statements/ Risk Assessments/Safe Work Procedures Tool Box Talks	3	2	1	6	Contractor, Construction Manager, CHSO, Operator

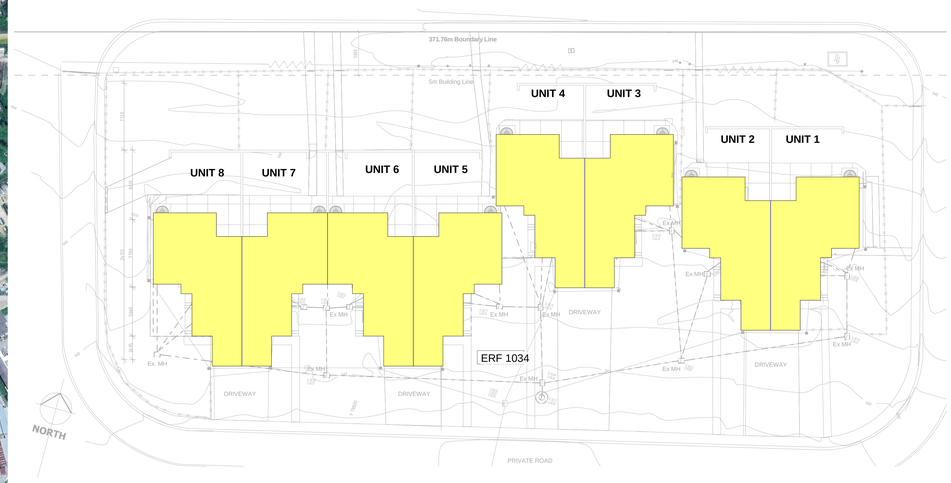
HOTWORK														
	Welding operation	Contact with electricity / contact with gas	Incompetent operator / Defective Macninery . Burns / Injury to hand and eyes	Competent operators. Sufficient training to be provided to employees in the use thereof. Suitable Fire Extinguishers placed nearby. Employees to wear the correct PPE.	**3**	**3**	**3**	27	Ensure opertion by competent welders. Hazardous awareness training. All vessels and equipmentto be inspected regularly. Registers to be kept	**3**	**2**	**2**	12	Contractor, Construction Manager, CHSO.Operator
PRESSURE EQUIPMENT														
	Pressure Equipment	Strike with uncontrolled hose or coupling.	Incompetent Operator: Impact • Pressurised content • Electricity • Ergonomics • Slips/trips/falls	Competent operators. Ensure sufficient training for operators.Wear appropriate PPE (e.g. goggles and water proof clothing etc).Ensure equipment is not directed at people or animals. Ensure sufficient rest breaks are taken whilst operating the machiney.	**3**	**3**	**3**	27	Ensure opertion by competent . Hazardous awareness training. Ensure equipment is operated and maintained in accordance with manufacturer's instructions. Ensure regular maintainance is maintained. Inspection records to be kept.	**3**	**2**	**2**	12	Contractor, Construction Manager, CHSO.Operator

C4 DRAWINGS



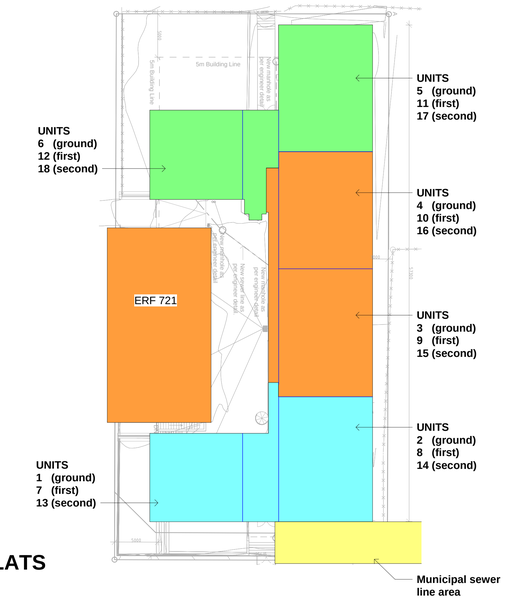
LOCALITY PLAN

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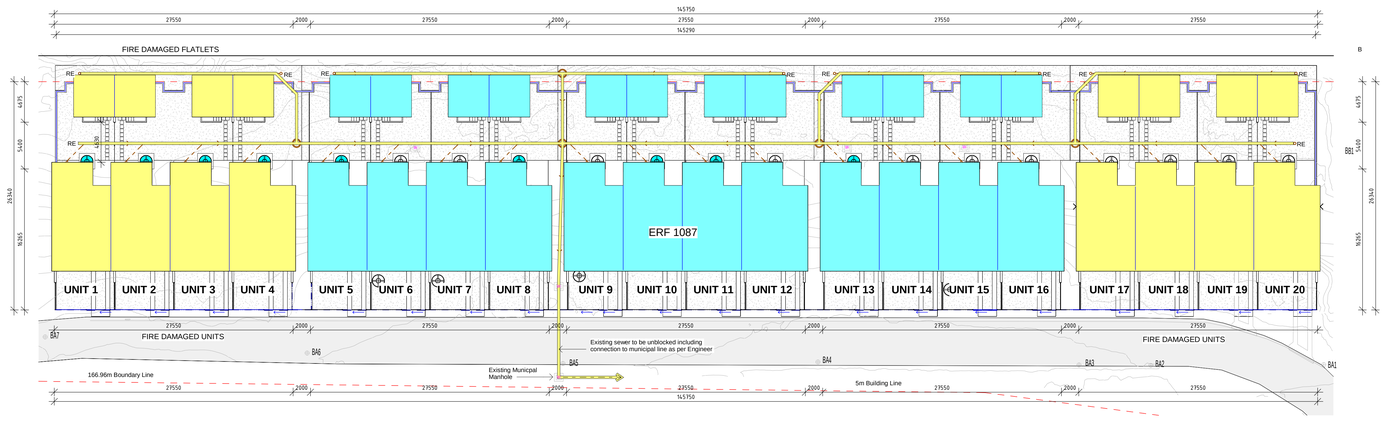


MSINTSI COURT

PHASE 1 (6 Months) : Decant tenants to Bashee Court
: Renovate Units 1-8
: Tenants move back



KYALAMI FLATS



BASHEE COURT

PHASE 1 (6 Months) :Renovate fire damaged units 1-4 and 17-20 and upgrade sewer.
:Tenants from Msintsi Court decanted to Bashee Court available units 5-16

PHASE 2 (9 Months) :Renovate units 5-16
:Tenants from Kyalami Flats decanted to Bashee Court Units 1-4 and 17-20.

BAR CHART PROGRAMME

PROJECT	DURATION IN MONTHS
Bashee Court Msintsi Court	0 1 2 3 4 5 6
Bashee Court	7 8 9 10 11 12 13 14 15
Kyalami Flats	6 7 8 9 10 11 12 13 14 15

PHASE 1 (1 Month) :Unblock and upgrade sewer connection to municipal line

PHASE 2 (3 Months) :Decant tenants in Units 1,7,13 and 2,8,14 to Bashee Court
:Renovate Units 1,7,13 and 2,8,14 and Main Entrance and Stairs
:Units 1,7,13 and 2,8,14 Tenants move back

PHASE 3 (3 Months) :Decant tenants in Units 3,9,15 and 4,10,16 to Bashee Court
:Renovate Units 3,9,15 and 4,10,16 and Covered Parking
:Units 3,9,15 and 4,10,16 Tenants move back

PHASE 4 (3 Months) :Decant tenants in Units 5,11,17 and 6,12,18 to Bashee Court
:Renovate Units 5,11,17 and 6,12,18 and Secondary Stairs and perimeter fence.
:Units 5,11,17 and 6,12,18 Tenants move back

ORIGINAL PAPER SIZE A0

SCALE BAR 10mm 20mm 30mm 40mm 50mm

1. All work is to be done in accordance with the National building Regulations.
2. All materials and workmanship are to comply with the relevant S.A.B.S. codes and or the specified international codes where applicable in the – Architectural specifications. Where relevant South African National Standards, British Standards, BS codes of practice, or Agrément Certificates applicable to the design exists, the recommendations and requirements of such documents fo be considered a minimum standard for the works.
3. The contractor shall in all aspects of the works comply with the provisions of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and any regulations promulgated in terms of that Act or the Factories Machinery and Building Works Act of 1941.
4. The contractor shall set up, document and maintain a quality assurance and quality control system, in accordance with SANS 9001/ISO 9001, able to be checked to the satisfaction of the Architect, that all materials and workmanship, whatever their sources, meet the requirements of the Specification. Should the Contractor or any of his sub-contractors be certified to the SANS 9000 family of standards then monitor these works accordingly.
5. This drawing must be read in conjunction with all the relevant drawings, schedules and specifications from IDA and all other consultants related to the project.
6. All portions of the works related to any service or consultant's information is to be done in accordance with the National Building Regulations.
7. This drawing is not to be scaled. Figured dimensions to be used. All dimensions are in millimeters unless otherwise stated.
8. All dimensions and levels must be checked on site by the contractor before putting work in hand.
9. All work to be executed by competent persons qualified for the specific trade.
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REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION

CLIENT.
EASTERNCAPE DEVELOPMENT CORPORATION

SIGNATURE.

ARCHITECT.
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

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SACAP NO. 5379

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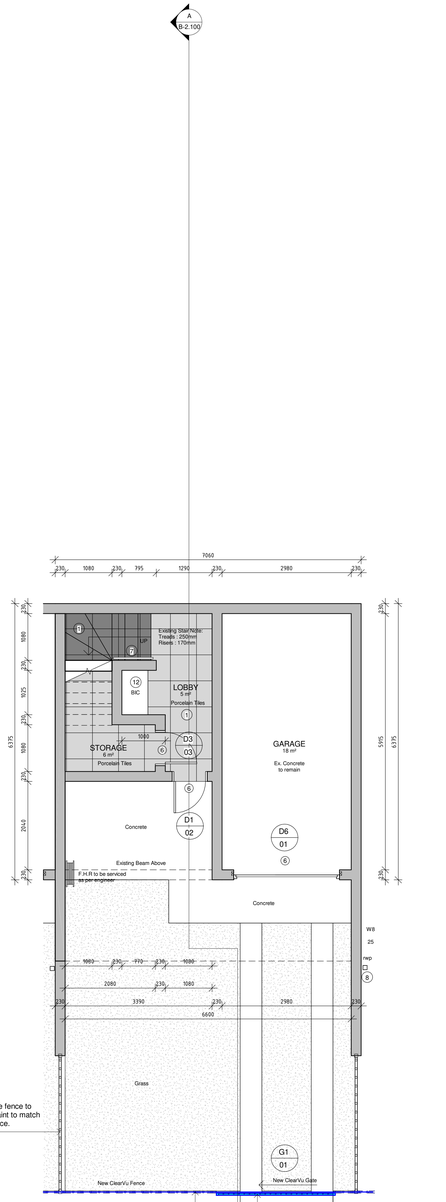
CLIENT
EASTERN CAPE ECDC ENTERPRISE DEVELOPMENT

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

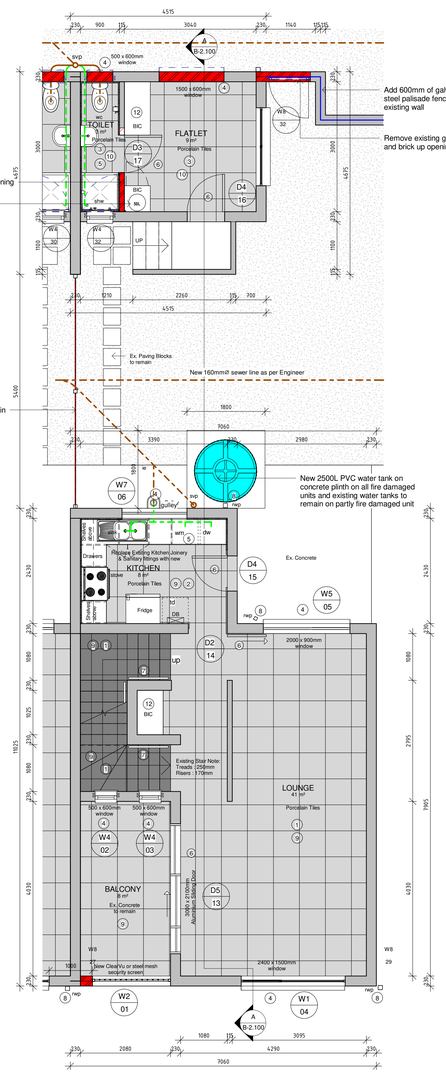
DRAWING
LOCALITY PLAN
WORK SEQUENCING

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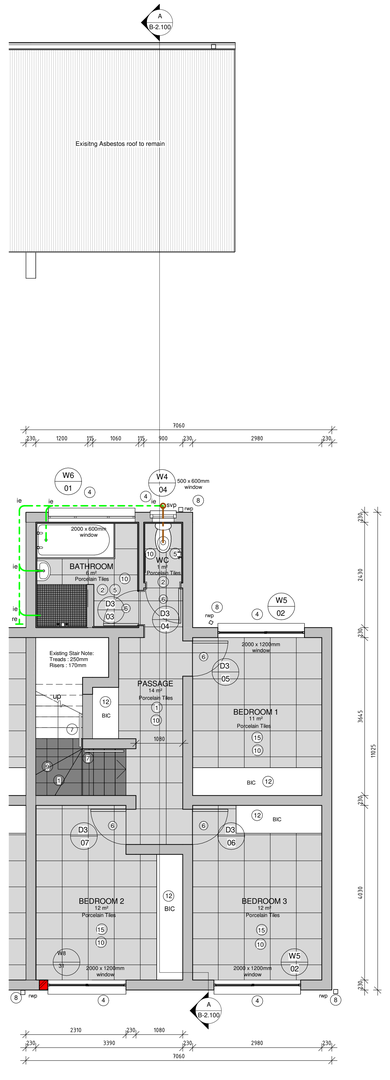
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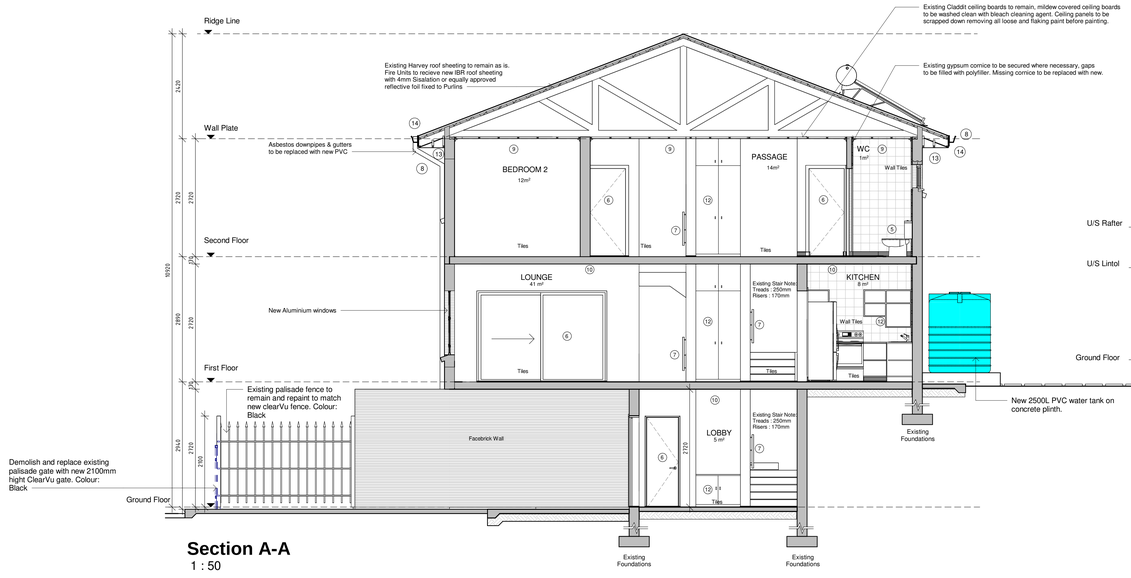
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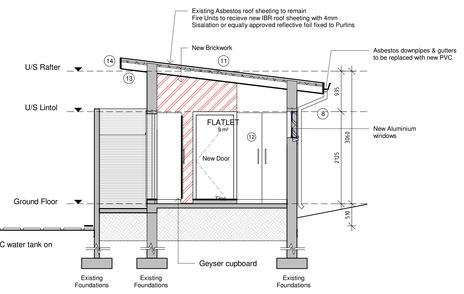
SECOND FLOOR
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NORTH

	UNIT SPECIFIC NOTES - INTERNAL & EXTERNAL
1	EXISTING CARPET TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
2	EXISTING VINYL TILES TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
3	EXISTING CONCRETE FLOOR TO BE PREPARED SURFACE FOR NEW PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
4	WINDOW OPENING SECTION TO BE RE-INSTATED, BROKEN PANES TO BE REPLACED. REPLACE MISSING STAYS, REPLACE MISSING PUTTY. MISSING WINDOWS ON FIRE DAMAGED UNITS TO BE REPLACED WITH NEW ALUMINIUM WINDOWS
5	REMOVE EXISTING SANITARY FITTINGS AND REPLACE WITH NEW
6	REPLACE / REPAIR EXISTING DAMAGED DOOR & IRONMONGERY
7	RUSTED HANDRAIL TO BE MADE GOOD & BE RE-PAINTED
8	EXISTING ASBESTOS DOWNPIPES & GUTTERS TO BE REMOVED AND REPLACED WITH NEW PVC DOWNPIPES
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12	BUILT-IN CUPBOARDS TO BE REPAIRS AND DOORS REPAINTED
13	WATER DAMAGE AT EAVES CLOSURE. REPAIR AND FIX LEAK AND OR EAVES BOARDS MISSING, RE-INSTATE.
14	FACIA BOARD MISSING OR DAMAGED. REPLACE AND MAKE GOOD
15	BEDROOM: EXISTING CARPET TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING



Section A-A
1 : 50



ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

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REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/03/15	CB	ISSUED FOR ESTIMATES
B	2023/05/09	KM	ADD FENCE, FLOOR FINISHES & RAINWATER TANKS
C	2023/06/02	KM	CLIENT REVISIONS
D	2023/07/18	KM	REVISE BEDROOM FLOOR FINISHES & ADD GEYSER CUPBOARD IN FLATLET & UPDATE NOTES
E	2023/08/11	CB	MUNICIPAL SUBMISSION
F	2023/08/23	CB	REVISED GUEST WC
G	2023/09/22	KM	REVISED BATHROOM, FLATLET WINDOWS & ROOF INSULATION

CLIENT.
EASTERNCAPE DEVELOPMENT CORPORATION

SIGNATURE

ARCHITECT.
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

SIGNATURE
SACAP NO. 5379

impendulo DESIGN ARCHITECTS

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Block B (First Floor), Berea, 5241
Branches: Grahamstown | Pretoria | Bloemfontein | East London | Durban
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Corporate Member of the South African Institute of Architects

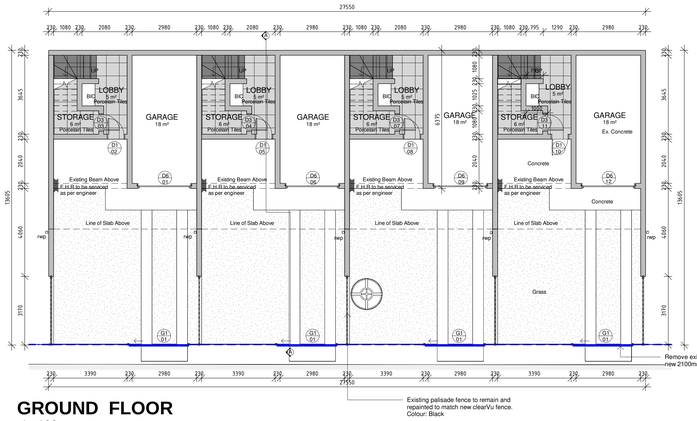
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PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

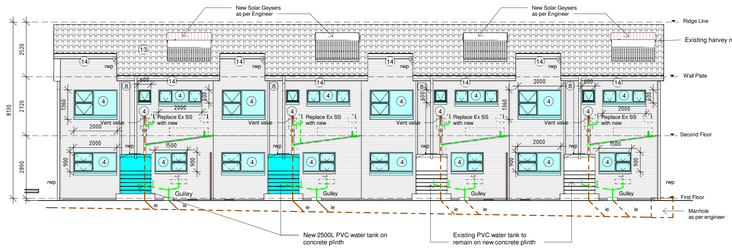
DRAWING
BASHEE COURT
FLOOR PLANS
SECTION

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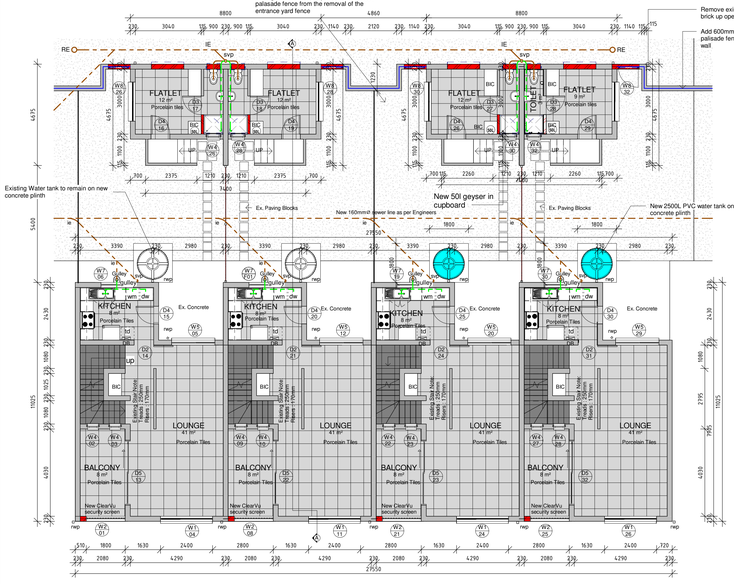
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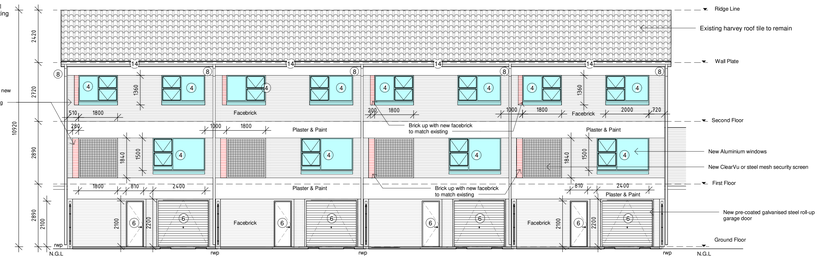
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SOUTH ELEVATION - GARDEN FACADE
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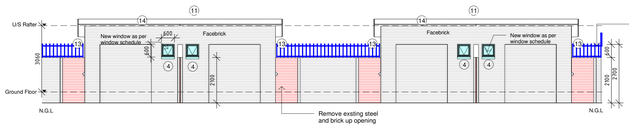
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NORTH ELEVATION - STREET FACADE
1 : 100



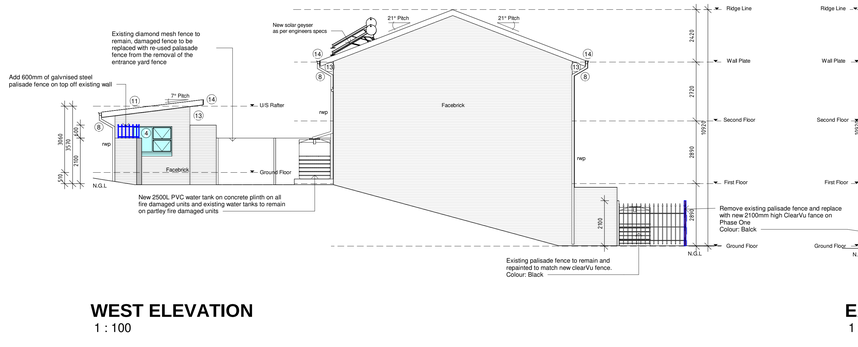
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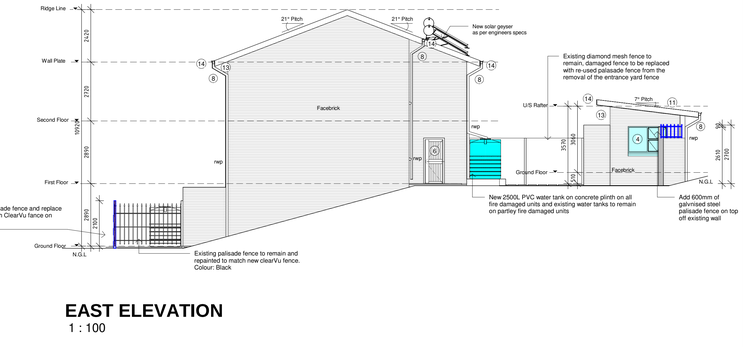
NORTH ELEVATION - FLATLETS
1 : 100



SOUTH ELEVATION - FLATLETS
1 : 100



WEST ELEVATION
1 : 100



EAST ELEVATION
1 : 100

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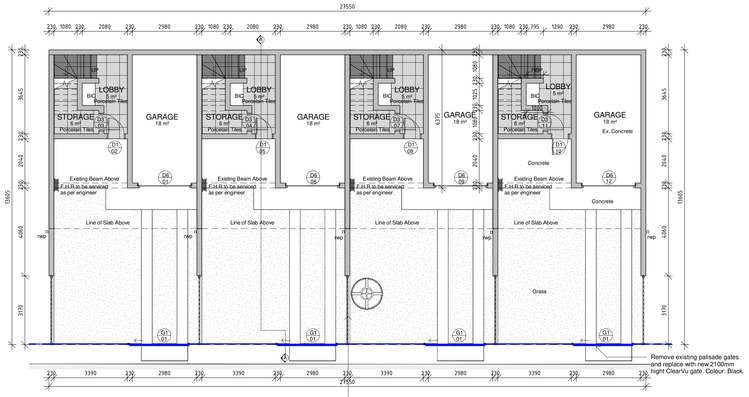
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BUTTERWORTH

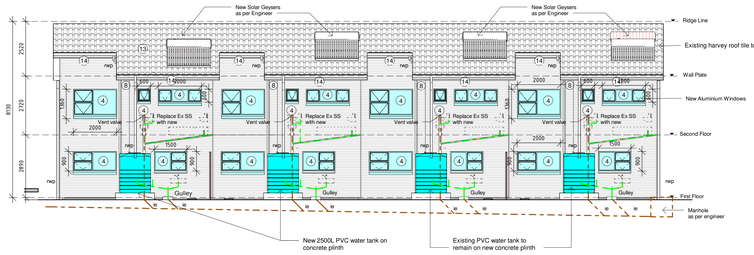
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TYPICAL BLOCK – UNIT 5-16
PLANS & ELEVATIONS

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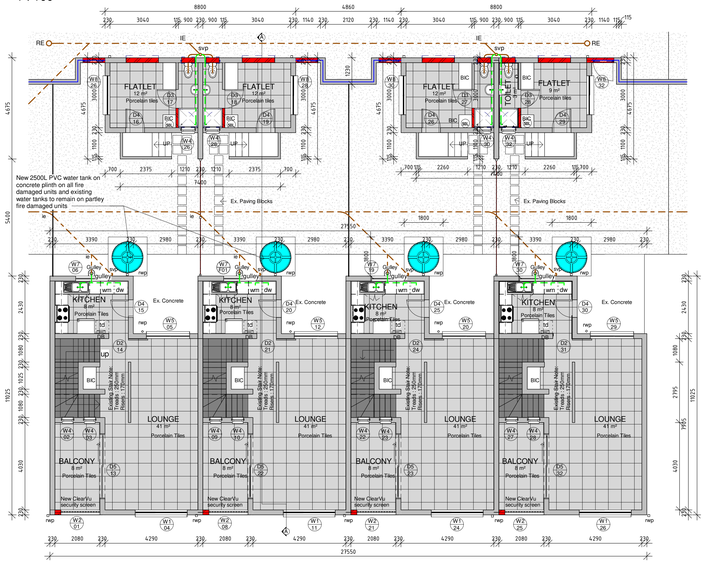


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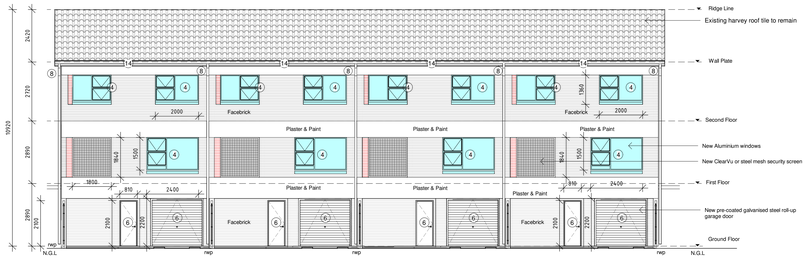


SOUTH ELEVATION - GARDEN FACADE
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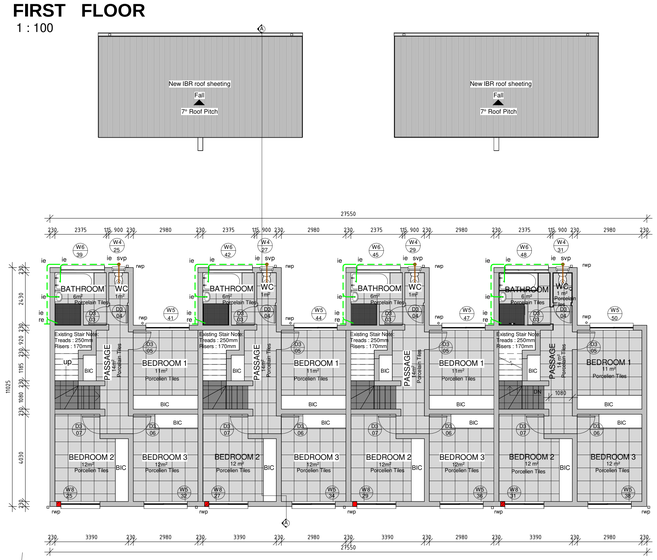
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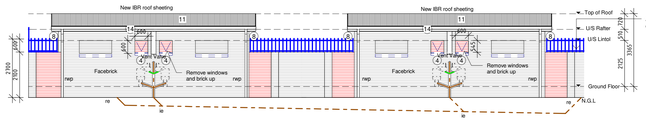
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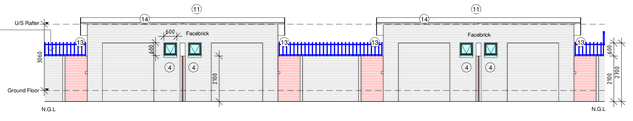
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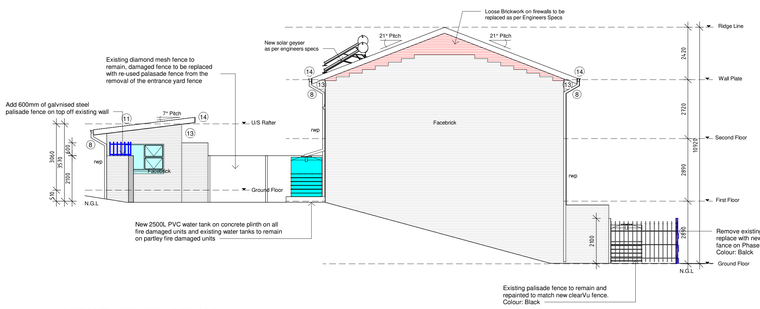
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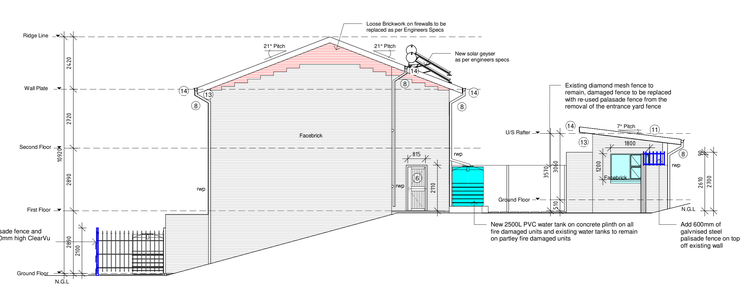
SOUTH ELEVATION - FLATLETS
1 : 100



NORTH ELEVATION - FLATLETS
1 : 100



WEST ELEVATION
1 : 100



EAST ELEVATION
1 : 100

ORIGINAL PAPER SIZE A0

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REG NO 2004/030975/07
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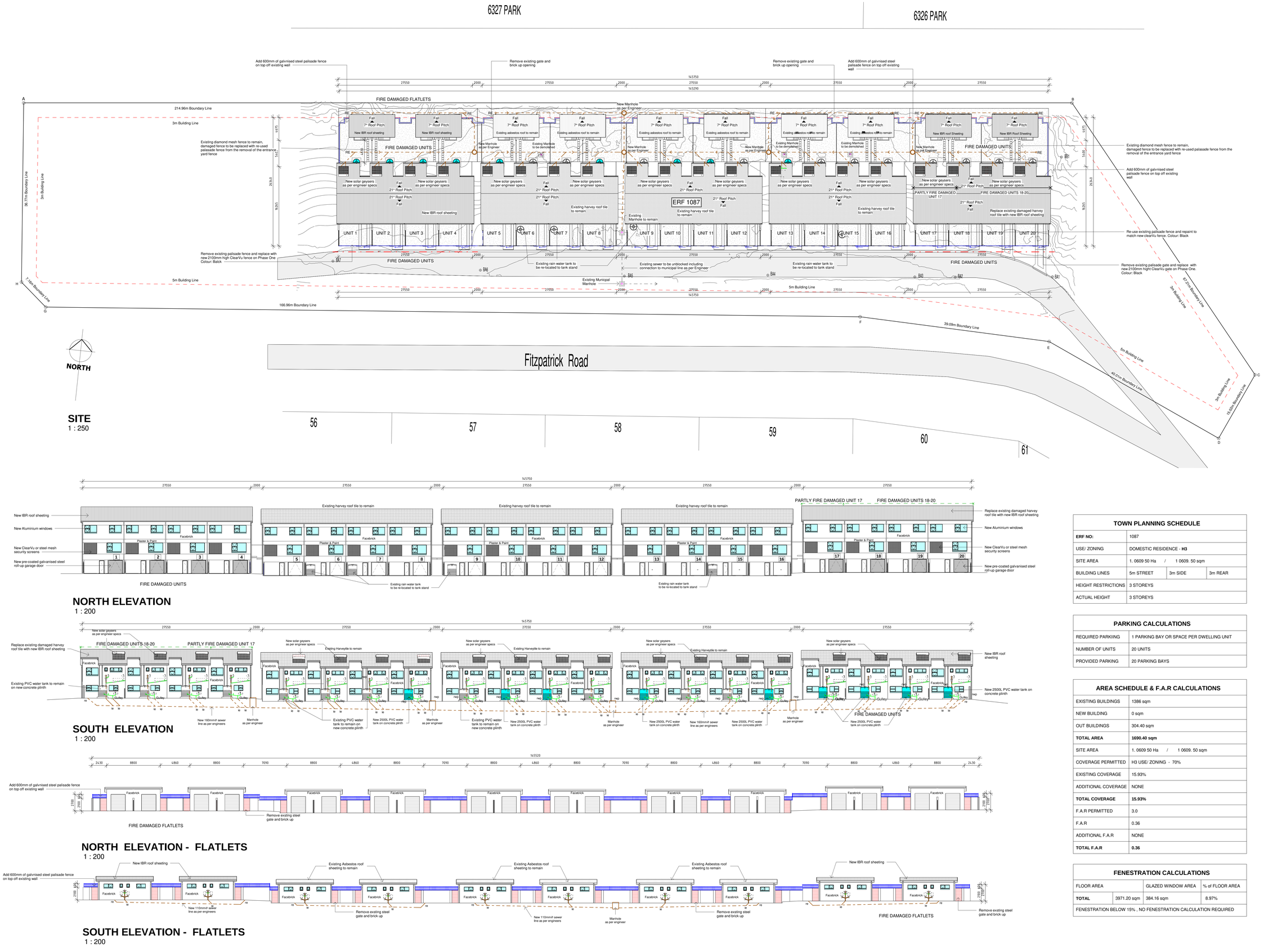
CLIENT
EASTERN CAPE DEVELOPMENT CORPORATION

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

DRAWING
BASHEE COURT
FIRE DAMAGED BLOCK - UNIT 1-4 & 17-20
PLANS & ELEVATIONS

SCALE	DRAWN	CHECKED	DATE
1 : 100	CB	JWS	2023/09/22 12:25:14

PROJECT NO.	DRAWING NO.	REVISION
E20.953	B-2.102	A



NORTH ELEVATION
1 : 200

SOUTH ELEVATION
1 : 200

NORTH ELEVATION - FLATLETS
1 : 200

SOUTH ELEVATION - FLATLETS
1 : 200

ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

1. All work is to be done in accordance with the National building Regulations.
2. All materials and workmanship are to comply with the relevant S.A.B.S. codes and or the specified international codes where applicable in the – Architectural specifications. Where relevant South African National Standards, British Standards, BS codes of practice, or Agrément Certificates applicable to the design exists, the recommendations and requirements of such documents fo be considered a minimum standard for the works.
3. The contractor shall in all aspects of the works comply with the provisions of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and any regulations promulgated in terms of that Act or the Factories Machinery and Building Works Act of 1941.
4. The contractor shall set up, document and maintain a quality assurance and quality control system, in accordance with SANS 9001/ISO 9001, able to be checked to the satisfaction of the Architect, that all materials and workmanship, whatever their sources, meet the requirements of the Specification. Should the Contractor or any of his sub-contractors be certified to the SANS 9000 family of standards then monitor these works accordingly.
5. This drawing must be read in conjunction with all the relevant drawings, schedules and specifications from IDA and all other consultants related to the project.
6. All portions of the works related to any service or consultant's information is to be done in accordance with the Nhe National Building Regulations.
7. This drawing is not to be scaled. Figured dimensions to be used. All dimensions are in millimeters unless otherwise stated.
8. All dimensions and levels must be checked on site by the contractor before putting work in hand.
9. All work to be executed by competent persons qualified for the specific trade.
10. This drawings is copyright reserved and remains the property of Impendulo Design Architects (Pty) Ltd.

REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/03/15	CB	ISSUED FOR ESTIMATES
B	2023/03/27	CB	ADD SURVEY DATA TO SITE PLAN
C	2023/05/09	KM	ADD FENCE, FLOOR FINISHES AND RAINWATER TANKS
D	2023/06/02	KM	CLIENT REVISIONS
E	2023/07/18	KM	ADD PROJECT PHASES
F	2023/08/10	CB	MUNICIPAL SUBMISSION
G	2023/08/25	CB	REMOVE PHASES

TOWN PLANNING SCHEDULE

ERF NO:	1087		
USE/ ZONING	DOMESTIC RESIDENCE - **H3**		
SITE AREA	1. 0609 50 Ha / 1 0609. 50 sqm		
BUILDING LINES	5m STREET	3m SIDE	3m REAR
HEIGHT RESTRICTIONS	3 STOREYS		
ACTUAL HEIGHT	3 STOREYS		

PARKING CALCULATIONS

REQUIRED PARKING	1 PARKING BAY OR SPACE PER DWELLING UNIT
NUMBER OF UNITS	20 UNITS
PROVIDED PARKING	20 PARKING BAYS

AREA SCHEDULE & F.A.R CALCULATIONS

EXISTING BUILDINGS	1386 sqm
NEW BUILDING	0 sqm
OUT BUILDINGS	304.40 sqm
TOTAL AREA	**1690.40 sqm**
SITE AREA	1. 0609 50 Ha / 1 0609. 50 sqm
COVERAGE PERMITTED	H3 USE/ ZONING - 70%
EXISTING COVERAGE	15.93%
ADDITIONAL COVERAGE	NONE
TOTAL COVERAGE	**15.93%**
F.A.R PERMITTED	3.0
F.A.R	0.36
ADDITIONAL F.A.R	NONE
TOTAL F.A.R	**0.36**

FENESTRATION CALCULATIONS

FLOOR AREA		GLAZED WINDOW AREA	% of FLOOR AREA
TOTAL	3971.20 sqm	384.16 sqm	8.97%
FENESTRATION BELOW 15% , NO FENESTRATION CALCULATION REQUIRED			

CLIENT.
EASTERNCAPE DEVELOPMENT CORPORATION

SIGNATURE. _____

ARCHITECT.
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

SIGNATURE. _____
SACAP NO. 5379

impendulo DESIGN ARCHITECTS
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CLIENT
EASTERN CAPE DEVELOPMENT CORPORATION

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

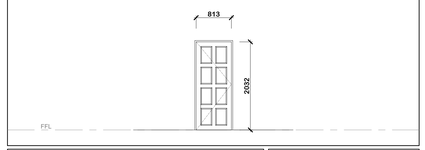
DRAWING
BASHEE COURT
SITE PLAN
ELEVATIONS

SCALE	DRAWN	CHECKED	DATE
As indicated	CB	JWS	2023/08/29 15:43:59

PROJECT NO.	DRAWING NO.	REVISION
E20.953	B-4.100	F

DOOR AND WINDOW SCHEDULE

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



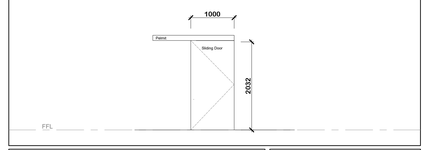
DOOR NUMBERS: D 01 — TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Timber Door	DESCRIP	Existing timber door frame to remain and be repaired where Required, broken pieces of wood are to be replaced with new meranti inserts Damaged timber door frames to be replaced with new 70 x 44 related HARDWOOD door frame to be built into wall. 18 mm quadrant to junction with walls to sides and at head.
OPENING	Single Door		
DESCRIP	Swartland single timber 813x 2032mm PD28 Colonial Eight Panel door		
IRON-MONGERY	As per Ironmongery Schedule		
FINISH	Lightly sand timber surface, leaving surface clean and dust free. Apply 3 coat of exterior quality clear Varnish and sand timber lighly in between the 3 coats.	FINISH	Lightly sand timber frame, leaving frame clean and dust free. Apply 3 coat of exterior quality clear Varnish and sand timber lighly in between the 3 coats.
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



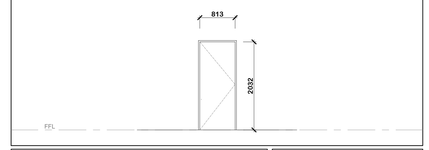
DOOR NUMBERS: D 02 — TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Timber Sliding Door	DESCRIP	None (See Ironmongery schedule for sliding door gear)
OPENING	Sliding Door		
DESCRIP	Purpose made single timber flash panel 1000x 2032mm Standard heavy duty interior door with two exposed hardwood edges		
IRON-MONGERY	As per Ironmongery Schedule		
FINISH	Lightly sand timber surface, leaving surface clean and dust free. Apply one coat of wood primer and finish with two coats of Plascon Velvago. Colour as per Architect	FINISH	None (See Ironmongery schedule for sliding door gear)
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



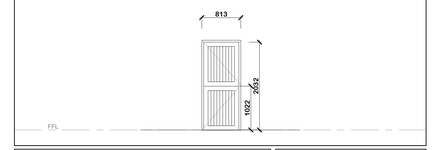
DOOR NUMBERS: D 03 — TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Timber Door	DESCRIP	Existing steel frames are to remain and be repaired Damaged and rusted steel frames to be replaced with new 1.2mm galvanised steel frames rebated and prime coated before being distributed by manufacturer with one and a half pair hinges welded on and built into brickwork
OPENING	Single Door		
DESCRIP	Swartland single timber flash panel 813x 2032mm Standard heavy duty interior door with two exposed hardwood edges (Code : HBSTDH02)		
IRON-MONGERY	As per Ironmongery Schedule		
FINISH	Lightly sand timber surface, leaving surface clean and dust free. Apply one coat of wood primer and finish with two coats of Plascon Velvago. Colour as per Architect	FINISH	Clean all steel frames thoroughly, all loose and flaking paints to be removed and all existing paint to be removed with approved paint remover and paint scraper. Repair all dents. Apply one coat of universal undercoat and prepare to take two coats of Plascon eggshell enamel.
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



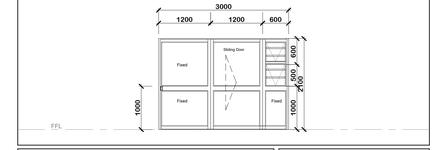
DOOR NUMBERS: D 04 — TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Timber Door	DESCRIP	Existing timber door frame to remain and be repaired where Required, broken pieces of wood are to be replaced with new meranti inserts Damaged timber door frames to be replaced with new 70 x 44 related HARDWOOD door frame to be built into wall. 18 mm quadrant to junction with walls to sides and at head.
OPENING	Stable Single Door		
DESCRIP	Swartland 813x 2032mm SD2S Stable single timber door		
IRON-MONGERY	As per Ironmongery Schedule		
FINISH	Lightly sand timber surface, leaving surface clean and dust free. Apply 3 coat of exterior quality clear Varnish and sand timber lighly in between the 3 coats.	FINISH	Lightly sand timber frame, leaving frame clean and dust free. Apply 3 coat of exterior quality clear Varnish and sand timber lighly in between the 3 coats.
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



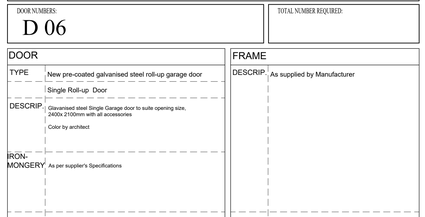
DOOR NUMBERS: D 05 — TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Aluminium sliding Door	DESCRIP	Flush glazed sliding door system. all glazed with safety glass with clip-on glazing beads with neoprene seals, plugged to existing brick wall.
DESCRIP	Purpose made 3000mm x 2100 mm high aluminium sliding door and sidelight, fitted with lock furniture as specified, complying with AAMMSA performance criteria Class A1 (1000Pa), SANS 10400:2010 (Part N of Section 3) and SANS 1283-1:2006 with clip-on glazing beads with gasket seals, plugged to brickwork, all in accordance with AAMMSA Selection Guide for Glazed Aluminium Architectural Aluminium Products – June 2008.		
IRON-MONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	Natural anodised aluminium finish	FINISH	Natural anodised aluminium finish
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffINS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



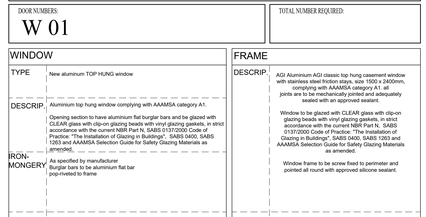
DOOR NUMBERS: D 06 — TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New pre-coated galvanised steel roll-up garage door Single Roll-up Door	DESCRIP	As supplied by Manufacturer
DESCRIP	Glavanised steel Single Garage door to suite opening size, 2400x 2100mm with all accessories Color by architect		
IRON-MONGERY	As per supplier's Specifications		
FINISH	Pre-coated paint	FINISH	Galvanised steel
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



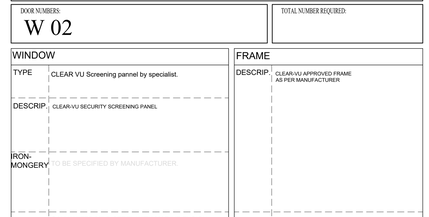
DOOR NUMBERS: W 01 — TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 1500 x 2400mm, complying with AAAMSA category A1. all joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRON-MONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffINS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



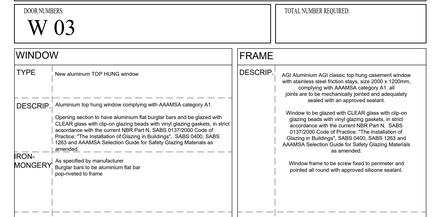
DOOR NUMBERS: W 02 — TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	CLEAR VU Screening pannel by specialist.	DESCRIP	CLEAR-VU APPROVED FRAME AS PER MANUFACTURER
DESCRIP	CLEAR-VU SECURITY SCREENING PANEL		
IRON-MONGERY	TO BE SPECIFIED BY MANUFACTURER.		
FINISH	GALVANIZED MILD STEEL WITH MARINE FUSION COATING AS PER MANUFACTURER COLOR: CHARCOAL	FINISH	TO MATCH SCREEN
GLAZING	Nill	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



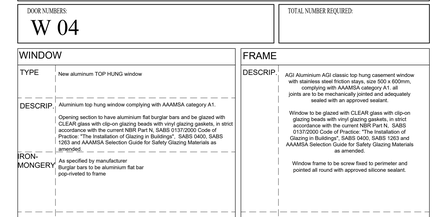
DOOR NUMBERS: W 03 — TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 2000 x 1200mm, complying with AAAMSA category A1. all joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRON-MONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffINS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: W 04 — TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 600 x 600mm, complying with AAAMSA category A1. all joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRON-MONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffINS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: W 05 — TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 2000 x 900mm, complying with AAAMSA category A1. all joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRON-MONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffINS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: W 06 — TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 2000 x 600mm, complying with AAAMSA category A1. all joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRON-MONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffINS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: W 07 — TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 1500 x 900mm, complying with AAAMSA category A1. all joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRON-MONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffINS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: W 08 — TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 2000 x 1200mm, complying with AAAMSA category A1. all joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRON-MONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffINS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: G 01 — TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	CLEAR VU Vehicle entrance gate by specialist. SINGLE SLIDING GATE	DESCRIP	CLEAR-VU APPROVED GATE FRAME AS PER MANUFACTURER
DESCRIP	SINGLE VEHICLE ENTRANCE GATE & SIDE PANEL WITH CLEAR-VU		
IRON-MONGERY	TO BE SPECIFIED BY MANUFACTURER.		
FINISH	GALVANIZED MILD STEEL WITH MARINE FUSION COATING AS PER MANUFACTURER COLOR: BLACK	FINISH	TO MATCH GATE
GLAZING	Nill	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

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REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/08/28	KM	ADD SECURITY SCREENING PANEL
B	2023/09/18	KM	AMEND SECURITY SCREENING PANEL AND WINDOW B & 4

CLIENT
EASTERN CAPE DEVELOPMENT CORPORATION

SIGNATURE

ARCHITECT
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

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SACAP NO. 5379

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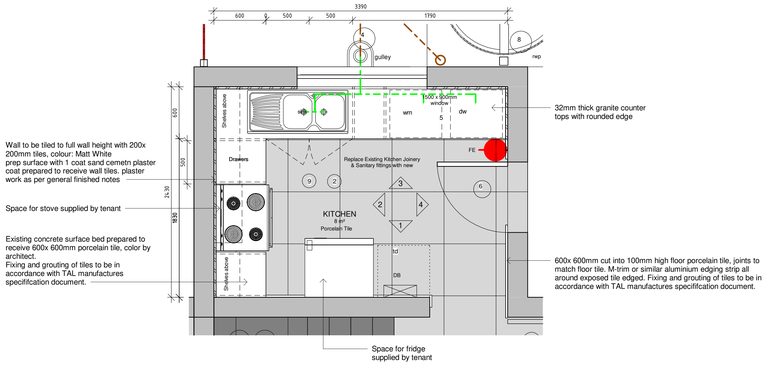
CLIENT
ECDC

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

DRAWING
BASHEE COURT
TYPICAL BLOCK - DOOR AND WINDOW SCHEDULE

SCALE	DRAWN	CHECKED	DATE
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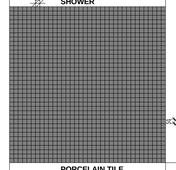
PROJECT NO.	DRAWING NO.	REVISION
E20.953	B-7.100	B



ROOM DATA KITCHEN PLAN
1 : 25

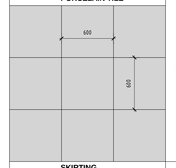
FLOOR FINISHES LEGEND

SHOWER



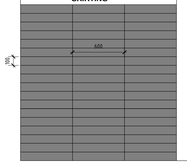
50x 50mm SHOWER MOSAIC TILES. FIXING AND GROUTING OF TILES TO BE IN ACCORDANCE WITH TAL MANUFACTURERS SPECIFICATION DOCUMENT. COLOUR BY ARCHITECT

PORCELAIN TILE



600x 600mm INDUSTRIA GREY PORCELAIN TILE. FIXING AND GROUTING OF TILES TO BE IN ACCORDANCE WITH TAL MANUFACTURERS SPECIFICATION DOCUMENT.

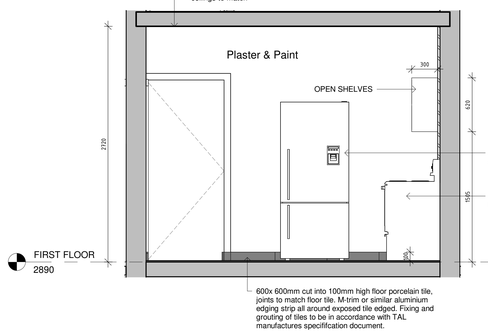
SKIRTING



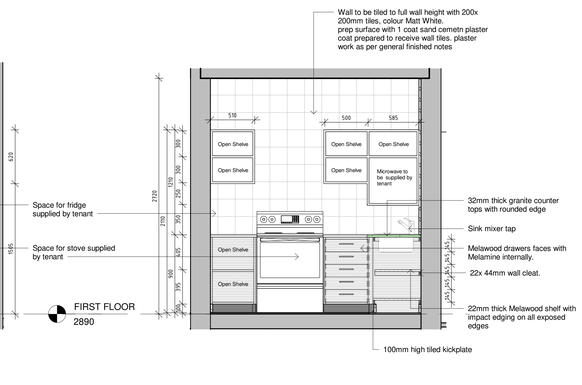
600x 600mm INDUSTRIA CHARCOAL PORCELAIN TILE, CUT IN 100MM HIGH SKIRTING. M-TRIM OR SIMILAR ALUMINIUM EDGING. FIXING AND GROUTING OF TILES TO BE IN ACCORDANCE WITH TAL MANUFACTURERS SPECIFICATION DOCUMENT.

FLOOR FINISHES LEGEND
1 : 25

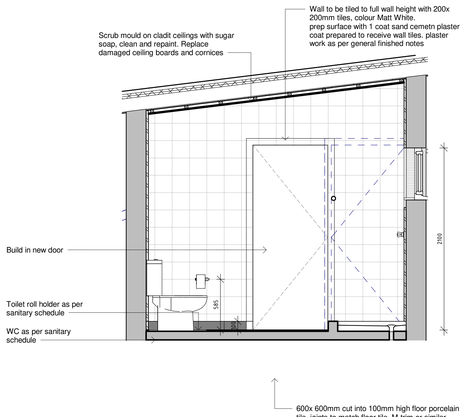
	UNIT SPECIFIC NOTES - INTERNAL & EXTERNAL
1	EXISTING CARPET TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
2	EXISTING VINYL TILES TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
3	EXISTING CONCRETE FLOOR TO BE PREPARED SURFACE FOR NEW PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
4	WINDOW OPENING SECTION TO BE RE-INSTATED. BROKEN PANES TO BE REPLACED. REPLACE MISSING STAYS. REPLACE MISSING PUTTY. MISSING WINDOWS ON FIRE DAMAGED UNITS TO BE REPLACED WITH NEW ALUMINIUM WINDOWS
5	REMOVE EXISTING SANITARY FITTINGS AND REPLACE WITH NEW
6	REPLACE / REPAIR EXISTING DAMAGED DOOR & IRONMONGERY
7	RUSTED HANDRAIL TO BE MADE GOOD & BE RE-PAINTED
8	EXISTING ASBESTOS DOWNPIPES & GUTTERS TO BE REMOVED AND REPLACED WITH NEW PVC DOWNPIPES
9	MILDEW COVERED EX. 6MM NUTEC CEILING BOARDS WITH JOINT STRIPS TO BE WASHED CLEAN WITH BLEACH CLEANING AGENT AND LEFT TO DRY THOROUGHLY. CEILING PANELS ARE TO BE SCRAPPED DOWN REMOVING ALL LOOSE AND FLAKING PAINT. DO NOT REMOVE WELL BONDED PAINT. ALL SURFACES ARE TO BE CLEAN AND DRY BEFORE PAINTING. EX. 75MM PROFILED GYPSUM CORNICE TO BE SECURED WHERE NECESSARY. APPLY POLYFILLA GAP FILLER. A FLEXIBLE MULTIPURPOSE GAP FILLER, TO FILL GAPS AROUND CORNICE. ALL SURFACES ARE TO BE CLEAN AND DRY BEFORE PAINTING.
10	EXISTING CONCRETE SOFFITS, EXPANSION JOINTS TO BE INSPECTED AND PREPARED AS FOLLOWS: REMOVE ALL LOOSE FILLERS AND, OPEN UP EXPANSION JOINTS REMOVE ALL LOOSE METERIAL, OPEN JOINTS TO BE THROUGHLY CLEANED AND REPAIRED AS PER STRUCTURAL ENGINEERS SPECIFICATIONS AND DETAILS. PREPARE EXPANSION JOINTS FOR NEW MASTIC FILLER TO STRUCTURAL ENGINEERS SPECIFICATIONS AND DETAILS. EXPOSED RUSTED STEEL REINFORCING TO BE THROUGHLY CLEANED AND REPAIRED AS PER STRUCTURAL ENGINEERS SEPECIFICATIONS AND DETAILS. PREPARE FOR PAINT FINISH, TO TAKE 1X COAT BONDING LIQUID 2X COATS HIGH QUALITY PAINT FINISH .
11	EXISTING ASBESTOS ROOF SHEETS TO REMAIN EXCEPT WHERE MISSING DUE TO FIRE DAMAGE. REPLACE WITH NEW IBR METAL ROOF SHEETING.
12	BUILT-IN CUPBOARDS TO BE REPAIRS AND DOORS REPAINTED
13	WATER DAMAGE AT EAVES CLOSURE. REPAIR AND FIX LEAK AND OR EAVES BOARDS MISSING, RE-INSTATE.
14	FACIA BOARD MISSING OR DAMAGED. REPLACE AND MAKE GOOD
15	BEDROOM: EXISTING CARPET TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING



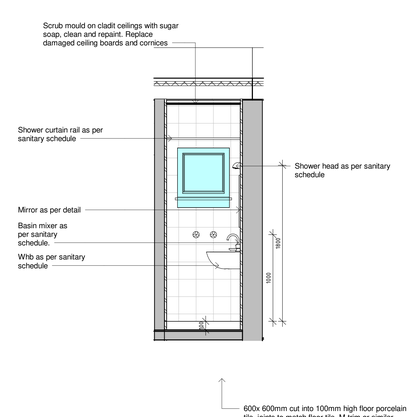
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1 : 25



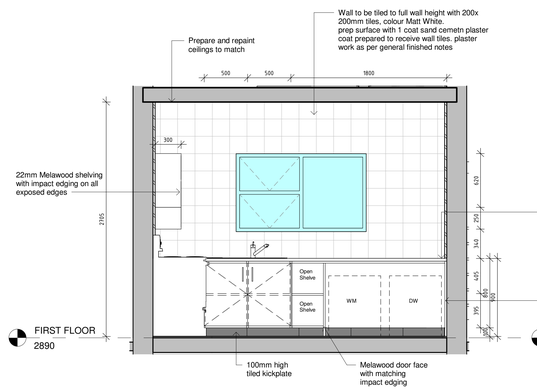
kitchen Elevation 2
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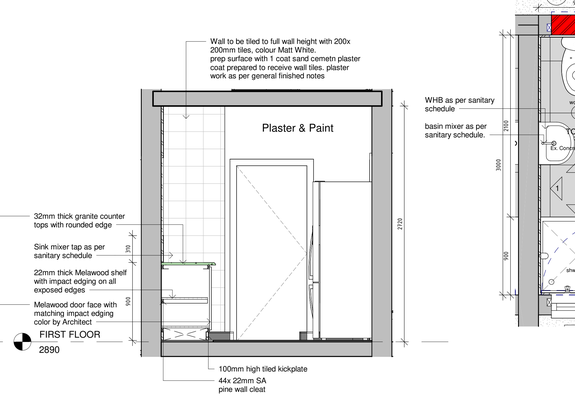
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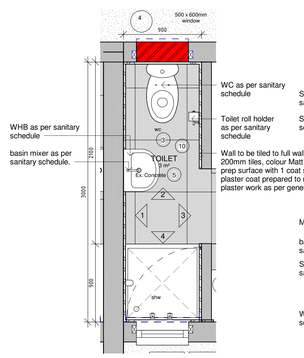
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1 : 25



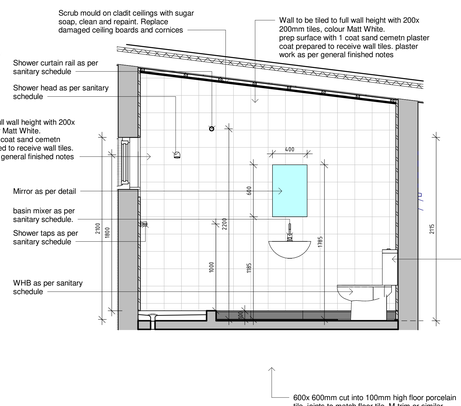
Kitchen Elevation 3
1 : 25



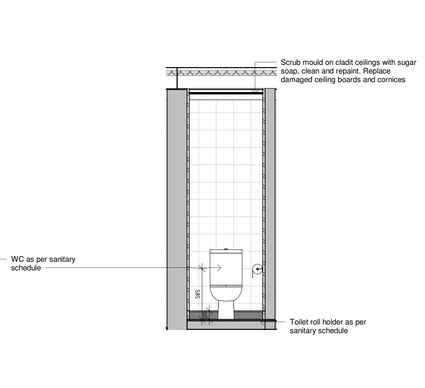
Kitchen Elevation 4
1 : 25



ROOM DATA TOILET PLAN
1 : 25



Toilet Elevation 1
1 : 25



Toilet Elevation 2
1 : 25

ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

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REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/08/29	KM	REVISED KITCHEN LAYOUT AND SHOWER TILES
A	2023/09/22	KM	REVISED TOILET WINDOW AND SHOWER

OWNER.
EASTERNCAPE DEVELOPMENT CORPORATION

SIGNATURE.

ARCHITECT.
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

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SACAP NO. 5379

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CLIENT
EASTERN CAPE DEVELOPMENT CORPORATION

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

DRAWING
BASHEE COURT
ROOM DATA SHEET - KITCHEN & TOILET

SCALE	DRAWN	CHECKED	DATE
1 : 25	KM	JS	2023/09/28 16:27:42

PROJECT NO.	DRAWING NO.	REVISION
E20.953	B-8.100	B



	UNIT SPECIFIC NOTES - INTERNAL & EXTERNAL
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3	EXISTING TILES TO BE REMOVED & PREPARED FOR NEW PORCELAIN TILES
4	EXISTING STEEL WINDOW FRAMES TO BE REPLACED WITH NEW ALUMINUM WINDOWS
5	REMOVE EXISTING SANITARY FITTINGS AND REPLACE WITH NEW
6	REPLACE / REPAIR EXISTING DAMAGED DOOR & IRONMONGERY
7	REPLACE EXISTING KITCHEN JOINERY & SANITARY FITTINGS WITH NEW
8	EXISTING ASBESTOS DOWNPIPES & GUTTERS TO BE REMOVED AND REPLACED WITH NEW SEAMLESS ALUMINIUM
9	MILDEW COVERED EX. 6MM NUTEC CEILING BOARDS WITH JOINT STRIPS TO BE WASHED CLEAN WITH BLEACH CLEANING AGENT AND LEFT TO DRY THOROUGHLY. CEILING PANELS ARE TO BE SCRAPPED DOWN REMOVING ALL LOOSE AND FLAKING PAINT. DO NOT REMOVE WELL BONDED PAINT. ALL SURFACES ARE TO BE CLEAN AND DRY BEFORE PAINTING. EX. 75MM PROFILED GYPSUM CORNICE TO BE SECURED WHERE NECESSARY. APPLY POLYFILLA GAP FILLER, A FLEXIBLE MULTIPURPOSE GAP FILLER, TO FILL GAPS AROUND CORNICE. ALL SURFACES ARE TO BE CLEAN AND DRY BEFORE PAINTING.
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12	BUILT-IN CUPBOARDS TO BE REPAIRS AND DOORS REPAINTED
13	EXISTING WALL TILES TO BE REMOVED AND BE REPLACED WITH NEW PORCELAIN WALL TILES
14	REPLACE BROKEN PIECES OF FIBRECEMENT BARGEBOARDS & CLEAN REMAINDER WITH SUGARSOAP
15	REPLACE MISSING ROOF SHEETS

ORIGINAL PAPER SIZE A0

SCALE BAR 10mm 20mm 30mm 40mm 50mm

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REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/03/23	CB	ISSUED FOR ESTIMATES
B	2023/05/10	KM	ADD FENCE AND FLOOR FINISHES
C	2023/06/02	KM	CLIENT REVISIONS AND CHANGED KITCHEN LAYOUT
D	2023/07/19	KM	REVISE BEDROOM FINISHES AND SEWER LINE
E	2023/08/14	KM	MUNICIPAL SUBMISSION
F	2023/08/23	KM	REVISED GUEST WC
G	2023/08/28	KM	REVISED DOOR NUMBERS
H	2023/09/21	KM	REVISED WINDOW 1

CLIENT.
EASTERN CAPE DEVELOPMENT CORPORATION

SIGNATURE.

ARCHITECT.
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

SIGNATURE.
SACAP NO. 5379

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Branches: Johannesburg I Pretoria I Bloemfontein East London I Durban
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Corporate Member of the South African Institute of Architects

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EASTERN CAPE DEVELOPMENT CORPORATION
ECDC

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

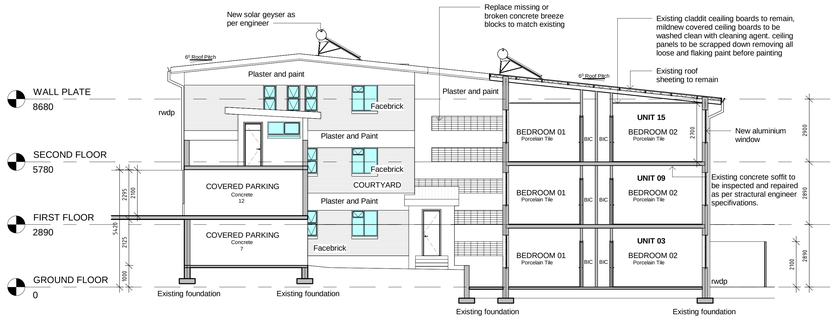
DRAWING
KYALAMI FLATS
GROUND & FIRST FLOOR PLANS

SCALE	DRAWN	CHECKED	DATE
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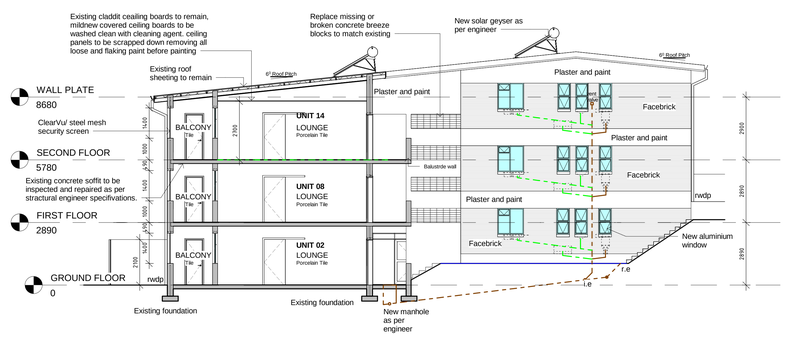
PROJECT NO.	DRAWING NO.	REVISION
E20.953	K-2.100	H



SECOND FLOOR
1 : 100



SECTION A-A
1 : 100



SECTION B-B
1 : 100



SECTION C-C
1 : 100

	UNIT SPECIFIC NOTES - INTERNAL & EXTERNAL
1	EXISTING CARPET TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
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4	EXISTING STEEL WINDOW FRAMES TO BE REPLACED WITH NEW ALUMINUM WINDOWS
5	REMOVE EXISTING SANITARY FITTINGS AND REPLACE WITH NEW
6	REPLACE / REPAIR EXISTING DAMAGED DOOR & IRONMONGERY
7	REPLACE EXISTING KITCHEN JOINERY & SANITARY FITTINGS WITH NEW
8	EXISTING ASBESTOS DOWNPIPES & GUTTERS TO BE REMOVED AND REPLACED WITH NEW SEAMLESS ALUMINUM
9	MILDEW COVERED EX. 6MM NUTEC CEILING BOARDS WITH JOINT STRIPS TO BE WASHED CLEAN WITH BLEACH CLEANING AGENT AND LEFT TO DRY THOROUGHLY. CEILING PANELS ARE TO BE SCRAPPED DOWN REMOVING ALL LOOSE AND FLAKING PAINT. DO NOT REMOVE WELL BONDED PAINT. ALL SURFACES ARE TO BE CLEAN AND DRY BEFORE PAINTING. EX. 75MM PROFILED GYPSUM CORNICE TO BE SECURED WHERE NECESSARY. APPLY POLYFILLA GAP FILLER. A FLEXIBLE MULTIPURPOSE GAP FILLER, TO FILL GAPS AROUND CORNICE. ALL SURFACES ARE TO BE CLEAN AND DRY BEFORE PAINTING.
10	EXISTING CONCRETE SOFFITS. EXPANSION JOINTS TO BE INSPECTED AND PREPARED AS FOLLOWS: REMOVE ALL LOOSE FILLERS AND, OPEN UP EXPANSION JOINTS REMOVE ALL LOOSE METERIAL, OPEN JOINTS TO BE THROUGHLY CLEANED AND REPAIRED AS PER STRUCTURAL ENGINEERS SEPECIFICATIONS AND DETAILS. PREPARE EXPANSION JOINTS FOR NEW MASTIC FILLER TO STRUCTURAL ENGINEERS SPECIFICATIONS AND DETAILS. EXPOSED RUSTED STEEL REINFORCING TO BE THROUGHLY CLEANED AND REPAIRED AS PER STRUCTURAL ENGINEERS SEPECIFICATIONS AND DETAILS. PREPARE FOR PAINT FINISH, TO TAKE 1X COAT BONDING LIQUID 2X COATS POLVIN PVA PAINT FINISH .
12	BUILT-IN CUPBOARDS TO BE REPAIRS AND DOORS REPAINTED
13	EXISTING WALL TILES TO BE REMOVED AND BE REPLACED WITH NEW PORCELAIN WALL TILES
14	REPLACE BROKEN PIECES OF FIBRECEMENT BARGEBOARDS & CLEAN REMAINDER WITH SUGARSOAP
15	REPLACE MISSING ROOF SHEETS

ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

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3. The contractor shall in all aspects of the works comply with the provisions of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and any regulations promulgated in terms of that Act or the Factories Machinery and Building Works Act of 1941.
4. The contractor shall set up, document and maintain a quality assurance and quality control system, in accordance with SANS 9001/ISO 9001, able to be checked to the satisfaction of the Architect, that all materials and workmanship, whatever their sources, meet the requirements of the Specification. Should the Contractor or any of his sub-contractors be certified to the SANS 9000 family of standards then monitor these works accordingly.
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REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/03/23	CB	ISSUED FOR ESTIMATES
B	2023/05/10	KM	ADD FLOOR FINISHES
C	2023/06/02	KM	CLIENT REVISIONS AND CHANGED KITCHEN LAYOUT
D	2023/07/19	KM	REVISE STEEL STAIRCASE, SEWER STACK & BEDROOM FLOOR FINISHES
E	2023/08/14	KM	MUNICIPAL SUBMISSION
F	2023/08/23	KM	REVISED GUEST WC
G	2023/08/28	KM	REVISED DOOR NUMBERS AND SECTION C-C
H	2023/09/22	KM	REVISED WINDOW 1

CLIENT.
EASTERN CAPE DEVELOPMENT CORPORATION

SIGNATURE

ARCHITECT.
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

SIGNATURE
SACAP NO. 5379

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Associate Offices Cape Town
Corporate Member of the South African Institute of Architects

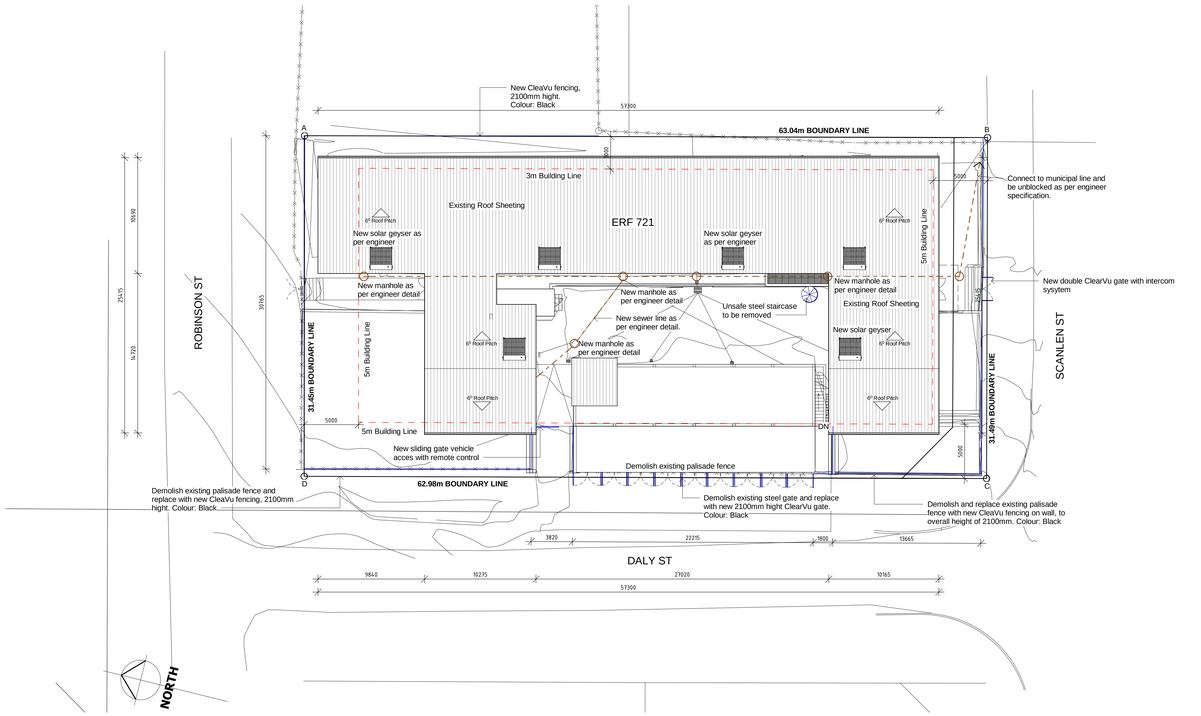
CLIENT
EASTERN CAPE DEVELOPMENT CORPORATION
ECDC

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

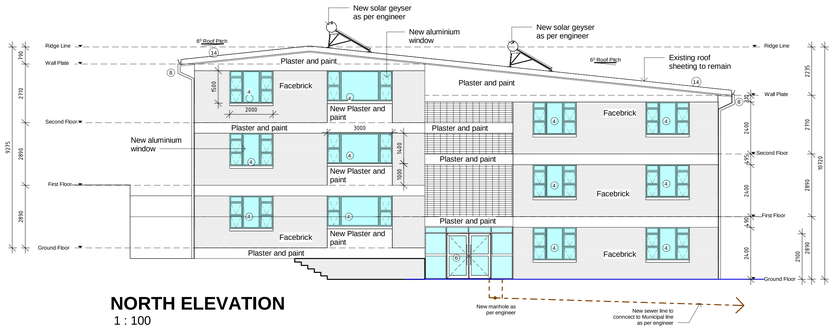
DRAWING
KYALAMI FLATS
SECOND FLOOR PLAN AND SECTIONS

SCALE	DRAWN	CHECKED	DATE
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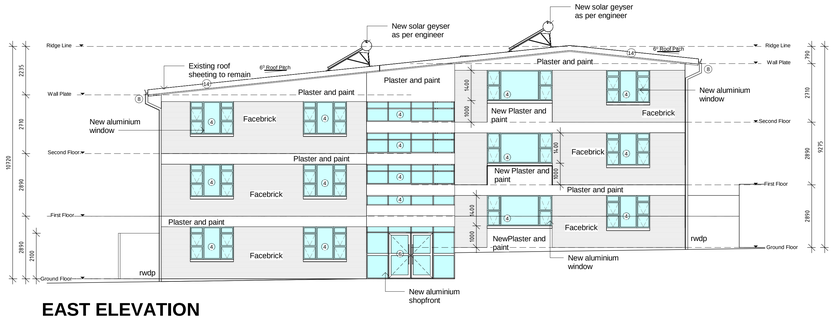
PROJECT NO.	DRAWING NO.	REVISION
E20.953	K-2.101	H



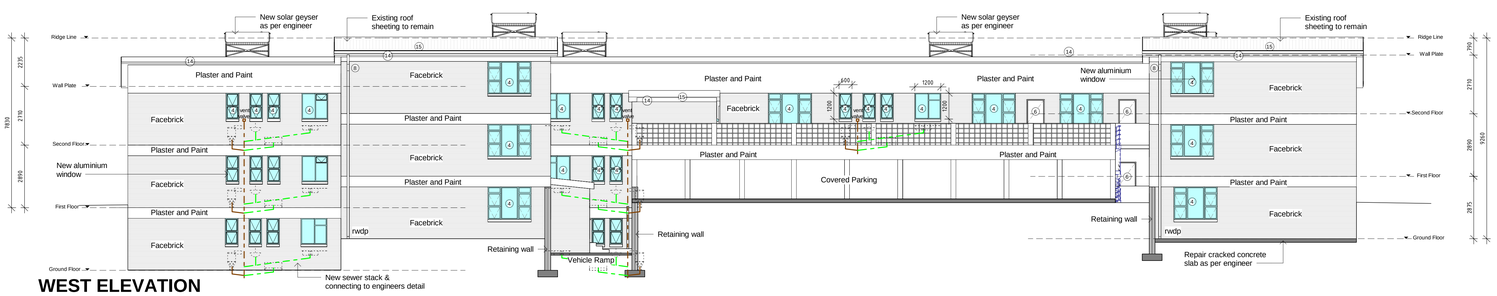
SITE PLAN
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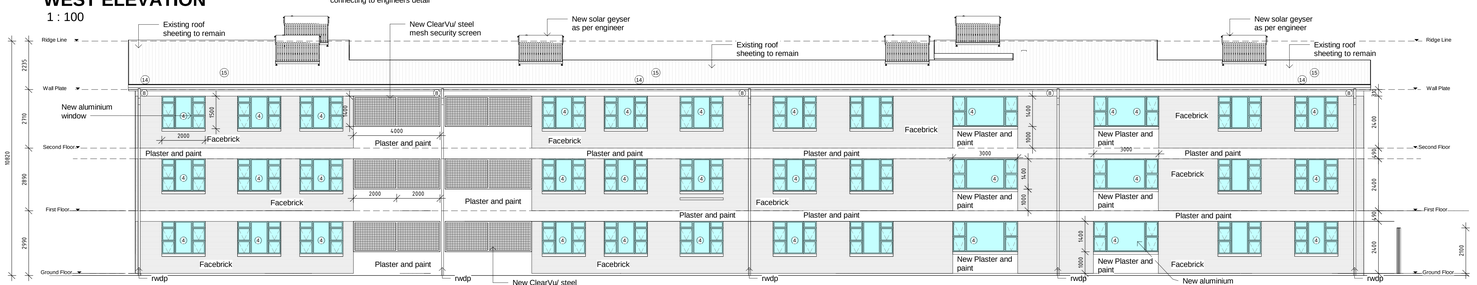
NORTH ELEVATION
1 : 100



EAST ELEVATION
1 : 100



WEST ELEVATION
1 : 100



SOUTH ELEVATION
1 : 100

	UNIT SPECIFIC NOTES - INTERNAL & EXTERNAL
1	EXISTING CARPET TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
2	EXISTING VINYL TILES TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
3	EXISTING TILES TO BE REMOVED & PREPARED FOR NEW PORCELAIN TILES
4	EXISTING STEEL WINDOW FRAMES TO BE REPLACED WITH NEW ALUMINUM WINDOWS
5	REMOVE EXISTING SANITARY FITTINGS AND REPLACE WITH NEW
6	REPLACE / REPAIR EXISTING DAMAGED DOOR & IRONMONGERY
7	REPLACE EXISTING KITCHEN JOINERY & SANITARY FITTINGS WITH NEW
8	EXISTING ASBESTOS DOWNPIPES & GUTTERS TO BE REMOVED AND REPLACED WITH NEW SEAMLESS ALUMINIUM
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TOWN PLANNING SCHEDULE

ERF NO:	721		
USE/ ZONING	DOMESTIC RESIDENCE - **H3**		
SITE AREA	1. 958 672 Ha / 1 958. 672 sqm		
BUILDING LINES	5m STREET	3m SIDE	3m REAR
HEIGHT RESTRICTIONS	3 STOREYS		
ACTUAL HEIGHT	3 STOREYS		

PARKING CALCULATIONS

REQUIRED PARKIING	1 PARKING BAY OR SPACE PER DWELLING UNIT
NUMBER OF UNITS	18 UNITS
PROVIDED PARKING	18 PARKING BAYS

AREA SCHEDULE & F.A.R CALCULATIONS

EXISTING BUILDINGS	820.997 sqm
NEW BUILDING	0 sqm
OUT BUILDINGS	132.989 sqm
TOTAL AREA	**953.986 sqm**
SITE AREA	19. 58 672 Ha / 1 958. 672 sqm
COVERAGE PERMITTED	H3 USE/ ZONING - 70%
EXISTING COVERAGE	48.71%
ADDITIONAL COVERAGE	0 sqm
TOTAL COVERAGE	**48.71%**
F.A.R PERMITTED	3.0
F.A.R	1.4
ADDITIONAL F.A.R	NONE
TOTAL F.A.R	**1.4**

FENESTRATION CALCULATIONS

FLOOR AREA		GLAZED WINDOW AREA	% of FLOOR AREA
TOTAL	2 463 sqm	447 sqm	18.15%
FENESTRATION ABOVE 15% , FENESTRATION CALCULATION REQUIRED			

ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

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REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/03/23	CB	ISSUED FOR ESTIMATES
B	2023/03/27	CB	ADD SURVEY DATA TO SITE PLAN
C	2023/05/10	KM	ADD FENCE AND NEW WINDOWS
D	2023/06/02	KM	CLIENT REVISIONS AND NEW WINDOWS
E	2023/07/019	KM	REVISE SEWER LINE, STACK AND STEEL STAIRCASE
F	2023/08/14	KM	MUNICIPAL SUBMISSION
G	2023/09/22	KM	REVISED WINDOW 1

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EASTERN CAPE DEVELOPMENT CORPORATION

SIGNATURE.

ARCHITECT.
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

SIGNATURE.
SACAP NO. 5379

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PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

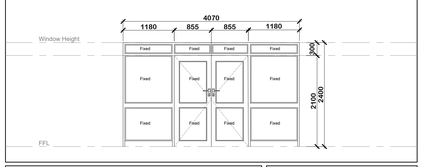
DRAWING
KYALAMI FLATS
SITE PLAN & ELEVATIONS

SCALE	DRAWN	CHECKED	DATE
As indicated	KM	JS	2023/09/22 11:16:41

PROJECT NO.	DRAWING NO.	REVISION
E20.953	K-4.100	G

DOOR AND WINDOW SCHEDULE

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: D 01

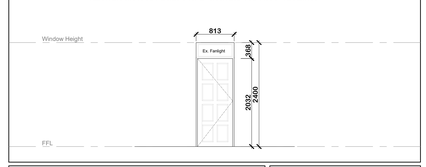
TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New purpose made aluminium double door with fixed side lights	DESCRIP	flush glazed shopfront system. all glazed with safety glass with clip-on glazing beads with neoprene seals, plugged to brickwall.
DESCRIP	Purpose made 3600mm x 2100 mm high aluminium double door system, fitted with lock furniture as specified, complying with AAAMSA performance criteria Class A1 (1000Pa). SANS 10400:2010 (Part N of Section 3) and SANS 1263-1:2006 with clip-on glazing beads with gasket seals, plugged to brickwork, All in accordance with AAAMSA Selection Guide for Glazed Aluminium Architectural Aluminium Products - June 2008.		
IRONMONGERY	As per Ironmongery Schedule		
FINISH	Natural anodised aluminium finish	FINISH	Natural anodised aluminium finish
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: D 02

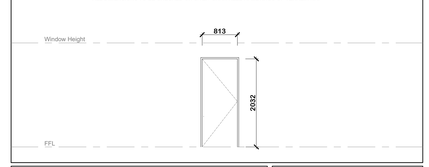
TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Timber Door	DESCRIP	Existing timber door frame and fixed fanlight to remain and be repaird where required. broken pieces of wood are to be replaced with new meranti inserts Damaged timber door frames to be replaced with new rebated HARDWOOD door frame to be built into wall. 18 mm quadrant to junction with walls to sides and at head.
OPENING	Single Door with Fanlight		
DESCRIP	Swartland single timber 813x 2032mm PG36 Colonial Eight Panel door with fanlight		
IRONMONGERY	As per Ironmongery Schedule		
FINISH	Lightly sand timber surface, leaving surface clean and dust free. Apply 3 coat of exterior quality clear Varnish and sand timber lighly in between the 3 coats.	FINISH	Lightly sand timber frame, leaving frame clean and dust free. Apply 3 coat of exterior quality clear Varnish and sand timber lighly in between the 3 coats.
GLAZING	Existing to remain and broken panes to be replaced with 6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: D 03

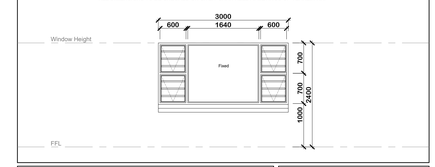
TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Timber Door	DESCRIP	Existing steel frames are to remain and be repaired Damaged and rusted steel frames to be replaced with new 1.2mm galvanised steel frames rebated and prime coated before being distributed by manufacturer with one and a half pair hinges welded on and built into brickwork
OPENING	Single Door		
DESCRIP	Swartland single timber flash panel 813x 2032mm Standard heavy duty interior door with two exposed hardwood edges (Code : HBSTDH02)		
IRONMONGERY	As per Ironmongery Schedule		
FINISH	Lightly sand timber surface, leaving surface clean and dust free. Apply one coat of wood primer and finish with two coats of Plascon Velvago. Colour as per Architect	FINISH	Clean all steel frames thoroughly. all loose and flaking paints to be removed and all existing paint to be removed with approved paint remover and paint scraper. Repair all dents. Apply one coat of universal undercoat and prepare to take two coats of Plascon eggshell enamel.
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: W 01

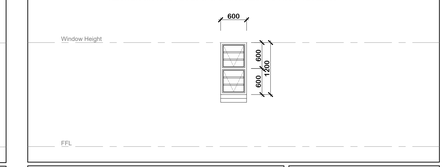
TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 3000x 1800mm, complying with AAAMSA category A1. All joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening sections to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRONMONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: W 02

TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 600x 1200mm, complying with AAAMSA category A1. All joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening sections to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRONMONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: W 03

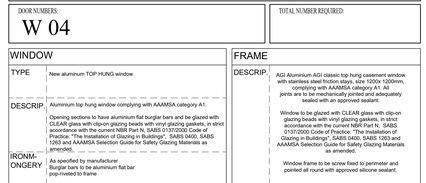
TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 1500 x 2000mm, complying with AAAMSA category A1. All joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening sections to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRONMONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: W 04

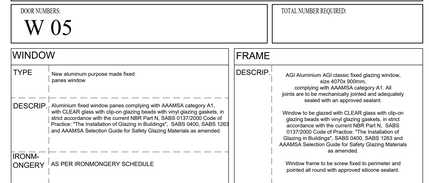
TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 1200x 1200mm, complying with AAAMSA category A1. All joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening sections to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRONMONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: W 05

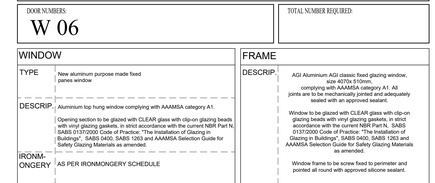
TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum purpose made fixed panes window	DESCRIP	AGI Aluminium AGI classic fixed glazing window, size 4070x 900mm, complying with AAAMSA category A1. All joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium fixed window panes complying with AAAMSA category A1, with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRONMONGERY	AS PER IRONMONGERY SCHEDULE		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: W 06

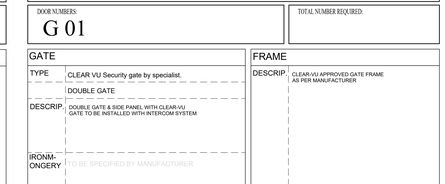
TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum purpose made fixed panes window	DESCRIP	AGI Aluminium AGI classic fixed glazing window, size 4070x 510mm, complying with AAAMSA category A1. All joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRONMONGERY	AS PER IRONMONGERY SCHEDULE		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: G 01

TOTAL NUMBER REQUIRED:

GATE		FRAME	
TYPE	CLEAR VU Security gate by specialist. DOUBLE GATE	DESCRIP	CLEAR-VU APPROVED GATE FRAME AS PER MANUFACTURER
DESCRIP	DOUBLE GATE & SIDE PANEL WITH CLEAR-VU GATE TO BE INSTALLED WITH INTERCOM SYSTEM		
IRONMONGERY	TO BE SPECIFIED BY MANUFACTURER.		
FINISH	GALVANIZED MILD STEEL WITH MARINE FUSION COATING AS PER MANUFACTURER COLOR: BLACK	FINISH	TO MATCH GATE
GLAZING	Nill	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: G 02

TOTAL NUMBER REQUIRED:

GATE		FRAME	
TYPE	CLEAR VU Security gate by specialist. DOUBLE GATE	DESCRIP	CLEAR-VU APPROVED GATE FRAME AS PER MANUFACTURER
DESCRIP	DOUBLE GATE WITH CLEAR-VU		
IRONMONGERY	TO BE SPECIFIED BY MANUFACTURER.		
FINISH	GALVANIZED MILD STEEL WITH MARINE FUSION COATING AS PER MANUFACTURER COLOR: BLACK	FINISH	TO MATCH GATE
GLAZING	Nill	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: G 03

TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	CLEAR VU entrance gate by specialist. SINGLE SLIDING GATE	DESCRIP	CLEAR-VU APPROVED GATE FRAME AS PER MANUFACTURER
DESCRIP	SINGLE VEHICLE ENTRANCE GATE WITH CLEAR-VU		
IRONMONGERY	TO BE SPECIFIED BY MANUFACTURER.		
FINISH	GALVANIZED MILD STEEL WITH MARINE FUSION COATING AS PER MANUFACTURER COLOR: BLACK	FINISH	TO MATCH GATE
GLAZING	Nill	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: G 04

TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	CLEAR VU Screening pannel by specialist.	DESCRIP	CLEAR-VU APPROVED FRAME AS PER MANUFACTURER
DESCRIP	CLEAR-VU SECURITY SCREENING PANEL		
IRONMONGERY	TO BE SPECIFIED BY MANUFACTURER.		
FINISH	GALVANIZED MILD STEEL WITH MARINE FUSION COATING AS PER MANUFACTURER COLOR: CHARCOAL	FINISH	TO MATCH SCREEN
GLAZING	Nill	SIGNAGE	Nill

REVISION

DATE	By	Rev No.	Description

ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

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REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/08/28	KM	ADD SECURITY SCREEN AND REVISED DOOR NUMBERS
B	2023/09/22	KM	REVISED WINDOW 1

CLIENT:
EASTERN CAPE DEVELOPMENT CORPORATION

SIGNATURE: _____

ARCHITECT:
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

SIGNATURE: _____
SACAP NO. 5379

impendulo DESIGN ARCHITECTS

Impendulo Design Architects (Pty) Ltd

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REG NO 2004/002973/07

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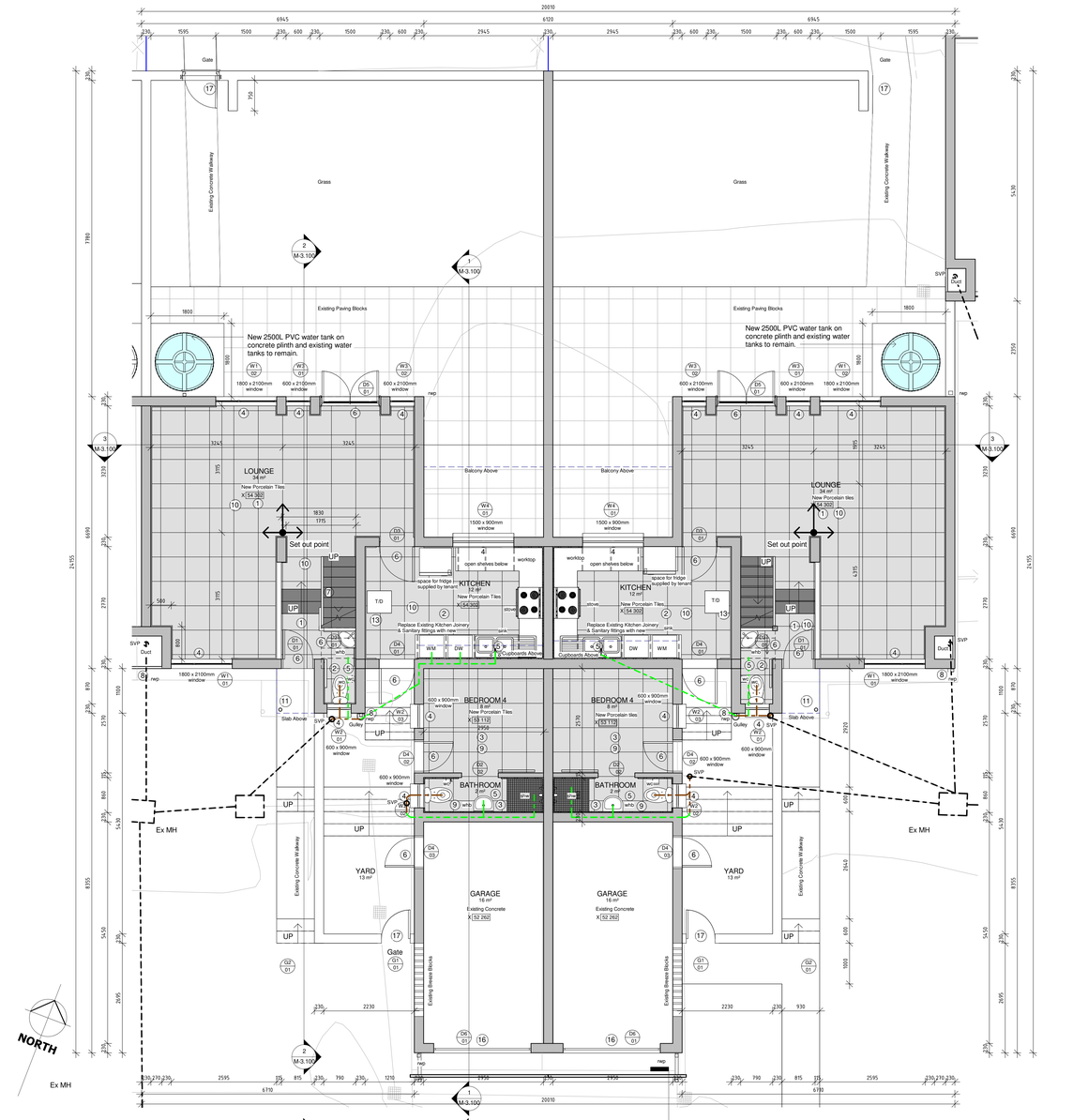
CLIENT
ECDC EASTERN CAPE DEVELOPMENT CORPORATION

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

DRAWING
KYALAMI FLATS
TYPICAL BLOCK - DOOR AND WINDOW SCHEDULE

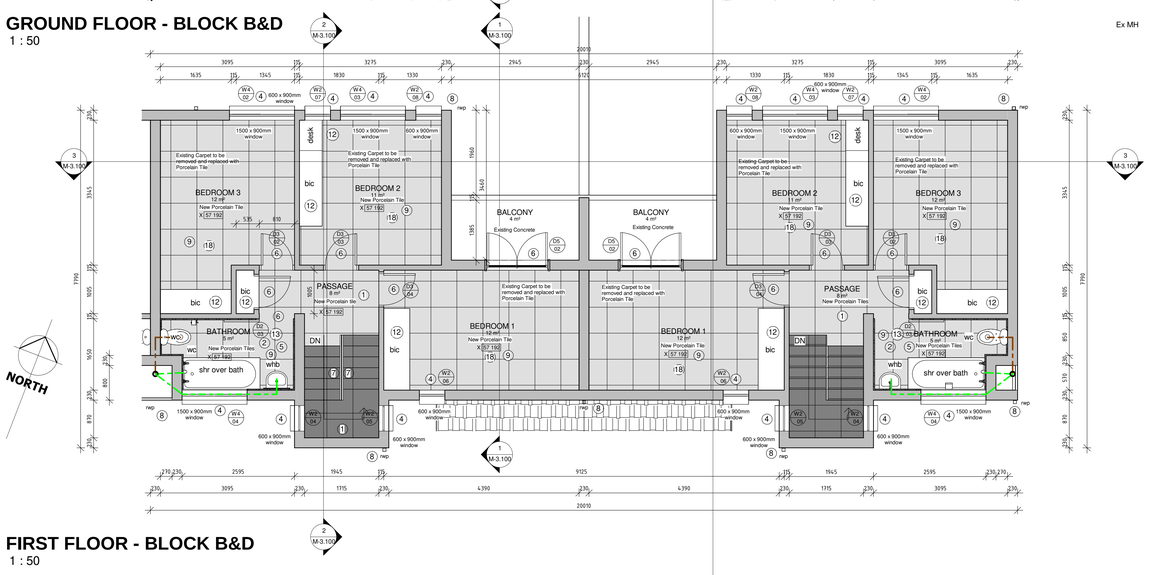
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1 : 50	KM	JWS	2023/06/01

PROJECT NO.	DRAWING NO.	REVISION
E20.953	K-7.100	B



GROUND FLOOR - BLOCK B&D

1 : 50



FIRST FLOOR - BLOCK B&D

1 : 50

	UNIT SPECIFIC NOTES - INTERNAL & EXTERNAL
1	EXISTING CARPET TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH CUT TILED SKIRTING
2	EXISTING VINYL TILES TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH CUT TILED SKIRTING
3	EXISTING CONCRETE FLOOR TO BE PREPARED FOR NEW PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
4	EXISTING STEEL WINDOW FRAMES TO BE REPLACED WITH NEW ALUMINUM WINDOWS
5	REMOVE EXISTING SANITARY FITTINGS AND REPLACE WITH NEW
6	REPLACE / REPAIR EXISTING DAMAGED DOOR & IRONMONGERY
7	TIMBER HANDRAIL TO BE MADE GOOD & BE RE-VARNISHED
8	EXISTING ASBESTOS DOWNPIPES & GUTTERS TO BE REMOVED AND REPLACED WITH NEW SEAMLESS ALUMINIUM
9	MILDEW COVERED EX. 6MM NUTEC CEILING BOARDS WITH JOINT STRIPS TO BE WASHED CLEAN WITH BLEACH CLEANING AGENT AND LEFT TO DRY THOROUGHLY. CEILING PANELS ARE TO BE SCRAPED DOWN REMOVING ALL LOOSE AND FLAKING PAINT. ALL CEILING PANELS TO BE PRIMED AND ALL SURFACES ARE TO BE CLEAN AND DRY BEFORE PAINTING. EX. 75MM PROFILED GYPSUM CORNICE TO BE SECURED WHERE NECESSARY. APPLY POLYFILLA GAP FILLER, A FLEXIBLE MULTIPURPOSE GAP FILLER, TO FILL GAPS AROUND CORNICE. ALL SURFACES ARE TO BE CLEAN AND DRY BEFORE PAINTING.
10	EXISTING CONCRETE SOFFITS, EXPANSION JOINTS TO BE INSPECTED AND PREPARED AS FOLLOWS: REMOVE ALL LOOSE FILLERS AND OPEN UP EXPANSION JOINTS REMOVE ALL LOOSE METERIAL, OPEN JOINTS TO BE THROUGHLY CLEANED AND REPAIRED AS PER STRUCTURAL ENGINEERS SEPECIFICATIONS AND DETAILS. PREPARE EXPANSION JOINTS FOR NEW MASTIC FILLER TO STRUCTURAL ENGINEERS SPECIFICATIONS AND DETAILS. EXPOSED RUSTED STEEL REINFORCEMENT TO BE CLEANED AND TREATED AS PER STRUCTURAL ENGINEERS SEPECIFICATIONS AND DETAILS. PREPARE FOR PAINT FINISH. TO TAKE 1X COAT BONDING LIQUID 2X COATS POLYVA PVA FINISH .
11	REPLACE STEEL COLUMN AT ENTRANCE CANOPY WHICH HAVE RUSTED & ARE LOOSE WIH NEW STEEL COLUMN
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13	EXISTING WALL TILES TO BE REMOVED AND BE REPLACED WITH NEW PORCELAIN WALL TILES
14	REPLACE BROKEN PIECES OF FIBRECEMENT BARGEBOARDS & CLEAN REMAINDER WITH SUGARSOAP
15	REPLACE MISSING ROOF TILES : DOUBLE ROMAN PROFILE
16	REPLACE EXISTING GARAGE ROLLER SHUTTER DOOR WITH NEW
17	EXISTING YARD GATE TO REMAN AND BE REPAINTED
18	BEDROOM- EXISTING CARPET TO BE REMOVED AND REPLACED WITH NEW PORCELAIN TILES

ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

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REVISIONS			
NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/03/21	CB	ISSUED FOR ESTIMATES
B	2023/05/05	KM	ADD FENCE, FLOOR FINISHES & RAINWATER TANKS
C	2023/05/23	KM	REVISE BATHROOM LAYOUT AND FENCE
D	2023/05/30	KM	CLIENT REVISIONS
E	2023/07/19	KM	REVISE BEDROOM FLOOR FINISHES & OMIT NEW FENCE
F	2023/08/11	KM	ADD DRAINAGE AND UPDATE KITCHEN LAYOUT
G	2023/08/30	KM	UPDATE GUEST WC

CLIENT.
ESTERN CAPE DEVELOPMENT CORPORATION

SIGNATURE

ARCHITECT.
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

SIGNATURE
SACAP NO. 5379

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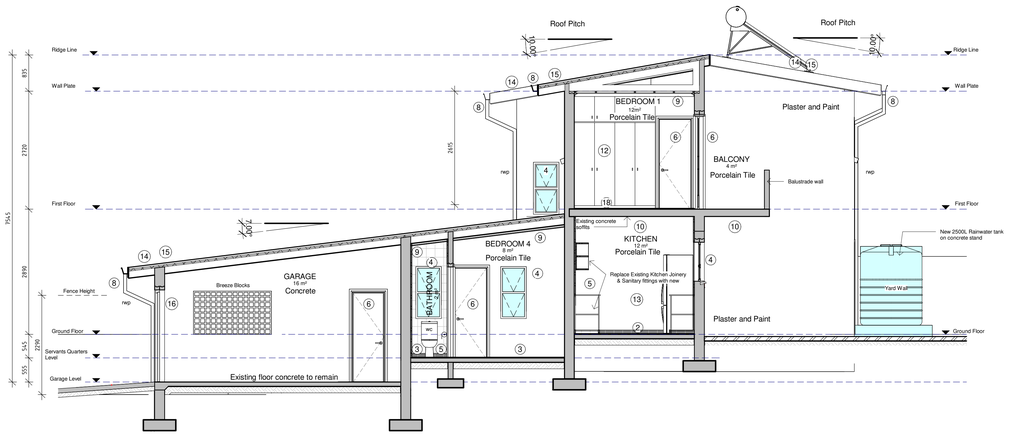
CLIENT
ECDC
EASTERN CAPE DEVELOPMENT CORPORATION

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

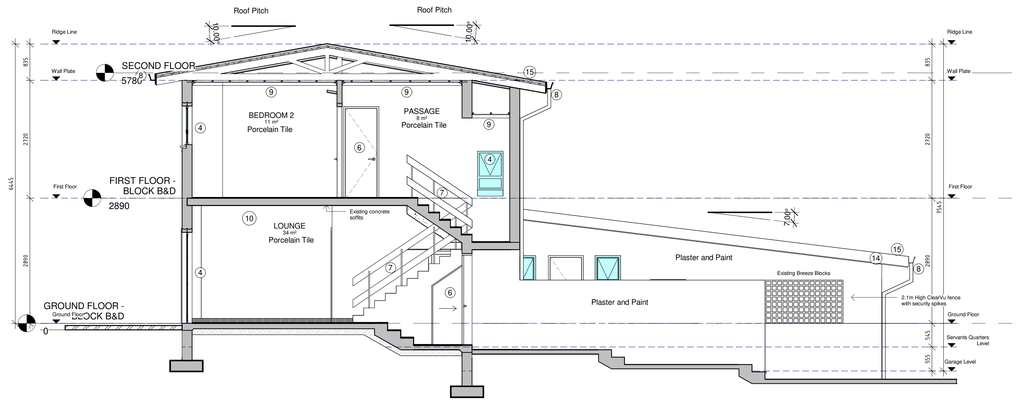
DRAWING
MSINTSI COURT
TYPICAL BLOCK - FLOOR PLANS

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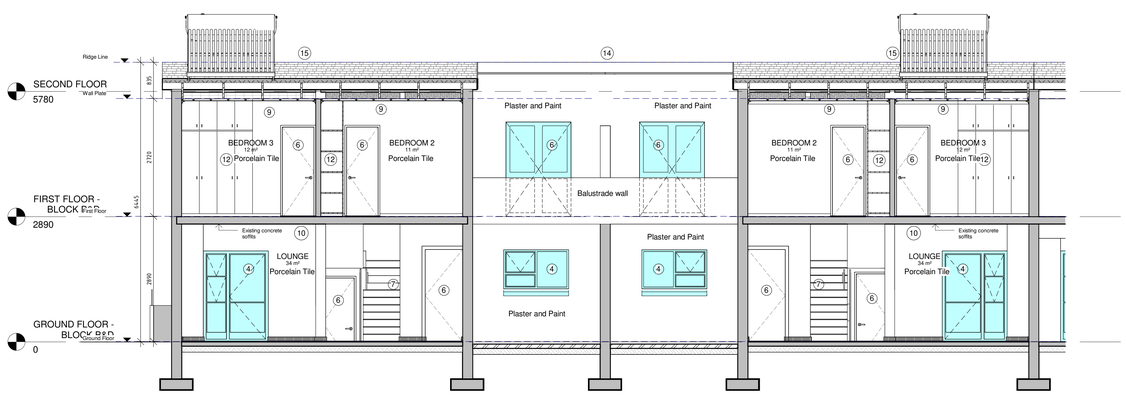
PROJECT NO.	DRAWING NO.	REVISION
E20.953	M-2.100	G



SECTION A-A
1 : 50



SECTION B - B
1 : 50



SECTION C -C
1 : 50

	UNIT SPECIFIC NOTES - INTERNAL & EXTERNAL
1	EXISTING CARPET TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH CUT TILED SKIRTING
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16	REPLACE EXISTING GARAGE ROLLER SHUTTER DOOR WITH NEW
17	EXISTING YARD GATE TO REMAIN AND BE REPAINTED
18	BEDROOM: EXISTING CARPET TO BE REMOVED AND REPLACED WITH NEW PORCELAIN TILES

ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

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REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION

CLIENT.
ESTERN CAPE DEVELOPMENT CORPORATION

SIGNATURE _____

ARCHITECT.
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

SIGNATURE _____
SACAP NO. 5379

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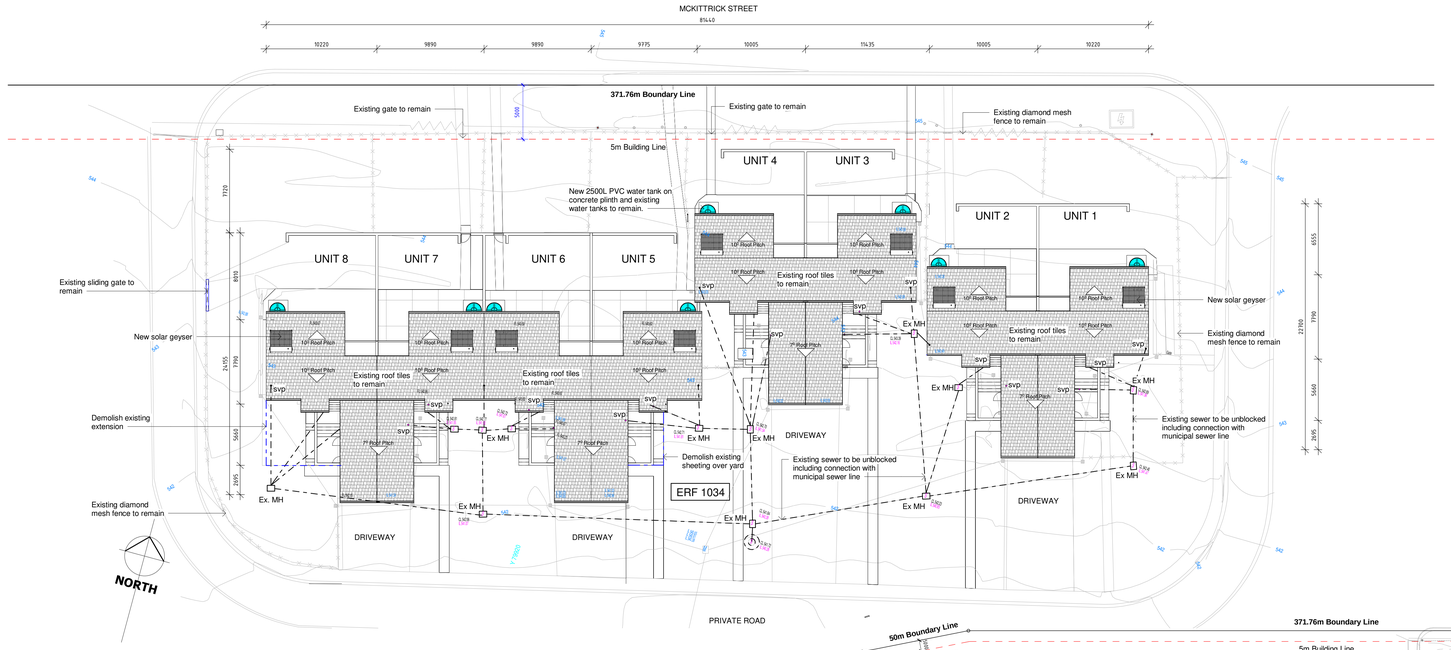
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EASTERN CAPE DEVELOPMENT CORPORATION

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

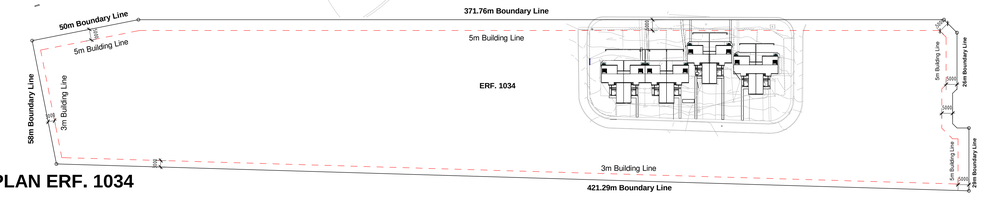
DRAWING
MSINTSI COURT
SECTIONS

SCALE	DRAWN	CHECKED	DATE
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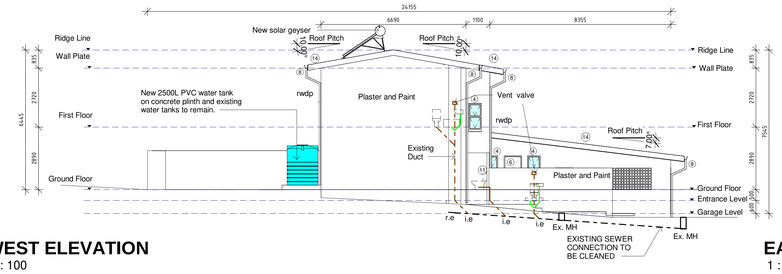
PROJECT NO.	DRAWING NO.	REVISION
E20.953	M-3.100	



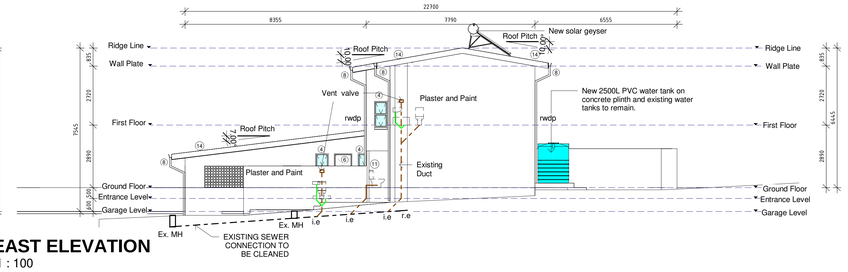
SITE PLAN
1 : 200



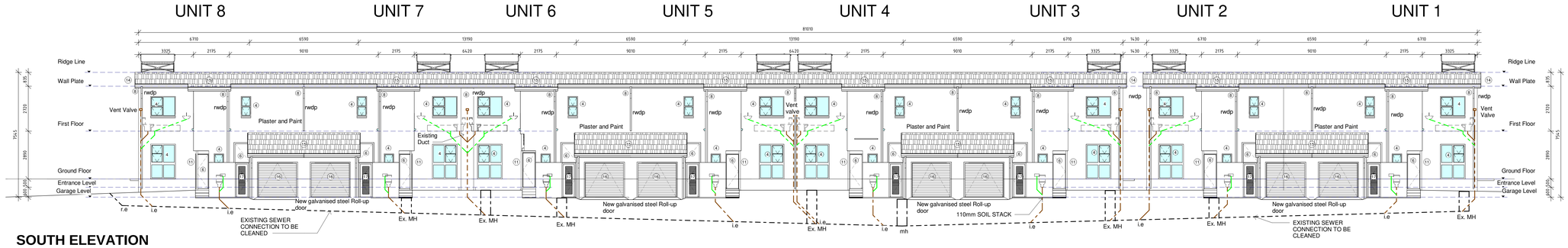
SITE PLAN ERF. 1034
1 : 1000



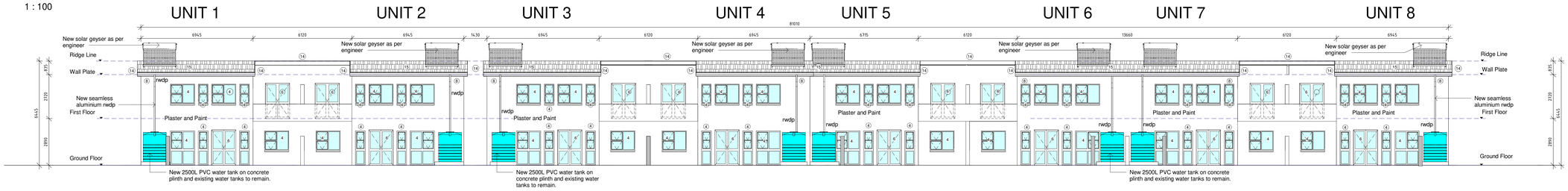
WEST ELEVATION
1 : 100



EAST ELEVATION
1 : 100



SOUTH ELEVATION
1 : 100



NORTH ELEVATION (screen walls not indicated)
1 : 100

	UNIT SPECIFIC NOTES - INTERNAL & EXTERNAL
1	EXISTING CARPET TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH CUT TILED SKIRTING
2	EXISTING VINYL TILES TO BE REMOVED AND REPLACED WITH PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH CUT TILED SKIRTING
3	EXISTING CONCRETE FLOOR TO BE PREPARED FOR NEW PORCELAIN TILES. EXISTING TIMBER SKIRTING TO BE REMOVED AND REPLACED WITH 100mm HIGH TILED SKIRTING
4	EXISTING STEEL WINDOW FRAMES TO BE REPLACED WITH NEW ALUMINUM WINDOWS
5	REMOVE EXISTING SANITARY FITTINGS AND REPLACE WITH NEW
6	REPLACE / REPAIR EXISTING DAMAGED DOOR & IRONMONGERY
7	TIMBER HANDRAIL TO BE MADE GOOD & BE RE-VARNISHED
8	EXISTING ASBESTOS DOWNPIPES & GUTTERS TO BE REMOVED AND REPLACED WITH NEW SEAMLESS ALUMINUM
9	MILDEW COVERED EX. 4MM NUTEC CEILING BOARDS WITH JOINT STRIPS TO BE WASHED CLEAN WITH BLEACH CLEANING AGENT AND LEFT TO DRY THOROUGHLY. CEILING PANELS ARE TO BE SCRAPPED DOWN REMOVING ALL LOOSE AND FLAKING PAINT. DO NOT REMOVE WELL BONDED PAINT. ALL SURFACES ARE TO BE CLEAN AND DRY BEFORE PAINTING. EX. 75MM PROFILED GYPSUM CORNICE TO BE SECURED WHERE NECESSARY. APPLY POLYFILLA GAP FILLER, A FLEXIBLE MULTIPURPOSE GAP FILLER, TO FILL GAPS AROUND CORNICE. ALL SURFACES ARE TO BE CLEAN AND DRY BEFORE PAINTING.
10	EXISTING CONCRETE SOFFITS, EXPANSION JOINTS TO BE INSPECTED AND PREPARED AS FOLLOWS: REMOVE ALL LOOSE FILLERS AND, OPEN UP EXPANSION JOINTS REMOVE ALL LOOSE METERIAL, OPEN JOINTS TO BE EXPOSED AS PER STRUCTURAL ENGINEERS SPECIFICATIONS AND DETAILS. PREPARE EXPANSION JOINTS FOR NEW MASTIC FILLER TO STRUCTURAL ENGINEERS SPECIFICATIONS AND DETAILS. EXPOSED RUSTED STEEL REINFORCING TO BE THROUGHLY CLEANED AND REPAIRED AS PER STRUCTURAL ENGINEERS SEPECIFICATIONS AND DETAILS. PREPARE FOR PAINT FINISH. TO TAKE 1X COAT BONDING LIQUID 2X COATS POLYN PVA FINISH .
11	REPLACE STEEL COLUMN AT ENTRANCE CANOPY WHICH HAVE RUSTED & ARE LOOSE WIH NEW STEEL COLUMN
12	BUILT-IN CUPBOARDS TO BE REPAIRS AND DOORS REPAINTED
13	EXISTING WALL TILES TO BE REMOVED AND BE REPLACED WITH NEW PORCELAIN WALL TILES
14	REPLACE BROKEN PIECES OF FIBRECEMENT BARGEBOARDS & CLEAN REMAINDER WITH SUGARSOAP
15	REPLACE MISSING ROOF TILES : DOUBLE ROMAN PROFILE
16	REPLACE EXISTING GARAGE ROLLER SHUTTER DOOR WITH NEW
17	EXISTING YARD GATE TO REMAIN AND BE REPAINTED
18	BEDROOM: EXISTING CARPET TO BE REMOVED AND REPLACED WITH NEW PORCELAIN TILES

TOWN PLANNING SCHEDULE

ERF NO:	1034		
USE/ ZONING	DOMESTIC RESIDENCE - **H3**		
SITE AREA	3. 670 079 Ha / 3 670. 079 sqm		
BUILDING LINES	5m STREET	3m SIDE	3m REAR
HEIGHT RESTRICTIONS	3 STOREYS		
ACTUAL HEIGHT	2 STOREYS		

PARKING CALCULATIONS

REQUIRED PARKIING	1 PARKING BAY OR SPACE PER DWELLING UNIT
NUMBER OF UNITS	8 UNITS
PROVIDED PARKING	8 PARKING BAYS

AREA SCHEDULE & F.A.R CALCULATIONS

EXISTING BUILDINGS	728. 189 sqm
NEW BUILDING	0 sqm
OUT BUILDINGS	0 sqm
TOTAL AREA	**728.189 sqm**
SITE AREA	3. 670 079 Ha / 3 670.079 sqm
COVERAGE PERMITTED	H3 USE/ ZONING - 70%
EXISTING COVERAGE	19.84%
ADDITIONAL COVERAGE	0 sqm
TOTAL COVERAGE	**19.84%**
F.A.R PERMITTED	3.0
F.A.R	0.34
ADDITIONAL F.A.R	NONE
TOTAL F.A.R	**0.36**

FENESTRATION CALCULATIONS

FLOOR AREA		GLAZED WINDOW AREA	% of FLOOR AREA
TOTAL	1 233. 3 sqm	136.5 sqm	11.07%
FENESTRATION BELOW 15% , NO FENESTRATION CALCULATION REQUIRED			

ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

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4. The contractor shall set up, document and maintain a quality assurance and quality control system, in accordance with SANS 9001/ISO 9001, able to be checked to the satisfaction of the Architect, that all materials and workmanship, whatever their sources, meet the requirements of the Specification. Should the Contractor or any of his sub-contractors be certified to the SANS 9000 family of standards then monitor these works accordingly.
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9. All work to be executed by competent persons qualified for the specific trade.
10. This drawings is copyright reserved and remains the property of Impendulo Design Architects (Pty) Ltd.

REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/03/21	CB	ISSUED FOR ESTIMATES
B	2023/03/27	CB	ADD SURVEY DATA TO SITE PLAN
C	2023/05/09	KM	ADD FENCE AND RAINWATER TANKS
D	2023/05/31	KM	CLIENT REVISIONS
E	2023/07/19	KM	OMIT NEW FENCE AND UPDATE NOTES
F	2023/08/11	KM	ADD NEW DRAINAGE, SOLAR GEYSER & TOWN PLANNING SCHEDULE

CLIENT.
ESTERN CAPE DEVELOPMENT CORPORATION

SIGNATURE _____

ARCHITECT.
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

SIGNATURE _____
SACAP NO. 5379

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Associate Offices: Cape Town
REG NO 2004/035707/07
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CLIENT
ECDC

PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

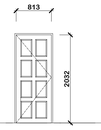
DRAWING
MSINTSI COURT
SITE PLAN
ELEVATIONS

SCALE	DRAWN	CHECKED	DATE
As indicated	KM	JS	2023/08/30 14:44:51

PROJECT NO.	DRAWING NO.	REVISION
E20.953	M-4.100	F

DOOR AND WINDOW SCHEDULE

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: **D 01**

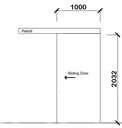
TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Timber Door	DESCRIP	Existing timber door frame to remain and be repaired where Required, broken pieces of wood are to be replaced with new meranti inserts Damaged timber door frames to be replaced with new 70 x 44 rebated HARDWOOD door frame to be built into wall. 18 mm quadrant to junction with walls to sides and at head.
DESCRIP	Swartland single timber 813x 2032mm PD28 Colonial Eight Panel door		
IRONMONGERY	As per Ironmongery Schedule		
FINISH	Lightly sand timber surface, leaving surface clean and dust free. Apply 3 coat of exterior quality clear Varnish and sand timber lighly in between the 3 coats.	FINISH	Lightly sand timber frame, leaving frame clean and dust free. Apply 3 coat of exterior quality clear Varnish and sand timber lighly in between the 3 coats.
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: **D 02**

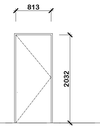
TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Timber Sliding Door	DESCRIP	None (See Ironmongery schedule for sliding door gear)
DESCRIP	Purpose made single timber flash panel 1000x 2032mm Standard heavy duty interior door with two exposed hardwood edges		
IRONMONGERY	As per Ironmongery Schedule		
FINISH	Lightly sand timber surface, leaving surface clean and dust free. Apply one coat of wood primer and finish with two coats of Plascon Velvago. Colour as per Architect	FINISH	None (See Ironmongery schedule for sliding door gear)
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: **D 03**

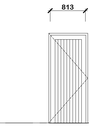
TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Timber Door	DESCRIP	Existing steel frames are to remain and be repaired Damaged and rusted steel frames to be replaced with new 1.2mm galvanised steel frames rebated and prime coated before being distributed by manufacturer with one and a half pair hinges welded on and built into brickwork
DESCRIP	Swartland single timber flash panel 813x 2032mm Standard heavy duty interior door with two exposed hardwood edges (Code : HBSTDH02)		
IRONMONGERY	As per Ironmongery Schedule		
FINISH	Lightly sand timber surface, leaving surface clean and dust free. Apply one coat of wood primer and finish with two coats of Plascon Velvago. Colour as per Architect	FINISH	Clean all steel frames thoroughly, all loose and flaking paints to be removed and all existing paint to be removed with approved paint remover and paint scraper. Repair all dents. Apply one coat of universal undercoat and prepare to take two coats of Plascon eggshell enamel.
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: **D 04**

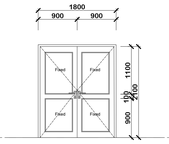
TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Timber Door	DESCRIP	Existing timber door frame to remain and be repaired where Required, broken pieces of wood are to be replaced with new meranti inserts Damaged timber door frames to be replaced with new 70 x 44 rebated HARDWOOD door frame to be built into wall. 18 mm quadrant to junction with walls to sides and at head.
DESCRIP	Swartland 813x 2032mm SD2/OB/BR single timber door		
IRONMONGERY	As per Ironmongery Schedule		
FINISH	Lightly sand timber surface, leaving surface clean and dust free. Apply 3 coat of exterior quality clear Varnish and sand timber lighly in between the 3 coats.	FINISH	Lightly sand timber frame, leaving frame clean and dust free. Apply 3 coat of exterior quality clear Varnish and sand timber lighly in between the 3 coats.
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.



DOOR NUMBERS: **D 05**

TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New Aluminium Double Door	DESCRIP	flush glazed aluminium door system.
DESCRIP	Purpose made 1800mm x 2100 mm high aluminium double door, fitted with lock furniture as specified, complying with AAAMSA performance criteria Class A1 (1000Pa), SANS 10400:2010 (Part N of Section 3) and SANS 1263-1:2006 with clip-on glazing beads with gasket seals, plugged to brickwork, all in accordance with AAAMSA Selection Guide for Glazed Aluminium Architectural Aluminium Products – June 2008.		all glazed with safety glass with clip-on glazing beads with neoprene seals, plugged to brick wall.
IRONMONGERY	As per Ironmongery Schedule		
FINISH	Natural anodised aluminium finish	FINISH	Natural anodised aluminium finish
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nil

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: **W 01**

TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 1500 x 2100mm, complying with AAAMSA category A1. all joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRONMONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nil

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: **W 02**

TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 600 x 1200mm, complying with AAAMSA category A1. All joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRONMONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nil

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: **W 03**

TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 600 x 1200mm, complying with AAAMSA category A1. All joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRONMONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nil

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: **W 04**

TOTAL NUMBER REQUIRED:

WINDOW		FRAME	
TYPE	New aluminum TOP HUNG window	DESCRIP	AGI Aluminium AGI classic top hung casement window with stainless steel friction stays, size 1500 x 1200mm, complying with AAAMSA category A1. All joints are to be mechanically jointed and adequately sealed with an approved sealant. Window to be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended. Window frame to be screw fixed to perimeter and pointed all round with approved silicone sealant.
DESCRIP	Aluminium top hung window complying with AAAMSA category A1. Opening section to have aluminium flat burglar bars and be glazed with CLEAR glass with clip-on glazing beads with vinyl glazing gaskets, in strict accordance with the current NBR Part N, SABS 0137/2000 Code of Practice: "The Installation of Glazing in Buildings", SABS 0400, SABS 1263 and AAAMSA Selection Guide for Safety Glazing Materials as amended.		
IRONMONGERY	As specified by manufacturer Burglar bars to be aluminium flat bar pop-riveted to frame		
FINISH	NATURAL anodized Aluminum	FINISH	NATURAL anodized Aluminum
GLAZING	6.35mm GSA SmartGlass™ IntruderpruffENS Clear laminated safety glass, complying with SANS 1253 Part 1, 2 or 3 with the name of the manufacturer permanently marked on each sheet visible after glazing in accordance with NBR N schedule 1 and SABS 0137.	SIGNAGE	Nil

REVISION

DATE	By	Rev No.	Description

ALL DIMENSIONS TO BE CHECKED ON SITE. / GAAN ALLE AFMETINGS OP TERREIN NA.

DOOR NUMBERS: **D 06**

TOTAL NUMBER REQUIRED:

DOOR		FRAME	
TYPE	New pre-coated galvanised steel roll-up garage door Single Roll-up Door	DESCRIP	As supplied by Manufacturer
DESCRIP	Galvanised steel Single Garage door to suite opening size, 2400x 2100mm with all accessories Color by architect		
IRONMONGERY	As per supplier's Specifications		
FINISH	Pre-coated paint	FINISH	Galvanised steel
GLAZING	None	SIGNAGE	None

REVISION

DATE	By	Rev No.	Description

ORIGINAL PAPER SIZE A0

SCALE BAR
10mm 20mm 30mm 40mm 50mm

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REVISIONS

NR.	DATE	DRAWN BY	DESCRIPTION
A	2023/07/19	KM	OMT CLEARVU FENCE AND CLEARVU GATES

CLIENT
EASTERN CAPE DEVELOMENT CORPORATION

SIGNATURE

ARCHITECT
IMPENDULO DESIGN ARCHITECTS (PTY) LTD

SIGNATURE
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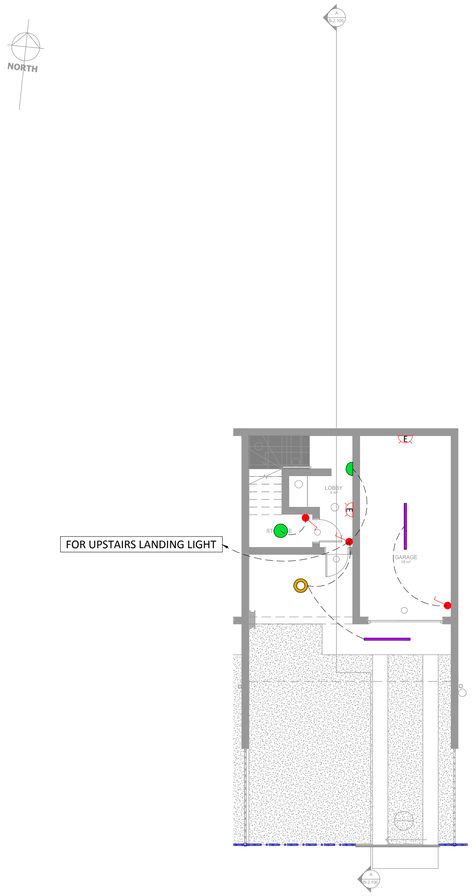
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PROJECT
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

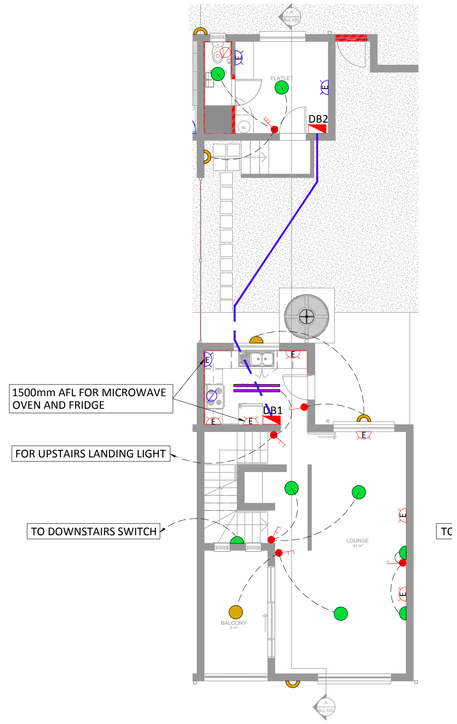
DRAWING
MSINTSI COURT
TYPICAL BLOCK - DOOR AND WINDOW SCHEDULE

SCALE	DRAWN	CHECKED	DATE
1 : 50	KM	JWS	2023/05/17

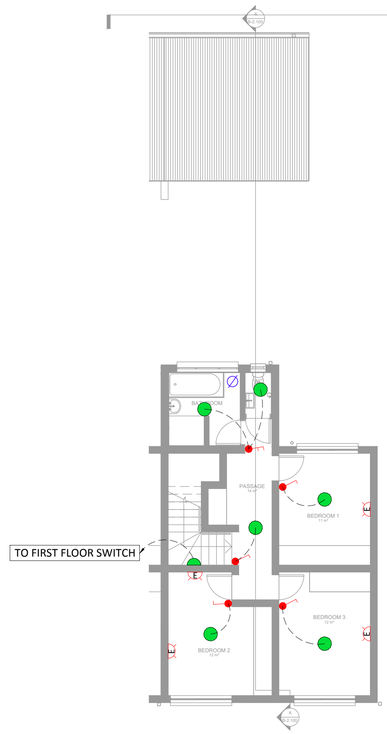
PROJECT NO.	DRAWING NO.	REVISION
E20.953	M-7.100	A



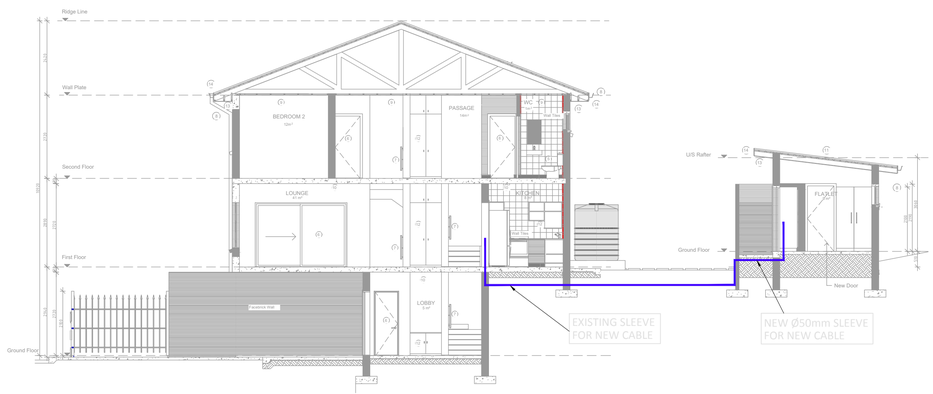
GROUND FLOOR



FIRST FLOOR



SECOND FLOOR



Section A-A

NOTES:

1. LIGHT CIRCUITS TO BE CONNECTED TO ALL EXISTING LIGHT SWITCHES
2. ALL WIRING FOR NEW WALL POWER SOCKET OUTLETS TO BE INSTALLED IN 20mm PVC CONDUIT CHASED IN WALLS WHERE INDICATED (IN BLUE)
3. REFER TO SINGLE LINE DIAGRAMME FOR DETAIL ON DISTRIBUTION BOARD
4. FIRE-DAMAGED UNITS TO GET A NEW SUPPLY CABLE AS DETAILED IN DRAWING 10669-3-EED-005

LEGEND:

- OR — TYPE B PROVINCE MEDITERRANEAN 80/10 BULKHEAD 18W, 4000K; WHITE (CEILING OR WALL-MOUNTED)
- OR — TYPE D1 PROVINCE SATURN 80/10 BULKHEAD 15W, 4000K; WHITE (CEILING OR WALL-MOUNTED)
- OR — TYPE D2 PROVINCE SATURN 80/10 BULKHEAD 15W, 4000K; WHITE, WITH BUILT-IN DAYLIGHT SWITCH (CEILING OR WALL-MOUNTED)
- TYPE C1 PROVINCE SAXA 11/83/40/36 36W, 4000K; WHITE
- TYPE C2 PROVINCE SAXA 11/83/40/54 54W, 4000K; WHITE
- 10A, 1-LEVER, 1-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 10A, 2-LEVER, 1-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 20A 2-POLE SURFACE-MOUNTED ISOLATOR MOUNTED NEXT TO THE GEYSER
- 45A 2-POLE SURFACE-MOUNTED ISOLATOR MOUNTED IN CEILING VOID FOR GEYSER OR FLUSH-MOUNTED 1400mm AFFL FOR STOVE
- 16A COMBO STANDARD SWITCHED & EURO SOCKET OUTLET FLUSH-MOUNTED IN WALL 300mm AFFL OR ABOVE KITCHEN COUNTER
- NEW 16A COMBO STANDARD SWITCHED & EURO SOCKET OUTLET FLUSH-MOUNTED IN WALL 300mm AFFL OR ABOVE KITCHEN COUNTER
- 3c 6mm² SWA/PVC COPPER CABLE + 4mm² BCEW BURIED IN TRENCH 500mm BGL WITH CABLE MARKER TAPE HIDDEN 300mm BGL ABOVE IT
- DISTRIBUTION BOARD

REV.	BY	DESCRIPTION	DATE
3	P.N.	FOR TENDER	09/2023
2	P.N.	FOR TENDER	09/2023
1	P.N	FOR TENDER	07/2023

DRG. No.	REFERENCE DRAWING

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MECHANICAL ENGINEER	L.S.	ELECTRICAL ENGINEER	P.N.

APPROVED

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REGIONAL DIRECTOR

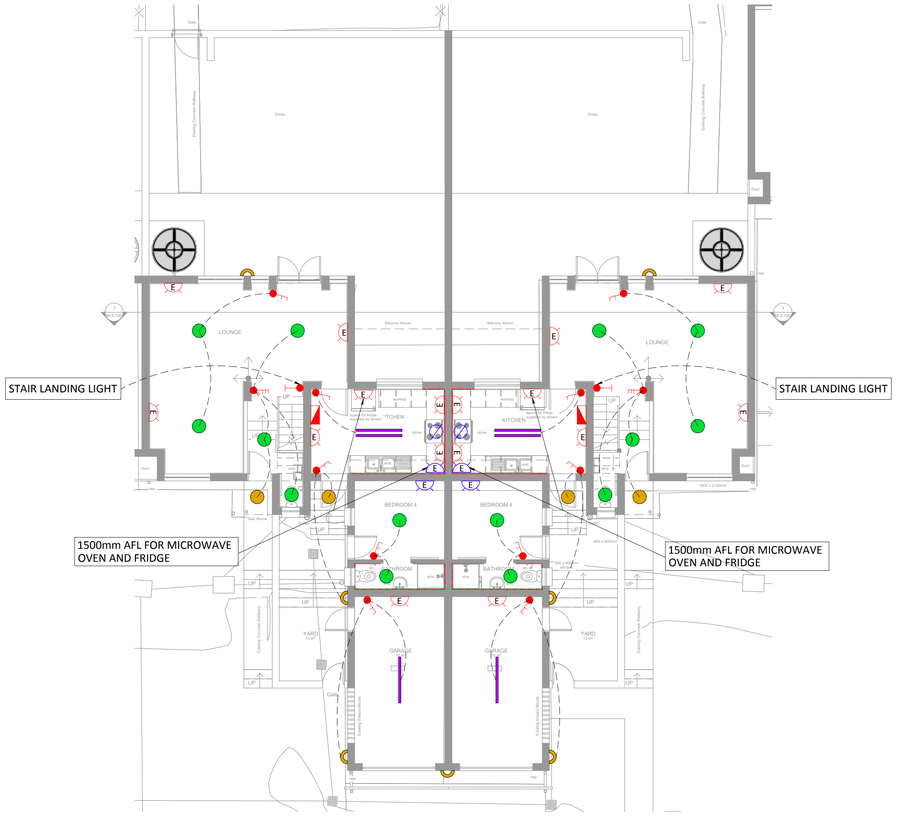
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

BASHEE COURT

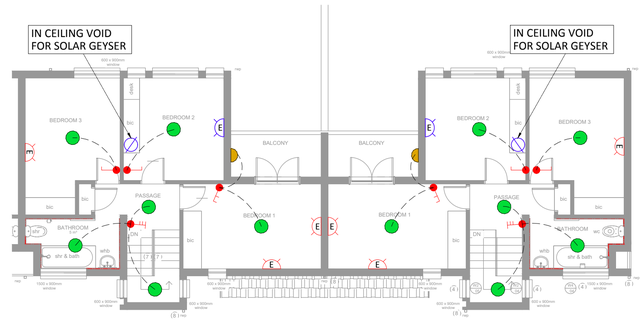
SMALL POWER & LIGHTING LAYOUT

SCALE	1:100	DATE	31/07/2023
DRAWING NUMBER	10669-3-EED-001	A1	REVISION 3

NORTH



GROUND FLOOR - BLOCK B&D



FIRST FLOOR - BLOCK B&D

LEGEND CONT:

- 16A COMBO STANDARD SWITCHED & EURO SOCKET OUTLET FLUSH-MOUNTED IN WALL 300mm AFFL OR ABOVE KITCHEN COUNTER
- NEW 16A COMBO STANDARD SWITCHED & EURO SOCKET OUTLET FLUSH-MOUNTED IN WALL 300mm AFFL OR ABOVE KITCHEN COUNTER
- DISTRIBUTION BOARD

NOTES:

1. LIGHT CIRCUITS TO BE CONNECTED TO ALL EXISTING LIGHT SWITCHES
2. ALL WIRING FOR NEW WALL POWER SOCKET OUTLETS TO BE INSTALLED IN 20mm PVC CONDUIT CHASED IN WALLS WHERE INDICATED (IN BLUE)
3. REFER TO SINGLE LINE DIAGRAMME FOR DETAIL ON DISTRIBUTION BOARD

LEGEND:

- OR TYPE B PROVINCE MEDITERRANEAN 80/10 BULKHEAD 18W, 4000K; WHITE (CEILING OR WALL-MOUNTED)
- OR TYPE D1 PROVINCE SATURN 80/10 BULKHEAD 15W, 4000K; WHITE (CEILING OR WALL-MOUNTED)
- OR TYPE D2 PROVINCE SATURN 80/10 BULKHEAD 15W, 4000K; WHITE, WITH BUILT-IN DAYLIGHT SWITCH (CEILING OR WALL MOUNTED)
- TYPE C1 PROVINCE SAXA 11/83/40/36 36W, 4000K; WHITE
- TYPE C2 PROVINCE SAXA 11/83/40/54 54W, 4000K; WHITE
- 10A, 1-LEVER, 1-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 10A, 2-LEVER, 1-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 10A, 2-LEVER, 1-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mm X 50mm, MOUNTED 1400mm AFFL
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- 10A, 2-LEVER, 1-WAY & 2-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 10A, 3-LEVER, 1-WAY AND 2-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mm X 50mm, MOUNTED 1400mm AFFL
- 45A 2-POLE SURFACE-MOUNTED ISOLATOR MOUNTED IN CEILING VOID FOR GEYSER OR FLUSH-MOUNTED 1400mm AFFL FOR STOVE

REV.	BY	DESCRIPTION	DATE
3	T.B.	FOR TENDER	09/2023
2	P.N.	FOR TENDER	09/2023
1	P.N.	FOR TENDER	08/2023

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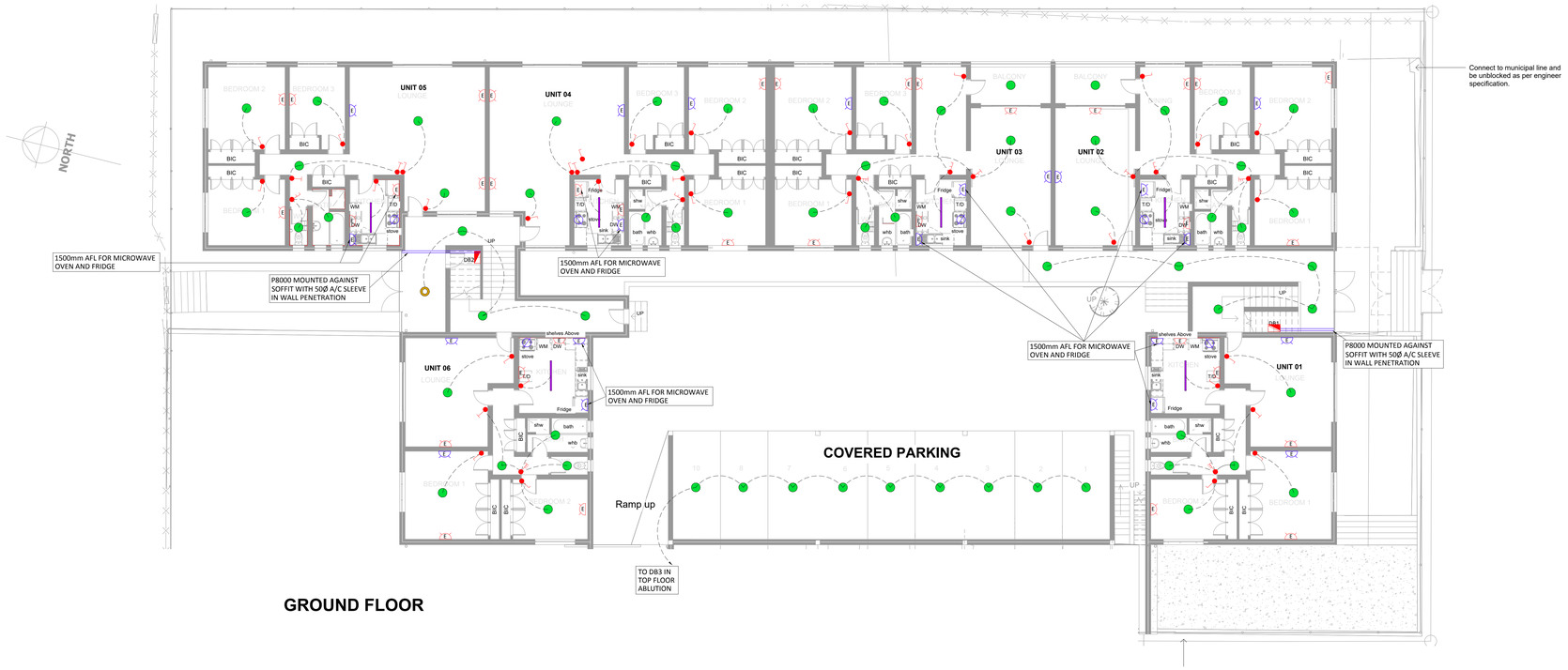
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CHECKED	J.K.	PROJECT MANAGER	E.S.
CIVIL ENGINEER	E.S.	STRUCTURAL ENGINEER	M.B.
MECHANICAL ENGINEER	L.S.	ELECTRICAL ENGINEER	P.N.

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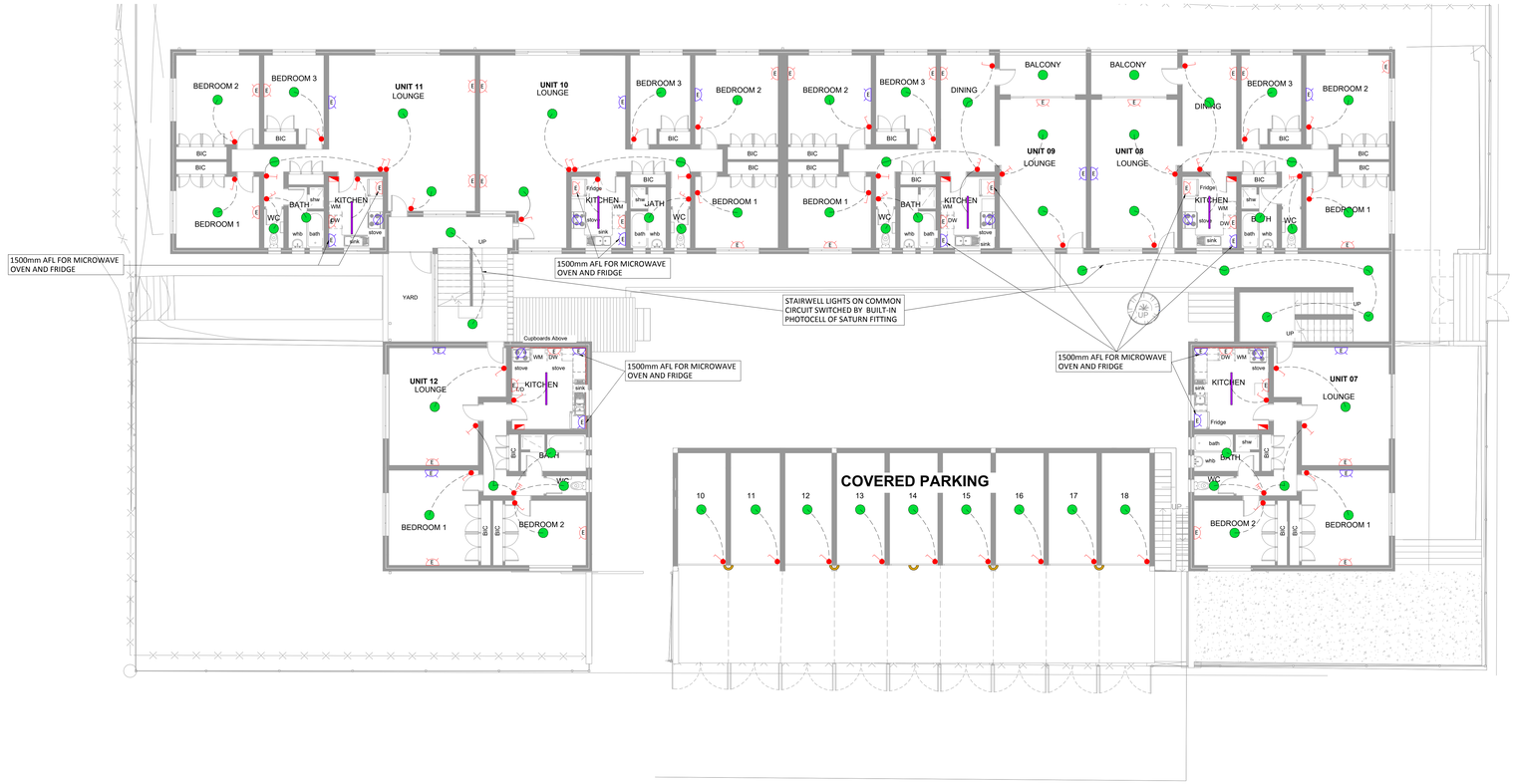
PROJECT MANAGER | REGIONAL DIRECTOR

ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS BUTTERWORTH
MSINTSI COURT
SMALL POWER & LIGHTING LAYOUT

SCALE 1:100		DATE 07/08/2023	
DRAWING NUMBER 10669-3-EED-002	A1	REVISION 3	



GROUND FLOOR



FIRST FLOOR

LEGEND:

- TYPE B PROVINCE MEDITERRANEAN 80/10 BULKHEAD 18W, 4000K; WHITE (CEILING OR WALL-MOUNTED)
- TYPE C1 PROVINCE SAXA 11/83/40/36 36W, 4000K; WHITE
- TYPE D2 PROVINCE SATURN 80/10 BULKHEAD 15W, 4000K; WHITE, WITH BUILT-IN DAYLIGHT SWITCH (CEILING OR WALL MOUNTED)
- 10A, 1-LEVER, 1-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 10A, 1-LEVER, 2-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 10A, 2-LEVER, 1-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 10A, 2-LEVER, 1-WAY & 2-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mm X 50mm, MOUNTED 1400mm AFFL
- 10A, 3-LEVER, 1-WAY AND 2-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mm X 50mm, MOUNTED 1400mm AFFL
- 45A 2-POLE SURFACE-MOUNTED ISOLATOR MOUNTED IN CEILING VOID FOR GEYSER OR FLUSH-MOUNTED 1400mm AFFL FOR STOVE
- 16A COMBO STANDARD SWITCHED & EURO SOCKET OUTLET FLUSH-MOUNTED IN WALL 300mm AFFL OR ABOVE KITCHEN COUNTER
- NEW 16A COMBO STANDARD SWITCHED & EURO SOCKET OUTLET FLUSH-MOUNTED IN WALL 300mm AFFL OR ABOVE KITCHEN COUNTER
- P8000 (76 X76mm) GALVANIZED STEEL DUCT MOUNTED AGAINST SOFFIT AND DOWN WALL UP TO TOP-ENTRY DB, PAINTED WHITE, FOR 3c25mm² OVERHEAD AERIAL BUNDLE CONDUCTOR FEEDER
- DISTRIBUTION BOARD

NOTES:

1. LIGHT CIRCUITS TO BE CONNECTED TO ALL EXISTING LIGHT SWITCHES
2. ALL WIRING FOR NEW WALL POWER SOCKET OUTLETS TO BE INSTALLED IN 20mm PVC CONDUIT CHASED IN WALLS WHERE INDICATED (IN BLUE)
3. REFER TO SINGLE LINE DIAGRAMME FOR DETAIL ON DISTRIBUTION BOARD
4. REFER TO ESKOM STANDARD D-DT-1047 FOR DETAIL ON METER & DATA CONCENTRATOR KIOSK

REV.	BY	DESCRIPTION	DATE
3	T.B.	FOR TENDER	09/2023
2	T.B.	FOR TENDER	09/2023
1	P.N	FOR TENDER	08/2023

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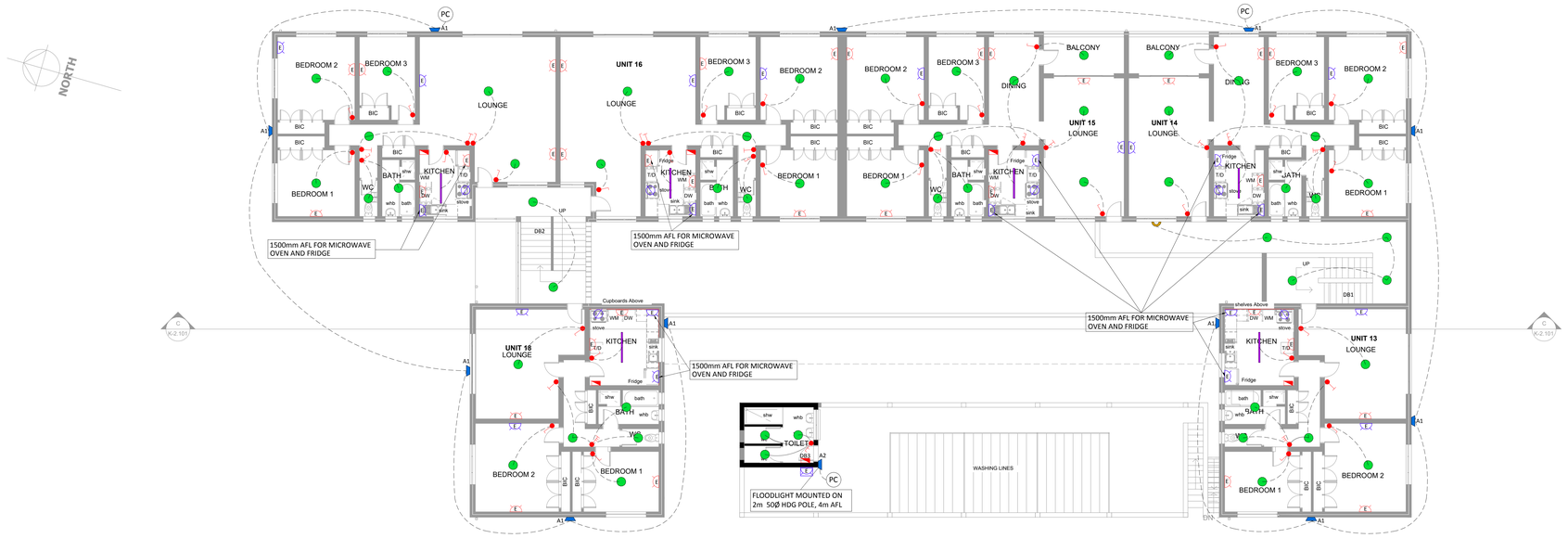
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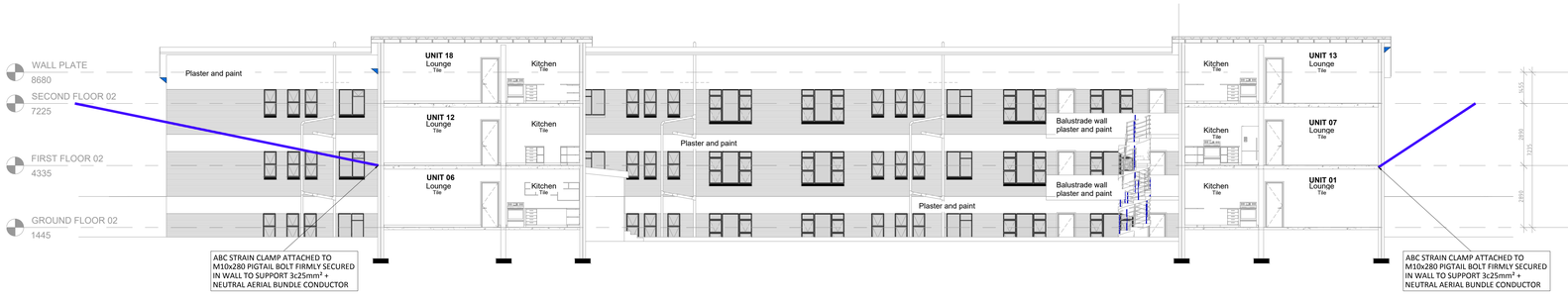
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS BUTTERWORTH
KYALAMI FLATS
GROUND & FIRST FLOOR PLANS

SCALE	DATE	REVISION
1:100	08/08/2023	3

DRAWING NUMBER: 10669-3-EED-003 | A0



SECOND FLOOR



SECTION C-C

LEGEND:

- A1 — TYPE A1 CHIRON 50W FLOODLIGHT WITH 90° BEAM, 4000K, MOUNTED 5.5m AFL ON WALL WITH STANDARD BRACKET
- A2 — TYPE A2 CHIRON 50W FLOODLIGHT WITH 90° BEAM, 4000K, MOUNTED 4m AFL ON POLE WITH POLE-MOUNT BRACKET
- OR — TYPE B PROVINCE MEDITERRANEAN 80/10 BULKHEAD 18W, 4000K; WHITE (CEILING OR WALL-MOUNTED)
- TYPE C1 PROVINCE SAXA 11/83/40/36 36W, 4000K; WHITE
- OR — TYPE D2 PROVINCE SATURN 80/10 BULKHEAD 15W, 4000K; WHITE, WITH BUILT-IN DAYLIGHT SWITCH (CEILING OR WALL MOUNTED)
- PC — ROYCE THOMPSON IP65 DAYLIGHT PHOTOCELL SWITCH SECURELY MOUNTED 3m AGL
- 10A, 1-LEVER, 1-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 10A, 1-LEVER, 2-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 10A, 2-LEVER, 1-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mmX 50mm, MOUNTED 1400mm AFFL
- 10A, 2-LEVER, 1-WAY & 2-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mm X 50mm, MOUNTED 1400mm AFFL
- 10A, 3-LEVER, 1-WAY AND 2-WAY, FLUSH MOUNTED SWITCH UNIT COMPLETE WITH WHITE PVC COVER AND PVC SCREWS OR CLIPPED PVC COVER, 100mm X 50mm, MOUNTED 1400mm AFFL
- 45A 2-POLE SURFACE-MOUNTED ISOLATOR MOUNTED IN CEILING VOID FOR GEYSER OR FLUSH-MOUNTED 1400mm AFFL FOR STOVE
- 16A COMBO STANDARD SWITCHED & EURO SOCKET OUTLET FLUSH-MOUNTED IN WALL 300mm AFFL OR ABOVE KITCHEN COUNTER
- NEW 16A COMBO STANDARD SWITCHED & EURO SOCKET OUTLET FLUSH-MOUNTED IN WALL 300mm AFFL OR ABOVE KITCHEN COUNTER
- NEW 16A COMBO STANDARD SWITCHED & EURO SOCKET OUTLET IN FLUSH-MOUNTED WALL BOX 300mm AFL ENCLOSED IN WEATHERPROOF YORK BOX
- DISTRIBUTION BOARD

NOTES:

1. LIGHT CIRCUITS TO BE CONNECTED TO ALL EXISTING LIGHT SWITCHES
2. ALL WIRING FOR NEW WALL POWER SOCKET OUTLETS TO BE INSTALLED IN 20mm PVC CONDUIT CHASED IN WALLS WHERE INDICATED (IN BLUE)
3. REFER TO SINGLE LINE DIAGRAMME FOR DETAIL ON DISTRIBUTION BOARDS

REV.	BY	DESCRIPTION	DATE
3	P.N.	FOR TENDER	09/2023
2	P.N.	FOR TENDER	09/2023
1	P.N.	FOR TENDER	08/2023

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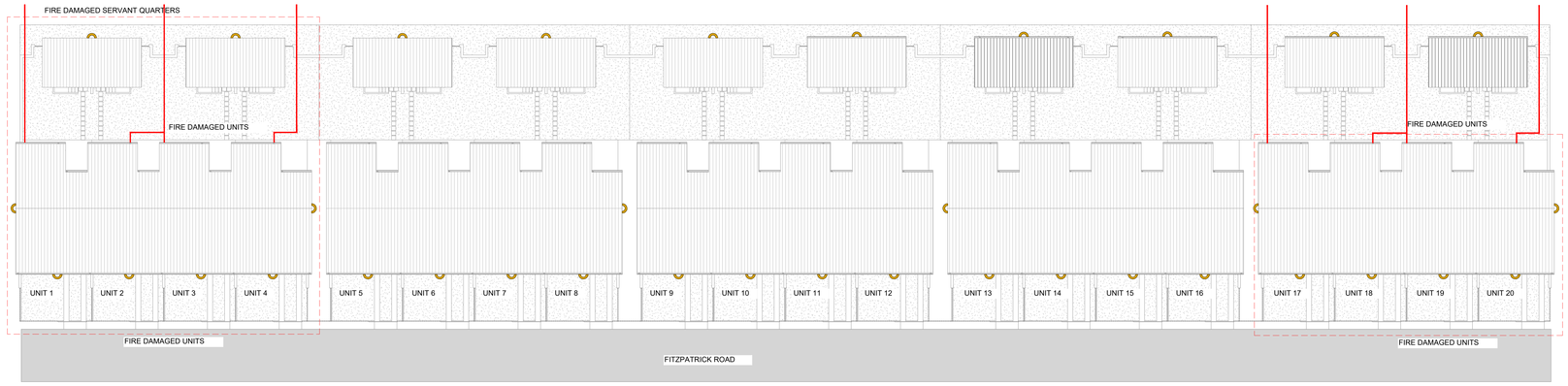
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CIVIL ENGINEER	E.S	STRUCTURAL ENGINEER	M.B
MECHANICAL ENGINEER	L.S	ELECTRICAL ENGINEER	P.N

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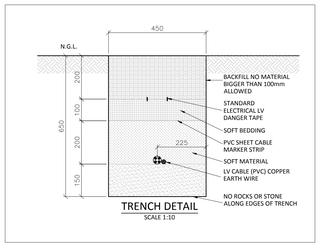
ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS BUTTERWORTH
KYALAMI FLATS
SECOND FLOOR PLAN AND SECTION

SCALE	1:100	DATE	14/08/2023
DRAWING NUMBER	10669-3-EED-004	A0	REVISION 3





SITE



TRENCH DETAIL
SCALE 1:10

LEGEND:

OR — TYPE D2 PROVINCE SATURN 80/10 BULKHEAD 15W, 400 BUILT-IN DAYLIGHT SWITCH (WALL MOUNTED)

3c10mm2 SWA/PVC COPPER CABLE + 6mm2 BCEW BURIED IN TRENCH 500mm BGL WITH CABLE MARKER TAPE BURIED 300mm BGL ABOVE IT, AND FED THROUGH EXISTING PVC SLEEVE UNDER FLOOR TO DB (REFER TO TRENCH DETAIL)

NOTES:

1. DOTTED ZONES DEMARCATE FIRE-DAMAGED UNITS FOR WHICH CABLING AND WIRING HAS TO BE RE-DONE
2. PROPOSED CABLE ROUTES ARE APPROXIMATE DEPENDING ON MOST PRACTICAL ROUTE AND POSITION OF KIOSK



NORTH ELEVATION



SOUTH ELEVATION

REV.	BY	DESCRIPTION	DATE
2	T.B.	FOR TENDER	09/2023
1	P.N	FOR TENDER	08/2023

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MECHANICAL ENGINEER	L.S	ELECTRICAL ENGINEER	P.N

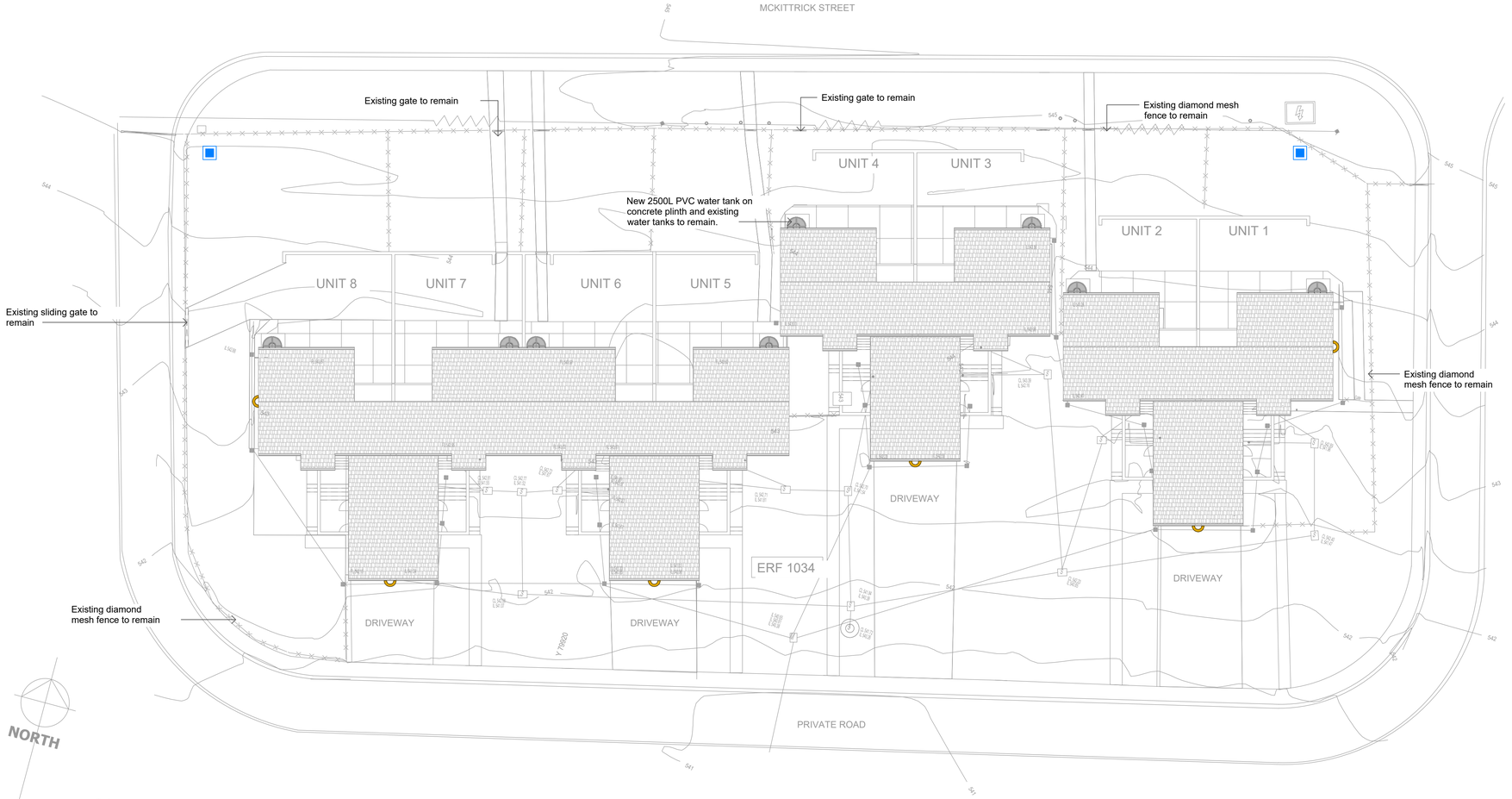
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ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

BASHEE COURT
EXTERIOR LIGHTING
LAYOUT

SCALE 1:200 | DATE 02/08/2023

DRAWING NUMBER 10669-3-EED-005 | A0 | REVISION 2



SITE PLAN



SOUTH ELEVATION



LEGEND:

TYPE A RUBICON 30W SOLAR POST TOP, 3000K, BLACK, MOUNTED ON 6m BLACK POWDER-COATED HDG POLE BURIED 1m BGL, 2m FROM FENCE LINE (BACK) AND ROAD (FRONT)

OR

TYPE D2 PROVINCE SATURN 80/10 BULKHEAD 15W, 400 BUILT-IN DAYLIGHT SWITCH (WALL MOUNTED)

REV.	BY	DESCRIPTION	DATE
2	P.N.	FOR TENDER	09/2023
1	P.N	FOR TENDER	08/2023

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CIVIL ENGINEER	E.S.	STRUCTURAL ENGINEER	M.B.
MECHANICAL ENGINEER	L.S.	ELECTRICAL ENGINEER	P.N.

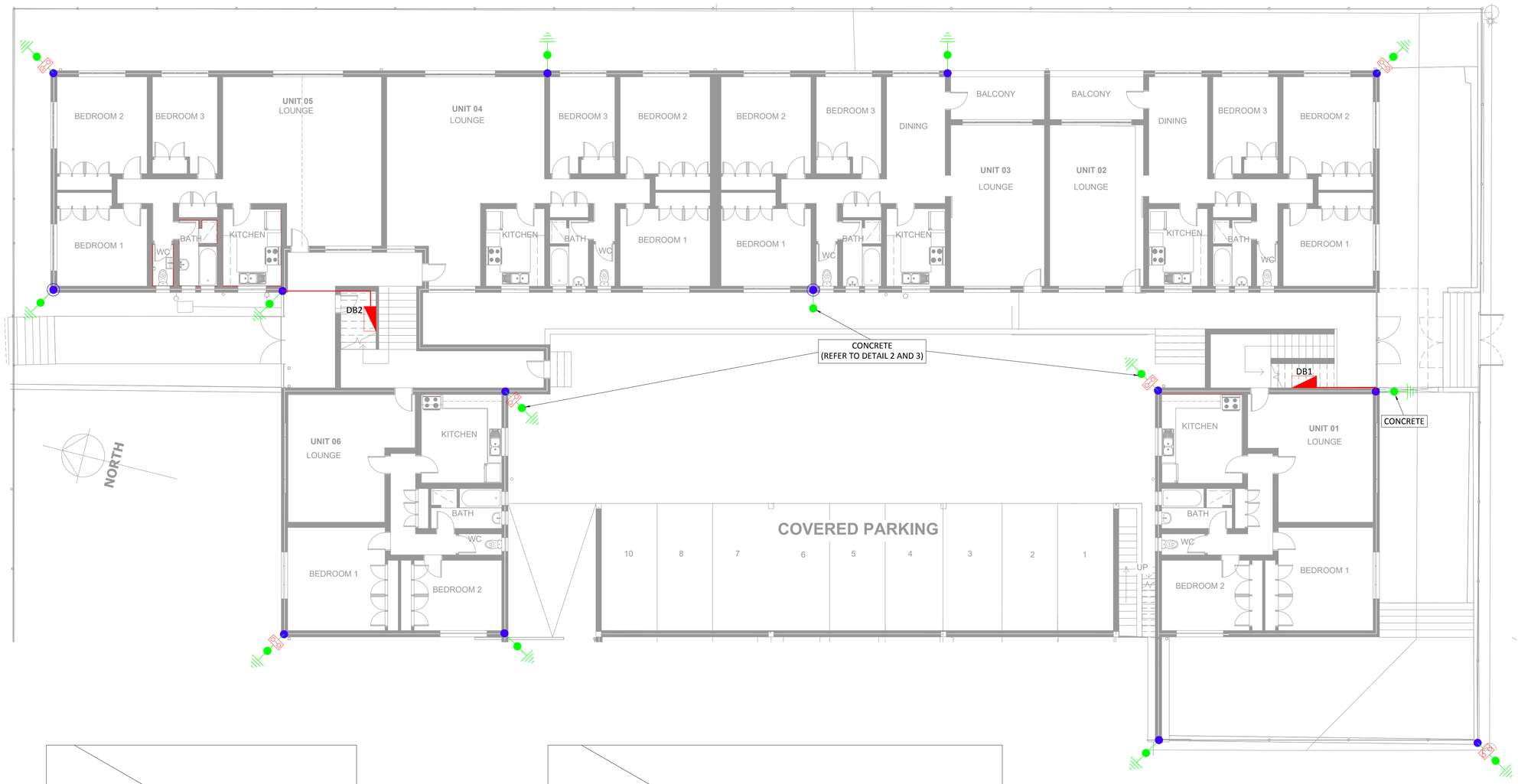
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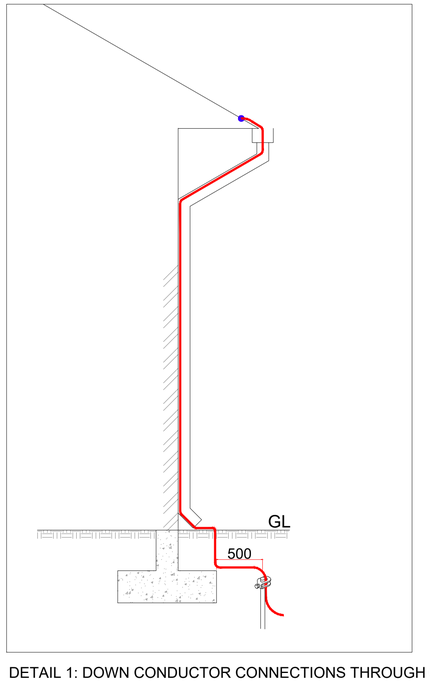
PROJECT MANAGER | REGIONAL DIRECTOR

ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

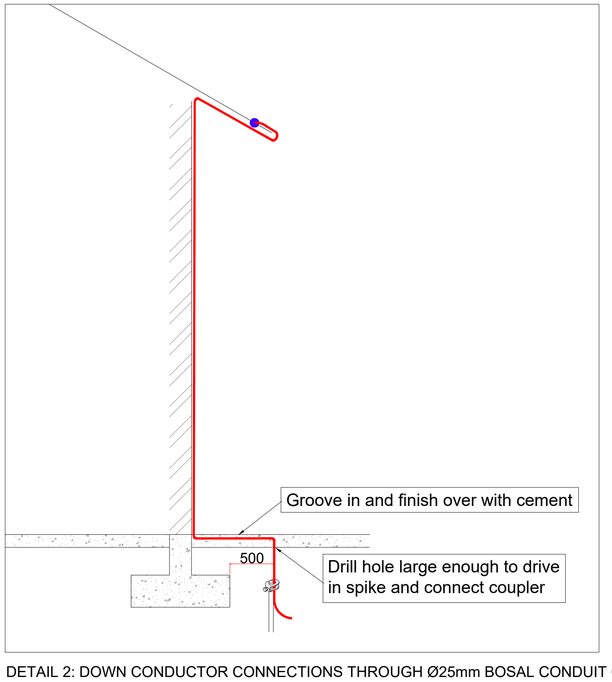
MSINTSI COURT
EXTERIOR LIGHTING
LAYOUT

SCALE	1:200	DATE	18/08/2023
DRAWING NUMBER	10669-3-EED-006	A1	REVISION 2

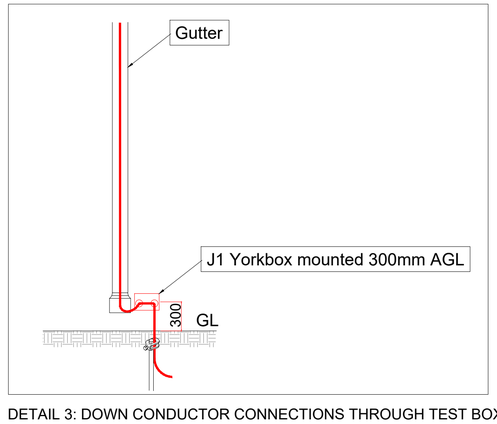




DETAIL 1: DOWN CONDUCTOR CONNECTIONS THROUGH GUTTER



DETAIL 2: DOWN CONDUCTOR CONNECTIONS THROUGH Ø25mm BOSAL CONDUIT ON WALL



DETAIL 3: DOWN CONDUCTOR CONNECTIONS THROUGH TEST BOX
(FRONT VIEW)

LEGEND:

- 2.4m EARTH SPIKE COMPRISING TWO 1.2 COPPER CLADDED STEEL CONDUCTOR ELECTRODES COUPLED WITH ROD COUPLING AND DRIVEN 500mm BGL, WITH CONNECTING BRASS CLAMP ATTACHED
- 70mm² PVC INSULATED COPPER CLADDED STEEL CONDUCTOR IN RAINWATER DOWNPIPE SECURELY ATTACHED TO ROOF IBR SHEETING WITH M10 STAINLESS STEEL LUGS, WASHERS AND NUTS AND TO EARTH SPIKE (OR TEST BOX) (REFER TO DETAIL 1)
- 70mm² PVC INSULATED COPPER CLADDED STEEL CONDUCTOR IN Φ25mm BOSAL CONDUIT ATTACHED TO WALL WITH SADDLES AT 1m INTERVALS, AND SECURELY ATTACHED TO ROOF IBR SHEETING WITH M10 STAINLESS STEEL LUGS, WASHERS AND NUTS AND TO EARTH SPIKE (REFER TO DETAIL 2)
- STAINLESS STEEL U-BOLT OR BRASS CLAMP CONNECTION BETWEEN ALUMINIUM CONDUCTOR AND EARTH SPIKE
- TYPE J1 YORK BOX 87X87X50 mm INCLUDING TEST TERMINALS AND JUMPER SURFACE-MOUNTED ON WALL 300mm AFFL (REFER TO DETAIL 3)
- DISTRIBUTION BOARD
- 70mm² PVC INSULATED COPPER CLADDED STEEL CONDUCTOR (FROM ARB)

NOTES:

1. ELECTRODE SECTIONS TO BE COUPLED AND DRIVEN BY VIBRATION HAMMER 500mm FROM FOUNDATION. WHERE ROCK IS ENCOUNTERED, TWO SINGLE ELECTRODE SECTIONS MAY BE DRIVEN 500mm APART.
2. 70mm² (COPPER EQUIVALENT SIZE) PVC INSULATED COPPER CLADDED STEEL CONDUCTOR TO BE SECURELY BONDED TO EARTH BAR OF MAIN DISTRIBUTION BOARDS, AND SOLIDLY CLAMPED TO THE NEAREST EARTH ELECTRODE USING A BRASS CLAMP.

REV.	BY	DESCRIPTION	DATE
1	P.N	FOR TENDER	08/2023

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ECDC EASTERN CAPE DEVELOPMENT CORPORATION

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CIVIL ENGINEER	E.S.	STRUCTURAL ENGINEER	M.B.
MECHANICAL ENGINEER	L.S.	ELECTRICAL ENGINEER	P.N.

APPROVED

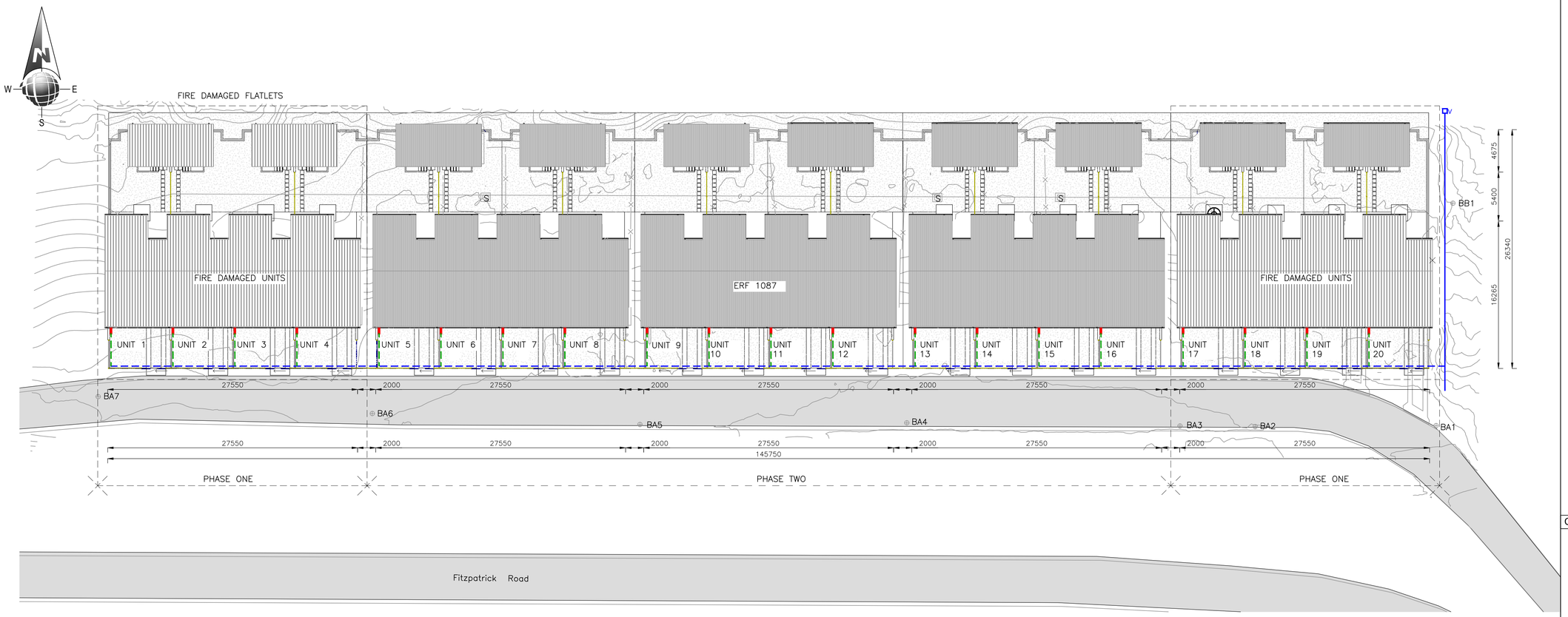
PROJECT MANAGER | REGIONAL DIRECTOR

ECDC CLUSTER F1
RENOVATION OF RESIDENTIAL BUILDINGS
BUTTERWORTH

KYALAMI FLATS

LIGHTNING PROTECTION SYSTEM

SCALE 1:100		DATE 23/08/2023	
DRAWING NUMBER 10669-3-ELP-002	A1	REVISION 1	



FIRE RING MAIN LAYOUT PLAN
1:250

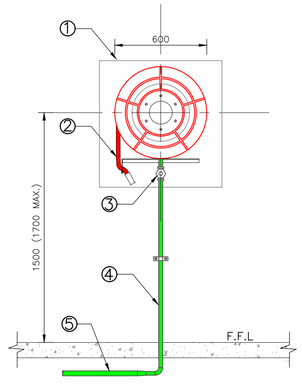
LEGEND
- NEW Ø50mm FIRE RING MAIN, METERED AT EACH TAKE-OFF POINT.
- EXISTING Ø50mm (ASSUMED) WATER MAIN
- Ø32mm CONNECTIONS TO FIRE HOSE REELS
- NEW FIRE HOSE REEL C/W 30m HOSE AND COUPLING HOUSED IN PVC HOSE REEL CABINET

NOTES
1. NEW FIRE MAIN NETWORK RUNS PARALLEL WITH EXISTING SEWER NETWORK SO EXTRA CARE TO BE TAKEN AGAINST DAMAGE DURING EXCAVATIONS.
2. MAIN CONTRACTOR TO INSTALL FIRE RING MAIN AND Ø32mm CONNECTIONS UP TO 1.2m AGL.
3. WATER PRESSURE TO BE MINIMUM 3 BAR (300kPa)

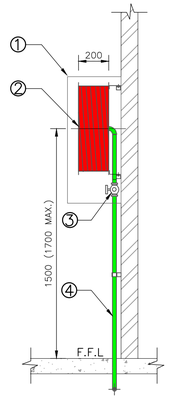
0 2.5 5 7.5 10 15 20 25m

0 0.2 0.4 0.6 0.8 1.2 1.6 2m
1:20

LEGEND
① – LOCKABLE PVC HOSE REEL CABINET
② – 30 METRE FIRE HOSE REEL
③ – Ø25mm STOP VALVE
④ – Ø25mm FIRE HOSE REEL SUPPLY PIPE
⑤ – Ø32mm FIRE HOSE REEL SUPPLY PIPE



SECTIONAL FRONT VIEW



SECTIONAL SIDE VIEW

TYPICAL FIRE HOSE REEL DETAIL
1:20

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REV.	BY	DESCRIPTION	DATE
T1	P.N	ISSUE FOR TENDER	08/2023

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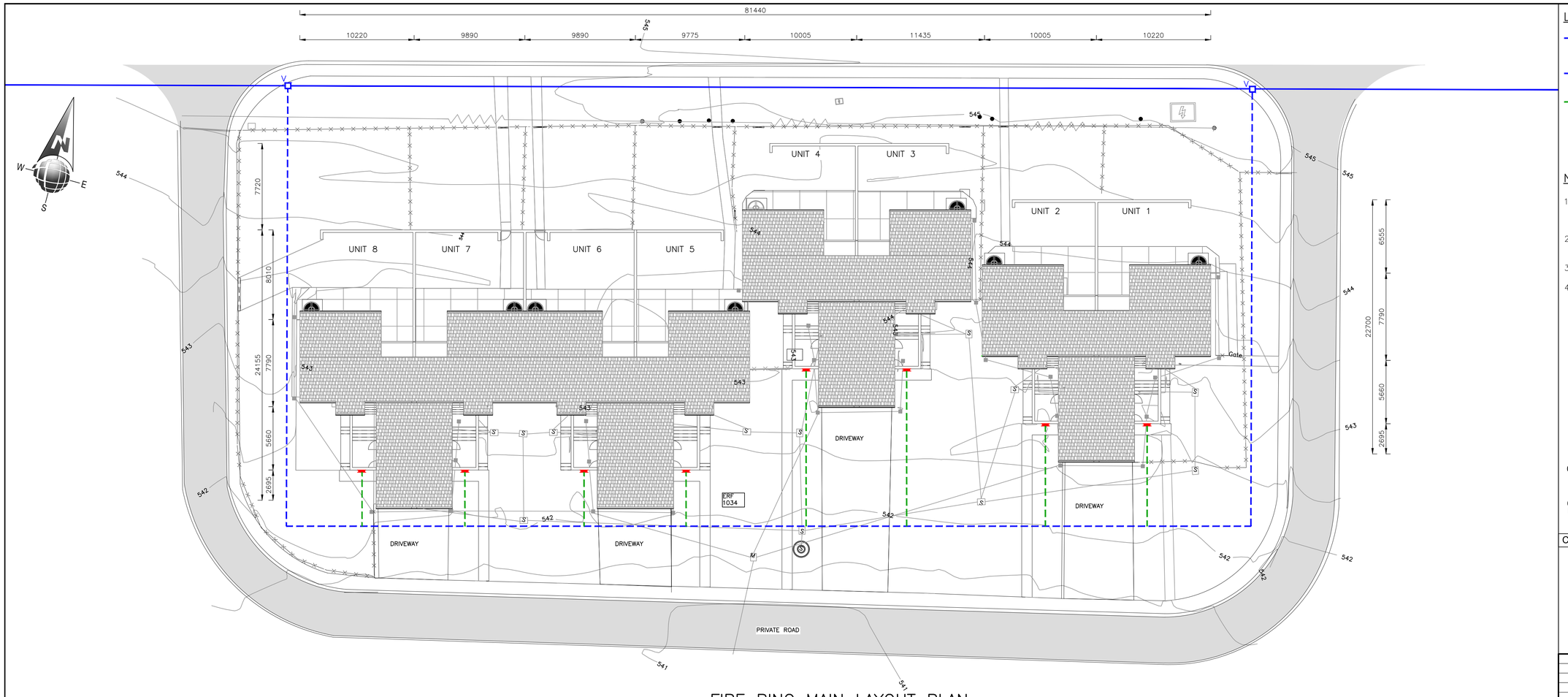
DRAWN	A.A		
CIVIL ENGINEER	E.S	STRUCTURAL ENGINEER	M.B
INSTRUMENT ENGINEER	N/A	ELECTRICAL ENGINEER	P.N
MECHANICAL ENGINEER	L.S	PROCESS ENGINEER	N/A
PROJECT MANAGER	E.S	DIVISIONAL MANAGER	A.R

EASTERN CAPE DEVELOPMENT CORPORATION
BUTTERWORTH
RENOVATION OF RESIDENTIAL BUILDINGS

ECDC CLUSTER F1
BASHEE COURT

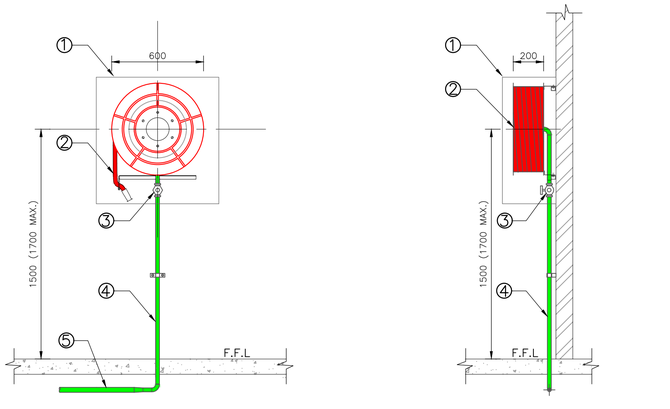
FIRE RING MAIN DETAILS

SCALE AS SHOWN	DATE 15/08/2023	
DRAWING NUMBER 10669-3-MME-01	SIZE A1	REVISION T1



FIRE RING MAIN LAYOUT PLAN
1:200

LEGEND
① – LOCKABLE PVC HOSE REEL CABINET
② – 30 METRE FIRE HOSE REEL
③ – Ø25mm STOP VALVE
④ – Ø25mm FIRE HOSE REEL SUPPLY PIPE
⑤ – Ø32mm FIRE HOSE REEL SUPPLY PIPE



SECTIONAL FRONT VIEW

SECTIONAL SIDE VIEW

TYPICAL FIRE HOSE REEL DETAIL
1:20

LEGEND

NEW Ø50mm FIRE RING MAIN, METERED AT EACH TAKE–OFF POINT.

EXISTING Ø50mm (ASSUMED) WATER MAIN

Ø32mm CONNECTIONS TO FIRE HOSE REELS

NEW FIRE HOSE REEL C/W 30m HOSE AND COUPLING HOUSED IN PVC HOSE REEL CABINET

NOTES

1. NEW FIRE MAIN NETWORK RUNS PARALLEL WITH EXISTING SEWER NETWORK SO EXTRA CARE TO BE TAKEN AGAINST DAMAGE DURING EXCAVATIONS.
2. MAIN CONTRACTOR TO INSTALL FIRE RING MAIN AND Ø32mm CONNECTIONS UP TO 1.2m AGL.
3. WATER PRESSURE TO BE MINIMUM 3 BAR (300kPa)
4. WATER METERS TO BE INSTALLED AT BOTH T–OFF'S FROM EXISTING MAIN

0 2 4 6 8 12 16 20m
1:200

0 0.2 0.4 0.6 0.8 1.2 1.6 2m

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REV.	BY	DESCRIPTION	DATE
T1	P.N	ISSUE FOR TENDER	08/2023

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DRAWN	A.A		
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PROJECT MANAGER	E.S	DIVISIONAL MANAGER	A.R

EASTERN CAPE DEVELOPMENT CORPORATION
BUTTERWORTH
RENOVATION OF RESIDENTIAL BUILDINGS

ECDC CLUSTER F1
MSINTSI COURT

FIRE RING MAIN LAYOUT DETAILS

SCALE	DATE	
AS SHOWN	07/08/2023	
DRAWING NUMBER	SIZE	REVISION
10669-3-MME-02	A1	T1