DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE (COGHSTA)

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

AUGUST 2026

EMPLOYER:

THE HEAD OF DEPARTMENT
CoGHSTA
PRIVATE BAG X5005
KIMBERLEY
8300

IMPLEMENTING AGENT:

ICEBURG TRADING 751CC AND BRUNEL ENGINEERING JV
NO. 04 JACOBUS SMIT AVENUE, LABRAM
KIMBERLEY
8300

TENDERER: _____

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

CLOSING DATE**: FRIDAY, 28 AUGUST 2026**	CLOSING TIME**: 11H00**

NAME OF TENDERER* ……

CONTACT PERSON* ……

ADDRESS* ……

……

……

……

TEL NO* ……

FAX NO* ……

E-MAIL ADDRESS* ……

CIDB GRADING* ……

CIDB REGISTRATION NO* ……

NHBRC REGISTRATION NO* ……

B-BBEE LEVEL* ……

CSD REGISTRATION NO ……

TENDER AMOUNT, EXCL. VAT* R ……

(* TO BE COMPLETED BY TENDERER)

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

GENERAL TENDER INFORMATION:

INVITATION DATE	**04 AUGUST 2026**
REQUIRED GRADING	**7 GB** or higher CIDB Grading
CLARIFICATION MEETING (COMPULSORY)	**WEDNESDAY, 12 AUGUST 2026 AT 14H00 AT THE CoGHSTA REGIONAL OFFICES, 18 VOORTREKKER ROAD, SPRINGBOK, 8240 (Co-ordinates-29°40'01.52"S,17°52'57.89"E)**
CLOSING DATE	**FRIDAY, 28 AUGUST 2026**
CLOSING TIME	**11H00**
CLOSING VENUE	Tender Box at **COGHSTA HEAD OFFICE, LARRY MOLEKO LOUW BUILDING, 9 CECIL SUSSMAN ROAD, KIMBERLEY, 8301.**

The Tender Documents (which include the Form of Offer and Acceptance) completed in all respects, plus any additional supporting documentation required, must be submitted in a sealed envelope with the name and address of the Tenderer, the Tender No. and title and the closing date indicated on the envelope. The sealed envelope must be handed in at the Tender Box at the **CoGHSTA KIMBERLEY** Offices. Tenders will be opened directly after closing. Due to a two-stage evaluation process tender prices will **NOT** be read out.

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

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VOLUME 1

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Human Settlement & Traditional Affairs

THE TENDER

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TENDER PROCEDURES

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T 1.1:

TENDER NOTICE AND INVITATION TO TENDER

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

1. **CoGHSTA hereby invites tenders for THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY.**
2. **Only NHBRC and CSD registered tenderers with a CIDB grading of 7 GB or HIGHER are eligible to submit tenders.**
3. **A COMPULSORY site briefing will be held on WEDNESDAY, 12 AUGUST 2026 at 14H00. Tenderers are requested to meet at CoGHSTA REGIONAL OFFICES, 18 VOORTREKKER ROAD, SPRINGBOK, 8240, (Co-ordinates 29°40'01.52" S 17°52'57.89"E)**
4. **Tender documents are avalable via the Department on eTender portal (www.etenders.gov.za)**
5. **The tender requires tenderers to submit a proposal for THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY.**
6. **General enquiries relating to this tender should be addressed to Karel Visagie of CoGHSTA, Tel: (053) 807–9713, e-mail: kvisagie@nccoghsta.gov.za and technical enquiries to RUDZANI P. MAMPHAGA of ICEBURG TRADING 751CC AND BRUNEL ENGINEERING JV, Tel: (086) 056 7890, e-mail: bruzarce@gmail.com.**

7. **Please note**

- Preference will be given to construction companies who are owned by Women, Youth & Persons with Disabilities.
- Functionality and 80/20 Principal evaluation criteria will apply. Based on functionality the tenderer should score 70 or more on the following criteria to be further evaluated:

Functionality	Criteria	Weight
1.	Experience of Tenderer	40
2.	Project Staff Experience	30
3.	Plant and Equipment	18
4.	Banking Rating	12
TOTAL		100

- Documents to be submitted with the tender document: An original valid Tax Clearance Certificate or certified copy inclusive of verification PIN, NHBRC certificate, Copy of CSD Registration summary report, B-BBEE Status Level Certificates or certified copies thereof. Exempted Micro Enterprises must in terms of B-BBEE Act, submit a certificate issued by an Accounting Officer as contemplated in the Close Corporation Act or Verification Agency accredited by SANAS or Registered Auditor.
- The requirements of the Preferential Procurement Regulations, 2022 (Government Gazette No. 2721) shall also apply, together with all other requirements as set out in the Tender Data.
- Contractors who previously failed to complete Northern Cape Department of COGHSTA projects in the last 5 years will be disqualified.
- Failure to comply with above requirements will result in automatic disqualification of the bidder.
- CoGHSTA reserves the right to withdraw any invitation to tender and/or re-advertise or to reject any tender or to accept a part of it. CoGHSTA does not bind itself to accepting the lowest tender or award a contract to the bidder scoring the highest number of points based on risk analysis and current commitments with CoGHSTA.
- Tenders will not be opened directly after closing. Due to a two-stage evaluation process tender prices will **NOT** be read out.

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

LOCALITY PLAN



Site Locality:

NABABEEP: 29°35'19.55"S, 17°47'10.37"E

CLARIFICATION MEETING VENUE: CoGHSTA REGIONAL OFFICES,18 VOORTREKKER ROAD, SPRINGBOK, 8240 (29°40'01.52" S 17°52'57.89"E)

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T 1.2:

TENDER DATA

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

T 1.2: TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of Board Notice 86 of 2010 in government Gazette No. 33239 of 28 May 2010, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (See www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of Tenderers as an Annex to this tender Data.

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.

The following variations, amendments and additions to the Standard Conditions of Tender as set out in the Tender Data below shall apply to this tender:

Clause Number	**Tender Data**
F.1	**General**
F.1.1	**Actions**
	Add the following to F.1.1:
	The Employer is CoGHSTA.
F.1.2	**Tender Documents**
	Add the following to F.1.2:
	"The following documents form part of this contract:
	(i) The General Conditions of Contract (GCC) for Construction Works (3rd Edition) 2015, as published by the South African Institution of Civil Engineering. This publication is available and Tenderers must obtain copies at their own cost from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel.: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za.
	(ii) The SANS Standardised Specifications for Civil Engineering Construction prepared by the South African Bureau of Standards. These publications are available and Tenderers must obtain copies at their own cost from the South African Bureau of Standards, Private Bag X191, Pretoria, 0001.
	The above may also be inspected, by appointment, at the offices of the Employer's Agent during normal office hours.
	The Tender Documents issued by the Employer comprise:

Volume 1: The Tender Document (this document), in which is bound:

The Tender

Part T 1:	**Tendering Procedure**
T 1.1	Tender notice and invitation to tender
T 1.2	Tender data
Part T 2:	**Returnable Documents**
T 2.1	List of returnable documents
T 2.2	Returnable Schedules

The Contract

Part C 1:	**Agreement and Contract Data**
C 1.1	Form of Offer and Acceptance
C 1.2	Contract Data
C 1.3	Form of Guarantee
C 1.4	Occupational Health and Safety Appointment
C 1.5	Occupational Health and Safety Agreement
C 1.6	Contract of Temporary Employment as Community Liaison Officer
Part C 2:	**Pricing Data**
C 2.1	Pricing Instructions
C 2.2	Calculation of Tender Sum
Part C 3:	**Scope of Work**
C 3.1	Description of the Works
C 3.2	Engineering Drawings
C 3.3	Construction Work Specifications: Project Specifications
C 3.4	Management
C 3.5	Annexures
Part C 4:	**Site Information**
C 4.1	Site Information-Geotechnical

Volume 2: Drawings (listed in C 3.2: Engineering Drawings)

Volume 1 is deemed the "**Returnable Document**" which must be returned to the Employer in terms of submitting a tender offer.

F.1.4 **Communication and Employer's Agent**

Add the following to F.1.4:

Attention is drawn to the fact that verbal information, given by the Employer's Agent during site visits / clarification meetings or at any other time prior to the award of the Contract, will not be regarded as binding on the Employer. Only information issued formally by the Employer's Agent in writing to Tenderers will be regarded as amending the Tender Document.

The Employer's Agent is:
Name: RUDZANI P. MAMPHAGA
ICEBURG TRADING 751CC AND BRUNEL ENGINEERING JV
NO. 04 JACOBUS SMIT AVENUE, LABRAM
KIMBERLEY, 8300
Tel.: (086) 056 7890
Fax: (086) 538 5002
E-mail: bruzarce@gmail.com

F.1.6.2 **Competitive Negotiation Procedures**

Add the following to F.1.6.2:

A competitive negotiation procedure may be followed.

F.1.6.3 **Proposal Procedure using the Two-Stage System**

Add the following to F.1.6.3:

A two-stage system will be followed.

F.2 Tenderer's Obligations

F.2.1 **Eligibility**

Add the following to F.2.1:

Only those Tenderers who satisfy the following criteria are eligible to submit tenders:

Construction Industry Development Board (CIDB) Contractor Registration

Only Tenderers who are registered with the CIDB, in a Contractor grading designation equal to or higher than a Contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a **7 GB** Class of construction work, and whose registration is in good standing and active at tender close 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 **7 GB** Class of construction work;
3. The combined Contractor grading designation calculated in accordance with the CIBD Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum tendered for a **7 GB** Class of construction work or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations.

Notwithstanding the above, Tenderers who are capable of being so registered prior to the evaluation of submissions may be evaluated at the sole discretion of the Employer (the evaluation of tenders shall be deemed to take place when the Employer's Bid Evaluation Committee meets to make a recommendation to the Bid Adjudication Committee).

For alpha-numerics associated with the Contractor Grading Designations see **Annex G** attached.

National Home Builders Registration Council (NHBRC) Registration

Only Tenderers who are registered with the NHBRC, in accordance with Housing Consumers Protection Measures Act 95 Of 1998, and whose NHBRC registration status is valid and has not expired at tender close are eligible to have their tenders evaluated.

F.2.7 **Clarification Meeting**

Add the following to F.2.7:

A compulsory clarification meeting and site visit will be held as follows:

Location: CoGHSTA REGIONAL OFICES' (29°40'01.52"S, 17°52'57.89"E)
Address: 18 VOORTREKKER ROAD, SPRINGBOK, 8240.
Date: WEDNESDAY, 14 AUGUST 2026
Time: 14:00HRS

Both the Clarification site and information meetings are COMPULSORY. Tenders will not be accepted from Tenderers who have not attended both the compulsory site or information meetings. Tenderers who arrive **15 (fifteen) minutes** or more after the advertised time the meeting starts will not be allowed to attend the meeting or to sign the attendance register. If the Tenderer is delayed, he must inform the Contact Person before the meeting commences and will only be allowed to attend the meeting if the Chairperson of the meeting, as well as all the other Tenderers attending the meeting, give permission to do so.

All partners or the leading partner of a Joint Venture must attend the compulsory clarification site or information meeting.

Tenderers should be represented at the compulsory clarification meeting by a person who is suitably qualified and experienced to comprehend the implications of the work involved.

F.2.9 **Insurance**

Add the following to F.2.9:

The Employer will provide **no** insurance.

F.2.10 **Pricing the Tender Offer**

F.2.10.1 *Add the following to F.2.10.1:*

This project is VAT Exempt (This Client will not Pay VAT on the Project).

F.2.10.2 *Add the following to F.2.10.2:*

VAT payable by the Employer shall be 0%

F.2.10.3 *Add the following to F.2.10.3:*

The tendered Sum will **not** be subject to escalation.

See C 1.2: Contract Data: Part 1: Data Provided by the Engineer: Clause 6.8.2.

F.2.13 **Submitting of a Tender Offer**

Add the following to F.2.13.1:

Where the tendering entity is a joint venture it is recommended that the standard CIDB Joint Venture Agreement be used.

Replace sub-clause F.2.13.2 with the following:

Return all returnable documents to the Employer after completing them in their entirety by writing in **non-erasable black ink.**

Add the following to F.2.13.3:
Parts of each Tender offer communicated on paper shall be submitted as an original **plus 1 (ONE) electronic scanned copy on a flash drive**.

Add the following after the first sentence of F.2.13.4:

The tender shall be signed by a person duly authorised to do so. Tenders submitted by Joint Ventures of 2 (two) or more firms shall be accompanied by the document of formation of the Joint Venture, authenticated by a public notary or other official deputed to witness sworn statements, in which is defined precisely the conditions under which the Joint Venture will function, its period of duration, the persons authorised to represent and obligate it, the participation of the several firms forming the Joint Venture, and any other information necessary to permit a full appraisal of its functioning.

Add the following to F.2.13.5:

The Employer's Agent's address for delivery of Tender Offers and identification details to be shown on each tender offer package are:

Location of tender closure:	Tender Box**,** COGHSTA HEAD OFFICE, LARRY MOLEKO LOUW BUILDING, 9 CECIL SUSSMAN ROAD, KIMBERLEY, 8301.
Identification details:	TENDER NUMBER: **NC/12/2026** TITLE OF TENDER: **THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY**

Sealed tenders with the Tenderer's name and address and the endorsement:
"TENDER NUMBER: NC/12/2026: **THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY** on the envelope, must be placed in the appropriate official Tender Box at the abovementioned address.

Add the following to F.2.13.6:

A two-envelope procedure will **not** be followed.

Add the following to F.2.13.9:

Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will **not** be accepted.

Add the following to F.2.13.10:

By signing the offer part of C 1.1: Form of Offer and Acceptance, the Tenderer declares that all information provided in the Tender submission is true and correct.

F.2.15 **Closing Time**

Add the following to F.2.15.1:

The closing time and location for the submission of tender offers are:

Time:	11:00 am on 14 August 2026
Tender box location:	Larry Moleko Louw Building
Physical address:	Department of Cooperative Governance Human Settlement and Traditional Affairs 9 Cecil Sussman Road, Kimberley

F.2.16 **Tender Offer Validity**

Add the following to F. 2.16.1:

The tender offer validity period is **90 (ninety)** days from the closing date.

F.2.17 **Clarification of Tender Offer after Submission**

Add the following to F.2.17:

A tender will be rejected as non-responsive if the Tenderer fails to provide any clarification requested by the Employer within the time for submission stated in the Employer's written request for such clarification.

F.2.18 **Provide Other Material**

F.2.18.1 *Add the following to F.2.18. 1:*

Accept that if requested, the Tenderer shall within 3 days of the date upon which he is requested to do so, submit a full report from his banker as to his financial standing. The Employer may, in its discretion, and subject to the provisions of Section 4(1)(d) of the State Tender Board Act 86 of 1968, condone any failure to comply with the foregoing condition.

Accept that the Employer or his agent, reserves the right to approach the Tenderer's banker or guarantor(s) as indicated in the tender document, or the bankers of each of the individual members of any joint venture that is constituted for purposes of this Contract, with a view to ascertaining whether the required guarantee will be furnished, and for purposes of ascertaining the financial strength of the Tenderer or of the individual member of such venture.

F.2.19 **Inspection, Tests and Analysis**

Add the following to F.2.19:

Access shall be provided for the following inspections, tests and analysis: **Site investigation.**

F.2.20 **Submit Securities, Bonds, Policies, etc.**

Add the following to F.2.20:

The successful Tenderer will have to provide security of;

- A fixed performance guarantee of 10% in the format attached to C1.3 or
- An additional deduction of 10% from each interim certificate or
- A fixed performance guarantee of 5% in the format attached to C1.3 and an additional deduction of 5% from each interim certificate

F.2.22 **Return of Other Tender Documents**

Add the following to F.2.22:

Return all retained tender documents and drawings within 28 (twenty-eight) days of the expiry date of the validity period.

F. 2.23 **Certificates**

Add the following to F.2.23:

The Tenderer is required to submit with his tender:

1. CIDB registration certificate in the grading designation stipulated in clause 2.1 above,
2. Original valid Tax Clearance Certificate,
3. Certified copy of Letter of Good Standing issued by the Department of Labour in terms of Act 130 of 1993,
4. Certified copy of Unemployment Insurance Fund Certificate of Compliance in terms of Act 4 of 2002
5. Certified copy of Certificate of Incorporation (if tenderer is a Company),
6. Certified copy of Founding Statement (if tenderer is a Closed Corporation),
7. Certified copy of Partnership Agreement (if tenderer is a Partnership),
8. Certified copy of Identity Document (if tenderer is a One-man concern),
9. Signed copy of the Joint Venture Agreement, joint CSD and separate SBD forms for each JV partner (if tenderer is a Joint Venture),
10. Curriculum vitae of the project staff with relevant qualifications and certifications
11. B-BBEE verification Certificate
12. CSD report
13. Copy of NHBRC registration certificate, and
14. Copy of Municipal Account (Rates, taxes and services), lease agreement/title deed or any documentation for verification of locality of business

F.3 The Employer's Undertakings

F.3.2 **Issue Addenda**

Add the following to F.3.2:

Notwithstanding any requests for confirmation of receipt of Addenda issued, the Tenderer shall be deemed to have received such addenda if the Employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.

F.3.4 **Opening of Tender Submissions**

Add the following to F.3.4.1:

All Bid proposals received will be uploaded on the Departmental website

Time: Tenders will **not** be opened immediately after the closing time for tenders as stated in the Tender Notice and Invitation to Tender, or as stated in any Addendum extending the closing date.

F.3.5 **Two-envelope System**

Add the following to F.3.5:

The 2 (two) - envelope procedure will **not** be followed.

F. 3.8 **Test for Responsiveness**

Add the following Sub-Clause F.3.8.3:

Tenders will be considered non-responsive and disqualified if, inter alia:

a) The tender is not in compliance with the Scope of Work;
b) The tenderer does not comply with requirements of F.2.1 above.
c) The tenderer has failed to clarify or submit any supporting documentation within the time for submission stated in the employer's or employer's agent written request.
d) The tenderer does not submit proof of CSD database registration.
e) The tenderer or Director/s of the Entity was/were previously terminated or failed to complete a COGHSTA project within the last 5 years.
f) The tenderer fails to attend both the Compulsory briefing session and the Compulsory Site Visit.
g) The tenderer fails to submit correct declarations on all SBD forms and where tender is a JV fails to submit signed copy of JV agreement, joint CSD and separate SBD4 forms.
h) The tenderer does not submit proof of CIDB registration and/or is not in good standing with their registration.
i) The tenderer does not submit proof of NHBRC registration and/or is not in good standing with their registration.
j) The tenderer does not submit proof of Company Registration
k) The tenderer does not submit Authority to sign on behalf of bidder together with Director's Certified ID Copy

COGHSTA reserves the right not to bind itself to accepting the lowest tender or to award a contract to the bidder scoring the highest number of points in the case where the contractor has current commitments (appointments) with the Department and other entities based on a risk assessment. **(Tenders are requested to complete Section T2.2.3 Present (current) commitments in full, with appointment letters as support)**.

F.3.9 **Arithmetical Errors, Omissions and Discrepancies**

Amend Sub-Clauses F.3.9.1 & F.3.9.2 to read as follows:

"F.3.9.1 Check the highest ranked Tender or Tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 and check only the Summary: Calculation of Tender Sum for:
  a) The gross misplacement of the decimal point in any rate; or
  b) Arithmetical errors in:
    i) line item totals resulting from the product of a unit rate and a quantity or
    ii) the summation of the amounts.

F.3.9.2 The Employer's Agent must correct the arithmetical errors in the following manner:

  a) Where there is a discrepancy between the amount in words and the amounts in figures, the amount in words shall govern;

  b) If, in the Summary: Calculation of tendered Sum 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.
  c) Where there is an error in the total of the amounts 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 unit rates to achieve the Tendered total of the amounts.

Consider the rejection of a tender offer if the Tenderer does not correct or accept the correction of the arithmetical error in the manner described above."

F.3.11 **Evaluation of Tender Offers**

F.3.11.1 ***Add the following to F.3.11.1:***

Functionality will be scored and a minimum of 70 out of the possible 100 is required to be evaluated any further.

Table F3.11.1.1 – Functionality Evaluation Criteria

Functionality	Criteria	Weight
1.	Experience of Tenderer on similar projects	40%
2.	Key personnel proposed for the project: Qualifications and experience on similar projects	30%
3.	Plant and Equipment	18%
4.	Bank rating	12%
TOTAL		100%

Table F3.11.1.2 – Criteria 1: Experience of Tenderer

Sub-Criteria:	Points Awarded
Completion of at least 5 projects of a similar scope (CIDB GB construction of buildings of a value of ≥ R3 million (Including Vat), in the last 5 years. Provide signed appointment and completion letters for each project from credible, contactable clients. Bidders who have been appointed on a sub-contracting basis should provide the Main-Contractor's Appointment letter.	40
Completion of at least 4 projects of a similar scope (construction of buildings of a value of ≥ R3 million (Including Vat), in the last 5 years. Provide signed appointment and completion letters for each project from credible, contactable clients. Bidders who have been appointed on a sub-contracting basis should provide the Main-Contractor's Appointment letter.	30
Completion of at least 3 projects of a similar scope (construction of buildings of a value of ≥ R3 million (Including Vat), in the last 5 years. Provide signed appointment and completion letters for each project from credible, contactable clients. Bidders who have been appointed on a sub-contracting basis should provide the Main-Contractor's Appointment letter.	20
Completion of at least 2 projects of a similar scope (construction of buildings of a value of ≥ R3 million (Including Vat), in the last 5 years. Provide signed appointment and completion letters for each project from credible, contactable clients. Bidders who have been appointed on a sub-contracting basis should provide the Main-Contractor's Appointment letter.	10
Completion of at least 1 project of a similar scope (construction of buildings of a value of ≥ R3 million (Including Vat), in the last 5 years. Provide signed appointment and completion letters for each project from credible, contactable clients. Bidders who have been appointed on a sub-contracting basis should provide the Main-Contractor's Appointment letter.	5
1.Total possible points for Experience of Tenderer	**40**

Table F3.11.1.3 – Criteria 2: Project Staff Experience

Sub-Criteria:	**Points Awarded**
2.1 Construction Manager: Provide the CV of the Construction Manager (CM) with list of similar projects they have completed and their certified qualifications (minimum B-Tech and above in the Engineering and Built Environment) and must currently be employed by the Bidding company, if not then a letter stating intent to employ this person, including this person's signature of willingness & acceptance for the intended duration of the project and proof of registration as Pr.CPM or Pr. CM or Candidate Pr CPM or Candidate CM with more than 3 years of experience	
10 or more years of experience in project management.	10
7 to 9 years of experience in project management.	6
3 to 6 years of experience in project management.	3
Less than 3 years of experience in project management.	0
Total possible points for Project Manager	**10**
2.2 Site Agent: Provide the CV of the SA with list of similar projects they have completed and their certified qualifications (minimum N. Diploma and above in the Engineering and Built Environment in Construction Managements, Construction Studies, Quantity Surveying and/or Civil/Structural Engineering) and must currently be employed by the Bidding company, if not then a letter stating such intent to employ this person, including this person's signature of willingness & acceptance for the intended duration of the project.	
7 or years of experience in the built environment, with particular experience in the required discipline.	10
5 to 6 years of experience in the built environment, with particular experience in the required discipline.	6
3 to 4 years of experience in the built environment, with particular experience in the required discipline.	3
Less than 3 years of experience in the built environment, with particular experience in the required discipline.	0
Total possible points for Site Agent	**10**
2.3 General Foreman: Provide the CV of the General Foreman with list of similar projects they have completed and must currently be employed by the Bidding company, if not then a letter stating such intent to employ this person, including this person's signature of willingness & acceptance for the intended duration of the project and building trade certificate with more than 3 years' experience submitted	
7 or more years of experience in construction, with particular experience in general building	6
5 to 6 years of experience in construction, with particular experience in general building	3
3 to 4 years of experience in construction, with particular experience in general building	2
Less than 3 years of experience in construction, with particular experience in general building	0
Total possible points for Site Agent	**6**
2.4 Safety Officer: Provide the CV of the Safety Officer and their certified qualifications with at least 2 years' experience in the required discipline and registered with SACPCMP. Indicate for zero	4
Less than 2 years of experience in construction, with particular experience in general building	0
Total possible points for Safety Officer	**4**

An original sworn affidavit to be provided confirming that the employee is employed by the bidder or an MOU if the bidder intends to employ the professional upon award of this bid.

Table F3.11.1.4 – Criteria 3: Plant and Equipment (18 Points)

Sub-Criteria:		**Points Awarded**
• Proof of ownership should be in the form of plant and equipment registration papers and or invoices (small plant and equipment) or other documentary proof of ownership for items not requiring registration indicating the bidder's name on the document. (3 points per plant and/or equipment) • For Hiring/Leasing proof of leasing/hiring and form of agreement would be acceptable, specify plant if hiring e.g. TLB x1, Crane, Truck x2 etc. (1 point per plant and/or equipment) o Plant to be specific to the project and proof to be attached, Equipment to be specific to the project and relevant to scope of work. o If NO proof of ownership is provided no points will be allocated. o If NO proof of hiring/leasing is not provided no points will be allocated. • Below is a description and the points breakdown		
DESCRIPTION	**HIRE**	**OWNER SHIP**
TLB	1	3
LDV	1	3
Tipper Truck	1	3
Walk behind roller/rammer	1	3
Powerfloat	1	3
2 x Concrete Mixer – minimum capacity 300L	1	3
3.Total possible points for Plant and Equipment		**18**

Table F3.11.1.5 – Criteria 4: Bank Rating (12 Points)

Sub-Criteria:	**Points Awarded**
Bank Rating (Letter not older than 1 month)	
Contractor with a bank rating A to C	12
Contractor with a bank rating D to E	0
4.Total possible points for Bank Rating	**12**

The procedure for the evaluation of responsive tenders is **Method 4: Financial Offer, Quality/Functionality and Preference** in accordance with F.3.11.3.

F.3.11.7 **Scoring Financial Offers**

Add the following to F.3.11.7:

The financial offer will be scored using **Formula 2 (Option 1)** where the value of W_1 is **80 (eighty)** points.

A maximum of **80 (eighty)** tender evaluation points (W_1) will be scored for Financial Offers from responsive tenders under consideration scoring points according to the formula:

$N_{FO} = W_1 \times [1 - \frac{(P - Pm)}{Pm}]$ where,

N_{FO} = Number of tender evaluation points awarded for Financial Offer
W_1 = Maximum tender evaluation points awarded for Financial Offer = **80 (eighty)** points

P = Financial Offer = Tender Sum (including VAT, contingencies, provisional sums and escalation) = the comparative offer of the tender offer under construction

P_m = Lowest Tender Sum (including VAT, contingencies, provisional sums and escalation) = the comparative offer of the most favourable comparative offer.

F.3.11.8 **Scoring Preferences (Specific Goals)**

Add the following to F.3.11.8:

Points will be awarded to Tenderers who are eligible for preferences (Specific Goals) in terms of the CoGHSTA NC Supply Chain Policy 2023.

Points for Specific Goals
A maximum of 20 (twenty) tender evaluation points will be awarded for Specific Goals to Tenderers with responsive tenders, who are eligible for such preference, in accordance with the criteria listed below.

Subject to section 2(1)(f) of the Preferential Procurement Policy Framework Act, 2000, the contract must be awarded to the tenderer scoring the highest points.

The following table must be used to calculate the score out of 8 0 / 20 for specific goals:

Specific Goal	Number of Points
100% or more Women or Youth owned company	10
Less than 100% Women or Youth owned company	5
100% Black owned Company	10
Less than 100% Black owned Company	5
100% People living with disability	10
Locally owned companies	5
Maximum obtainable points	**20**

The following must be noted for the allocation of 20 points:

- A tenderer might be requested to submit proof of its B-BBEE status level of contributor.
- A share certificate and or CIPC information of the company might be requested to be able to verify ownership
- Any other relevant evidence can be requested from the tenderer to substantiate the claim for the 20 points from any of the above specific goals on the table.
- CSD printout must accompany all submission documents

- The above points can be increased, reduced and split to more than one specific goal, depending on the requirements of the bid and specifications, however when such is increased or reduced, the information must be published correctly to the bidder at the time of advert of tender, but total points must not exceed 20 points.
- Locality points will be allocated to any company with a valid and verifiable address in the Northern Cape, e.g. CIPC, SARS etc. A lease agreement must have substantiating legitimate evidence relating to the Northern Cape address claimed, such as proof of rental payment and receipt of rentals by both the lessee and lessor.
- If the price offered by the tenderer scoring the highest points is not reasonable, COGHSTA must not award the contract to the tenderer
- COGHSTA may negotiate a reasonable price with the tenderer scoring the highest points or cancel the tender

- If the tenderer does not agree to a reasonable price, negotiate a reasonable price with the tenderer scoring the second highest points or cancel the tender
- If the tenderer scoring the second highest points does not agree a reasonable price, negotiate a reasonable price with the tenderer scoring the third highest points or cancel the tender.
- If a reasonable price is not agreed as envisaged, COGHSTA must cancel the tender.

F.3.12 **Insurance provided by the Employer**

The Employer will provide **no** insurance

F.3.13 **Acceptance of Tender Offer**

Add the following to F.3.13:

The Employer reserves the right to with draw any invitation to tender and/or to re-advertise or to reject any tender or to accept a part of it. The Employer does not bind itself to accepting the lowest or only tender.

Tender offers will only be accepted if:

(a) the Tenderer is registered and in good standing with the South African Revenue Service (SARS) and has submitted evidence in the form of an original valid Tax Clearance Certificate (for tender) issued by SARS or poof hat he or she has made arrangements with SARS to meet his or her outstanding tax obligations;

(b) the Tenderer or any of its Directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;

(c) the Tenderer has not:
  (i) abused the Employer's Supply Chain Management System; or
  (ii) the Tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the Tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process.

F.3.13.1 **Risk Analysis add new clause**

Notwithstanding compliance with regard to CIDB registration or any other requirements of the tender, the employer will perform a risk analysis in respect of the following:

(a) reasonableness of the financial offer
(b) reasonableness of unit rates and prices
(c) the Tenderer's ability to fulfil its obligations in terms of the tender document, that is, that the Tenderer can demonstrate that he/she possesses the necessary professional and technical qualifications, professional and technical competence, financial resources,

equipment and other physical facilities, managerial capability, reliability, experience, reputation, personnel to perform the contract, etc.

(d) Experience reference checks to check the validity of submitted reference and appointment letters

No Tenderer will be recommended for an award unless the Tenderer has demonstrated that he/she has the resources and skills required.

No Tenderer will be recommended for an award unless the Tenderer has demonstrated that he/she has the resources and skills required.

F.13.16 **Notice to unsuccessful Tenderers**

Replace the heading above with:

Notice to successful and unsuccessful Tenderers

Replace sub-clause F.3.16.2 with the following:

The Employer shall, at the same time notifying the successful Tenderer of the Bid Adjudication Committee's decision to award the tender to the successful Tenderer, also give written notice to the other Tenderers informing them that they have been unsuccessful.

F.3.17 **Provide copies of the contract**

Add the following to F.3.17:

The number of paper copies of the signed contract to be provided by the Employer is **1 (One).**

F.4 ADDITIONAL CONDITIONS OF TENDER

The additional conditions of tender are:

F.4.1 **Compliance with Occupational Health and Safety Act (Act 85 Of 1993)**

Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2014 where applicable, issued in terms of Section 43 of the Act. The Tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

The Contractor will not be allowed to start with any construction works until his Health and Safety Plan is approved by the Health and Safety Agent.

Tenderers are to note that the Contractor is required to ensure that all Sub-Contractors or others engaged in the performance of the contract also comply with the above requirements.

The Contractor shall prepare and maintain a Health and Safety File in respect of the project, which shall be available for inspection on Site at all times and handed over to the Employer on Final Completion of the project.

The Contractor is required to submit to the Employer the Occupational Health and Safety Agreement (included in C 1.4 of the Contract document) and a letter of good standing from the Compensation Commissioner, or a licensed Compensation Insurer, within 14 (fourteen) days after the Commencement Date of the Contract.

F.4.2 **Eligibility with respect to Expanded Public Works Programme**

This Contract does not qualify for consideration as an Expanded Public Works Program project, but he Contractor shall make use of local labour as far as possible. Where manual labour is required, remuneration must be paid according to the minimum wages for the region and in accordance with the latest published "Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the Expanded Public Works Programme (Epwp)". Monthly project reporting will be done on all the EPWP reporting documentation attached in Annexure A of Part 3: Scope of Works of this Tender Document.

F.4.3 Claims arising after submission of tender

No claim for any extras arising out of any doubt or obscurity as to the true intent and meaning of anything shown on the Contract Drawings or contained in the Conditions of Contract, Scope of Work and Pricing Data, will be admitted by the Employer after the submission of any tender and the Tenderer shall be deemed to have:

(a) Inspected the Contract Drawings and read and fully understood the Conditions of Contract;

(b) Read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract;

(c) Visited the site of the proposed works, carefully examined existing conditions, the means of access to the Site, the conditions under which the work is to be done, and acquainted himself with the limitations or restrictions that may be imposed by the Municipality or other Authorities in regard to access and transport of materials, plant and equipment to and from the site and made the necessary provisions for any additional costs involved thereby.

(d) Requested the Employer or his duly authorized agent to make clear the actual requirements of anything shown on the Contract Drawings or anything contained in the Scope of Work and Pricing Data, the exact meaning or interpretation of which is not clearly intelligible to the Tenderer.

(e) Received any Addenda to the tender documents which have been issued in accordance with the Employer's supply Chain Management Policy.

Before submission of any tender, the Tenderer should check the number of pages, and if any are found to be missing or duplicated, or the figures or writing indistinct, or if the Pricing Data contain any obvious errors, the Tenderer must apply to the Employer's agent at once to have the same rectified, as no liability will be admitted by the Employer in respect of errors in any tender due to the foregoing.

F.4.4 **Community Liaison Officer**

It is a requirement of the Contract that a Community Liaison Officer (CLO) for the project shall be appointed by the Contractor. The primary functions of the CLO shall be to assist the Contractor with the selection and recruitment of labour, to represent the local community in matters concerning the use of labour on the works, and to assist with and facilitate communication between the Contractor, the Principal Agent and the local communities. The appointment of the CLO will be as by the guidelines/instructions of the Implementing Agent and the local Municipality.
The remuneration of the CLO to be fixed at R 7500-00 per month as per the current rate for CLO's in the local authority.

The method of identifying suitable candidates for the position of CLO will be through advertisement throughout the community and local Municipality, interviews will be held with candidates and the representative of the Department will be present.

F.4.5 **Invalid tenders**

Tenders shall be considered invalid and shall be endorsed and recorded as such in the tender opening record, by the official responsible who opened the tender, in the following circumstances:

(a) If the tender offer (the tender price/amount) is not submitted on the Form of Offer and Acceptance bound into this tender document (Form C 1.1: Part C 1: Agreement and Contract Data);

(b) If the tender is not completed in non-erasable black ink;

(c) If the Form of Offer and Acceptance is signed, the name of the Tenderer is not stated or is indecipherable.

F.4.6 **Negotiations with preferred Tenderers**

The Employer may negotiate the final terms of a contract with Tenderers identified through a competitive tendering process as preferred Tenderers, provided that such negotiation:

(a) does not allow any preferred Tenderer a second or unfair opportunity;

(b) is not to the detriment of any other Tenderer; and

(c) does not lead to a higher price than the quotation as submitted.

Minutes of any such negotiations shall be kept for record purposes.

F.4.7 **General Supply Chain Management Conditions applicable to tenders**

In terms of its Supply Chain Management Policy, the Employer may not consider a tender unless the provider who submitted the tender:

a) has furnished the Employer with that provider's:

- full name;
- **identification number or company or other registration number; and**
- **tax reference number and VAT registration number, if any;**
- Certificate of attendance at a compulsory site inspection, where applicable

b) has indicated whether:

- the provider is in the service of the state, or has been in the service of the state in the previous twelve months;
- the provider is not a natural person, whether any of the directors, managers, principal shareholders or stakeholders is in the service of the state, or has been in the service of the state in the previous twelve months; or
- whether a spouse, child or parent of the provider or of a director, manager, shareholder or stakeholder referred to above is in the service of the state, or has been in the service of the state in the previous twelve months.

Irrespective of the procurement process followed, the Employer is prohibited from making an award to:

- a person who is in the service of the state;
- a juristic entity of which any director, manager, principal shareholder or stakeholder is in the service of the state;
- an advisor or consultant contracted with the Employer; or
- a person, advisor or corporate entity involved with the bid specification committee, or a director of such corporate entity.

In this regard, Tenderers shall complete Schedule 2, Part T2.2: Returnable Schedules: Compulsory Enterprise Questionnaire. Failure to complete this schedule may result in the

tender not being considered.

F.4.8 **Combating abuse of the Supply Chain Management Policy**

In terms of the Its Supply Chain Management Policy, the Employer may reject the tender of any Tenderer if that Tenderer or any of its Directors has:

(a) failed, during the last five years, to perform satisfactorily on a previous contract with the Employer or any other organ of state after written notice was given to that T enderer that performance was unsatisfactory;

(b) abused the supply chain management system of the Employer or has committed any improper conduct in relation to this system;

(c) been convicted of fraud or corruption during the past five years;

(d) willfully neglected, reneged on or failed to comply with any government, municipal or other public-sector contract during the past five years; or

(e) been listed with the Register of Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004) or has been listed on National Treasury's database as a person or juristic entity prohibited from doing business with the public sector.

F.4.9 **UIF payments**

The Tenderer shall submit to the Employer a letter from the Industrial Council indicating his or her good standing with regard to UIF payments upon being requested to do so.

F.4.10 **Registration with Bargaining Council**

Tenderers must be registered with a relevant Bargaining Council (if such be in place) and provide the applicable Certificate of Compliance in terms of the relevant Government Gazette.

F.4.11 **Price Variations**

The tendered Sum shall **not** be subject to contract price adjustment in accordance with the General Conditions of Contract. If special materials are specified in the Contract Data, then the provision of the General Conditions of Contract shall apply to such special materials.

F.4.12 **Requests for contract documents, or parts thereof, in electronic format**

The Employer shall not formally issue tender documents in hard-copy format as contemplated in F.2.13.2 and F.2.13.3 and shall only issue tender documents in electronic format. An electronic version of the issued tender documents shall be made available to all the Tenderers terms of this clause, subject to the following:

(a) Electronic copies of the contract document, or parts thereof, will only be provided to Tenderers who have been invited to participate in the tender as contemplated in F.1.2;

(b) The electronic version shall be regarded as the only issued tender documents;

(c) The Employer shall not accept tenders submitted in electronic format. Tenderers shall complete and submit a printed copy of the electronic version of the tender document or part thereof. Only those tenders that have been completed on the issued electronic tender document shall be considered;

(d) The Employer further guarantees that the electronic version corresponds with the issued tender documents in all respects. Tenderers are alerted to the fact that electronic

versions of the tender documents may not reflect any notice or addenda that amend the tender document;

(e) Any non-compliance with these provisions, including effecting any unauthorized alterations to the tender document as contemplated in F. 2.11, shall render the tender invalid. The Employer reserves the right to take any action against such Tenderer allowed in law including, in circumstances where the tender had already been awarded, the right to cancel the contract.

(f) In requesting the electronic version of the tender document or parts thereof, the Tenderer is deemed to have read, understood and accepted all of the above conditions.

F.4.13 **Minimum Wages**

The Tenderer is drawn to the fact that minimum wages must be paid in terms of the relevant legislation.

PART T 2:

RETURNABLE DOCUMENTS

T 2.1	**List of Returnable Documents**	**T 2 – 2**
T 2.2	**Returnable Schedules**	**T 2 - 4**

T 2.1:

LIST OF RETURNABLE DOCUMENTS

T 2.1: LIST OF RETURNABLE DOCUMENTS:

NB: TENDERERS MUST COMPLETE THESE SCHEDULES / DATA SHEETS / FORMS IN BLACK INK

1. Returnable Schedules required for Tender Evaluation Purposes:

Schedule 1: Authority of Signatory
Schedule 2: Compulsory Enterprise Questionnaire
Schedule 3: Standard Bidding Documents (SBDs)
Schedule 4: Certificate of Independent Tender Determination
Schedule 5: Certificate of Authority for Joint Ventures
Schedule 6: Declaration in terms of the Public Finance Management Act.
Schedule 7: Bargaining Council Certificate and Declarations in respect of Minimum Wage
Schedule 8: Tax Clearance Certificate
Schedule 9: Company Registration Documentation
Schedule 10: Central Supplier Database Documentation
Schedule 11: Declaration concerning fulfilment of the Construction Regulations 2014, where applicable Proposed Amendments and Qualifications by Tenderer
Schedule 12: Compensation for Occupational Injuries & Diseases (COID)
Schedule 13: Confirmation of Construction Industry Development Board (CIDB) Registration
Schedule 14: Confirmation of National Home Builders Registration Council (NHBRC) Contractor Registration
Schedule 15: Method Statement; Project Program and Projected Cashflow
Schedule 16: Schedule of Work Experience
Schedule 17: Project Specific Management Team & Qualifications
Schedule 18: Schedule of Construction Equipment
Schedule 19: Confirmation of Bank Rating
Schedule 20: Schedule of Sub-Contractors
Schedule 21: Day works Schedule
Schedule 22: Proposed Amendments and Qualifications by Tenderer
Schedule 23: Record of Addenda to Tender Documents

2. Other documents required for Tender Evaluation Purposes:

2.1. Joint Venture Agreement (if applicable) - append to Schedule 5.
2.2. A certified copy of the Bargaining Council Certificate (where applicable) - append to Schedule 7.
2.3. A certified copy of the certificate of Contractor Registration issued by the CIDB - append to Schedule 13.
2.4. A certified copy of the NHBRC registration certificate - appended to Schedule 14.
2.5. An original valid Tax Clearance Certificate issued by the South African Revenue Services - append to Schedule 8.
2.6. A certified copy of the COID - appended to Schedule 12

3. Returnable Schedules that will be incorporated into the Contract:

Schedule 3: SBD Schedules as required by COGHSTA: SDB 1; SBD 2; SBD 4; SBD 6.1; SBD 7.1; SBD 8; SBD9
Schedule 23: Record of Addenda to Tender Documents

4. C 1.1 The offer portion of the C1.1 Form of Offer and Acceptance

5. C 1.2 Contract Data (Part 2)

6. C 2.2 Calculation of Tender Sum

T 2.2:

RETURNABLE SCHEDULES

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

SCHEDULE 1

AUTHORITY OF SIGNATORY

Attach to this schedule Authority of Signatory – (resolution of the Board of Directors if Company; resolution of Members if Partnership; resolution of the Board of Officials if Close Corporation, proof of sole ownership if one-man business and Certified copies of Directors' ID)

Details of person responsible for tender process:

Name: ----------

Contact number: ----------

Office address: ----------

Signatories for close corporations and companies shall confirm their authority by attaching to this form a duly signed and dated original or certified copy on the Company Letterhead of the relevant resolution of their members or their board of directors, as the case may be.

SIGNED ON BEHALF OF THE TENDERER: ……..……

DATE: ……..……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

SCHEDULE 2

COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a Joint Venture, SEPARATE questionnaires in respect of each partner must be completed and submitted.

SECTION 1:

Name of Enterprise: …….

Address of Enterprise: …….

…….

…….

SECTION 2:

VAT Registration Number, if any: ……

SECTION 3:

CIDB Registration Number, if any: ……..

SECTION 4:

Particulars of Sole Proprietors and Partners in partnerships:

NAME*	IDENTITY NUMBER *	PERSONAL INCOME TAX NUMBER*

* Complete only if Sole Proprietors or Partnership and attach separate page if more than 5 (five) partners.

SECTION 5: Particulars of Companies and Close Corporations:

Company Registration Number: ……

Close Corporation Number: ……

Tax Reference Number: ……

SECTION 6: Record of service of the State:

Indicate by marking the relevant boxes with a cross, if any Sole Proprietor, partner in partnership or Director, Manager, Principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 (twelve) months in the service of any of the following:

☐ A member of any Municipal Council;

☐ A member of any Provincial Legislature;

☐ A member of the National Assembly or the National Council for Provinces;

☐ A member of the Board of Directors of any Municipal entity;

☐ An official of any Municipality or Municipal entity;

☐ An employee of any Provincial Department, National or Provincial public entity or Constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999);

☐ A member of the accounting authority of any National or Provincial public entity; or

☐ An employee of Parliament or a provincial legislature.

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

Name of Sole Proprietor, Partner, Director, Manager, Principal shareholder or Stakeholder	Identity Number	Name of Institution, Public Office, Board or Organ of State and position held	Status of service (tick appropriate column)	
			Current	Within last 12 months

* **Insert** separate page if necessary.

SECTION 7: Record of spouses, children and parents in the service of the State:

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a Sole Proprietor, Partner in a partnership or Director, Manager, Principal shareholder or Stakeholder in a company or close corporation is currently or has been within the last 12 (twelve) months been in the service of any of the following:

☐ A member of any Municipal Council;

☐ A member of any Provincial Legislature;

☐ A member of the National Assembly or the National Council for Provinces;

☐ A member of the Board of Directors of any Municipal entity;

☐ An official of any Municipality or Municipal entity;

☐ An employee of any Provincial Department, National or Provincial public entity or Constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999);

☐ A member of the accounting authority of any National or Provincial public entity; or

☐ An employee of Parliament or a provincial legislature.

Name of Sole Proprietor, Partner, Director, Manager, Principal shareholder or Stakeholder	Identity Number	Name of Institution, Public Office, Board or Organ of State and position held	Status of service (tick appropriate column)	
			Current	Within last 12 months

* **Insert** separate page if necessary.

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

i) Authorizes the Employer to obtain a Tax Clearance Certificate from the South African Revenue Service that my/our tax matters are in order;

ii) Confirms that neither the name of the enterprise or the name of any Partner, Manager, Director or other person, who, wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulter established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;

iii) Confirms that no Partner, Member, Director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last 5 (five) years been convicted of fraud or corruption;

iv) Confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the Tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;

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

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

SCHEDULE 3

SBD SCHEDULES AS REQUIRED BY COGHSTA

SBD 1 32
SBD 2 34
SBD 4 (7/12/11) 35
SBD 6.1 (7/12/11) 38
SBD 7.2 42
SBD 8 44
SBD 9 46

PART A
INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (*NAME OF DEPARTMENT/ PUBLIC ENTITY*)					
BID NUMBER:	NC/12/2026	CLOSING DATE:	28 AUGUST 2026	CLOSING TIME:	11:00
DESCRIPTION	CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY				

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*
COGHSTA HEAD OFFICE,
LARRY MOLEKO LOUW BUILDING,
9 CECIL SUSSMAN ROAD,
KIMBERLEY, 8301

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO		TECHNICAL ENQUIRIES MAY BE DIRECTED TO:	
CONTACT PERSON	KAREL VISAGIE	CONTACT PERSON	RUDZANI MAMPHAGA
TELEPHONE NUMBER	(053) 807 9713	TELEPHONE NUMBER	(082) 857 3204
FACSIMILE NUMBER		FACSIMILE NUMBER	
E-MAIL ADDRESS	KVisagie@nccoghsta.gov.za	E-MAIL ADDRESS	bruzarce@gmail.com

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

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES OFFERED?	☐Yes ☐No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES OFFERED?	☐Yes ☐No [IF YES, ANSWER THE QUESTIONNAIRE BELOW]

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?	☐ YES ☐ NO
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
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?	☐ YES ☐ NO

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

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2. **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED (NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.**
1.3. **BIDDERS MUST REGISTER ON THE CENTRAL SUPPLIER DATABASE (CSD) TO UPLOAD MANDATORY INFORMATION NAMELY: (BUSINESS REGISTRATION/ DIRECTORSHIP/ MEMBERSHIP/IDENTITY NUMBERS; TAX COMPLIANCE STATUS; AND BANKING INFORMATION FOR VERIFICATION PURPOSES). B-BBEE CERTIFICATE OR SWORN AFFIDAVIT FOR B-BBEE MUST BE SUBMITTED TO BIDDING INSTITUTION.**
1.4. **WHERE A BIDDER IS NOT REGISTERED ON THE CSD, MANDATORY INFORMATION NAMELY: (BUSINESS REGISTRATION/ DIRECTORSHIP/ MEMBERSHIP/IDENTITY NUMBERS; TAX COMPLIANCE STATUS MAY NOT BE SUBMITTED WITH THE BID DOCUMENTATION. B-BBEE CERTIFICATE OR SWORN AFFIDAVIT FOR B-BBEE MUST BE SUBMITTED TO BIDDING INSTITUTION.**
1.5. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE STANDARD PROFESSIONAL SERVICES CONTRACT, JULY 2009, THIRD EDITION OF CIDB, IF APPLICABLE, ANY OTHER LEGISLATION OR SPECIAL CONDITIONS OF CONTRACT.
1.6. NO FAXED, EMAILED AND/OR SCANNED ID PROPOSALS WILL BE CONSIDERED.
1.7. COGHSTA RESERVES THE RIGHT TO WITHDRAW ANY INVITATION TO TENDER AND/OR RE-ADVERTISE OR TO REJECT ANY TENDER OR TO ACCEPT A PART OF IT. COGHSTA DOES NOT BIND ITSELF TO ACCEPTING THE LOWEST TENDER OR TO AWARD A CONTRACT TO THE BIDDER SCORING THE HIGHEST NUMBER OF POINTS.
1.8. ONLY CSD REGISTERED SERVICE PROVIDER MAY BID
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA.
2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

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

SIGNATURE OF BIDDER: ……

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

DATE: ……

TAX CLEARANCE REQUIREMENTS

IT IS A CONDITION OF BIDDING THAT:

1. The taxes of the successful Bidder **must** be in order, or that satisfactory arrangements have been made with the Receiver of Revenue to meet his/her tax obligations.

2. The form “Application for Tax Clearance Certificate (in respect of Bidders)”, must be completed in all respects and submitted to the Receiver of Revenue where the Bidder is registered for tax purposes. The Receiver of Revenue will then furnish the Bidder with a Tax Clearance Certificate that will be valid for a period of 6 (six) months from the date of issue. This Tax Clearance Certificate must be submitted in the original (or PIN), together with the bid and attached to this page. Failure to submit the **original** and valid Tax Clearance Certificate **will** invalidate the bid.

3. In bids where Consortia / Joint Ventures / Sub-Contractors are involved; each party must submit a separate Tax Clearance Certificate. Copies of the “Application for Tax Clearance Certificates” are available at any Receiver’s Office.

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

1.1 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, 1996 (Constitution), and further expressed in the various applicable legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

1.2 If a person is 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. DECLARATION ON EMPLOYMENT BY ORGAN OF STATE

2.1 Is the bidder, or any of the directors / trustees / shareholders / members / partners of the bidder employed by an organ of state, as defined in section 239 of the Constitution? **YES/NO**

2.2 If YES, furnish particulars of the names, individual identity numbers, in the table below:

Full Name	**Identity Number**	**Name of organ of state**

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

2.3.1 If so, furnish particulars:

……
……
……

2.4 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**

2.4.1 If so, indicate all companies registered in the CSD in the table below:

Supplier registration number (MAAA)	Status (active/inactive/deleted)

Failure to disclose all CSD-registered active companies linked to all Directors will lead to disqualification**.**

3 GENERAL DECLARATION

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

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

3.2 I understand that the accompanying bid will be disqualified if this disclosure is found to be false.

3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor.

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

3.5 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.

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

3.7 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act, 1998 (Act No. 89 of 1998) and or may be referred to law enforcement agencies for criminal investigation and or may be restricted from conducting business with the state for a period not exceeding 10 years in terms of the Prevention and Combating of Corrupt Activities Act, 2004 (Act No. 12 of 2004) or any other applicable legislation.

I CERTIFY THAT THE ABOVE IS CORRECT.

I ACCEPT THAT THE PROCURING INSTITUTION MAY REJECT THE BID OR TAKE APPROPRIATE ACTION AGAINST ME IF THIS DECLARATION IS FALSE.

……	…….
Signature	Date
……	……...
Designation	Name of bidder

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

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

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

1. GENERAL CONDITIONS

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

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

1.2 **To be completed by the organ of state**

a) The applicable preference point system for this tender is the **80/20** preference point system.

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

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

1.4 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

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

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

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

2. DEFINITIONS

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

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

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

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

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

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

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

3.2.1. POINTS AWARDED FOR PRICE

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

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

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

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

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

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

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

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

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

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

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

The specific goals allocated points in terms of this tender	**Number of points allocated (80/20 system) (To be completed by the organ of state)**	**Number of points claimed (80/20 system) (To be completed by the tenderer)**
100% or more Women or Youth owned company	10	
Less than 100% Women or Youth owned company	5	
100% Black owned Company	10	
Less than 100% Black owned Company	5	
100% People living with disability	10	
Locally owned companies	5	

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm…….

4.4. Company registration number: ……...

4.5. 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]

4.6. 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 and I acknowledge that:

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

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

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

(a) disqualify the person from the tendering process;

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

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

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

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

.....
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME: .....
DATE: .....

ADDRESS: .....

.....

.....
.....

CONTRACT FORM - RENDERING OF SERVICES

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

PART 1 (TO BE FILLED IN BY THE SERVICE PROVIDER)

1. I hereby undertake to render services described in the attached bidding documents to (name of the institution)……. in accordance with the requirements and task directives / proposals specifications stipulated in Bid Number…….. at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid .

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

   (i) Bidding documents, *viz*
   - Invitation to bid;
   - Proof of tax compliance status;
   - Pricing schedule(s);
   - Filled in task directive/proposal;
   - Preference claim form for Preferential Procurement in terms of the Preferential Procurement Regulations;
   - Bidder's Disclosure form;
   - Special Conditions of Contract;

   (ii) General Conditions of Contract; and
   (iii) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfilment of this contract.

5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

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

NAME (PRINT) …….

CAPACITY …….

SIGNATURE …….

NAME OF FIRM ……..

DATE …….

WITNESSES

1 ……..…….

2 …….…….

DATE: ……..

CONTRACT FORM - RENDERING OF SERVICES

PART 2 (TO BE FILLED IN BY THE PURCHASER)

1. I……. in my capacity as……...……..
accept your bid under reference number ……dated……for the rendering of services indicated hereunder and/or further specified in the annexure(s).

2. An official order indicating service delivery instructions is forthcoming.

3. I undertake to make payment for the services rendered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice.

DESCRIPTION OF SERVICE	PRICE (ALL APPLICABLE TAXES INCLUDED)	COMPLETION DATE	TOTAL PREFERENCE POINTS CLAIMED	POINTS CLAIMED FOR EACH SPECIFIC GOAL

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

SIGNED AT ……ON……..

NAME (PRINT) …….

SIGNATURE ……

OFFICIAL STAMP

WITNESSES

1 ….…….

2 …..…….

DATE: ……..

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1. This Standard Bidding Document must form part of all bids invited.

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

3. The bid of any bidder may be disregarded if that bidder, or any of its directors have-

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

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

Item	Question	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? **(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the *audi alteram partem* rule was applied).** The Database of Restricted Suppliers now resides on the National Treasury's website(**www.treasury.gov.za**) and can be accessed by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? **The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court outside of the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐
4.3.1	If so, furnish particulars:		

4.4	Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) ……
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS TRUE AND CORRECT.

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

……... **……..**
Signature **Date**

……. **……..**
Position **Name of Bidder**

CERTIFICATE OF INDEPENDENT BID DETERMINATION

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

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

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

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

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

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

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

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

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

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

_____

(Bid Number and Description)

in response to the invitation for the bid made by:

_____

(Name of Institution)

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

I certify, on behalf of:_____that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:

    (a) has been requested to submit a bid in response to this bid invitation;
    (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
    (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder

6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium[3] will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
    (a) prices;
    (b) geographical area where product or service will be rendered (market allocation)
    (c) methods, factors or formulas used to calculate prices;
    (d) the intention or decision to submit or not to submit, a bid;
    (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
    (f) bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

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

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

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

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

SCHEDULE 4

CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting this tender for TENDER NO. NC/12/2026: THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY in response to the invitation to tender made by the DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE, do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of (Name of Tenderer) …….. that

1. I have read and understand the contents of this Certificate;

2. I understand that this tender will be disqualified if this Certificate is found not to be true and complete in every respect;

3. I am authorised by the Tenderer to sign this Certificate, and to submit this tender on behalf of the Tenderer;

4. Each person whose signature appears on this tender has been authorised by the Tenderer to determine terms of, and to sign, the tender on behalf of the Tenderer;

5. For the purposes of this Certificate and this tender, I understand that the word “competitor” shall include any individual or organization, other than the Tenderer whether or not affiliated with the Tenderer;

   (a) has been requested to submit a tender in response to this invitation to tender;
   (b) could potentially submit a tender in response to this invitation to tender, based on their qualifications, abilities or experience; and
   (c) provides the same goods and services as the Tenderer and/or is in the same line of business as the Tenderer;

6. The Tenderer has arrived at this tender independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communicating between partners in a Joint Venture or Consortium[1] will not be construed as collusive tendering;

7. In particular, without limiting the generality of Paragraph 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

   (a) prices;
   (b) geographical area where product or service will be rendered (market allocation);
   (c) methods, factors or formulas used to calculate prices;
   (d) the intention or decision to submit or not to submit a tender;
   (e) the submission of a tender which does not meet the specifications and conditions of the tender; or
   (f) tendering with the intention not to win the tender.

[1] 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.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this invitation to tender relates.

9. The terms of this tender have not been, and will not be, disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening or of the awarding of the contract.

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to tenders and contracts, tenders 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 1989 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 10 (ten) tears in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or another applicable legislation.

……...	……
SIGNATURE	**DATE**
……	……
POSITION	**NAME OF TENDERER**

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

SCHEDULE 5

CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This returnable schedule is to be completed by Joint Ventures.

YES NO (**PLEASE INDICATE IF THIS IS A JV OR NOT. IF YES, FILL IN THE DETAILS BELOW. ALSO ATTACH A SIGNED COPY OF AGREEMENT BETWEEN PARTIES)**

We, the undersigned, are submitting this tender offer in Joint Venture and herby authorize

Mr/Mrs ……., authorised signatory of the

Company, Close Corporation or Partnership ……., acting in the capacity of Lead Partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead Partner:		Signature: ……..…… Name: …… Designation: ……..
		Signature: ……..…… Name: …… Designation: ……..
		Signature: ……..…… Name: …… Designation: ……..

Note: A copy of the Joint Venture Agreement shall be appended to this Schedule.

SIGNED ON BEHALF OF THE TENDERER: ……..……

DATE: ……..……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 6

DECLARATION IN TERMS OF THE PUBLIC FINANCE MANAGEMENT ACT (No. 29 of 1999)

ITEM	QUESTION	YES	NO
1.1	Is the Tenderer or any of its Directors listed on the National Treasury's database as a company or person prohibited from doing business with the Public Sector? **(Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the *audi alteram partem* rule was applied)**		
1.1.1	If so, furnish particulars:		
1.2	Is the Tenderer or any of its Directors listed on the Register for Tender Defaulters in terms of Section 29 of the Prevention and Combatting of Corrupt Activities Act (No. 12 of 2004)? **(To access this Register, enter the National Treasury's website, www.treasury.gov.za, click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to Facsimile Number 012-326 5445).**		
1.2.1	If so, furnish particulars:		
1.3	Was the Tenderer or any of its Directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past 5 (five) years?		
1.3.1	If so, furnish particulars:		
1.4	Does the Tenderer or any of its Directors owe any Municipal rates and taxes or Municipal charges to the Municipality/Municipal entity, or to any other Municipality/Municipal entity, that is in arrears for more than 3 (three) months?		
1.4.1	If so, furnish particulars:		
1.5	Was any contract between the Tenderer and the Department / entity or any other Organ of State terminated during the past 5 (five) years on account of failure to perform on or comply with the contract?		
1.5.1	If so, furnish particulars:		

CERTIFICATION:

I, THE UNDERSIGNED ……

(Full Name)

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

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

……...	……
SIGNATURE	**DATE**
……	……
POSITION	**NAME OF TENDERER**

*** Where the entity tendering is a Joint Venture, each party to the Joint Venture must sign a declaration in terms of the Public Finance Management Act and attach it to this Schedule.**

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TENDER NO. NC/12/2026

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SCHEDULE 7

BARGAINING COUNCIL CERTIFICATE AND DECLARATION IN RESPECT OF MINIMUM WAGE

Tenderers must be registered with a relevant Bargaining Council (if such be in place) and must attach to this Schedule the applicable Certificate of Compliance (Letter of Good Standing in terms of the relevant Government Gazette).

Each party to a Consortium / Joint Venture shall attach separate certificates in the above regard.

DECLARATION IN RESPECT OF MINIMUM WAGE:

The Tenderer, by signing this Schedule, declares that not less than the statutory minimum wage shall be paid to Employees, as applicable.

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……

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SCHEDULE 8

TAX CLEARANCE CERTIFICATE

An original valid Tax Clearance Certificate from the South African Revenue Service (SARS) shall be attached to this Schedule, or proof that the Tenderer has made arrangements with SARS to meet his or her outstanding tax obligations.

Each party to a Consortium / Joint Venture shall submit a separate Tax Clearance Certificate, or proof that he or she has made the necessary arrangements with SARS.

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……..……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 9

COMPANY REGISTRATION DOCUMENTATION

A copy of the company registration documents shall be attached to this Schedule.

Each party to a Consortium / Joint Venture shall submit separate Registration Certificates, or proof of registration.

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 10

CENTRAL SUPPLIER DATABASE DOCUMENTATION

Attach Proof of the National Treasury Central Supplier Database (Full CSD required, not summary)

The tenderer shall provide a printed copy of the Active Supplier Listing on the National Treasury Central Supplier Database. (www.treasury.gov.za). Tenderers who are not registered on the Central Supplier. In the case of a Joint Venture, a printed copy of the Active Supplier Listing must be provided for each member of the Joint Venture.

Name of Contractor:
.....
Central Supplier Database Supplier Number:
.....

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……

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SCHEDULE 11

DECLARATION CONCERNING FULFILMENT OF THE CONSTRUCTION REGULATIONS 2014, WHERE APPLICABLE

In terms of regulations 5.1 (g) & (h) of the Construction Regulations, 2014 (hereinafter referred to as the Regulations), promulgated on 07 February 2014 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) the Employer shall not appoint a Contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

Tenderers shall answer the questions below:

1. I confirm that I am fully conversant with the Regulations and that my Company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations.

   (*Tick)* **YES** ☐ **NO** ☐

2. Indicate which approach shall be employed to achieve compliance with the Regulations. *(Tick)*

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) – Specify: …… …… …… …… ……	

3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the Contract team as specified in the Regulations (CV's to be attached):

   ……

   ……

   ……

4. Provide details of proposed training (if any) that will be undergone:

……

……

……

……

5. List potential key risks identified and measures for addressing risks:

……

……

……

……

……

6. I have fully included in my tendered Sum for resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period.
(*Tick)*

YES ☐ **NO** ☐

SIGNATURE OF PERSON(S) AUTHORISED TO SIGN THIS TENDER:

SIGNED ON BEHALF OF THE TENDERER: ……..……...

(Name in print): ……,,,,,…… **ID NO**.: ……..……..……...

WITNESS: ……..……..

(Name in print): …… **ID NO**.: ……..……..……

DATE: ……...

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 12

COMPENSATION FOR OCCUPATIONAL INJURIES & DISEASES (COID)

The Tenderer must attach to this page a **certified copy** of the Tenderer's COID Number from the Department of Labour.

GOOD STANDING FROM THE COMPENSATION COMMISSIONER

1. A valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof must accompany the Tender Document.

2. In the case of a Consortium/Joint Venture every member must submit a separate valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof with the Tender Documents.

3. If a Tender Document is not supported by a valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof, the Employer reserves the right to obtain such document after the closing date. If no such document can be obtained within a period as specified by the Employer, the Tender will be disqualified.

4. Should a Tenderer's Letter of Good Standing from the Compensation Commissioner expire during the contract period, a valid certificate must be submitted within an agreed upon time.

5. The right is reserved to not award a Tender if a valid Letter of Good Standing from the Compensation Commissioner or a certified copy thereof is not submitted within the requested time.

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……

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SCHEDULE 13

CONFIRMATION OF CIDB CONTRACTOR REGISTRATION

I/We understand that only Tenderers who are registered with the Construction Industry Development Board (CIDB) in a Contractor grading designation equal to or higher than a Construction grading designation determined in accordance with the sum tendered for, are eligible to submit tenders.

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 of not more than one lower than the designation determined in accordance with the sum tendered.

3. The combined Contractor grading designation calculated in accordance with the CIDB Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum tendered; and

4. The contract participation of each member in a Joint Venture is in accordance with the individual member's CIDB contractor grading designation.

I/We understand that the Employer may only enter into a formal contract with a Tenderer who is registered with the Construction Industry Development board (CIDB) as a CIDB Designation **GB** (of the correct Class in accordance with the tendered sum) and has been issued with such a CIDB Contractor registration grading designation.

Contractor Industry Development Board (CIDB) Contractor Registration

I/We wish to confirm the following:

Yes I/We are registered with the CIDB as a …..... GB (Class …….. General Building Works) Contractor:

Registration No.: ……

CIDB Contractor's Grading: …….

Tender amount, VAT excluded: R……

I/We understand that:

Tenderers must be registered prior to the closing date/time for tender submissions in a CIDB Contractor grading designation equal to or higher than a grading corresponding to the amount tendered.

DESIGNATION	UPPER LIMIT, (R) OF TENDER VALUE RANGE, VAT INCLUDED
1	500,000
2	1,000,000
3	3,000,000
4	6,000,000
5	10,000,000
6	20,000,000
7	60,000,000
8	200,000,000
9	No Limit

TABLE: The value required to determine the financial capability of a Contractor is as indicated.

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……..……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 14

CONFIRMATION OF NHBRC CONTRACTOR REGISTRATION

I/We understand that only Tenderers who are registered with the National Home Builders Registration Council (NHBRC) are eligible to submit tenders.

Joint Ventures are eligible to submit Tenders provided that every member of the Joint Venture is registered with the NHBRC.

I/We understand that the Employer may only enter into a formal contract with a Tenderer who is registered with the NHBRC.

National Home Builders Registration Council (NHBRC) Contractor Registration

I/We wish to confirm the following:

Registration No.: ……

The Certificate must be valid for a period of 1 (one) year.

Date Issued: ……..

Expiry Date: ……..

I/We understand that Tenderers must be registered with the NHBRC prior to the closing date/time for tender.

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……..……

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SCHEDULE 15

METHOD STATEMENT; PROJECT PROGRAM AND DETAILED CASHFLOW

Attach to this schedule a Detailed Project Method Statement, Project Program and Projected Cashflow (Cashflows should be in line with the Departments Milestone Payments)

Anticipated Timeframes from the Client:
Contract Award: 1 calendar day
Contract Acceptance: 5 calendar days
NHBRC Enrolment documentation: 5 calendar days from contract award
Construction Period: 28 weeks from date of Enrolment
Retention Period: 3 Months

Cashflow:
The Cashflow must be linked to the project program and Milestone Payment Measurements

Start-up capability
The Contractor will provide proof that he/she has the start-up capital, supplier accounts or cashflow

SIGNED ON BEHALF OF THE TENDERER: ……..……

DATE: ……...……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 16

SCHEDULE OF WORK EXPERIENCE

The Tenderer shall insert in the spaces provided below a list of similar completed contracts awarded to him and those currently being undertaken.

EMPLOYER (NAME, TEL. NO. AND FAX NO.)	PRINCIPAL AGENT (NAME, TEL. NO. AND FAX NO.)	NATURE OF WORK	VALUE OF WORK R (m)	APPOINTMENT DATE	COMPLETION DATE
	COMPLETED CONTRACTS (Not older than 5 years)				
	CURRENT CONTRACTS				

Number of sheets appended by the Tenderer to this Schedule: …… **(If nil, enter NIL**)

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 17

DETAILS OF MANAGEMENT TEAM

Tenderers shall set out in the Schedule hereunder details of the Project Staff experience in work of a similar nature to that for which their tender is submitted.

The Tenderer must attach to this page a **detailed organogram** of the Proposed project team. Should the person identified for a specific position not be in the employment of the tenderer, a signed letter providing availability and/or memorandum of understanding should be attached

Failure to complete this Schedule may result in the Tenderer not being considered.

1) Project Manager Name: ……

Years' Experience: In housing delivery field as Project/Contract Manager: ……
In housing delivery field as Site Agent: ……

2) Site Agent's Name: ……

Years' Experience: In housing delivery field as Site Agent: ……
In housing delivery field as Foreman: ……

3) General Foreman's Name: ……

Years' Experience: In housing delivery field as Foreman: ……

4) Safety Officer's Name: ……

Years' Experience: ……

NOTE: PLEASE APPEND CV'S AND CERTIFICATES OF ALL TEAM MEMBERS

Number of sheets, appended by the Tenderer to this Schedule: ……..…… **(If nil, enter NIL)**

SIGNED ON BEHALF OF THE TENDERER: ……..……

DATE: ……..……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 18

SCHEDULE OF CONSTRUCTION EQUIPMENT

18.1: CONSTRUCTION EQUIPMENT IMMEDIATELY AVAILABLE:

DESCRIPTION, SIZE, CAPACITY	NUMBER
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……
……	……

8. 2: CONSTRUCTION EQUIPMENT ON ORDER:

(State details of arrangements made, with delivery dates)

DESCRIPTION, SIZE, CAPACITY	NUMBER
……..	……
……..	……
……..	……
……	……..
……	……..
……	……..
……	……..
……	……...

18. 3: CONSTRUCTION EQUIPMENT THAT WILL BE ACQUIRED OR HIRED:

(State details of delivery arrangements)

DESCRIPTION, SIZE, CAPACITY	NUMBER
……..	……
……..	……
……..	……..
……	……..
……	……...
……	

Number of sheets appended by the Tenderer to this Schedule: ……..…… **(If nil, enter NIL)**

SIGNED ON BEHALF OF THE TENDERER: ……..……

DATE: ……..……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 19

CONFIRMATION OF BANK RATING

Tenderers must attach confirmation of bank rating letter not older than 1 month.

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 20

SCHEDULE OF SUB-CONTRACTORS

We notify you that it is our intention to employ the following Sub-Contractors for work (excluding work covered by provisional sums and contingencies) in this contract.

Acceptance of this tender shall not be construed as approval of all or any of the listed Sub-Contractors. Should any of the Sub-Contractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this contract and the tendered unit rates for the various items of work shall remain final and binding.

SUB-CONTRACTORS		
SUB-CONTRACTOR'S NAME	**WORK ACTIVITIES TO BE UNDERTAKEN BY THE SUB-CONTRACTOR**	**ESTIMATED VALUE OF WORK (RAND)**

Number of sheets appended by the Tenderer to this Schedule: …… **(If nil, enter NIL**)

SIGNED ON BEHALF OF THE TENDERER: ……

DATE: ……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 21

DAY WORKS SCHEDULE

This day work statement shall be used according to the opinion of the Engineer for the assessment of value of additional work which cannot be assessed easily according to the tendered Sum.

The rates for labour and material should not include overhead costs and profit, Site Supervision of personnel, insurance, paid vacation, the use and maintenance of small hand equipment and non-mechanical equipment, travel allowance, other payments and allowance. Provision is being made for this by including the percentages covering all these items with the item “Up costs”. The rate which should be used for the assessment of value of additional work is the basic rate plus the percentage “UP costs”.

The item “Up costs” is left out in the case of equipment. The rate then has to include all of the above “Up costs” mentioned as well as Operator’s costs, user’s goods, maintenance, etc.

The Tenderer has to fill in all of the items listed underneath, otherwise his tender can be considered as incomplete.

A. **LABOUR**

1)	Workers	……	per hour plus	……10……. % “Up cost”
2)	Supervisors	……	per hour plus	……10……. % “Up cost”
3)	Artisans	……	per hour plus	……10……. % “Up cost”

B. **EQUIPMENT**

DESCRIPTION	RATE PER HOUR	
	In Work	Standing
Excavator ……	……	……
Front-end Loader …….	……	……
Tipper Truck …….. cubic meters	……	……
Compressor …….. (capacity)	……	……
…….. (Specify)	……	……
…….. (Specify)	……	……
…….. (Specify)	……	……

Note: The rate for an air pressure machine has to include rubber pipes and pneumatic equipment.

C. **MATERIAL**

Here, the Tenderer has to provide the “Up Costs” which ought to be added to the basic price:

……. %

SIGNED ON BEHALF OF THE TENDERER: ……..……

DATE: ……..……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 22

PROPOSED AMENDMENTS AND QUALIFICATIONS BY TENDERER

The Tenderer should record any proposed deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a Tenderer may state such proposed deviations and qualifications in a covering letter attached to his tender and reference such letter in this Schedule. **All amendments and qualifications are solely for the consideration and approval of the Employer and may not necessarily be applied.**

The Tenderer's attention is drawn to Clause F.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the employer's handling of material deviations and qualifications.

If no deviations or modifications are desired, the Schedule hereunder is to be marked **NIL** and signed by the Tenderer.

PAGE	CLAUSE OR ITEM	PROPOSAL

Number of sheets, appended by the Tenderer to this Schedule: ……..…… **(If nil, enter NIL)**

SIGNED ON BEHALF OF THE TENDERER: ……..……

DATE: ……..……

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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SCHEDULE 23

RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:		
	DATE	**TITLE OR DETAILS**
1		Minutes of the Compulsory Site Meeting (Clarification Meeting)
2		
3		
4		
5		
6		
7		
8		
9		
10		

Attach additional pages if more space is required.

…….... ……

SIGNATURE **DATE**

…….. ……

POSITION **NAME OF TENDERER**

THE CONTRACT

PART C 1:

AGREEMENT AND CONTRACT DATA

C 1.1	Form of Offer and Acceptance	C 1 – 2
C 1.2	Contract Data	C 1 - 8
C 1.3	Form of Guarantee	C 1 – 21
C 1.4	Occupational Health & Safety Appointment	C 1 - 25
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C 1.1:
FORM OF OFFER AND ACCEPTANCE (AGREEMENT)

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

FORM OF OFFER AND ACCEPTANCE
(AGREEMENT)

OFFER

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

TENDER NO. NC/12/2026: THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY.

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 of Tender.

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

THE OFFERED TOTAL OF THE TENDERED SUM EXCLUSIVE OF VALUE ADDED TAX IS:

R……..…….……..…….…… (in figures);

……..……..……

……..……..…….. (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 Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

Signature(s) …… ……

Name(s) …… ……

Capacity …… ……

For the Tenderer ……

(Name and address of Organisation/Tenderer)

Name & signature of Witness ……..…….…… **Date** ……

ACCEPTANCE

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

The terms of the Contract are contained in:

Part C 1: Agreement and Contract Data, which includes this agreement
Part C 2: Pricing Data (Tendered Sum)
Part C 3: Scope of Work
Part C 4: Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C 3 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representative(s) of both parties.

The Tenderer shall within 2 (two) weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of Contract identified in the Contract Data at, or just after, the date this Agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives 1 (one) fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within 5 (five) days of the date of such receipt, notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

Signature(s) …… ……

Name(s) …… ……

Capacity …… ……

For the Employer DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE
PRIVATE BAG X5005
KIMBERLEY, 8300

Name & signature of Witness …… **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 to those 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, become 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 the tender documents 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 documents 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 ……...

4. Subject ……..

Details ……...

5. Subject ……..

Details ……...

6. Subject ……..

Details ……...

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

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

AGREEMENT

The Employer identified below has accepted a Tender Offer by the Contractor for the construction, completion and remedying of defects of the specified Works. Acceptance of the Contractor's Offer shall form an agreement between the Employer and the Contractor upon the terms and conditions contained in the Agreement and in the Contract that is the subject of the Agreement.

THIS AGREEMENT WITNESSES THAT:

1. The following documents shall be deemed to form and be read and construed as part of this Agreement:

   (a) Form of Offer and Acceptance, including Schedule of Deviations
   (b) Addenda, Schedules
   (c) Contract Data
   (d) Tendered Sum
   (e) Scope of Work (Specifications, drawings)
   (f) Site Information
   (g) Annexures (as applicable)

2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor covenants with the Employer to execute and complete the Works and remedy any defects therein, in conformity with the provisions of the Contract.

3. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works and the remedying of defects therein, the tendered Sum at the times and in the manner prescribed by the Contract.

FOR THE CONTRACTOR (SUCCESSFUL TENDERER):

Signature(s) …… ……

Name(s) …… ……

Capacity …… ……

For the Contractor ……
(Name and address of organisation)

Name & signature of Witness …… ……
Date

FOR THE EMPLOYER:

Signature(s) …… ……

Name(s) …… ……

Capacity …… ……

For the Employer DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE
PRIVATE BAG X5005
KIMBERLEY, 8300

Name & signature of Witness …… ……

CONFIRMATION OF RECEIPT

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

At ……..…..… (Place) on the ……..… day of …… (Month) 20 ……. (Year)

FOR THE CONTRACTOR (SUCCESSFUL TENDERER):

Signature(s) ……. ……

Name(s) ……. ……

Capacity ……. ……

For the Contractor ……
(Name and address of organisation)

Name & signature of Witness ……..…..…..… ……
Date

C 1.2:
CONTRACT DATA

PART 1:
DATA PROVIDED BY THE EMPLOYER

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

CONTRACT DATA

PART 1: DATA PROVIDED BY THE EMPLOYER

CONDITIONS OF CONTRACT

Variations, amendments and additions to the General Conditions of Contract as Special Conditions of Contract prescribed by the Employer are set out below. Each item of the Special Conditions of Contract given below is cross-referenced to the clause in the General Conditions of Contract to which it mainly applies.

The General Conditions of Contract (GCC) for Construction Works, Third Edition, 2015, as published by the South African Institution of Civil engineering (SAICE), Private Bag X200, Halfway House, 1685, is applicable to this Contract and is obtainable from www.saice.org.za.

The Pro Formas bound with the General Conditions of Contract 2015, shall not apply to this Contract and shall be replaced with the documentation bound into this Contract Document.

CONTRACT SPECIFIC DATA

The following contract specific data, referring to the GCC for Construction Works, Third Edition, 2015, are applicable to this Contract:

Compulsory Data

Clause 1.1.1.13:

The Defects Liability Period is *3 (Three) months, measured from the date of the Certificate of Completion.*

Clause 1.1.1.14:

The time for achieving Practical Completion is: 28 weeks from the Commencement Date.

Clause 1.1.1.15:

The name of the Employer is CoGHSTA.

Clause 1.1.1.16:

The name of the Employer's Agent is ICEBURG TRADING 751CC AND BRUNEL ENGINEERING JV

Clause 1.1.1.26:

The Pricing Strategy is a Fixed Price Contract. See also Clause 1.1.1.19

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Clause 1.2.1.2:

The address of the Employer is:

Physical address: LARRY MOLEKO LOUW BUILDING
9 CECIL SUSSMAN ROAD
KIMBERLEY
8301

Postal Address: PRIVATE BAG X5005
KIMBERLEY
8300

E-mail address: bslenkoe@ncpg.gov.za

The address of the Employer's Agent is:

Physical address: NO. 04 JACOBUS SMIT AVENUE, LABRAM
KIMBERLEY, 8301

Postal address: NO. 04 JACOBUS SMIT AVENUE, LABRAM
KIMBERLEY, 8301

E-mail address: bruzarce@gmail.com

Clause 1.3.3:

The language of the Contract and of written communication shall be Afrikaans and/or English as determined by the Employer and the Employer's Agent at the onset of the Contract.

Clause 3.2.3:

The Employer's Agent is required to obtain the specific approval of the Employer before executing any of the following functions or duties:

1. Nominating the Employer's Agent's Representative in terms of Clause 3.3.1.
2. Delegation of Employer's Agent's authority in terms of Clause 3.3.4.
3. Granting permission to work during non-working times in terms of Clause 5.8.1.
4. Suspend the progress of the works in terms of Clause 5.11.
5. The issuing of an instruction to accelerate progress in terms of Clause 5.7.3.
6. The Term Engineer will be the Project's Professional Service provider.

Clause 4.1.2:

Amend the first three lines to read:

"Where any part of the Works, whether permanent or temporary is designed by the Contractor, he shall, notwithstanding any approval of the Employer's Agent be liable for any error or deficiency in and design, drawing or document and any loss or damage arising out of such error or deficiency."

Clause 4.2:

Add the following new sub-clause:

Clause 4.2.3:

"4.2.3.1 The Employer's Agent shall establish the basic reference pegs and benchmarks on the Site and give to the Contractor the particulars thereof in sufficient time to enable the Contractor to meet his approved programme.

4.2.3.2 After compliance by the Employer's Agent with the provisions of Sub-Clause 5.4.1, the Contractor shall be responsible for the true and proper setting out of the Works and for the correctness of the position, levels, dimensions and alignment of all parts of the Works and for the provision of all necessary instruments, appliances and labour in connection therewith.

4.2.3.3 If at any time during the progress of the Works, any error shall appear or arise in the position, levels dimensions or alignment of any part of the Works, the Contractor, on being required to do so by the Employer's Agent, shall at his own expense rectify such error to the satisfaction of the Employer's Agent, but if such error is based on incorrect data supplied in writing by the Employer's Agent or if there is any delay in providing the particulars required in terms of Sub-Clause 5.4.1, the Contractor shall, in respect of that delay and the Cost of such rectification, be entitled to make a claim in accordance with Clause 10.1.
The Contractor shall carefully protect and preserve all benchmarks, sight-rails, pegs and other things used in setting out the Works. The checking of any setting-out or of any line or level by the Employer's Agent shall not relieve the Contractor of his responsibility for the correctness thereof."

Clause 4.3:

Add the following new sub-clause:

"4.3.3 The Employer and the Contractor shall enter into an agreement to complete the work required for construction of the works in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (Act 85 of 1993) and the Construction Regulations promulgated thereunder.

An agreement is concluded in the Contract Document (C 1.4 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) within 14 (fourteen) 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**".

Clause 4.4.4:

Add the Employer's Agent to the consultation between the Employer and the Contractor.

Clause 4.9

Add the following new sub-clauses:

"4.9.2: In order to preclude seizure by the owner of any construction equipment being held by the Contractor on a hire-purchase agreement for the purposes of the contract, the Employer shall be entitled to pay any such owner the amount of any outstanding instalment or other sum owing under any hire or hire-purchase agreement and in the event of his doing so, any amount thus paid by him shall be a debt payable to the Employer by the Contractor and may be deducted by the Employer from any monies owing or that may become owing the Contractor in terms of the Contract, or be recovered at law from the Contractor by the Employer.

4.9.3: When entering into any subcontract for the execution of any part of the works, the Contractor shall incorporate in such subcontract, by reference or otherwise, the provisions of this clause in respect of construction equipment brought to the site by the Subcontractor."

Clause 5.3.1:

The Commencement Date will be the date that the project has been enrolled with the NHBRC.

The Contractor shall commence executing the Works within ***14 (fourteen) days*** *from the Commencement Date.*

The documentation required before commencement with Works execution is:

1) Approved Health and Safety Plan (Refer to Clause 4.3)
2) Initial programme (Refer to Clause 5.6)
3) Security or performance guarantee (Refer to Clause 6.2)
4) Insurance (Refer to Clause 8.6)
5) Occupational Health and Safety Agreement (C 1.4 of the Contract Document)
6) Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer)

7) Approved organogram with competent personnel per the schedule submitted during the evaluation stage (Refer to Clause 4.11)

Clause 5.3.2:

The time to submit the documentation required before commencement of Works is **7 (seven) days** from the Commencement Date

Clause 5.3.3:

Add the following clause after Clause 5.3.3:

"5.3.4: The Contractor shall commence executing the Works within ***14 (fourteen) days*** from the Commencement Date.

The Commencement Date will be the date when all of the following takes place:
1) Site Handover to the Contractor
2) The Completion of the Form of Offer and Acceptance
3) The above will take place within **7 (seven) days** of the issue of the Letter of Acceptance".

Clause 5.4.1:

Delete Clause 5.4.1 in its entirety and replace with the following:

"Access to and possession of Site shall be deemed granted by the Employer on the issuance of instruction to commence carrying out the works by the Employer's Agent"

Clause 5.4.2:

Access to and possession of Site shall not be exclusive to the Contractor insofar as the provisions of Clause 4.8 apply, and where on-going use by the general public is required.

Add the following sub-clause:

"5.4.4 The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site. The Contractor shall also provide at his own cost any additional facilities outside the Site required by him for purposes of the Works."

Clause 5.8.1:

The non-working days are *usually Sundays.*

The special non-working days are:

1) *Public holidays and the official Builder's Holiday (Year End Break).*
2) *The year-end break commencing on 11 December 2026 and ending on 11 January 2027 and similar dates in the following year end break.*

Clause 5.9.1:

Add the following paragraph:

"All additional copies, whether provided by the Employer's Agent or reproduced by the Contractor, shall be to the Contractor's account."

Clause 5.11.4:

Add the following after "Contractor," and before "the Contractor: in the third line:

"5.11.4 "or by reason of any Contractor executing construction work, which is not in accordance with the Contractor's Health and Safety Plan for the site or which poses a threat to the health and safety of persons"

Clause 5.12.2.2:

No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal climatic conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working days listed in the Project Specifications for each month, then abnormal climatic conditions shall be deemed to exist, and an extension of time may be claimed in accordance with the provisions of Clause 5.12.

The number of days quoted under the Project Specifications shall be regarded as a fair estimate of the delays to be anticipated and allowed for under normal climatic conditions where inclement weather prevents or disrupts critical work.

Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day is experienced.

Should an extension of time be granted by the Employer's Agent, such extension of time will be added to the time for completion or set against any over-provision that may have occurred in the abovementioned Schedule.

It shall further be noted that where the critical path is not affected, no extension of time for **abnormal** climatic conditions or for any other reason will be entertained.

See also C 3.3.3.5.10.

Clause 5.13.1:

The following penalties will applicable on this contract:

a) The penalty for failing to complete a house within 10 weeks of platform approval is ***R 50-00 (Fifty Rand)*** *per house per calendar day of delay.*
b) The penalty for failing to complete the total Works is ***R 250-00 (Two Hundred and Fifty Rand)*** *per outstanding house per calendar day of delay.*

Clause 5.14.4:

Add the following at the end of this sub-clause:

"However, a Certificate of Completion will not be issued before the Contractor hands over a consolidated Health and Safety file that shall include all the specified information, as well as all "Record" information as required by the Employer's Agent."

Clause 5.16.3:

The latent defect period is *10 (ten) years.*

Clause 6.2.1:

The security to be provided by the Contractor shall be the form of security selected by the Contractor under Part 2: Data Provided by the Tenderer.

Clause 6.2.2:

Delete Clause 6.2.2 in its entirety.

Clause 6.2.3:

Delete Clause 6.2.3 in its entirety and replace with the following:

"The Contractor shall ensure that the performance guarantee remains valid and enforceable until the Certificate of Completion of the Works is issued."

Clause 6.6:

*In the second line of sub-clause 6.6.1.2, after the words "*sum or sums" *insert the words* "excluding VAT."
*In the first line of sub-clause 6.6.1.2.1, after the words "*sum or sums" *insert the words* "excluding VAT."
*In the second line of sub-clause 6.6.1.2.2, after the word "*sum" *insert the words* "excluding VAT."
*In the fourth line of sub-clause 6.6.2, after the word "*price" *insert the words* "excluding VAT."

Clause 6.7.1:

Refer to sub-clause 1.1.1.26 and C 3.3.6.13.

Clause 6.8.2:

Add the following to Clause 6.8.2:

"The tendered amount shall **not be** subject to contract price adjustments in accordance with Clause 6.8 of the General Conditions of Contract.

If special materials are specified in Part 2 of the Contract Data then the provisions of Clause 6.8.3 of the General Conditions of Contract shall apply to such special materials."

Clause 6.8.4:

Add the following to Clause 6.8.4:

"Notwithstanding the above, in the event that a public holiday is proclaimed after 28 (twenty-eight) days before the closing date for tenders, no cost other than those that can be claimed under Clause 5.12.3 shall be added to the contract price."

Clause 6.10.1.5:

The percentage advance on materials not yet built into the Permanent Works is 80 (eighty) %.

Clause 6.10.3:

Interim payments to the Contractors shall be subject to retention by the Employer. The overall retention shall be limited to **15 (fifteen) %** should the Contractor selects Retention in the form of security. Where a performance guarantee is taken the limit of retention money is **5 (five) %** of the Contract Price, including allowances for contingencies and Contract Price Adjustment. A guarantee in lieu of retention is **not** permitted for the latent defects period.

Clause 6.10.4:

Add the following to Clause 6.10.4:

"Furthermore, payment shall be subject to the Employer being in possession of an original valid Tax Clearance Certificate at the time payment is due (it is the responsibility of the Contractor to submit an updated original Tax Clearance Certificate to the Employer) should any current certificate expire during the contract period.

The Employer shall withhold any payments should EPWP reporting not be submitted monthly or with each claim, whichever comes first.

Notwithstanding anything above, the Employer's Agent shall be empowered to withhold the delivery of the payment certificate until the Contractor has complied with his obligations to report in terms of Clause 4.10.2 and as described in the Scope of Work."

The Employer's Agent shall ensure that the payment certificate referred to in Clause 10.1 shall be delivered to the Employer seven (7) days prior to "the year-end break" and the Employer's "financial year-end" during the months of March and April, of which the Employer shall communicate the date for submission. The Contractor shall ensure that they will submit the certificate referred to in Clause 10.1 fourteen (14) days prior of such of these dates"

Clause 6.10.6.1.1

Add the following to Clause:

The Employer may deduct from any monies due to the Contractor any amounts owed by the Contractor to local Labourers where such payment to local labourers is overdue by more than 30 days. The Employer may instruct the Employer's Agent to pay over the amounts deducted to the local labourers. Deductions will be made from current payment certificates or from Retention monies due to the Contractor. Where such instruction is made to the Employer's Agent, the remuneration for the Agent shall be at 10% of the payments so effected by the Agent.

Clause 7.2.1:

Add the following to this sub-clause:

"The onus rests with the Contractor to produce work which conforms in quality and accuracy of detail to all the requirements of the specifications and drawings, and the Contractor shall, at his own expense, institute a quality-control system and provide experienced personnel, together with all transport, instruments and equipment, to ensure adequate supervision and positive control of the works at all times."

Clause 7.4.1

Add the following to this sub-clause:

"The Contractor shall conduct tests or have them conducted continually on a regular basis, to check the properties of natural materials and processed natural materials and of products manufactured on site, such as concrete and asphalt. Although not a requirement for the Contractor to conduct regular tests on any commercially produced products such as cement, bitumen, steel and pipes, the Contractor shall remain fully responsible for any defective material or equipment provided by him.

Similarly, the quality of all elements of the works shall be checked on a regular basis so as to ensure compliance with the specified requirements.

The intensity of control and of tests to be conducted by the Contractor in terms of these obligations is not specified but shall be adequate to ensure that proper control is being exercised to the satisfaction of the Employer's Agent.

Where any natural materials or products made from natural materials are supplied, upon completion of each element of the construction works, the Contractor shall test and check such materials, products and or elements for compliance with the specified requirements and shall submit his results to the Employer's Agent for approval. Such submission shall include all his measurements and test results and shall furnish adequate proof of compliance with the specified requirements."

Clause 7.6.3.3

Add the following new sub-clause:

"To stop any Contractor from executing construction work, which is not in accordance with, the Contractor's Health and Safety Plan for the site or which poses a threat to the health and safety of persons and to implement the required health and safety measures before continuing."

Clause 8.4.1.1:

Delete and replace with the following:

"… hereby indemnifies the Employer, the Employer's Agent and all consultants against any liability in respect of damage to or physical loss of the property of any person, including any Employee of the Contractor, or injury to or death of any person, including any employee of the Contractor and"

Clause 8.6:

Clause 8.6.1.1.2:

The value of Plant and Materials supplied by the Employer to be included in the insurance sum is *R0-00 (Nil Rand).*

Clause 8.6.1.1.3:

The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is *R10 000-00 (Ten Thousand Rand) per house.*

Clause 8.6.1.3:

The limit of indemnity for liability insurance is *R 10 000 000-00 (Ten Million Rand).*

Clause 8.6.1.5:

In addition to the insurances required in terms of the General Conditions of Contract Clauses 8.6.1.1 to 8.6.1.4, the following insurance is also required:

a) Insurance of Construction Equipment (including tools, offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the site for a sum sufficient for their replacement.

b) Insurance in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993.

c) Motor Vehicle Liability Insurance comprising (as a minimum) “Balance of Third Party” Risks including Passenger Liability indemnity.

d) Where the contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor’s Policies of Insurance.

Clause 8.6.8:

Add the following new sub-clause 8.6.8:

“Where the contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor’s Policies of insurance.”

Clause 9.2.1:

Add the following new sub-clause 9.2.1.3.9, 9.2.1.3.10, 9.2.1.3.11 and 9.2.1.3.12:

“9.2.1.3.9: The Contractor committed a corrupt or fraudulent act during the procurement process or execution of the contract. “

“9.2.1.3.10 An official or other role player committed any corrupt or fraudulent act during the procurement Process or in the execution of the contract that benefitted the Contractor.”

“9.2.1.3.11 The Contractor fails to provide the required Guarantee and insurances within the prescribed time.”

“9.2.1.3.12 Has failed to execute construction work in accordance with the Contractor’s Health and Safety Plan or with a threat to the health and safety of persons within 14 (fourteen) days after receiving from the Employer’s Agent written notice of the same.“

Clause 10.1.6

Add the following sub-clause:

“Early warning – A Party shall notify the other as soon as he is aware of any circumstance which may delay or disrupt the Works, or which may give rise to a claim for additional payment. The Contractor shall take all reasonable steps to minimise these effects.

The Contractor’s entitlement to extension of the Time for Completion or additional payment shall be limited to the time and payment which would have been due if he had given prompt notice and had taken all reasonable steps.”

ADDITIONAL CONDITIONS OF CONTRACT

Add the following new clause after Clause 10:

Clause 11: Details to be confidential

The Contractor shall treat the details of the Works comprised in this Contract as private and confidential (save in so far as may be necessary for the purposes hereof) and shall not publish or disclose the same or any particulars thereof in any trade or technical paper elsewhere without prior written consent from the Engineer.

PART 2:
DATA PROVIDED BY THE TENDERER

PART 2: DATA PROVIDED BY THE TENDERER

Clause 1.1.1.9:

The name of the Contractor is ……

Clause 1.2.1.2:

The address of the Contractor is:

Physical address: ……..

……

…….. ……

Postal address: ……....

E-mail address: ……

Fax number: ……..

Contact person: ……

Cell No.: ……

Clause 6.2.1:
The security to be provided by the Contractor shall be one of the following:

Type of security *(Indicate if Value Added Tax is excluded from the Contract Sum and the value of the Works for calculating the percentages)*	**Contractor's choice** *(Indicate "Yes" or "No")*
*Fixed Performance Guarantee of **10%** of the Contract Sum.*	
*Additional Retention of **10%** of the value of the Works, if no Fixed Performance Guarantee is provided.*	
*Fixed Performance Guarantee of **5%** of the Contract Sum, plus Additional Retention of **5%** of the value of the Works.*	

SIGNED ON BEHALF OF THE TENDERER: ……...

DATE: ……

COGHSTA
Co-operative Governance
Human Settlement & Traditional Affairs

C 1.3:
FORM OF GUARANTEE

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 1.3: PERFORMANCE GUARANTEE FROM AN APPROVED FINANCIAL INSTITUTION

For use with the General Conditions of Contract for Construction Works, Third Edition, 2015.

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: .....

Physical address: ....

"Employer" means: CoGHSTA

“Contractor” means: ……..

"Engineer” means: ICEBURG TRADING 751CC AND BRUNEL ENGINEERING JV

“Works" means: TENDER NO. NC/12/2026: **THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY**

"Site" means: The site as defined in Clause 1.1.1.29 of the General Conditions of Contract.....

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

“Contract Sum” means: The accepted amount exclusive of tax of R ……

Amount in words: ……..

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

Amount in words: .....

"Expiry Date" means: The date of issue by the Engineer of the Certificate of Completion of the Works

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

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

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

3. The Guarantor hereby acknowledges that:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SIGNED AT: …….

DATE: ……

GUARANTOR'S SIGNATORY (1): ……

CAPACITY: ……..

GUARANTOR'S SIGNATORY (2): ……..

CAPACITY: ……..

WITNESS SIGNATORY (1): ……

WITNESS SIGNATORY (2): ……

C 1.4:
OCCUPATIONAL HEALTH AND SAFETY APPOINTMENT

OCCUPATIONAL HEALTH & SAFETY ACT, ACT 85 OF 1993

CONSTRUCTION REGULATION 5(1)(k) of 2014
APPOINTMENT OF PRINCIPAL CONTRACTOR

I, ……., the…… of CoGHSTA hereby appoint you, ..., as Principal Contractor to perform the construction work of **TENDER NO. NC/12/2026: THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY and to effectively manage those Contractors appointed to assist you with the work.**

In terms of this appointment, you are required to ensure that all requirements of the Occupational Health and Safety Act are complied with on the said TENDER NO. NC/12/2026: THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

In particular, you are required to ensure compliance with the Construction Regulations, which requires of you to ensure, amongst others, the following:

1. That a sufficient, site-specific Health and Safety Plan is provided to the Client for approval and such plan implemented and maintained on site; this shall also apply to any Sub-Contractors appointed;
2. Ensure that work is carried out by suitably trained/competent persons with the necessary resources at their disposal to ensure that work is performed safely and without risk to health;
3. Ensure that all persons allowed on site (employees & visitors) undergo induction training and carry proof of such induction training undergone;
4. Provide the Client with any information that may affect the health and safety of any person;
5. After implementation of the Health and Safety Plan, you must ensure that such plan is maintained; to this end you are required to conduct audits on Contractors at pre-determined intervals of not more than one month;
6. That any construction work be stopped if not performed in accordance with the approved Health and Safety plans or if the process poses a threat to the health and safety of any person;
7. That your company are registered and in good standing with the Compensation Fund or another licensed compensation insurer and that you have made sufficient provision for the cost of health and safety measures in the tender; and
8. That a consolidated Health and Safety file, in terms of Construction Regulation 7 (1)(e) of 2014 as applicable, is handed to **NAMA-KHOI MUNICIPALITY** upon completion of the construction work.

This appointment is valid from ..... to the completion of the stipulated construction work.

....

NAME **DATE**
DESIGNATION
CoGHSTA

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C 1.5:
OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 1.5: OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

AGREEMENT MADE AND ENTERED INTO BETWEEN CoGHSTA (HEREINAFTER CALLED THE "EMPLOYER") AND

……
(Contractor / Mandatary / Company / CC Name)

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

I, ... , representing

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

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

COID Act Registration Number: .....

OR Compensation Insurer: .... Policy No.: ..... .

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

I further undertake to ensure that any Sub-Contractors employed by me will enter into an occupational health and safety agreement separately, and that such Sub-Contractors comply with the conditions set.

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

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

Signed at …….. on the ……. day of ……. 20...

WITNESS: ……

MANDATARY: ……

Signed at …….. on the ……. day of ……. 20...

WITNESS: ……

For and on behalf of COGHSTA: ……

OCCUPATIONAL HEALTH AND SAFETY CONDITIONS

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

2. All work performed on the Employer's premises shall be performed under the supervision of the Construction Supervisor who understands the hazards associated with any work that the Contractor performs on the site in terms of Construction Regulations 2014.

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

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

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

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

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

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

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

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

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

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

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

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C 1.6:
CONTRACT OF TEMPORARY EMPLOYMENT AS COMMUNITY LIAISON OFFICER

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 1.6: CONTRACT OF TEMPORARY EMPLOYMENT AS COMMUNITY LIAISON OFFICER

Construction Contract No.: …….....

PROJECT: ……..... ..... .

AGREEMENT made between the CONTRACTOR .....

and the Community Liaison Officer. ..... hereafter referred to as the CLO, for the appointment and employment of a CLO for the duration of the work in respect of the above-named construction contract.

1. THE PARTIES HAVE AGREED THAT

   The CLO will be employed by the CONTRACTOR on a temporary basis for the duration of the contract to the date of practical completion as defined in the Contract, subject to all the conditions set out below.

2. THE DUTIES OF THE CLO SHALL BE:

   (a) to keep the community informed on the progress of the project;
   (b) to keep the Contractor informed on relevant Community affairs and possible grievances;
   (c) to manage the recruitment of workers from the Sub-Council Job-Seekers Database;
   (d) to assist the Contractor's supervisory staff in the management of the workers.

3. THE FOLLOWING CONDITIONS OF EMPLOYMENT SHALL APPLY:

   The Conditions of Temporary Employment as applicable on this Contract for the workers recruited from the Community shall apply equally to the CLO, except that the rate of remuneration shall be a not less than R200.00 per working day or as stated in the Bill of Quantities. All costs pertaining to the CLO must be included in the tendered rates for contractual requirements in Preliminary & General in the Bill of Quantities.These conditions that apply are listed below as they appear in the Contract of Temporary Employment:

   3.1 If required to work on a statutory public holiday or Sunday the payment will be double the amount stated in the previous paragraph.

   3.2 Maximum hours of work:

   (a) 9¼ hours per day
   (b) 45 hours per week;
   (c) 5 days per week;
   (d) 5 hours without an interval, whereupon there shall be an interval of at least minutes;
   (e) A spread-over period of 12 hours.

3.3 The CLO shall be entitled to payment where the CLO is prevented from working by reasons which are within the control of the Contractor.

3.4 On days when it is raining the Contractor may, before 9 a.m., decide not to open the site and there will be no pay.

If the Contractor closes the site between 9 a.m. and 1 p.m., the CLO will be paid half the daily wage.

If the site works later than 1 p.m., the CLO will be paid the full daily wage.

3.5 Workers and the CLO will not be permitted to work under conditions of:

(a) abuse of intoxicating substances;
(b) criminal actions by the employee;
(c) strike action or political stayaways.

3.6 Workers, including the CLO, may be dismissed after 2 official written warnings for the following behavior:

(a) undisciplined or unruly behavior;
(b) insubordination to Team Leader, Supervisors or Management;
(c) abuse of intoxicating substances;
(d) willful or negligent damage to or loss of machines or equipment.

The Contractor shall ensure that he has statements from at least 2 witnesses' concerning any of the above situations.

The Contractor shall inform the CLO within 24 hours of any warning issued to workers employed from the Job-Seekers Database.

3.7 The CLO will be paid on a Friday afternoon every 4 weeks, 1 week in arrears.

3.8 The CLO shall be given a statement with each payment on which is recorded:

(i) the name of the Contractor;
(ii) the CLO's name;
(iii) the number of days worked by the CLO;
(iv) the rate per day;
(v) the details of any deductions made;
(vi) the actual amount paid to the CLO.

3.9 No deduction shall be made from the remuneration except where the CLO consents in writing or unless the Contractor is permitted or required to do so by law or the order of any competent court.

3.10 The CLO shall be supplied free of charge with all health and safety equipment required by the Occupation Health and Safety Act. The equipment shall remain the property of the Contractor.

3.11 The Contractor must give the CLO at least 1 weeks' notice of the termination of the Contract of Temporary Employment. If this is not done, the CLO must be paid earnings for 5 days. This condition does not apply if the CLO is dismissed.

3.12 At the end of the period of temporary employment, the Contractor shall provide a Certificate of Service recording the Contractor's name, the CLO's name and address, the period of service, the type of work on which the CLO was engaged and the rate of remuneration on termination.

4. TERMINATION OF AGREEMENT

4.1 If the CLO can no longer perform and execute his/her duties as detailed in this agreement, this agreement will be terminated without prejudice to any rights under this agreement.

5. THE CONDITIONS OF THIS AGREEMENT

5.1 The parties expressly declare that this agreement contains all the conditions negotiated between them, and no condition or stipulation not contained herein shall be binding upon the parties.

3. THUS AGREED AND SIGNED BY THE PARTIES:

CONTRACTOR: ……

COMMUNITY LIAISON OFFICER: ……

DATE: ……..

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PART C 2:
PRICING DATA

C 2.1	Pricing Instructions	C 2 - 1
C 2.2	Calculation of Price	C 2 - 3

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C 2.1:
PRICING INSTRUCTIONS

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 2.1 PRICING INSTRUCTIONS

1. Pricing Instructions means the criteria as set out below, read together with all parts of this Contract document, which will be assumed in the contract that the Tenderer has taken into account when developing his prices.

2. The work scheduled below is described in more detail in the specifications and drawings. Where certain items are referred to the General Conditions of Contract or Specification or a certain drawing number for more information, the Tenderer is referred to the complete General Conditions of Contract, Specification and Drawings and it must not be presumed that the references are complete.

3. Arithmetical errors will be corrected by assuming the amount per Item as correct. The tendered Sum will be corrected accordingly if there are arithmetical errors.

4. The price quoted shall be assumed **the all-inclusive price** for the work to be executed.

5. The prices as tendered in the Calculation of Tender Sum shall be taken as being valid for the full duration of the Tender, unless otherwise stated in C 1.2: Contract Data: Part 1: Clause 6.8.2 of this Tender Document.

6. No deviation that may be requested by the Tenderer from the above, or from the General Conditions of Contract, Specification, Calculation of Tender Sum, Tender form and Conditions, shall be considered, unless clearly indicated in Part 2: Returnable Documents: Schedule 10 of this Tender Document when the Tender Document is submitted.

7. The costs to comply with all the conditions, obligations and liabilities and as described in the General Conditions of Contract and Specifications, shall be assumed as being all inclusive in this Calculation of Tender Sum, except if indicated differently in Part 2: Returnable Documents: Schedule 10 of this Tender Document.

8. The Calculation of Tender Sum must be completed in **BLACK INK** and must not be removed from the bound set of documents. Only the Calculation of Tender Sum as bound into this document may be used. **Nothing else** will be accepted. Deviation from this will render the Tender as invalid.

9. **No** correction fluid may be used.

10. The price quoted in the Calculation of Tender Sum shall be in Rand and whole cents. Fractions of a cent shall be discarded.

11. In this document SABS will mean SANS and vice versa.

12. Measurements for Certificates of Payment will be in accordance to C 3.1.6.4.

C 2.2:
CALCULATION OF TENDER SUM

COGHSTA
THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

SECTION A: New Houses – 40m² BNG HOUSE

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	TOTAL RATE PER MILESTONE	QTY	AMOUNT
Supply, delivery and installation of all material and tools to construct complete standard **40 m² BNG** houses inclusive of ancillary works as per the breakdown for the minimum specifications.						
1		Preliminary and General (Fixed and Time Related Items for Site Establishment and Overhead Costs)	Sum		1	
2		Earthworks (Bulk Excavations of Foundations and services connections) completely inspected and approved by Engineer.(Contractor to allow for Hard Rock Excavations).	No.		65	
3		Supply and Deliver of G5 Fill Compacted to 93% MOD AASHTO with Soil Poisoning Certificate, completely inspected and approved by Engineer.	No.		65	
4		Supply,Deliver and Casting of 25Mpa Reinforced Raft Concrete Foundation inclusive of Formwork, completely inspected and approved by Engineer.	No.		65	
5		Building of Superstructure Brickwork inclusive of all doors and window frames built in complete as well as gables and beamfilling, all inspected and approved by Engineer.	No.		65	
6		Complete Supply, Deliver, Installation and Certification of Roof inclusive of Fascia's and barge boards as per specifications, inspected and approved by Engineer.	No.		65	
7		Plaster of Internal and External walls inclusive of reveals at window and door frames, completely inspected and approved by Engineer.	No.		65	
8		Supply Deliver and Installation of Ceiling and Insulation complete with Cornice, Strips and Two Coats of PVA paint , completely inspected and approved by Engineer.	No.		65	
9		Complete installation of all doors and glazing, disposal and all finishes, inspected and approved by Engineer.	No.		65	
10		Supply, Deliver and Install, All Electrical components inclusive of 7 Light Switches, 2 External Lights, 5 Indoor Lights, DB board, 5 double electrical sockets and a stove plug **per unit,**completely inspected and approved by Engineer.(Tenderer to allow for COC's).	No.		65	
11		Supply and Install Plumbing inclusive of all sanitary fittings and pipe work,completely inspected and approved by Engineer.	No.		65	
12		Construct Concrete apron as per specifications (25mpa concrete, 1m wide, 85mm thick all round) completely inspected and approved by Engineer.	No.		65	
13		Practical Completion inclusive of Finishing and Paintwork in total, completely inspected and approved by Engineer.	No.		65	
14		Construct 6000 Litres Septic Tank as per design drawings and specifications.			65	
15		Electrical Connection Application with the Local Municipality on behalf of beneficiary (Tenderer to allow for relocation of electrical meterbox from existing house into new house inclusive of COC.)	No.		65	
16		Supply and Install Perspex Plaque	No.		65	
17		Supply, Deliver and Install Connection to Water Service	No.		65	
18		Supply, Deliver and Install Connection to Sewer Service	No.		65	
19		Quality Completion Pack	No.		65	
20		OHS Compliance	Sum,		65	
21		CLO Appointment	Months	7,500.00	7	52,500.00
				SECTION A TOTAL CARRIED FORWARD TO SUMMARY		

COGHSTA

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

SECTION B: New Houses – 45m² BNG DISABLED HOUSE (CATEGORY B, C & F)

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	TOTAL RATE PER MILESTONE	QTY	AMOUNT
Supply, delivery and installation of all material and tools to construct complete standard **45 m² BNG** houses inclusive of ancillary works as per the breakdown for the minimum specifications.						
1		Preliminary and General (Fixed and Time Related Items)	Sum		1	
2		Earthworks (Bulk Excavations of Foundations and services connections) completely inspected and approved by Engineer.(Contractor to allow for Hard Rock Excavations).	No.		4	
3		Supply and Deliver of G5 Fill Compacted to 93% MOD AASHTO with Soil Poisoning Certificate, completely inspected and approved by Engineer.	No.		4	
4		Supply,Deliver and Casting of 25Mpa Reinforced Raft Concrete Foundation inclusive of Formwork, completely inspected and approved by Engineer.	No.		4	
5		Building of Superstructure Brickwork inclusive of all doors and window frames built in complete as well as gables and beamfilling, all inspected and approved by Engineer.	No.		4	
6		Complete Supply, Deliver, Installation and Certification of Roof inclusive of Fascia's and barge boards as per specifications, inspected and approved by Engineer.	No.		4	
7		Plaster of Internal and External walls inclusive of reveals at window and door frames, completely inspected and approved by Engineer.	No.		4	
8		Supply Deliver and Installation of Ceiling and Insulation complete with Cornice, Strips and Two Coats of PVA paint, completely inspected and approved by Engineer.	No.		4	
9		Complete installation of all doors and glazing, disposal and all finishes, inspected and approved by Engineer.	No.		4	
10		Supply, Deliver and Install, All Electrical components inclusive of 7 Light Switches, 2 External Lights, 5 Indoor Lights, DB board, 5 double electrical sockets and a stove plug **per unit,**completely inspected and approved by Engineer.(Tenderer to allow for COC's).	No.		4	
11		Supply and Install Plumbing inclusive of all sanitary fittings and pipe work,completely inspected and approved by Engineer.	No.		4	
12		Construct Concrete apron as per specifications (25mpa concrete, 1m wide, 85mm thick all round) completely inspected and approved by Engineer.	No.		4	
13		Practical Completion inclusive of Finishing and Paintwork in total, completely inspected and approved by Engineer.	No.		4	
14		Construct 6000 Litres Septic Tank as per design drawings and specifications.	No.		4	
15		Electrical Connection Application with the Local Municipality on behalf of beneficiary (Tenderer to allow for relocation of electrical meterbox from existing house into new house inclusive of COC.)	No.		4	
16		Supply and Install Perspex Plaque	No.		4	
17		Supply, Deliver and Install Connection to Water Service	No.		4	
18		Supply, Deliver and Install Connection to Sewer Service	No.		4	
19		Quality Completion Pack	No.		4	
20		Acces to house(12m² concrete ramp at doorway).	No.		4	
21		Kick plates to doors	No.		4	
22		Hand and Grab rails	No.		4	
23		Lever action taps	No.		4	
24		Solid hard wood door (900 x 2032 mm) fixed to a barn door sliding rail mechanism	No.		4	
25		OHS Compliance	Sum		1	
				SECTION B TOTAL CARRIED FORWARD TO SUMMARY		

SECTION C: RELOCATIONS OF EXISTING STRUCTURES AND SERVICES

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	TOTAL RATE PER MILESTONE	QTY	AMOUNT
Supply, deliver and installation of all materials to relocate/remove existing structures/services						
1		Relocation of Existing Shacks completely inspected and approved by Engineer.	No.		24	
2		Removal of Existing Informal Brick Structures completely inspected and approved by Engineer.	No.		45	
3		Relocation of Existing Electrical Services completely inspected and approved by Engineer. (Contractor to allow for preservation of the existing meter-box).	No.		69	
				SECTION C TOTAL CARRIED FORWARD TO SUMMARY		

COGHSTA

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

SECTION D: BNG DISABLED HOUSE ADDITIONAL REQUIREMENTS (CATEGORY A, D, & E)

ITEM NO	PAYMENT CLAUSE	DESCRIPTION	UNIT	TOTAL RATE PER MILESTONE	QTY	AMOUNT
Supply, delivery and installation of all material and tools to construct additional disabled amenities per house						
1		Visual doorbell indicator	No.		1	
2		Lever action taps	No.		6	
3		Acces to house(12m² concrete ramp at doorway).	No.		6	
4		Hand and Grab rails	No.		6	
5		Slip resistant flooring	No.		6	
6		Colour contrast on doorways, stairs, corners of buildings and skirting on walls	No.		1	
				SECTION D TOTAL CARRIED FORWARD TO SUMMARY		

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 2.2 CALCULATION OF TENDER SUM

DESCRIPTION	AMOUNT
SECTION A: CONSTRUCTION ITEMS Sum per 40m² BNG House: BNG house, inclusive of connection to sewer, water and electrical network, etc	
SECTION B: CONSTRUCTION ITEMS Sum per 45m² Disabled BNG House for Category B, C and F: Disabled BNG house, inclusive of connection to sewer, water and electrical network, etc	
SECTION C: RELOCATIONS BNG houses - relocations of existing structures and services	
SECTION D: ADDITIONAL REQUIREMENTS FOR DISABLED Special amenities for Categories A, D and E	
SUB TOTAL 1 (SECTION A + SECTION B + SECTION C + SECTION D)	
PLUS: 5% CONTINGENCIES (calculated on SUB TOTAL 1)	
SUB TOTAL 2	
PLUS: **0% VAT** (calculated on SUB TOTAL 2)	
TOTAL (CARRIED OVER TO FORM OF OFFER & FRONT PAGE)	

DECLARATION IN RESPECT OF COMPLETENESS OF TENDER:

DEPT. OF COGHSTA
Private Bag X5005
KIMBERLEY
8300

I/We, the undersigned, do hereby declare that these are the properly priced Calculations of Tender Sum (Sum) forming Part 2.2 of this Contract Document upon which my/our tender for the TENDER NO. NC/12/2026: THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALTY has been based on.

NAME OF FIRM: ……

SIGNATURE OF TENDERER/S: ……

DATE: ……..

PART C 3:
SCOPE OF WORK

C 3.1	Scope of Work: Part 1	C 3 – 1
C 3.2	Part 2: Project Specifications	C 3 - 16
C 3.3	Engineering Drawings	C 3 - 41
C 3.4	Management	C 3 - 44
C 3.5	Annexures	C 3 - 52

STATUS:

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

Drawings
Scope of Work (Part C 3.1, C 3.3, C 3.4 and C 3.5)
SABS / SANS Standardised Specifications

C 3.1:
SCOPE OF THE WORKS:
PART 1

COGHSTA
Co-operative Governance
Human Settlement & Traditional Affairs

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 3.1: SCOPE OF WORKS: PART 1

C 3.1.1 GENERAL DESCRIPTION OF THE CONTRACT

The project involves the construction of BNG houses. The work to be carried out under this Contract entails THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY. Preferences afforded to construction companies owned by women, youth or disabled persons.

C 3.1.1.1 PRINCIPAL CONTRACT

1. Site establishment.
2. Site Clearance and access.
3. Demolishing/Relocation works of existing Mud house/Informal Settlement.
4. Construction of complete top-structures and ancillary works:
   a) Demolishing/relocation where applicable and discarding
   b) G5/G6 fill and compaction (if and when required)
   c) Excavations – Hard rock anticipated (Foundations and services connections)
   d) Casting of Foundations for strip foundations (if required)
   e) Building of Brickwork for strip foundations (if required)
   f) Cast Surface Bed / Raft Foundation
   g) Plaster and Paint of External walls
   h) Plaster and Paint of Internal walls
   i) Installation of Steel Windows and Door frames
   j) Roof and Ceiling as per specifications.
   k) All plumbing as per specifications.
   l) Aprons all round
   m) Electrical Installation as per specifications.
   n) Connection to existing Electrical Services/ Relocation of Electrical Box
   o) Connection to existing Water
   p) Construction of 6000 Litres Septic Tank
   q) Completion of snags
   r) House numbers to be printed black on silver Perspex plaque
   s) Signing of “Happy letters”
   t) Submission of Completion Quality Pack (per stand)

Contractors are required to supply of all necessary materials, the supply and use of tools, the provision, operation and maintenance of all Contractor’s plant and equipment, the supply and supervision of all labour and workmanship and everything and every service for the construction, completion and upholding of the Works in a manner required by the Contract and to the entire satisfaction of the Implementing Agent.

The Contract is to extend to and comprise all such minor operations, matters and details as if they had been expressly shown and described, the intention being that the Contractor is to execute, as part of this Contract, every requisite for the full and perfect completion of the whole of the Works comprised therein and essential to their stability and completeness for the purposes intended by them, whether Drawings or Specifications are sufficient or not.

The Contractor' s attention is also drawn to the following extra over specifications of works that may be carried out when the need arises.

PHYSICALLY DISABLED BENEFICIARIES HOUSING NEEDS – **PRECAUTIONARY MEASURES:**

VERIFICATION CATEGORIES

- **Category A:** Needs walking aids
- **Category B:** Partial usage of wheel chair
- **Category C:** Full-time usage of wheel chair
- **Category D:** Partially/profoundly deaf
- **Category E:** Partially/profoundly blind
- **Category F:** Partially/total movement loss/paralysis in the upper body limbs

	PRECAUTIONARY MEASURES
Category A	Installation of fittings to improve quality of life: Access to house (12 m² paving, and ramp at doorway) + Kick plates to doors + Hand rails and grab rails + Lever action taps + 1 m vinyl folding door in bathroom + Increase size of bathroom (reduce other rooms)
Category B	Installation of fittings to improve quality of life: Access to house (12 m² paving, and ramp at doorway) + Kick plates to doors + Hand rails and grab rails + Lever action taps + 1 m vinyl folding door in bathroom + Increase size of bathroom (reduce other rooms)
Category C	Installation of fittings to improve quality of life: Access to house (12 m² paving, and ramp at doorway) + Kick plates to doors + Hand rails and grab rails + Lever action taps + 1 m vinyl folding door in bathroom + Increase size of bathroom (reduce other rooms)
Category D	Visual doorbell indicator
Category E	Installation of fittings to improve quality of life: Access to house (12 m² paving, and ramp at doorway) + Kick plates to doors + Hand rails and grab rails + Lever action taps + 1 m vinyl folding door in bathroom + Slip resistant flooring

	+ Colour contrast on doorways, stairs, corners of buildings and skirting on walls
Category F	Installation of fittings to improve quality of life: Access to house (12 m² paving, and ramp at doorway) + Kick plates to doors + Hand rails and grab rails + Lever action taps + 1 m vinyl folding door in bathroom + Slip resistant flooring + Increase size of bathroom (reduce other rooms)

C 3.1.1.2 OTHER SIMULTANEOUS CONTRACTS

During the construction period Contracts may be awarded to other Contractors.

The Contractor's attention is drawn to Clause 4.8 of the General Conditions of Contract that all reasonable access must be given to other Contractors. The Building Contractor must co-ordinate his program with the other Contractors to accommodate the overlap of construction activities. No additional payments will be made or the above arrangements.

C 3.1.2 **DESCRIPTION OF THE SITE AND ACCESS**

The site of the Works is in the residential area of NABABEEP in the Namakwa Local Municipality area and is accessible by means of tar and gravel roads. Vehicles may only use **existing** roads and accesses to and on the site. Where no entrance to the construction site exists, there may only be moved within the areas as indicated by the Engineer.

Where existing roads and accesses are not sufficient for construction purposes, the Contractor will have to construct his own accesses to meet his needs and repair it, to the satisfaction of the Engineer, after completion of the Contract.

Due to the fact that the works will be executed in residential areas, the Contractor will ensure that his work does not inconvenience the residents. Work will only be executed during normal working hours from Monday to Friday.

Where the construction takes place within existing road reserves, the Contractor will at all times ensure safe passage to vehicles and/or pedestrians.

Where only half of the carriageway is accessible to vehicular traffic, sufficient flagmen, signs, etc. will be provided to safely regulate the traffic. Site traffic management must comply with SA Road Traffic Signs Manual, Chapter 13.

C 3.1.3 **NATURE OF SOIL AND UNDERGROUND SOIL CONDITIONS**

The Geotechnical Report is attached as Annexure C of this tender document.

The Contractor is responsible to obtain and supply all material that must comply with the minimum requirements for the specific material, as well as the construction and maintenance of all access roads to the work on site, to spoil sites and sources of material on site that may be required by the Contractor. No payment will be made for the above and payment will be deemed to be included in the tendered Sum.

It is the responsibility of the Tenderers to dig additional trial holes if deemed necessary.

The Contractor will be responsible for the obtaining of all materials needed in the construction process.

Where there is not sufficient material available on site, material will have to be obtained from commercial sources.

The information, where applicable, given in this document with regards to the underground conditions on site is given in good faith for the convenience of the Tenderer, but must not be accepted as representative. The provision of this information does not exempt the Tenderer of his primary responsibility of ascertaining the conditions on site for himself.

C 3.1.4 **DRAWINGS**

The drawings attached in this document are only for tender purposes. Final construction drawings will be issued to the successful contractor at commencement of the project.

C 3.1.5 **CONSTRUCTION PROGRAMME**

C 3.1.5.1 GENERAL

The Contractor's programme to be submitted in terms of Clause 5.6 of the General Conditions of Contract shall take full account of all matters as may impact on the sequence of executing the various components of the Works and the requisite rate of progress of the Works, as are specified in or reasonably to be inferred from the Contract.

C 3.1.5.2 FORMAT

The Construction Programme to be submitted by the Contractor in accordance with the provisions of Clause 5.6 of the General Conditions of Contract shall:

a) Be in the form of a bar chart;
b) Clearly indicate the start and end dates and duration of all construction activities and identify the critical path; and
c) Take full cognizance of all the Contractor's risks and obligations in terms of the Contract.
d) A resource histogram is required in0line with the submitted program of the works.

C 3.1.5.3 FAILURE TO MAINTAIN CONSTRUCTION PROGRAMME

C 3.1.5.3.1 If the Construction Programme has to be revised in terms of Clause 5.6 of the General Conditions of Contract, because the Contractor is falling behind on his programme, the Contractor shall submit a revised programme of how he intends to regain lost time to ensure completion of the Works before the Due Completion Date. Any proposals by the Contractor to increase the tempo of work must incorporate positive steps to increase production either by the provision of more labour and plant on the Site, or by using the available labour and plant in a more efficient manner.

C 3.1.5.3.2 Failure on the part of the Contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Engineer to take steps to remedy the situation.

C 3.1.5.3.3 A written request from the Contractor must be obtained for the following inspections: Floor, Brickwork, Roof, Practical Completion and Final Completion. Failure to comply with requested inspections will result in an R 700-00 (Seven hundred rand) fine and a re-inspection.

C 3.1.5.4 SPECIFIC PROGRAMME REQUIREMENTS

The Contractor's programme shall also take full account of matters described in the Sub-Clauses hereunder. **No** additional payments will be made to the Contractor in respect of any additional costs as it may incur in consequence of arranging or adjusting its programme to accommodate the said matters and the Contractor's various tendered rates and prices shall be deemed to be fully inclusive of such costs.

C 3.1.6 **SITE ESTABLISHMENT**

C 3.1.6.1 SITE FACILITIES AVAILABLE

C 3.1.6.1.1 WATER SUPPLY

The Contractor shall make his own arrangements with the relevant authorities or any other organisation or source for obtaining water for construction and domestic purposes as well as toilet facilities as required by the Health and Safety Regulations. The Contractor shall pay for the water at the rates and tariffs as determined by the source, including the cost of supplying a temporary standpipe as required. The contractor shall also be responsible for all testing of water by an accredited laboratory, as required.

C 3.1.6.1.2 ELECTRICITY SUPPLY

The Contractor shall make his own arrangements for obtaining power and be responsible for all costs involved.

C 3.1.6.1.3 LOCATION OF CAMP AND DEPOTS

The contractor must arrange with the Local Authority for an appropriate site that can be used for the Contractor's site office and camp.

C 3.1.6.1.4 HEALTH & SAFETY

The contractor must make the necessary arrangements to comply with the Occupational Health and Safety Act. This includes all the registrations required and the appointment of a qualified safety officer on site.

C 3.1.6.1.5 LOCATION OF CAMP AND DEPOTS

The Contractor must make his own arrangements for a Camp Site at the location of the Works. The location of the Contractor's camp, including the material storage areas, will be subject to the Engineer's approval.

C 3.1.6.1.6 HOUSING FOR THE CONTRACTOR'S EMPLOYEES

No housing is available for the Contractor's employees, and the Contractor shall make his own arrangements for housing his employees or transporting them to and from the site.

The Contractor is in all respects responsible for the housing and transporting of his employees and for the arrangements thereof and no extension of time due to any delays resulting from this, will be granted.

No housing on site will be allowed.

C 3.1.6.2 SITE FACILITIES REQUIRED

C 3.1.6.2.1 ENGINEERS OFFICE

A separate office will not be required for the Engineer's representative.

The Contractor will, however, need to furnish an office with a desk, drawing table, a lockable cupboard and two chairs for the exclusive use by the Engineer. No telephones need be provided for the Engineer or his staff.

The Engineer and his representative shall be allowed free use of all the Contractor's site facilities.

The Engineer and the Engineer's representative shall be allowed free use of survey equipment and assistants to carry out control work as and when required and the Contractor shall provide all pegs, concrete, tools and other necessary items as well as all necessary labour for excavation, bush cleaning, mixing and placing of concrete, as and when required for the control of the setting out of the Works.

C 3.1.6.2.2 SANITATION AND FIRST AID

The Contractor shall provide and maintain adequate sanitation and first aid for his work force. These facilities shall comply with the requirements of the Local Authority and must be accessible from all points of construction.

C 3.1.6.2.3 TELEPHONE

A site telephone will not be required by the engineer but the contractor must be available 24/7 on his cell phone for the duration of the contract. The time related tender rate for the contractor's telephone shall include for official calls made by/to the Engineer.

C 3.1.6.2.4 HOUSING FOR THE CONTRACTOR'S EMPLOYEES

The contractor shall make his own arrangements with regards to the housing of his employees since no housing is available. The transporting of the contractor's employees to the site is his own responsibility. No extension of time because of mismanagement of afore mentioned will be granted.

C 3.1.6.2.5 OFFICES FOR THE CONTRACTOR

The Contractor must provide for such temporary offices as he may require for his own use. No conference facility is required.

C 3.1.6.2.6 SITE INSTRUCTION BOOK

The Contractor shall provide an A4-size carbon triplicate site instruction book and maintain it permanently in the site office. All site instructions to Sub-Contractors will also be recorded in this site instruction book.

C 3.1.6.2.6 REFUSE

The Contractor shall provide suitable refuse containers at his site offices and stores yard. He should ensure that his employees make use of the containers for the disposal of refuse so that the site of the Work as well as the existing production facility will not become polluted. The Contractor shall dispose of the refuse in the containers at regular intervals in an acceptable manner.

C 3.1.6.3 FEATURES REQUIRING SPECIAL ATTENTION

C 3.1.6.3.1 EXISTING SERVICES

The Contractor shall take all necessary steps to ascertain the location of existing services before commencing with any section of the works and shall exercise the greatest care when working near such services.

The Contractor shall check the position and level of every existing service before starting any construction that has to connect with such a service. The Contractor shall give written confirmation of the accuracy or inaccuracy of the positions and levels of existing services.

The Contractor shall request the latest available drawings showing the location of services already installed, no more than 3 (three) weeks and not less than 1 (one) week before commencing his operations in any particular area.

The Contractor shall take all the necessary steps to protect any existing services and/or structures whatsoever against damages which may arise as a result of his operations on site. The Contractor shall bear the cost of the repair of damage to any service the possible existence of which could reasonably have been ascertained by him in good time and the Contractor shall bear the cost of the repair of damage to any structure caused by his operations on site.

Where the Contractor is responsible for damage for which repairs have to be carried out by the Employer or an outside authority, the costs of these repairs will be covered by means of a deduction from the Contractor's Monthly Payment Certificate.

It will be accepted that the Tenderer made provision in his tendered Sum for the cost of the above. No additional payment will be made by the Client.

C 3.1.6.3.2 CONTRACTOR'S CONSTRUCTION PLANT

If, during the course of the Contract, the Engineer considers that any item or items of construction plant are in any way inefficient, unsafe or inadequate to complete the Works within the Contract period, he shall have the right to call on the Contractor to either:

a) Put the construction plant in order;
b) Remove such construction plant and replace it with other efficient plant; or
c) Provide additional similar plant or plant of greater capacity.

No additional payment shall be made to the Contractor for expenses incurred in complying with any or all of the above, the cost being deemed to be included in the Contractor's tendered Sum.

C 3.1.6.3.3 KEY PERSONNEL

The Contractor shall furnish the Employer and the Engineer with a list of addresses and telephone numbers of key personnel in the Contractor's organization who may be contacted in an emergency both during and outside office working hours in connection with the Works.

C 3.1.6.3.4 PUBLICATION AND ADVERTISING

The Contractor shall not publish, or cause to be published in any papers, articles or information relating to the Works nor permit any advertising mentioning the subject of his Contract and he shall not display or allow his Sub-Contractors to display any advertisement on the site or elsewhere in connection with the Works without the prior written permission of the Employer.

C 3.1.6.3.5 ORDERS AND INDENTS

On acceptance of this tender the Contractor is to ascertain if all materials to be supplied by him can be obtained in South Africa and if not, steps will be taken to import the same so that the Works are not delayed. Delay in the Works owing to non-delivery of materials will not be considered a cause for delay in completing the Works.

C 3.1.6.3.6 SECURITY AND SAFETY REGULATIONS

The Contractor is to familiarize himself and comply with all safety regulations, statutes and regulations governing construction activities. The safety of all personnel on site shall be the Contractor's sole responsibility.

C 3.1.6.3.7 ACCESS TO PROPERTIES

The Contractor shall organize the work to cause the least possible inconvenience to the municipal operating staff. The Contractor will be responsible for the necessary traffic control where required. Works over private property will be done in close co-operation with the specific Landowners.

The Contractor shall ensure that all streets, roads and footpaths adjacent to or crossing the site and which are affected by the works and/or temporary works are kept in a safe condition for pedestrians and vehicular traffic. The Contractor shall organise his work so as to reduce the inconvenience to traffic and the private Landowners to a minimum, and no public road track or footpath shall be completely closed without prior approval.

If so ordered, the Contractor shall provide suitable bridges at street and driveway crossings where traffic must cross open trenches.

All signs shall be in English and Afrikaans.

C 3.1.6.3.8 SITE MAINTENANCE

During progress of the work and upon completion, the site of the Works shall be kept and left in a clean and orderly condition. The Contractor shall store materials and equipment for which he is responsible in an orderly manner and shall keep the site free from debris and obstruction.

C 3.1.6.3.9 TESTING AND QUALITY CONTROL

C 3.1.6.3.9.1 CONTRACTOR TO ENGAGE SERVICES OF A SUITABLE LABORATORY

Notwithstanding the requirements of the Specifications pertaining to testing and quality control, the Contractor shall engage the services of a suitable laboratory to undertake all testing of materials, the results of which tests are specified in, or reasonably to be inferred from the Contract, as to be taken into consideration by the Engineer in deciding on whether the quality of materials utilized and workmanship achieved by the Contractor complies with the requirements of the Specifications. The afore going shall apply irrespective of whether the said testing is indicated in the Specifications as to be carried out by the Engineer or by the Contractor.

The Contractor shall be responsible for arranging with the testing laboratory for the timeous carrying out of all such testing specified in the Contract, at not less than the frequencies and in the manner specified. The Contractor shall promptly provide the Engineer with copies of the results of all such testing carried out by the laboratory.

For the purposes of this Clause, a "suitable laboratory" shall mean a laboratory which is not under the management or control of the Contractor and in which the Contractor has no financial interest, nor which has any control of financial interest in the Contractor.

C 3.1.6.3.9.2 ADDITIONAL TESTING REQUIRED BY THE ENGINEER

In addition to the provisions of Sub-Clauses 7.4.2 and 7.4.3 of the General Conditions of Contract, the Engineer shall be entitled at times during the Contract, to require that the Contractor arrange with the laboratory to carry out any such tests, additional to those described, at such times and at such locations in the Works as the Engineer shall prescribe. The Contractor shall promptly and without delay, arrange with the laboratory for carrying out of all such additional testing as required by the Engineer and copies of the test results shall be promptly provided to the Engineer.

C 3.1.6.3.9.3 COSTS OF TESTING

(a) Tests in terms of Sub-Clause 7.4.4.1 of the General Conditions of Contract:

The costs of all testing carried out by the laboratory in accordance with the requirements of Sub-Clause 7.4.4.1 of the General Conditions of Contract above shall be borne by the Contractor and shall be deemed to be included in the tendered Sum. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of Sub-Clause 7.4.4.1 of the General Conditions of Contract.

Where, as a result of the consistency of the materials carrying or as a result of failure to meet the required Specifications for the work, it becomes necessary to carry out additional tests (e.g. Re-test on rectified work and/or replacement material), the costs of such additional testing shall be for the Contractor's account.

(b) Additional tests required by the Engineer

The cost of any additional tests required by the Engineer in terms of Sub-Clause 7.4.4.1 of the General Conditions of Contract shall be reimbursed to the Contractor, provided always that the costs of any such additional tests ordered by the Engineer, the results of which indicate that the quality of the materials utilized and/or the standard of workmanship achieved is not in accordance with the Specifications, shall not be reimbursable to the Contractor.

No separate payment will be made for such testing, the cost of which will be deemed to be included in the Contractor's tendered Sum for the items of work that require testing in accordance with the Specifications.

C 3.1.6.3.10 EXTENSION OF TIME DUE TO ABNORMAL CLIMATIC CONDITIONS

Extension of time will not be granted for what is considered normal adverse climatic conditions. Extension of time will only be grated in case of abnormal rainfall or saturated conditions in accordance with the method described as follows:

The Contractor must make allowance in his programme for the expected number of working days for which possible delays due to weather conditions may occur as scheduled in the table below.

Extension of time for each calendar month or part thereof for the full period required for the completion of the works, plus any approved extensions thereof will be calculated as follows:

Delays caused by abnormal climatic conditions will only be considered for extension of time if, in the opinion of the Engineer, critical path items as indicated on the Contractor's programme are influenced negatively. Only delays occurring on working days will be considered.

Extension of time will be granted for the number of days on which accepted adverse climatic conditions occurred, minus the number of days for the specific month in the schedule below.

The nett extension of time determined for every month, which may be negative, will be algebraically accumulated to determine the total nett number of days of extended time due to adverse climatic conditions. A negative balance at the time of completion will not be taken into consideration.

Where a portion of a month is involved, a pro rata number of days will be calculated.

SCHEDULE:
Expected number of working days which work may be delayed due to adverse weather conditions:

MONTH	DAYS	MONTH	DAYS
January	2	July	1
February	2	August	1
March	2	September	1
April	2	October	1
May	1	November	2
June	1	December	1

TOTAL: 12 Days

C 3.1.6.3.9.10.1 The Engineer shall, simultaneously on granting any extension of time in terms of this Clause, revise the Due Completion Date of the Contract to reflect an extension of time having been granted in respect of wet climatic conditions, to the extent of the above calculation provided that where such period is negative, the Due Completion Period shall not be revised.

C 3.1.6.3.10.2 Any extension of time in respect of wet climatic conditions granted in terms of this Clause shall not be deemed to take into account delays experienced by the Contractor in repairing or reinstating damage to or physical loss of the Works arising from the occurrence of abnormal climatic conditions. Extension of time in respect of any such repairs or reinstatement of damage shall be the subject of a separate application for extension of time in accordance with the provisions of the General Conditions of Contract.

C 3.1.6.3.11 SUB-CONTRACTORS (NOMINATED OR APPROVED)

The Contractor shall be responsible for work carried out by both nominated and approved Sub-Contractors on his behalf.

The Engineer will not liaise directly with such Sub-Contractors. Problems related to payments, programming, workmanship, etc. shall be the concern of the Contractor and the Sub-Contractor, and the Engineer will not become involved.

C 3.1.6.3.12 STANDING TIME

Standing time will only be considered when work is suspended by the written order of the Engineer. The Contractor shall not be entitled to recover any standing costs unless he provides full details in writing to the Engineer within 48 (forty-eight) hours of the Engineers order.

Standing time will not be considered when work is suspended as a result of inclement weather or default on the part of the Contractor.

C 3.1.6.3.13 LABOUR RETURNS

The Contractor shall provide the Engineer with monthly returns showing the number and grade of employers and the number and type of construction plant on site.

C 3.1.6.3.14 SITE MEETINGS

The Engineer shall hold monthly site meetings and keep and circulate minutes. The Contractor will attend and will ensure that all Sub-Contractors are represented.

C 3.1.6.3.15 RESTRICTED AREAS

The Contractor and his workers shall remain within the demarcated area of the construction site. No persons will in particular be allowed in adjacent areas actively used by the Landowners for agricultural operations.

C 3.1.6.3.16 INTERFACE WITH OTHER CONTRACTORS (OPERATING / EMERGING CONTRACTORS)

Other Contractors may be operating on the Site in close proximity to the Works during the construction period. The Contractor is to take cognizance of this and specify what restrictions (if any) are to apply.

C 3.1.6.3.17 MINIMUM NUISANCES TO PERSONS FROM THE SURROUNDING AREA

The Contractor is to ensure that he causes an absolute minimum nuisance to persons from the surrounding area by complying strictly with the following:

a) Work to be executed only between the hours of 07:00 and 18:00.
b) The works to be continuously and adequately watered as a means of dust suppression**.**

C 3.1.6.3.18 BORROW PITS

No borrow pits or sand quarries have been specifically allocated for this Contract. The Contractor is advised to liaise with the Municipality and/or Commercial Quarries on the availability of material.

C 3.1.6.3.19 DEALING WITH WATER

The Contractor is responsible for the control of storm water from adjoining areas, the site and groundwater. **No** additional payment will be made and it will be deemed to be included in the rates of the relevant items.

C 3.1.6.3.20 SURVEY BEACONS

NB: Only if available to the Department of CoGHSTA NC, The Engineer will provide benchmarks with levels and co-ordinates as and when necessary. The Contractor's attention is drawn to Clause 5.1.2 of SABS 1200 A.

It is the exclusive responsibility of the Contractor to ensure that land surveyor's beacons, erf pegs and benchmarks are not covered, disturbed or damaged.

The Contractor's attention is drawn to the stipulations of Article 35 and 36 of the Land Survey Act, 1927 (Act 9 of 1927), in which he is held responsible for the safety of all survey beacons and benchmarks and of any plot boundary pegs that are found on the site, as well as for the cost involved in the replacement of displaced and/or damaged survey beacons and benchmarks or plot boundary pegs by a registered Land Surveyor.

After completion of the contract and before the final take-over certificate is issued, the Contractor will have to hand in a certificate from a registered land surveyor certifying that all survey beacons, benchmarks and erf pegs are in position.

Erf pegs and trigonometrical land surveyor's beacons that are either misplaced or destroyed during the contract must be replaced and installed by a registered land surveyor at the Contractor's expense.

The Contractor must point out to the Engineer, in writing, any erf pegs that are not in position within 14 (fourteen) days after commencement of the project. Should the Contractor fail to point out to the Engineer, in writing, any pegs not in position, it will be accepted that **all** pegs are in position.

It will be accepted that the Contractor has made provision under Preliminary and General to comply with the above. **No additional** payments will be made to comply with this.

The Contractor's attention is specifically drawn to the stipulation of Sub-Clause 5.1.2 of the Standardised Specifications SANS 1200 A.

C 3.1.6.3.21 RECORD DRAWINGS

As the Woks proceed the Contractor must keep detailed records of all changes to plans. The actual position of all new and existing services must be indicated on the set of drawings supplied free of charge for this purpose.

The Certificate of Completion will only be issued once the Engineer has received the record drawings. **No** separate payment will be made for this and it will be deemed to be included in the rates for the relevant items.

C 3.1.6.3.22 SAFETY

The Contractor must take the safety of the residents and their property into account during the planning and execution of the Works. All open trenches, services, material and machines must be protected and clearly marked.

Unless otherwise permitted by the Engineer in writing, no more trench in any one place shall be opened in advance of the pipe laying operation than can be backfilled before the end of the normal working day. Open trenches and/or excavations shall be clearly barricaded with rigid orange nylon netting, “Netlon”, or similar approved. Minimum height **1,0 m** (safety netting) as instructed by the Engineer and/or Safety Agent. **No** trenches and/or excavations will be left open outside normal working hours. See Clause 5.8 of the General Conditions of Contract. The cost to provide the above will be taken as included with the tendered rates for the excavations. The Employer will make **no** additional payment to comply with the above.

Where applicable, no trenches may be left open during the Contractor’s holiday during December and January. All trenches which have been excavated but which have not been finally backfilled and compacted at the commencement of the said holiday period shall be temporarily fully backfilled and compacted to a standard which will:

a) Prevent damage occurring to the trenches or any other part of the Works;
b) Prevent damage to or physical loss of the property of any person;
c) Eliminate the risk of injury to any person during the said period.

All costs involved in the temporary backfilling and compaction of such trenches and the subsequent re-opening of the trenches after the holiday period shall be for the Contractor’s account.

The Contractor shall comply with all the safety regulations of the Employer, Other Authorities and/or as demanded by the Engineer.

It will be accepted that the Contractor has made provision in his tender to comply with abovementioned requirements and **no** additional payment shall be made to comply with these requirements.

The Contractor must ensure that works are properly safeguarded with the necessary road signs, chevron safety bands, lights, etc. at all times, especially at night. The Engineer reserves the right to instruct the Contractor to supply additional safety measures, **without additional payment**. Remuneration to comply with these requirements must be included in the tendered amounts in Section: Preliminary & General of the Bill of Quantities.

The possible cost of shoring of excavation sides must be included in the cost of excavations. The Engineer reserves the right to request shoring or to strengthen any shoring **without additional remuneration** to the Contractor.

The “Factories, Machinery and Building Work Act (Act 22 of 1941)” as well as the “Machinery and Occupational Safety Act (Act 6 of 1983)” must, where it may appear in the SANS 1200 Standardised Specifications, be replaced by the “Occupational Health and Safety Act (Act 85 of 1993).

C 3.1.6.4 CERTIFICATES OF PAYMENT

The statement to be submitted by the Contractor in terms of Clause 6.10 of the General Conditions of Contract shall be prepared in accordance with the standard payment certificate prescribed by the Engineer and shall consist of at least 2 (two) sets of A-4 sized paper copies.

All costs resulting from the preparation and submission of the statements shall be borne by the Contractor.

The value certified in each payment certificate shall only be based on houses where specific interim payment stage has been reached and a Certificate of Compliance for that part of the work has been issued and signed by the Engineer, considering the information submitted by the Contractor.

No interim payments will be made for site establishment, demolishing and discarding of materials. First payment will be made only after milestone 1 (Platforms) has been reached.

The interim payment stages shall be based on the following progress achieved per house:

INTERIM STAGE	PROGRESS COMPLETED	% PAYMENT	CUMULATIVE %
1	Completion of platform, completely inspected and approved by Engineer.	5	5
2	Completion of raft foundation &/or foundation & floor slab construction, completely inspected and approved by Engineer.	25	30
3	Completion of all brickwork up to wall plate height including all door and window frames built in complete, inspected and approved by the Engineer.	15	45
4	Completion of roof trusses and roof sheeting complete, inspected and approved by the Engineer.	18	63
5	Completion of all plastering, inspected and approved by the Engineer.	8	71
6	Complete installation of all doors and glazing, disposal, ironmongery and all finishes, inspected and approved by the Engineer.	5	76
7	Complete installation of ceiling with prescribed air gap inclusive of above-ceiling insulation, inspected and approved by the Engineer.	5	81
8	Complete plumbing installation, inspected and approved by the Engineer	4	85
9	Complete electrical installation, inspected and approved by the Engineer.	5	90
10	Complete casting of aprons as per specifications, inspected and approved by the Engineer.	2	92
11	Practical Completion – Completion of house in totality, inspected and approved by the Engineer	8	100
12	Relocation of existing informal shacks	Rate	Rate
13	Removal of existing informal brick structures	Rate	Rate
14	Relocation of existing electrical services	Rate	Rate

No re-measuring of quantities will be applicable. See also C 3.1.9.14.
ALL payments are subject to 5% retention. See also C 6.10.3.

C 3.1.6.5 CONSTRUCTION IN LIMITED AREAS

Although not very often, working space may sometimes be restricted. The construction method used in these restricted areas largely depends on the Contractor's plant. However, the Contractor must note that measurement and payment will be according to the specified cross-sections and dimensions irrespective of the method used and that the rates and prices tendered will be deemed to include full compensation for difficulties encountered while working in restricted areas. **No** extra payment or any claim for payment due to these difficulties will be considered. Where, in the Engineer's opinion, the use of hand excavation

has been deemed necessary, it has been allowed for in a separate item of the Schedule of Quantities.

C 3.1.6.6 SPOIL MATERIAL

No indiscriminate spoiling of material will be allowed. All surplus or unsuitable material shall be spoiled at a site to be indicated by the Employer. Such site shall meet with the approval of the Local Authority within whose area it falls and the spoiling shall comply with all the statutory and municipal regulations.

C 3.1.6.7 SAMPLES

The Contractor shall at his own cost, supply all samples that may be required. Material or work not conforming to the approved samples shall be rejected. The Engineer reserves to himself the right to submit samples to any tests to ensure that the material represented by the sample conforms to the requirements of the Specifications.

C 3.1.6.8 MANUFACTURER'S INSTRUCTIONS

The recommendations of the Manufacturers of patented materials must be strictly adhered to regarding the use, mixing, application, fastening, etc. thereof except when otherwise instructed by the Engineer in writing.

C 3.1.6.9 PROPRIETARY MATERIALS

Where proprietary materials are specified it is to indicate the quality or type of materials or articles required and where the terms "or similar approved" are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the Engineer.

C 3.1.6.10 NOTICES, SIGNS, BARRICADES AND ADVERTISEMENTS

The Contractor shall erect the necessary signs, notices and barricades for the duration of the Contract in order to safeguard both the Works and the Public.

Notices: The Contractor may use signs and barricades as well as advertisements only upon approval, and the Contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Engineer shall have the right to have any sign, notice or advertisement moved to another position or to have it removed from the site of the Works, should it in any way prove to be unsatisfactory, inconvenient or dangerous to the general public.

Such notices, signs and barricades shall be provided and erected at the Contractor's own expense.

C 3.1.6.11 SETTING OUT OF WORK

Benchmarks and reference line data shall be provided to the Contractor at commencement of the Contract. The Contractor shall be responsible for the proper and accurate setting out of the Works.

The Contractor shall be responsible for the correctness of the position, levels, dimensions and alignment of all parts of the Works.

The checking of any setting-out of any line or level by the Engineer shall not relieve the Contractor of his responsibility for the correctness thereof. The Contractor shall be responsible for the provision of all necessary instruments, appliances and labour in connection with his responsibility for setting out of the works.

If at any time during the progress of the Works, any error shall appear or arise in the position, level, dimension or alignment on any part of the Works, the Contractor, on being required to do so by the Engineer, shall rectify such error.

C 3.1.6.12 WORKMANSHIP AND QUALITY CONTROL

The onus to produce work which conforms in quality and accuracy of detail to the requirements of the Specifications and drawings rest on the Contractor and the Contractor shall, at his own expense, institute a quality control system and provide experienced Engineers, foremen, surveyors, materials technicians, other technicians and staff, together with the transport, instruments and equipment, to ensure adequate supervision and positive control of the Works at all times.

The cost of all supervision and process control, including testing thus caries out by the Contractor shall be deemed to be included in the rates tendered for the related items of work.

The Contractor's attention is drawn to the provisions of the various standardized Specifications regarding the minimum frequency of testing that will be required for process control. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion of every part of the work and submission thereof to the Engineer for examination, the Contractor shall furnish the Engineer with results of all relevant tests, measurements and levels to indicate compliance with the Specifications.

C 3.1.6.13 TRANSPORT OF MATERIAL

All costs of transporting material, including overhaul, shall be included in the applicable tendered rates. All references in the Specifications to transport, overhaul and haul distances shall be deleted irrespective of whether or not the deletion is included in these Specification Data.

The tendered unit prices for the provision of all imported construction materials from feudal quarries or commercial sources and for the removal of spoil material and unfit material, shall be deemed as including the loading and transportation of material from the source to the final unloading point, as well as the unloading thereof.

No additional payments shall be made for **any** imported construction materials.

All haul distances, unless otherwise specified in the Bill of Quantities, shall be deemed as free haul, including the dumping of excess material.

C 3.1.6.14 EMPLOYMENT OF PREVIOUSLY DISADVANTAGED LOCAL LABOUR

Where possible the Contractor must make use of unemployed local labour.

C 3.1.6.15 LIAISON WITH LOCAL AUTHORITIES

The Contractor will have to liaise with the Local Authorities regarding the following matters:

a) Dealing with traffic;
b) Locating of existing underground services;
c) Protection of existing services during construction.

All relevant authorities will be notified of above operations. It is then the Contractor's onus to immediately contact all these Authorities and to accommodate their involvement in his programme of work. The Contractor should also warn the Authorities at least 48 (forty-eight) hours before the actual work commence. Compensation for delays, losses or accidents will not be considered should the Contractor at and time have failed to keep the Local Authorities informed. The Engineer and/or Employer must immediately be notified, should the Contractor experience any problem regarding work, which involves a Local Authority.

C 3.1.6.16 LOCAL MATERIAL

Where possible the Contractor must make use of local suppliers for materials. It shall be **compulsory** for the contractor to source the required bricks from the local brick suppliers.

C 3.1.7 **WAY LEAVES, PERMISSIONS AND PERMITS**

The Contractor shall be responsible for obtaining all the necessary way leaves, permissions or permits applicable to working near any existing services or other infrastructure on site, and shall ensure that any way leaves, permissions or permits obtained by the Employer's Agent prior to the award of the Contract are transferred into the Contractor's name.

The Contractor shall abide by any conditions imposed by such way leaves, permissions or permits.

The Contractor shall ensure that all way leaves, permissions and permits are kept on site and are available for inspection by the relevant service authorities on demand.

The Contractor shall also ensure that any way leaves in respect of electricity services are renewed timeously every 3 (three) months.

C 3.1.8 **ALTERNATIVE TENDERS**

In the case of an Alternative Tender submitted by the Contractor having been accepted by the Employer, the provisions as set out hereunder shall, in addition to the other requirements of the Contract, apply in the Contract.

C 3.1.8.1 COMPLETION AND SUBMISSION OF FINAL DESIGNS AND DRAWINGS

C 3.1.8.1.1 The Contractor shall, not later than **1 (one)** month prior to the date on which it intends to commence work on the Works or any part thereof which is the subject the Contractor's alternative technical proposals in respect of the design or Specifications of the Works contained in an alternative Tender accepted by the Employer, submit to the Engineer for his approval, the complete set of final working drawings, including general layout drawings and bending schedules, final design calculations, Specifications, the design assumptions and parameters on which the designs are based and all other documentation and details as may be required by the Engineer for the purposes of evaluating and approving the final design, Specifications and drawings.

C 3.1.8.1.2 The information and details to be submitted by the Contractor shall comply in all respects with the following:

a) **Calculations**

(i) Calculations shall include calculations of stresses in the structure as relevant, including calculations of reinforcing or pre-stressing steel.

(ii) The calculations shall be set out in a clear and logical manner to facilitate checking.

(iii) A full description of the design assumptions shall accompany the calculations.

b) **Drawings**

(i) Drawings shall show the whole structure in elevation, sectional elevation and in plan to a suitable scale.

(ii) Sufficient large-scale sections and other details shall be submitted to show the concrete and other dimensions clearly.

(iii) Foundation levels and foundation sizes as well as the steel reinforcement at critical sections shall be indicated on the drawings.

(iv) The standard of detailing and the quality of the prints shall be the same as that of the Contract drawings supplied to the Contractor, or in the absence of any such contract drawings having been provided, of the same standard as that which was provided in the Tender Documents.

(v) The drawings shall be compiled in the official language of the Contract.

c) **Further details**

Should the Engineer conclude that the calculations, drawings, Specifications or any other data submitted by the Contractor in accordance with the provisions of this Clause are insufficient or inadequate for proper evaluation, the Engineer reserves the right to require the Contractor to submit such further calculations, drawings, Specifications and any other such data as the Engineer may require. If such further details are not submitted within the time required by the Engineer, the Tenderer will be deemed in default of the provisions of this Clause.

C 3.1.8.1.3 The Contractor shall submit only drawings and other data, which are complete in all respects and in accordance with Sub-Clause C 3.3.5.1.2. If the final calculations, drawings and details do not comply with the specified requirements, the alternative designs will be rejected unless suitably amended by the Contractor.

C 3.1.8.1.4 The Contractor will not be entitled to any claim for delays experienced as a result of the submission of incomplete drawings or other documents and data, which is not strictly in accordance with the requirements of this Specification.

C 3.1.8.1.5 The Contractor shall not commence executing the Works or any portion thereof which is the subject of alternative technical proposals in respect of the design or Specifications of the Works contained in an Alternative Tender accepted by the Employer, until the Engineer's approval of the designs and calculations has been given in writing and the Drawings signed by the Employer, or the Engineer on the Employer's behalf.

C 3.1.8.2 STATUS OF ACCEPTED DRAWINGS

C 3.1.8.2.1 The accepted Drawings shall form an integral part of the Contract Documents and drawings not accepted and signed by or on behalf of the Employer will not be permitted for construction or manufacturing purposes.

C 3.1.8.2.2 Notwithstanding the approval and/or acceptance and signing of the drawings, the Contractor shall remain fully responsible for the details, discrepancies, omissions, errors and consequences in respect of the said drawings and the approval of a design by the Engineer shall not in any way relieve the Contractor of its responsibility to produce a design that complies with all the specified requirements.

C 3.1.8.3 MEASUREMENT AND PAYMENT

C 3.1.8.3.1 DESIGN, CONSTRUCTION AND REMEDYING OF DEFECTS

a) **Amount**

No payment will be made to the Contractor in respect of its costs incurred in the design, preparation and submission of drawings and other documents pertaining to an accepted Alternative Tender.

b) **Re-measurement**

Notwithstanding anything to the contrary as may be contained in the Contract, the said Works or portions thereof (as applicable) which are the subject of the works shall not be subject to re-measurement and the quantities listed by the Contractor in the Schedule of Quantities forming part of its Alternative Tender shall be fixed and not subject to any variation whatever during the Contract.

c) **Interim Payments**

The amounts which shall become due and payable to the Contractor in the monthly Payment Certificates, in respect of the portions of the Works which are the subject of the Contractor's alternative technical proposals, shall be determined on the basis of the quantities of work certified as having been completed in the period for which the payment applies as inspected in floor; brick work to roof; roof; Practical Completion and Final Completion; provided always that no payment will be made in respect of quantities exceeding those listed by the Contractor in the said Schedule. When payments on the abovementioned stages have been made per house the next payment must be Practical Completion or payment might be stopped until such time that said houses are practical complete.

C 3.1.8.3.2 ENGINEER'S COSTS IN REVIEWING THE CONTRACTOR'S DESIGN

The Engineer's costs incurred in reviewing, checking and approving the designs, drawings, calculations and other documents pertaining to the Contractor's accepted Alternative Tender (and which designs, drawings, calculations and other documents were submitted by the Contractor in accordance with the provisions of both the Tender Documents and the Contract) shall, on presentation of an account to the Contractor and certified in writing by the Employer, be paid by the Contractor to the Engineer.

The Contractor shall be reimbursed in the actual amounts of all such payments made in the next subsequent Payment Certificate, in substitution of the Provisional Sum provided by the Contractor in the Schedule of Quantities forming part of its Alternative Tender in accordance with the requirements of the Tender Documents.

C 3.1.8.4 VARIATIONS TO THE ACCEPTED ALTERNATIVE PROPOSALS

C 3.1.8.4.1 VARIATIONS BY THE ENGINEER

a) When the Engineer requires design modifications for reasons other than:

   (i) The Contractor's failure to comply with the design requirements; or
   (ii) Errors in the Contractor's designs (e.g. foundation conditions that differ materially from those indicated by the test holes); the Contractor shall make such modifications.

b) When such design modifications result in a variation on the quantities of work to be executed, such variations will be valued by the Engineer in accordance with the rates and prices in the Schedule of Quantities and the tendered Lump Sum for the alternative will be adjusted up or down, depending on whether the modifications entail an increase or a decrease in the quantity of work.

C 3.1.8.4.2 VARIATIONS BY THE CONTRACTOR

The Contractor shall not, subsequent to the approval of its alternative designs, specifications and drawings, amend without the prior written permission of the Engineer.

C 3.1.8.5 DEFAULT OF THE CONTRACTOR

C 3.1.8.5.1 Should it become apparent at any time during construction or during the Defects Liability Period that the Contractor's alternative design and/or Specifications do not comply with the specified requirements, the Contractor shall be liable for all consequential damage and shall, at its own expense, do all the work required to ensure that the structure complies with the design requirements and the Contractor shall not be entitled to any additional payment.

C 3.1.8.5.2 When circumstances that are within the control of the Contractor arise after the acceptance of the Alternative Tender and when these circumstances, in the opinion of the Engineer, render construction of the alternative unacceptable, the Contractor shall construct the Works strictly in accordance with the original designs specified in the Tender Documents. In such circumstances, the Contractor shall not be entitled to any additional payment.

C 3.1.9 **GENERAL**

C 3.1.9.1 CONNECTION TO EXISTING WORKS

Where construction has to be connected to existing works, the Contractor must negotiate a suitable time for the connecting with the Employer. It may be necessary to connect after hours and/or over weekends. Tendered prices for connection must provide for the above and/or control of all flows and **no** additional payments will be made by the Employer to comply with this.

C 3.1.9.2 CLEANING OF PIPES AND STRUCTURES

The Contractor shall ensure that pipes and structures shall be clear of all planks, stones, concrete, etc. which may be found in them, before commissioning. Any damage caused to equipment, structures, etc. as a result of the presence of above objects, shall be repaired at the Contractor's cost.

C 3.1.9.3 BLASTING

Where the Contractor is going to make use of blasting in excavations, the Contractor must notify all residents in the vicinity of the works in writing at least 14 (fourteen) days before commencement of the works of the proposed blasting.

The Contractor must also inspect **all** buildings in the vicinity at least 14 (fourteen) days before commencement of the blasting and any existing damage to buildings must be noted. Owners must sign the noted inspection within 7 (seven) days. After completion of **all** blasting in the vicinity, the buildings must once again be inspected, and damage noted. The Owners must again sign the noted inspection.

The Employer shall not be held accountable for **any** damages caused due to the use of explosives.

C 3.1.9.4 BEDDING AND BACKFILL

Placing and compacting of bedding and filling around pipes, as well as the main backfill over pipes, shall be done **strictly** according to the requirements of SANS 1200, the Project Specifications, Details on Drawings and the Specifications of the pipe manufacturers. **No** deviation of the above will be allowed. Tenderers shall make adequate provision in their tendered unit prices to comply with the above **in full**. The Employer shall make **no** additional payments to comply with the above.

Backfill density shall be done **strictly** in accordance with SANS 1200 DB, Sub-Clauses 5.7.1 and 5.7.2. The Contractor shall execute control tests as and when so requested by the Engineer, to verify densities, as prescribed in SANS 1200. Cost of the test will be deemed as included in bedding and backfill tendered rates.

C 3.1.9.5 CONTRADICTIONS AND OBSCURITIES IN THE TENDER DOCUMENT

Should there be any contradictions, obscurities or doubt in the text of the Tender Document or drawings, or if any obvious errors or illegible figures are found, the Contractor must, before submitting the tender, get a written, signed declaration of the correct meaning of such descriptions, figures, Clauses, etc. from the Engineer.

The Contractor shall not be permitted to submit **any** claims against the Employer and/or Engineer after closing of tender due to the abovementioned reasons.

The Contractor must examine the Tender Documents to ensure that it contains all the applicable pages and that a complete set of drawings has been issued. The Contractor must notify the Engineer accordingly should there be any pages and/or drawings missing. The Engineer shall then immediately supply a complete set of Tender Documents and/or drawings in exchange for the incomplete set of Tender Documents and/or drawings.

The Contractor will be forced to, at own cost, repair all work caused by the incorrect interpretation of the drawings and /or Specifications and as a result not complying with the requirements of this contract document and/or drawings.

C 3.1.9.6 CONTRACTOR TO BE COMPENSATED
(CLAUSE 4.5.4 OF THE GENERAL CONDITIONS OF CONTRACT)

The Employer shall NOT refund to the contractor any such sums.

C 3.1.9.7 VESTING OF MATERIAL

All material on site is to remain the contractor's responsibility throughout the duration of the contract. The contractor is to ensure that all material had to be stored in a safe and secure location until completion of the works at hand.

C 3.1.9.8 SPECIFICATIONS

Where referred to SANS Specifications or any other specification, it shall mean the latest published edition of abovementioned specification.

C 3.1.9.9 COSTS INCURRED WITH THE PREPARATION AND SUBMISSION OF TENDERS

The Employer shall not be held responsible for **any** expenses or losses incurred by the Tenderer with regards to the preparation and/or submission of tender documents.

C 3.1.9.10 STATUTORY LAWS AND REGULATIONS

The Contractor must supply all notices and pay all fees, as required by an Act of the Parliament, Ordinance or any Regulations or By-Laws or any Local or other Statutory Power with regards to the executing of the Contract Works or any other Temporary Works and according to the Employer and all Public Authorities and Companies whose property or rights may at any time be influenced by the Contract Works or any temporary Works.

The Contractor shall under all circumstances comply with the regulations of any Act of Parliament, Ordinance or any Regulations or By-Laws or any Local or other Statutory Power that may be applicable to the Contract Works or any Temporary Works and according to rules and regulations of the Employer and all Public Authorities and Companies, as already mentioned, and shall indemnify the Employer against all fines and responsibilities of any kind for breach of contract of such an Act, Ordinance, Regulation or By-Laws.

The Employer shall compensate the Contractor, or reimburse the Contractor for all amounts payable, as specified by the Engineer, that is payable and already paid for by the Contractor on such fees, and also all taxes paid by the Contractor for the Site or any part thereof or

anything constructed or erected on site, or any part thereof, or any temporary structure, placed elsewhere, but exclusively for the use of the Contract Works, with the understanding that the Employer, and not the Contractor, shall be responsible for the obtaining any planning permissions that may be required for the Contract Works.

C 3.1.9.11 LAWS THAT SHALL APPLY

The contract shall at all times be executed in accordance with the Laws of the Republic of South Africa, and any discrepancies that may occur between the Employer and the Contractor as far as the contract is concerned, shall be settled in the Republic of South Africa, unless the Law on the contract applicable on this Clause is from another country, the Employer is entitled to adopt the Law from another country in the case of any disagreement and/or the case may be settled in such a country.

All Laws and/or Regulations referred to in the Tender Document will be, where applicable, “as amended”.

C 3.1.9.12 LABOUR

C 3.1.9.12.1 CONTRACTS WITH LABOURERS

The contractor will enter into employment contracts with all labourers to be employed during the construction period of this project.

C 3.1.9.12.2 WAGE RATES

Wage rates for labourers will be paid in accordance with the latest Government Gazette for the Northern Cape Province. The current rate is R29.37/hour for a normal 9 hours working day.

C 3.1.9.12.3 COMMUNITY LIAISON OFFICER (CLO)

A community liaison officer (CLO) will be appointed on a full-time basis for the duration of the project in order to facilitate, inter alia, the smooth proceeding of the employment of local labour. The CLO will be the link between contractor and labourers. The CLO will be identified by the Local Municipality but will be paid out of the project. The wages for the CLO shall be in line with the Local Municipality CLO labour wage rate/month for an average 9 hour working day.

C 3.1.9.12.4 LABOUR INTENSIVE CONSTRUCTION ACTIVITIES

The following activities where applicable shall be carried out using Labour Intensive Construction (LIC) methods:

1. Preparation of bedding and blanket
2. Laying of all pipes with a diameter of less than 355mm
3. Installation of all fittings and accessories (valves etc.) to pipes
4. Mixing and placing of concrete for small concrete works (i.e. thrust blocks)
5. Building of manholes and benching
6. Finishing and cleaning of site
7. Other activities that by their nature are usually done by labour intensive construction methods.

The Contractor is encouraged to add activities to the above list but he shall ensure that the specified standards of construction will be achieved.

Although it is the intention that the above activities be carried out by labour intensive construction methods the Contractor may propose to the Engineer alternative ways in which

the work is to be executed. The Engineer's approval of these alternative methods will not be unreasonably withheld from the Contractor.

C 3.1.9.12.5 EMPLOYMENT OF LOCAL LABOUR

C 3.1.9.12.5.1 QUANTUM OF KEY PERSONNEL

The Contractor must submit the description and numbers of his key-personnel that he will bring onto Site in a Key Personnel Schedule. Key personnel will include Foremen, Artisans, Clerks, skilled Supervisors and Operators.

C 3.1.9.12.5.2 QUANTUM OF LABOUR EMPLOYED

The Contractor shall submit detailed daily labour records, weekly, to the Engineer indicating respectively the numbers of permanent and temporary local employees employed on the Works, and the activities on which they were engaged.

The number of labourers stated by the Contractor in the Key Personnel Schedule shall be used by the PLO (if appointed), Engineer and Employer, in collaboration with the Contractor in the planning and programming of the Contractor's local labour requirements.

C 3.1.9.12.5.3 PAYMENT AND PRODUCTIVITY

Payment to the local labour force shall be made on a forth nightly basis in respect of Tasks completed during that period. Formal up to date records must be kept of all payments made to subcontractors and labourers.

In order that the project is economically viable and the employment of labour is not merely a "hand-out" to the local community, is important that payment of the labour force is linked to productivity. Increased productivity can be achieved by utilising the "Task Work" Principal (see Clause PS 9.7), in terms of which the Contractor will be required to reward the labour force on the basis of Tasks completed.

C 3.1.9.12.6 CONDITIONS OF TEMPORARY EMPLOYMENT

It is envisaged that there may not be sufficient experienced local subcontractors available to warrant tenders or quotations on the base of competitive labour rates. Equally it may prove confusing to the local labourers and therefore counterproductive for possible tenderers to bargain for lower labour rates. A rate agreed upon at tender stage, may no longer be accepted as valid by the time the Tender is awarded. For the purpose of this tender therefore, tenders are to price labour at the approved local minimum daily rate as prescribed by the Department of Labour.

The rate of payment to local labour will be based on the accepted contractual productivity levels. The Engineers Representative will monitor productivity to ensure that this Principal is carried out. For labour intensive construction (LIC) activities where no production rate is applicable, the minimum rate of payment per working day specified above shall apply.

The following conditions of work shall complement the conditions of employment:

(1) The Contractor shall give to a temporary employee, at the earliest possible opportunity, notice of the termination of the project and/or the requirements of that employee's participation in the project; provided that such notice.

(2) The temporary employee shall, upon termination of his services, be entitled to a certificate of service showing the full names of the employer and the employee, the date of commencement, a record of training received and the date of termination of the contract.

(3) Skilled labour e.g. Brick layers and carpenters will be paid normal hourly rates as commonly used in the industry.

(4) The Contractor must provide unemployment insurance for the local labourers.

C 3.1.9.12.7 TASK WORK RELATED ACTIVITIES

A task shall be determined on the basis of what an average person from the local Community could complete in a day. A Task shall be defined on the said basis with regard to the prevailing physical conditions and other regulatory conditions as specified in Clause PS 9.6.

A task is a quantified activity or operation to be performed by a person/labourer in one ordinary working day. The quantification of tasks shall be based on individual employees or a group of employees. The supply and control of hand tools and other equipment necessary to do the work, will be the responsibility of the Contractor.

	DESCRIPTION	UNIT	QUANTITY
1.	Excavation in: - Soft (sandy) material 0 to 1,0 m deep 0 to 1,5 m deep	 m^3 m^3	 3,0 2,2
2.	Backfilling: 0 to 1,5 m deep	m^3	6
3.	Brickwork to Manholes and similar (220 mm thick)	m^2	5
4. 4.1 4.2	Pipe laying, including bedding and blanket Sewer Pipes Water Pipes	 m m	 48m/team of 8 60m/team of 8

The activity and production rates ranges given in the schedule above, must be used only as a guideline.

C 3.1.9.12.8 TRAINING OF LOCAL LABOUR

C 3.1.9.12.8.1 IN SERVICE TRAINING OF LOCAL LABOUR

Through the core of artisans, skilled and semi-skilled personnel are required to construct, supervise and adequately control the Contract; the Contractor shall provide the necessary in-service (on-the-job) training in basic construction skills.

C 3.1.9.13 INTERCHANGEABLE TERMS

Throughout this document the terms “Bid/Bidder” and “Tender/Tenderer” has the same meaning.

“Bill of Quantities” and “Schedule of Quantities” will also have the same meaning.

C 3.1.9.14 BILL OF QUANTITIES: LUMP SUM CONTRACT

The Tender is a **Lump Sum** per Bill of Quantities Sections and **no** re-measuring of quantities will be applicable.

The Bill of Quantities is included in the document to assist Tenderers to price the Works. Quantities are provided in good faith, but Tenderers must ensure that their tendered prices for the works are **all inclusive** for the works as indicated on the drawings and as per the Specifications.

The Client will not pay any additional amounts not included in the Tendered amounts.
Due to the fact that the Bill of Quantities is not re-measurable, monthly payments will be calculated in accordance to C 3.1.6.4.

The Bill of Quantities were compiled as per “Model Preambles for Trades: 2008”. A copy can be viewed at the Offices of the Consulting Engineer.

C 3.1.9.15 VALUE ADDED TAX

The Contractor must be registered as a vendor in terms of the Law on Value Added Tax of 1991. **NOTE THAT COGHSTA DOES NOT PAY VALUE ADDED TAX.**

C 3.1.10 **MINIMUM SPECIFICATIONS FOR THE HOUSES**

C 3.1.10.1 INTRODUCTION

Tenderers must determine their independent tendered Fixed Rate per house, but the pricing structure of the houses must be in line with the National Human Settlement Guidelines.

House type and /or sizes are as listed below per area:

NABABEEP Standard 40m² House = 65 units (6 Disabled, Category A, 1 Disabled Category B)
NABABEEP 45m² Disabled House = 4 units (Category C =3)

C 3.1.10.3 MINIMUM SPECIFICATIONS

C 3.1.10.3.1 Listed below are some abstracts from the SANS 10400 and also the specifications from National Housing Code, the specifications and code will be judged as the minimum requirements for these houses:

C 3.1.10.3.1.1 The minimum standard is a 40m² house, consisting of a lounge/kitchen, 2 bedrooms and a bathroom;

C 3.1.10.3.1.2 The installation of a ceiling with the prescribed air gap for the entire dwelling;

C 3.1.10.3.1.3 The installation of above-ceiling insulation comprising a 135 mm mineral fibreglass blanket for the entire house;

C 3.1.10.3.1.4 Internal walls to be plastered and painted (1 coat universal pva primer and 2 coats matt durable paint.)

C 3.1.10.3.1.5 A standard basic electric installation comprising a pre-paid meter-ready board with a recessed distribution board with lid and lights and double plugs to all living areas of the house, water-tight outside lights above the front and back doors, and stove point in the kitchen area. Inclusive of Earthing and earthing peg.

The Electrical Installation must be done by a person registered as an Electrical Contractor in terms of the Occupational Health and Safety Act of 1993 - “Electrical Installation Regulations”, as well as be registered with the Local Council / Authorities;

C 3.1.10.3.1.6 Must comply with the latest NHBRC specifications; SANS 10400 and SANS 1200.

C 3.1.10.3.1.7 Special low E clear and opaque safety glass of all windows.

C 3.1.10.3.2 Construction Specifications:

C 3.1.10.3.2.1 Walls:

(i) “Brickforce” of internal walls to fully overlap that of the external walls. Masonry walls to have 2.8mm dia suitable “Brickforce” every third course and in every course above window height and in foundation walls.
(ii) Internal walls: plastered 12mm, 1:6 cement plaster with 1 x plaster primer and 2 x pure acrylic emulsion paint (Colour – Natural Wicker) .
(iii) External walls: plastered 12mm, 1:6 cement plaster with 1 x plaster primer and 2 x Exterior pure acrylic emulsion paint (Colours – Chalk Stone, Beige Sand and Cape Fog).
(iv) Jointing to be done on the external doors and internal doors as per Engineers drawings.
(v) All bricks of the external walls to be 140x90x290mm Maxi brick with a minimum compression strength of 14MPa.
(vi) All bricks of the internal walls to be 140x90x290mm Maxi brick with a minimum compression strength of 14MPa.

C 3.1.10.3.2.2 Doors:

(i) 2.0 mm Steel cottage section windows and 1.2 mm thick steel doorframes with fixed lugs neatly built into brickwork. Windows to have standard fittings.
(ii) Install precast lintels over all window- and door openings.
(iii) Exterior 2032 x 813 x 44 mm FL&B door complete with 70 mm weather board and 3-lever lock set. Internal 2032 x 813 x 44 mm hollow core doors (commercial veneer) to be fitted with 2-lever lock set. Doors to have standard fittings.
(iv) Meranti or similar approved weather strip on external doors

C 3.1.10.3.2.3 Windows:

(i) Kitchen Windows: C7 with 4 mm glass (No. = 1)
(ii) Bedroom Windows: D7 with 4 mm glass (No. = 2)
(iii) Lounge Windows: D57 with 4 mm glass (No. = 1)
(iv) Bathroom Windows: ES1 with 4 mm obscure glass (No. 1)
(v) All glazing to comply with SABS 0137

C 3.1.10.3.2.4 Plumbing:

(i) All plumbing to be carried out by a Plumber registered with the Local Council/Authorities.
(ii) Build-in 1700 mm bath side wall and sand bed complete with 15 mm chromium plated hot and cold taps, 40 mm bath outlet and removable fibre cement inspection panel. Neatly silicone along wall surfaces;
(iii) Fit one basin complete with 2 x pillar taps, plug with chain chromed outlet and PVC trap. Neatly silicone along wall surfaces.
(iv) Fit one WC complete with 6 ℓ cistern, fitments, toilet seat and flush pipe.
(v) Provide and fit a 1200 x 535 mm single bowl sink unit with one chromium plated bib tap, 38 mm chromed waste outlet and 40 mm PVC trap, on one pair of brackets. Neatly silicone along wall surfaces.
(vi) Hot and cold water polycop lines to be neatly chased into walls to all sanitary fittings. Hot water to be blanked off in roof for future geyser.
(vii) Install angle valves and a stop cocks where applicable.
(viii) A 16 mm HDPE water connection to the Municipal network, inclusive of a stopcock.

C 3.1.10.3.2.5 Drainage:

(i) Provide 1 x 15 mm bibtap over a gully at the kitchen.
(ii) Provide a 110 mm vent valve at the head of the 110 mm soil line.
(iii) Waste water pipe system to have 50 mm vent valve at highest point.
(iv) Provide a marked rodding eye at the head of the soil drain and at all change of direction. All pipe connections on soil drain to have inspection eyes.

C 3.1.10.3.2.6 Finishes:

(i) Floors to be power-floated to a smooth and level finish and kept damp for a period, as per Engineer's requirements, before any brickwork commences.
(ii) Steel window- and door frames to have a 1 x coat red oxide factory coated primer, 1 x universal undercoat and 2 x finishing coats.
(iii) External timber doors: well sanded and cleaned, apply 1 coat wood stain and 2 coats external polyurethane varnish.
(iv) Internal doors: well sanded and cleaned, apply 1 x coat timber primer and 1 x universal undercoat and 2 coats Enamel paint.
(v) Window panes to be fitted with correctly prepared putty and only painted when surface is firm and dry - not to be left unpainted for too long, paint as per window frames.
(vi) House numbers on Perspex plaque 150mm High Black on Silver

C 3.1.10.3.2.7 Roof:

(i) Certified pre-fabricated nail plate timber roof trusses;
(ii) Minimum roof slope of 17.5 degrees.
(iii) Roof covering to be 0.5 mm corrugated cranked chromadek roof cladding, color sandstone beige, installed according to manufacturer's specification.
(iv) 30x1.2mm Galvanised hoop iron roof anchors at 1050mm centres on the eaves and on the centre wall including on each rafter to the gable walls.
(v) 220x12mm fibre cement fascias and barge boards to truss ends and eaves with 50x5mm counter sunk steel wood screw heads and apply paint as for exterior walls.
(vi) All sprockets to be treated with carbolineum or similar approved product.

C 3.1.10.3.2.8 Ceiling:

(i) 6.4mm Gypsum Ceiling with R value of 3.38m² K/W on 38x38mm timber branderings @450mm centres one direction.
(ii) 50x8mm cover strips.
(iii) Standard 70mm coved gypsum cornice fixed with “Crestestone” OSA paste. Apply acrylic filler where needed and 2 x white commercial PVA paint.
(iv) 135mm Mineral fibreglass blanket insulation with R Value of 0.062m² K/W above ceiling.
(v) All ceiling to be installed in accordance to SANS 10400.

C 3.1.10.3.2.9 Aprons:

(i) Concrete strength of 25MPa
(ii) Maximum slump of 75mm
(iii) 85mm thick, 1000mm wide
(iv) Maximum length of panels: 2500mm with 10mm expansion joints

C 3.1.10.3.2.10 Septic Tank

(i) 6000 Liters Septic Tank as per the drawings

Installation Process of Septic Tank

a) **Site Identification**

I. Ensure correct location as per instruction from the Engineer
II. Log GPS Coordinates of site position and number unit for future reference
III. Determine lay-out of installation, i.e. confirm with Engineer top structure door orientation.

b) **Excavation and construction of Septic Tank**

I. Mark position of hole for Septic Tank
II. Excavate hole to size as per drawings
III. Construct floor slab, brick walls and cover slab as per drawings

c) Connection to Top-structure

I. Fit toilet bowl, hwb and bath of top structure and connect outlet to Septic Tank.

Contractors are required to supply of all necessary materials, the supply and use of tools, the provision, operation and maintenance of all Contractor’s plant and equipment, the supply and supervision of all labour and workmanship and everything and every service for the construction, completion and upholding of the Works in a manner required by the Contract and to the entire satisfaction of the Implementing Agent.

The Contract is to extend to and comprise all such minor operations, matters and details as if they had been expressly shown and described, the intention being that the Contractor is to execute, as part of this Contract, every requisite for the full and perfect completion of the whole

of the Works comprised therein and essential to their stability and completeness for the purposes intended by them, whether Drawings or Specifications are sufficient or not. The Contractor' s attention is also drawn to the following extra over specifications of works that may be carried out when the need arises.

C 3.1.10.4 COMPLETION QUALITY PACK:

The contractor will be required to submit a Completion Quality Pack for each stand number in the scope of works as part of completion of the project.

Each pack will consist of the following documentation:
(i) Signed Happy Letter
(ii) SANS 10400 – A: Form 4 (Structure) – Signed by the Implementing Agent
(iii) Test Cube results
(iv) Test Results and certification where applicable
(v) Soil Poisoning Certificate
(vi) Roof Erection Certificate
(vii) COC – Electrical Installation
(viii) COC – Plumbing Installation
(ix) COC – Glazing Installation
(x) Timber Truss Manufacturer Guarantee
(xi) Roof Sheeting Manufacturer Guarantee

All testing to be done by a SANAS accredited laboratory
Retention payments will be retained should the above documents not be submitted per stand.

Section A: New House:

Refer to clause 3.1.10.3 for minimum specifications

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19	• BNG house 40m2 • ALL CONTRACTUAL REQUIREMENTS • Breaking down and discard of informal structure (if so ordered by the Department) • GFSH-2 Geotechnical Investigation (If so ordered by the Department) • Site clearance and access • Temporary accommodation • "Excavations • (Foundations and services connections)" • Reinforcing and Casting of Strip Foundations • Building of Foundation Brickwork • Cast Surface Bed • G5/G6 Fill Compacted to 93% MOD AASTHO & 25Mpa Reinforced Raft Foundation • Building of Superstructure Brickwork • Complete Supply, Deliver and Installation of Roof • Complete gable and beamfilling • Internal walls plastered 12mm, 1:6 cement plaster with 1 x plaster primer and 2 x pure acrylic emulsion paint (Colour – Natural Wicker). • External walls: plastered 12mm, 1:6 cement plaster with 1 x plaster primer and 2 x Exterior pure acrylic emulsion paint (Colours – Chalk Stone, Beige Sand and Cape Fog). • Apply approved brick sealant to all external walls, as per manufacturers specifications if applicable • Supply and Install Ceiling complete with Cornish installation according to SANS 10400 and two Coats of PVA • Supply and Install Plumbing inclusive of all sanitary fittings and pipe work • Supply, deliver and install 2 external doors inclusive of 3 lever lock and 70 mm weather board (Well sanded and cleaned, apply 1 coat wood stain and 2 coats external polyurethane varnish) • Supply, deliver and install 3 internal doors inclusive of a 2-lever lock. (Well sanded and cleaned, apply 1 x coat timber primer and 1 x universal undercoat and 2 coats Enamel paint) • Supply, Deliver and Install 1xES1 Window, inclusive of all Fittings and Obscured Glazing as per specifications • Supply, Deliver and Install 2xD7 Window inclusive of all Fittings and Glazing as per specifications • Supply, Deliver and Install 1xC7 Window inclusive of all Fittings and Glazing as per specifications. • Supply, Deliver and Install 1xD57 Window inclusive of all Fittings and Glazing as per specifications • Construct Concrete apron as per specifications (25mpa concrete, 1m wide, 85mm thick all round) • Supply, Deliver and Install All Electrical components to be chased into walls under strict supervision inclusive of 7 Light Switches, 2 External Lights, 5 Indoor Lights, DB board, 5 double-electrical sockets and a stove plug. • Electrical Connection Application with the Local Municipality on behalf of beneficiary • Disconnect electrical connection from old structure, move of electrical box and install other electrical components and then do electrical connection on newly built structure • Construct 6000 Litres Septic Tank • Supply, Deliver and Install Connection to Water Service • Supply, Deliver and Install Connection to Sewer Service • Quality Completion Pack • CLO appointment • OHS Regulation

Section B: New House: (DISABLED)

Refer to clause 3.1.10.3 for minimum specifications.

1	BNG house 45m² • ALL CONTRACTUAL REQUIREMENTS • Breaking down and discard of informal structure • Site clearance and access • Temporary accommodation • "Excavations • (Foundations and services connections)" • Reinforcing and Casting of Strip Foundations • Building of Foundation Brickwork • Cast Surface Bed • G5/G6 Fill Compacted to 93% MOD AASTHO & 25Mpa Reinforced Raft Foundation • Building of Superstructure Brickwork • Complete Supply, Deliver and Installation of Roof • Complete gable and beamfilling • Internal walls plastered 12mm, 1:6 cement plaster with 1 x plaster primer and 2 x pure acrylic emulsion paint (Colour – Natural Wicker). • External walls: plastered 12mm, 1:6 cement plaster with 1 x plaster primer and 2 x Exterior pure acrylic emulsion paint (Colours – Chalk Stone, Beige Sand and Cape Fog). • Apply approved brick sealant to all external walls, as per manufacturers specifications if applicable • Supply and Install Ceiling complete with Cornish installation according to SANS 10400 and two Coats of PVA • Supply and Install Plumbing inclusive of all sanitary fittings and pipe work • Supply, deliver and install 2 external doors inclusive of 3 lever lock and 70 mm weather board (Well sanded and cleaned, apply 1 coat wood stain and 2 coats external polyurethane varnish) • Supply, deliver and install 3 internal doors inclusive of a 2-lever lock. (Well sanded and cleaned, apply 1 x coat timber primer and 1 x universal undercoat and 2 coats Enamel paint) • Supply, Deliver and Install 1xES1 Window, inclusive of all Fittings and Obscured Glazing as per specifications • Supply, Deliver and Install 2xD7 Window inclusive of all Fittings and Glazing as per specifications • Supply, Deliver and Install 1xC7 Window inclusive of all Fittings and Glazing as per specifications • Supply, Deliver and Install 1xD57 Window inclusive of all Fittings and Glazing as per specifications • Construct Concrete apron as per specifications (25mpa concrete, 1m wide, 85mm thick all round) • Access to house (12m² paving, and ramp at doorway) • Kick plates to doors • Hand and Grab rails • Lever action taps • 1 m vinyl folding door in bathroom • Supply, Deliver and Install All Electrical components to be chased into walls under strict supervision inclusive of 7 Light Switches, 2 External Lights, 5 Indoor Lights, DB board, 5 double-electrical sockets and a stove plug. • Electrical Connection Application with the Local Municipality on behalf of beneficiary • Disconnect electrical connection from old structure, move of electrical box and install other electrical components and then do electrical connection on newly built structure • Construct 6000 Litres Septic Tank • Supply, Deliver and Install Connection to Water Service • Supply, Deliver and Install Connection to Sewer Service • Quality Completion Pack • CLO appointment • OHS Regulation

C 3.2:

PART 2:

PROJECT SPECIFICATIONS

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 3.2: PART 2: VARIATIONS AND ADDITIONS TO SABS 1200 STANDARDIZED SPECIFICATIONS

The following variation and additions to the SABS 1200 Standardized Specifications referred to will be valid for this contract. The prefix “PS A” indicated an amendment to SABS 1200 A; “PS C” to SABS 1200 C; etc. The numbers following these prefixes are the relevant Clause numbers in SABS 1200.

SANS 1200 A	:	GENERAL
SANS 1200 AB	:	ENIGNEERS OFFICE
SANS 1200 C	:	SITE CLEARANCE
SANS 1200 AB	:	EARTHWORKS
SANS 1200 DB	:	EARTHWORKS (PIPE TRENCHES)
SANS 1200 G	:	CONCRETE (STRUCTURAL)
SANS 1200 I	:	MEDIUM-PRESSURE PIPES
SANS 1200 LB	:	BEDDING (PIPES)
SANS 1200 LD	:	SEWERS
SANS 1200 LF	:	ERF CONNECTIONS (WATER)

SANS 1200 A : GENERAL

A 1 SCOPE

PS A 1.1 *REPLACE THE CONTENTS OF SUB-CLAUSE 1.1, INCLUDING THE NOTES, WITH THE FOLLOWING*:

"This specification covers requirements, Principals and responsibilities of a general nature which are generally applicable to Civil Engineering Construction and Building Works Contracts, as well as the requirements for the Contractor's establishment on the Site."

A 2 INTERPRETATION

PS A 2.2 **APPLICABLE ISSUE OF STANDARDS**

ADD TO THE BEGINNING OF SUB-CLAUSE A 2.2:

"Unless another issue is specified, …."

PS A 2.3 **DEFINITIONS**

IN THE OPENING PHRASE, INSERT THE WORDS: "the definitions given in the Conditions of Contract and" *BETWEEN THE WORDS* "Specification" *AND* "the following".

a) General

ADD THE FOLLOWING DEFINITIONS:

"'General Conditions' and 'Conditions of Contract': The General Conditions of Contract specified for use with this contract, together with the Special Conditions of Contract as applicable.

'Specified': As specified in the Standardized Specifications, the Drawings or the Project Specifications. "Specifications' shall have the corresponding meaning.

ADD THE FOLLOWING NEW CLAUSE:

"PS A 2.3.1 **DELAY DUE TO SUPPLY OF MATERIALS AND ORDERING**

The Contractor shall ensure that the work is not delayed, due to the lack of materials on the site of the works, by placing orders with Suppliers for the material required under his contract as soon as possible after acceptance of this tender.

The Contractor shall, by producing copies of written enquiries for Suppliers, prove to the satisfaction of the Engineer that any delay occasioned by non-availability of materials has been caused by the ability of Suppliers to supply and not by his own lack of timely ordering or lack of exhaustive enquiry for Suppliers, before any extension of contract time will be allowed due to such delays.

The quantities set out in the Schedule of Quantities have been clearly determined calculations based on data available at the time and should therefore be considered to be approximate quantities only. Before ordering materials of any kind, the Contractor shall check with the Engineer whether or not the Scope of Work for which the materials are required is likely to change substantially. No liability or responsibility whatsoever shall be attached to the Employer for materials ordered by the Contractor except when ordered in accordance with the written confirmation issued by the Engineer."

PS A 2.4 **ABBREVIATIONS**

a) Abbreviations relating to standard documents:

ADD THE FOLLOWING ABBREVIATIONS:

"CKS: SABS Co-ordinating Specification."

A 3 MATERIALS

PS A 3.1 **QUALITY OF MATERIALS**

ADD THE FOLLOWING:

"All materials are to be the best of their respective kinds, new, undamaged, sound and free from defects and shall comply with the relevant Clauses of the Specifications.

All references to Standard Specifications are to the latest amendment to such Specifications.

Materials bearing the SABS or BS mark will not be subjected to tests to determine whether they comply with the relevant Specifications. The Engineer may in his discretion require any material not bearing such mark to be tested in accordance with the relevant Specifications; should he do so, the Contractor shall arrange for such tests to be carried out, to the Contractor's cost, by the South African Bureau of Standards or other approved body.

Whether or not the material bears the mark or is tested, any material found not to be in accordance with the Specifications shall be rejected and replaced by the Contractor at his own cost.

The Contractor may be required, at his own expense, to submit samples of the material offered to the Engineer for his approval and the material supplied under his contract shall be of the standard equal to that of the samples so submitted and approved. Samples will remain the property of the Contractors, who shall remove them when called upon to do so by the Engineer."

ADD THE FOLLOWING AT THE END OF SUB-CLAUSE 3.1:

"All manufactured materials supplied shall be new materials unless the contrary is specified. All materials specified to be in accordance with SABS Specifications shall bear the SABS mark."

ADD THE FOLLOWING NEW SUB-CLAUSE:

"PS A 3.3 **ORDERING OF MATERIALS:**

ADD THE FOLLOWING:

The quantities set out in the Schedule of Quantities have been clearly determined calculations based on data available at the time and should therefore be considered to be approximate quantities only. Before ordering materials of any kind, the Contractor shall be solely responsible for determining, from the drawings issued or approved by the Engineer for construction purposes, the actual quantities of materials required for the execution of the Works. No liability or responsibility whatsoever shall be attached to the Employer or the Engineer in respect of materials ordered by the Contractor except when ordered in accordance with the drawings issued or approved by the Engineer for construction purposes."

A 4 PLANT

PS A 4.1 SILENCING OF PLANT

REPLACE THE CONTENTS OF SUB-CLAUSE 4.1 WITH THE FOLLLOWING:

"The Contractor's attention is drawn to the applicable regulations pertaining to noise and hearing conservation, framed under the Occupational Health and Safety Act (Act No. 85 of 1993) as amended.

The Contractor shall at all times and at its own cost, be responsible for implementing all necessary steps to ensure full compliance with such regulations, including but not restricted to the provision and use of suitable and effective silencing devices for pneumatic tools and other Plant which would otherwise cause a noise level in excess of that specified in the said regulations.

Where appropriate, the Contractor shall further, by means of temporary barriers, effectively isolate the source of such noise in order to comply with the said regulations."

PS A 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES

ADD THE FOLLOWING PARAGRAPH BEFORE THE EXISTING FIRST PARAGRAPH IN SUB-CLAUSE 4.2:

"The Contractor's buildings, sheds and other facilities erected or utilized on the Site for the purposes of the Contract shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. as may be required by the Contractor. The facilities shall always be kept in a neat and orderly condition.

A Night-watchman may be on Site after hours."

*DELETE "*and first-aid services" *IN THE SECOND PARAGRAPH OF SUB-CLAUSE 4.2 AND ADD THE FOLLOWING:*

"The Contractor shall provide on the Site and in close proximity to the actual locations where the work is being executed, one toilet per 10 workmen, which toilets shall be effectively screened from public view and their use enforced. Such toilets shall be relocated from time to time as the location of the work being executed changes, so as to ensure that easy access to the toilets is maintained.

The Contractor shall, where applicable, make all necessary arrangements and pay for the removal of night soil."

ADD THE FOLLOWING NEW SUB-CLAUSE:

"PS A 4.3 CONSTRUCTION PLANT

Construction plant, where the use thereof is permitted, shall be of a suitable type for carrying out the work for which it is required. Its capacity shall be sufficient to meet the requirements of the work within the contract time. It shall be kept in full working order and repair at all times."

A 5 CONSTRUCTION

A 5.1 SURVEY

PS A 5.1.1 SETTING OUT OF THE WORKS

ADD THE FOLLOWING TO SUB-CLAUSE 5.1.1:

"Setting out of works shall not be measured and paid directly and any costs involved herein shall be deemed as included in the tendered Sum of work that is included in the Contract.

Further to the above, the Contractor shall timeously, before commencement of construction, check all levels in a specific area to provide for both the accurate measurement of quantities for payment purposes and should any discrepancies occur, to give the Engineer ample time to check levels and to make adjustments, if necessary.

Should the Contractor neglect to do so, the levels as shown on the Engineers drawings will be used for measurement and payment purposes.

Setting out details of all the works are defined by offsets from pegs and benchmarks established by the Engineer. The Contractor shall be responsible for the setting out of the works with reference to these pegs and benchmarks. The Contractor will survey the area after completion of the works and supply the data to the Engineer."

PS A 5.1.2 PRESERVATION AND REPLACEMENT OF SURVEY BEACONS AND PEGS SUBJECT TO THE LAND SURVEY ACT

DELETE THE WORDS "in the vicinity of boundaries" *IN THE SECOND SENTENCE OF SUB-CLAUSE 5.1.2 AND REPLACE THE WORDS:* "under the direction of" *IN THE SAME SENTENCE WITH* "in consultation and liaison with."

ADD THE FOLLOWING AFTER THE SECOND SENTENCE OF SUB-CLAUSE 5.1.2:

*"*The Contractor and the Engineer shall record on the said list, their concurrence or disagreement, as the case may be, regarding the completeness and accuracy of the details recorded therein."

REPLACE THE THIRD SENTENCE OF SUB-CLAUSE 5.1.2 WITH THE FOLLOWING:

"At the completion of the Contract, the Contractor shall expose all pegs that were listed at the commencement of the construction as being in order and the Contractor shall arrange with a registered Land Surveyor for the checking of the positions of all such pegs and the replacement of any thereof which the Land Surveyor's check reveals have become disturbed or damaged. The Contractor shall, as a precedent to the issue of the Certificate of Completion, provide to the Engineer, a certificate from the registered Land Surveyor, certifying that all the pegs listed at the commencement of construction in accordance with the provisions of this Clause, have been checked and that those found to have been disturbed, damaged or destroyed have been replaced in their correct positions, all on accordance with the provisions of the said Act.

The costs of all checking, replacement and certification as aforesaid shall be entirely for the Contractor's account; provided always that the Contractor shall not be held liable for the cost of preplacement of pegs which:

a) Cannot reasonably be re-established in their original positions by reason of the finished dimensions of the permanent works; and
b) The Contractor can prove beyond reasonable doubt to the satisfaction of the Engineer, were disturbed, damaged or destroyed by others beyond his control."

PS A 5.3 **PROTECTION OF EXISTING STRUCTURES**

REPLACE: "Machinery and Occupational Safety Act, 1983, (Act No. 6 of 1983)" *WITH:* "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), as amended" *AND INSERT THE FOLLOWING AFTER* "(Act No. 27 of 1956)": "as amended."

PS A 5.4 **PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES**

REPLACE THE HEADING AND THE CONTENTS OF THIS SUB-CLAUSE WITH THE FOLLOWING:

PS A 5.4 **LOCATION AND PROTECTION OF EXISTING SERVICES**

PS A 5.4.1 LOCATION OF EXISTING SERVICES

Before commencing with any work in an area, the Contractor shall ascertain the presence and actual position of all services which can reasonably be expected by and experienced and competent Contractor to be present on, under, over or within the Site.

Without in any way limiting its liability in terms of the Conditions of Contract in relation to damage to property and interference with services, the Contractor shall, in collaboration with the Engineer, obtain the most up-to-date plans as are available, showing the positions of services existing in the area where it intends to work. Neither the Employer nor the Engineer offer any warranty as to the accuracy or completeness of such plans and because services can often not be reliably located from plans, the Contractor shall ascertain the actual location of services depicted on such plans by means of careful inspection of the Site and the provision and utilization of suitable detecting and testing equipment.

Thereafter, the Contractor shall, by the use of appropriate methodologies carefully expose the services at such positions as are agreed to by the Engineer, for the purposes of verifying the exact location and position of the services. Where the exposure of existing services involves excavation to expose underground services, the further requirements of Sub-Clauses 4.4 and 5.1.2.2 of SABS 1200 D, as amended, shall apply.

The aforesaid procedure shall also be followed in respect of services not shown on the plans, but which may reasonably be anticipated by an experienced Contractor to be present or potentially present on the site.

All services, the positions of which have been determined as aforesaid at the critical points, shall henceforth be designated as 'Known Services' and their positions shall be indicated by the Contractor on a separate set of drawings, a copy of which shall be furnished to the Engineer without delay.

As soon as any service which has not been identified and located as described above is encountered on, under, over or within the Site, it shall henceforth be deemed to be 'Known Service' and the aforesaid provisions pertaining to locating, verifying and recording its position on the balance of the site shall apply. The Contractor shall notify the Engineer immediately any such service is encountered or discovered on the site.

Whilst it is in possession of the site, the Contractor shall be liable for all loss of or damage as may occur to:

a) 'Known Services' anywhere along the entire lengths of their routes, as may reasonably be deducted from the actual locations at which their positions were verified as aforesaid, due cognizance being taken of such deviations in line and level which may reasonably be anticipated; and

b) Any other service which ought reasonably to have been a 'Known Service' in accordance with the provisions of this Clause; as well as for consequential damage, whether caused directly by the Contractor's operations or by the lack of proper protection;

Provided always that the Contractor will not be held liable in respect of damages occurring to services not being 'Known Services'.

No separate payment will be made to the Contractor in respect of its costs of providing, holding available on the site and utilizing the said detecting and testing equipment, nor for any costs incurred in preparing and submitting to the Engineer the drawings as aforesaid and these costs shall be deemed included in the tendered Sum.

It will be accepted that the Tenderer made provision in his tendered Sum for the cost of the above. No additional payment will be made by the Client.

PS A 5.4.2 PROTECTION DURING CONSTRUCTION

The Contractor shall take all reasonable precautions and arrange its operations in such a manner as to prevent damage occurring to all 'Known Services' during the period which the Contractor has occupation and/or possession of the site.

Services left exposed shall be suitably protected from damage and in such a manner as will eliminate any danger arising there from for the public and/or workmen, all in accordance with the requirements of the prevailing legislation and related regulations.

PS A 5.4.3 ALTERATIONS AND REPAIRS TO EXISTING SERVICES

Unless the contrary is clearly specified or ordered, the Contractor shall not carry out alterations to existing services. When this is necessary, the Contractor shall inform the Engineer, who will either make arrangements for such work to be executed by the owner of the service, or instruct the Contractor to make such arrangements himself.

When the Contractor damages existing services, he shall immediately inform the Engineer or the relevant authority and obtain instructions as to who should carry out repairs. In urgent cases the Contractor shall take the necessary steps to minimize damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted.

The Employer will accept no liability for damages due to a delay in having such alterations or repairs affected. The Contractor shall provide all reasonable opportunity, access and assistance to persons carrying out alterations or repairs of existing services.

PS A 5.7 **SAFETY**

ADD THE FOLLOWING:

"Before acceptance of the Contract, an Occupational Health and Safety Management File must be handed over to the Engineer, acceptable to Department of Labour and maintained for the duration of the project.

Pursuant to the provisions of the Conditions of Contract and without it in any way limiting the Contractor's obligations there under, the Contractor shall at its own expense, except only where specific provisions, if any, is made in the Contract for reimbursement to the Contractor in respect of particular items.

a) Provide to its Employees on the site of the Works, all safety materials, clothing and equipment necessary to ensure full compliance with the provisions of the Occupational Health and Safety Act (Act No, 85 of 1993) as amended, hereinafter referred to as the Act, at all times and shall institute appropriate and effective measures to ensure the proper usage of such safety materials, clothing and equipment, at all times; and

b) Provide, install and maintain on all barricades, safety signage and other measures to ensure the safety of workmen and all persons in, on and around the site, as well as the general public; and

c) Implement on the Site of Works, such procedures and systems and keep all records as may be required to ensure compliance with the requirements of the Act at all times; and

d) Implement all necessary measures as to ensure compliance of the Act by all Sub-Contractors engaged by the Contractor and their employees engaged on the Works; and
e) Comply fully with all other requirements pertaining with safety as may be specified in the Contract.

The Employer and the Engineer shall be entitled, although not obliged, to make such inspections on the /site as they shall deem appropriate, for the purpose of verifying the Contractor's compliance with the requirements of the Act. For this purpose, the Contractor shall grant full access to the Site of all parts of the Site and shall co-operate fully in such inspections and shall make available for inspection all such documents and records as the Employer's and/or Engineer's representative may reasonably require.

Where any such investigations reveal or where it comes to the Engineer's attention that the Contractor is in any way in breach of the requirements of the Act or is failing to comply with the provisions of this Clause, the Engineer shall, in accordance with the provisions of Clause 5.11 of the General Conditions of Contract, be entitles to suspend progress on the Works or any part thereof until such time as the Contractor has demonstrated to the satisfaction of the Engineer, that such breach has been rectified.

The Contractor shall have no grounds for a claim against the Employer for extension of time and/or additional costs if the progress of the Works or any part thereof is suspended by the Engineer in terms of this Clause and the Contractor shall remain fully liable in respect of the payment of penalties for late completion in accordance with the provisions of Clause 5.13.1 of the General Conditions of Contract should the Contractor fail to complete the Works on or before the specified Due Date for Completion in consequence of the suspensions.

Persistent and repeated breach by the Contractor of the requirements of the Act and/or this Clause shall constitute grounds for the Engineer to act in terms of Clause 9.2 of the General Conditions of Contract and for the Employer to cancel the Contract in accordance with the further provisions of the said Clause 9.

All work and particularly work carried out in the proximity of buildings, bridges, tanks or other structures shall be carried out in conformance with the regulations framed under the Occupational Health and Safety Act, 1993 and the Minerals Act (Act 50 of 1991), including shoring where necessary, to ensure the safety of structures that are at risk.

The Contractor shall make available for the duration of the contract safety helmets, gumboots and any other necessary safety equipment for sole use by the Engineer and his representative(s)."

ADD THE FOLLOWING NEW SUB-CLAUSES TO CLAUSE 5:

"PS A 5.9 **CONTRACTUAL INSPECTION**

Written inspections must be obtained for each house in the following phases:

a) Reinforced Foundation Trenches
b) Floor
c) Brick work to roof
d) Roof
e) Practical completion
f) Final completion

Failing to comply with the written request on such house might stop until satisfactory inspection was done.

PS A 5.10 **SECURITY**

PS A 5.10.1 SECURITY OF CONTRACTOR'S PLANT AND PRESONNEL

"The Contractor shall note that, notwithstanding any insurance which may be by the Employer, the Contractor shall be responsible for the effecting of safety and security of plant and personnel on and around the site of the works and that no claims in this regard will be entertained by the Employer.

Provision must be made by the Contractor in the Schedule of Quantities for effecting of safety and security of plant and personnel on and around the site of the Works and shall be deemed to include full compensation for all necessary to effect the safety and security, including, where necessary, the employment of the services of a security organization."

PS A 5.11 **SITE MEETINGS**

"The Contractor or its authorized agent will be required to attend regular site meetings, which shall normally be held twice a month on dates and at times determined by the Engineer, but in any case whenever reasonably required by the Engineer. Unless otherwise indicated in the Contract or instructed by the Engineer, such meetings shall be held at the Contractor's offices on the Site. At such monthly meetings, matters such as general progress on the Work, quality of work, problems, claims, payments and safety, etc. shall be discussed but no matters concerning the day-to-day running of the Contract."

A 6 TOLERANCES

ADD THE FOLLOWING SUB-CLAUSE TO CLAUSE 6:

"PS A 6.1 **USE OF TOLERANCES**

No guarantee is given that the full specified tolerances will be available independently of each other and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified, or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorized' dimensions. These specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Engineer, without any allowance for the specified tolerances. Except if otherwise specified, all measurements for determining quantities for payment will be based on the 'authorized' dimensions.

If the work is constructed in accordance with the 'authorized' dimensions plus or minus the tolerances allowed, the calculation of quantities will be based on the 'authorized' dimensions, regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the 'authorized' dimensions plus or minus the tolerances allowed, the Engineer may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the 'authorized' dimensions and where the actual dimensions are less than the 'authorized' dimensions minus the tolerance allowed, quantities for payment shall be calculated based on the actual dimensions as constructed."

A 7 TESTING

PS A 7.1 PRINCIPALS

PS A 7.1.2 STANDARD OF FINISHED WORK NOT TO SPECIFICATION

INSERT THE WORDS "or checks by an approved laboratory…" *AFTER THE WORDS* "Where the Engineer's checks …" *IN THE FIRST LINE OF SUB-CLAUSE 7.1.2.*

PS A 7.2 APPROVED LABORATORIES

REPLACE THE CONTENTS OF SUB-CLAUSE 7.2 WITH THE FOLLOWING:

"Unless otherwise specified in the relevant Specification or elsewhere in the Project Specifications, the following shall be deemed to be approved laboratories in which design work, or testing required in terms of a Specification for the purposes of acceptance by the Engineer of the quality of materials used and/or workmanship achieved, may be carried out:

a) Any testing laboratory certified by the South African National Accreditation System (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract;

b) Any testing laboratory owned, managed or operated by the Employer or the Engineer;

c) Any testing laboratory established and operated on the site by or on behalf of the Employer or the Engineer.

SANS 1200 AB: ENGINEER'S OFFICE

AB 3 MATERIALS

PS AB 3.2 **OFFICE BUILDINGS**

The contractor shall provide one board room with a table and chairs to accommodate at least 10 people for site meeting purposes.

AB 4 PLANT

PS AB 4.1 **TELEPHONE**

The Contractor’s contract manager and site agent must have a cellular phone available as contact between him and the engineer. The site agent must always be available on his cellular phone except during long weekends and the Christmas break where special arrangements will be required.

AB 5 CONSTRUCTION

PS AB 5.5 **SURVEY ASSISTANTS**

Two semi-skilled labourers with relevant experience will be required to assist the engineer if required.

PS AB 5.6 **SURVEY EQUIPMENT**

The Contractor shall provide the following tested and approved survey equipment (a certificate will be required) on site for the duration of the contract and for the use of the Engineer whenever needed:

a) one automatic level plus tripod and level staff.

b) one 5m and one 50m measuring tape

c) Diverse surveyor’s necessities like paint, pegs, etc.

The above-mentioned equipment may by arrangement be shared between the Contractor and the Engineer's representative. It must be maintained and kept in good working order for the duration of the contract.

SANS 1200 C: SITE CLEARANCE

PS C 5 CONSTRUCTION

PS C 5.2 **CUTTING OF TREES**

PS C 5.2.3 PRESERVATION OF TREES

PS C 5.2.3.2 Individual Trees

The Contractor shall pay a penalty of R5,000 for each Kameeldoring (Acacia Erioloba) tree damaged or removed by him without the written permission of the Engineer and permit issued to do so.

PS C 5.4 **GRUBBING**

Grubbing shall consist of the grubbing out of roots and stumps to a depth of at least 600 mm below cleared surface level.

SABS 1200 D: EARTHWORKS

PS D 5 CONSTRUCTION

PS D 5.1.2 **EXISTING SERVICES**

PS D 5.1.2.4 DETECTION, LOCATION AND EXPOSURE

ADD THE FOLLOWING SUB-CLAUSE TO D 5.1.2.2

If existing services are not shown on the drawings but the existence thereof can be reasonably expected, the Contractor shall, in conjunction with all relevant authorities, determine the exact depth and location of such services before the commencement of construction.

After locating the exact position of services, whether indicated on the drawing or not, such services shall be deemed to be known services and the contractor shall be liable for all costs and subsequently costs arising from the damage thereof as a result of the Contractor's activities. These services must also be indicated on the "As-built" drawings.

PS D 5.2 **METHODS AND PROCEDURES**

PS D 5.2.3 **PLACING AND COMPACTION**

PS D 5.2.3.1 DETECTION, LOCATION AND EXPOSURE

SUBSTITUTE THE FOLLOWING SUB-CLAUSE TO D 5.2.3.1

The material of each embankment shall, unless otherwise approved, be deposited in layers of thickness, before compaction, not exceeding 300mm.

With

The material of each embankment shall, unless otherwise approved, be deposited in layers of thickness, before compaction, not exceed **150mm.**

SABS 1200 DB: EARTHWORKS (PIPE TRENCHES)

DB 3 MATERIALS

PS DB 3.1 **CLASSES OF EXCAVATION**

ADD THE FOLLOWING:

"In case of hand excavation, the following classification method will be used:

PS DB 3.1.1 SOFT EXCAVATION

Soft excavation is classified as material that can be removed with a shovel and pick. Should this material be subjected to a DCP test, the density will be such that penetration will not be less than 10 mm per impact for a layer of 150 mm thick.

PS DB 3.1.2 INTERMEDIATE EXCAVATION

Intermediate excavation is classified as material that can be removed with a pick and shovel where penetration of a DCP apparatus is less than 10 mm per impact.

PS DB 3.1.3 HARD EXCAVATION

Hard excavation is classified as material that can only be removed with pneumatic equipment, edges, splitting or explosives."

PS DB 3.7 **SELECTION**

ADD THE FOLLOWING:

"Where suitable backfill material occurs in layers of 150 mm or more, this material should be separated during excavation from unsuitable material and used for backfilling. Should this material not be utilized in this manner, an estimate will be made of the available quantities and deducted from the imported backfill material."

DB 5 CONSTRUCTION

PS DB 5.6 **BACKFILLING**

PS DB 5.6.4 REMOVAL OF INTERMEDIATE AND HARD ROCK MATERIAL

ADD THE FOLLOWING:

"It is the responsibility of the Contractor to flatten out any spoil heaps and to dump subsequent loads on top. The Contractor will not be allowed to just dump spoil material on the horizontal surface."

SABS 1200 G: CONCRETE (STRUCTURAL)

G 3 MATERIALS

PS G 3.2 **CEMENT**

PS G 3.2.2 ALTERNATIVE TYPES OF CEMENT

REPLACE THE CONTENTS OF THIS SUB-CLAUSE WITH THE FOLLOWING:

"Only ordinary Portland cement shall be used.

If the Contractor wishes to use any other type of cement, he shall obtain the Engineer's prior written approval."

PS G 3.2.3 STORAGE OF CEMENT

ADD THE FOLLOWING:

"Cement shall not be stored for longer than 12 (twelve) weeks without the Engineer's permission."

PS G 3.4 **AGGREGATES**

ADD THE FOLLOWING:

"All aggregates used must comply with SABS 1083. No aggregates with a shrinkage exceeding 130% will be allowed."

PS G 3.4.1 *ADD THE FOLLOWING TO SUB-CLAUSE G 3.4.1:*

"PS G 3.4.1.1 COURSE AGGREGATES

PS G 3.4.1.1.1 Coarse aggregates must comply with the 10% FACT requirement for durability."

PS G 3.4.1.1.2 The nominal aggregate size is the smaller of the 37,5 mm maximum particle size and 25% of slab thickness.

PS G 3.4.1.1.3 Should the nominal aggregate size exceed 26,5 mm, the coarse aggregate shall be a mixture of *b*-aggregate greater than 26,5 mm and an *a*-aggregate smaller than 26,5 mm."

PS G 3.4.1.2 FINE AGGREGATES

PS G 3.4.1.2.1 Fine aggregate may not contain silicone particles in excess of 40%.

PS G 3.4.1.2.2 Should the FM of the fine aggregate vary by more than ± 0,2 during construction, modifications to the mix design should be done.

PS G 3.4.1.3 MIX DESIGN

Special consideration should be given to the minimizing of bleeding during the mix design. If bleeding is foreseen, special attention should be given to the fine aggregate.

PS G 3.4.1.4 ADMIXTURES

The use of admixtures should be limited. Should admixtures be utilized, special attention should be given to possible shrinkage. The uses of any admixtures are to be approved by the Engineer. See also G 3.5.

G 4 PLANT

PS G 4.1 **GENERAL**

ADD THE FOLLOWING NEW SUB-CLAUSE:

"PS G 4.1.1 MINIMUM PLANT

The Contractor shall have the following minimum plant available and in sound working order:

a) 2 (Two) concrete mixers, each of sufficient capacity to complete a section of floor slabs between construction joints within 4 (four) hours without interruption.

If the plant used for placing concrete for the structure is electrically or mechanically powered, the Contractor shall also provide some other approved non-electrical powered standby means for placing concrete at an adequate rate in the event of a power or mechanical failure of the main plant.

When the Contractor elects to utilize a crane during the construction period, he shall communicate with the Engineer in good time to allow for such positioning of the crane."

PS G 4.5 **FORMWORK**

PS G 4.5.1 DESIGN

ADD THE FOLLOWING:

"All formwork or scaffolding required for any part of the Works shall be designed by the Contractor and before commencing with the erection of any formwork or scaffolding, the Contractor shall submit the methods he proposes to use to the Engineer for approval. The Engineer has the authority to order alterations to the design or the sizes of any part of the formwork or scaffolding. The Contractor shall check the safety and suitability of all such alterations. The fact that the Engineer has approved or altered any part of the formwork or scaffolding shall not be construes as relieving the Contractor of his responsibility with regard to the strength and stability of the formwork or scaffolding."

PS G 4.5.3 TIES

ADD THE FOLLOWING:

"No plugs, bolts, ties or clamps of any description used to hold the formwork will be allowed to project into or through the concrete unless expressly approved by the Engineer.

Only approved tie-rods consisting of solid rods (that remain embedded in the concrete) and with removable ends shall be used to hold the formwork of the walls. The removable tie-rod ends shall facilitate removal without damage to the concrete and no permanently embedded parts of such tie-rods shall have less than 50 mm of cover to the finished concrete surface.

The cavities left in the concrete when the tie-rod end cones are removed shall be soundly caulked with a cement mortar to which an approved shrinkage-reducing agent has been added and shall be neatly finished to a smooth surface uniform with that of the surrounding concrete.

The cost of supplying special tie-rods as well as the filling of cavities left by the tie-rod cones shall be included in the tendered Sum.

On no account shall formwork be secured to reinforcing bars."

G 5 CONSTRUCTION

PS G 5.1 REINFORCEMENT

PS G 5.1.2 FIXING

ADD THE FOLLOWING:

"The Engineer will inspect the reinforcing after it has been fixed in place, the formwork has been cleaned, cover blocks have been positioned and before concreting commences.

Welding of reinforcing steel will not be permitted."

PS G 5.1.3 COVER

ADD THE FOLLOWING:

"The distance between pipes in the concrete and the reinforcing steel shall nowhere be less than:

a) 40 mm or

b) 5 mm plus the maximum size of the coarse aggregate, whichever is the largest."

PS G 5.2 FORMWORK

PS G 5.2.1 CLASSIFICATION OF FINISHES

c) SPECIAL

ADD THE FOLLOWING:

"This finish is obtained by first giving the surface a smooth finish with the joints between formwork panels forming an approved regular pattern suitable for the appearance of the structure. All projections shall then be removed, irregularities repaired and the surface rubbed or otherwise treated until it is smooth with an even texture, appearance and colour.

If the finish of exposed surfaces does not comply with the requirements for uniformity of the texture and appearance, the Contractor shall, when instructed to do so by the Engineer, rub down the exposed surfaces of the entire structure or any part thereof as specified below, entirely at his own cost. All repairs must be completed before the rubbing commences.

The surface shall be saturated with water for at least 1 (one) hour. The initial rubbing of the face shall be carried out with a medium coarse carborundum stone, together with a small amount of mortar of the same cement/sand ratio as the concrete being repaired. Rubbing shall continue until all form marks, projections and irregularities have been removed and a uniform surface has been obtained. The paste produced by the rubbing shall be kept in place. The final rubbing shall be carried out with a fine carborundum stone and water. This rubbing shall continue until the entire surface has a smooth, even texture and is uniform in colour. The surface shall subsequently be washed with a brush to remove surplus paste and powder."

PS G 5.3 HOLES, CHASE AND FIXING BLOCKS

ADD THE FOLLOWING:

"Cover blocks for reinforcing and fixtures may be placed into the concrete provided that neither the strength nor any other desirable characteristic (such as the appearance) of the concrete section is affected or impaired in the opinion of the Engineer."

PS G 5.5 **CONCRETE**

PS G 5.5.1 QUALITY

PS G 5.5.1.5 DURABILITY

ADD THE FOLLOWING:

"The exposure conditions of the concrete are classified as 'severe'."

PS G 5.5.1.7 STRENGTH CONCRETE

ADD THE FOLLOWING:

"The concrete mixes for the works shall be designed by the Portland Cement Institute or a similar approved laboratory."

PS G 5.5.3 MIXING

PS G 5.5.3.2 READY-MIX CONCRETE

ADD THE FOLLOWING:

"Ready-mixed concrete may be used on the site. The Contractor shall take samples for testing from every load delivered to the Site."

G 6 TOLERANCES

PS G 6.2 **PERMISSIBLE DEVIATIONS**

PS G 6.2.3 SPECIFIED PERMISSIBLE DEVIATIONS (PDs)

ADD THE FOLLOWING:

"Degree-of-accuracy 1 is applicable.

Every specified permissible deviation is binding in itself. The cumulative effect of permissible deviations will not be considered. The maximum permissible vertical deviation is subject to the other permissible deviations."

REPLACE SUB-CLAUSE 6.2.3(d)(5) WITH THE FOLLOWING:

Vertically, subject to a maximum of:

Permissible Deviation		
Degree of Accuracy		
III	II	1
mm	mm	mm
5 50	3 30	2 10

G 7 TESTS

PS G 7.1 FACILITIES AND FREQUENCY OF SAMPLING

PS G 7.1.1 FACILITIES

ADD THE FOLLOWING:

"The Contractor shall provide sufficient storage capacity for the concrete cubes and shall test the cubes by means of an approved, calibrated cube testing press in a manner approved by the Engineer or shall arrange to have them tested by an approved laboratory.

The cost of testing, including the cost of sampling, storage and transport of samples shall be included in the tendered Sum."

PS G 7.3 ACCEPTANCE CRITERIA FOR STRENGTH CONCRETE

ADD THE FOLLOWING:

"Test results obtained from the Supplier of ready-mixed concrete will not be acceptable for evaluation on terms of Sub-Clause 7.3 but samples for testing shall be taken of such concrete at the point of placing."

SABS 1200 L: MEDIUM PRESSURE PIPES

L 2 INTERPRETATION

PS L 2.4 **ABBREVIATIONS**

ADD THE FOLLOWING TO SUB-CLAUSE L 2.4:

"FC: Fibre Cement

HDPE: High density Polyethylene pipes"

PS L 3.8.4 LOOSE FLANGES

ADD THE FOLLOWING:

"Bolts shall be to SANS 135."

L 3 MATERIALS

PS L 3.10 **VALVES**

ADD THE FOLLOWING NEW SUB-CLAUSE:

"PS L 3.10.1 GATE VALVES

All gate valves are to comply with SABS 1200 LK; must be of the "waterworks" type and be suitable for a working pressure of 16 Bar. All valves to be clockwise (right hand) closing and the direction of opening and closing should be permanently displayed on the valve casing. Valves should be of the non-rising spindle type and be equipped with a square cap-top suitable for use with a valve spanner. All valves will be tested for water tightness. One valve spanner is to be provided for every 10 (ten) valves or less."

PS L 5.1.4 DEPTH AND COVER

ADD THE FOLLOWING NEW SUB-CLAUSE:

"PS L 5.1.4.6 A minimum cover of 500 mm is required over the top of pipes inside erven; 800 mm in street reserves, underneath roads or as specified by levels on long sections and plans. Where instructed, pipes are to be encased in concrete."

L 7 TESTING

PS L 7.3 **STANDARD HYDRAULIC PIPE TEST**

PS L 7.3.1 TEST PRESSURE AND TIME OF TEST

PS L 7.3.1.1 TEST PRESSURE

ADD THE FOLLOWING:

"Before any connections are made, pipes are to be tested to 1.5 times the working pressure of the specific class of pipe. After connected to existing pipelines or fittings, all costs associated with the excavation, removal of fittings, cutting in, joining, labour and complete finishing are deemed to be included in the tendered price."

SABS 1200 LB: BEDDING PIPES

LB 3 MATERIAL

PS LB 3.1 **SELECTED GRANULAR MATERIAL**

ADD THE FOLLOWING:

"Notwithstanding the provisions in Sub Clause LB 3.1, the selected granular material shall be singularly graded between 0,6 mm and 13 mm."

PS LB 3.2 **SELECTED FILL MATERIAL**

ADD THE FOLLOWING:

"Notwithstanding the requirements of Sub Clause LB 3.2, the selected fill material for storm water pipelines in all areas, excluding roadways, shall have a PI not exceeding 18. This amendment is not applicable to sewers and water mains."

PS LB 3.3 **BEDDING**

ADD THE FOLLOWING:

"Class C bedding as applicable to rigid pipes is required. Material for the Class C bedding will only be imported where insufficient suitable material is obtainable from the excavated material.

Where large diameter UPVC pipes (> 300 mm diameter) are utilized, compaction on either side of the pipe should be carefully done in layers not exceeding 100 mm in thickness to ensure that the bedding and pipe act as a "pipe-soil system" to prevent ovality of the pipes occurring during backfilling.

The Contractor shall be responsible for finding a source of suitable bedding material."

LB 3.4 **SELECTION**

PS LB 3.4.2 SUITABLE MATERIAL NOT AVAILABLE FROM THE TRENCH EXCAVATION

ADD THE FOLLOWING:

"Should there, during selective excavation methods with the correct tools, still be insufficient suitable material available for the bedding, material must be imported. The Contractor will find a suitable source of bedding material and submit it to the Engineer for approval.

The finding of a suitable source/quarry/ borrow pit, loading, placement and compaction of the imported material is deemed to be included in the rate tendered by the Contractor."

LB 5 CONSTRUCTION

PS LB 5.1.4 COMPACTION

ADD THE FOLLOWING:

"After excavation of the trench, the trench bottom will be levelled by means of a rake and compacted. Compaction may be conducted by hand tools. The required compaction to be achieved must exceed or equal 90% mod AASHTO density.

After installation of the pipes, similar compaction must be applied to the blanket material. Now the final backfilling to 50 mm above the adjacent soil levels may be carried out. The total working area shall then be finished off. Only when specified by the Engineer will sidewalks be finished to specific standards and levels.

Where streets and roads are crossed, compaction of the bedding and backfill must be conducted by mechanical means to achieve a density of 98% mod AASHTO density."

PS LB 5.2.1(c) CLASS A BEDDING

AMEND THE SUB-CLAUSE WITH THE FOLLOWING:

"The main fill shall not be placed in any section until the bedding cradle in that section has achieved a compressive strength of at least 15 MPa or a period of 5 days has elapsed after the placing of the concrete in that section, whichever occurs first."

SANS 1200 LD: SEWER

LD 3 MATERIALS

PS LD 3.5 **MANHOLES, CHAMBERS, ETC.**

PS LD 3.5.2 PRE-CAST CONCRETE SECTIONS

ADD THE FOLLOWING TO SUB-CLAUSE LD 3.5.2:

"The joint between the manhole and the cement cover must be effectively sealed with a sealant so that no ground water or storm water can filter in. The lifting holes in the manholes must be sealed with epoxy after installation but before back filling.

Benching must be made from concrete fabricated from dolomitic aggregate."

PS LD 3.5.3 PRE-FABRICATED FC MANHOLES

REPLACE SUB-CLAUSE LD 3.5.3 WITH THE FOLLOWING:

"Pre-fabricated FC-manholes must comply with the requirements of fibre strengthened cement sewer pipes according to SANS 819 with inside diameter of 1 000 mm. All manholes must be dipped in bitumen.

The joint between the manhole and the cement cover must be effectively sealed with a sealant so that no ground water or storm water can filter in. The lifting holes in the manholes must be sealed with epoxy after installation but before back filling.

Benching must be made from concrete fabricated from dolomitic aggregate."

PS LD 3.5.7 STEP IRONS

REPLACE SUB-CLAUSE LD 3.5.7 WITH THE FOLLOWING:

"Step irons shall be manufactured of at least 12 mm tensile strength armour-plated steel with a polypropylene casing. Attaching of step irons in manholes must be done according to the instructions and requirements of the Manufacturers."

PS LD 3.6 **MARKER POSTS**

ADD THE FOLLOWING TO SUB-CLAUSE LD 3.6:

"Marker posts consisting of a 1 m length kerbing that is planted vertically above the end cap of the erf connection. The end of the kerbing must be 400 mm above natural ground level and painted red, while the bottom is connected to the end cap with a 3 mm wire."

LD 5 CONSTRUCTION

PS LD 5.4 **CONNECTIONS TO MANHOLES**

ADD THE FOLLOWING TO SUB-CLAUSE LD 5.4:

"Where a pipe lies at a gradient of 1:10 (that is 5,71°) an 11¼° bend cannot be used as a bend with an angle greater than the gradient of the pipe will produce a low point. It is the Contractor's responsibility to shorten the bend to form the desirable angle.

For pipes with a gradient of 1:10 the angle can be taken up by a coupling in the manhole and, where necessary, also by a coupling between the short length and first full pipe."

LD 5.6 **MANHOLES, INSPECTION CHAMBERS, ETC.**

PS LD 5.6.1 GENERAL

REPLACE SUB-CLAUSE LD 5.6.1(A) WITH THE FOLLOWING:

"Manholes on new pipes shall be of FC, brick or concrete and built as indicated on the drawings.

Final cover levels of manholes must be as follows:

1.	In roads and on pavements	:	level with the road or pavement
2.	All other areas	:	50 mm above final level

If the position of a manhole is such that it is situated in a low or a hole where there is a danger of storm water filtering into the cover, the final level of the manhole must be elevated to such a level where storm water infiltration is no longer a danger, or to a level previously approved by the Engineer.

If the manhole cover for FC or concrete manholes must be elevated with more than 300 mm, FC or concrete rings with the same diameter as the manhole, and attached to the fibre cement or concrete manhole with epoxy, must be used."

PS LD 5.6.2 BENCHING

ADD THE FOLLOWING TO SUB-CLAUSE LD 5.6.2.3:

"Benching will be constructed and finished off as indicated on the drawings."

PS LD 5.9 **CONNECTING SEWERS**

ADD THE FOLLOWING TO SUB-CLAUSE LD 5.9.1:

"Plot connections must be installed in the exact position as indicated on the drawings. Where mains go through plots the erf connection must end 1 m from where the manifold and 45° bend ends on the erf. Where mains are outside the plot the erf connection must be 1 m inside the plot border, and sealed with an end cap.

Unless stipulated differently on the drawings or specified by the Engineer, all connecting sewers must be laid with a gradient of 1:60."

LD 7 TESTING

PS LD 7.1 **GENERAL**

ADD THE FOLLOWING TO SUB-CLAUSE LD 7.1.5:

"All tests shall be repeated after back filling of pipe trenches has been completed."

PS LD 7.2.6 WATERTIGHTNESS OF MANHOLES

ADD THE FOLLOWING TO SUB-CLAUSE LD 7.2.6:

"On completion of a manhole, the Engineer might call for a water tightness test, at the Contractor's expense, as follows:

Manholes must be filled to the brim with water and left to stand for 60 minutes. After the water loss has been filled up again, the water measured over 60 minutes may not be more than the volume given in the comparison below. The water level must be filled up every 20 minutes. Filling up volume must be measured. Loss must be determined with comparison 1, also see Table below.

I = 0,6.D – (1)

I = Water loss in l/hour/metre depth

D = manhole diameter in m.

Should the manhole leak more water than given in comparison 1, the manhole must be water proofed and re-tested. The Contractor cannot claim any additional compensation.

Manhole must be tested for water proofing **prior** to starting back filling.

Manhole diameter (mm)	Water loss over 60 minutes/m depth (ℓ)
750	0,405
1 000	0,630
1 200	0,720

SANS 1200 LF: ERF CONNECTIONS (WATER)

PS LF 3 MATERIAL

LF 3.1 **PIPES, FITTINGS AND COUPLINGS**

PS LF 3.1.1 COPPER PIPE

SCRAP SUB-CLAUSE LF 3.1.1 AND REPLACE WITH THE FOLLOWING:

"Copper pipe shall be "Maksel" or similar approved Class O according to SANS 460 with coupling of capillary silver flux."

PS LF 3.1.3 GALVANIZED SOFT STEEL PIPES (GSS)

SCRAP SUB-CLAUSE LF 3.1.3 AND REPLACE WITH THE FOLLOWING:

"All wrought iron pipe sleeves shall comply with SANS 509 and the hot dip galvanizing process to SANS 763. All screw-threads shall be supplied in in accordance with BS 21.1973/ISO-R7".

PS LF 3.1.4 HIGH-DENSITY POLYETHYLENE PIPES (HDPE)

SCRAP SUB-CLAUSE LF 3.1.4 AND REPLACE WITH THE FOLLOWING:

"High-density polyethylene pipe (HDPE) Type IV (Class 10) with compression accessories for HDPE pipe shall be used for water distribution on plots. The HDPE pipes must comply with SANS 533 and accessories to ISO/DIS 3458 (Class 16)".

PS LF 3.1.5 OPVC OR MPVC PIPES

SCRAP SUB-CLAUSE LF 3.1.5 AND REPLACE WITH THE FOLLOWING:

"PVC pipes and accessories shall comply with the applicable requirements of SANS 966 for, in the case of pipes, the class specified or mentioned in the Bill of Quantities and shall have applicable approved welded or PVC compression type couplings. Cast-iron accessories shall comply with SANS 664. There will be specified in the Bill of Quantities if OPVC or MPVC pipes must be used".

PS LF 3.1.7 SADDLES

ADD THE FOLLOWING TO SUB-CLAUSE LF 3.1.7:

"Saddles shall be of polypropylene or similar approved alternatives for pipes not smaller than 63 mm in diameter. Compression T-pieces shall be used for erf connections from HDPE pipes".

PS LF 3.1.8 FIBRE CEMENT (FC) PRESSURE PIPES

ADD NEW SUB-CLAUSE LF 3.1.8:

"C.I.D and C.O.D. fibre cement (FC) pressure pipes shall be supplied according to SANS 1223".

PS LF 3.1.9 LIGHT-WEIGHT HDPE PIPES

ADD NEW SUB-CLAUSE LF 3.1.9:

"Light-weight low pressure HDPE pipe shall comply with ISO 9002, ISO DP 9969, ISO / DIS 6259 and SANS 533 and supplied to the minimum stiffness as specified.

The laying of pipes must be **strictly** according to the Manufacturer's specifications. "Waterproof" or similar approved sockets must be used up to 800 mm diameter pipe in-situ welded pipes must be used for larger than 800 mm".

PS LF 5 CONSTRUCTION

PS LF 5.2 **LAYING OF MAIN LINE TO ERF**

PS LF 5.2.2 PIPE LAYING

"Erf connections shall be bedded on Class B bedding, with the thickness of the bedding cradle 100 mm.

Erf connections must not be laid shallower than 450 mm and deeper than 600 mm under the final road level or kerb height.

Under roads trenches shall be backfilled according to PS DB 3.6."

C 3.3:

ENGINEERING DRAWINGS

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 3.3: ENGINEERING DRAWINGS

C 3.3.1 DRAWINGS ISSUED WITH THIS DOCUMENT

The drawing list on the next page are applicable to the Contract and are issued with this tender document and will form part of the Contract Documents as **Volume 2.**

C 3.3.1.1 DESIGN BY ENGINEER

The Engineer, on behalf of the Employer, has designed the permanent works to be executed under this Contract. **Where specifications on the drawings deviate from the minimum housing specifications as stated in clause C 3.1.10 of the Scope of works, the contractor shall adhere to the specifications as per clause C3 3.1.10.**

C 3.3.1.2 "RECORD" DRAWINGS

The Contractor shall record all amendments and deviations from the drawings. This shall be done on a set of drawings specially allocated for this purpose. These drawings shall be handed to the Engineer on completion of the Works. The Completion Certificate **will not be issued** without this information having been submitted to the Engineer.

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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LIST OF DRAWINGS

2024-NABABEEP-SC-101-01	40m² BNG House: Foundation Layout and Details
2024-TYPICAL-SC-103-1-Model	Typical Joint Details and Roof Anchorage Details
2024-NABABEEP-SC-104-1	40m² BNG House: Foundation Layout and Details
RG 101 REV 6	40m² BNG House: Plans, Sections and Elevations
RG 102 REV 6	40m² BNG House: Schedules / Elevations
2024-CND-SC-104-0	Septic Tank
NAMAKWA-ARCH-LO-01-1	45m² BNG House: Typical Disabled House Unit
NAMAKWA-ARCH-LO-02-1	45m² BNG House: Typical Disabled House Unit

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C 3.4:

MANAGEMENT

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

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THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 3.4 MANAGEMENT

C 3.4.1 CONSTRUCTION PROGRAMME

C 3.4.1.1 FORMAT

In addition to the requirements of the General Conditions of Contract, the Contractor's programme shall:

a) Be in a bar chart form;
b) Show the various activities related to a time-chart indicating the sequence of performing the works comprising the contract;
c) Indicate critical path activities.

C 3.4.1.2 ALLOWANCES

The Contractor's programme shall take the following into consideration:

a) Expected weather conditions;
b) Special non-working days as stipulated in the Tender;
c) The accommodation and safeguarding of traffic.

C 3.4.2 PROCEDURES DURING CONSTRUCTION

The Contractor to supply, keep up to date and keep the following documents on site:

C 3.4.2.1 A full set of the latest construction drawings to be on site permanently for use by the Engineer and others.

C 3.4.2.2 The Contractor to supply and keep on site an A4 triplicate Site Instruction Book.

C 3.4.2.3 The Contractor to supply an A4 duplicate diary on Site. The Contractor to keep daily dairy, with at least the following information:

(i) Weather conditions;
(ii) Record of any accidents and details;
(iii) Record of construction activities of the day;
(iv) Information of any strikes;
(v) Any other relevant information.

C 3.4.3 SITE FACILITIES AVAILABLE

C 3.4.3.1 SOURCE OF WATER SUPPLY

The Contractor shall make his own arrangements with the relevant Authorities for obtaining water for construction and domestic purposes as well as toilet facilities as required by the Health and Safety Regulations. The Contractor shall pay for the water at the rates and tariffs as determined by the Local Authority, including the cost of supplying a temporary standpipe as required.

C 3.4.3.2 SOURCE OF POWER SUPPLY

The Contractor shall make his own arrangements for obtaining power and be responsible for all costs involved.

C 3.4.3.3 LOCATION OF CAMP AND DEPOT

The Contractor must make his own arrangements for a Camp Site at the location of the Works. The location of the Contractor's camp, including the material storage areas, will be subject to the Engineer's approval.

The Contractor shall make his own arrangements for the accommodation of labour.

C 3.4.3.4 SPOIL SITES

No indiscriminate spoiling of material will be allowed.

All unsuitable surplus material shall be removed from the Site and the Contractor shall make his own arrangements with regard to a suitable spoil site.

C 3.4.4 ABNORMAL RAINFALL

Refer to C 3.1.6.3.10

C 3.4.5 TIME RELATED ITEMS

An approved extension of time (other than an extension of time granted in terms of the Special Conditions of Contract) will entitle the Contractor to submit a claim for additional payment. Any such approved additional payment will be made for proven additional costs for each relevant time related item.

C 3.4.6 NAMEBOARD

No name board will be provided.

C 3.4.7 PROTECTION FROM STORMS AND FLOODS

The tendered Sum shall be deemed to be full compensation for any damage to the Works due to storms, rain, floods, storm water or subsurface water.

Under no circumstances shall the Contractor be entitled to any additional payment in this regard. The Contractor shall accept full responsibility and costs to handle water from any source on his Site.

C 3.4.8 EXISTING SERVICES

The Engineer will provide information regarding the location of existing utility services, but the Engineer does not accept responsibility for the accuracy of this information. The Contract shall make further investigations to determine the exact locality, size and depth of existing services before commencing construction to ensure that no damage is done to any service.

The Contractor shall take all reasonable precautions to protect existing services during construction and during relocation of such services.

Any pipe, cable, conduit or other services of any nature whatsoever indicated to the Contractor and subsequently damaged as a result of the Contractor's operations shall be repaired and reinstated forthwith by the Contractor or by the authority concerned, all at the expense of the Contractor and to the satisfaction of the Engineer.

Whenever services are encountered which interfere with the execution of the works and which require to be moved and relocated, the Contractor shall advise the Engineer, who will determine the extent of the work, if any, to be undertaken by the Contractor in removing, relocating and reinstating such services.

The Contractor shall work in close co-operation with private owners or public authorities controlling services, which have to be protected, removed or relocated. No undertaking can be given as to the exact time of commencement or of completion of the relocation, removal or protection of services, which have to be carried out by the owners or controlling authorities themselves. The Contractor is to make allowance in his programme for this contingency.

Where services have to be removed or relocated or protected, the Engineer will at the request of the Contractor, notify or negotiate with the owners or Authorities controlling those services, but the Engineer does not accept liability for any costs resulting from delays in the relocation, removal or protection of any service, or delays as a result of delays in negotiations.

It will be accepted that the Tenderer made provision in his tendered Sum for the cost of the above. No additional payment will be made by the Client.

C 3.4.9 ACCOMMODATION OF TRAFFIC AND PUBLIC ACCESS

During all his operations and when using his machinery, plant and equipment, the Contractor shall at all times take the necessary cate to protect the public and to facilitate the traffic flow.

C 3.4.10 SETTING OUT OF WORKS

All setting out required to carry out the work shall be undertaken by the Contractor. Setting out of the Works to be included in the tendered Sum.

It will be accepted that the Tenderer made provision in his tendered Sum for the cost of the above. No additional payment will be made by the Client.

C 3.4.11 SANITARY CONDITIONS

The Contractor shall ensure that, during the period of construction, sanitary conditions prevail on the site and surrounding areas. Unhygienic behaviour that may cause contamination of the works or the surrounding area is strictly prohibited.

It will be accepted that the Tenderer made provision in his tendered Sum for the cost of the above. No additional payment will be made by the Client.

C 3.4.12 CONSTRUCTION IN CONFINED AREAS

It may be necessary for the Contractor to work within confined areas and no additional payment will be made for work done in restricted areas. The method of construction in these confined areas will depend largely on the Contractor's construction plant.

It will be accepted that the Tenderer made provision in his tendered Sum for the cost of the above. No additional payment will be made by the Client.

C 3.4.13 DENSITY TESTS / CONCRETE CUBES

The Contractor shall carry out his own density tests on each compacted layer and these tests shall be submitted to the Engineer for scrutiny and approval before commencing with the construction of the following layer.

The Contractor also needs to do his own concrete cube tests, which is to be handed to the Engineer for scrutiny and approval. The Engineer may order that further, control tests are to be taken.

The Engineer may order that control tests be taken by his own or another independent laboratory. Cube/density tests carried out by the Contractor in the normal course of his work shall be carried out at his own expense.

It will be accepted that the Tenderer made provision in his tendered Sum for the cost of the above. No additional payment will be made by the Client.

C 3.4.14 HEALTH AND SAFETY SPECIFICATION

C 3.4.14.1 PURPOSE

In terms of the Occupational Health and Safety Act (Act 85 of 1993) (OHSA) or as amended, and the Construction Regulations 2014 or as amended, the Employer must provide the Contractor with a Health and Safety Specification to which the Contractor must respond with a Health and Safety Plan for approval by the Employer.

The purpose of this Specification is to ensure that the Principal Contractors entering into a contract with the Employer maintain an acceptable level of performance with regard to health and safety issues during the performance of the contract. In this regard the OHSA Specification form an integral part of the Contract and the Principal Contractor shall ensure that their Contractors and/or Suppliers comply with the requirements of this Specification.

C 3.4.14.2 SCOPE

This Contract comprises of THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICTMUNICIPALITY.

The Contractor, in complying with the OHS Act and the Construction Regulations, shall consider all aspects of the Works described and take into account the construction methods and materials to be used.

C 3.4.14.3 GENERAL

The Contractor is referred to and shall comply with the full text of the Occupational Health and Safety Act (Act 85 of 1993) (OHSA) or as amended and to the Construction Regulations 2014 or as amended, promulgated there under.

In this regard refer also to the Health and Safety Agreement and Conditions attached to these Contract documents (See Part C 1.4)

The following Specification covers health and safety matters applicable during construction.

All the work included in this Contract shall, for the purpose of complying with OHSA and the Construction Regulations, be deemed to be “construction work”.

It should be noted that, with a few exceptions, the Model Preambles and the Project Specifications are “end product specifications” and not “method Specifications”. As the

methods of construction to be used are generally determined by the Contractor, detailed safety requirements applicable to all the operations to be carried out on Site are not provided in the project documentation. The Contractor shall apply all the relevant regulations and requirements to the work methods and materials used.

The Principal Contractor shall give the required notice to the Provincial Department of Labour before commencement of any work on Site. This notice shall include the information as required by the Construction Regulations and shall be signed by the Contractor and the Employer.

The Principal Contractor shall ensure current registration and good standing with the Compensation Commissioner and shall provide evidence to this effect to the Employer.

It is the responsibility of the Principal Contractor and his Contractors to provide for all costs and expenses related to the management of and compliance with the OHSA and this Specification.

It will be accepted that the Tenderer made provision in his tendered Sum for the cost of the above. <u>No</u> additional payment will be made by the Client.

C 3.4.14.4 EXISTING SITE CONDITIONS

The Contractor shall take into account, *inter alia*, the following existing conditions when complying with the OHSA:

a) Existing utility services;
b) Existing site conditions. The Contractor shall be deemed to have visited the site and examined the site conditions applicable for the Works;
c) The traffic accommodation requirements;
d) Surrounding land use;
e) Anticipated weather conditions for the area; and
f) Access to the public and the use of the facility during construction.

C 3.4.14.5 DESIGN INFORMATION

Design information provided for safety planning purposes, such as design loads for structures, foundation conditions, etc. is available from the Engineer where required.

C 3.4.14.6 CONSTRUCTION MATERIALS

The following commonly used construction materials and substances potentially pose health and safety hazards:

a) All materials contained in pressurized containers;
b) Bitumen and tar products;
c) Cement;
d) Epoxies;
e) Lime and other stabilizing agents;
f) Paints;
g) Timber preservatives; and
h) Asbestos cement products.

The materials to be used to construct the Works are described in the following:

a) The Project Specification

The Contractor shall take appropriate measures to manage the risks associated with the use of all materials required to complete the “Works, i.e. not only those listed above, and shall, *inter alia*, implement all the precautionary measures provided by Manufacturers and Suppliers for the storage, use and application of materials used.

C 3.4.14.7 SITE ACCESS AND ENVIRONMENTAL CONDITIONS

a) Site access, egress, deliveries and vehicular and pedestrian routes

The requirements regarding the control of access to and egress from the Site and vehicular and pedestrian routes are to be noted by the Contractor and provision is to be made to ensure the safety of all pedestrians and vehicular traffic at all times.

b) Environment

The Contractor shall ensure compliance with all current environmental legislation applicable to the Works and the Site. The Contractor is advised of the existing asbestos cement products and all necessary environmental precautions and requirements shall be adhered to in this regard.

C 3.4.14.8 USE OF SITE BY THE EMPLOYER

Any continues use of the Site required by the Employer to maintain traffic flows or to allow work to be done by other Contractors or Authorities is a requirement of this contract and the Contractor shall take due precaution in this regard.

C 3.4.14.9 SITE RULES

a) Way leaves, permissions and permits:

The Contractor shall be responsible for obtaining all the way leaves, permissions or permits applicable to working near any existing services or other infrastructure on Site and shall abide by the safety conditions imposed by such way leaves, permissions or permits.

b) Reporting of incidents:

All incidents shall be reported strictly in accordance with the requirements of the OHSA and the General Conditions of Contract.

C 3.4.14.10 HEALTH AND SAFETY PLAN

In compliance with the Construction Regulations the Contractor shall, after performing a risk assessment, prepare a Health and Safety Plan for approval by the Employer.

The Health and Safety Plan shall include, but not be limited to, the following:

a) The Safety Management Structure, including the names of all designated persons such as the Construction Supervisor and any other competent persons;

b) Safety Method Statements and procedures to be adopted to ensure compliance with the OHSA. Aspects to be dealt with shall include:

(i) Public vehicular and pedestrian traffic accommodation measures;
(ii) Control of the movement of construction vehicles;
(iii) The storage and use of materials;
(iv) The use of tools, vehicles and plant;

(v) Environmental conditions and safety requirements in working hazardous materials, including asbestos cement products;
(vi) Security, access control and the exclusion of unauthorised persons
(vii) The provision and use of temporary services;
(viii) Compliance with the way leaves, permissions and permits;
(ix) Safety equipment, devices and protective clothing to be employed;
(x) Emergency procedures;
(xi) Provision of welfare facilities;
(xii) Induction and training;
(xiii) Provision and maintenance of the Health and Safety file and other documentation;
(xiv) Arrangements for monitoring and control to ensure compliance with the safety plan.

C 3.4.14.11 AUDITS BY THE EMPLOYER

The Contractor shall permit the Employer to regularly audit, at an agreed interval, the implementation and maintenance of the approved Health and Safety Plan and shall co-operate and provide all the required documentation, as may be required, in this regard.

C 3.4.14.12 VARIATIONS

Should any variations be ordered or design amendments issued, the Engineer shall inform the Contractor of all associated potential hazards to ensure that the health and safety aspects of the work ordered are taken into account.

C 3..4.14.13 INSPECTIONS

- Setting Out
- Excavations
- Steel (Footing & Raft)
- Post Casting inspections
- Brickwork/Super structure
- Roof trusses and roof ties
- Plaster
- Electrical Installation and materials
- Paint
- Sanitary Fittings
- Carpentry and Ironmongery

Approval of these approvals must be done and obtained in written form.

C 3.4.14.14 INSPECTION SIGN OFF LIST

The contractor shall prepare a check list be signed off by the responsible person to verify that each of the following items has been inspected and found meeting the specifications

- Setting out
- Excavations foundations
- Excavations for services
- Backfilling on foundations
- Backfilling on services
- Plumbing pressure and leakage testing
- Certification of Foundation
- Certification of Surface bed
- Certification of Super Structure
- Certification of Roof structure
- COC for electrical installation
- Plaster work

- Paint work
- Glazing
- Carpentry and Ironmongery
- Concrete cube tests

C 3.5

ANNEXURES

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 3.5 ANNEXURES

ANNEXURE A	**MONTHLY FORMS TO BE COMPLETED**
ANNEXURE B	**OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS**
ANNEXURE C	**GEOTECHNICAL REPORT / GFSH-2**

ANNEXURE A
MONTHLY FORMS TO BE COMPLETED

Participant's Registration Form 1 of 2

Participant's personal details										
No	**First Name**	**Initials**	**Surname**	**ID number**	**Gender (F/M)**	**Disability (Y/N)**	**Education level**	**Start Date**	**End Date**	**Cell Number**

Participant's Registration Form 2 of 2

	Grants			Experience /Literacy	Location Details			Contacts & Nationality		Household Details		
No.	Beneficiary Code	Beneficiary Project Link Code	Government Grant (Y/N) and Type	First Language	District	Municipality	Physical address	Cell Number	Nationalit y (RSA/ Non-RSA)	Number of people in Household	Number of Dependants in Household	Number of Children attending school

Registration and Business Form

Reference No	
Profile ID	
Project Name	
PROJECT DETAILS	
Project Name	
Project Reference Number	
Project description	
Project Start Date	
Project End Date	
Estimated Budget	
Project Location	
Province	
District/Metro Municipality	
Local Municipality/Metro Region	
Latitude (in decimal format)	
Longitude (in decimal format)	
PUBLIC BODY DETAILS	
Public body sphere	
Reporting public body that is the project owner (and will report on the project)	
Implementing public body type	
Public body that will implement the project	
IDP reference number allocated to the project	
EPWP DETAILS	
EPWP Sector	
EPWP Program	
EPWP Sub programme	
Budget Amount	
April 2014/March 2015	
April 2015/March 2016	
Total Budget Amount	
Wages	
UIF	
COIDA	

Training	
Administration	
Equipment and materials	
Other	
Describe other	
OUTPUTS AND TRAINING	
Output	
Description	
Target Quantity	
Number of persons to be trained	
CONTACT PERSON	
Title	
Initials	
First Name	
Surname	
Email	
Tel (Office)	
Fax Number	
Cell Number	
Physical Address 1	
Physical Address 2	
Physical Address 3	
Physical Address 4	
Postal Address 1	
Postal Address 2	
Postal Address 3	
Postal Address 4	

Beneficiary Details													
First Name	Initials	Surname	ID number	Nationality	Gender	Disability	Education	Start Date	End Date	Language ID	Address	Cell Number	Government Grant

Experience/Literacy				Location Details				Household Details		
First Language	Other Language I	Other Language 2	Highest Level of Education	Province	District	MUNICIPALITY /Village	Ward Name/Number	Number of people in Household	Number of Dependants in Household	Number of Children attending school

Payment Upload														
Initials	Surname	ID number	Date of Birth	Wage Rate	Total Paid Days	Amount Paid	Work Days	Training Days Paid	Training Days Non-Paid	Total Training Days	Training Course Id	Project Profile Id	Month	Year

Training										
ID	Course Name	Code	Type	Start	End	Number of Trainees	Number of Days	Cost	Status	Training Provider

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ANNEXURE B
OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS

HEALTH AND SAFETY SPECIFICATION

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

1. HEALTH AND SAFETY SPECIFICATION

1.1 Scope

This Health & Safety Specification has been developed to address all aspects of occupational health and safety, as affected by the proposed construction work in accordance with the provisions in the Construction Regulations.

The specification provides the requirements that the Principal Contractor and other Contractors shall have to comply with to reduce the risks associated with the construction work to a level as low as reasonably practicable.

1.2 Introduction

In terms of Construction Regulation 5(1) (b) and (c) of the Occupational Health and Safety Act, No. 85 of 1993, the Client, or his Health and Safety Agent, is required to compile a Site-Specific Health & Safety Specification for any intended project and provide such specification to the Designer as well as to any prospective tenderers.

The Client's further duties are stipulated in Clause 3, and in the Construction Regulations, published in Government Gazette No 37305 of 2014. This specification has an objective to ensure that Principal Contractors and other Contractors entering in to a Contract with the Client, achieve an acceptable level of Occupational Health & Safety performance. This document forms an integral part of the Contract and Principal Contractors should make it part of any Contracts that they may have with Contractors and/or Suppliers.

Compliance with this document does not absolve the Principal Contractor and other Contractors from complying with minimum legal requirements. All Contractors remain responsible for the health & safety of his employees, persons other than his employees in terms of Section 9 of the Occupational Health and Safety Act, No. 85 of 1993 and those of his Mandatory's

1.3 General Occupational Health and Safety Provisions

1.3.1 Hazard Identification & Risk Assessment

*1.3.1.1 **Development of Risk Assessments***

Every Contractor shall appoint a competent person in writing to perform a Risk Assessment before the commencement of any Construction work. This Risk Assessment shall form part of the Occupational Health and Safety Plan and be implemented and maintained as contemplated in Construction regulation 5(1).

The Risk Assessment shall include at least the following:

- the identification of the risks and hazards to which persons may be exposed to
- the analysis and evaluation of the identified risks and hazards
- a documented plan of safe work procedures to mitigate, reduce or control the risks and hazards that have been identified
- a monitoring plan, and
- a review plans
- material safety data sheets

Based on the Risk Assessments, the Contractor must develop a set of site-specific Occupational Health & Safety rules that will be applied to regulate the Occupational Health & Safety aspects of

the construction. The Risk Assessments, together with the site-specific Occupational Health & Safety rules shall be submitted to the Client before mobilisation on site commences.

The Contractor is required to conduct a baseline Risk Assessment of the risks he anticipates encountering during the project. The baseline Risk Assessment must include the Standard Working Procedures (SWP) and the applicable Method Statements based on the Risk Assessments.

1.3.1.2 ***Review of Risk Assessments***

The Contractor is to review the Hazard Identification, Risk Assessments and Safe Work Procedure's at each Production Planning and Progress Report meeting as the Contract work develops and progresses and each time changes are made to the designs, plans and construction methods and processes [monthly].

The Contractor shall provide the Client, other Contractors and all other concerned-parties with copies of any changes, alterations or amendments brought about by the above.

1.3.2 Legal Requirements

All Contractors entering into a Contract with the Client**,** shall, as a minimum, comply with the:

- Occupational Health & Safety Act and Regulations (Act 85 of 1993). **A current, up-to-date copy of the Occupational Health Safety Act shall be available on site always**.
- Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993). The Principal Contractor will be required to submit a letter of Registration and "good-standing" from the Compensation Insurer before being awarded the Contract. **A current, up-to-date copy of the Compensation for Occupational Injury and Diseases Act (COIDA) shall be available on site at all times.**
- The Client must determine the competency of Contractors/persons he allows (authorise) to enter such premises.

1.3.3 Structure and Responsibilities

1.3.3.1 ***Overall Supervision and Responsibility for Occupational Health and Safety***

- The Client is to ensure that the Contractor, appointed in terms of Construction Regulation 5(1) (k), implements and maintains the agreed and approved Occupational Health & Safety Plan.

- The Chief Executive Officer of the Contractor, in terms of Section 16(1) of the Act, is to ensure that the Employer (as defined in the Act) complies with the Act. Annexure 5. "Audit System" may be used for this purpose.

- It is a requirement that the Contractor, when he appoints Contractors in terms of Construction Regulations 7 includes an Occupational Health & Safety Act Section 37(2) agreement (“Agreement with Mandatory”) in his agreement with such Contractors.

- Every project must have an Occupational Health & Safety Act (85 /1993), Section 16(2) Appointee.

- The client must ensure that the contractor appoints a Construction Supervisor and Assistant Construction Supervisor in terms of Construction Regulation 8(8).

1.3.3.2 ***Further (Specific) Supervision Responsibilities for Occupational Health & Safety***

The Contractor shall appoint designated competent employees and/or other competent persons as required by the Act and Regulations. The appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information must be communicated and agreed with the appointees.

1.3.3.3 ***Designation of* Occupational Health & Safety *Representatives* (Section 18 of the Occupational Health & Safety Act)**

The Contractors shall ensure Occupational Health & Safety Representatives are appointed for every workplace where employees (including the employees of other Contractors) are exposed to risk.

Occupational Health & Safety Representatives have to be designated in writing and the designation must include the area of responsibility of the person and term of the designation.

The Contractor shall ensure that the designated OH&S Representatives conduct an inspection of their respective areas of responsibility using a checklist and report thereon.

Occupational Health & Safety representatives shall be included in accident/incident investigations and must attend all Occupational Health & Safety committee meetings.

1.3.4 Administrative Controls and the Occupational Health & Safety File

1.3.4.1 ***The* Occupational Health & Safety *File***

As required by Construction Regulation 7(1)(b), the Principal Contractor and other Contractors will each keep an updated Occupational Health & Safety File on site containing the following documents as a minimum:

- Permit to construct Notification of Construction Work (Construction Regulations 4)
- Copy of Occupational Health & Safety Act (updated) (Gen Administrative Regulation 4)
- Proof of Registration and good standing with a COID Insurer (Construction Regulation 5(1) (j)
- Occupational Health & Safety Programme/Plan agreed with the Client including the underpinning Risk Assessment/s & Method Statements (Construction Reg 5(1)(q)
- Copies of Occupational Health & Safety Committee and other relevant Minutes
- Designs/drawings
- A list of Contractors including copies of the agreements between the parties (Section 37(2) agreement in terms of the OHS act) and the type of work being done by each Contractor
- Appointment/Designation forms (For example H&S rep, first aider etc.)
- Electrical Installations, -Equipment & -Appliances including temporary certificate of compliance
- All other applicable records

1.3.5 OH&S Goals & Objectives & Arrangements for Monitoring & Review of Occupational Health and Safety Performance

The Contractor is required to report all incidents to the Project Manager/Client. The Project manager must also submit an up to date report regarding all incidents to the Head, OHS.

1.3.6 Notification of Construction Work

The Contractors shall, where the Contract meets the requirements laid down in Construction Regulation 4, notify the Department of Labour at least 7 days before the commencement of work of the intention to carry out construction work.

A copy must be held on the Occupational Health & Safety File and included into the project file.

1.3.7 Training, Awareness and Competence

1.3.7.1 ***General Induction Training***

All persons on site are to attend a general induction session presented by the Contractor.

All persons on the site shall be in possession of documentation/proof that they have undergone General Induction training.

The Contractor will be required to develop project specific induction training based on the Risk Assessments for the Contract work and train all employees and other Contractors and their employees in this.

1.3.7.2 ***Other Training***

All operators, drivers and users of construction vehicles, mobile plant and other equipment (for example overhead cranes) shall be in possession of documentation proving that they have undergone training to operate said vehicles, plant and equipment.

All employees in jobs requiring training in terms of the Act and Regulations shall be in possession of valid proof of training as required in the portfolio of evidence of the contractor.

1.3.7.3 ***Awareness & Promotion***

The Contractor is required to have scheme in place to promote an Occupational Health & Safety awareness and culture in employees. The following are some of the methods that may be used:

- Toolbox Talks
- Occupational Health & Safety Posters
- Videos
- Competitions
- Suggestion schemes
- Participative activities such as Occupational Health & Safety circles.

1.3.7.4 ***Competence***

The Contractor shall ensure that all appointed staff is competent and that all training required to do the work safely and without risk to health, has been completed before work commences.

The Contractor shall ensure that follow-up and refresher training is conducted as the contract work progresses and the work situation change. Records of all training shall be kept on the Health & Safety file for auditing purposes.

1.3.8 Consultation, Communication and Liaison

Occupational Health & Safety Liaison between the Client, Principal Contractor, other Contractors, Designer and other concerned parties will be through the Client/Project Manager. In addition to the above, communication may be directly with the Client or his appointed Agent, verbally or in writing, as and when the need arises.

The Principal Contractor will be required to do Site Safety Audits with the Client/Project Manager on a basis to be determined between the two parties.

1.3.9 Checking, Reporting and Corrective Actions

3.3.9.1 ***Monthly Audit by Client*** **(Construction Regulation 4(1)(d)**

The **Client or his agent** will conduct minimum monthly audits to comply with Construction Regulation 5(1) (o) to ensure that the Contractor has implemented and is maintaining the agreed and approved Occupational Health & Safety Plan.

The Contractor is to conduct his own minimum monthly internal audits to verify compliance with his own Occupational Health & Safety plan.

The Occupational Health & Safety Representative is to conduct monthly inspections of their areas of responsibility and report thereon to their supervisor

All the results of the abovementioned inspections shall be in writing, reviewed, endorsed and placed on the Occupational Health & Safety File.

1.3.10 Incident Reporting and Investigation

1.3.10.1 ***Reporting of Accidents and Incidents***

The 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

OR where:

- a major incident occurred
- the health or safety of any person was endangered
- where a dangerous substance was spilled
- the uncontrolled release of any substance under pressure took place
- machinery or any part of machinery fractured or failed resulting in flying, falling or uncontrolled moving objects
- machinery ran out of control

to the **Client** and to the Provincial Director of the Department of Labour forthwith (Section 24 of the Act & General Administrative Regulation 8.)

The Contractor is required to provide the **Client** with copies of all internal and external accident/incident investigation as well as all statutory reports required in terms of the Act within 7 days of the incident occurring.

1.3.10.2 ***Accident and Incident Investigation***

The Contractor is responsible for the investigation of all accidents/incidents where employees and non-employees were injured to the extent that he/she/they had to be referred for medical treatment by a doctor, hospital or clinic and the results of the investigation shall be entered into the Accident/Incident Register.

The Contractor is responsible for the investigation of all minor, non-injury incidents and near misses. The Client reserves the right to hold its own investigation into an incident or call for an independent external investigation.

1.3.11 Operational Control

1.3.11.1 **Emergency Preparedness, Contingency Planning and Response**

The Contractor shall appoint a competent person to act as Emergency Coordinator.

The Contractor shall conduct an emergency identification exercise and establish what emergencies could possibly develop. He/she must then develop detailed contingency plans and emergency procedures.

1.3.11.2 **First Aid**

The Contractor shall provide relevant First Aid equipment and have qualified First Aider/s on site as required by General Safety Regulation 3 of the Occupational Health & Safety Act.

1.3.11.3 **Security**

The Contractor shall develop, implement and maintain Security- and Site Access Control rules and procedures throughout the construction period. Access control shall include the rule that non-employees will not be allowed on site unaccompanied.

1.3.11.4 **Fall Protection (Working in Elevated Positions)**

Any work undertaken at height above ground level higher than two metres or any floor level will be classified as "Work in Elevated Positions" and a pre-emptive Risk Assessment shall be carried out.

Workers working in elevated positions shall be trained to do this safely, without risk and compliant with legislation.

Risk Assessment shall take the possibility into account of persons falling through fragile material, skylights and other openings in the roof.

1.3.11.5 **Structures**

The Contractor shall ensure that:

- Steps are taken to ensure that no structure becomes unstable or collapses due to construction work being performed on it or in the vicinity of it
- No structure is overloaded to the extent where it becomes unsafe
- He/she has received from the designer the following information:
- Information on known or anticipated hazards relating to the construction work and the relevant information required for the safe execution of the construction work.
- A geo-scientific report (where applicable)
- The loading the structure is designed to bear
- The methods and sequence of the construction process
- All drawings pertaining to the design are on site and available for inspection

1.3.11.6 **Temporary Works**

Temporary work shall be carried out under the supervision of a competent person designated in writing to do so.

All drawings pertaining to the temporary work shall be kept available on site. A competent person shall check all equipment used in the erection of temporary work before it is used.

1.3.11.7 **Access Scaffolding**

Access Scaffolding shall be erected, used and maintained safely in accordance with Construction Regulation 16 and SA Bureau of Standards Code of Practice, SANS 085 entitled, "The Design, Erection, Use & Inspection of Access Scaffolding.

Detailed consideration shall be given to all scaffolding to ensure that it is properly planned to meet the working requirements.

Scaffolding may only be erected, altered or dismantled by a person who has adequate training and experience in this type of work or under the supervision of such a person (Proof of competence to be put on the OHS File).

1.3.11.8 **Construction Vehicles & Mobile Plant (CV&MP)**

All Construction Vehicles and Mobile Plant shall be inspected by the Contractor prior to being allowed on a project site and suppliers of hired vehicles, plant and equipment will be required to comply with this specification as well as the Occupational Health & Safety Act and Regulations.

No unauthorised persons are to be allowed to drive CV&MP. Operators/drivers of CV&MP shall be competent to operate the equipment safely and be in possession of a valid medical certificate issued by an Occupational Medicine Practitioner testifying that the holder is physically and psychologically fit to operate the equipment.

1.3.11.9 **Electrical Installations**

Temporary electrical installations shall be carried out by competent persons, and controlled by a competent person that has been appointed to do so in writing, in accordance with Construction Regulation 24 and the Electrical Installation Regulations. Temporary electrical installations shall be inspected at least once per week by a competent person and a record of the inspections kept in the Occupational Health & Safety File.

The Contractor shall ensure that:

- existing electrical services are located and marked before construction commences and during the progress thereof. Where this is not possible, workers with jackhammers etc. are to be protected against electric shock by the use of suitable protective equipment like insulated handles, rubber mats etc.

- electrical installations and -machinery are sufficiently robust to withstand working conditions on site.
- all electrical machinery used on site are inspected before start-up on a daily basis by a competent person and that a record of the inspection is kept in the Occupational Health & Safety File.

An electrical and mechanical lock-out procedure for the construction site shall be developed by the Principal Contractor and submitted for approval by the Project Manager before construction commences. This lock-out procedure shall be adhered to by all Contractors on site.

1.3.11.10 **Housekeeping**

The Contractor shall ensure that good housekeeping practises are implemented so that:

- an unimpeded work space is maintained for every employee.
- the walls and roof of every indoor workplace is sound and leak-free.
- every workplace is kept clean, orderly and free of tools and materials that is not required for the work being done.
- every floor, walkway, stair, passage and gangway is kept in a good state of repair, skid-free and free of obstruction, waste and materials.
- catch platforms or -nets are erected over entry and exit ways or over places where persons are working to prevent them being struck by falling objects.
- openings in floors, hatchways, stairways and open sides of floors or buildings are barricaded, fenced, boarded over or provided with protection to prevent persons from falling through or off them.
- materials and equipment are stored properly.
- materials ready for use is placed safely and not allowed to accumulate or cause an obstruction to pedestrian and vehicular traffic.
- Scrap, waste and debris is removed regularly and in a safe manner.
- construction sites are fenced off to prevent entry by unauthorised persons.

1.3.11.11 **Eating-, Changing-, Washing- and Toilet Facilities**

Eating facilities should be provided in a location that is sheltered from the elements.
Adequate changing-, washing – and toilet facilities shall be provided for both sexes.
At least 1 shower per 15 workers and 1 toilet per 30 workers shall be provided. Chemical toilets may be used instead of the water borne sewerage type.

1.3.11.12 **Personal & Other Protective Equipment**

The Contractor shall identify the hazards in the workplace and endeavour to eliminate them. Where this is not possible, suitable steps shall be taken to protect workers from these hazards. Engineering- and other solutions to mitigate the hazard(s) should be attempted before the issue of **personal protective equipment (PPE)** is considered.

The Contractor is required to inform employees of health and safety hazards and issue them with suitable equipment to protect them from these hazards. It is a further requirement that the Contractor maintains the equipment and instructs and train employees in the use of the equipment. Employees do not have the right to refuse to use/wear safety equipment.

1.3.11.13 **Portable Electrical Tools & Equipment**

Portable electrical tools and equipment is defined as units taking electrical power from 220Volt 15 Amp power outlets and is moved around the workplace to perform work like drilling, sawing, grinding etc. and also include portable lights. Electrical appliances, on the other hand, include items like fridges, stoves and heaters.

1.3.11.14 **Public Health & Safety**

The Contractor is responsible for ensuring that non-employees affected by the construction work, like visitors, the surrounding community and passers-by, are made aware of the dangers likely to arise from the construction work as well as the precautionary measures to be observed to avoid or minimise these dangers. Appropriate signage must be posted to this effect and all employees on site shall be instructed to ensure that non-employees are protected at all times. All non-employees entering the site must receive induction into the hazards and risks and the control measures.

Annexure "A"

CONSTRUCTION OCCUPATIONAL HEALTH - SAFETY – RISK ASSESSMENT

Denotes items applicable to both Construction sites and Contractors Plant/Storage Yards

ELEMENT	REMARKS
1. Administrative & Legal Requirements	• Dept. of labour will be notified – Annexure 2 • Updated copy of OHS Act will be available on site • All legally required appointments will be made as specified in the OHS Act and Construction Regulations • Site specific health and safety specification will be drawn up and provided to all prospective tendering contractors • Site specific risk assessment will be conducted and monitored and reviewed on a regular basis • Written proof of registration and good standing of contractor with COID will be obtained • Health and safety committee will be established and meetings conducted • All contractors will be required to enter into a Section 37(2) agreement • All incidents/accidents will be reported and investigated as required • Detailed and site-specific fall protection plan will be drawn up and implemented – Employees fitness to work at heights will be determined and records kept • Cherry pickers will be load tested and valid load test certificates will be kept on file – Regular safety inspections by competent persons done and records kept • Only persons medically tested in the form of Annexure 3 of the Construction Regulations and declared medically fit for the type of construction work to be done will be allowed to work on site • All excavations will be inspected by a competent person before every shift as required, edges will be sloped to at least the angle of repose, the excavations will be substantially barricaded and egress will be provided at least every 6 metres • Demolition work will be carried out under the supervision of a competent person, detailed and site specific risk assessment will be carried out and engineering survey and method statement will be available on site

	• Inspections to prevent premature collapse will be carried out by competent person before each shift. Inspection register kept • Cranes/Lifting Machines & equipment will be operated under the supervision of a competent person • Valid load test certificates and 3 monthly inspection records of all lifting tackle will be kept on site • Emergency and fire protection plan will be drawn up and displayed, emergency teams trained and available • All the legally required first aid equipment will be provided and clearly located - Trained and qualified first aiders available on site • Assessment will be conducted to determine the personal protective equipment requirements, all equipment issued free of charge and the wearing of the equipment will be strictly enforced • Gas welding/cutting equipment only used by competent persons and equipment placed on register and inspected regularly to ensure its safety • Alphabetical list of all chemicals on site will be drawn up and material safety data sheets for all hazardous substances obtained – first aiders will be trained in the correct first aid measures to be taken in case of injury or illness caused by hazardous chemicals • All construction vehicles will be inspected daily before start up and only operated by operators who are competent and medically fit to do so
2. Education, Training & Promotion	• **All employees entering the site will be required to undergo a site specific health and safety induction training programme – A copy of the site rules will also be made available to them** • **Relevant employees will receive specific safety training such a training in the safe work procedures for plant, equipment and substances they are required to use** • **All visitors to the site will be given induction training and will only be allowed on the site if they are accompanied by a member of the site staff** • **Specific training will include inter alia first aid training, general safety training, firefighting training, operator training**

3. Public Safety & Emergency Preparedness	• **Signage will be used to limit access to the site – "No unauthorised entry", "Visitors to report to site office" and other relevant signage will be used** • **General signage warning of overhead work and other hazards on site will be deployed** • **Netting or other measures will be used to protect persons from falling objects** • **Security measures such as patrols to prevent unauthorised entry as well as an entry register will placed in use**
4. Personal Protective Equipment	• Assessment will be conducted to determine the personal protective equipment required on site • All equipment will be issued free of charge and the wearing thereof strictly enforced – this will also count for visitors to the site
5. Housekeeping	• Removal of rubble will form part of the project – Rubble to be crushed and removed by truck to predetermined dump site • High standards of housekeeping will be enforced on all contractors
6. Scaffolding, Formwork & Support work	All legal requirements to be addressed and adhered to
7. Ladders	All legal requirements to be addressed and adhered to
8. Electrical Safeguarding	All legal requirements to be addressed and adhered to
9. Emergency/Fire Prevention & Protection	• Sufficient firefighting equipment will be provided, correctly located and clearly signposted • Emergency plan will be formulated for evacuation and published
10. Excavations & Demolition	• Demolition work will be carried out under the supervision of a competent person, detailed and site specific risk assessment will be carried out and engineering survey and method statement will be available on site • Inspections to prevent premature collapse will be carried out by competent person before each shift. Inspection register kept • All excavations will be inspected by a competent person before every shift as required, edges will be sloped to at least the angle of repose, the excavations well be substantially barricaded and egress will be provided at least every 6 metres

	• All excavations will be inspected by a competent person before every shift as required, edges will be sloped to at least the angle of repose, the excavations will be substantially barricaded and egress will be provided at least every 6 metres
11. Tools	• All hand tools will be in good condition and will be inspected regularly for safety – Findings will be entered into a register kept for this purpose
12. Cranes	• Cranes/Lifting Machines & equipment will be operated under the supervision of a competent person • Valid load test certificates and 3 monthly inspection records of all lifting tackle will be kept on site
13. Personnel & Material Hoists	• Cherry pickers will be load tested and valid load test certificates will be kept on file – Regular safety inspections by competent persons done and records kept – Only persons medically tested for physical and psychological fitness and declared competent will be allowed to work on cherry pickers
14. Transport & Materials Handling	• All construction vehicles will be inspected daily before start up and only operated by operators who are competent and medically fit to do so
15. Site Plant & Machinery	• All construction vehicles will be inspected daily before start up and only operated by operators who are competent and medically fit to do so
16. Plant & Storage Yards/Site Workshops Specifics	• Good housekeeping practices and environmental protection to be practiced as far as is reasonably practicable
17. Health & Hygiene	• All hygiene facilities such as toilets, eating areas, change rooms and the like will be provided in line with the Facilities Regulations and the Construction Regulations and will be kept in a clean and hygienic condition

1. ADMINISTRATIVE & LEGAL REQUIREMENTS

OHS ACT SECTION / REGULATION	SUBJECT	REQUIREMENTS	YES / NO
Construction. Regulation 4	**Notice of carrying out Construction work**	Department of Labour notified Copy of Notice available on Site	Yes
General Admin. Regulation 4	***Copy of OH&S Act (Act 85 of 1993)**	Updated copy of Act & Regulations on site. Readily available for perusal by employees.	Yes
COID Act Section 80	***Registration with Compensation Insurer**	Written proof of registration/Letter of good standing available on Site	Yes
Construction. Regulation 5, 6 & 7	**A.1.1 OH&S Specification & Programme**	OH&S Spec received from Client OH&S programmed developed Updated regularly	Yes
Section 8(2)(d) Construction. Regulation 5, 6 & 7	**A.1.2 *Hazard Identification & Risk Assessment**	Hazard Identification carried out/Recorded Risk Assessment and – Plan drawn up/Updated RA Plan available on Site Employees/Sub-Contractors informed/trained	Yes
Section 16(2)	***Assigned duties (Managers)**	Responsibility of complying with the OH&S Act assigned to other person/s by CEO.	Yes
Construction. Regulation 7	**Designation of Person Responsible on Site**	Competent persons appointed in writing as Construction Managers and Supervisors	Yes
Section 17 & 18 General Administrative Regulations 6 & 7	***Designation of Occupational Health & Safety Representatives**	More than 20 employees - one OH&S Representative, one additional OH&S Rep. for each 50 employees or part thereof. Designation in writing, period and area of responsibility specified. Meaningful OH&S Rep. reports. Reports actioned by Management.	Yes
Section 19 & 20 General Administrative Regulations 5	***Occupational Health & Safety Committee/s**	OH&S Committee/s established. Members appointed in writing. Meetings held monthly. Minutes kept. Actioned by Management.	Yes
Section 37(1) & (2)	***Agreement with Mandataries/ Sub-Contractors**	Written agreement with(Sub- Contractors) List of (Sub-) Contractors displayed. Proof of Registration with Compensation Insurer/Letter of Good Standing Construction Supervisor designated Written arrangements re. OH&S Reps & OH&S Committee Written arrangements re. First Aid	Yes

Section 24 & General Admin. Regulation 8 COID Act Sect.38, 39 & 41	***Reporting of Incidents (Dept. of Labour)**	Incident Reporting Procedure displayed. All incidents in terms of Sect. 24 reported to the Provincial Director, Department of Labour, within 3 days. (Annexure 1)(WCL 1 or 2) Cases of Occupational Disease Reported Copies of Reports available on Site Record of First Aid injuries kept	Yes
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 OH&S Committee meeting Action taken by Site Management.	Yes
Construction. Regulation 10	**Fall Prevention & Protection**	Competent person appointed to draw up and supervise the Fall Protection Plan Proof of appointees competence available on Site Risk Assessment carried out for work at heights Fall Protection Plan drawn up/updated Available on Site	Yes
Construction. Regulation 10(5)	**A.1.3 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	Yes
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 register kept	Yes

Construction. Regulation 12	**Temporary work**	Competent person appointed in writing to supervise erection, maintenance, use and dismantling of Support & Formwork Design drawings available on site Risk Assessment carried out Support & Formwork inspected: - before use/inspection - before pouring of concrete - weekly whilst in place - before stripping/dismantling. Inspection register kept	Yes
Construction. Regulation 16	**A.1.4 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 Inspected weekly/after bad weather. Inspection register/s kept	Yes
Construction. Regulation 17	**A.1.5 Suspended Platforms**	Competent persons appointed in writing to: - control the erection of Suspended platforms - act as Suspended platforms Team Leaders - inspect Suspended Scaffolding weekly and after inclement weather Risk Assessment conducted. Certificate of Authorisation issued by a registered professional engineer available on Site and a copy forwarded to the Department of Labour. The following inspections of the whole installation carried out by a competent person - after erection and before use - daily prior to use. Inspection register kept The following tests to be conducted by a competent person: - load test of whole installation and working parts every 12 months - hoisting ropes/hooks/load attaching devices quarterly. Tests log book kept. Employees working on Suspended Platform shall be medically examined for physical & psychological fitness and written proof thereof shall be available.	Yes

Construction. Regulation 13	**A.1.6 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	Yes
Construction. Regulation 14	**A.1.7 Demolition Work**	Competent person/s appointed in writing to supervise and control Demolition work Written Proof of Competence of above appointee/s available on Site Risk Assessment carried out Engineering survey and Method Statement available on Site Inspections to prevent premature collapse carried out by competent person before each shift. Inspection register kept	Yes
Construction. Regulation 19	**A.1.8 Materials Hoist**	Competent person appointed in writing to inspect the Material Hoist Written Proof of Competence of above appointee available on Site. Materials Hoist to be inspected weekly by a competent person. Inspections register kept.	Yes
Construction. Regulation 22/ Driven Machinery Regulations 18 & 19	**A.1.9 Cranes & Lifting Machines Equipment**	Competent person appointed in writing to inspect Cranes, Lifting Machines & Equipment. Written Proof of Competence of above appointee available on Site. Cranes & Lifting tackle identified/numbered Register kept for Lifting Tackle Log Book kept for each individual Crane Inspection: - All cranes - **daily by operator** - Tower Crane/s - **after erection/6monthly** - Other cranes - **annually by comp. person** - Lifting tackle(slings/ropes/chain slings etc.) - **3 Monthly**	Yes

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 and -lights and extension leads identified/numbered. Monthly visual inspection by User/Issuer/ Storeman. Register kept.	Yes
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	Yes
Construction. Regulation 29/ Environmental Regulation 9	**A.1.10 *Designation of a Person to Co-ordinate Emergency Planning** **A.1.11 And Fire Protection**	Person/s with specific knowledge and experience designated to co-ordinate emergency contingency planning and execution and fire prevention measures Emergency Evacuation Plan developed: - Drilled/Practiced - Plan & Records of Drills/Practices available on Site Fire Risk Assessment carried out All Fire Extinguishing Equipment identified and on ***register***. Inspected weekly. Inspection Register kept Serviced annually	Yes
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 Aiders and Certificates Name of person/s in charge of First Aid box/es displayed. Location of F/Aid box/es clearly indicated. Signs instructing employees to report all Injuries/illness including first aid injuries.	Yes
General Safety Regulation 2	**Personal Safety Equipment (PSE)**	PSE Risk Assessment carried out Items of PSE prescribed/use enforced Records of Issue kept Undertaking by Employee to use/wear PSE	Yes

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 Equipment identified/numbered and entered into a register Equipment inspected monthly. Inspection Register kept	Yes
Hazardous Chemical Substances **(HCS)** Regulations Construction Regulation 29	***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	Yes
Vessels under Pressure Regulations	**Vessels under Pressure (VUP)**	Competent Person/s with specific knowledge and experience designated to supervise the use, storage, maintenance, statutory inspections & testing of VUP's Written Proof of Competence of above appointee available on Site Risk Assessment carried out Certificates of Manufacture available on Site Register of VUP's on Site Inspections & Testing by Approved Inspection Authority (AIA): - after installation/re-erection or repairs - every 36 months. - Register/Log kept of inspections, tests. Modifications &repair	
Construction. Regulation 23	**Construction Vehicles & Earth Moving Equipment**	Operators/Drivers appointed to: - Carry out a daily inspection prior to use - Drive the vehicle/plant that he/she is competent to operate/drive Written Proof of Competence of above appointee available on Site Record of Daily inspections kept	Yes
General Safety Regulation 13A	***Inspection of Ladders**	Competent person appointed in writing to inspect Ladders Ladders inspected at arrival on site and monthly thereafter. Inspections register kept	Yes
General Safety regulation 13B	**A.1.12 Ramps**	Competent person appointed in writing to Supervise the erection & inspection of Ramps. Inspection register kept.	N/A

2. EDUCATION & TRAINING

SUBJECT	REQUIREMENT	YES / NO
*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.	Yes
*Company/Site OH&S Rules (Section 13(a)	Rules published Rules displayed on Employee Notice Boards Rules issued and explained to employees: written proof Follow-up to ensure employees understand/adhere to the rules.	Yes
*Induction & Task Safety Training (Section 13(a)	All new employees receive OH&S Induction Training. Training includes Task Safety Instructions. Employees acknowledge receipt of training. Follow-up to ensure employees understand/adhere to instructions.	Yes
*General OH&S Training (Section 13(a)	All employees receive basic OH&S training: written proof Operators of Plant & Equipment receive specialised training Follow-up to ensure employees understand/adhere to instructions.	Yes
*Occupational Health & Safety Promotion	<u>Incident Experience Board indicating e.g.</u> Number of hours and days worked without an Injury Star Grading - Board kept up to date. Safety Posters displayed & changed regularly Employee Notice Board for OH&S Notices. Site OH&S Competition. Company OH&S Competition. Participation in Regional OH&S Competition. Suggestion scheme.	Yes

3. PUBLIC SAFETY, SECURITY MEASURES & EMERGENCY PREPAREDNESS

SUBJECT	REQUIREMENT	YES /NO
*Notices &Signs	Notices & Signs at entrances / along perimeters indicating **"No Unauthorised 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**	Yes
SUBJECT	**REQUIREMENT**	**YES /NO**
Site Safeguarding	Nets, Canopies, Stulls, Fans etc. to protect members of the public passing / entering the site.	Yes
*Security Measures	Access control measures/register in operation Security patrols after hours/weekends Sufficient lighting after dark Guard has access to telephone/other means of emergency communication	Yes
*Emergency Preparedness	Emergency contact numbers displayed near Telephone 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)	Yes
*Emergency Drill & Evacuation	Adequate No. of employees trained to use Fire Equipment. Emergency Evacuation Plan available displayed and practised.	Yes

4. PERSONAL PROTECTIVE EQUIPMENT

Subject	Requirement	Yes/No
*PPE needs analysis	Need for PPE identified and prescribed in writing.	Yes
*Head Protection	All persons on site wearing Safety Helmets including Sub-contractors and Visitors (where prescribed)	Yes
*Foot Protection	All persons on site wearing Safety Footwear including Gumboots for concrete / wet work and non-slip shoes for roof work.	Yes
*Eye and Face Protection	Eye and Face Protection (Goggles, Face Shields, Welding Helmets etc.) used when operating the following: * Cable jointing (lead sweating only) * 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 * Arc Welding Equipment * Skill / Bench Saws * Spray Painting Equipment etc.	Yes
*Hearing Protection	Hearing Protectors (Muffs, Plugs etc.) used when operating the following: * Jack / Kango Hammers * Explosive Powered Tools * Wood/Aluminium Working Machines e.g. saws, planers, routers	Yes
*Hand Protection	Protective Gloves worn by employees handling / using: using: * Cable jointing * Cement / Bricks / Steel / Chemicals * Welding Equipment * Hammers & Chisels * Jack / Kango Hammers etc.	Yes

*Respiratory Protection	Suitable/efficient Respirators worn correctly by employees handling / using: * Cable jointing (lead fumes) * Dry cement * Dusty areas * Hazardous chemicals * Angle Grinders * Spray Painting etc.	Yes
*Fall Prevention Equipment	Suitable Safety Belts / 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	Yes
*Protective Clothing	All jobs requiring protective clothing (Overalls, Rain Wear, Welding Aprons etc.) Identified and clothing worn. Fire retardant and flash proof clothing for all work inside a substation.	Yes
*PPE Issue & Control	Identified Equipment issued free of charge. All PPE maintained in good condition. (Regular checks). Workers instructed in the proper use & maintenance of PPE. Commitment obtained from wearer accepting conditions and to wear the PPE. Record of PPE issued kept on file.	Yes

5. HOUSEKEEPING

Subject	Requirement	Yes / No
*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.	Yes
Stacking & Storage **(See Section 1 for Designation & Register)**	<u>Stacking:</u> * Stable/* On firm level surface / base. * Not leaning / collapsing. * Irregular shapes bonded. * Not exceeding 3 x the base. * Stacks accessible * Removal from top only <u>Storage:</u> * 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.	Yes
*Waste Control/Reclamation	Re-usable Off cuts and other re-useable material removed daily and kept to a minimum in the work areas. All re-useable materials neatly stacked / stored in designated areas. (Nails removed / bent over in re-useable timber). Issue of hardware / nails / Screws / cartridges etc. controlled and return of unused items monitored.	Yes
Sub-Contractors (Housekeeping)	Sub-contractors required complying with Housekeeping requirements.	Yes

6. WORKING AT HEIGHTS (including Roof work)

Subject	Requirement	Yes/No
Openings	Unprotected openings adequately guarded/fenced/barricaded/catch nets installed	Yes
	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	Yes

7. SCAFFOLDING / FORMWORK / SUPPORT WORK

Subject	Requirement	Yes/No
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	Yes
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	Yes

*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	Yes
*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	Yes
Suspended Scaffolding	Outriggers securely supported and anchored. Correct No. of steel wire ropes used. Platform as close as possible to the structure. Handrails on all sides All winches / ropes / cables / brakes inspected regularly. Scaffolding complies with OHS Act (Act 85/93) Winches maintained by competent person	Yes
Temporary 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.	Yes
Special Scaffolding	Special Scaffolding e.g. Cantilever, Jib and Truss-out scaffolds erected to an acceptable standard and inspected by specialists.	Yes
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.	Yes

8. LADDERS

Subject	Requirement	Yes/No
*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 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	Yes

9. ELECTRICITY

Subject	Requirement	Yes/No
*Electrical Distribution Boards & Earth Leakage	Colour 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 milli-amps Aperture/Opening/s provided for the plugging in and removal of extension leads without the need to open the door	Yes
*Electrical Installations & Wiring	Temporary wiring / extension leads in good condition / no bare or exposed wires. Earthing continuity / polarity correct: **"Brown is live, Blue is not, Green and Yellow earth the lot"** 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.	Yes
*Physical condition of Electrical Appliances & Tools	Electrical Equipment and Tools: (includes all items plugging in to a 15 Amp supply socket) Insulation / casing in good condition. Earth wire connected/intact where not of double insulated design Double insulation mark where no earth wire. Cord in good condition/no bare wires/secured to machine & plug. Plug in good condition, connected correctly and correct polarity.	Yes

10. EMERGENCY/FIRE PREVENTION AND PROTECTION

Subject	Requirement	Yes/No
*Fire Extinguishing Equipment	Fire Risks Identified and on record Fire Extinguishing Equipment available for: * Offices * General Stores * Flammable Store * Fuel Storage Tank/s * Gas Welding / Cutting operations * Where flammable substances are being used / applied.	Yes
*Maintenance	Fire equipment serviced minimum annually/preferably 6 monthly	Yes
*Location & Signs	Fire Extinguishing Equipment: * Clearly visible * Unobstructed * Sign posted including “No Smoking” / “No Naked Lights” where required. (Flammable store, Gas store, Fuel tanks etc.)	Yes
* 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 Principals applied Only sufficient quantities issued for one day’s usage Special gas cylinder store/storage area. Gas Cylinders stored / used / transported upright and secured in trolley/cradle/structure and ventilated. Types of Gas Cylinders identified/stored separately Full cylinders stored separately from empty cylinders	Yes
*Storage, Issue & Control of Hazardous Chemical Substances (HCS)	HCS storage Principals applied: products segregated Provision made for leakage/spillage containment Emergency showers/eye wash facilities provided HCS under lock & key controlled by designated person Decanted/issued in containers with information/warning labels Disposal of unwanted HCS by recognised disposal agent	Yes

11. EXCAVATIONS

Subject	Requirement	Yes/No
Excavations deeper than 1.5 m.	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	Yes

12. TOOLS

Subject	Requirement	Yes/No
*Hand Tools	Shovels / Spades / Picks: * Handles free from cracks and splinters * Handles fit securely * Working end sharp and true Hammers: * Good quality handles, no pipe or reinforcing steel handles. * Handles free from cracks and splinters Handles fit securely Chisels: * No mushroomed heads / heads chamfered * Not hardened * Cutting edge sharp and square Saws: * Teeth sharp and set correctly * Correct saw used for the job	Yes
*Explosive Powered Tools.	Only used by trained / authorised personnel. Prescribed warning signs placed / displayed where tool is in use. 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.	Yes

13. CRANES

Subject	Requirement	Yes/No
Tower Crane	Only operated by trained authorised operator with valid certificate of training Structure - no visible defects Electrical installation good/safe Crane hook: Throat pop marked/safety latch fitted/functional SWL/MML displayed Limit switches fitted/operational Access Ladder fitted with backrests/Fall arrest system installed Lifting tackle in good condition/inspection colour coding current	Yes
*Mobile Crane	Only operated by trained authorised operator with valid certificate of training Rear view mirrors Windscreen visibility good Windscreen wipers operating effectively Indicators operational Hooter working Tyres safe/sufficient tread/pressure visibly sufficient No missing Wheel nuts Headlights, taillights operational Grease nipples and grease on all joints No Oil leaks Hydraulic pipes visibly sound/no leaks No corrosion on Battery terminals Boom visibly in good condition/no apparent damage Cable/sheaves greased/no visible damage/split wires/corrosion Brakes working properly Crane hook: Throat pop marked/safety latch fitted/functional SWL/MML displayed By-pass valves operational Deflection chart displayed/visible to operator/driver Outriggers functional used	Yes
*Gantry Crane	Only operated by trained authorised persons Correct slinging techniques used Recognised/displayed on chart signals used Log book kept/up to date Prescribed inspections conducted on crane &lifting tackle “Crane overhead” signage, where applicable Crane hook: Throat pop marked/safety latch fitted/functional SWL/MML displayed/load limiting switches fitted/operational	Yes

14. BUILDER'S HOIST

Subject	Requirement	Yes/No
Builder's Hoist	**"Hoist In Operation"** - sign displayed. General construction strong and free from patent defects. Tower: * Adequately secured / braced. * At least 900 mm available for over travel. * Barricaded at least 2 100 mm high at ground level and floors. * Landing place provided with gate at least 1 800 high. Platform: * No persons conveyed on platform * Steel wire ropes with breaking strain of six times max. weight. * Signal systems used. * Goods prevented from moving / falling off. * Effective brake capable of holding max. weight.	Yes

15. TRANSPORT & MATERIALS HANDLING EQUIPMENT

Subject	Requirement	Yes/No
*Site Vehicles	All Site Vehicles, Dumpers, Bobcats, Loaders etc; checked daily before used by driver / operator. Inventory of vehicles used/operated on site Inspection by means of a checklist / results recorded. No persons may ride on equipment not designed for passengers. Site speed limit posted and not exceeded. Drivers / Operators trained / licensed. No unauthorised persons allowed to drive/operate equipment.	Yes
Conveyors	Conveyor belt nip points and drive guarded. Emergency stop/lever/brake fitted, clearly marked & accessible.	Yes

16. SITE PLANT AND MACHINERY

Subject	Requirement	Yes/No
Brick Cutting Machine	Operator Trained. Only authorised 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.	Yes
*Electric Arc Welder	Welder Trained. Only authorised / trained persons use welder. Adequately earthed. 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. Screens & warning signs placed	Yes
*Woodworking Machines	Operators Trained. Only authorised persons use machines. Provided with guards. Guards used. Operators using correct PPE - eye/face/foot/hearing	Yes
*Compressors	Relief valves set and locked / sealed. Maximum Safe Working Pressure (MSWP) indicated on face of pressure gauge face: not on glass cover. All drives adequately guarded. Receiver/lines drained daily Hoses good condition/clamped, not wired	Yes
Concrete Mixer / Batch Plant	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. Banksman identified and crane signals displayed and used.	Yes
*Gas Welding / Flame Cutting Equipment	Only authorised/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. Fire prevention/control methods applied/hot work permits	Yes

17. PLANT & STORAGE YARDS/SITE WORKSHOPS SPECIFICS

Subject	Requirement	Yes/No
Section 8(2) (1)General Machinery Regulation 2(1): **Supervision: Person appointed for supervision of the Use & Maintenance of Machinery**	Person/s with specific knowledge and experience designated 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	Yes
General Machinery Regulation 9(2): **Notices re. Operation of Machinery**	Schedule D Notice posted in Work areas	Yes
V Pressure Vessel Regulation 13(1)(b): **Supervision of the Use & Maintenance of Pressure equipment (PE)**	Person/s with specific knowledge and experience designated to Supervise the Use & Maintenance of VUP's VUP's identified/numbered/placed on register/Manufacturers plate intact Inspection/maintenance schedules for abovementioned Inspections/maintenance carried out to above schedules Results recorded/Test certificates available.	Yes

Lock–out Procedure	Lock-out procedure in operation	Yes
Ergonomics	Ergonomics survey conducted – results on record Survey results applied	Yes
Demarcation & Colour Coding	Demarcation Principals 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	Yes
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 Stone/disk - correct type and size/mounted correctly/dressed Use of Eye protection enforced	Yes
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	Yes
Ancillary Lifting Equipment	Chain Blocks/Tirfors/jacks/mobile gantries etc. identified/ numbered on register Chains in good condition/links no excessive wear Lifting hooks – throat pop marked/safety latch fitted SWL/MML marked/displayed	Yes
Presses/Guillotines/ Shears	Only operated by trained/authorised persons Interlocks/lock-outs fitted	Yes

18. WORKPLACE ENVIRONMENT, HEALTH AND HYGIENE

Subject	Requirement	Yes/No
***Lighting**	**Adequate lighting in places where work is being executed e.g. stairwells and basements.** **Light fittings placed / installed causing no irritating/blinding glare.**	**Yes**
*Ventilation	Adequate ventilation / extraction / exhausting in hazardous areas e.g. chemicals / adhesives / welding / petrol or diesel/ motors running and in confined spaces / basements.	Yes
*Noise	Tasks identified where noise exceeds 85 dBa. All reasonable steps taken to reduce noise levels at the source. Hearing protection used where noise levels could not be reduced to below 85 dBa.	Yes
*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 when extreme temperatures are experienced.	Yes
*Ablutions	Sufficient toilets provided - 1 per 30 employees (National Building Regulations prescribe chemical toilets for Construction sites) Toilet paper available. Sufficient showers provided. Facilities for washing hands provided Soap available for washing hands Means of drying hands available Changing facilities / area provided. Ablution facilities hygienic and clean.	Yes
*Eating / Cooking Facilities	Adequate storage facilities provided. Weather protected eating area provided, separate from changing area Refuse bins with lids provided. Facilities clean and hygienic.	Yes
*Pollution of Environment	Measures in place to minimize dust generation. Accumulation of empty cement pockets, plastic wrapping / bags, packing materials etc. prevented. Spillage / discarding of oil, chemicals and dieseline into storm water and other drains prevented.	Yes
*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.	

Comments:

_____

_____

_____

I, …… the responsible person for the principal contractor has received this health and safety specification for the project: **THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY** together with the tender document and will use this specification as a guideline from which to formulate my site specific health and safety plan and risk assessment for the above mentioned project.

_____ _____

SIGNATURE DATE

ANNEXURE C
GEOTECHNICAL REPORT / GFSH-2



GEOTECHNICAL INVESTIGATION: 100 INFILL LOW COST HOUSING, NABABEEP TOWNSHIP, NAMA KHOI LOCAL MUNICIPALITY

Prepared For

COGHSTA

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Kimberley,

8301

Report No. ICEBURG21-12

iceburg trading

GEOTECHNICAL INVESTIGATION: 100 INFILL LOW COST HOUSING, NABABEEP TOWNSHIP, NAMA KHOI LOCAL MUNICIPALITY.

September 2021

Report Issue	**Draft Report**		
Reference Number	**Iceburg Trading751cc 21-12**		
Title	**GEOTECHNICAL INVESTIGATION: 100 INFILL LOW COST HOUSING, NABABEEP TOWNSHIP, NAMA KHOI LOCAL MUNICIPALITY.**		
	Name	**Signature**	**Date**
Author	Dineo Ramakatsa		2021/09/02
Document Reviewer	Golden Manganyi		2021/09/02
Document Authorisation	Tumelo Mokgatle		2021/09/02

DECLAIMER

This report is intended solely for the information of Nababeep Township. Iceburg trading 751cc is bound by the confidentiality agreement that no information will be communicated to a third party without the COGHSTA's written permission. Its existence may not be disclosed nor its contents published in any way without the prior written approval of COGHSTA.

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1. INTRODUCTION

On the 26th March 2021, COGHSTA appointed Iceburg Trading 751cc to undertake the Geotechnical investigation for the proposed 100 low cost housing located in Nababeep Village, Northern Cape Province. The physical and geotechnical nature of the site needs to be investigated to facilitate the civil engineering design and foundation solution. Iceburg Trading 751cc was advised that the development comprises of a 100-infill low cost housing to be developed in Nababeep area.

The report presents the finding of the site with regards to the Revised Edition of the Guide to Soil Profiling for Civil Engineering Purposes in Southern Africa which was published in September 2002.

This report discusses the method of investigation, geotechnical conditions encountered with on-site material characteristics, recommendations, and general considerations.

The level of information provided in this report is deemed suitable for planning purposes.

2. PURPOSE OF INVESTIGATION AND SCOPE OF WORK

The scope of work comprises trial pits excavation and soil sampling within the proposed areas/villages, this includes:

- Determine the geological origin of the material on site.
- Identify and discuss the main on-site geotechnical constraints;
- Materials classification according to TRH14 of different in-situ materials (indicator tests – mod and CBR related – in situ densities and in situ CBR) for suitability in re-use in new layer works and fill below walkways.
- Identify problem areas at a sufficiently early stage.
- Determining the ground water depth level, along the soggy areas
- Identify risk and consequence of failure.
- Identify and discuss the main on-site geotechnical constraints;
- Recommendation on aspects of the site that can adversely affect the design and cost of the project (Facilitate an adequate and economical design).
- Comment on the founding conditions
- Provide the geotechnical basis for planning and preliminary design purposes.

The scope of work was accomplished by:

- Excavation of 157 trial holes to maximum depth of 1.6m below ground level by Bell TLB;
- Performing laboratory tests to determine physical or engineering characteristics of the soil onsite;

- Performing engineering analysis to develop design guidelines and recommendations.

Subsequent sections of this report contain descriptions of the fieldwork, general subsurface conditions, design recommendations, and construction considerations.

3. CHALLENGES

The proposed scope was to excavate a minimum of two trial holes per stand as per the guideline, however the investigation was within the build-up area, some investigated stands are occupied by houses and underground services. The challenges encountered was that some of the stand didn't have enough space to excavate two trial pits because of the existing house, hence one trial pit was excavated. Two open portions were also investigated as per 'SANS 634:2012 Geotechnical investigation for township development' and 'Generic Specification GFSH-2:2002 Geotechnical site investigation for housing development'.

4. AVAILABLE INFORMATION

- A 1:250 000 scale Geological Map from Council for Geoscience
- Topographical maps and google earth images provided by the client
- A field walkover survey done by the consultant and the municipality.

5. METHOD OF INVESTIGATION

The geotechnical investigation commenced with a desktop study, which entailed obtaining as much information as possible of the site that may provide indication of the most likely sub-soil and associated geotechnical conditions prevailing within the area. By determining the underlying geological setting together with prevailing topographical and climatic condition, the weathering characteristic of the host rock can be estimated and the indication of the most likely geotechnical condition underlying the site can be established.

The desktop study was followed by a site reconnaissance which was carried on 16th May 2021. This was done through walking over the entire area whilst noting and recording information for visible surface information, from this phase of investigation together with desktop study, provided the preliminary assessment of the geotechnical condition underlying the site and identify areas necessary for further investigation.

Field investigation was carried out on 17 to 23rd May 2021 and entailed setting out and excavating 157 trial holes using Tlb (Tractor loader backhoe). Holes referred as TP 01 to TP 157 were excavated at position shown on the attached plan.

Representative soil samples were sampled from the soil horizons and submitted to soil laboratory for testing. The following tests were conducted.

- Foundation Indicator tests
- MOD AASHTO compaction and CBR
- Material Classification
- pH and Conductivity

6. BIOPHYSICAL DESCRIPTION

6.1 SITE LOCATION AND DESCRIPTION

The study area is Nababep Village, Springbok, Northern Cape Province. Nababeep is located 7,9km north of Springbok town. The investigated village lies on the eastern side on the National Road 7 (N7). The investigated area is an existing residential village with houses and shacks, and it is subdivided into sub-villages. Municipality is supplying Water and electricity in bulk to the existing village. Electricity supply is by means of an overhead network.

The vegetation comprises of trees, shrubs and few outcrops of granites, mainly foliated and quartzites were encountered during the walkover survey and fieldwork.



Figure 6-1: A Photograph showing outcrops found onsite

Table 1: Coordinates of the proposed investigated village

Latitude	29°35'31.04"S
Longitude	17°52'33.44"E

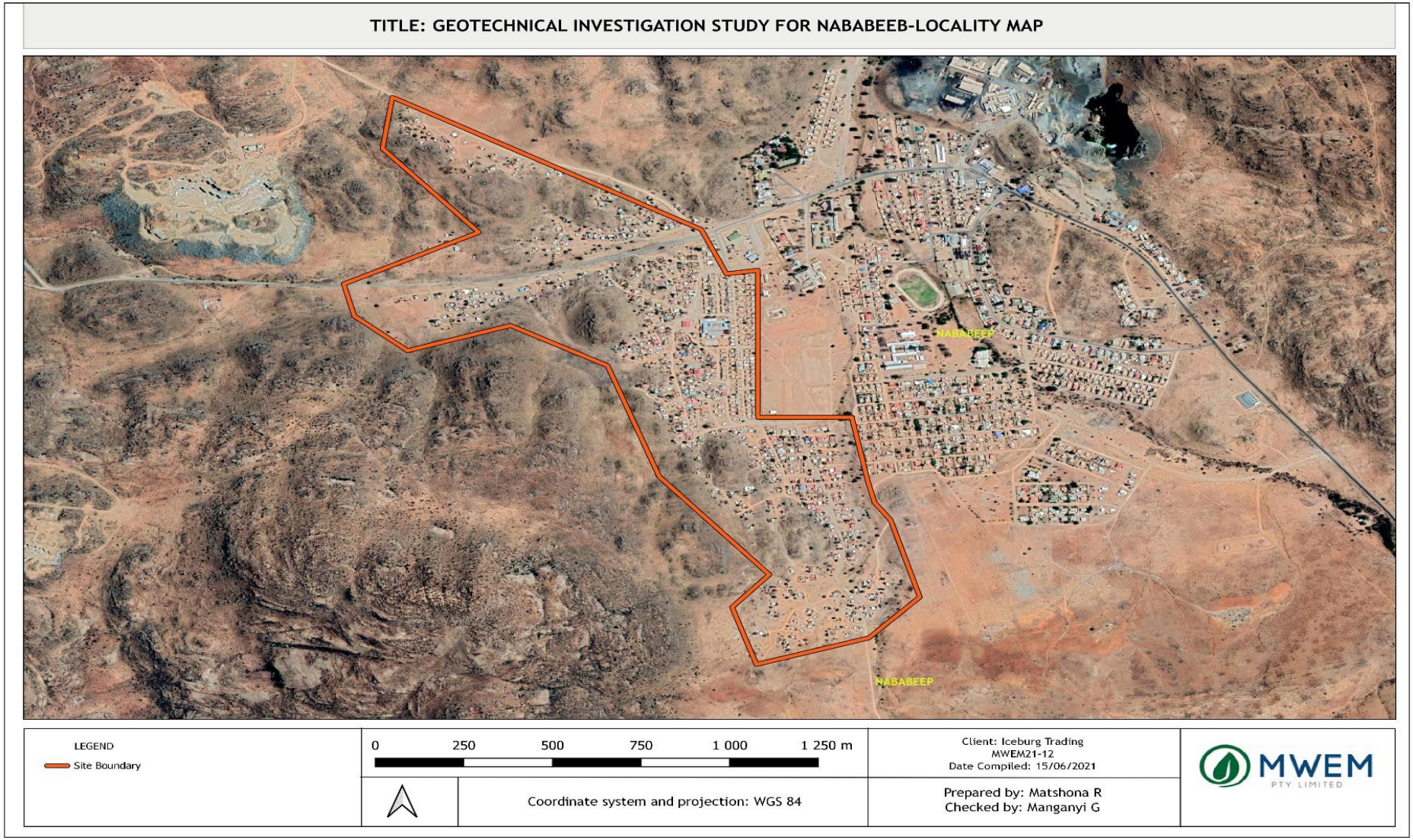


Figure 6-2: Locality map, showing the investigated village.

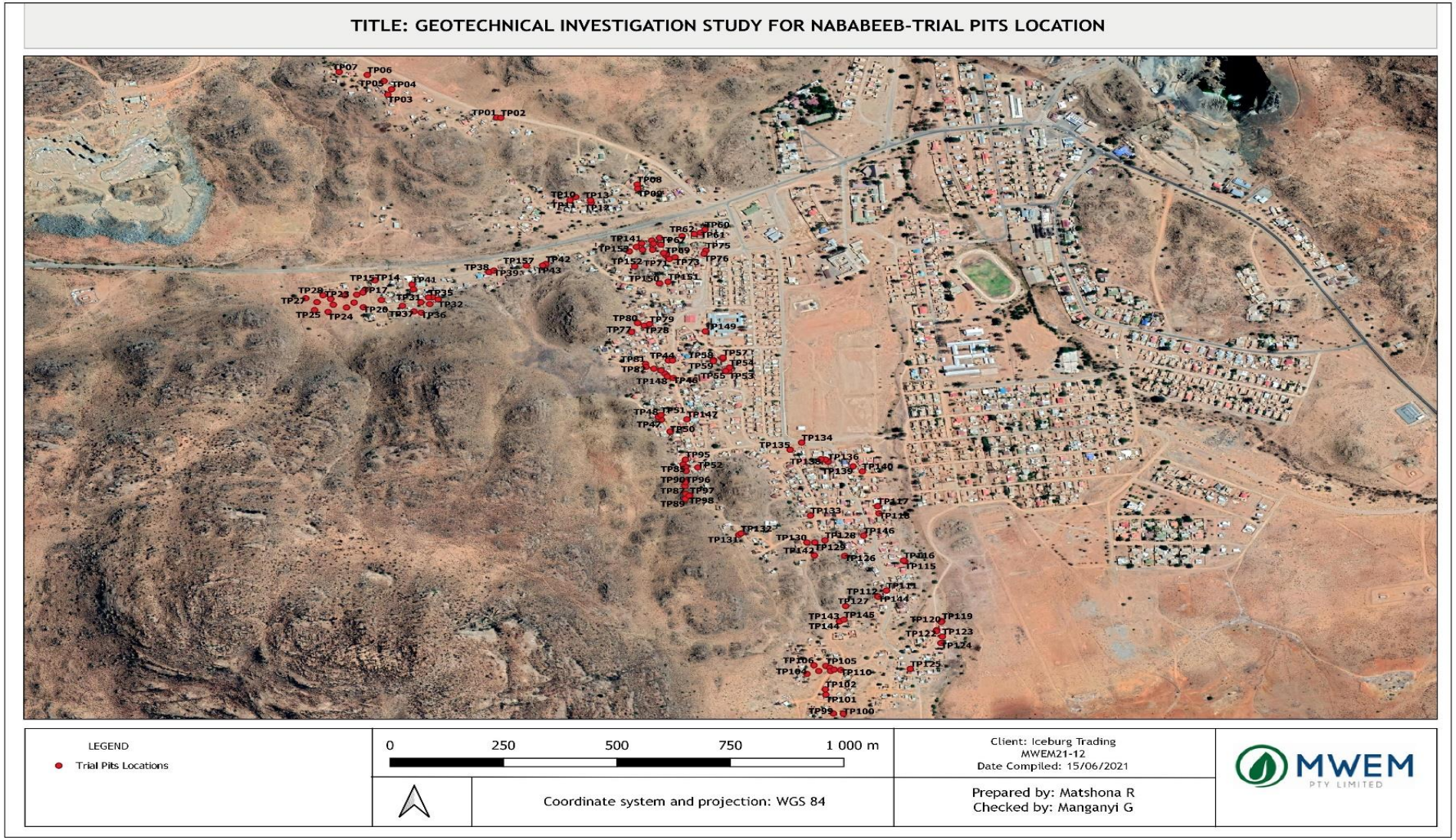


FIGURE 6-3 TIAL PITS LOCATION

6.2 SURFACE WATER

No streams and water ponds were noted during the walkover survey over the proposed area for investigation.

6.3 LAND USE

The investigated area is an existing residential village with houses and shacks, with services such as water and electricity from the municipality to the existing village.

7. GEOLOGY

According to the 1:250 000 geological map the investigated area is expected to be underlain by different types of Quartzites, Granite and Granite Gneiss of the Namaqualand Suite.

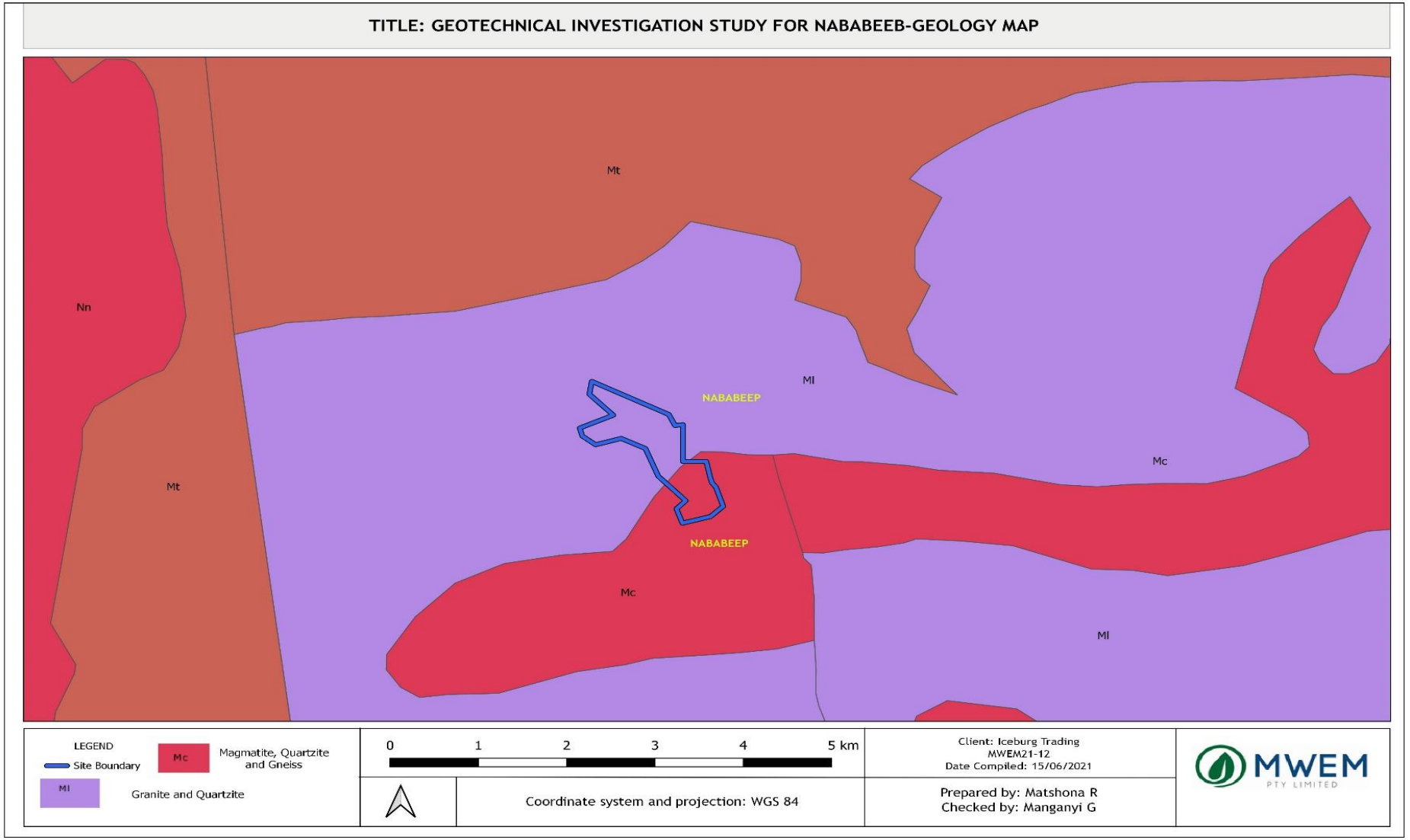


Figure 7-1: Geology map of the investigated area

8. CLIMATE AND HYDROLOGY

Nababeep normally receives about 117mm of rain per year, with most rainfall occurring during summer. It receives the lowest rainfall (0mm) in January and the highest (25mm) in June. The average midday temperatures for Nababeep range from 16.5°C in July to 28.3°C in February. The region is the coldest during July when the mercury drops to 3.8°C on average during the night.

Weinert (1964), through his work on basic rocks in Southern Africa, demonstrated that mechanical disintegration is the predominant mode of rock weathering in areas where his climatic "N-value" is greater than 5, while chemical decomposition predominates where the N-value is less than 5. The climatic N-value of the area is <5, which implies that chemical decomposition is the dominant mode or rock weathering.

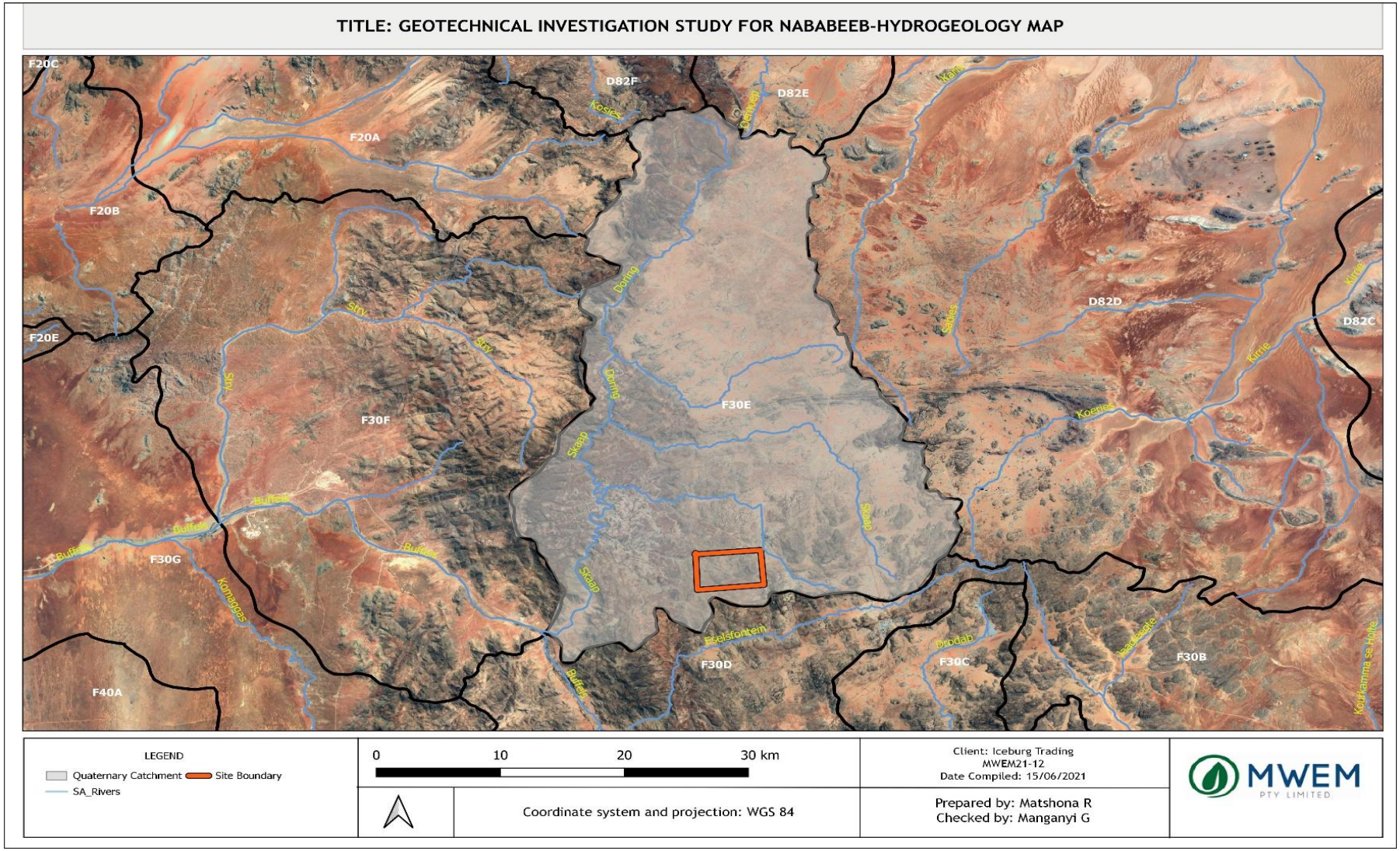


FIGURE 8-1 QUARTERNARY CATCHMENT MAP

9. NATURE OF INVESTIGATION

9.1 TRIAL PITS

The site investigation was carried out on the 17th to the 23rd May 2021. Hundred and fifty-seven trial pits were excavated with a backhoe loader. The maximum depth reached is 1.6m below ground level. The trial pits were internally profiled by a registered Engineering Geologist in accordance with the latest standard of South Africa (after Jennings et. al. 1973).

Disturbed samples were selectively retrieved in order to determine the soil grading, compaction characteristics and general material properties. The samples were submitted to an SANAS accredited laboratory. The trial pit was loosely backfilled after profiling.

The positions of the trial pits were determined with the aid of a hand-held GPS, the test pit profile is presented in Appendix A of this report and its approximate location is indicated on a test pits locality plan attached in Appendix D.



Figure 9-1: A photograph showing a TLB machine excavating on site

Table 2: Summary of trial pits

Test Pit Number	End of hole (EOH)	Depth (mm)	Water seepage
TP 01	Hard dig	800mm	No water seepage encountered
TP 02	Hard dig	700mm	No water seepage encountered
TP 03	Hard dig	200mm	No water seepage encountered
TP 04	Hard dig	700mm	No water seepage encountered
TP 05	Hard dig	300mm	No water seepage encountered
TP 06	Refusal on bedrock	400mm	No water seepage encountered
TP 07	Hard dig	400mm	No water seepage encountered
TP 08	Hard dig	600mm	No water seepage encountered
TP 09	Hard dig	600mm	No water seepage encountered
TP 10	Hard dig	800mm	No water seepage encountered
TP 11	Hard dig	600mm	No water seepage encountered
TP 12	Hard dig	400mm	No water seepage encountered
TP 13	Hard dig	100mm	No water seepage encountered
TP 14	Hard dig	300mm	No water seepage encountered
TP 15	Hard dig	300mm	No water seepage encountered
TP 16	Hard dig	300mm	No water seepage encountered
TP 17	Hard dig	200mm	No water seepage encountered
TP 18	Hard dig	200mm	No water seepage encountered
TP 19	Hard dig	200mm	No water seepage encountered
TP 20	Hard dig	700mm	No water seepage encountered
TP 21	Hard dig	400mm	No water seepage encountered
TP 22	Refusal on bedrock	400mm	No water seepage encountered

Test Pit Number	End of hole (EOH)	Depth (mm)	Water seepage
TP 23	Hard Dig	800mm	No water seepage encountered
TP 24	Hard Dig	500mm	No water seepage encountered
TP 25	Hard Dig	700mm	No water seepage encountered
TP 26	Hard Dig	600mm	No water seepage encountered
TP 27	Hard Dig	600mm	No water seepage encountered
TP 28	Hard Dig	800mm	No water seepage encountered
TP 29	Hard Dig	500mm	No water seepage encountered
TP 30	Hard Dig	400mm	No water seepage encountered
TP 31	Hard Dig	300mm	No water seepage encountered
TP 32	Hard Dig	500mm	No water seepage encountered
TP 33	Hard Dig	400mm	No water seepage encountered
TP 34	Hard Dig	400mm	No water seepage encountered
TP 35	Hard Dig	500mm	No water seepage encountered
TP 36	Hard Dig	500mm	No water seepage encountered
TP 37	Hard Dig	500mm	No water seepage encountered
TP 38	Hard Dig	1600mm	No water seepage encountered
TP 39	Hard Dig	200mm	No water seepage encountered
TP 40	Hard Dig	400mm	No water seepage encountered
TP 41	Hard Dig	400mm	No water seepage encountered
TP 42	Hard Dig	1300mm	No water seepage encountered
TP 43	Hard Dig	200mm	No water seepage encountered
TP 44	Hard Dig	200mm	No water seepage encountered

Test Pit Number	End of hole (EOH)	Depth (mm)	Water seepage
TP 45	Hard Dig	200mm	No water seepage encountered
TP 46	Hard Dig	400mm	No water seepage encountered
TP 47	Hard Dig	400mm	No water seepage encountered
TP 48	Hard Dig	200mm	No water seepage encountered
TP 49	Hard Dig	1200mm	No water seepage encountered
TP 50	Hard Dig	500mm	No water seepage encountered
TP 51	Hard Dig	400mm	No water seepage encountered
TP 52	Hard Dig	500mm	No water seepage encountered
TP 53	Hard Dig	400mm	No water seepage encountered
TP 54	Hard Dig	500mm	No water seepage encountered
TP 55	Hard Dig	900mm	No water seepage encountered
TP 56	Hard Dig	900mm	No water seepage encountered
TP 57	Hard Dig	300mm	No water seepage encountered
TP 58	Hard Dig	600mm	No water seepage encountered
TP 59	Hard Dig	300mm	No water seepage encountered
TP 60	Hard Dig	200mm	No water seepage encountered
TP 61	Hard Dig	200mm	No water seepage encountered
TP 62	Hard Dig	400mm	No water seepage encountered
TP 63	Hard Dig	400mm	No water seepage encountered
TP 64	Hard Dig	500mm	No water seepage encountered
TP 65	Hard Dig	600mm	No water seepage encountered
TP 66	Hard Dig	300mm	No water seepage encountered

Test Pit Number	End of hole (EOH)	Depth (mm)	Water seepage
TP 67	Hard Dig	400mm	No water seepage encountered
TP 68	Hard Dig	200mm	No water seepage encountered
TP 69	Hard Dig	600mm	No water seepage encountered
TP 70	Hard Dig	200mm	No water seepage encountered
TP 71	Hard Dig	1000mm	No water seepage encountered
TP 72	Hard Dig	300mm	No water seepage encountered
TP 73	Hard Dig	100mm	No water seepage encountered
TP 74	Hard Dig	200mm	No water seepage encountered
TP 75	Hard Dig	200mm	No water seepage encountered
TP 76	Hard Dig	500mm	No water seepage encountered
TP 77	Hard Dig	500mm	No water seepage encountered
TP 78	Hard Dig	400mm	No water seepage encountered
TP 79	Hard Dig	400mm	No water seepage encountered
TP 80	Hard Dig	1000mm	No water seepage encountered
TP 81	Refusal On Bedrock	400mm	No water seepage encountered
TP 82	Hard Dig	200mm	No water seepage encountered
TP 83	Hard Dig	800mm	No water seepage encountered
TP 84	Hard Dig	300mm	No water seepage encountered
TP 85	Hard Dig	900mm	No water seepage encountered
TP 86	Hard Dig	500mm	No water seepage encountered
TP 87	Hard Dig	500mm	No water seepage encountered
TP 88	Hard Dig	1000mm	No water seepage encountered

Test Pit Number	End of hole (EOH)	Depth (mm)	Water seepage
TP 89	Hard Dig	900mm	No water seepage encountered
TP 90	Refusal on Bedrock	500mm	No water seepage encountered
TP 91	Hard Dig	300mm	No water seepage encountered
TP 92	Hard Dig	500mm	No water seepage encountered
TP 93	Refusal on Bedrock	400mm	No water seepage encountered
TP 94	Hard Dig	500mm	No water seepage encountered
TP 95	Hard Dig	500mm	No water seepage encountered
TP 96	Hard Dig	500mm	No water seepage encountered
TP 97	Hard Dig	500mm	No water seepage encountered
TP 98	Hard Dig	700mm	No water seepage encountered
TP 99	Hard Dig	600mm	No water seepage encountered
TP 100	Hard Dig	1000mm	No water seepage encountered
TP 101	Hard Dig	400mm	No water seepage encountered
TP 102	Hard Dig	400mm	No water seepage encountered
TP 103	Hard Dig	1000mm	No water seepage encountered
TP 104	Refusal on Bedrock	200mm	No water seepage encountered
TP 105	Refusal on Bedrock	600mm	No water seepage encountered
TP 106	Hard Dig	300mm	No water seepage encountered
TP 107	Hard Dig	300mm	No water seepage encountered
TP 108	Hard Dig	800mm	No water seepage encountered
TP 109	Hard Dig	700mm	No water seepage encountered
TP 110	Hard Dig	300mm	No water seepage encountered

Test Pit Number	End of hole (EOH)	Depth (mm)	Water seepage
TP 111	Hard Dig	800mm	No water seepage encountered
TP 112	Hard Dig	300mm	No water seepage encountered
TP 113	Hard Dig	600mm	No water seepage encountered
TP 114	Hard Dig	600mm	No water seepage encountered
TP 115	Hard Dig	500mm	No water seepage encountered
TP 116	Hard Dig	600mm	No water seepage encountered
TP 117	Hard Dig	400mm	No water seepage encountered
TP 118	Hard Dig	400mm	No water seepage encountered
TP 119	Hard Dig	200mm	No water seepage encountered
TP 120	Hard Dig	400mm	No water seepage encountered
TP 121	Hard Dig	400mm	No water seepage encountered
TP 122	Hard Dig	300mm	No water seepage encountered
TP 123	Refusal on Bedrock	500mm	No water seepage encountered
TP 124	Refusal on Bedrock	200mm	No water seepage encountered
TP 125	Refusal on Bedrock	700mm	No water seepage encountered
TP 126	Hard Dig	700mm	No water seepage encountered
TP 127	Hard Dig	400mm	No water seepage encountered
TP 128	Hard Dig	700mm	No water seepage encountered
TP 129	Refusal on Bedrock	200mm	No water seepage encountered
TP 130	Refusal on Bedrock	300mm	No water seepage encountered
TP 131	Refusal on Bedrock	200mm	No water seepage encountered
TP 132	Hard Dig	700mm	No water seepage encountered

Test Pit Number	End of hole (EOH)	Depth (mm)	Water seepage
TP 133	Hard Dig	500mm	No water seepage encountered
TP 134	Hard Dig	400mm	No water seepage encountered
TP 135	Hard Dig	500mm	No water seepage encountered
TP 136	Hard Dig	500mm	No water seepage encountered
TP 137	Hard Dig	400mm	No water seepage encountered
TP 138	Hard Dig	500mm	No water seepage encountered
TP 139	Hard Dig	600mm	No water seepage encountered
TP 140	Hard Dig	600mm	No water seepage encountered
TP 141	Refusal on Bedrock	300mm	No water seepage encountered
TP 142	Refusal on Bedrock	500mm	No water seepage encountered
TP 143	Refusal on Bedrock	400mm	No water seepage encountered
TP 144	Hard Dig	600mm	No water seepage encountered
TP 145	Hard Dig	800mm	No water seepage encountered
TP 146	Refusal on Bedrock	500mm	No water seepage encountered
TP 147	Hard Dig	400mm	No water seepage encountered
TP 148	Hard Dig	400mm	No water seepage encountered
TP 149	Hard Dig	100mm	No water seepage encountered
TP 150	Hard Dig	500mm	No water seepage encountered
TP 151	Hard Dig	1000mm	No water seepage encountered
TP 152	Hard Dig	600mm	No water seepage encountered
TP 153	Hard Dig	500mm	No water seepage encountered
TP 154	Hard Dig	300mm	No water seepage encountered

Test Pit Number	End of hole (EOH)	Depth (mm)	Water seepage
TP 155	Hard Dig	200mm	No water seepage encountered
TP 156	Hard Dig	600mm	No water seepage encountered
TP 157	Hard Dig	800mm	No water seepage encountered

9.2 SAMPLING METHODS AND MATERIAL TESTING

The investigation was further supplemented by limited materials sampling and testing. Representative samples were taken to the lab and the following tests performed:

- **Indicator Test:** samples were collected from various layers exposed in the trial pits and submitted to the lab for sieve analysis, atterberg limits (LS, PI, LL).
- **California Bearing Ratio (CBR):** samples were collected from the soil material and submitted to a lab for analysis. The test results are used as an important input to soil classification using USCS and AASHTO classification systems for soil description and correlation. This test is done to determine the quality and suitability of in-situ materials for use in earthworks.
- **Chemical soil aggressiveness testing**: To determine the proneness of the in-situ material to corrosivity with specific reference to underground services (stormwater, water reticulation and sewer pipes and electrical cables).

10. SUBSURFACE SOIL CONDITIONS

The geotechnical investigation revealed that the profile across the site is uniform, comprising of the following horizons:

- Colluvium;
- Bedrock

These horizons are described in more detail below:

10.1.1 COLLUVIUM

The colluvium soil horizon forms the upper most layers of the site. It is characterised by slightly moist, light to reddish brown, orange red to grey, loose to medium dense, intact, sandy silty gravel and gravely sandy silty and few abundant sub-rounded and sub-angular cobbles of granite were noted clast supported in a matrix of reddish brown in some area.

This horizon varies in thickness across the site. The material found here are loose, unconsolidated sediments that have been deposited either by gravity or downslope creep, or a variable combination of

these processes. This horizon was underlain by the bedrock which is expected to be granite gneiss and quartzites.

10.1.2 BEDROCK

The granite gneiss bedrock on site occurs as moderately to highly weathered, closely jointed, black and grey, medium grained and the hardness of the rock was generally profiled as medium hard to hard rock. The minimum thickness of the bedrock is approximately 0.55m. Excavation was not possible due to the bedrock outcropping at some portions of the site.

11. LABORATOTY TESTING

Table 3: Summary of foundation indicator test results

Sample No.	Depth (m)	Grading (%)				Atterberg Limits (%)			AASHTO Class.	Pot. Exp.	USCS Class.
		Gravel	Sand	Silt	Clay	LL	LS	PI			
TP01	0.0 – 0.8	0.0	80.0	20.0	0.0	18	2.0	3.8	A-1-b(0)	Low	-
TP03	0.0 – 0.2	25.0	69.9	4.4	0.7	-	0.0	NP	A-1-b(0)	Low	SW-SC
TP04	0.0 – 0.7	10.0	81.9	7.1	1.0	-	0.0	NP	A-1-b(0)	Low	SC
TP05	0.0 -0.3	49.0	42.3	5.5	3.2	-	0.0	NP	A-1-b(0)	Low	SW-SC
TP06	0.0 – 0.4	0.0	81.0	19.0	0.0	-	1.0	NP	A-1-a(0)	Low	-
TP07	0.0 – 0.6	8.0	83.5	7.0	1.3	-	0.0	NP	A-2-4(0)	Low	SW-SC
TP08	0.0 – 0.6	0.0	75.0	25.0	0.0	-	1.5	SP	A-1-b(0)	Low	-
TP09	0.6 – 1.1	57.0	37.3	4.8	0.9	25	3.0	5	A-1-a(0)	Low	SW-SM-SC
TP10	0.0 – 0.8	0.0	80.0	21.0	0.0	20	3.0	6	A-1-b(0)	Low	-
TP14	0.0 – 0.3	32.0	56.5	9.8	1.7	19	2.0	4	A-1-b(0)	Low	SM-SC
TP12	0.0 – 0.4	49.0	44.8	4.9	1.3	-	0.0	NP	A-1-b(0)	Low	SW-SC
TP16	0.0 – 0.3	0.0	77.0	24.0	0.0	18	2.0	3.8	A-1-b(0)	Low	-
TP17	0.0 – 0.2	22.0	71.9	5.4	0.7	-	0.0	NP	A-1-b(0)	Low	SC
TP18	0.0 – 0.2	48.0	43.0	7.2	1.8	-	1.0	SP	A-1-b(0)	Low	SW-SC
TP19	0.0 – 0.1	28.0	59.2	11.6	1.2	-	0.0	NP	A-1-b(0)	Low	SC
TP20	0.0 – 0.4	0.0	75.0	26.0	0.0	-	0.0	NP	A-1-b(0)	Low	-
TP21	0.0 – 0.7	53.0	36.2	10.2	0.6	16	1.5	9	A-2-6(0)	Low	SC
TP22	0.0 – 0.4	38.0	54.2	6.7	1.1	-	0.0	NP	A-1-b(0)	Low	SC

Sample No.	Depth (m)	Grading (%)				Atterberg Limits (%)			AASHTO Class.	Pot. Exp.	USCS Class.
		Gravel	Sand	Silt	Clay	LL	LS	PI			
TP23	0.0 – 0.8	0.0	71.0	29.0	0.0	21	2.0	3.8	A-1-a(0)	Low	-
TP24	0.0 – 0.5	48.0	46.8	4.1	1.1	-	1.5	SP	A-1-b(0)	Low	SC
TP25	0.0 – 0.7	15.0	75.5	7.6	1.9	-	0.0	NP	A-2-4(0)	Low	SC
TP26	0.0 -0.6	0.0	75.0	26.0	0.0	13	2.0	4.0	A-2-4(0)	Low	-
TP27	0.0 – 0.6	6.0	86.0	6.1	1.9	-	0.0	NP	A-2-4(0)	Low	SC
TP28	0.0 – 0.8	0.0	83.0	18.0	0.0	19	1.5	5.0	A-1-b(0)	Low	-
TP30	0.0 – 0.35	0.0	84.0	17.0	0.0	-	1.5	SP	A-1-a(0)	Low	-
TP31	0.0 – 0.3	52.0	43.2	4.2	0.6	-	1.5	SP	A-1-a(0)	Low	SW-SC
TP32	0.0 – 0.5	0.0	64.0	36.0	0.0	28	4.5	9.0	A-2-4(0)	Low	-
TP33	0.4 – 0.7	38.0	57.5	3.5	1.0	25	2.0	3.0	A-1-b(0)	Low	SW-SM
TP35	0.0 – 0.5	30.0	60.4	5.7	3.9	19	2.0	4.0	A-1-b(0)	Low	SC
TP36	0.0 – 0.5	0.0	81.0	19.0	0.0	-	1.0	SP	A-1-a(0)	Low	-
TP38	0.0 – 1.6	0.0	78.0	23.0	0.0	-	1.0	SP	A-2-4(0)	Low	-
TP40	0.0 – 0.35	52.0	41.8	5.2	1.0	-	1.5	SP	A-1-a(0)	Low	SW-SC
TP42	0.8 – 1.3	29.0	63.2	7.6	0.2	23	3.0	6	A-1-b(0)	Low	SM-SC
TP44	0.0 – 0.15	56.0	40.0	2.8	1.2	-	1.5	SP	A-1-a(0)	Low	SW-SC
TP46	0.0 – 0.4	0.0	81.0	19.0	0.0	-	1.0	SP	A-1-b(0)	Low	-
TP47	0.0 – 0.4	0.0	82.0	19.0	0.0	-	0.0	NP	A-1-b(0)	Low	-
TP49	0.0 – 1.2	30.0	62.9	4.9	2.2	20	2.0	3.0	A-1-b(0)	Low	SC
TP51	0.0 – 0.35	0.0	85.0	15.0	0.0	-	0.0	NP	A-1-b(0)	Low	-
TP52	0.0 - 0.5	52.0	44.5	2.8	0.7	-	0.0	NP	A-1-a(0)	Low	SW-SC

Sample No.	Depth (m)	Grading (%)				Atterberg Limits (%)			AASHTO Class.	Pot. Exp.	USCS Class.
		Gravel	Sand	Silt	Clay	LL	LS	PI			
TP53	0.0 – 0.4	0.0	85.0	16.0	0.0	-	0.0	NP	A-2-4(0)	Low	-
TP55	0.0 -0.9	14.0	76.2	6.2	3.6	16	1.5	3.0	A-1-b(0)	Low	SC
TP56	0.4 – 0.9	0.0	82.0	18.0	0.0	-	0.0	NP	A-2-4(0)	Low	-
TP58	0.0 -0.6	52.0	42.7	3.7	1.6	20	2.5	5.0	A-1-a(0)	Low	SW-SM-SC
TP60	0.0 – 0.15	0.0	67.0	33.0	0.0	18	2.0	4.0	A-1-b(0)	Low	-
TP62	0.0 – 0.4	0.0	79.0	21.0	0.0	17	1.0	1.5	A-1-a(0)	Low	-
TP64	0.0 – 0.5	19.0	74.7	4.4	1.9	15	0.0	0.0	A-1-b(0)	Low	SC
TP66	0.0 – 0.3	0.0	82.0	18.0	0.0	-	0.0	NP	A-1-b(0)	Low	-
TP68	0.0 - 0.2	57.0	40.7	1.8	0.5	-	0.0	NP	A-1-a(0)	Low	SW-SC
TP69	0.6 - 1.0	0.0	78.0	23.0	0.0	23	3.5	7.0	A-2-4(0)	Low	-
TP71	0.0 - 0.25	48.0	47.0	3.8	1.2	-	0.0	NP	A-1-b(0)	Low	SW-SC
TP73	0.0 – 0.2	0.0	84.0	16.0	0.0	-	0.0	NP	A-1-b(0)	Low	-
TP75	0.0 – 0.5	0.0	82.0	18.0	0.0	-	0.0	NP	A-1-b(0)	Low	-
TP77	0.0 – 0.3	17.0	75.4	4.7	2.9	16	0.5	2.0	A-1-b(0)	Low	SC
TP78	0.0 – 0.7	0.0	81.0	19.0	0.0	-	0.0	NP	A-1-b(0)	Low	-
TP81	0.0 – 0.4	0.0	76.0	23.0	0.0	24	6.5	12	A-2-6(0)	Low	-
TP83	0.0 – 0.8	0.0	81.0	19.0	0.0	-	1.0	NP	A-1-b(0)	Low	-
TP85	0.0 – 0.9	0.0	77.0	23.0	0.0	-	1.5	SP	A-1-b(0)	Low	-
TP87	0.5 - 1.1	0.0	80.0	20.0	0.0	-	0.5	SP	A-1-b(0)	Low	-
TP88	0.0 – 1.1	0.0	77.0	23.0	0.0	-	1.0	SP	A-2-4(0)	Low	-
TP90	0.0 - 0.5	42.0	50.8	6.2	1.0	-	1.0	SP	A-1-b(0)	Low	SW-SC

Sample No.	Depth (m)	Grading (%)				Atterberg Limits (%)			AASHTO Class.	Pot. Exp.	USCS Class.
		Gravel	Sand	Silt	Clay	LL	LS	PI			
TP92	0.0 – 0.5	0.0	76.0	24.0	0.0	17	2.0	3.9	A-1-b(0)	Low	-
TP94	0.0 – 0.5	48.0	45.6	5.4	1.0	15	0.0	0.0	A-1-b(0)	Low	SW-SC
TP95	0.5 - 0.7	26.0	64.2	7.9	1.9	26	4.5	9.0	A-2-4(0)	Low	SC
TP97	0.0 – 0.5	0.0	74.0	26.0	0.0	-	0.0	NP	A-2-4(0)	Low	-
TP99	0.0 – 0.6	0.0	56.0	44.0	0.0	22	3.5	6.0	A-2-4(0)	Low	-
TP101	0.0 – 0.4	10.0	77.8	10.4	1.8	15	0.0	1.0	A-2-4(0)	Low	SC
TP103	0.0 – 0.8	0.0	65.0	36.0	0.0	23	4.0	7.0	A-2-4(0)	Low	-
TP104	0.0 - 0.2	9.0	84.8	4.3	1.9	-	0.0	NP	A-2-4(0)	Low	SC
TP107	0.0 – 0.3	0.0	81.0	20.0	0.0	19	1.0	5.0	A-2-4(0)	Low	-
TP108	0.0 – 0.8	11.0	77.3	9.3	2.4	18	0.0	0.0	A-2-4(0)	Low	SC
TP109	0.0 - 0.7	29.0	64.7	5.3	1.0	15	0.0	-1.0	A-1-b(0)	Low	SW-SC
TP111	0.0 – 0.8	0.0	80.0	19.0	0.0	-	0.0	NP	A-1-b(0)	Low	-
TP113	0.0 - 0.6	6.0	80.3	11.1	2.6	-	1.5	SP	A-2-4(0)	Low	SC
TP116	0.0 – 0.6	45.0	46.4	7.2	1.4	13	0.0	0.0	A-1-b(0)	Low	SC
TP117	0.0 - 0.4	5.0	85.8	4.2	5.0	-	0.0	NP	A-2-4(0)	Low	SC
TP119	0.0 – 0.2	24.0	64.0	10.1	1.9	19	0.0	0.0	A-1-b(0)	Low	SC
TP121	0.0 – 0.35	64.0	33.2	2.1	0.7	16	0.0	0.0	A-1-a(0)	Low	SW-SC
TP123	0.0 – 0.5	56.0	41.0	2.0	1.0	22	1.5	2.0	A-1-a(0)	Low	SW-SC
TP125	0.0 – 0.7	0.0	83.0	18.0	0.0	-	0.0	NP	A-1-b(0)	Low	-
TP126	0.0 – 0.8	0.0	80.0	21.0	0.0	-	0.0	NP	A-2-4(0)	Low	-
TP128	0.0 - 0.7	10.0	72.5	11.0	6.5	28	4.0	8.0	A-2-4(0)	Low	SC

Sample No.	Depth (m)	Grading (%)				Atterberg Limits (%)			AASHTO Class.	Pot. Exp.	USCS Class.
		Gravel	Sand	Silt	Clay	LL	LS	PI			
TP129	0.0 – 0.2	32.0	61.0	6.2	0.8	20	0.0	00	A-1-b(0)	Low	SC
TP132	0.0 – 0.1	43.0	51.3	3.8	1.9	17	0.0	0.0	A-1-b(0)	Low	SW-SC
TP135	0.0 – 0.5	0.0	82.0	17.0	0.0	-	0.0	NP	A-1-b(0)	Low	-
TP136	0.0 – 0.5	34.0	58.6	6.3	1.1	20	0.0	0.0	A-1-b(0)	Low	SC
TP138	0.0 – 0.5	21.0	70.7	6.5	1.8	-	0.0	NP	A-1-b(0)	Low	SC
TP140	0.0 – 0.6	46.0	47.4	5.2	1.4	16	0.0	1.0	A-1-b(0)	Low	SW-SC
TP141	0.0 – 0.3	38.0	50.6	9.0	2.4	23	2.0	5.0	A-1-b(0)	Low	SM-SC
TP142	0.0 - 0.7	0.0	81.0	19.0	0.0	-	0.0	NP	A-2-4(0)	Low	-
TP143	0.0 – 0.4	21.0	71.2	6.1	1.7	18	0.0	0.0	A-1-b(0)	Low	SC
TP144	0.0 – 0.6	9.0	82.0	7.7	1.3	17	0.0	0.0	A-2-4(0)	Low	SC
TP145	0.0 - 0.8	29.0	63.9	4.7	2.4	-	1.0	SP	A-1-b(0)	Low	SC
TP147	0.0 – 0.4	0.0	80.0	21.0	0.0	-	1.0	SP	A-1-b(0)	Low	-
TP148	0.0 – 0.4	53.0	43.3	2.2	1.5	21	2.5	5.0	A-1-a(0)	Low	SW-SM-SC
TP149	0.0 – 0.1	23.0	70.6	4.4	2.0	-	0.0	NP	A-1-b(0)	Low	SC
TP150	0.0 – 0.5	21.0	73.7	3.4	1.9	-	0.0	NP	A-1-b(0)	Low	SC
TP152	0.0 – 0.6	0.0	80.0	20.0	0.0	-	1.5	SP	A-1-b(0)	Low	-
TP156	0.0 - 0.6	30.0	65.3	3.3	1.4	16	0.0	0.0	A-1-b(0)	Low	SW-SC
TP157	0.0 – 0.8	0.0	84.0	16.0	0.0	-	0.0	NP	A-1-b(0)	Low	-

LS = Linear Shrinkage LL = Liquid Limit PI = Plasticity Index Pot. Exp. = Potential Expansiveness (vd Merwe Classification) USCS = Unified Soil Classification System AASHTO – American Association for State Highways and Transport Officials.

One of the major design factors for building structures is the shrinking and swelling potential of fine-grained soils. The shrink/swell movements can be estimated using the Plasticity Index (PI). Generally, the higher the PI of a material, the greater the potential for soil movements during moisture changes; the results of the Atterberg Limits tests indicate that the soil at the site has low expansion potential (Effective PI = 12).

Shrink-swell movement occurs in response to soil moisture content changes beneath the slab. Moisture changes occur beneath the slab due to seasonal changes in the relative amount of rainfall and evaporation potential. Also, soil moisture changes result from the construction of a slab-on-grade floor due to the presence of the slab/vapor barrier/grade beam system. The installation of the slab, vapor barrier, and grade beams reduces the natural moisture transfer from the subsurface beneath the building and generally causes the soil moisture content to increase in the soil beneath the building after construction. Another significant cause of soil moisture change is changes in vegetation, particularly trees, associated with landscaping.

Material on-site is classified as SC, SW and SM and class in accordance to Unified Soil Classification System (USCS). SC is clayey sands, sand- clay mixtures with Atterberg limits above A- line with PI > 7; SW is well-graded sands, gravelly sands (little or no fines); SM is silty sands, sand-silt mixtures, Atterberg limits below A- line or PI < 4.

A summary of laboratory results is presented in Appendix B of this report. The laboratory test results indicate that the site is typically underlain by gravelly sand and gravel silt underlain by bedrock. The Liquid Limit of the samples ranges between 0% and 28% with the Linear Shrinkage ranging between 0% and 6.5%. The samples indicate non to low plasticity with the Plasticity Index of the samples ranging between NP and 12%. Furthermore, the laboratory tests indicate that the samples have high silty sand and gravelly sand content. The low Plasticity Index indicate that the samples will exhibit a non to low potential expansiveness (Van der Merwe, 1964).

Table 4: Summary of CBR test results

Sample No.	Depth (m)	CBR @					PI	GM	OMC (%)	Max. Dry Density (kg/m^3)	COLTO Class
		90%	93%	95%	98%	100%					
TP01	0.0 – 0.8	13	24	37	70	107	3.8	2.1	4.9	2118	G6
TP04	0.0 – 0.7	15	26	37	62	88	NP	1.5	6.4	2025	G6
TP06	0.0 – 0.4	24	38	52	83	113	NP	2.2	4.4	2159	G5
TP08	0.0 – 0.6	11	22	34	65	100	SP	2.0	7.0	2148	G6
TP10	0.0 – 0.8	13	22	31	50	70	6	1.8	6.3	2101	G6
TP16	0.0 – 0.3	6	15	27	67	121	3.8	2.0	6.2	2155	G6
TP20	0.0 – 0.4	12	13	15	17	19	NP	1.6	6.3	2182	G8
TP23	0.0 – 0.8	10	13	15	19	23	3.8	2.5	7.3	2103	G8
TP26	0.0 – 0.6	15	23	31	48	65	4.0	1.4	6.7	2189	G6
TP28	0.0 – 0.8	22	35	48	78	108	5	2.1	6.6	2163	G5
TP30	0.0 – 0.35	21	34	46	74	102	SP	2.3	7.4	2151	G5
TP32	0.0 – 0.5	3	4	6	8	10	9	1.1	8.6	2027	-
TP35	0.0 – 0.5	23	38	55	93	132	SP	2.2	7.7	2164	G5
TP38	0.0 – 1.6	21	32	43	65	87	SP	1.3	6.0	2147	G6
TP46	0.0 – 0.4	18	32	47	83	123	SP	1.8	6.2	2165	G6
TP47	0.0 – 0.4	17	29	43	74	108	NP	1.9	6.4	2101	G6
TP51	0.0 – 0.35	22	37	52	86	121	NP	1.8	7.4	2052	G6
TP53	0.0 – 0.4	16	25	33	44	51	NP	1.3	6.5	2058	G6
TP56	0.4 – 0.9	75	12	22	53	94	NP	1.4	5.6	2029	G8

TP60	0.0 – 0.15	16	18	19	20	21	4	1.7	6.0	2189	G7
TP62	0.0 – 0.4	16	30	45	84	126	1.5	2.3	5.9	2180	G5
TP66	0.0 – 0.3	26	43	62	105	150	NP	1.7	6.5	2154	G6
TP69	0.6- 1.0	16	26	37	63	89	7	2.2	7.3	2107	G6
TP73	0.0 – 0.2	10	15	21	34	47	NP	1.9	8.4	2148	G7
TP75	0.0 – 0.5	7	10	13	19	25	NP	2.0	8.2	2124	G8
TP78	0.0 – 0.7	3	8	17	52	111	NP	2.0	7.3	2153	G9
TP81	0.0 – 0.4	16	23	30	44	57	12	2.1	8.3	2129	G7
TP83	0.0 – 0.8	13	23	34	60	89	NP	2.0	7.9	2161	G6
TP85	0.0 – 0.9	13	24	36	67	100	SP	1.6	7.1	2120	G6
TP87	0.5 – 1.1	22	28	34	43	50	SP	1.5	7.6	2068	G6
TP88	0.0 – 1.1	12	19	25	39	53	SP	1.3	5.4	2100	G6
TP92	0.0 – 0.5	16	18	20	22	24	3.9	1.6	8.0	2114	G7
TP97	0.0 – 0.5	4	5	6	8	9	NP	1.3	6.6	2083	-
TP99	0.0 – 0.6	4	5	5	6	6	6	1.3	9.7	2042	-
TP103	0.0 – 0.8	3	4	5	7	8	7	1.2	10.7	1961	-
TP107	0.0 – 0.3	18	29	40	65	90	5	1.5	7.9	2076	G6
TP111	0.0 – 0.8	8	13	19	32	46	NP	1.6	7.1	1973	G8
TP125	0.0 – 0.7	10	15	21	34	47	NP	1.8	8.4	2148	G7
TP126	0.0 – 0.8	15	17	19	22	25	NP	1.3	7.5	2104	G7
TP133	0.0 – 0.5	10	17	23	40	56	NP	1.4	7.2	2023	G7
TP135	0.0 – 0.5	16	29	44	82	124	NP	2.1	6.2	2208	G6
TP142	0.0 – 0.7	7	10	12	15	19	NP	1.3	5.9	2051	G8
TP147	0.0-0.4	6	14	26	66	121	SP	1.6	6.4	2133	G6

TP152	0.0 – 0.6	27	38	48	68	86	SP	1.9	6.3	2143	G5
TP157	0.0 – 0.8	10	12	15	19	23	NP	1.9	7.0	2099	G8

CBR tests carried out on material or soil from the site are classified as G5 to G9 gravel soil in accordance with the COLTO: 1998.

Material was sampled and classified as fair to good graded silty sand to gravel sand with a grading modulus of between 1.1 and 2.5. Soils with a good grading are generally characterized with higher grading modulus. Coarse grained soil has some good compatibility characteristics compared to finer material and can normally carry much heavier loads without deformation than finer materials. The CBR samples indicate low plasticity with the Plasticity Index ranging between NP and 12% which may be associated with non to low expansive potential according to Van Der Merwe's Classification System. Soil found at this site has fair to good compatibility characteristics and therefore as such material on-site can be used as sub-grade and selected layers during construction stage

Table 5: Summary of soil pH and conductivity

Sample No.	Depth (m)	pH	Conductivity ($s.m^{-1}$)
TP17	0.0 – 0.2	8.33 @ 21.7°C	0.05 @ 21.9°C
TP25	0.0 – 0.7	7.95 @ 21.6°C	0.08 @ 21.7°C
TP31	0.0 – 0.3	7.94 @ 21.6°C	0.07 @ 22.0°C
TP128	0.0 – 0.7	8.28 @ 21.6°C	0.71 @ 21.3°C
TP148	0.0 – 0.4	7.94 @ 21.7°C	0.10 @ 22.0°C

Chemical test of soils has a pH value ranging between 7.94 to 8.33. The pH values may be used as an initial indicator of potential corrosion problems, since bio-corrosion occurs optimally in the pH ranges of 2-6, while chemical attack generally occurs in either highly alkaline or highly acidic condition. Therefore, the results indicate that the soil is slightly acid to slightly alkaline with a conductivity ranging between 0.05 to 0.71. Conductivity is used as an initial indication of electrochemical corrosion potential.

12. GROUND WATER CONDITIONS

Groundwater seepage was not encountered in any of the trial pits excavated on the site. Problems due to ground water seepage are therefore expected in places, especially during and after a very wet rainy season.

Maximum depth reached was at 1.6m depth below ground level with no sign of near surface water table as such the water table in the area is permanently deeper than 1.6 m below surface level.

13. GEOTECHNICAL ASSESSMENT

It is also the purpose of this investigation to consider various geotechnical factors at the site which may have an influence on the proposed developments and associated infrastructure. The geotechnical factors observed during the field investigation are discussed below.

13.1 PROBLEM SOILS

Problem soils such as dolomite and marshy areas were not encountered on site.

13.2 SLOPE STABILITY

Layers for material encountered in all trial pits were stable during excavation and profiling, hence, slope instability is not anticipated over the area.

13.3 HEAVE AND HIGH COMPRESSIBILITY

This will affect concrete structures around the site. It is recommended that during construction, should clay be encountered alongside or below any structures, it should be removed and replaced with suitable material with no heave or high compressibility potential.

13.4 EXISTENCE OF COLLAPSIBLE/COMPRESSIBLE PROFILE

The soils encountered on the site typically comprise silty sand and gravely sand underlain by bedrock with no visual open-textured structure such as pinholes which indicate collapse potential. However, silty sand and gravelly sand have been documented to exhibit low to moderate collapse potential. From the site observations, it is anticipated that the site has low to moderate collapse potential. Compressible soils typically comprise fine grained soils such as clay, clayey sand and clayey silt with low plasticity, gravelly and sandy soil. The soils underlying the area are silty sand and gravelly sand underlain by

bedrock, therefore problems associated with compressible soils such as differential settlement is not anticipated on the site.

13.5 EXPANSIVE SOILS

The site is mainly underlain by silty sand and gravelly sand underlain by bedrock, therefore, problems associated with expansive soils such as differential volume change of the soil (heaving and shrinking) are not anticipated on the site.

13.6 ERODIBILITY OF THE SOIL

During the site investigation, visible signs of surface soil erosion were not identified, in the form of erosion gullies and rills to indicate that the material could be erodible. The risk of erosion on the proposed site is not expected.

13.7 EXCAVATION CLASSIFICATION WITH RESPECT TO SERVICES

Trial pits were excavated to depths ranging between 0.1 and 1.6 mbgl with all of the test pits terminated due to refusal at hard dig or bedrock. Excavations for the proposed development are expected to utilise soft excavation techniques to remove the thin layer of colluvium material and hardrock excavation techniques to remove the bedrock. It is recommended that all required earthworks be carried out in accordance with guidelines provided by SANS 1200 (latest edition).

Table 6 Classification of material for machine excavation (SANS 1200D

CLASSIFICATION	DESCRIPTION
Restricted excavation	
Soft	Material which can be efficient removed by a back-acting excavator having a fly wheel power > 0.10 kW for each mm of tined bucket width.
Intermediate	Material which can be efficient removed by a back-acting excavator having a fly wheel power > 0.10 kW for each mm of tined-bucket width or with the use of pneumatic tools before removal by a machine capable of removing soft material.
Hard rock	Material that cannot be removed without blasting or wedging and splitting.
Non-restricted excavation	
Soft	Material which can be efficiently removed or loaded, without prior ripping, by any of the following plant: A bulldozer or a track type front end loader having an approximate mass of 22 tonne and a fly wheel power of 145 kW. A tractor-scrapper unit having an approximate mass of 28 tonne and fly wheel power of 245 kW, pushed during loading by a bulldozer equivalent to that described above.

Intermediate	Material which can be efficiently ripped by a bulldozer having an approximate mass of 35 tonne and a fly wheel power of 220 kW.
Hard rock	Material which cannot be efficiently ripped by a bulldozer having an approximate mass of 35 tonne and a fly wheel power of 220 kW.
Boulder class A	Material containing more than 40% by volume of boulders of size between 0.03 m^3 and 20 m^3, in a matrix of soft material or smaller boulders.
Boulder class B	Material containing 40% or less by volume of boulders of size between 0.03 m^3 and 20 m^3, in a matrix of soft material or smaller boulders.

All trial pits were excavated with Backhoe Loader. Based on engineering properties of material underlying the proposed area; material on-site is classified soft to hard rock excavation (SANS 1200 D).

13.8 GROUNDWATER CONDITIONS

No groundwater was encountered during test pits excavation or profiling. Maximum depth reached was at 1.6m depth below ground level with no sign of near surface water table as such the water table in the area is permanently deeper than 1.6 m below surface level.

14. UNDERGROUND SERVICES

The investigations were conducted within a built-up area with services such as water supply, sewage system running along the street.

15. DEVELOPMENT RECOMMENDATIONS

15.1 PROPOSED DEVELOPMENT

It is understood that the investigation is for the development of 100 infill low-cost housing to be developed in the Nababeep area.

15.2 RIPPABILITY AND TRENCHABILITY

Soft excavation in terms of SABS 1200 is anticipated to at least a depth of 0.6 m below existing ground level using light earthmoving equipment due to the soft nature of the underlying soils. Some hardrock excavation may locally occur below 0.4 m where the bedrock occurs.

15.3 EARTHWORK CONSTRUCTION

It is recommended that all earthworks be carried out along the guidelines given in SANS 1200 and should be carried out in a manner to promote stable development of the site.

15.4 SITE CLASSIFICATION

RESIDENTIAL SITE CLASS DESIGNATIONS	TYPICAL FOUNDING MATERIAL	CHARACTER OF FOUNDING MATERIAL	SINGLE STOREY MASONRY HOUSE CONSTRUCTION TYPE
R	Rocks	Stable	Normal
H	Clays, silty clays, clayey silts and sandy clays.	Expansive soils	Normal
H1			Modified normal / soil raft
H2			Stiffened or cellular raft / piled or split construction / soil raft
H3			Stiffened or cellular raft / piled construction / soil raft.
C	Silty sands, sands, sandy and gravely soils	Compressible and potentially collapsible soils	Normal
C1			Modified normal / compaction of in-situ soils below individual footings / deep strip foundations / soil raft.
C2			Stiffened strip footings, stiffened or cellular raft / deep strip foundations / compaction of in-situ soils below individual footings / piled or pier foundations / soil raft.
P	Contaminated soils, controlled fill, dolomitic areas, landslip, landfill, marshy areas, mine waste fill, mining subsidence, reclaimed areas, uncontrolled fill, very soft silts / silty clays.	Variable	Variable
S	Clayey silts, clayey sands of low plasticity, sands, sandy and gravely soils	Compressible soils	Normal
S1			Modified normal / compaction of in-situ soil below individual footings / deep strip foundations / soil raft.
S2			Stiffened strip footings, stiffened or cellular raft / deep strip foundations / compaction of in-situ soils below individual footings / piled or pier foundations / soil raft.

For urban planning purpose the site is zoned according to the NHBRC classification systems. Due to the presence of colluvium horizons the entire site is classified as a Zone S1/C1/R site. The description of this zoning is as follows:

Zone C1/S1: This zone covers a small portion of the site and is characterised by collapsible soils (fine silts) with a total settlement movement between 5mm to 10mm and differential movement that is 75% (C1) and fine-grained soils (clayey sand) with a total settlement movement less than 10mm and differential movement that is 50% (S)

Zone R: This zone is characterised by the occurrence of bedrock at shallow depths. The bedrock (refusal) is encountered at depths shallower than 1 m.

16. CONCLUSION

Based on desktop study geotechnical considerations the area is suitable for the development. The following must be taken into account:

- Geology: Soils associated with the proposed site are mainly silty sands, gravelly sands and shallow bedrock.
- Undermined Areas or Ground: The site has not been subject to underground mining.

- Sinkholes and Sub-surface Subsidence: The geological conditions underlying the site do not lend themselves to the formation of sinkholes or surface subsidence such as dolines.
- The area is underlain by different types of Quartzite, Granite and Gneiss of the Namaqualand Suite.
- The geotechnical investigation revealed that the profile across the site is uniform, comprising of the colluvium and bedrock
- The low Plasticity Index indicate that the samples will exhibit a low potential expansiveness (Van der Merwe, 1964).
- CBR tests carried out on material or soil from the site are classified as G5 to G9 gravel soil in accordance with the COLTO: 1998.
- Material on-site are classified as SC, SW and SM and class in accordance to Unified Soil Classification System (USCS).
- The granite gneiss bedrock on site occurs as moderately to highly weathered.

17. RECOMMENDATIONS

Based on the profiles of trial pits excavated within the area proposed for the development, together with results of a laboratory tests, the following foundation can be suggested:

- Normal foundation
- Soil raft foundation

The foundation recommendation per stand is attached in Appendix D

18. ADDITIONAL INVESTIGATIONS

No additional investigation is required.

19. CONSTRUCTION MONITORING

19.1 EXCAVATION INSPECTION

The excavation needs to be inspected by a competent person prior to placing any concrete.

19.2 CONTROL TESTING

Regular checks on the quality and compaction of the backfill to the terraces should be made.

Appendices

Appendix A: Soil Profiles

CoGHSTA
Nababeep Housing Development

LEGEND
Sheet 1 of 1

JOB NUMBER: 000

	BOULDERS	{SA01}
	GRAVEL/gravels	{SA02}
	GRAVELLY	{SA03}
	SAND	{SA04}
	SANDY	{SA05}
	SILT	{SA06}
	SILTY	{SA07}
	CLAY	{SA08}
	CLAYEY	{SA09}
	QUARTZITE	{SA15}
	PLUTONIC/norite/syenite	{SA17}
	FREE QUARTZ/visible quartz	{SA44}
	GRANITE	{SA17}{SA44}
Name ●	DISTURBED SAMPLE	{SA38}
	COBBLES	{SA58}

CONTRACTOR :
MACHINE :
DRILLED BY :
PROFILED BY :
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE :
DATE : 06/07/2021 20:02
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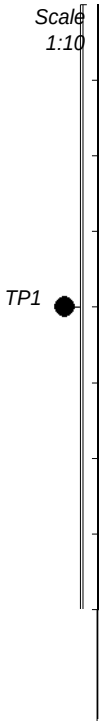
ELEVATION :
X-COORD :
Y-COORD :

LEGEND
SUMMARY OF SYMBOLS

CoGHSTA
Nababeep Housing Development

HOLE No: TP1
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, light brown, medium dense, intact, gravelly silty SAND with minor cobbles. COLLUVIUM."

0.80

NOTES

1) No seepage.
2) "Disturbed samples taken TP1 at 0,0--0,8 m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

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DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
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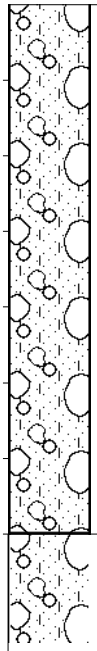
HOLE No: TP1

CoGHSTA
Nababeep Housing Development

HOLE No: TP2
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light brown, medium dense, intact, gravelly silty SAND with minor cobbles. COLLUVIUM."

0.70

NOTES

1) No seepage.
2) No disturbed sample taken.
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
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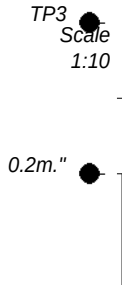
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Y-COORD : 17.86503503

HOLE No: TP2

CoGHSTA
Nababeep Housing Development

HOLE No: TP3
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, loose, intact, silty SAND. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) "Disturbed samples taken TP3 at 0,0 - 0.2m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.56139702
Y-COORD : 17.86510603

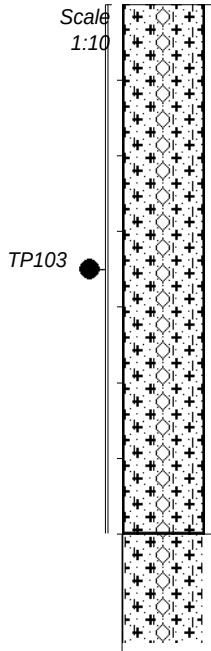
HOLE No: TP3

CoGHSTA
Nababeep Housing Development

HOLE No: TP4
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light greyish brown, loose to medium dense, intact, silty SAND with granite cobbles. COLLUVIUM."

0.70

NOTES

1) No seepage.
2) "Disturbed samples taken TP103 at 0,0--0,7 m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

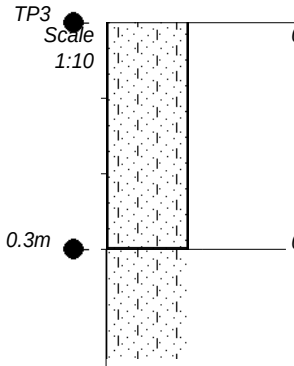
ELEVATION :
X-COORD : -29.56318103
Y-COORD : 17.86448602

HOLE No: TP4

CoGHSTA
Nababeep Housing Development

HOLE No: TP5
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light greyish brown, loose to medium dense, intact, silty SAND with cobbles. COLLUVIUM."

0.30

NOTES

1) No seepage.
2) Disturbed samples taken TP3 at 0.0 - 0.3m.
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

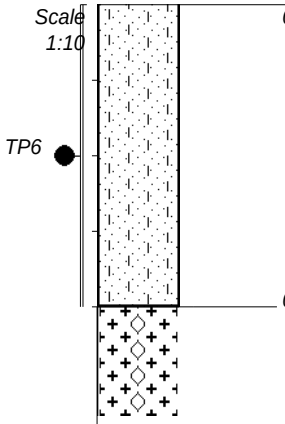
ELEVATION :
X-COORD : -29.56321497
Y-COORD : 17.86458501

HOLE No: TP5

CoGHSTA
Nababeep Housing Development

HOLE No: TP6
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, orange brown, loose, intact, silty SAND. COLLUVIUM."

0.40

"End of hole, refusal on bedrock. Greyish white, moderately weathered, fine grained, medium hard, mica-rich granite gneiss. "

NOTES

1) No seepage.
2) "Disturbed samples taken TP6 at 0,--0,4 m."
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

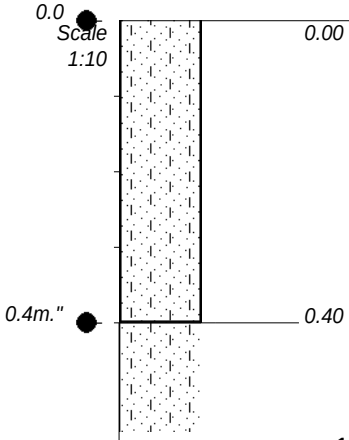
ELEVATION :
X-COORD : -29.56231199
Y-COORD : 17.86296696

HOLE No: TP6

CoGHSTA
Nababeep Housing Development

HOLE No: TP7
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, orange brown, loose, intact, silty SAND. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken at 0,0 - 0,4m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

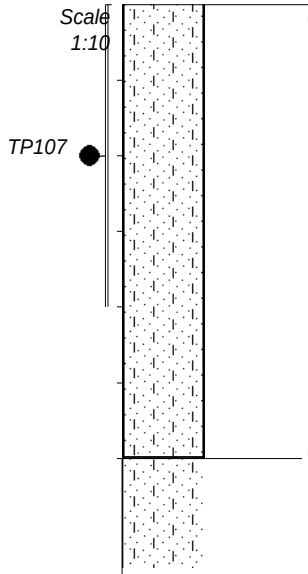
ELEVATION :
X-COORD : -29.56245398
Y-COORD : 17.86302597

HOLE No: TP7

CoGHSTA
Nababeep Housing Development

HOLE No: TP8
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, light brown, loose to medium dense, intact, silty sand with quartzite cobbles and roots in places. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) "Disturbed samples taken TP107 at 0,0--0,4 m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

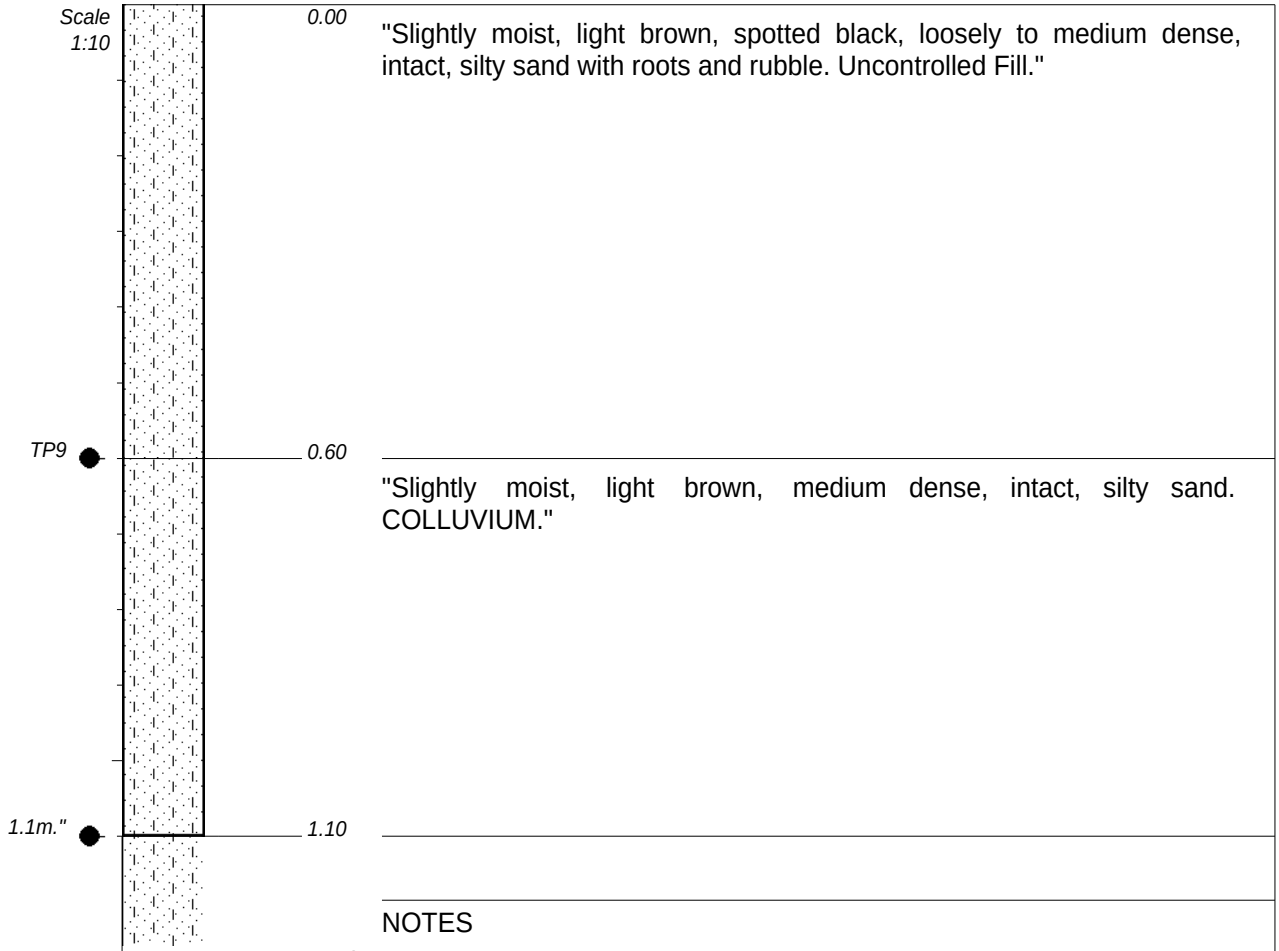
ELEVATION :
X-COORD : -29.56133299
Y-COORD : 17.86277301

HOLE No: TP8

CoGHSTA
Nababeep Housing Development

HOLE No: TP9
Sheet 1 of 1

JOB NUMBER: 000



NOTES

1) No seepage.
2) "Disturbed samples taken TP9 at 0,6 - 1,1m."
3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

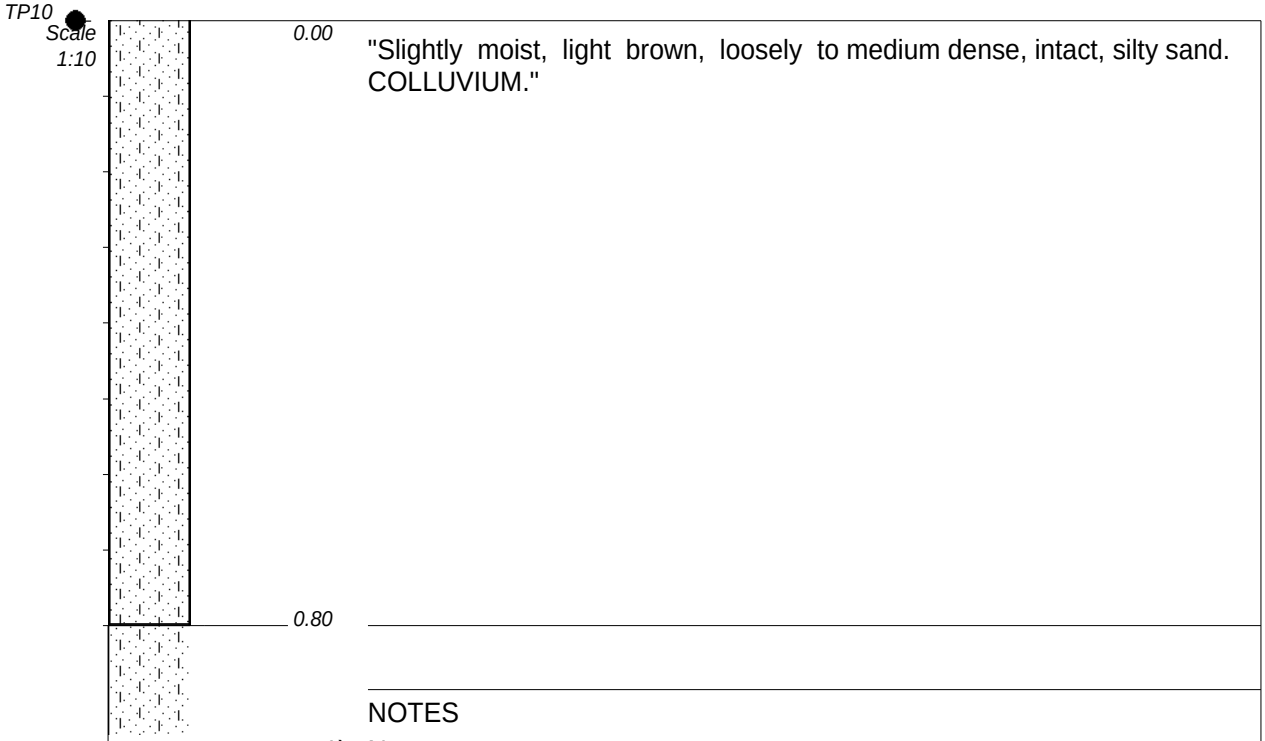
ELEVATION :
X-COORD : -29.56134296
Y-COORD : 17.86297803

HOLE No: TP9

CoGHSTA
Nababeep Housing Development

HOLE No: TP10
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light brown, loosely to medium dense, intact, silty sand. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP10 at 0,0-0,8m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.590810í
Y-COORD : 17.775570í

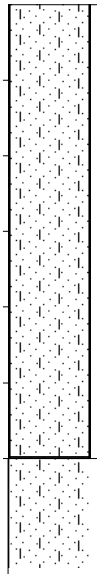
HOLE No: TP10

CoGHSTA
Nababeep Housing Development

HOLE No: TP11
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00

"Slightly moist, light brown, loosely to medium dense, intact, silty sand with roots in places. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

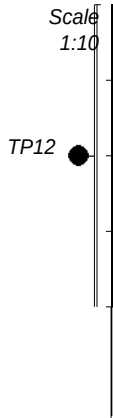
ELEVATION :
X-COORD : -29.590900í
Y-COORD : 17.775440í

HOLE No: TP11

CoGHSTA
Nababeep Housing Development

HOLE No: TP12
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, medium dense, intact, silty sand with roots in places. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP12 at 0,0--0,4 m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.590970í
Y-COORD : 17.775920í

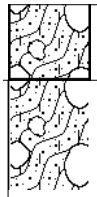
HOLE No: TP12

CoGHSTA
Nababeep Housing Development

HOLE No: TP13
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00

"Slightly moist, light brown, medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.10

NOTES

1) No seepage.
2) No disturbed sample taken.
3) Very Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.590897í
Y-COORD : 17.775910í

HOLE No: TP13

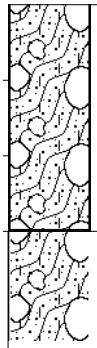
CoGHSTA
Nababeep Housing Development

HOLE No: TP14
Sheet 1 of 1

JOB NUMBER: 000

0.0-0.3m."

Scale 1:10



0.00

"Slightly moist, light brown, medium dense, intact, silty sand with roots and quartzite cobbles. COLLUVIUM."

0.30

NOTES

1) No seepage.
2) "Disturbed samples taken TP 14 at 0,0-0,3m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.593120í
Y-COORD : 17.771010í

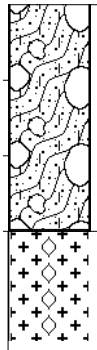
HOLE No: TP14

CoGHSTA
Nababeep Housing Development

HOLE No: TP15
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light brown, medium dense, intact, silty sand with abandant quartzite cobbles. COLLUVIUM."

0.30 "End of hole, refusal on bedrock. Greyish white, moderately weathered, fine grained, medium hard, Granite gneiss. "

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

ELEVATION :
X-COORD : -29.593130í
Y-COORD : 17.771000í

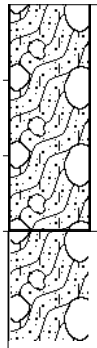
HOLE No: TP15

CoGHSTA
Nababeep Housing Development

HOLE No: TP16
Sheet 1 of 1

JOB NUMBER: 000

TP16
Scale 1:10



0.00 "Slightly moist, light brown, loosely to medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.30

NOTES

1) No seepage.
2) "Disturbed samples taken TP16 at 0,0-0.3m."
3) Hard Dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.593390í
Y-COORD : 17.770780í

HOLE No: TP16

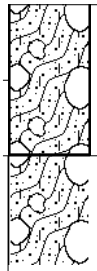
CoGHSTA
Nababeep Housing Development

HOLE No: TP17
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10

TP17



0.00 "Slightly moist, light brown, spotted black, medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) "Disturbed samples taken TP17 at 0,0--0,2 m."
3) Stable side walls.
4) Refusal on bedrock

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

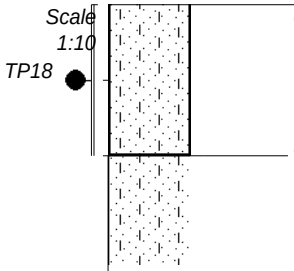
ELEVATION :
X-COORD : -29.593470í
Y-COORD : 17.770730í

HOLE No: TP17

CoGHSTA
Nababeep Housing Development

HOLE No: TP18
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, spotted black, medium dense, intact, silty sand with qartzite cobbles. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) "Disturbed samples taken TP18 at 0,0--0,2 m."
3) Hard Dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.593530í
Y-COORD : 17.770590í

HOLE No: TP18

CoGHSTA
Nababeep Housing Development

HOLE No: TP19
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.20 "End of hole, refusal on bedrock. Greyish white, highly weathered, fine grained, medium hard, Granite gneiss. "

NOTES

1) No seepage.
2) "Disturbed samples taken TP19 at 0,0--0,2 m."
3) Refusal on weathered Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

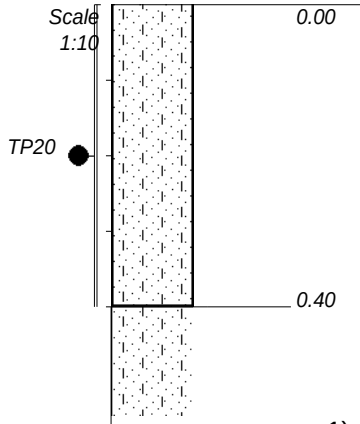
ELEVATION :
X-COORD : -29.593750í
Y-COORD : 17.770530í

HOLE No: TP19

CoGHSTA
Nababeep Housing Development

HOLE No: TP20
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP20 at 0,0--0,4 m."
3) Hard Dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

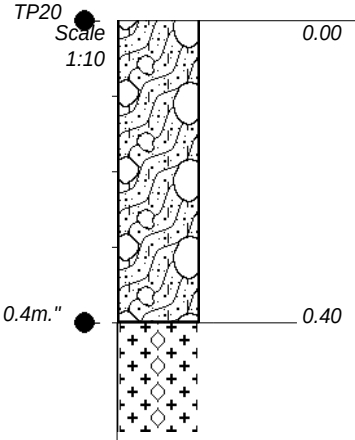
ELEVATION :
X-COORD : -29.593880í
Y-COORD : 17.770740í

HOLE No: TP20

CoGHSTA
Nababeep Housing Development

HOLE No: TP21
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, loose to medium dense, intact, silty sand with minor quartzite cobbles. COLLUVIUM."

0.40 "End of hole, Refusal on weathered Bedrock. Greyish white, spotted brown, highly weathered, fine grained, medium hard, Granite gneiss."

NOTES

1) No seepage.
2) "Disturbed samples taken TP20 at 0,0 - 0,4m."
3) Refusal on weathered Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.593887í
Y-COORD : 17.770357í

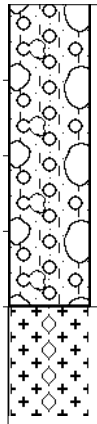
HOLE No: TP21

CoGHSTA
Nababeep Housing Development

HOLE No: TP22
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, sandy silty GRAVEL with minor quatzite cobbles. COLLUVIUM."

0.40 "End of hole. Refusal on weathered Bedrock. Greyish white, spotted brown, highly weathered, fine grained, medium hard, Granite gneiss."

NOTES

1) No seepage.
2) "Disturbed samples taken TP22 at 0--0,4 m."
3) Refusal on weathered Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

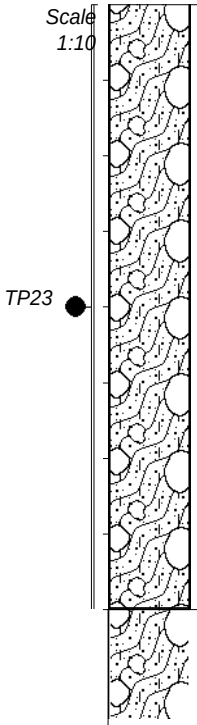
ELEVATION :
X-COORD : -29.593550í
Y-COORD : 17.770323í

HOLE No: TP22

CoGHSTA
Nababeep Housing Development

HOLE No: TP23
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, light brown, medium dense, intact, silty sand with abundant quartzite cobbles. COLLUVIUM."

0.80

NOTES

1) No seepage.
2) "Disturbed samples taken TP23 at 0,0--0,8 m."
3) Hard Dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

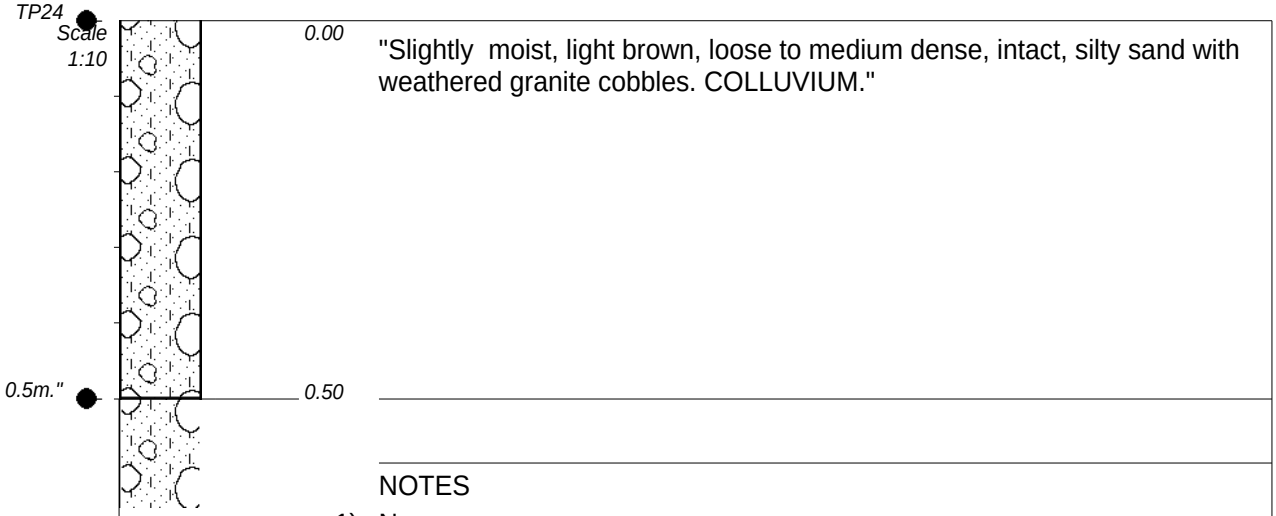
ELEVATION :
X-COORD : -29.593649í
Y-COORD : 17.770000í

HOLE No: TP23

CoGHSTA
Nababeep Housing Development

HOLE No: TP24
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light brown, loose to medium dense, intact, silty sand with weathered granite cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP24 at 0,0 - 0,5m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

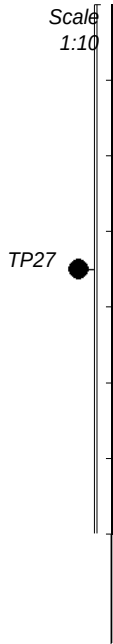
ELEVATION :
X-COORD : -29.594010í
Y-COORD : 17.769940í

HOLE No: TP24

CoGHSTA
Nababeep Housing Development

HOLE No: TP25
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, medium dense, intact, silty sand with quartzite cobbles and roots in places. COLLUVIUM."

0.70

NOTES

1) No seepage.
2) "Disturbed samples taken TP27 at 0,0--0,7 m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

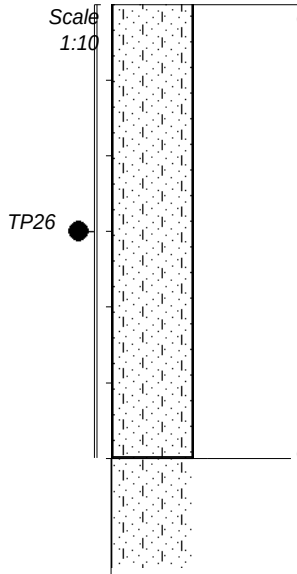
ELEVATION :
X-COORD : -29.593960í
Y-COORD : 17.769630í

HOLE No: TP25

CoGHSTA
Nababeep Housing Development

HOLE No: TP26
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, medium dense, intact, silty sand with roots in places. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) "Disturbed samples taken TP26 at 0,0--0,6 m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

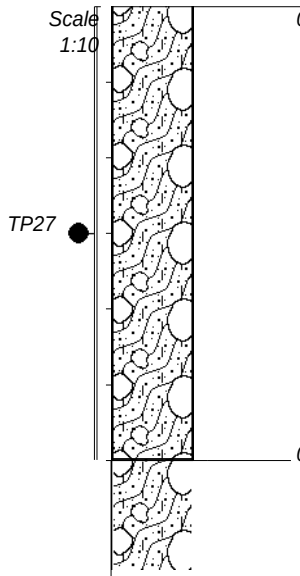
ELEVATION :
X-COORD : -29.593738í
Y-COORD : 17.769686í

HOLE No: TP26

CoGHSTA
Nababeep Housing Development

HOLE No: TP27
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light brown, loose to medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP27 at 0,0--0,6 m."
3) Refusal on bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

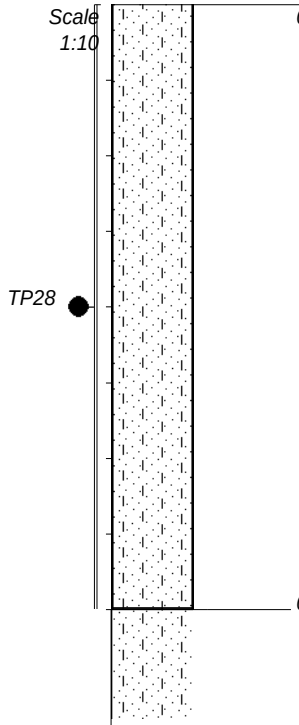
ELEVATION :
X-COORD : -29.593630í
Y-COORD : 17.769430í

HOLE No: TP27

CoGHSTA
Nababeep Housing Development

HOLE No: TP28
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light brown, medium dense, intact, silty sand with abundand mica rich granite gneiss cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP28 at 0,0--0,8 m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.593546í
Y-COORD : 17.769823í

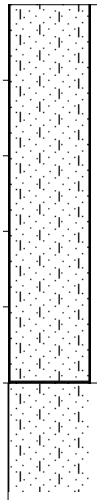
HOLE No: TP28

CoGHSTA
Nababeep Housing Development

HOLE No: TP29
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light brown, loose to medium dense, intact, silty sand with abundand mica rich granite gneiss cobbles. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

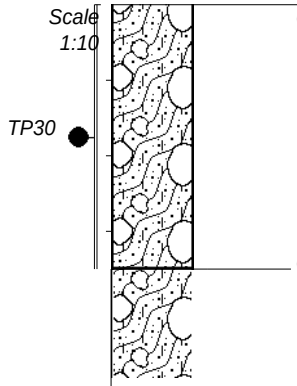
ELEVATION :
X-COORD : -29.593811í
Y-COORD : 17.770057í

HOLE No: TP29

CoGHSTA
Nababeep Housing Development

HOLE No: TP30
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light brown, medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP30 at 0,0--0,35 m."
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

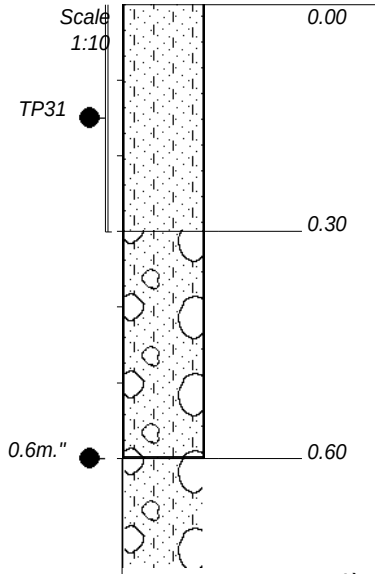
ELEVATION :
X-COORD : -29.593680í
Y-COORD : 17.771150í

HOLE No: TP30

CoGHSTA
Nababeep Housing Development

HOLE No: TP31
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, loosely dense, intact, silty sand with rubble. UNCONTROLLED FILL."

0.30 "Slightly moist, light brown, medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) "Disturbed samples taken TP31 at 0,3-- 0,6m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

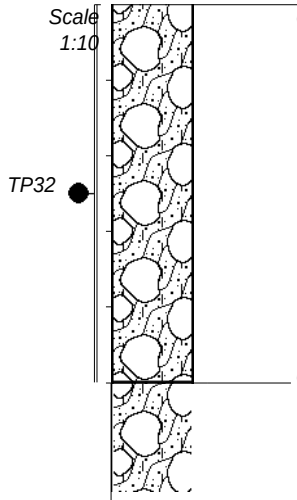
ELEVATION :
X-COORD : -29.593740í
Y-COORD : 17.772050í

HOLE No: TP31

CoGHSTA
Nababeep Housing Development

HOLE No: TP32
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, light brown, loose to medium dense, intact, silty sand with quartzite cobbles and minor boulders. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) "Disturbed samples taken TP32 at 0,0--0,5 m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

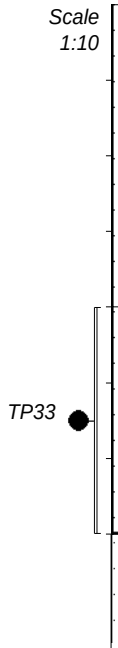
ELEVATION :
X-COORD : -29.593666í
Y-COORD : 17.772444í

HOLE No: TP32

CoGHSTA
Nababeep Housing Development

HOLE No: TP33
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, loose to medium dense, intact, silty sand with weathered rock fragments, roots and rubble. UNCONTROLLED FILL."

0.40 "Slightly moist, light brown, loose to medium dense, intact, silty sand with weathered rock fragments. COLLUVIUM."

0.70

NOTES

1) No seepage.
2) "Disturbed samples taken TP33 at 0,4--0,7 m."
3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.593790í
Y-COORD : 17.772250í

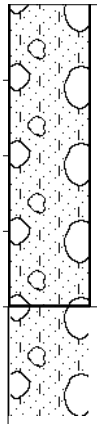
HOLE No: TP33

CoGHSTA
Nababeep Housing Development

HOLE No: TP34
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light brown, dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

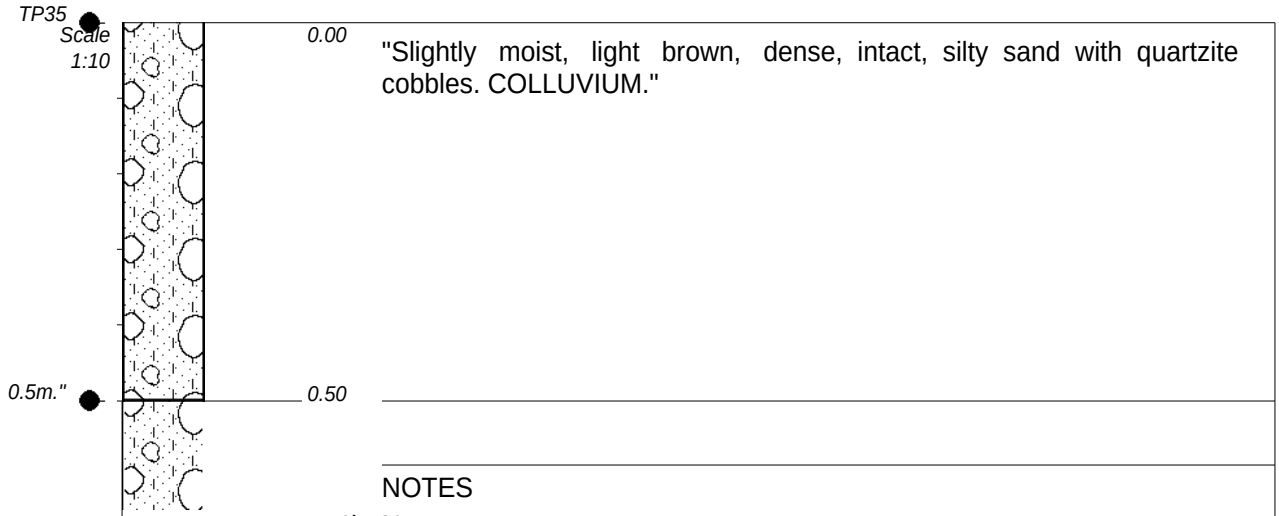
ELEVATION :
X-COORD : -29.593600í
Y-COORD : 17.772310í

HOLE No: TP34

CoGHSTA
Nababeep Housing Development

HOLE No: TP35
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light brown, dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP35 at 0,0 -- 0.5m."
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

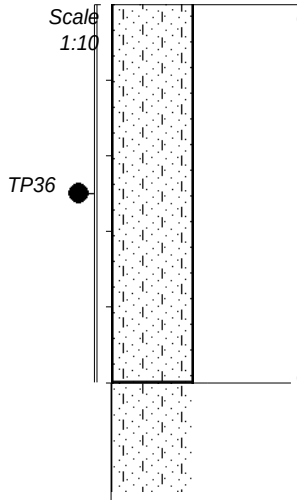
ELEVATION :
X-COORD : -29.593610í
Y-COORD : 17.772220í

HOLE No: TP35

CoGHSTA
Nababeep Housing Development

HOLE No: TP36
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, medium dense, intact, silty sand with abundand weathered rock fragments. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) "Disturbed samples taken TP36 at 0,0--0,5 m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.594030í
Y-COORD : 17.772060í

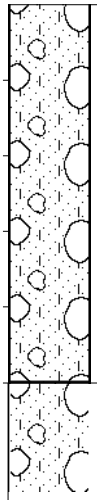
HOLE No: TP36

CoGHSTA
Nababeep Housing Development

HOLE No: TP37
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light brown, loose to medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

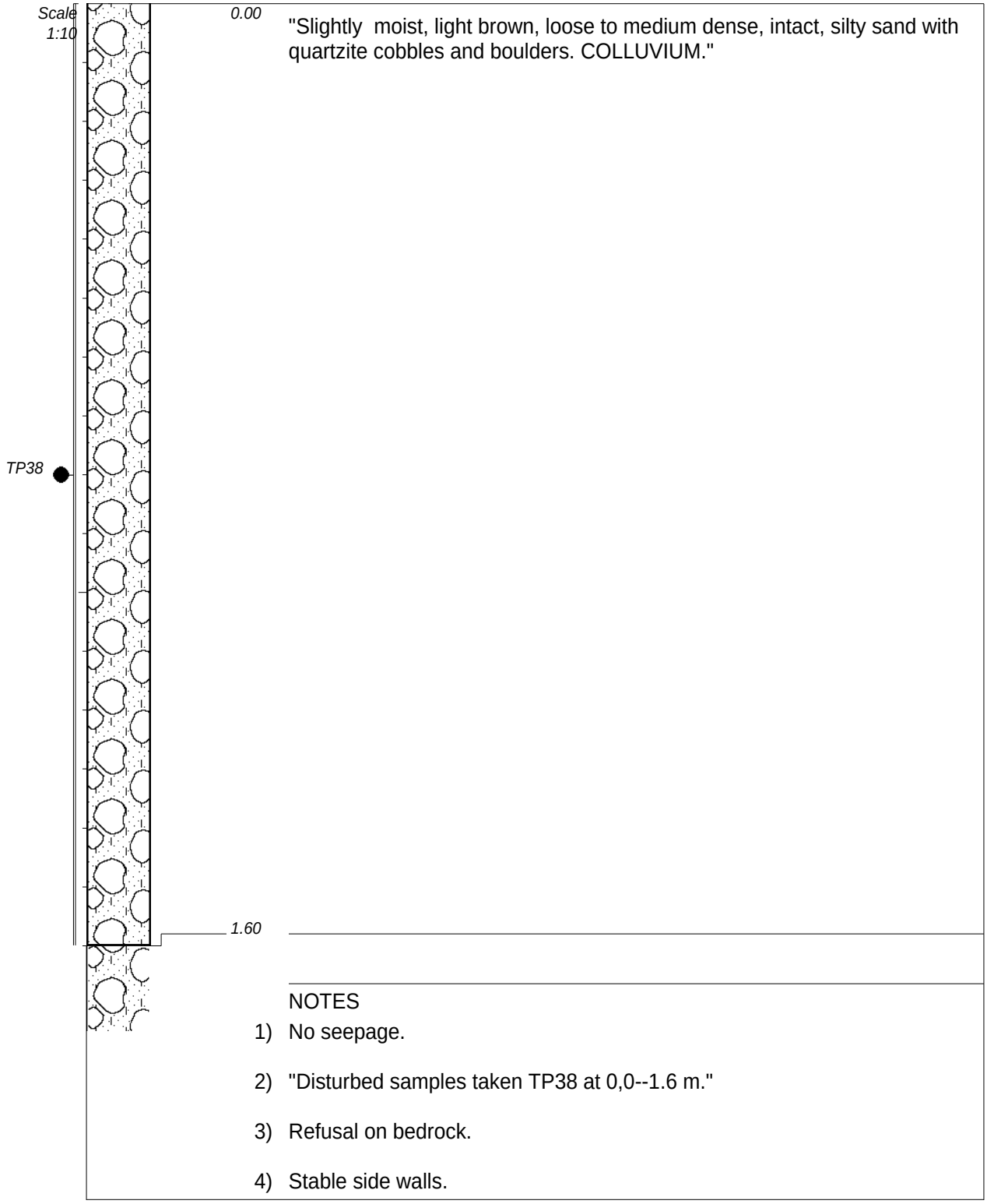
ELEVATION :
X-COORD : -29.594000í
Y-COORD : 17.771890í

HOLE No: TP37

CoGHSTA
Nababeep Housing Development

HOLE No: TP38
Sheet 1 of 1

JOB NUMBER: 000



NOTES

1) No seepage.
2) "Disturbed samples taken TP38 at 0,0--1.6 m."
3) Refusal on bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

ELEVATION :
X-COORD : -29.592900í
Y-COORD : 17.773600í

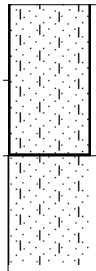
HOLE No: TP38

CoGHSTA
Nababeep Housing Development

HOLE No: TP39
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light brown, dense, intact, silty sand with sub-rounded and angular weathered rock fragments. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

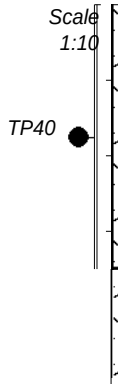
ELEVATION :
X-COORD : -29.592860í
Y-COORD : 17.773710í

HOLE No: TP39

CoGHSTA
Nababeep Housing Development

HOLE No: TP40
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, loosely dense, intact, silty sand with quartzite cobbles and roots in places. COLLUVIUM."

0.35

NOTES

1) No seepage.
2) "Disturbed samples taken TP40 at 0,0--0,35 m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

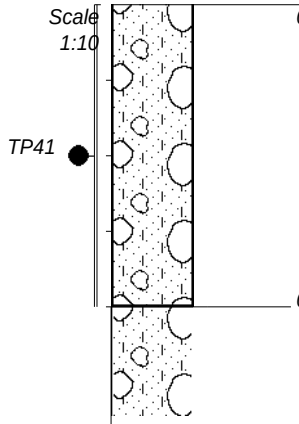
ELEVATION :
X-COORD : -29.593380í
Y-COORD : 17.771880í

HOLE No: TP40

CoGHSTA
Nababeep Housing Development

HOLE No: TP41
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, loosely dense, intact, silty sand with quartzite cobbles and roots in places. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP41 at 0,0--0,4 m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

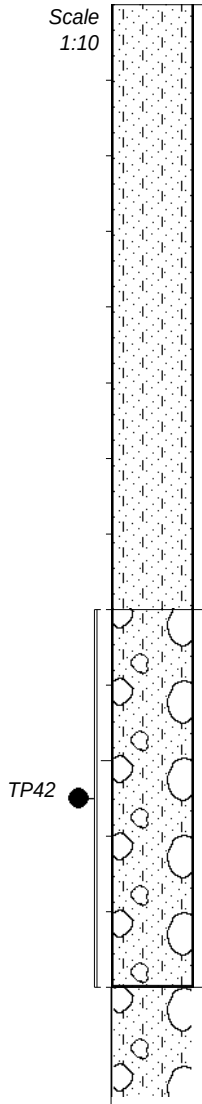
ELEVATION :
X-COORD : -29.593250í
Y-COORD : 17.771850í

HOLE No: TP41

CoGHSTA
Nababeep Housing Development

HOLE No: TP42
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, loosely dense, intact, silty sand with roots and ash in places. UNCONTROLLED FILL."

0.80 "Slightly moist, reddish brown, loosely to medium dense, intact, silty sand with quartzite cobbles and roots in places. COLLUVIUM."

1.30

NOTES

1) No seepage.
2) "Disturbed samples taken TP42 at 0,8--1,3 m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.592680í
Y-COORD : 17.774890í

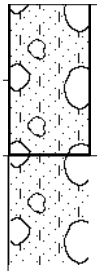
HOLE No: TP42

CoGHSTA
Nababeep Housing Development

HOLE No: TP43
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.20

NOTES

1) No seepage.

2) No disturbed samples taken.

3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.592720í
Y-COORD : 17.774820í

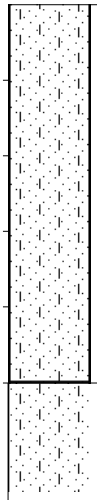
HOLE No: TP43

CoGHSTA
Nababeep Housing Development

HOLE No: TP44
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with abandant weathered rock fragments. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.595360í
Y-COORD : 17.777680í

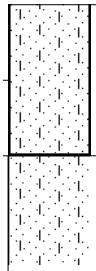
HOLE No: TP44

CoGHSTA
Nababeep Housing Development

HOLE No: TP45
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with abandant weathered rock fragments. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

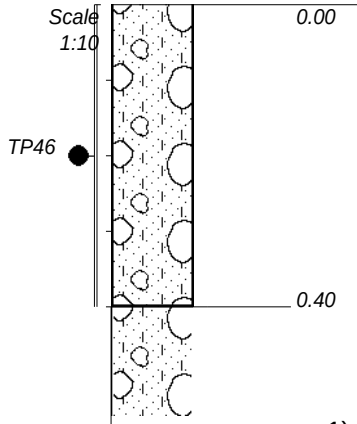
ELEVATION :
X-COORD : -29.595360í
Y-COORD : 17.777770í

HOLE No: TP45

CoGHSTA
Nababeep Housing Development

HOLE No: TP46
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, reddish brown, dense, intact, silty sand with sub-rounded and angular quartzite cobbles. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP46 at 0,0--0,4 m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

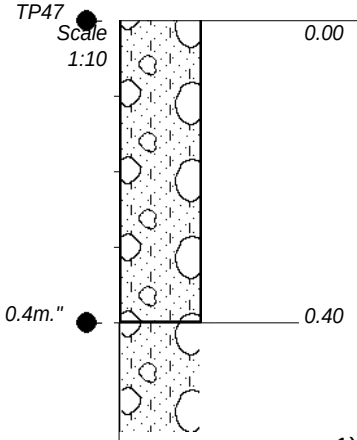
ELEVATION :
X-COORD : -29.595850í
Y-COORD : 17.777790í

HOLE No: TP46

CoGHSTA
Nababeep Housing Development

HOLE No: TP47
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, dense, intact, silty sand with sub-rounded and angular quartzite cobbles. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP47 at 0,0 -- 0,4m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.597010í
Y-COORD : 17.777520í

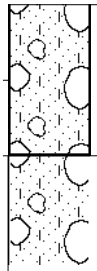
HOLE No: TP47

CoGHSTA
Nababeep Housing Development

HOLE No: TP48
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with sub-rounded and angular quartzite cobbles. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.596930í
Y-COORD : 17.777450í

HOLE No: TP48

CoGHSTA
Nababeep Housing Development

HOLE No: TP49
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown,loose to medium dense, intact, silty sand with ash and rubble. UNCONTROLLED FILL."

0.40 "Slightly moist, reddish brown, medium dense, intact, silty sand with sub-rounded and angular quartzite cobbles. COLLUVIUM."

1.20

NOTES

1) No seepage.
2) "Disturbed samples taken TP49 at 0,0--1,2 m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.596930í
Y-COORD : 17.777600í

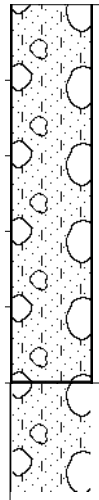
HOLE No: TP49

CoGHSTA
Nababeep Housing Development

HOLE No: TP50
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

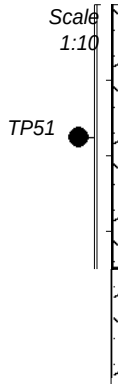
ELEVATION :
X-COORD : -29.597340í
Y-COORD : 17.777720í

HOLE No: TP50

CoGHSTA
Nababeep Housing Development

HOLE No: TP51
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.35

NOTES

1) No seepage.
2) "Disturbed samples taken TP51 at 0,0--0,35 m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

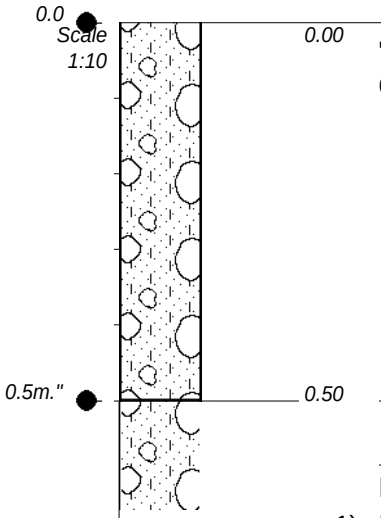
ELEVATION :
X-COORD : -29.596880í
Y-COORD : 17.777510í

HOLE No: TP51

CoGHSTA
Nababeep Housing Development

HOLE No: TP52
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with quartzite cobbles. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) "Disturbed samples taken TP 52 at 0,0 -- 0,5m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

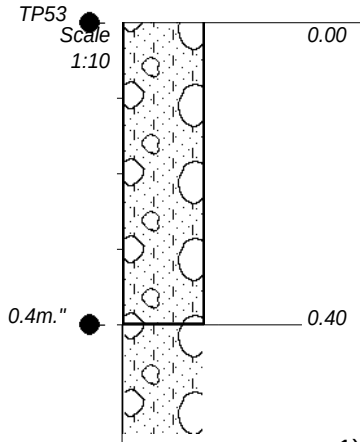
ELEVATION :
X-COORD : -29.598340í
Y-COORD : 17.778350í

HOLE No: TP52

CoGHSTA
Nababeep Housing Development

HOLE No: TP53
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, reddish brown, medium dense, intact, silty sand with sub-rounded and angular quartzite cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP53 at 0,0 -- 0,4m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

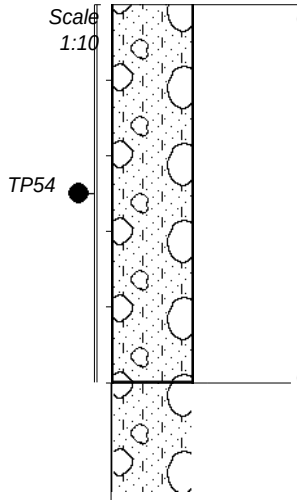
ELEVATION :
X-COORD : -29.595660í
Y-COORD : 17.779060í

HOLE No: TP53

CoGHSTA
Nababeep Housing Development

HOLE No: TP54
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, reddish brown, medium dense, intact, silty sand with sub-rounded and angular quartzite cobbles. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) "Disturbed samples taken TP54 at 0,0--0,5 m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

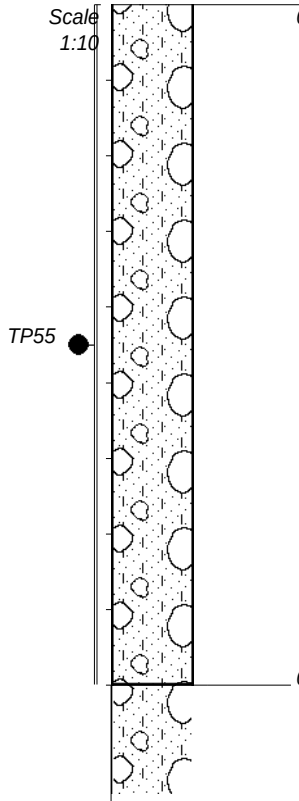
ELEVATION :
X-COORD : -29.595560í
Y-COORD : 17.779070í

HOLE No: TP54

CoGHSTA
Nababeep Housing Development

HOLE No: TP55
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, reddish brown, dense, intact, silty sand with roots in places and abundant large quartzite cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP55 at 0,0--0,9 m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

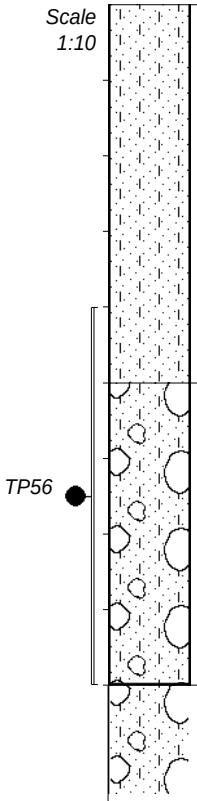
ELEVATION :
X-COORD : -29.595656í
Y-COORD : 17.778980í

HOLE No: TP55

CoGHSTA
Nababeep Housing Development

HOLE No: TP56
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, spotted black, loosely dense, intact, silty sand with rubble. UNCONTROLLED FILL."

0.50 "Slightly moist, reddish brown, medium dense, intact, silty sand with roots in places and abundant large quartzite cobbles. COLLUVIUM."

0.90

NOTES

1) No seepage.
2) "Disturbed samples taken TP56 at 0,4--0,9 m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.595310í
Y-COORD : 17.778920í

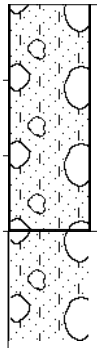
HOLE No: TP56

CoGHSTA
Nababeep Housing Development

HOLE No: TP57
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with sub-rounded and angular quartzite cobbles. COLLUVIUM."

0.30

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

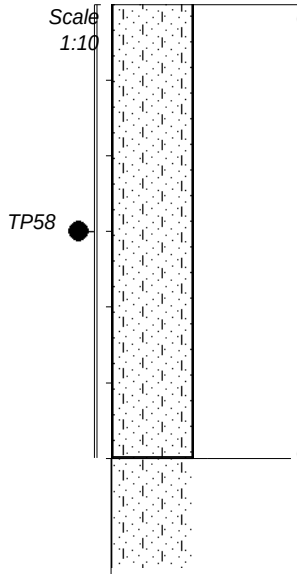
ELEVATION :
X-COORD : -29.595280í
Y-COORD : 17.778920í

HOLE No: TP57

CoGHSTA
Nababeep Housing Development

HOLE No: TP58
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish orange, loose to medium dense, intact, silty sand with highly weathered granite cobbles. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) "Disturbed samples taken TP58 at 0,0--0,6 m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.595350í
Y-COORD : 17.778700í

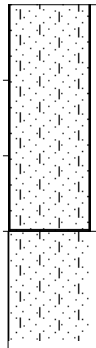
HOLE No: TP58

CoGHSTA
Nababeep Housing Development

HOLE No: TP59
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish orange, loose to medium dense, intact, silty sand with highly weathered granite cobbles. COLLUVIUM."

0.30

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.595381í
Y-COORD : 17.778702í

HOLE No: TP59

CoGHSTA
Nababeep Housing Development

HOLE No: TP60
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, spotted black, loose to medium dense, intact, silty sand with abundant rock fragments. COLLUVIUM."

0.15

NOTES

1) No seepage.
2) "Disturbed samples taken TP60 at 0,0--0,15 m."
3) Refusal on hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.591720í
Y-COORD : 17.778510í

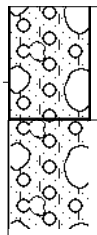
HOLE No: TP60

CoGHSTA
Nababeep Housing Development

HOLE No: TP61
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with gravels and quartzite cobbles. COLLUVIUM."

0.15

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.591800í
Y-COORD : 17.778410í

HOLE No: TP61

CoGHSTA
Nababeep Housing Development

HOLE No: TP62
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, reddish brown, medium dense, intact, silty sand with rock fragments. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP62 at 0,0 -- 0,4m."
3) Refusal on hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

ELEVATION :
X-COORD : -29.591840í
Y-COORD : 17.778270í

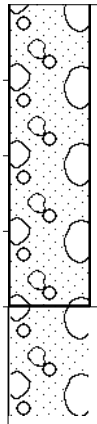
HOLE No: TP62

CoGHSTA
Nababeep Housing Development

HOLE No: TP63
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, gravelly SAND with cobbles. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

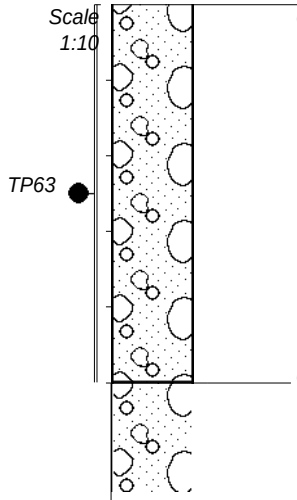
ELEVATION :
X-COORD : -29.591900í
Y-COORD : 17.777990í

HOLE No: TP63

CoGHSTA
Nababeep Housing Development

HOLE No: TP64
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, reddish brown, medium dense, intact, gravelly SAND with cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP63 at 0,0--0,5 m."
3) Refusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

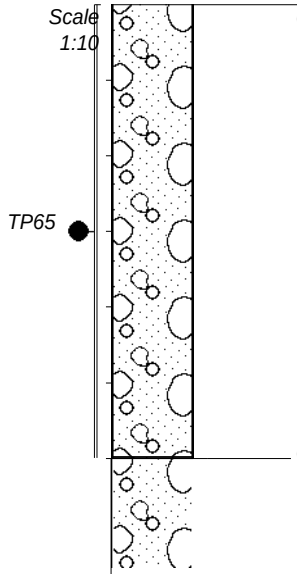
ELEVATION :
X-COORD : -29.591950í
Y-COORD : 17.777480í

HOLE No: TP64

CoGHSTA
Nababeep Housing Development

HOLE No: TP65
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, medium dense, intact, gravelly SAND with cobbles. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) "Disturbed samples taken TP65 at 0,0--0,6 m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

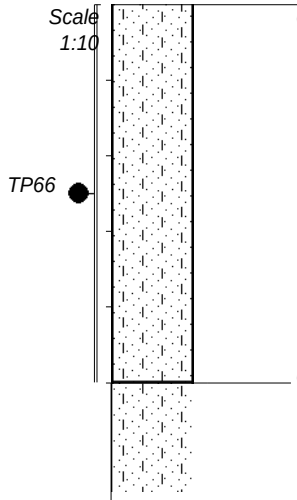
ELEVATION :
X-COORD : -29.592020í
Y-COORD : 17.777300í

HOLE No: TP65

CoGHSTA
Nababeep Housing Development

HOLE No: TP66
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, reddish brown, medium dense, intact, silty sand with rock fragments. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) "Disturbed samples taken TP66 at 0,0--0,5 m."
3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

ELEVATION :
X-COORD : -29.592110í
Y-COORD : 17.777340í

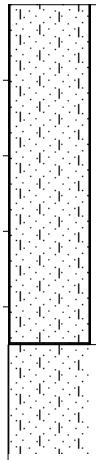
HOLE No: TP66

CoGHSTA
Nababeep Housing Development

HOLE No: TP67
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with rock fragments. COLLUVIUM."

0.45

NOTES

1) No seepage.
2) No disturbed samples taken.
3) hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.592140í
Y-COORD : 17.777510í

HOLE No: TP67

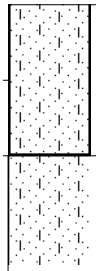
CoGHSTA
Nababeep Housing Development

HOLE No: TP68
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10

TP68



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with large boulders of granite. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) "Disturbed samples taken TP68 at 0,0--0,2 m."
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

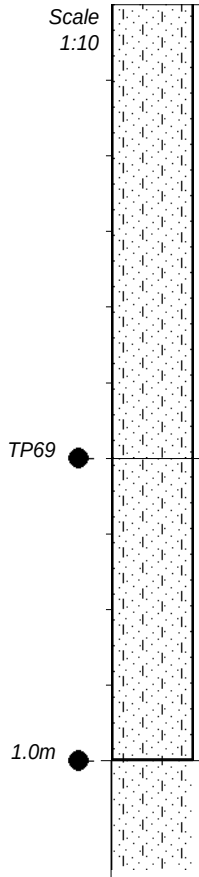
ELEVATION :
X-COORD : -29.592280í
Y-COORD : 17.777320í

HOLE No: TP68

CoGHSTA
Nababeep Housing Development

HOLE No: TP69
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, loosely to medium dense, intact silty sand with ash and rubble. UNCONTROLLED FILL."

0.60 "Slightly moist, reddish brown, medium dense, intact silty sand with abundant boulders of quartzite. COLLUVIUM."

1.00

NOTES

1) No seepage.
2) "Disturbed samples taken TP69 at 0,6 -- 1,0m. "
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

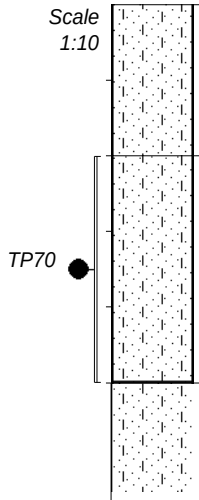
ELEVATION :
X-COORD : -29.592430í
Y-COORD : 17.777610í

HOLE No: TP69

CoGHSTA
Nababeep Housing Development

HOLE No: TP70
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, loosely to medium dense, intact silty sand with ash and rubble. UNCONTROLLED FILL."

0.20 "Slightly moist, reddish brown, medium dense, intact silty sand with abundant boulders of quartzite. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) "Disturbed samples taken TP70 at 0,2--0,5 m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.592390í
Y-COORD : 17.777640í

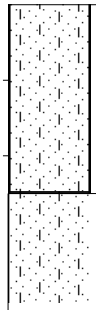
HOLE No: TP70

CoGHSTA
Nababeep Housing Development

HOLE No: TP71
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with abundant rock fragments. COLLUVIUM."

0.25

NOTES

1) No seepage.
2) "Disturbed samples taken TP71 at 0,0--0,25 m."
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.592520í
Y-COORD : 17.777680í

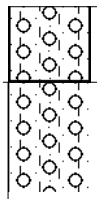
HOLE No: TP71

CoGHSTA
Nababeep Housing Development

HOLE No: TP72
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, orange brown, loose to medium dense, intact, sandy silty GRAVEL. COLLUVIUM."

0.10

NOTES

1) No seepage.

2) No disturbed samples taken.

3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

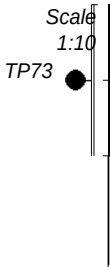
ELEVATION :
X-COORD : -29.61424903
Y-COORD : 17.87418899

HOLE No: TP72

CoGHSTA
Nababeep Housing Development

HOLE No: TP73
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, reddish brown, medium dense, intact, silty sand with abundant rock fragments. COLLUVIUM."

0.20

NOTES

1) No seepage.

2) "Disturbed samples taken TP73 at 0,0--0,2 m."

3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.62127902
Y-COORD : 17.87325399

HOLE No: TP73

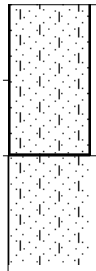
CoGHSTA
Nababeep Housing Development

HOLE No: TP74
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10

TP74



0.00 "Slightly moist, light reddish brown, loose to medium dense, intact, silty SAND. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) "Disturbed samples taken TP74 at 0,0--0,2 m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

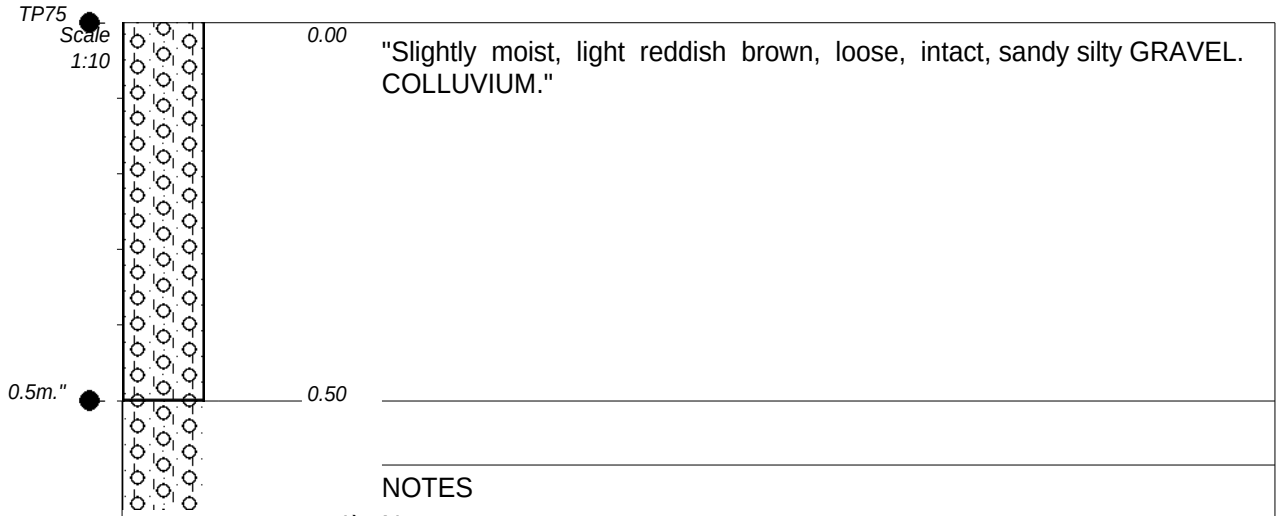
ELEVATION :
X-COORD : -29.62010798
Y-COORD : 17.87293003

HOLE No: TP74

CoGHSTA
Nababeep Housing Development

HOLE No: TP75
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light reddish brown, loose, intact, sandy silty GRAVEL. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP75 at 0,0 - 0,5m."
3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.61992199
Y-COORD : 17.87305098

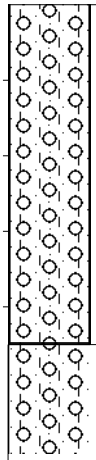
HOLE No: TP75

CoGHSTA
Nababeep Housing Development

HOLE No: TP76
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light reddish brown, loose to medium dense, intact, sandy silty GRAVEL. COLLUVIUM."

0.45

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

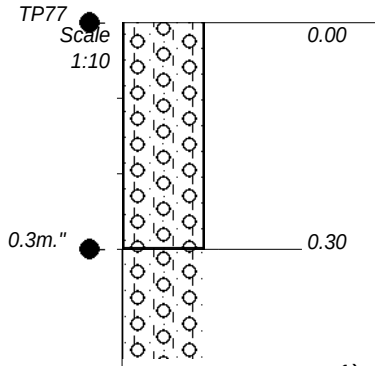
ELEVATION :
X-COORD : -29.62024704
Y-COORD : 17.87072601

HOLE No: TP76

CoGHSTA
Nababeep Housing Development

HOLE No: TP77
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light reddish brown, loose to medium dense, intact, sandy silty GRAVEL. COLLUVIUM."

NOTES

1) No seepage.
2) Hard dig
3) "Disturbed samples taken TP77 at 0,0 - 0,3m."
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

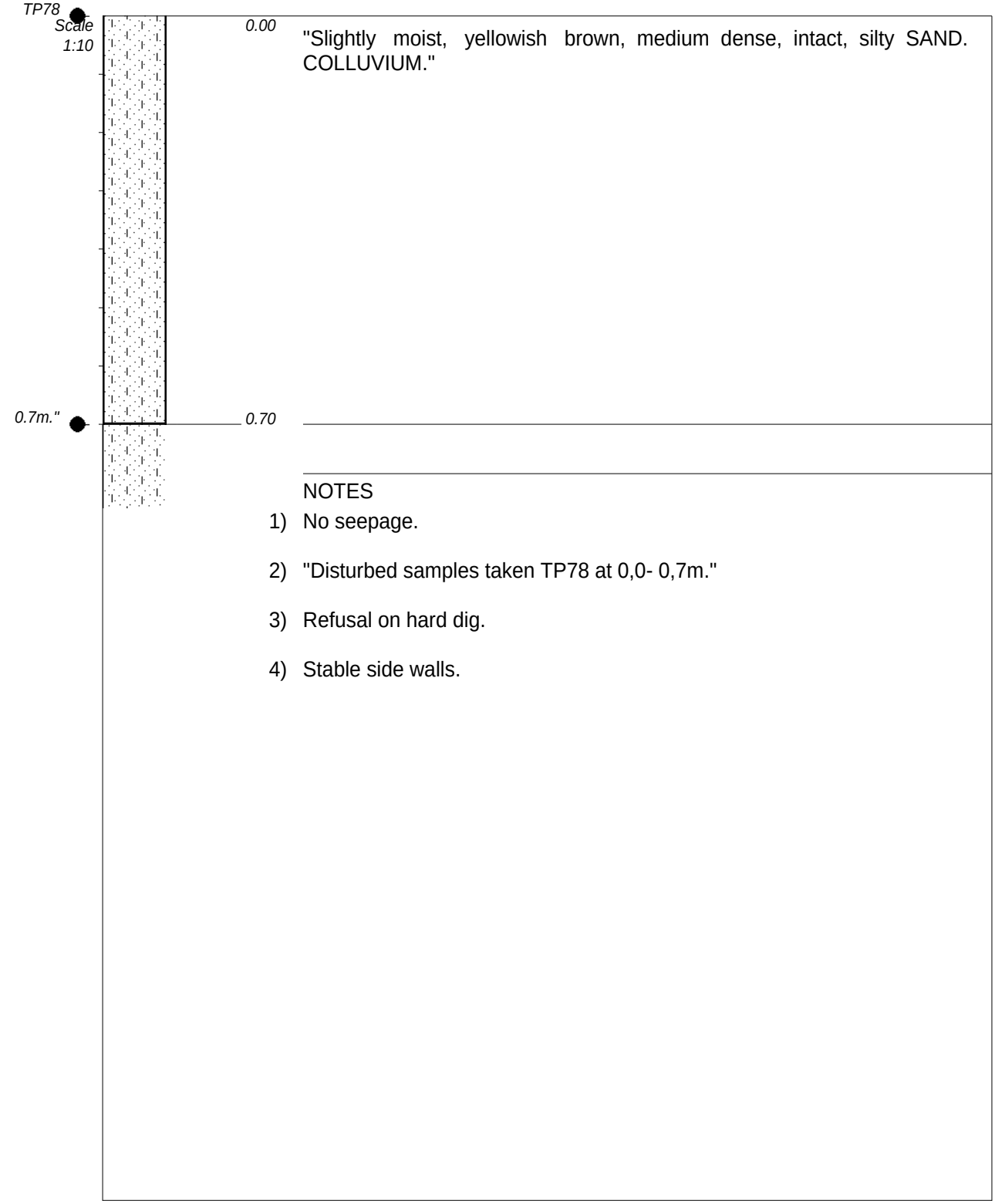
ELEVATION :
X-COORD : -29.62032398
Y-COORD : 17.87075099

HOLE No: TP77

CoGHSTA
Nababeep Housing Development

HOLE No: TP78
Sheet 1 of 1

JOB NUMBER: 000



NOTES

1) No seepage.
2) "Disturbed samples taken TP78 at 0,0- 0,7m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.61794796
Y-COORD : 17.87383896

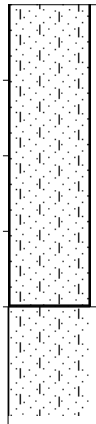
HOLE No: TP78

CoGHSTA
Nababeep Housing Development

HOLE No: TP79
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, yellowish brown, medium dense, intact, silty SAND. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

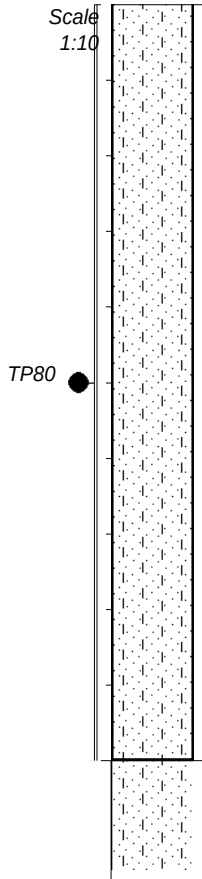
ELEVATION :
X-COORD : -29.61790496
Y-COORD : 17.87371499

HOLE No: TP79

CoGHSTA
Nababeep Housing Development

HOLE No: TP80
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light yellowish brown, loose, intact, silty SAND. COLLUVIUM."

1.00

NOTES

1) No seepage.
2) "Disturbed samples taken TP80 at 0,0--1,0 m."
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.61765502
Y-COORD : 17.87524402

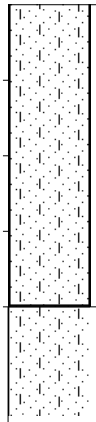
HOLE No: TP80

CoGHSTA
Nababeep Housing Development

HOLE No: TP81
Sheet 1 of 1

JOB NUMBER: 000

TP84
Scale 1:10



0.00

"Slightly moist, light yellowish brown, loose, intact, silty SAND. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP84 at 0,0 -0,4m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *06/07/2021 20:02*
TEXT : *..testpitlogsNababeep3.txt*

ELEVATION :
X-COORD : -29.61787102
Y-COORD : 17.87524704

HOLE No: TP81

CoGHSTA
Nababeep Housing Development

HOLE No: TP82
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light yellowish brown, loose, intact, silty SAND. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) "Disturbed samples taken TP82 at 0,0--0,2 m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

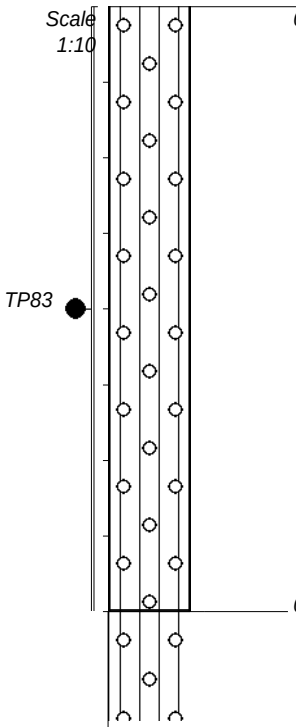
ELEVATION :
X-COORD : -29.61741102
Y-COORD : 17.87559598

HOLE No: TP82

CoGHSTA
Nababeep Housing Development

HOLE No: TP83
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light greyish brown, medium dense, intact, gravelly SILT. COLLUVIUM."

0.80

NOTES

1) No seepage.
2) "Disturbed samples taken TP83 at 0,0--0,8 m."
3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.61474599
Y-COORD : 17.87435797

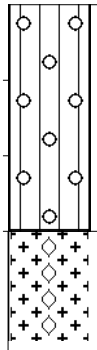
HOLE No: TP83

CoGHSTA
Nababeep Housing Development

HOLE No: TP84
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light greyish brown, medium dense, intact, gravelly SILT. COLLUVIUM."

0.30 "End of hole. Refusal on Bedrock. Greyish white, Highly weathered,fine grained, medium hard, Granite gneiss. "

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

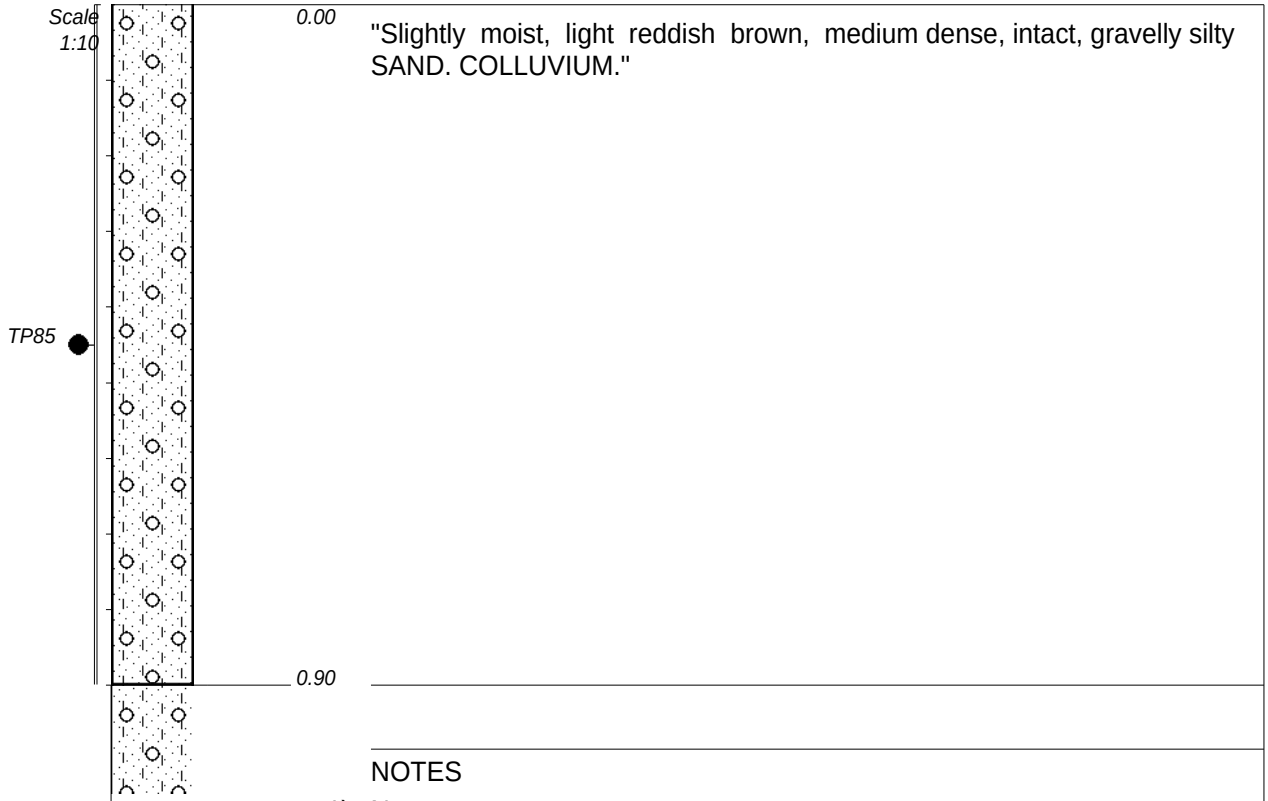
ELEVATION :
X-COORD : -29.60613602
Y-COORD : 17.88313097

HOLE No: TP84

CoGHSTA
Nababeep Housing Development

HOLE No: TP85
Sheet 1 of 1

JOB NUMBER: 000



NOTES

1) No seepage.
2) "Disturbed samples taken TP85 at 0,0--0,9 m."
3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.61177302
Y-COORD : 17.87379303

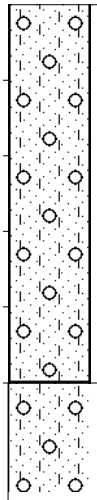
HOLE No: TP85

CoGHSTA
Nababeep Housing Development

HOLE No: TP86
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light reddish brown, medium dense, intact, gravelly silty SAND. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

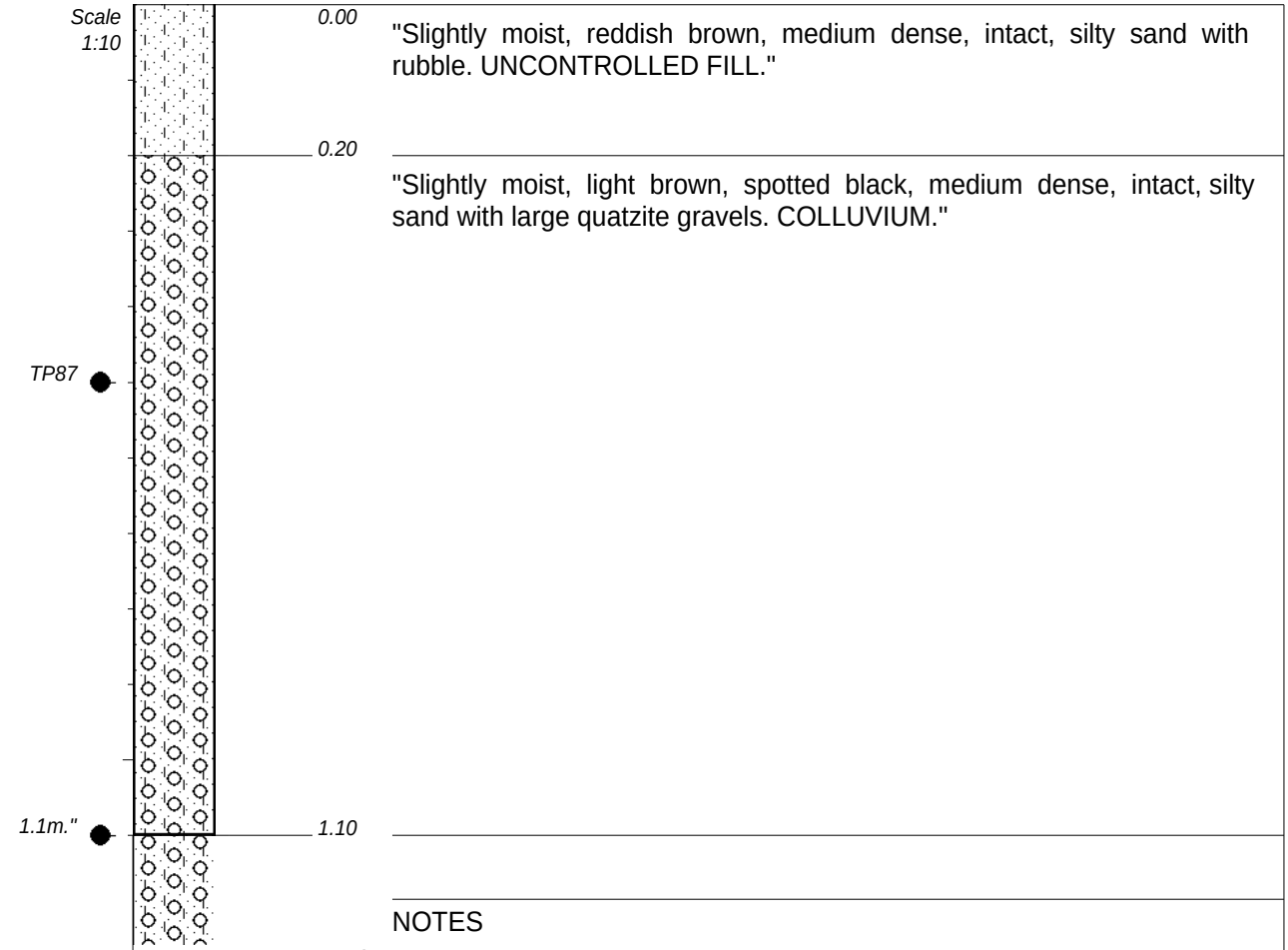
ELEVATION :
X-COORD : -29.61163304
Y-COORD : 17.87413501

HOLE No: TP86

CoGHSTA
Nababeep Housing Development

HOLE No: TP87
Sheet 1 of 1

JOB NUMBER: 000



NOTES

1) No seepage.
2) "Disturbed samples taken TP87 at 0,5 - 1,1m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

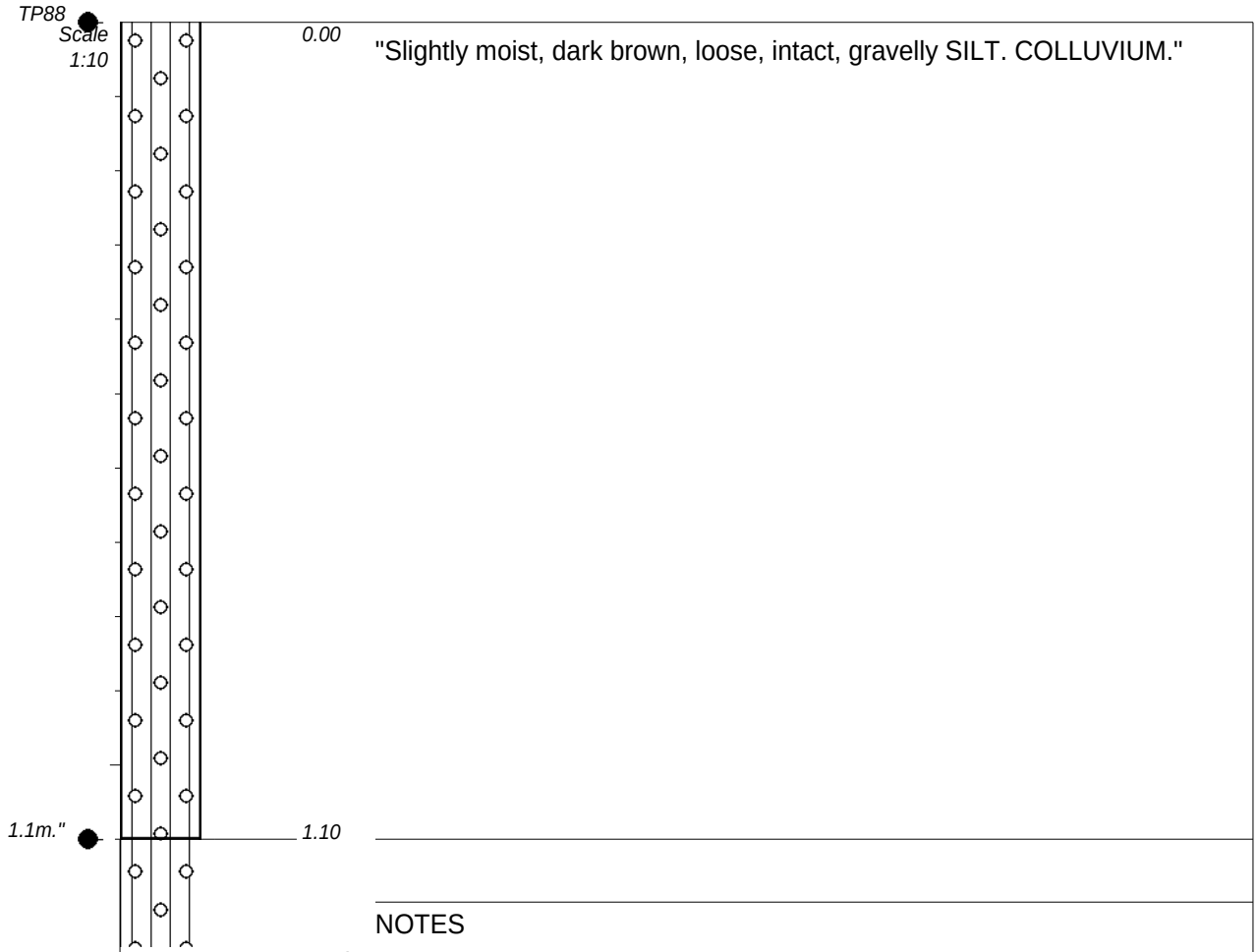
ELEVATION :
X-COORD : -29.61150999
Y-COORD : 17.87430801

HOLE No: TP87

CoGHSTA
Nababeep Housing Development

HOLE No: TP88
Sheet 1 of 1

JOB NUMBER: 000



NOTES

1) No seepage.
2) "Disturbed samples taken TP88 at 0,0 - 1,1m."
3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.61132299
Y-COORD : 17.874391

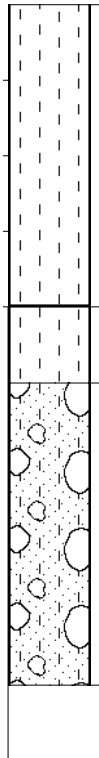
HOLE No: TP88

CoGHSTA
Nababeep Housing Development

HOLE No: TP89
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, reddish brown, spotted black, medium dense, intact, silty sand with ash, roots in places and rubble. UNCONTROLLED FILL."

0.50 "Slightly moist, reddish brown, medium dense, intact, silty sand with highly weathered granite gneiss cobbles. COLLUVIUM."

0.90

0.40

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Harddig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

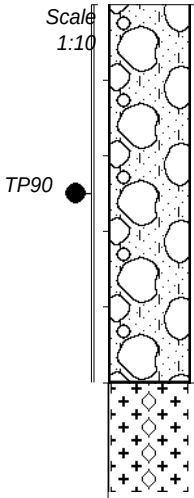
ELEVATION :
X-COORD : -29.61055303
Y-COORD : 17.87083204

HOLE No: TP89

CoGHSTA
Nababeep Housing Development

HOLE No: TP90
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, greyish brown, medium dense, intact, gravelly silty SAND with cobbles and boulders. COLLUVIUM."

0.50 "End of hole, Refusal on Bedrock. Greyish brown, highly weathered, fine grained, medium hard, Granite."

NOTES

1) No seepage.
2) "Disturbed samples taken TP90 at 0,0--0,5 m."
3) Refusal at Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.61042797
Y-COORD : 17.87094704

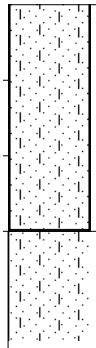
HOLE No: TP90

CoGHSTA
Nababeep Housing Development

HOLE No: TP91
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, greyish brown, loose, intact, silty SAND. TOP SOIL."

0.30

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

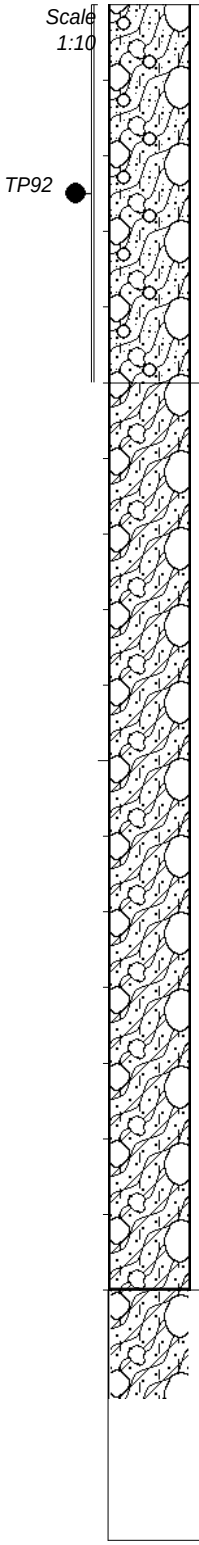
ELEVATION :
X-COORD : -29.61667098
Y-COORD : 17.85508202

HOLE No: TP91

CoGHSTA
Nababeep Housing Development

HOLE No: TP92
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light reddish brown, loosely dense, intact, gravelly silty sand with quartzite cobbles. COLLUVIUM."

0.50 "Slightly moist, yellowish brown, medium dense, intact, silty clay with quartzite cobbles. COLLUVIUM."

1.70

NOTES

1) No seepage.
2) "Disturbed samples taken TP92 at 0,0--0,5 m."
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.61674499
Y-COORD : 17.85511496

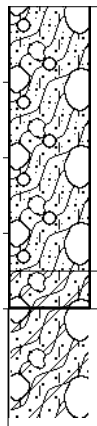
HOLE No: TP92

CoGHSTA
Nababeep Housing Development

HOLE No: TP93
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light reddish brown, loosely dense, intact, gravelly silty SAND with quartzite cobbles. COLLUVIUM."

0.35 "Slightly moist, yellowish brown, medium dense, intact, silty clay with quartzite cobbles. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

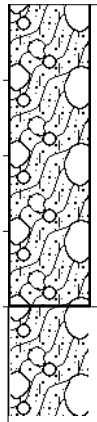
ELEVATION :
X-COORD : -29.61735997
Y-COORD : 17.85384201

HOLE No: TP93

CoGHSTA
Nababeep Housing Development

HOLE No: TP94
Sheet 1 of 1

JOB NUMBER: 000



Scale 1:10

0.00

"Slightly moist, light reddish brown, medium dense, intact, gravelly silty sand with quartzite cobbles. COLLUVIUM."

TP94

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP94 at 0,3 - 0,7m."
3) Refusal on very hard dig.
4) Stable side walls.

0.7m."

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

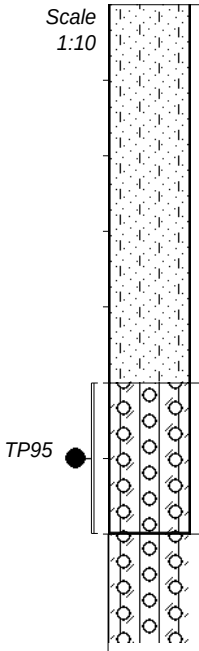
ELEVATION :
X-COORD : -29.61751596
Y-COORD : 17.85398299

HOLE No: TP94

CoGHSTA
Nababeep Housing Development

HOLE No: TP95
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light greyish brown, loose, intact, silty SAND. COLLUVIUM."

0.50 "Slightly moist, reddish brown mottled black, medium dense, intact, clayey SILT with minor gravels. COLLUVIUM."

0.70

NOTES

1) No seepage.
2) "Disturbed samples taken TP95 at 0,5--0,7 m."
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.618141
Y-COORD : 17.85379498

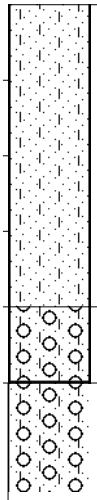
HOLE No: TP95

CoGHSTA
Nababeep Housing Development

HOLE No: TP96
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light greyish brown, loose, intact, silty SAND. COLLUVIUM."

0.40 "Slightly moist, greyish brown, medium dense, intact, silty SAND with minor gravels. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.61814201
Y-COORD : 17.85294296

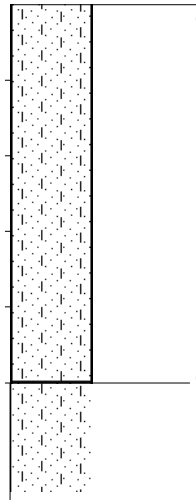
HOLE No: TP96

CoGHSTA
Nababeep Housing Development

HOLE No: TP97
Sheet 1 of 1

JOB NUMBER: 000

TP97
Scale 1:10



0.00

"Slightly moist, light greyish brown, loose, intact, silty SAND. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) "Disturbed samples taken TP97 at 0,0-0,5m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.618257
Y-COORD : 17.85299401

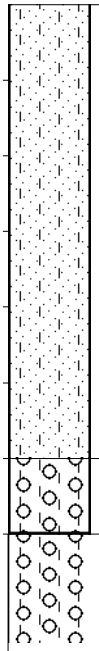
HOLE No: TP97

CoGHSTA
Nababeep Housing Development

HOLE No: TP98
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light greyish brown, loose, intact, silty SAND. COLLUVIUM."

0.60 "Slightly moist, orangish brown, medium dense, intact, silty GRAVEL with roots. COLLUVIUM."

0.70

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

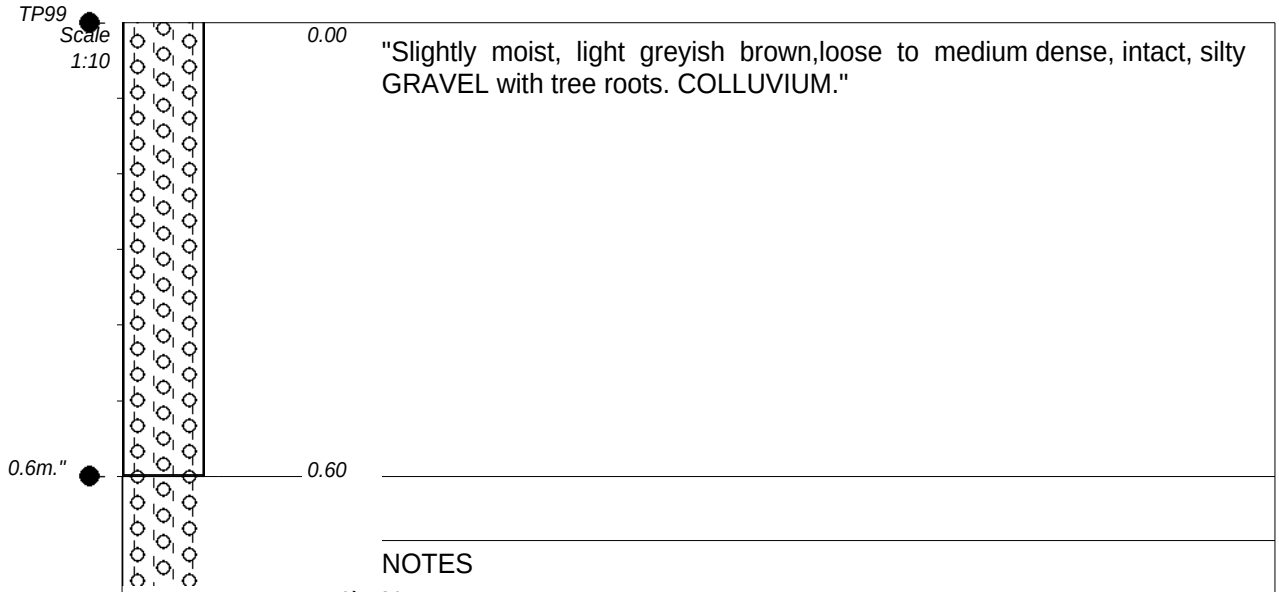
ELEVATION :
X-COORD : -29.61921296
Y-COORD : 17.85252303

HOLE No: TP98

CoGHSTA
Nababeep Housing Development

HOLE No: TP99
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light greyish brown,loose to medium dense, intact, silty GRAVEL with tree roots. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP99 at 0,0 - 0,6m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 06/07/2021 20:02
TEXT : ..testpitlogsNababeep3.txt

ELEVATION :
X-COORD : -29.61943701
Y-COORD : 17.851641

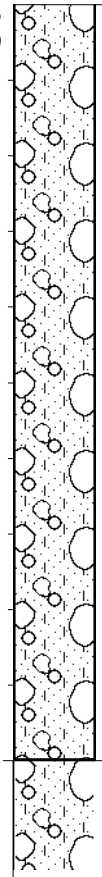
HOLE No: TP99

CoGHSTA
Nababeep Housing Development

HOLE No: TP100
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00

"Slightly moist, reddish brown, medium dense, intact, gravelly silty sand with minor cobbles. COLLUVIUM."

1.00

NOTES

1) No seepage.
2) No Disturbed samples taken.
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

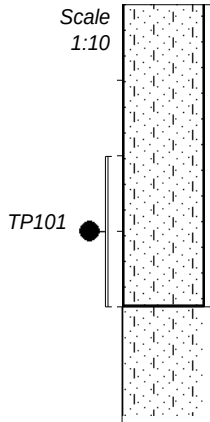
ELEVATION :
X-COORD : -29.605200í
Y-COORD : 17.781660í

HOLE No: TP100

CoGHSTA
Nababeep Housing Development

HOLE No: TP101
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light brown, loosely dense, intact, silty sand with large boulders of quartzite. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP101 at 0,2--0,4 m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.604670í
Y-COORD : 17.781260í

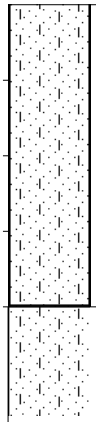
HOLE No: TP101

CoGHSTA
Nababeep Housing Development

HOLE No: TP102
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light brown, loosely dense, intact, silty sand with large boulders of quartzite. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.604520í
Y-COORD : 17.781250í

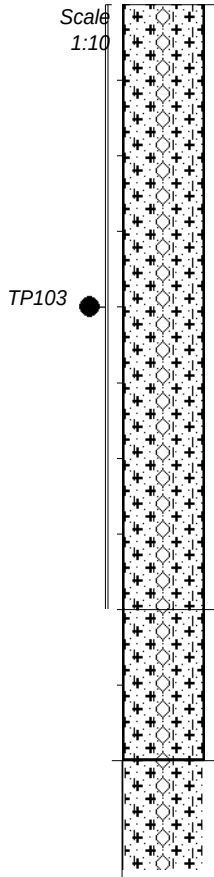
HOLE No: TP102

CoGHSTA
Nababeep Housing Development

HOLE No: TP103
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, greyish brown, loose to medium dense, intact, silty sand with granite cobbles and . COLLUVIUM."

0.80 "Slightly moist, reddish brown, medium dense, intact, silty sand with granite cobbles. COLLUVIUM."

1.00

NOTES

1) No seepage.
2) "Disturbed samples taken TP103 at 0,0--0,8 m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

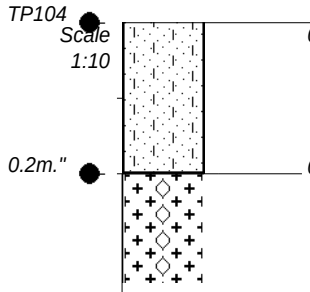
ELEVATION :
X-COORD : -29.604010í
Y-COORD : 17.781100í

HOLE No: TP103

CoGHSTA
Nababeep Housing Development

HOLE No: TP104
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light greyish brown, loose to medium dense, intact, silty sand with cobbles. COLLUVIUM."

0.20 "End of hole, Refusal on Bedrock. Greyish brown, Highly weathered, fine grained, medium hard, Granite."

NOTES

1) No seepage.
2) "Disturbed samples taken TP104 at 0,0 -- 0,2m."
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.604090í
Y-COORD : 17.780830í

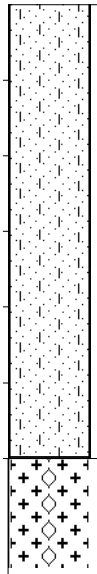
HOLE No: TP104

CoGHSTA
Nababeep Housing Development

HOLE No: TP105
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, orange brown, loosely dense, intact, silty sand. COLLUVIUM."

0.60 "End of hole, Refusal on Bedrock. Greyish brown, Highly weathered, fine grained, medium hard, Granite."

NOTES

1) No seepage.
2) No disturbed samples take.
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.603870í
Y-COORD : 17.781260í

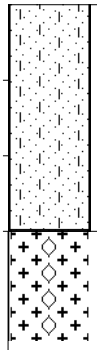
HOLE No: TP105

CoGHSTA
Nababeep Housing Development

HOLE No: TP106
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, orange brown, loosely dense, intact, silty sand. COLLUVIUM."

0.30 "End of hole, Refusal on Bedrock. Greyish brown, Highly weathered, fine grained, medium hard, Granite."

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

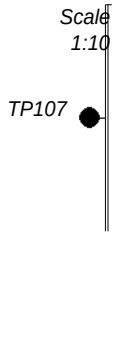
ELEVATION :
X-COORD : -29.603850í
Y-COORD : 17.780990í

HOLE No: TP106

CoGHSTA
Nababeep Housing Development

HOLE No: TP107
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, orange brown, medium dense, intact, gravelly silty sand. COLLUVIUM."

0.30

NOTES

1) No seepage.
2) "Disturbed samples taken TP107 at 0,0--0,3 m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

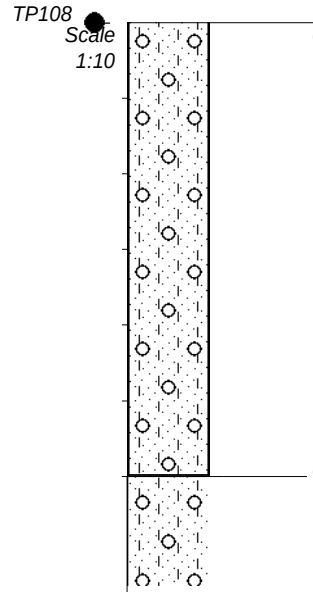
ELEVATION :
X-COORD : -29.603920í
Y-COORD : 17.781350í

HOLE No: TP107

CoGHSTA
Nababeep Housing Development

HOLE No: TP108
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, orange brown, loose to medium dense, intact, gravelly silty sand. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP108 at 0,0 -- 0,8m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

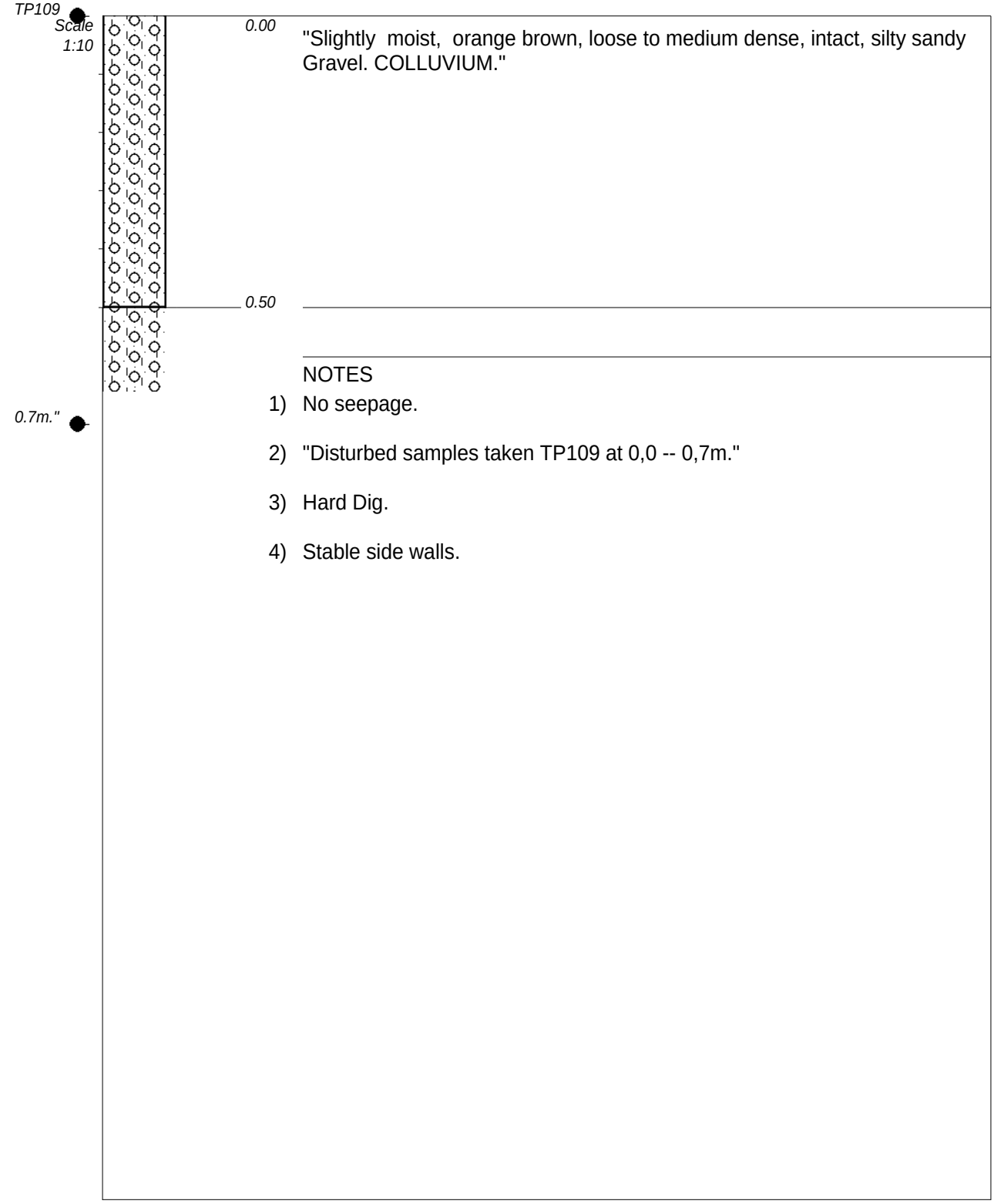
ELEVATION :
X-COORD : -29.604010í
Y-COORD : 17.781370í

HOLE No: TP108

CoGHSTA
Nababeep Housing Development

HOLE No: TP109
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, orange brown, loose to medium dense, intact, silty sandy Gravel. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP109 at 0,0 -- 0,7m."
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.603970í
Y-COORD : 17.781450í

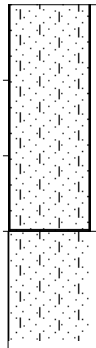
HOLE No: TP109

CoGHSTA
Nababeep Housing Development

HOLE No: TP110
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light reddish brown, loosely dense, intact, silty sand. COLLUVIUM."

0.30

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

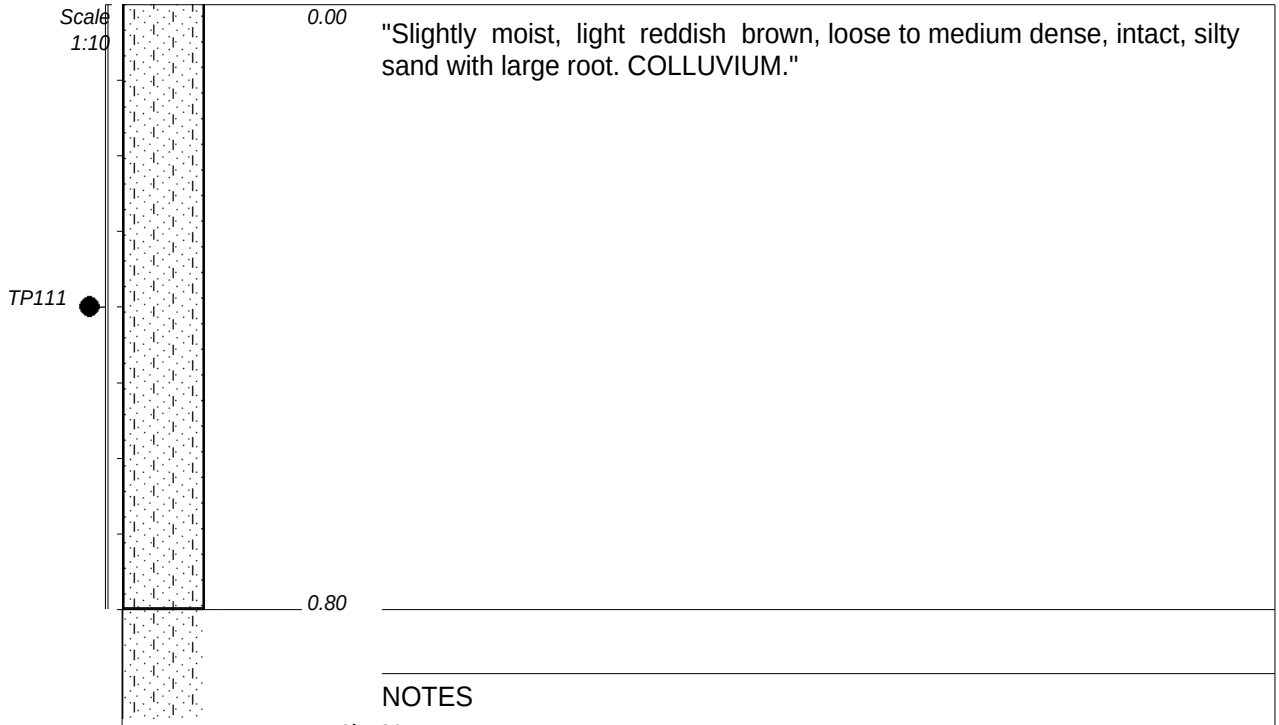
ELEVATION :
X-COORD : -29.603980í
Y-COORD : 17.781600í

HOLE No: TP110

CoGHSTA
Nababeep Housing Development

HOLE No: TP111
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light reddish brown, loose to medium dense, intact, silty sand with large root. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP111 at 0,0--0,8 m."
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.601770í
Y-COORD : 17.782640í

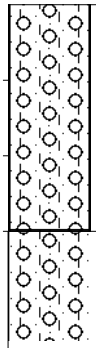
HOLE No: TP111

CoGHSTA
Nababeep Housing Development

HOLE No: TP112
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light reddish brown, loose to medium dense, intact, silty sandy Gravel. COLLUVIUM."

0.30

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

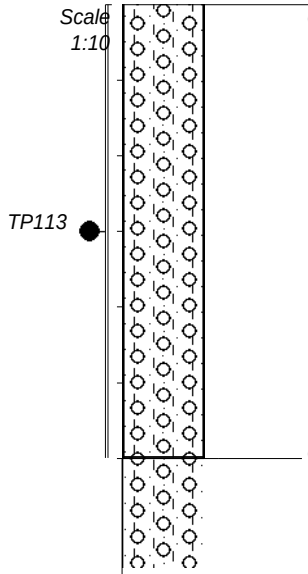
ELEVATION :
X-COORD : -29.601930í
Y-COORD : 17.782440í

HOLE No: TP112

CoGHSTA
Nababeep Housing Development

HOLE No: TP113
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light reddish brown, loose to medium dense, intact, silty sandy Gravel. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) "Disturbed samples taken TP113 at 0,0--0,6 m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.601930í
Y-COORD : 17.782440í

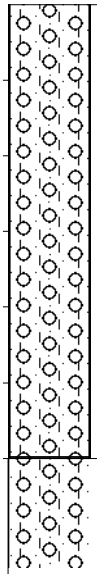
HOLE No: TP113

CoGHSTA
Nababeep Housing Development

HOLE No: TP114
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light reddish brown, loose to medium dense, intact, silty sandy Gravel. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) Hard dig
3) No disturbed samples taken.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.601940í
Y-COORD : 17.782450í

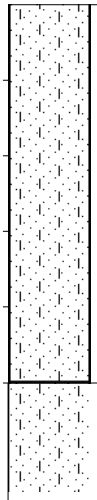
HOLE No: TP114

CoGHSTA
Nababeep Housing Development

HOLE No: TP115
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, yellowish brown, medium dense, intact, silty Sand with abundant large cobbles and boulders. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

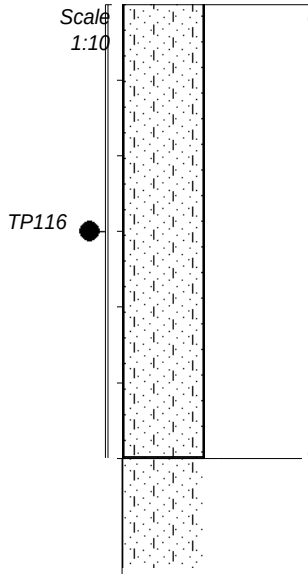
ELEVATION :
X-COORD : -29.600960í
Y-COORD : 17.783060í

HOLE No: TP115

CoGHSTA
Nababeep Housing Development

HOLE No: TP116
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, yellowish brown, medium dense, intact, silty Sand with abundant large cobbles and boulders. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) "Disturbed samples taken TP116 at 0,0--0,6 m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

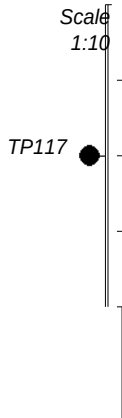
ELEVATION :
X-COORD : -29.600930í
Y-COORD : 17.783030í

HOLE No: TP116

CoGHSTA
Nababeep Housing Development

HOLE No: TP117
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light yellowish brown, loose, intact, silty Sand with boulders and cobbles. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP117 at 0,0--0,4 m."
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.599420í
Y-COORD : 17.782440í

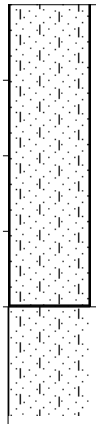
HOLE No: TP117

CoGHSTA
Nababeep Housing Development

HOLE No: TP118
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light yellowish brown, loose to medium dense, intact, silty sand. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.599620í
Y-COORD : 17.782470í

HOLE No: TP118

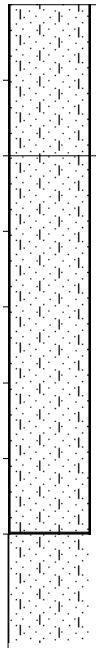
CoGHSTA
Nababeep Housing Development

HOLE No: TP119
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10

TP119



0.00 "Slightly moist, light yellowish brown, loose to medium dense, intact, silty sand with abundant boulders and cobbles. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) "Disturbed samples taken TP119 at 0,0--0,2 m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

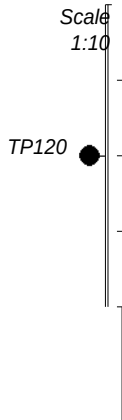
ELEVATION :
X-COORD : -29.602620í
Y-COORD : 17.783900í

HOLE No: TP119

CoGHSTA
Nababeep Housing Development

HOLE No: TP120
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light greyish brown, loose to medium dense, intact, gravelly silty sand. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP120 at 0,0--0,4 m."
3) Reusal on Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

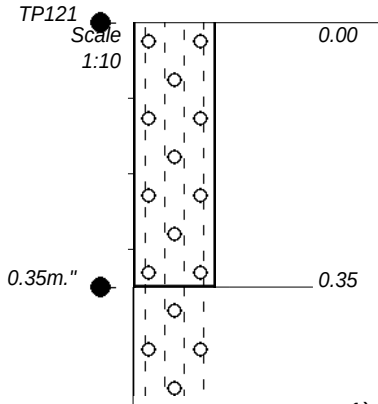
ELEVATION :
X-COORD : -29.602640í
Y-COORD : 17.783880í

HOLE No: TP120

CoGHSTA
Nababeep Housing Development

HOLE No: TP121
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light greyish brown, medium dense, intact, gravelly Silty sand with large boulders and cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP121 at 0,0 -- 0,35m."
3) Very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.602869í
Y-COORD : 17.783783í

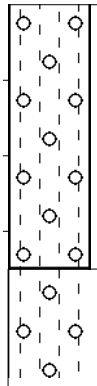
HOLE No: TP121

CoGHSTA
Nababeep Housing Development

HOLE No: TP122
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light greyish brown, medium dense, intact, gravelly Silty sand with large boulders and cobbles. COLLUVIUM."

0.35

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

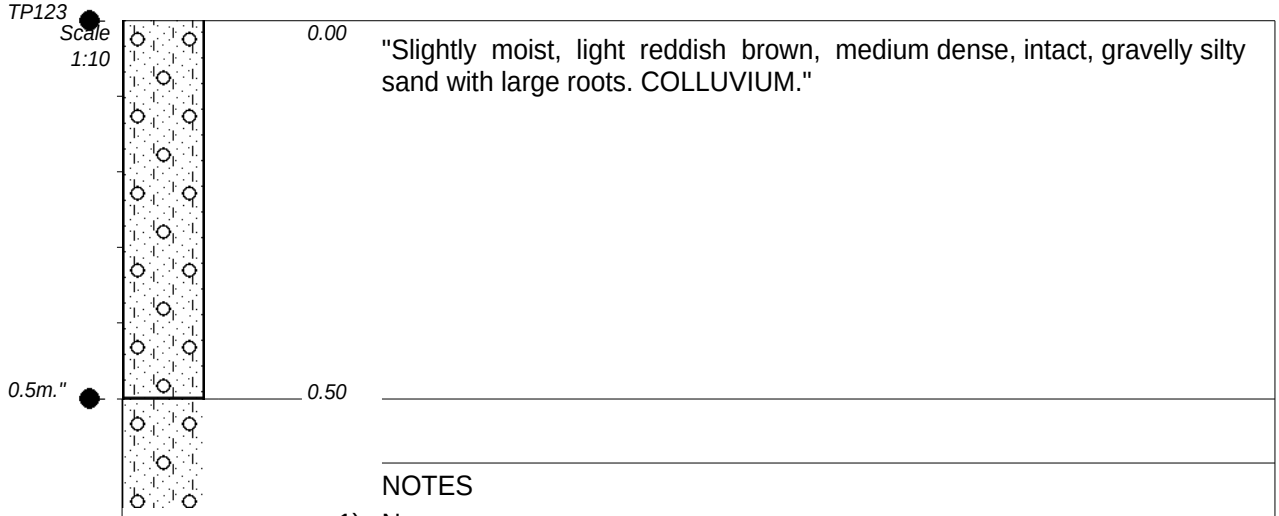
ELEVATION :
X-COORD : -29.602902í
Y-COORD : 17.783776í

HOLE No: TP122

CoGHSTA
Nababeep Housing Development

HOLE No: TP123
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light reddish brown, medium dense, intact, gravelly silty sand with large roots. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP123 at 0,0 -- 0,5m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.603050í
Y-COORD : 17.783910í

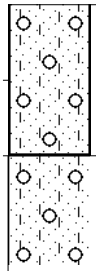
HOLE No: TP123

CoGHSTA
Nababeep Housing Development

HOLE No: TP124
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light reddish brown, medium dense, intact, gravelly silty sand with large roots. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.603230í
Y-COORD : 17.783880í

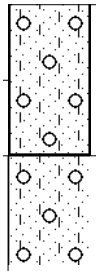
HOLE No: TP124

CoGHSTA
Nababeep Housing Development

HOLE No: TP125
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light reddish brown, medium dense, intact, gravelly silty sand with large roots. COLLUVIUM."

0.20

NOTES

1) No seepage.

2) No disturbed samples taken.

3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

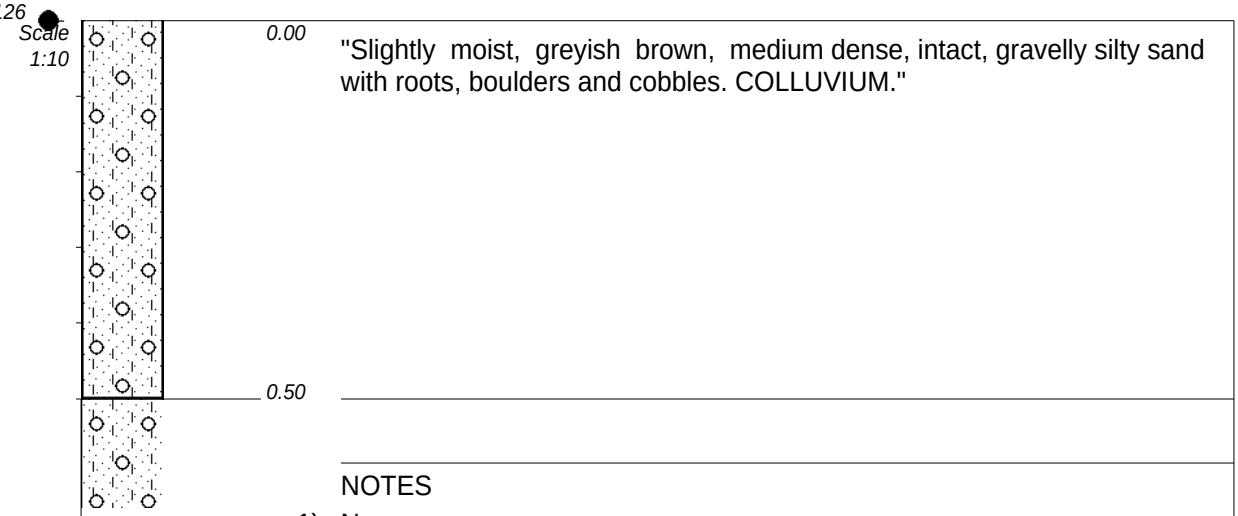
ELEVATION :
X-COORD : -29.603950í
Y-COORD : 17.783180í

HOLE No: TP125

CoGHSTA
Nababeep Housing Development

HOLE No: TP126
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, greyish brown, medium dense, intact, gravelly silty sand with roots, boulders and cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP126 at 0,0 -- 0,8m."
3) Hard Dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

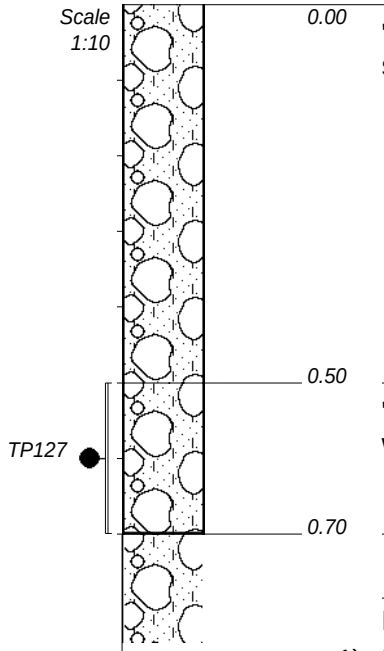
ELEVATION :
X-COORD : -29.600800í
Y-COORD : 17.781690í

HOLE No: TP126

CoGHSTA
Nababeep Housing Development

HOLE No: TP127
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, greyish brown, loose to medium dense, intact, gravelly silty sand with cobbles, boulders and rubble. UNCONTROLLED FILL."

"Slightly moist, greyish brown, medium dense, intact, gravelly silty sand with cobbles and boulders. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP127 at 0,5--0,7 m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.602200í
Y-COORD : 17.781710í

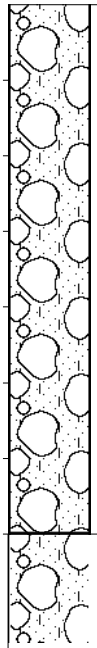
HOLE No: TP127

CoGHSTA
Nababeep Housing Development

HOLE No: TP128
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, greyish brown, medium dense, intact, gravelly silty sand with cobbles and boulders. COLLUVIUM."

0.70

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

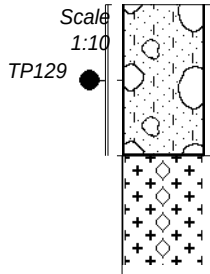
ELEVATION :
X-COORD : -29.600370í
Y-COORD : 17.781240í

HOLE No: TP128

CoGHSTA
Nababeep Housing Development

HOLE No: TP129
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, greyish brown, medium dense, intact, silty sand with highly weathered granite cobbles. COLLUVIUM."

0.20 "End of hole, Refusal on Bedrock. Greyish Brown, Highly weathered, fine grained, medium hard, Granite."

NOTES

1) No seepage.
2) "Disturbed samples taken TP129 at 0,0--0,2 m."
3) Refusal on very Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.600430í
Y-COORD : 17.781010í

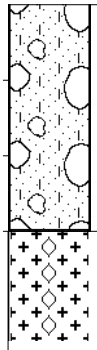
HOLE No: TP129

CoGHSTA
Nababeep Housing Development

HOLE No: TP130
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, greyish brown, medium dense, intact, silty sand with highly weathered granite cobbles. COLLUVIUM."

0.30 "End of hole, Refusal on Bedrock. Greyish Brown, Highly weathered, fine grained, medium hard, Granite."

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on very Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.600430í
Y-COORD : 17.780830í

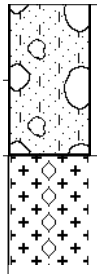
HOLE No: TP130

CoGHSTA
Nababeep Housing Development

HOLE No: TP131
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, greyish brown, medium dense, intact, silty sand with highly weathered granite cobbles. COLLUVIUM."

0.20 "End of hole, Refusal on Bedrock. Greyish Brown, Highly weathered, fine grained, medium hard, Granite."

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

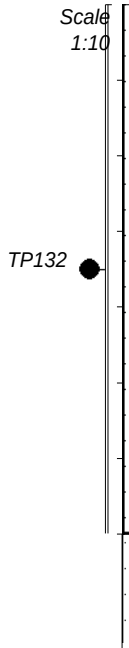
ELEVATION :
X-COORD : -29.600220í
Y-COORD : 17.779280í

HOLE No: TP131

CoGHSTA
Nababeep Housing Development

HOLE No: TP132
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light greyish brown, loosely dense, intact, silty sand with large roots in places. COLLUVIUM."

0.70

NOTES

1) No seepage.
2) "Disturbed samples taken TP132 at 0,0--0,7 m."
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

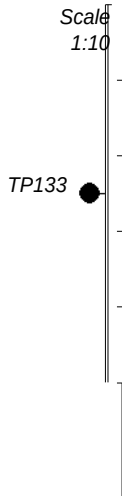
ELEVATION :
X-COORD : -29.600180í
Y-COORD : 17.779330í

HOLE No: TP132

CoGHSTA
Nababeep Housing Development

HOLE No: TP133
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light greyish brown, loosely dense, intact, silty sand with large roots in places. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) "Disturbed samples taken TP133 at 0,0--0,5 m."
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.599680í
Y-COORD : 17.780910í

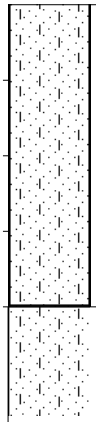
HOLE No: TP133

CoGHSTA
Nababeep Housing Development

HOLE No: TP134
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light greyish brown, loose, intact, silty sand with large boulders and cobbles. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

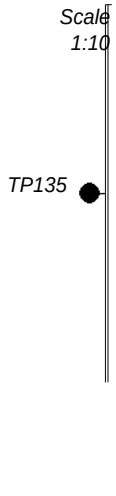
ELEVATION :
X-COORD : -29.597650í
Y-COORD : 17.780710í

HOLE No: TP134

CoGHSTA
Nababeep Housing Development

HOLE No: TP135
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light greyish brown, loose, intact, silty sand with large boulders and cobbles. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) "Disturbed samples taken TP135 at 0,0--0,5 m."
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

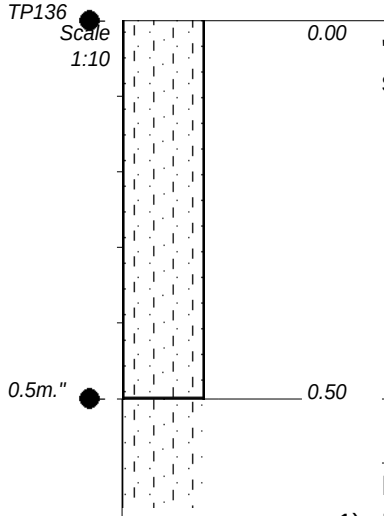
ELEVATION :
X-COORD : -29.597850í
Y-COORD : 17.780450í

HOLE No: TP135

CoGHSTA
Nababeep Housing Development

HOLE No: TP136
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light greyish brown,loose to medium dense, intact, silty sandy gravel with tree roots, boulders and cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP136 at 0,0 -- 0,5m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

ELEVATION :
X-COORD : -29.598180í
Y-COORD : 17.781310í

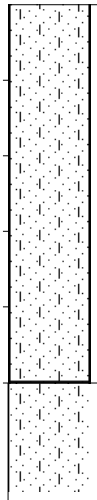
HOLE No: TP136

CoGHSTA
Nababeep Housing Development

HOLE No: TP137
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00

"Slightly moist, light brown, medium dense, intact, silty sand with abundant boulders and cobbles. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.598120í
Y-COORD : 17.781250í

HOLE No: TP137

CoGHSTA
Nababeep Housing Development

HOLE No: TP138
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, light brown, medium dense, intact, silty sand with large cobbles, boulders and roots in places. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) "Disturbed samples taken TP138 at 0,0 -- 0,5m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

ELEVATION :
X-COORD : -29.598110í
Y-COORD : 17.781150í

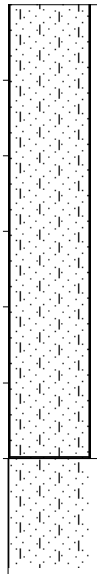
HOLE No: TP138

CoGHSTA
Nababeep Housing Development

HOLE No: TP139
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00

"Slightly moist, light brown, medium dense, intact, silty sand with large cobbles, boulders and roots in places. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

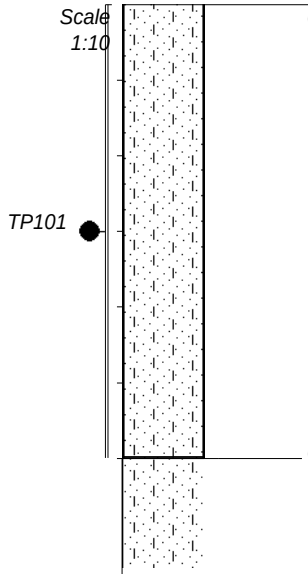
ELEVATION :
X-COORD : -29.598310í
Y-COORD : 17.781880í

HOLE No: TP139

CoGHSTA
Nababeep Housing Development

HOLE No: TP140
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light brown, medium dense, intact, silty sand with large cobbles, boulders and roots in places. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) "Disturbed samples taken TP101 at 0,0--0,6 m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

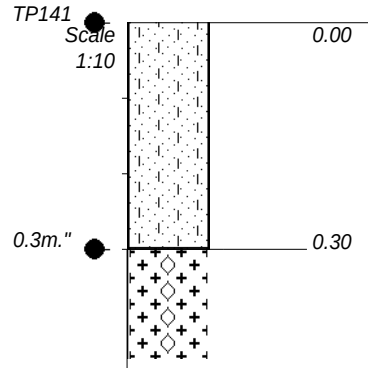
ELEVATION :
X-COORD : -29.598450í
Y-COORD : 17.782090í

HOLE No: TP140

CoGHSTA
Nababeep Housing Development

HOLE No: TP141
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, dark greyish brown, loose, intact, silty SAND. COLLUVIUM."

0.30 "End of hole, Refusal on Bedrock. Greyish Orange Brown, Highly weathered, fine grained, medium hard, Granite gneiss."

NOTES

1) No seepage.
2) "Disturbed samples taken TP141 at 0,0 -- 0,3m."
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

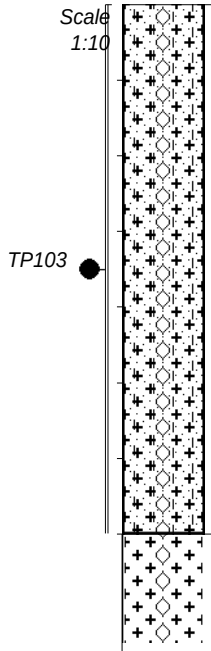
ELEVATION :
X-COORD : -29.592100í
Y-COORD : 17.777070í

HOLE No: TP141

CoGHSTA
Nababeep Housing Development

HOLE No: TP142
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, greyish brown, loose to medium dense, intact, silty sand with granite cobbles. COLLUVIUM."

"End of hole, Refusal on Bedrock. Greyish Orange Brown, Highly weathered, fine grained, medium hard, Granite gneiss."

NOTES

1) No seepage.
2) "Disturbed samples taken TP103 at 0,0--0,7 m."
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

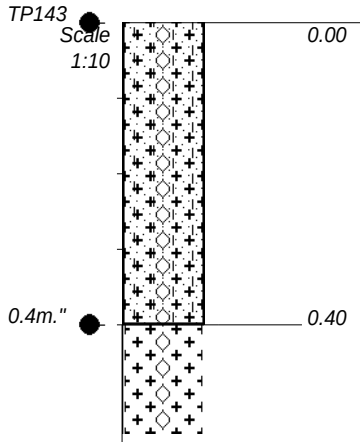
ELEVATION :
X-COORD : -29.600790í
Y-COORD : 17.781000í

HOLE No: TP142

CoGHSTA
Nababeep Housing Development

HOLE No: TP143
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, greyish brown, loose to medium dense, intact, silty sand with granite cobbles. COLLUVIUM."

0.40 "End of hole, Refusal on Bedrock. Greyish Orange Brown, Highly weathered, fine grained, medium hard, Granite gneiss."

NOTES

1) No seepage.
2) "Disturbed samples taken TP143 at 0,0 -- 0,4m."
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : *STANDARD.SET*

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : *07/07/2021 06:19*
TEXT : *..testpitlogsNababeep1.txt*

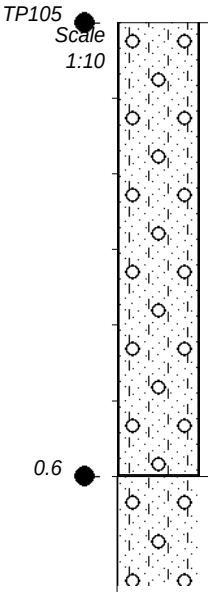
ELEVATION :
X-COORD : -29.602620í
Y-COORD : 17.781570í

HOLE No: TP143

CoGHSTA
Nababeep Housing Development

HOLE No: TP144
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, orange brown, medium dense, intact, gravelly silty sand. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP105 at 0,0 -- 0,6 m."
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

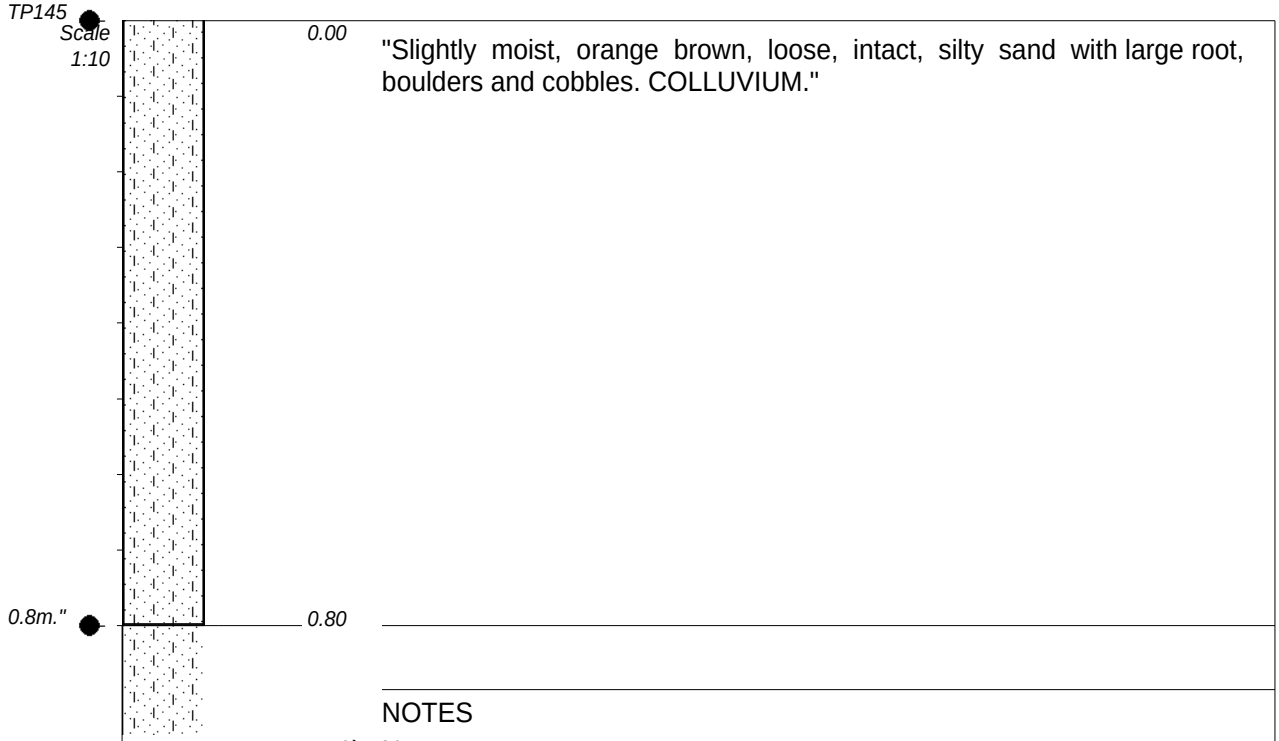
ELEVATION :
X-COORD : -29.602627í
Y-COORD : 17.781573í

HOLE No: TP144

CoGHSTA
Nababeep Housing Development

HOLE No: TP145
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, orange brown, loose, intact, silty sand with large root, boulders and cobbles. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP145 at 0,0 -- 0,8m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.602580í
Y-COORD : 17.781670í

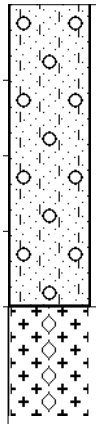
HOLE No: TP145

CoGHSTA
Nababeep Housing Development

HOLE No: TP146
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, orange brown, medium dense, intact, gravelly silty sand. COLLUVIUM."

0.40 "End of hole, Refusal on Bedrock. Greyish Orange Brown, Highly weathered, fine grained, medium hard, Granite gneiss."

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on Bedrock.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

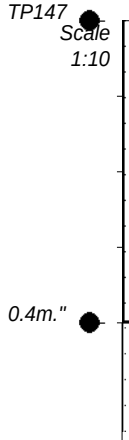
ELEVATION :
X-COORD : -29.600240í
Y-COORD : 17.782120í

HOLE No: TP146

CoGHSTA
Nababeep Housing Development

HOLE No: TP147
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, orange brown, loose to medium dense with depth, intact, gravelly silty sand. COLLUVIUM."

0.40

NOTES

1) No seepage.
2) "Disturbed samples taken TP147 at 0,0 -- 0,4m."
3) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

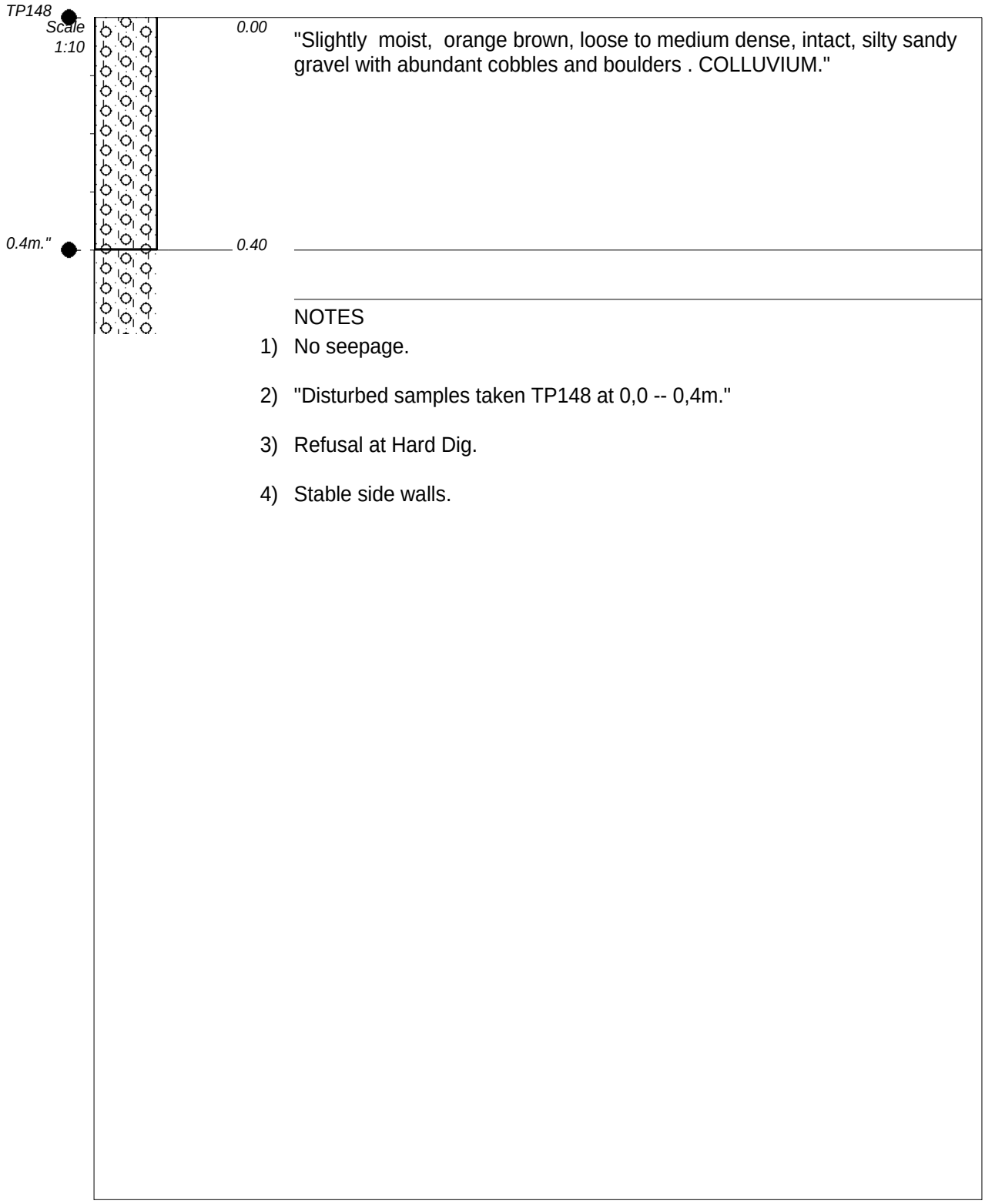
ELEVATION :
X-COORD : -29.597000í
Y-COORD : 17.778100í

HOLE No: TP147

CoGHSTA
Nababeep Housing Development

HOLE No: TP148
Sheet 1 of 1

JOB NUMBER: 000



NOTES

1) No seepage.
2) "Disturbed samples taken TP148 at 0,0 -- 0,4m."
3) Refusal at Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

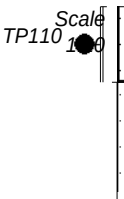
ELEVATION :
X-COORD : -29.595808í
Y-COORD : 17.777655í

HOLE No: TP148

CoGHSTA
Nababeep Housing Development

HOLE No: TP149
Sheet 1 of 1

JOB NUMBER: 000



0.00

"Slightly moist, orange brown, loose to medium dense, intact, silty sandy gravel with abundant boulders and cobbles . COLLUVIUM."

0.10

NOTES

1) No seepage.
2) "Disturbed samples taken TP110 at 0,0--0,1 m."
3) Refusal at Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

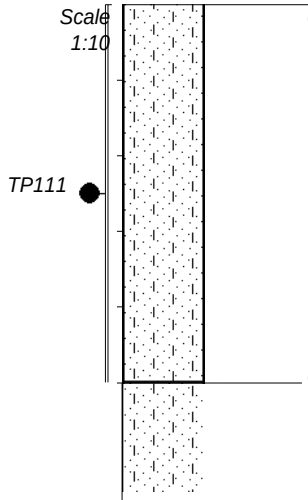
ELEVATION :
X-COORD : -29.594550í
Y-COORD : 17.778520í

HOLE No: TP149

CoGHSTA
Nababeep Housing Development

HOLE No: TP150
Sheet 1 of 1

JOB NUMBER: 000



"Slightly moist, light reddish brown, loose to medium dense, intact, silty sand with large root. COLLUVIUM."

NOTES

1) No seepage.
2) "Disturbed samples taken TP111 at 0,0--0,5 m."
3) Hard dig
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.593214í
Y-COORD : 17.777478í

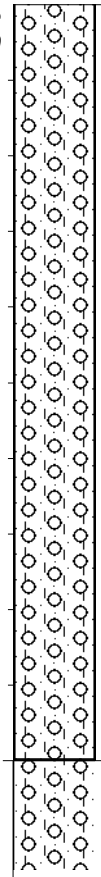
HOLE No: TP150

CoGHSTA
Nababeep Housing Development

HOLE No: TP151
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00

"Slighly moist, light reddish brown,spotted black, loose to medium dense, intact, silty sandy gravel with ash and rubble. UNCONTROLLED FILL."

1.00

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Hard Dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.593170í
Y-COORD : 17.777672í

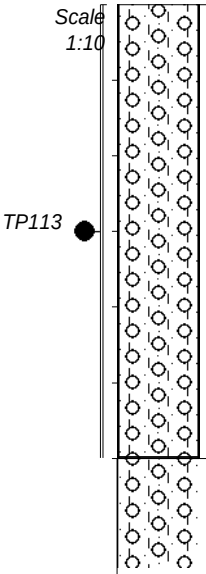
HOLE No: TP151

CoGHSTA
Nababeep Housing Development

HOLE No: TP152
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slighly moist, light reddish brown,spotted black, loose to medium dense, intact, silty sandy gravel. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) "Disturbed samples taken TP113 at 0,0--0,6 m."
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.592740í
Y-COORD : 17.776910í

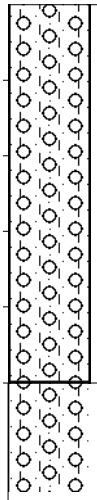
HOLE No: TP152

CoGHSTA
Nababeep Housing Development

HOLE No: TP153
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00

"Slighly moist, light reddish brown,spotted black, loose to medium dense, intact, silty sandy gravel. COLLUVIUM."

0.50

NOTES

1) No seepage.
2) Hard dig.
3) No disturbed samples taken.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.592320í
Y-COORD : 17.776790í

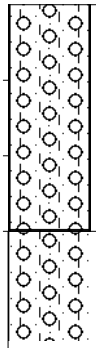
HOLE No: TP153

CoGHSTA
Nababeep Housing Development

HOLE No: TP154
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slighly moist, light reddish brown,spotted black, loose to medium dense, intact, silty sandy gravel. COLLUVIUM."

0.30

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.592200í
Y-COORD : 17.776950í

HOLE No: TP154

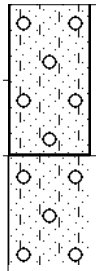
CoGHSTA
Nababeep Housing Development

HOLE No: TP155
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10

TP116



0.00 "Slightly moist, dark yellowish brown, medium dense, intact, gravelly silty Sand. COLLUVIUM."

0.20

NOTES

1) No seepage.
2) "Disturbed samples taken TP116 at 0,0--0,2 m."
3) Hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

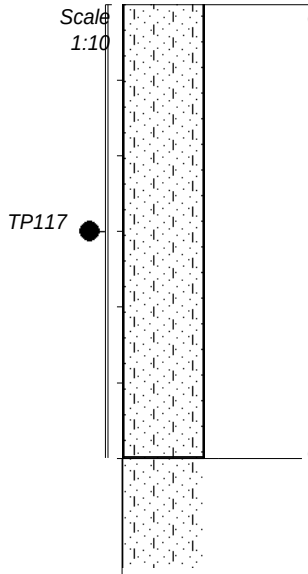
ELEVATION :
X-COORD : -29.592280í
Y-COORD : 17.777090í

HOLE No: TP155

CoGHSTA
Nababeep Housing Development

HOLE No: TP156
Sheet 1 of 1

JOB NUMBER: 000



0.00 "Slightly moist, light yellowish brown, loose, intact, silty Sand. COLLUVIUM."

0.60

NOTES

1) No seepage.
2) "Disturbed samples taken TP117 at 0,0--0,6 m."
3) Refusal on very hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.593840í
Y-COORD : 17.771630í

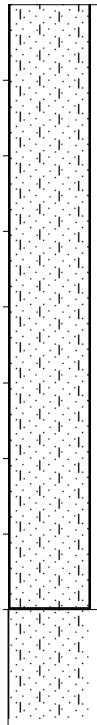
HOLE No: TP156

CoGHSTA
Nababeep Housing Development

HOLE No: TP157
Sheet 1 of 1

JOB NUMBER: 000

Scale 1:10



0.00 "Slightly moist, light yellowish brown, loose, intact, silty Sand. COLLUVIUM."

0.80

NOTES

1) No seepage.
2) No disturbed samples taken.
3) Refusal on hard dig.
4) Stable side walls.

CONTRACTOR :
MACHINE : CAT 428
DRILLED BY :
PROFILED BY : Dineo Ramakatsa
TYPE SET BY :
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM : "0,7m trench"
DATE :
DATE : 15/05/2021 - 25-21-2021
DATE : 07/07/2021 06:19
TEXT : ..testpitlogsNababeep1.txt

ELEVATION :
X-COORD : -29.592720í
Y-COORD : 17.774450í

HOLE No: TP157

Appendix B: Laboratory Results

ROADLAB

Upington
11 Swakara Street, Industria, Upington, 8801
PO Box 2893, Upington, 8800
Tel: 054 334 0838 Fax: None
Email: roelof@roadlab.co.za
Web: www.roadlab.co.za

Job Request No.: RU3988
Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Date Reported : 2021-06-17

Project : RDP Houses, Nababeep

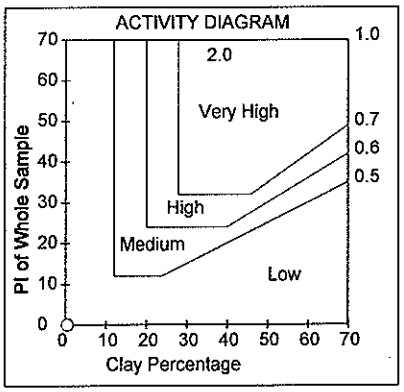
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

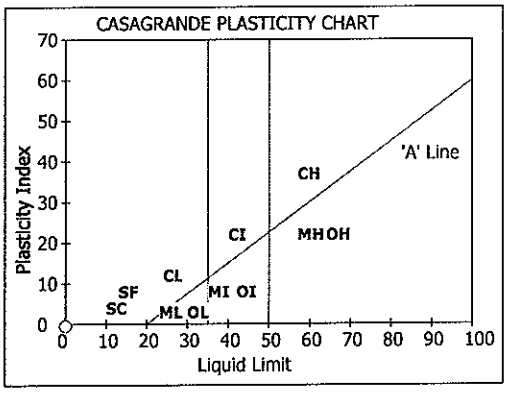
Sample No.	: U9801
Position	: TP 03; 0.0 - 0.2m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown
Sample Type	: Sand + Quartz Stone

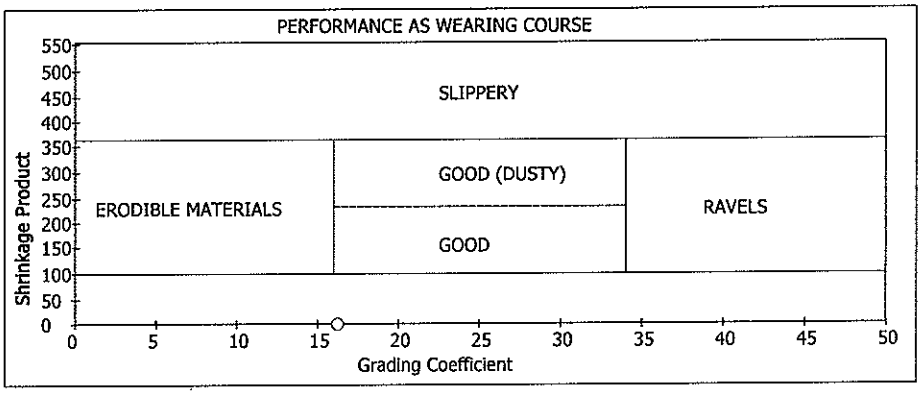
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	95
20.00	90
14.00	88
5.000	81
2.000	75
0.425	39
0.250	31
0.150	21
0.075	9.6
0.060	5.1
0.050	4.7
0.020	1.3
0.005	1.0
0.002	0.7

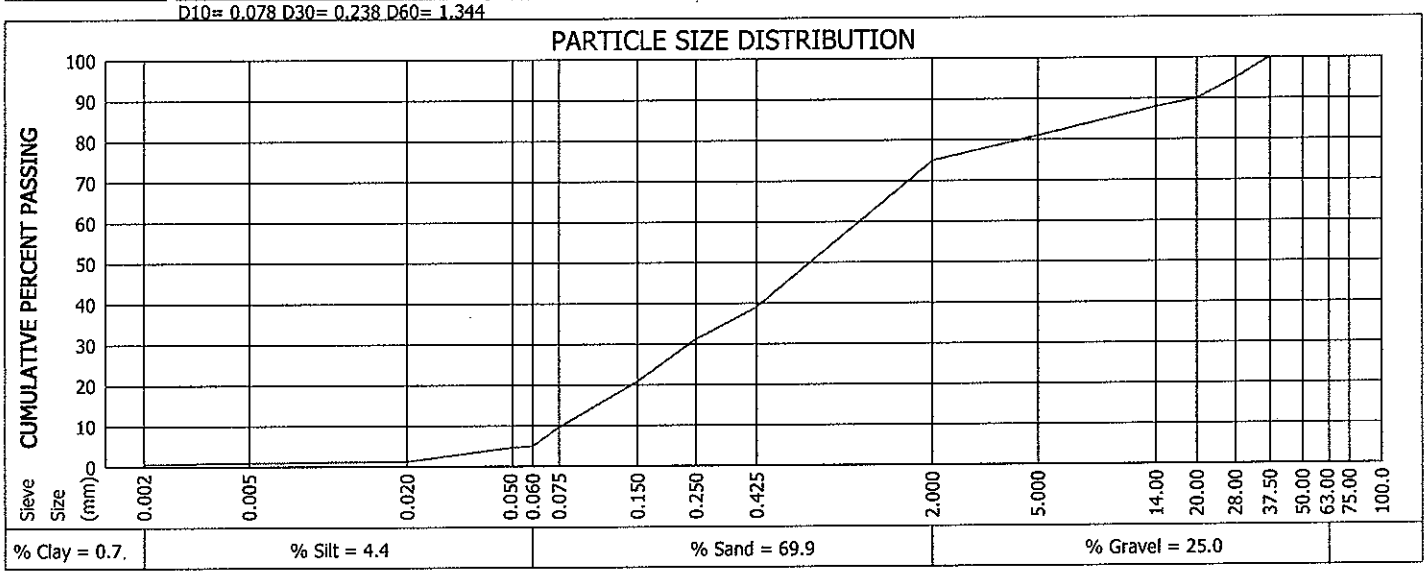
Soil Mortar	2.000 - 0.425	48
	0.425 - 0.250	10
	0.250 - 0.150	14
	0.150 - 0.075	15
	< 0.075	13
Effective Size		0.078
Uniformity Coefficient		17.2
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		16.2
Grading Modulus		1.80
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.078 D30= 0.238 D60= 1.344









% Clay = 0.7	% Silt = 4.4	% Sand = 69.9	% Gravel = 25.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Job Request No.: RU3988

Date Reported : 2021-06-17

Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

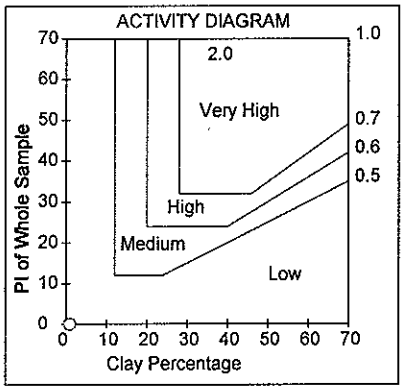
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

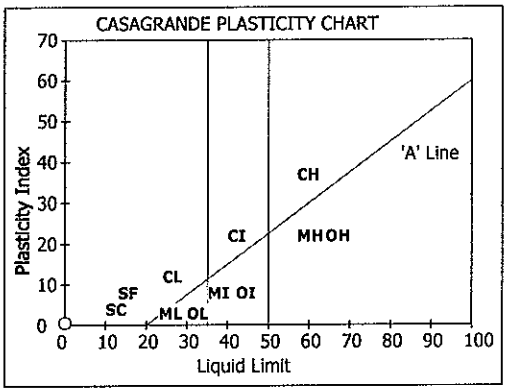
Sample No.	: U9802
Position	: TP 04; 0.0 - 0.7m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown
Sample Type	: Sand + Quartz Stone

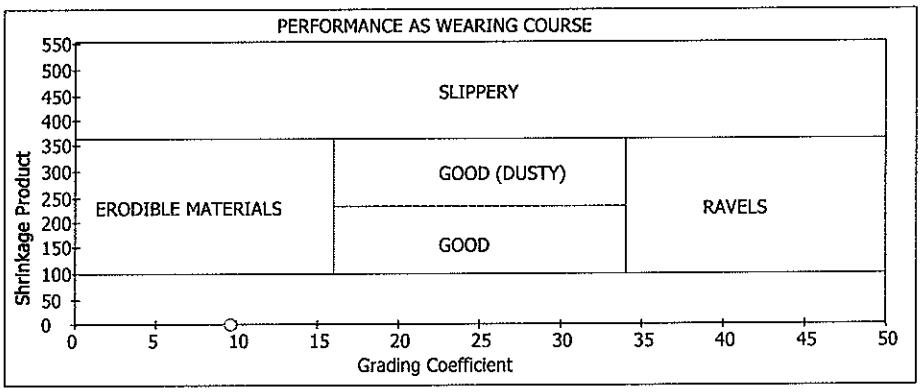
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	99
14.00	99
5.000	96
2.000	90
0.425	49
0.250	39
0.150	27
0.075	15
0.060	8.1
0.050	7.0
0.020	2.5
0.005	1.7
0.002	1.0

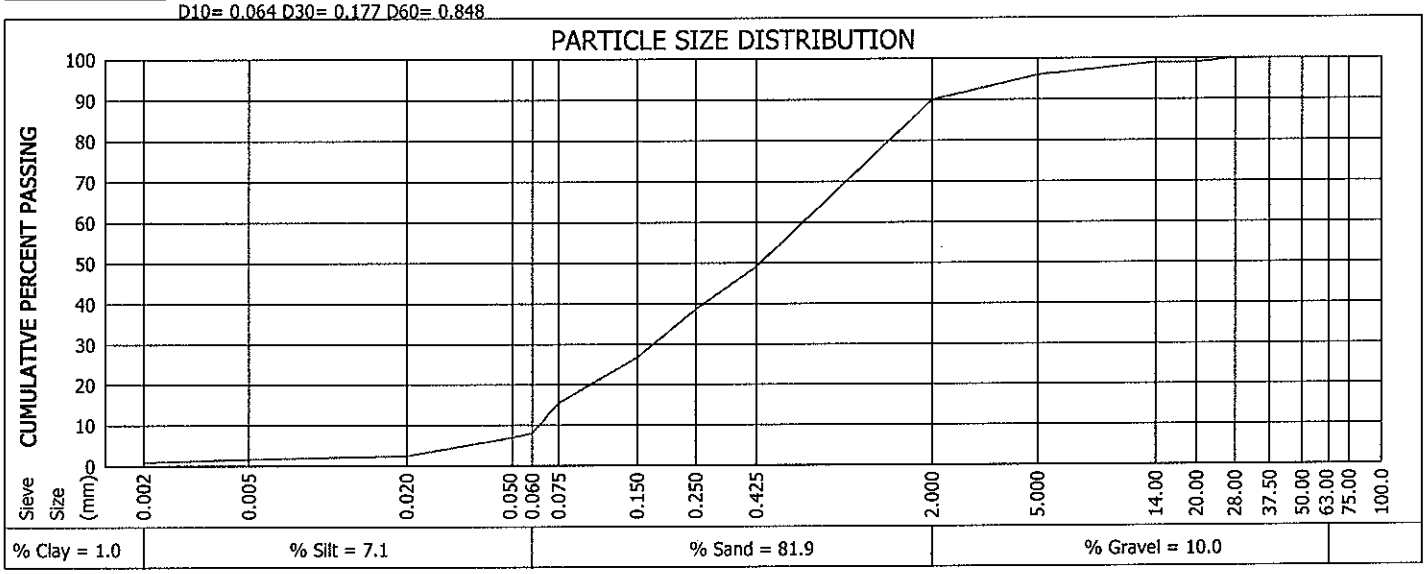
Soil Mortar	2.000 - 0.425	46
	0.425 - 0.250	11
	0.250 - 0.150	13
	0.150 - 0.075	13
	< 0.075	17
Effective Size		0.064
Uniformity Coefficient		13.3
Curvature Coefficient		0.6
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		9.6
Grading Modulus		1.50
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.064 D30= 0.177 D60= 0.848









% Clay = 1.0	% Silt = 7.1	% Sand = 81.9	% Gravel = 10.0

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Attention : Aubrey Nonyana

Date Reported : 2021-06-17

Project : RDP Houses, Nababeep

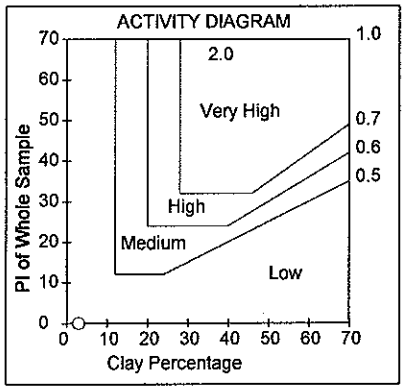
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

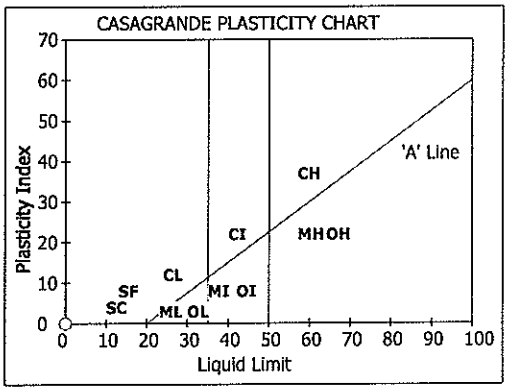
Sample No.	: U9803
Position	: TP 05; 0.0 - 0.3m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravel
Sample Type	: Weathered Quartz Sto

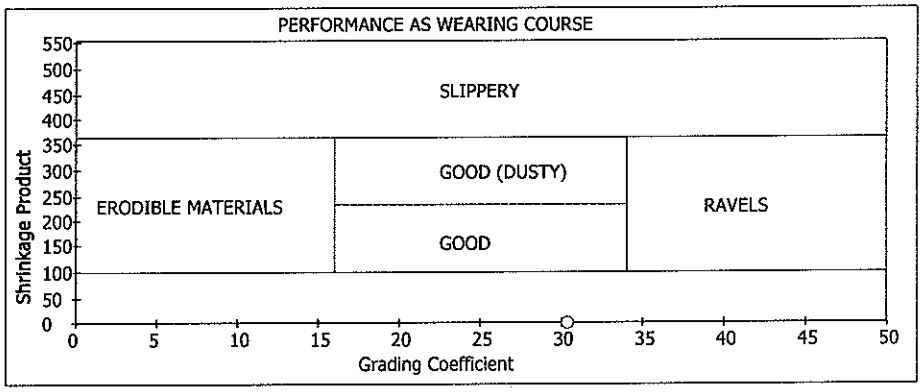
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	97
20.00	94
14.00	87
5.000	66
2.000	51
0.425	29
0.250	23
0.150	16
0.075	9.8
0.060	8.7
0.050	8.7
0.020	4.1
0.005	3.8
0.002	3.2

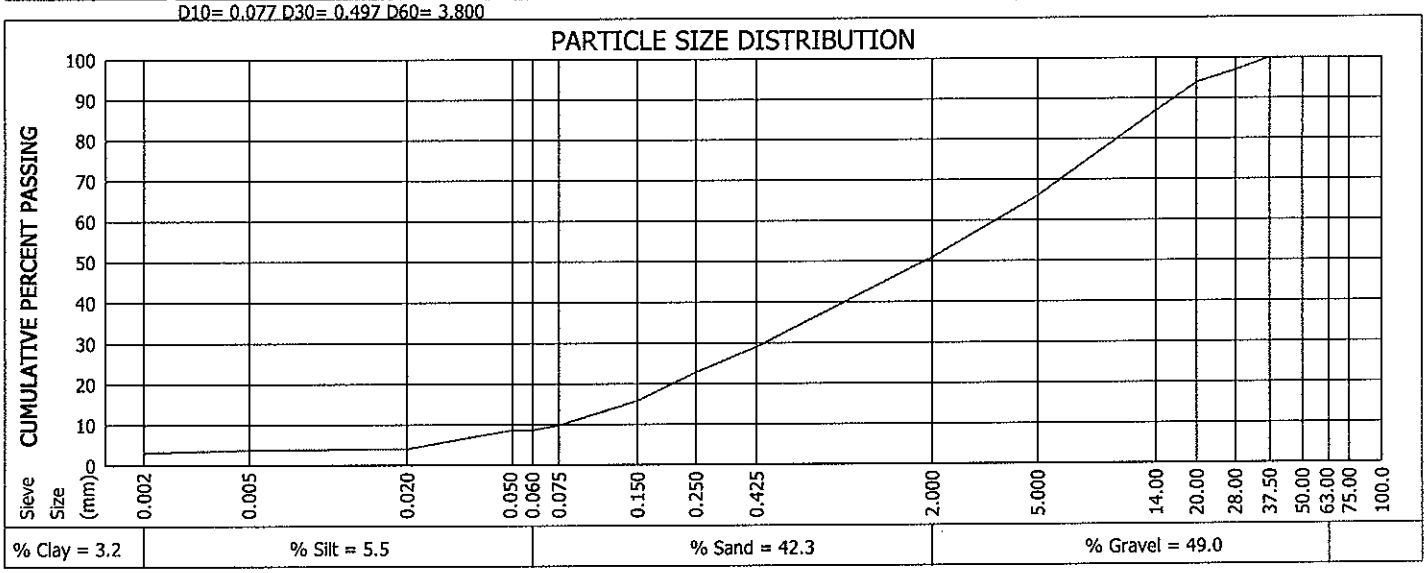
Soil Mortar	2.000 - 0.425	43
	0.425 - 0.250	12
	0.250 - 0.150	14
	0.150 - 0.075	12
	< 0.075	20
Effective Size		0.077
Uniformity Coefficient		49.4
Curvature Coefficient		0.8
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		30.4
Grading Modulus		2.10
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.077 D30= 0.497 D60= 3.800









% Clay = 3.2	% Silt = 5.5	% Sand = 42.3	% Gravel = 49.0

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Manager

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Attention : Aubrey Nonyana

Date Reported : 2021-06-17

Project : RDP Houses, Nababeep

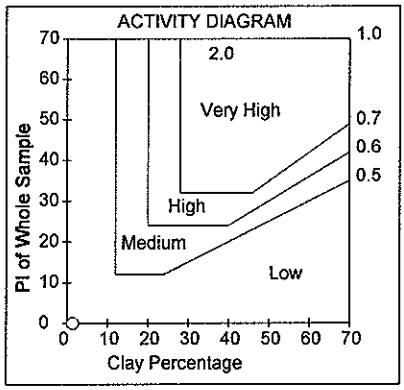
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

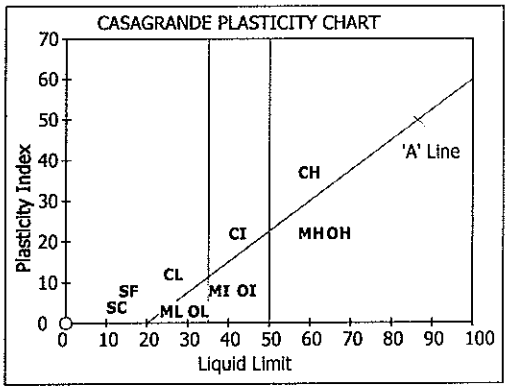
Sample No.	: U9805
Position	: TP 07; 0.0 - 0.6m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown
Sample Type	: Sand + Quartz Stone

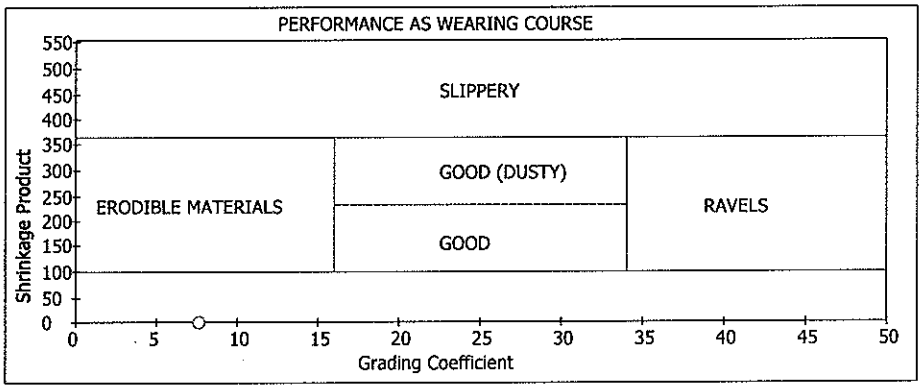
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	99
14.00	99
5.000	96
2.000	92
0.425	53
0.250	42
0.150	24
0.075	11
0.060	8.5
0.050	7.4
0.020	2.7
0.005	1.9
0.002	1.3

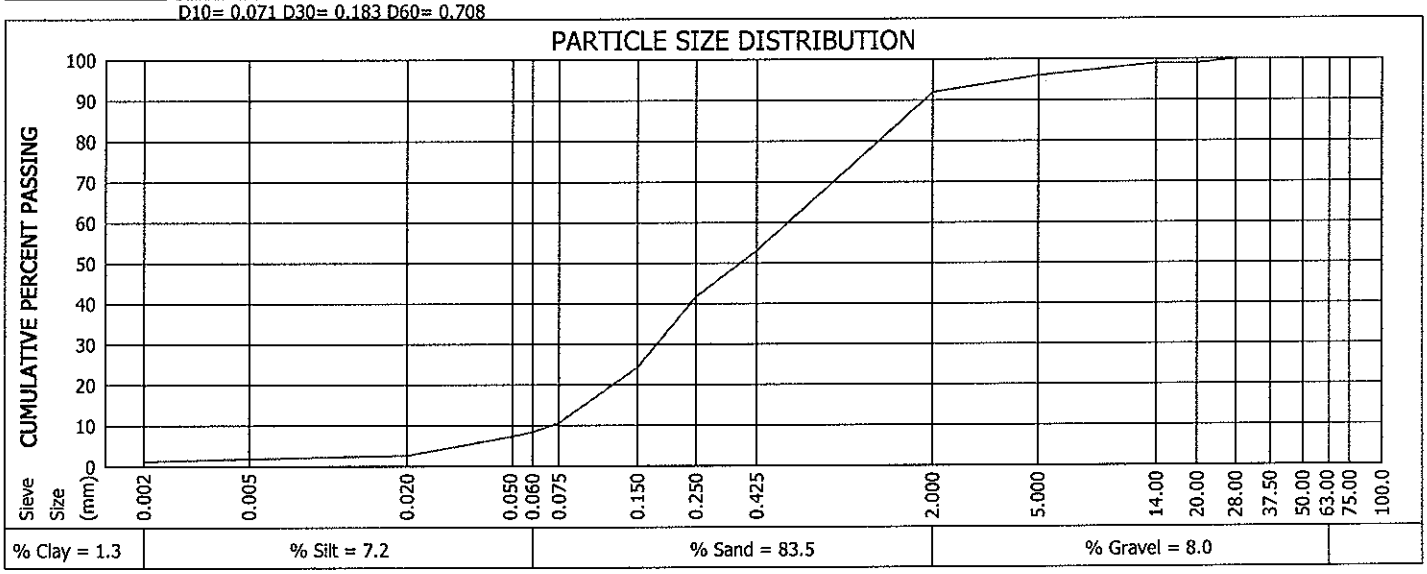
Soil Mortar	2.000 - 0.425	42
	0.425 - 0.250	12
	0.250 - 0.150	19
	0.150 - 0.075	15
	< 0.075	12
Effective Size		0.071
Uniformity Coefficient		10.0
Curvature Coefficient		0.7
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		7.7
Grading Modulus		1.40
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-2-4(0)

D10= 0.071 D30= 0.183 D60= 0.708









% Clay = 1.3	% Silt = 7.2	% Sand = 83.5	% Gravel = 8.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Manager

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Attention : Aubrey Nonyana

Date Reported : 2021-06-17

Project : RDP Houses, Nababeep

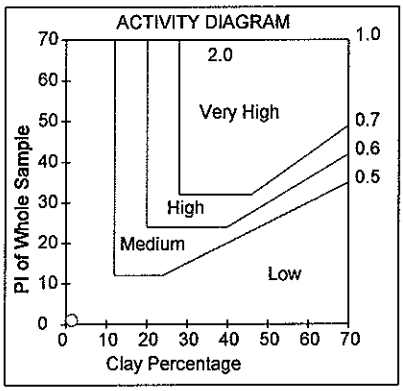
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

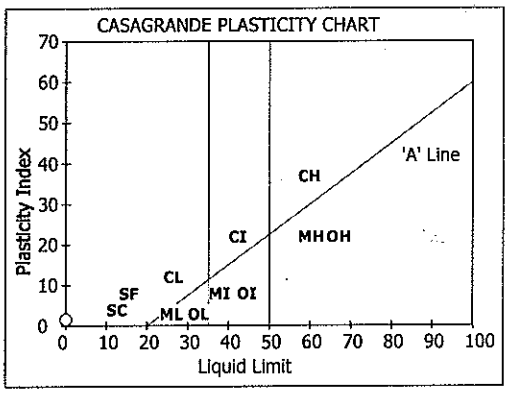
Sample No.	: U9806
Position	: TP 08; 0.0 - 0.6m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown
Sample Type	: Sand + Quartz Stone

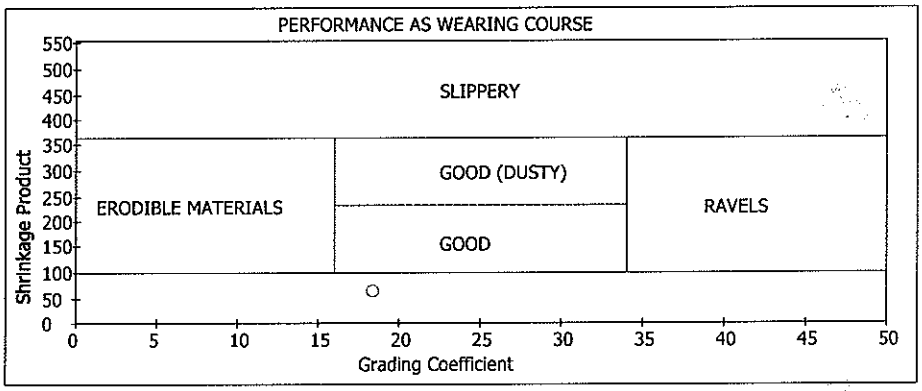
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	95
20.00	92
14.00	89
5.000	80
2.000	72
0.425	43
0.250	36
0.150	27
0.075	18
0.060	14
0.050	9.2
0.020	3.5
0.005	2.6
0.002	1.4

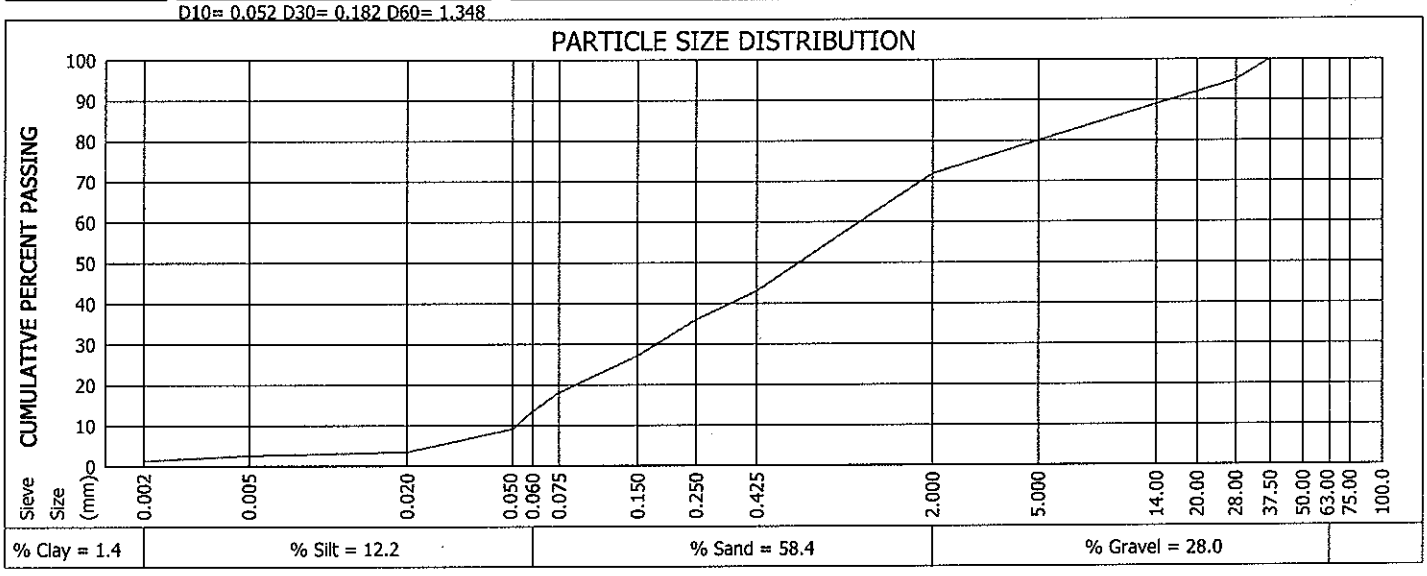
Soil Mortar	2.000 - 0.425	40
	0.425 - 0.250	10
	0.250 - 0.150	12
	0.150 - 0.075	13
	< 0.075	25
Effective Size		0.052
Uniformity Coefficient		25.9
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		64.5
Grading Coefficient		18.4
Grading Modulus		1.70
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	1.5
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.052 D30= 0.182 D60= 1.348









% Clay = 1.4	% Silt = 12.2	% Sand = 58.4	% Gravel = 28.0

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Attention : Aubrey Nonyana

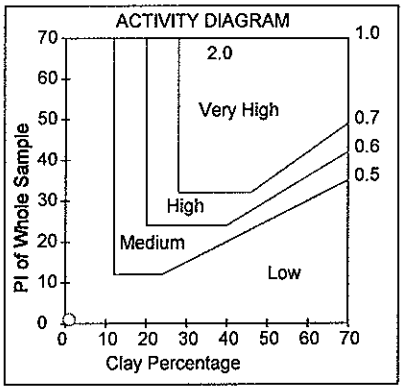
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

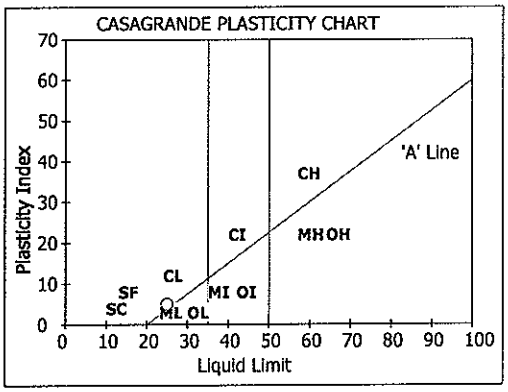
Sample No.	: U9807
Position	: TP 09; 0.6 - 1.1m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Gravel +
Sample Type	: Weathered Quartz Sto

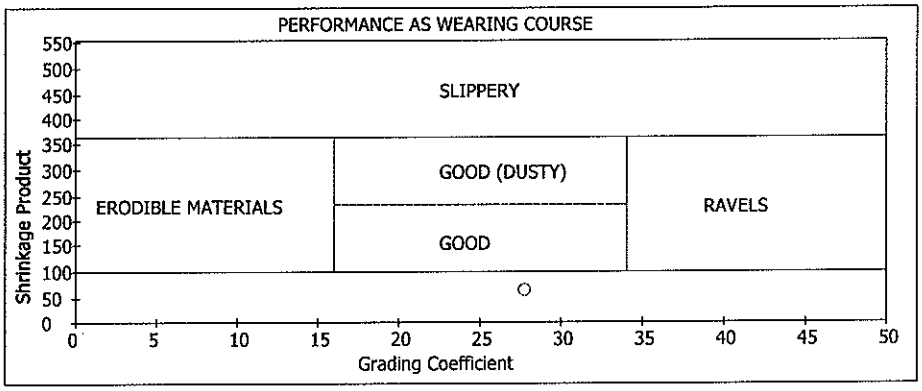
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	93
28.00	90
20.00	84
14.00	79
5.000	59
2.000	43
0.425	21
0.250	17
0.150	13
0.075	8.3
0.060	5.7
0.050	5.1
0.020	2.7
0.005	1.3
0.002	0.9

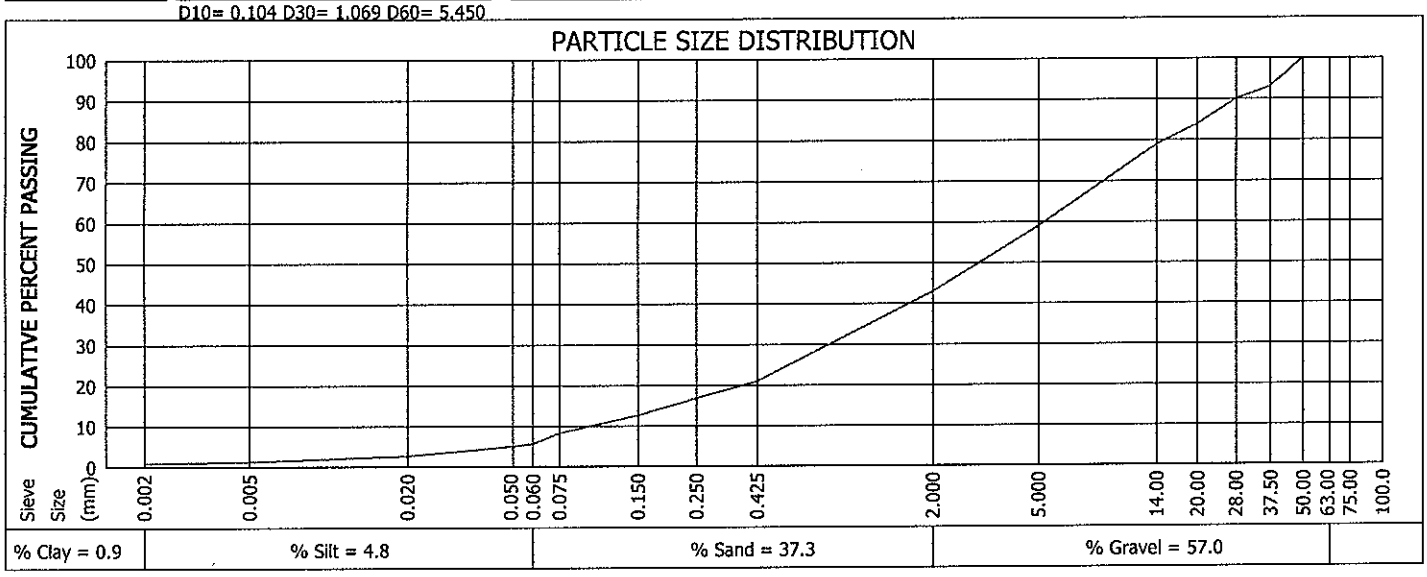
Soil Mortar	2.000 - 0.425	53
	0.425 - 0.250	8
	0.250 - 0.150	10
	0.150 - 0.075	11
	< 0.075	19
Effective Size		0.104
Uniformity Coefficient		52.4
Curvature Coefficient		2.0
Oversize Index		7.0
Shrinkage Product		63.0
Grading Coefficient		27.7
Grading Modulus		2.30
Atterberg Limits	Liquid Limit	25
	Plasticity Index	5
	Linear Shrinkage	3.0
	PI < 0.075	
Unified Soil Classification		SW-SM-SC
US Highway Classification		A-1-a(0)

D10= 0.104 D30= 1.069 D60= 5.450









% Clay = 0.9	% Silt = 4.8	% Sand = 37.3	% Gravel = 57.0

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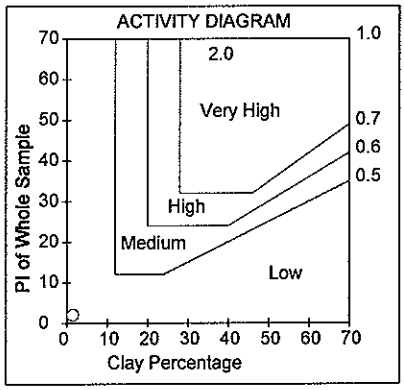
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

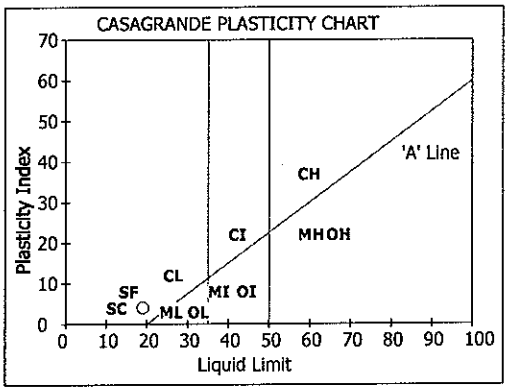
Sample No.	: U9810
Position	: TP 14; 0.0 - 0.3m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravelly
Sample Type	: Sand + Quartz Stone

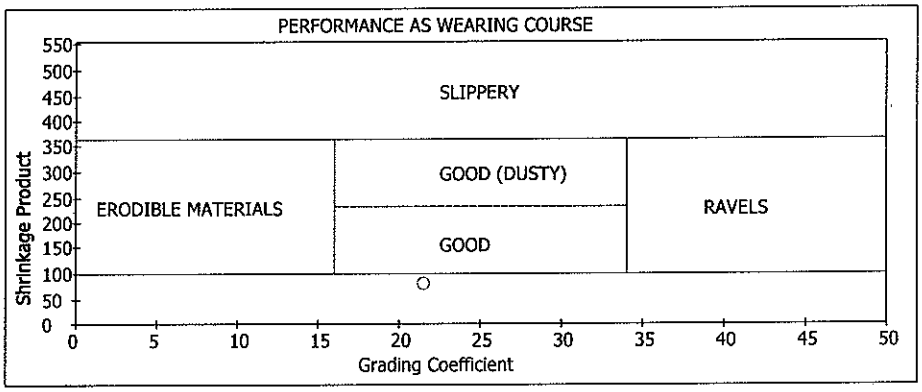
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	97
28.00	96
20.00	91
14.00	90
5.000	77
2.000	68
0.425	41
0.250	34
0.150	25
0.075	15
0.060	12
0.050	9.8
0.020	3.1
0.005	2.7
0.002	1.7

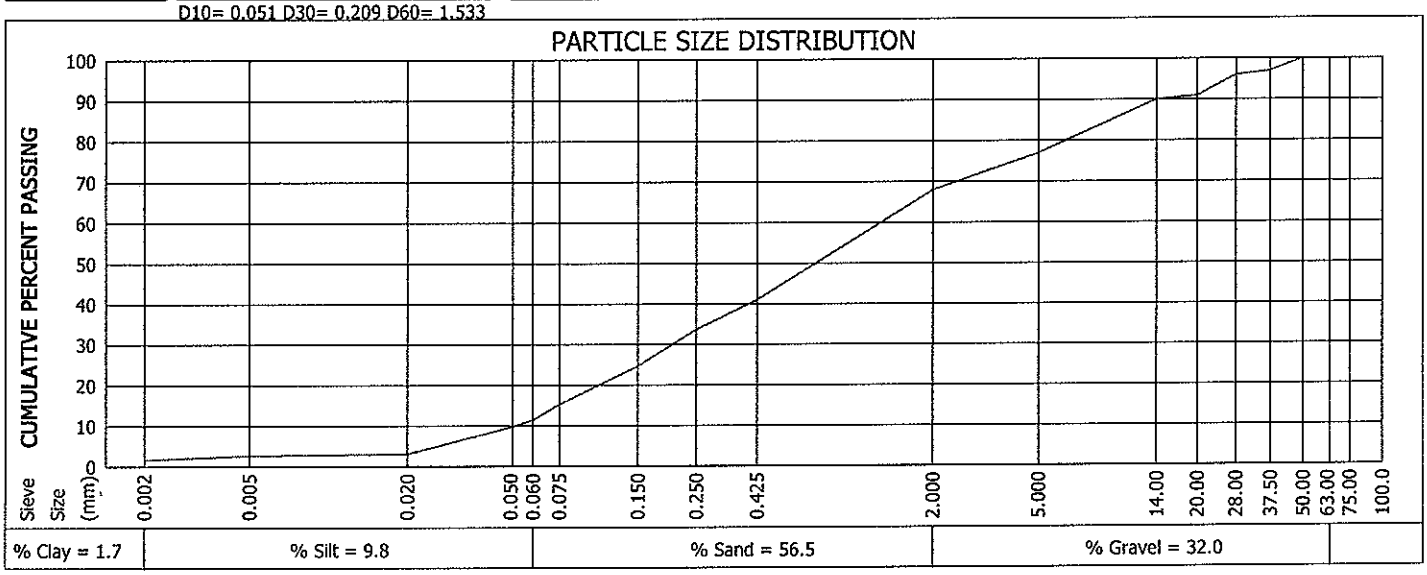
Soil Mortar	2.000 - 0.425	40
	0.425 - 0.250	11
	0.250 - 0.150	13
	0.150 - 0.075	14
	< 0.075	22
Effective Size		0.051
Uniformity Coefficient		30.1
Curvature Coefficient		0.6
Oversize Index		3.0
Shrinkage Product		82.0
Grading Coefficient		21.6
Grading Modulus		1.80
Atterberg Limits	Liquid Limit	19
	Plasticity Index	4
	Linear Shrinkage	2.0
	PI < 0.075	
Unified Soil Classification		SM-SC
US Highway Classification		A-1-b(0)

D10= 0.051 D30= 0.209 D60= 1.533









% Clay = 1.7	% Silt = 9.8	% Sand = 56.5	% Gravel = 32.0

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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Job Request No.: RU3988
Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Date Reported : 2021-06-17

Project : RDP Houses, Nababeep

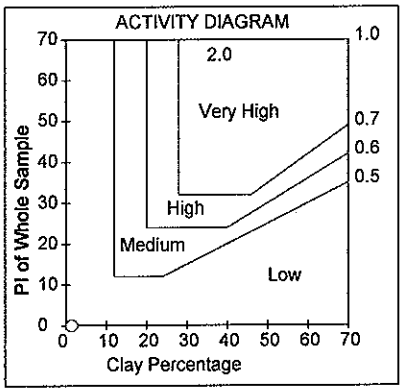
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

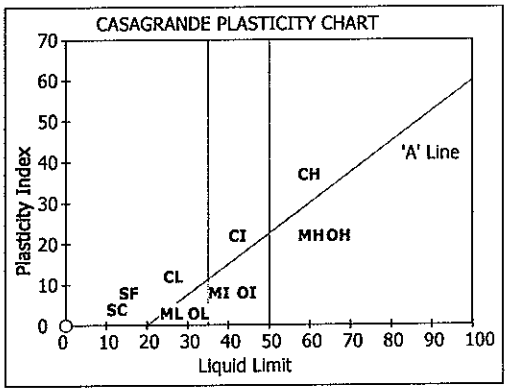
Sample No.	: U9812
Position	: TP 12; 0.0 - 0.4m
Layer Type	: Not Specified
Sample Colour	: Light Orange Gravel
Sample Type	: Weathered Quartz Sto

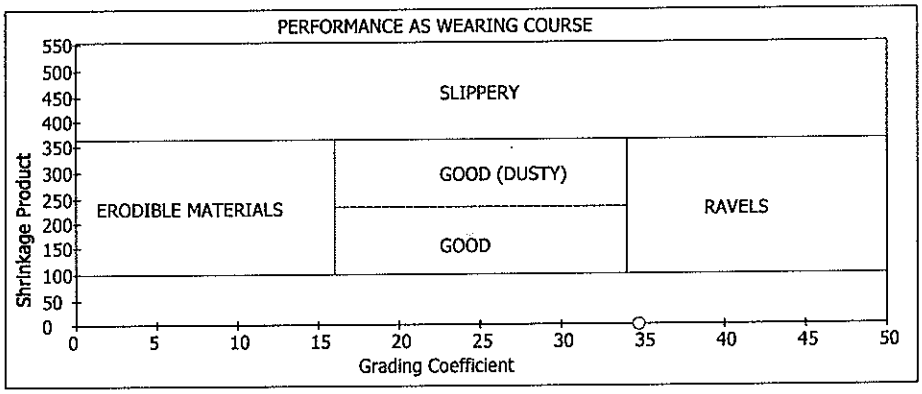
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	97
14.00	93
5.000	71
2.000	51
0.425	26
0.250	22
0.150	17
0.075	11
0.060	6.2
0.050	6.2
0.020	2.5
0.005	1.8
0.002	1.3

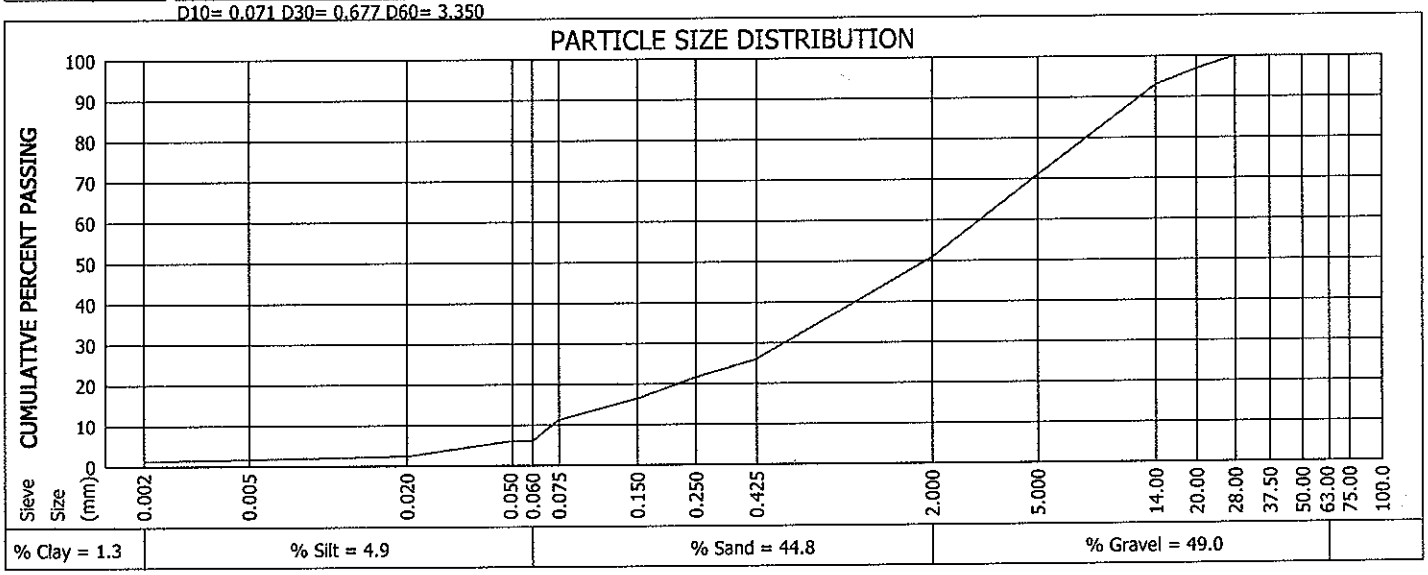
Soil Mortar	2.000 - 0.425	48
	0.425 - 0.250	9
	0.250 - 0.150	10
	0.150 - 0.075	11
	< 0.075	22
Effective Size		0.071
Uniformity Coefficient		47.2
Curvature Coefficient		1.9
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		34.8
Grading Modulus		2.10
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.071 D30= 0.677 D60= 3.350









% Clay = 1.3	% Silt = 4.9	% Sand = 44.8	% Gravel = 49.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Manager

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0920

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

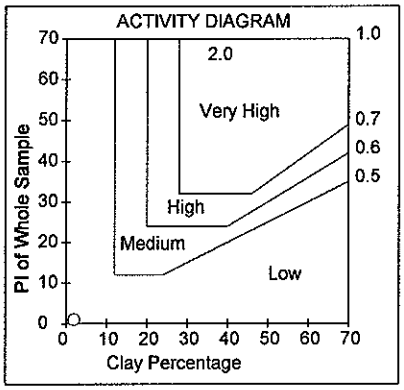
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

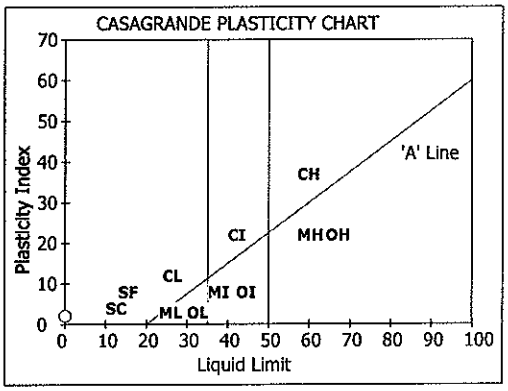
Sample No.	: U9813
Position	: TP 18; 0.0 - 0.2m
Layer Type	: Not Specified
Sample Colour	: Light Orange Gravell
Sample Type	: Sand + Quartz Stone

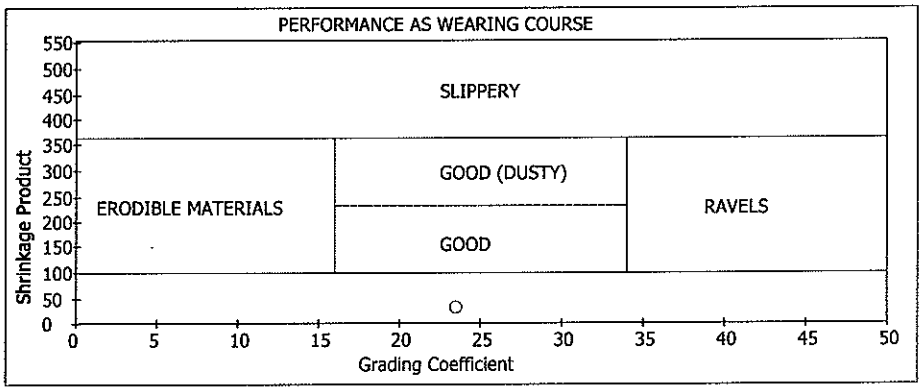
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	96
37.50	94
28.00	90
20.00	87
14.00	82
5.000	62
2.000	52
0.425	30
0.250	24
0.150	18
0.075	12
0.060	9.0
0.050	8.1
0.020	2.9
0.005	2.5
0.002	1.8

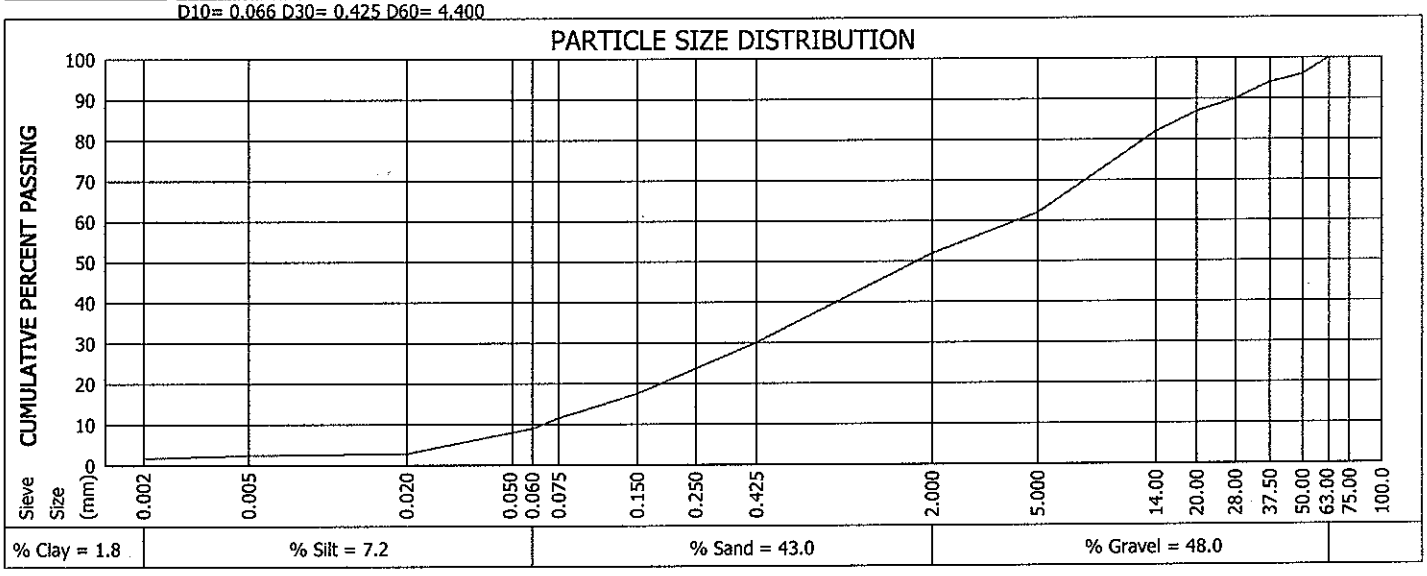
Soil Mortar	2.000 - 0.425	42
	0.425 - 0.250	12
	0.250 - 0.150	12
	0.150 - 0.075	11
	< 0.075	23
Effective Size		0.066
Uniformity Coefficient		66.7
Curvature Coefficient		0.6
Oversize Index		2.0
Shrinkage Product		30.0
Grading Coefficient		23.6
Grading Modulus		2.10
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	1.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.066 D30= 0.425 D60= 4.400









% Clay = 1.8	% Silt = 7.2	% Sand = 43.0	% Gravel = 48.0

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Manager

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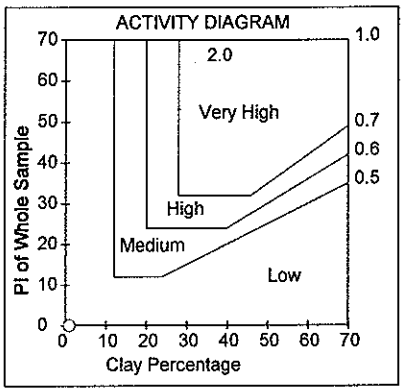
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

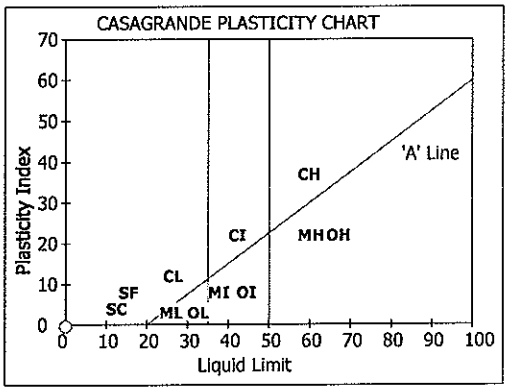
Sample No.	: U9814
Position	: TP 19; 0.0 - 0.1m
Layer Type	: Not Specified
Sample Colour	: Light Orange
Sample Type	: Sand + Quartz Stone

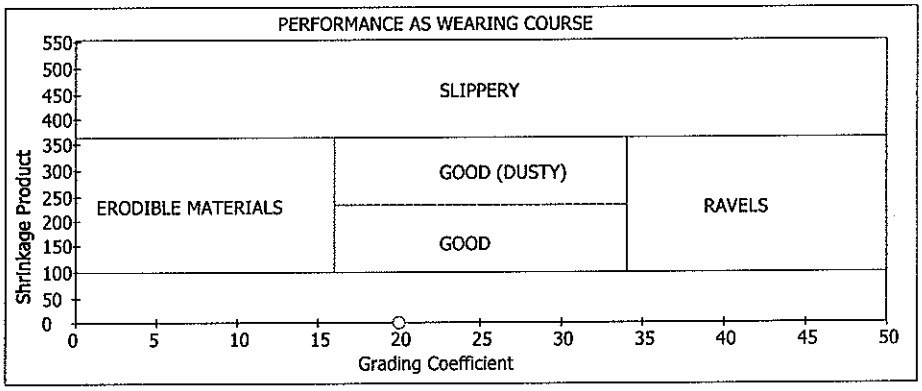
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	98
28.00	97
20.00	93
14.00	90
5.000	80
2.000	72
0.425	42
0.250	34
0.150	26
0.075	18
0.060	13
0.050	8.0
0.020	3.0
0.005	1.8
0.002	1.2

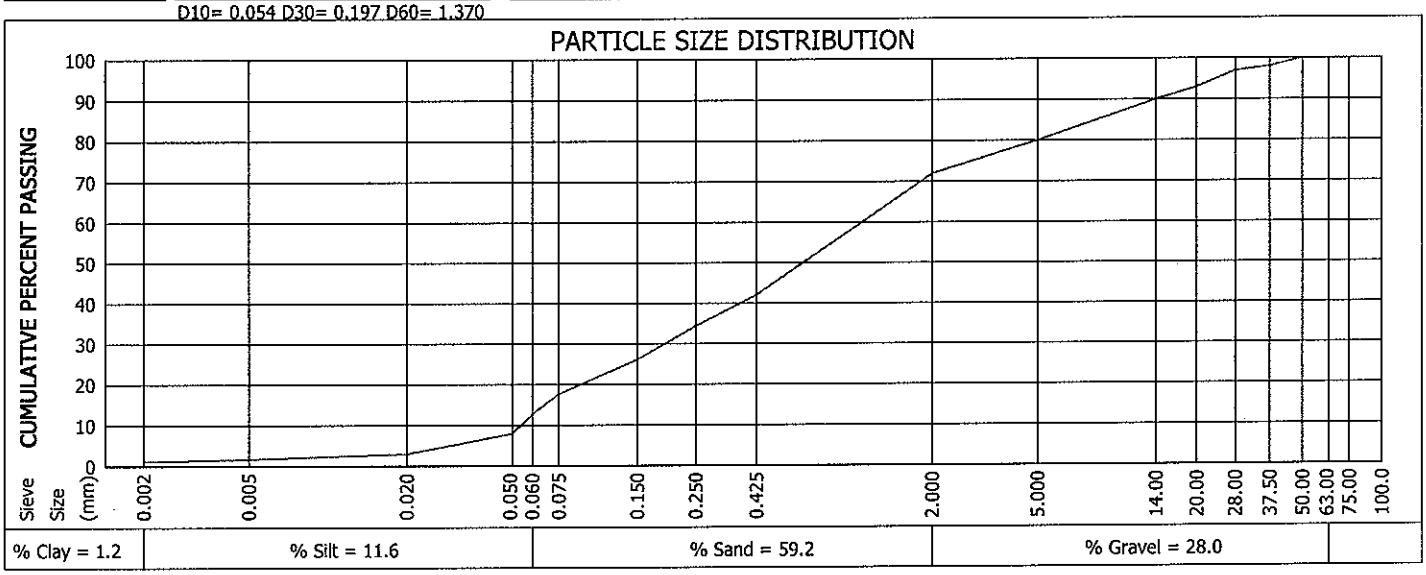
Soil Mortar	2.000 - 0.425	41
	0.425 - 0.250	11
	0.250 - 0.150	12
	0.150 - 0.075	11
	< 0.075	25
Effective Size		0.054
Uniformity Coefficient		25.4
Curvature Coefficient		0.5
Oversize Index		2.0
Shrinkage Product		0.0
Grading Coefficient		20.0
Grading Modulus		1.70
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.054 D30= 0.197 D60= 1.370









% Clay = 1.2	% Silt = 11.6	% Sand = 59.2	% Gravel = 28.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
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Manager

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Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Project : RDP Houses, Nababeep

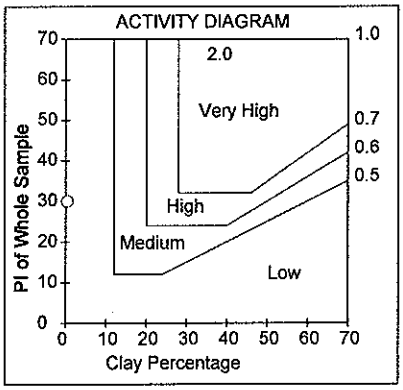
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

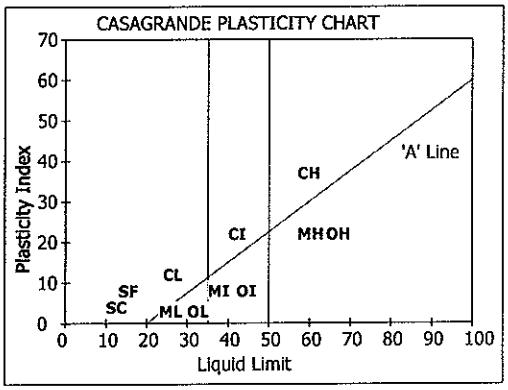
Sample No.	: U9816
Position	: TP 21; 0.0 - 0.7m
Layer Type	: Not Specified
Sample Colour	: Light Brown
Sample Type	: Gravel + Quartz Ston

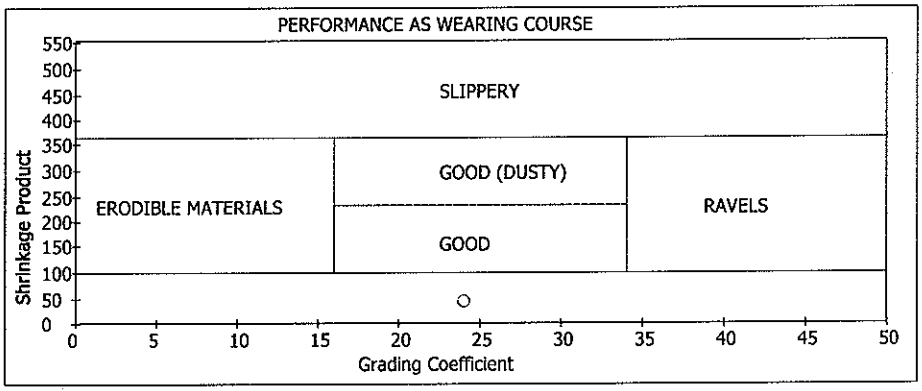
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	94
28.00	89
20.00	85
14.00	78
5.000	57
2.000	47
0.425	29
0.250	24
0.150	19
0.075	13
0.060	11
0.050	6.5
0.020	2.7
0.005	1.5
0.002	0.6

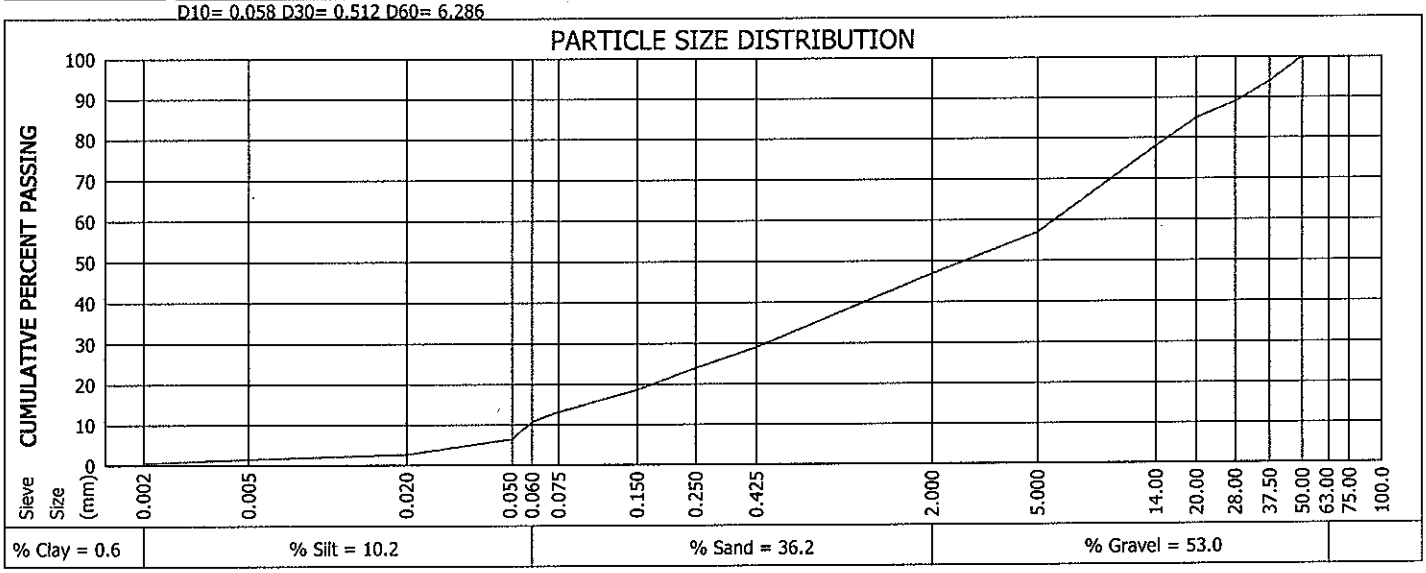
Soil Mortar	2.000 - 0.425	38
	0.425 - 0.250	11
	0.250 - 0.150	11
	0.150 - 0.075	12
	< 0.075	27
Effective Size		0.058
Uniformity Coefficient		108.4
Curvature Coefficient		0.7
Oversize Index		6.0
Shrinkage Product		43.5
Grading Coefficient		23.9
Grading Modulus		2.10
Atterberg Limits	Liquid Limit	16
	Plasticity Index	103
	Linear Shrinkage	1.5
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-6(0)

D10= 0.058 D30= 0.512 D60= 6.286









% Clay = 0.6	% Silt = 10.2	% Sand = 36.2	% Gravel = 53.0

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Project : RDP Houses, Nababeep

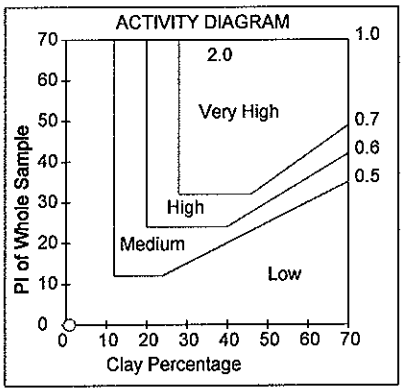
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

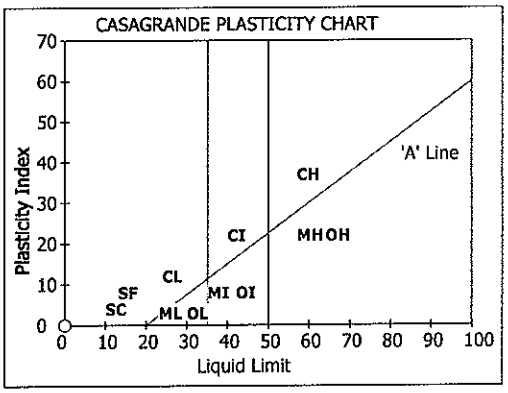
Sample No.	: U9817
Position	: TP 22; 0.0 - 0.4m
Layer Type	: Not Specified
Sample Colour	: Orange Brown Gravel
Sample Type	: Weathered Quartz Sto

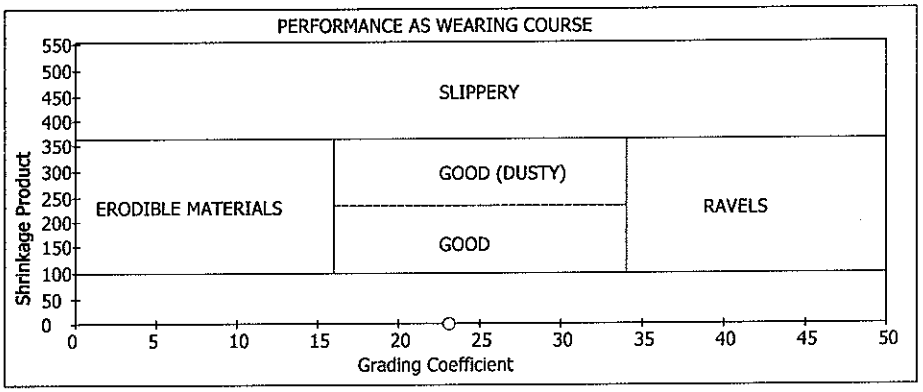
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	95
20.00	91
14.00	84
5.000	70
2.000	62
0.425	35
0.250	28
0.150	20
0.075	13
0.060	7.8
0.050	5.0
0.020	2.5
0.005	1.8
0.002	1.1

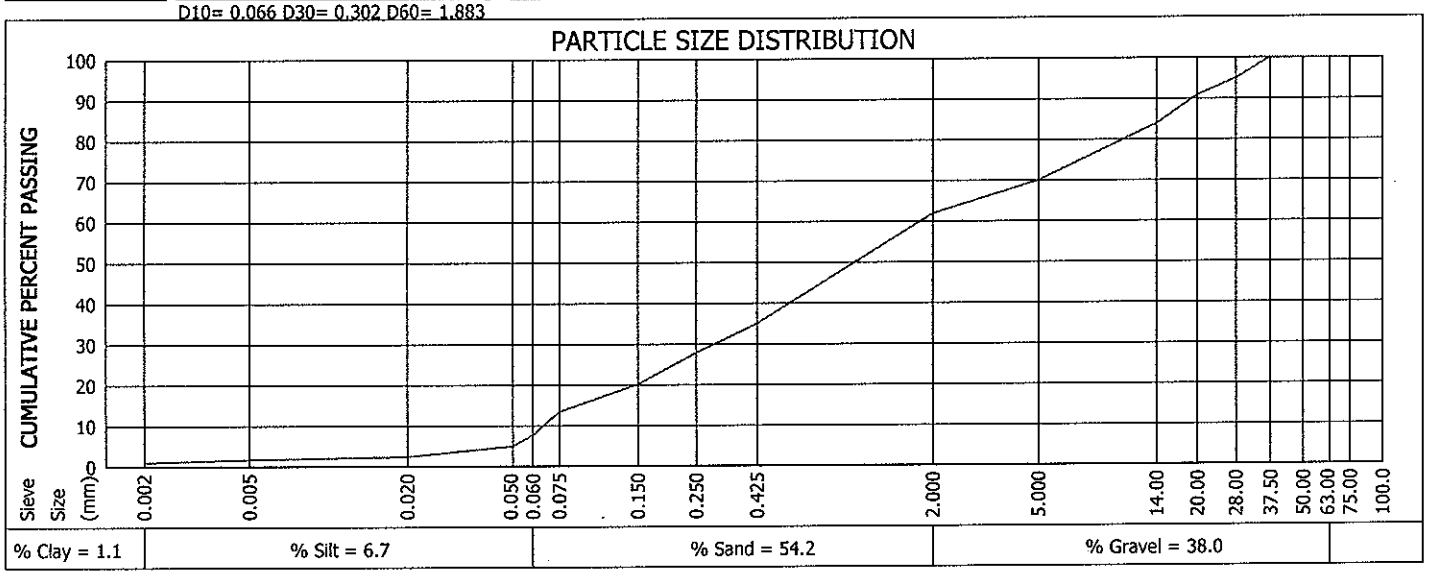
Soil Mortar	2.000 - 0.425	43
	0.425 - 0.250	12
	0.250 - 0.150	12
	0.150 - 0.075	12
	< 0.075	21
Effective Size		0.066
Uniformity Coefficient		28.5
Curvature Coefficient		0.7
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		23.1
Grading Modulus		1.90
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.066 D30= 0.302 D60= 1.883









% Clay = 1.1	% Silt = 6.7	% Sand = 54.2	% Gravel = 38.0

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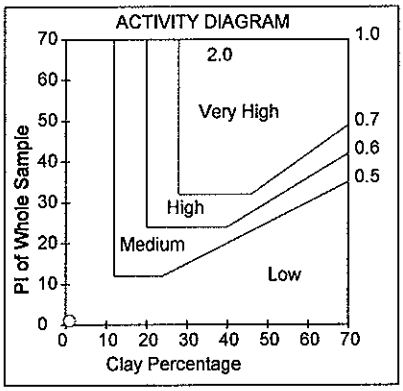
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

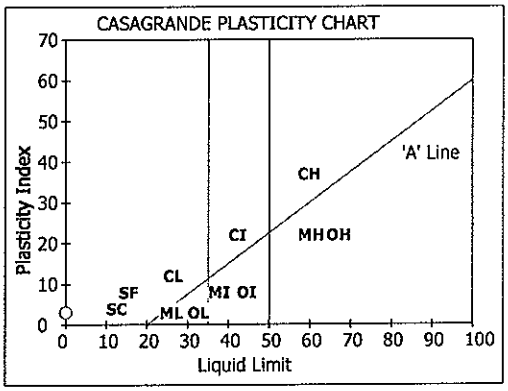
Sample No.	: U9819
Position	: TP 24; 0.0 - 0.5m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravel
Sample Type	: + Quartz Stone

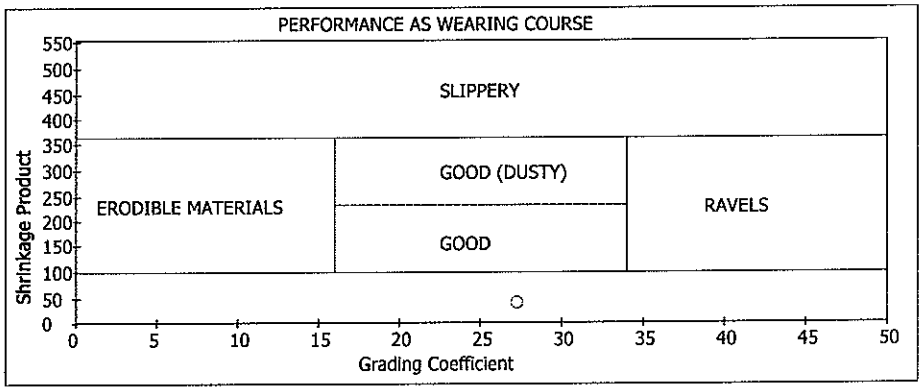
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	94
20.00	88
14.00	84
5.000	65
2.000	52
0.425	27
0.250	22
0.150	17
0.075	12
0.060	5.2
0.050	3.4
0.020	1.8
0.005	1.7
0.002	1.1

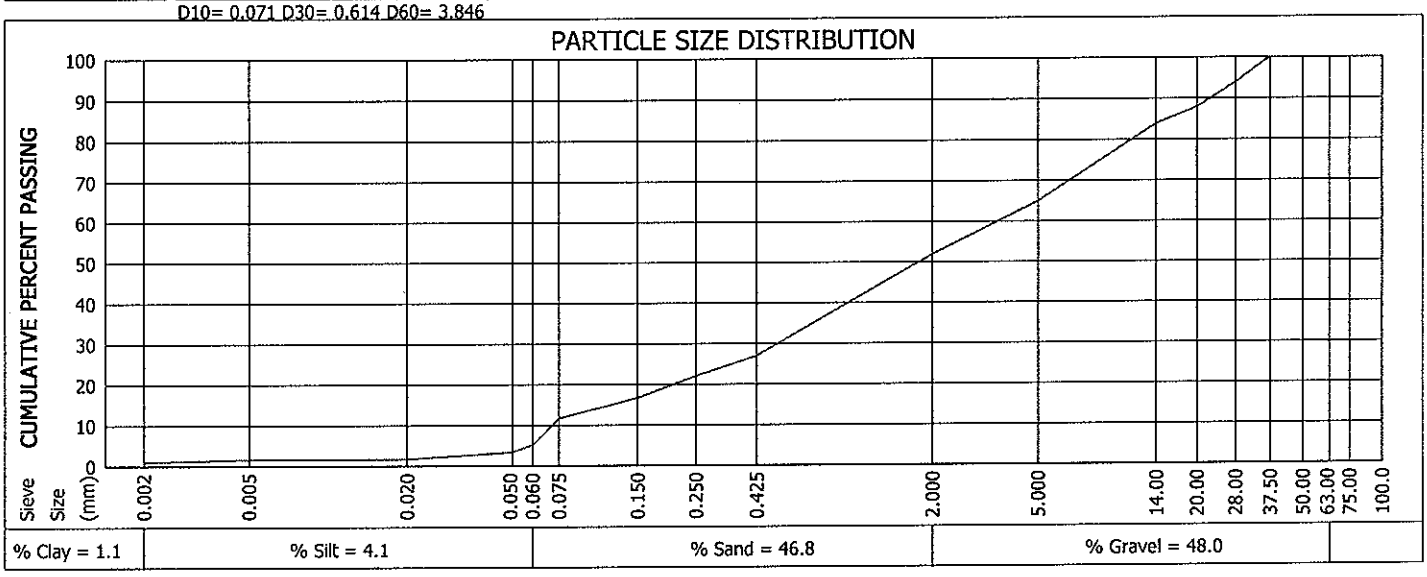
Soil Mortar	2.000 - 0.425	48
	0.425 - 0.250	10
	0.250 - 0.150	10
	0.150 - 0.075	9
	< 0.075	23
Effective Size		0.071
Uniformity Coefficient		54.2
Curvature Coefficient		1.4
Oversize Index		0.0
Shrinkage Product		40.5
Grading Coefficient		27.3
Grading Modulus		2.10
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	1.5
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.071 D30= 0.614 D60= 3.846









% Clay = 1.1	% Silt = 4.1	% Sand = 46.8	% Gravel = 48.0

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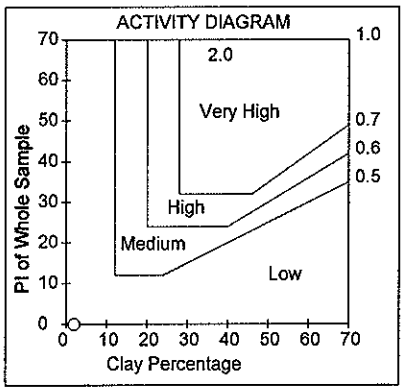
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

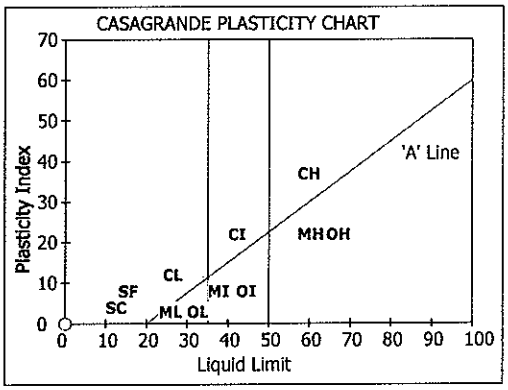
Sample No.	: U9820
Position	: TP 25; 0.0 - 0.7m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown
Sample Type	: Sand + Quartz Stone

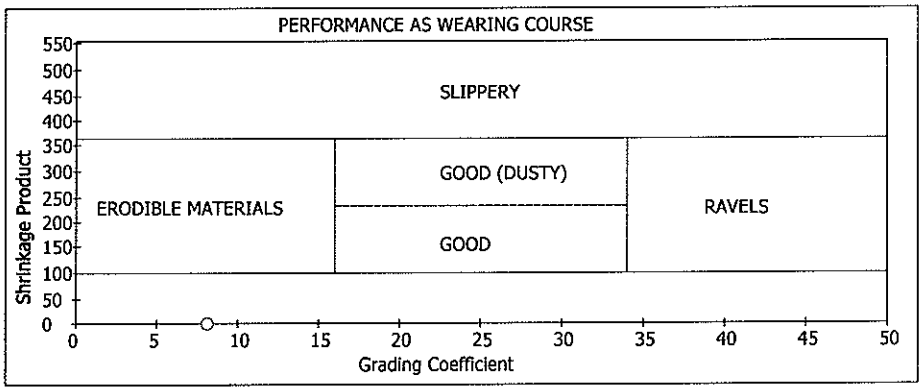
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	96
28.00	94
20.00	93
14.00	92
5.000	90
2.000	85
0.425	55
0.250	46
0.150	34
0.075	21
0.060	9.5
0.050	8.2
0.020	3.8
0.005	2.7
0.002	1.9

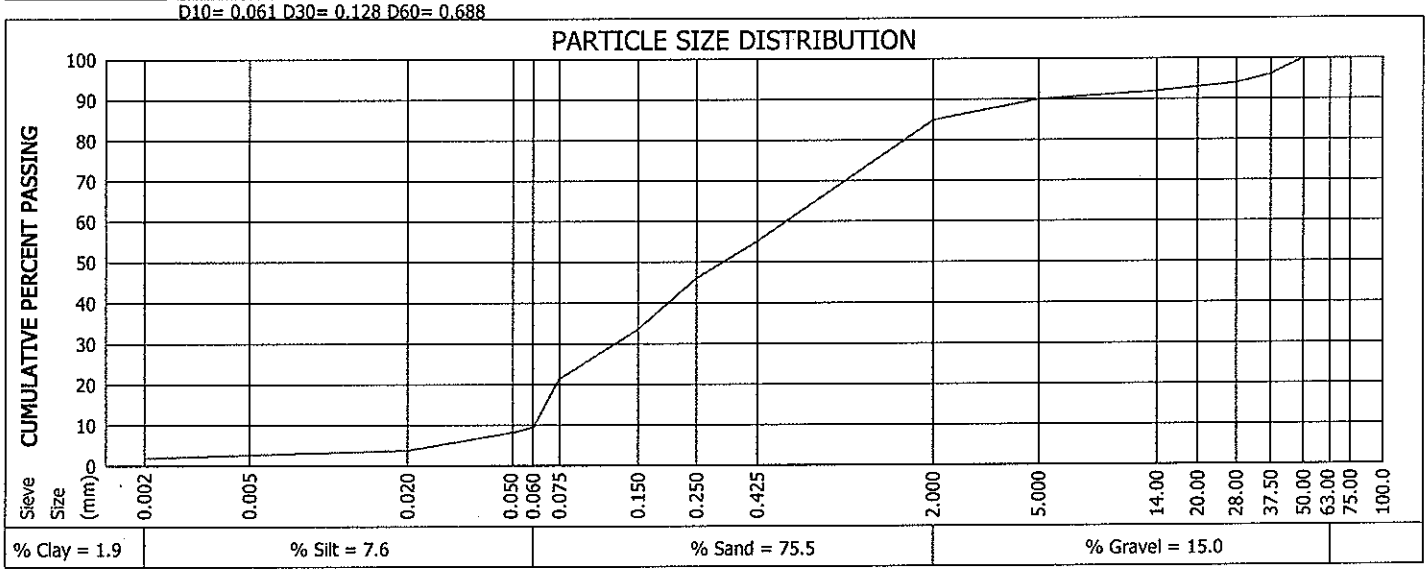
Soil Mortar	2.000 - 0.425	36
	0.425 - 0.250	10
	0.250 - 0.150	15
	0.150 - 0.075	15
	< 0.075	25
Effective Size		0.061
Uniformity Coefficient		11.3
Curvature Coefficient		0.4
Oversize Index		4.0
Shrinkage Product		0.0
Grading Coefficient		8.1
Grading Modulus		1.40
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-4(0)

D10= 0.061 D30= 0.128 D60= 0.688









% Clay = 1.9	% Silt = 7.6	% Sand = 75.5	% Gravel = 15.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
The test results reported relate to the samples tested.
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Report compiled by : Mareze Lategan

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Job Request No.: RU3988
Iceberg Trading
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Louis Trichardt
0920

Attention : Aubrey Nonyana

Date Reported : 2021-06-17

Project : RDP Houses, Nababeep

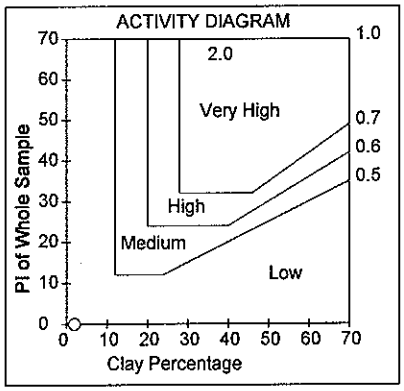
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

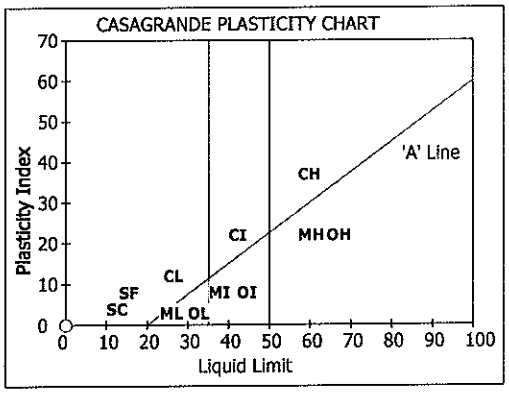
Sample No.	: U9822
Position	: TP 27; 0.0 - 0.6m
Layer Type	: Not Specified
Sample Colour	: Orange Brown
Sample Type	: Sand + Quartz Stone

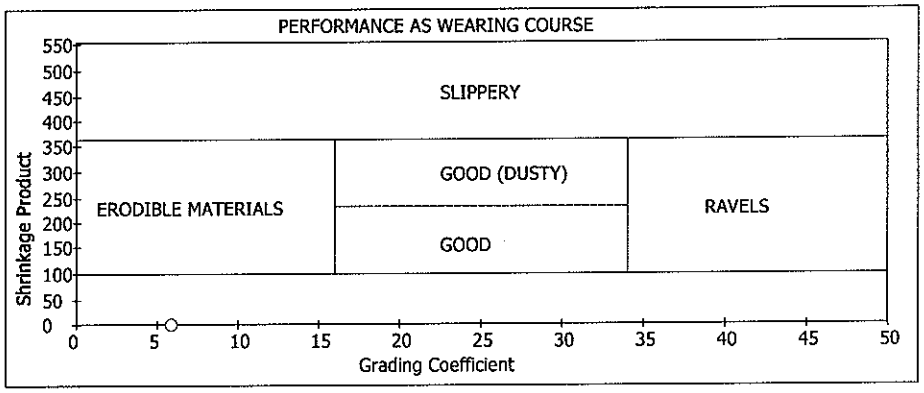
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	100
14.00	100
5.000	98
2.000	94
0.425	60
0.250	49
0.150	37
0.075	23
0.060	8.0
0.050	5.2
0.020	4.4
0.005	3.0
0.002	1.9

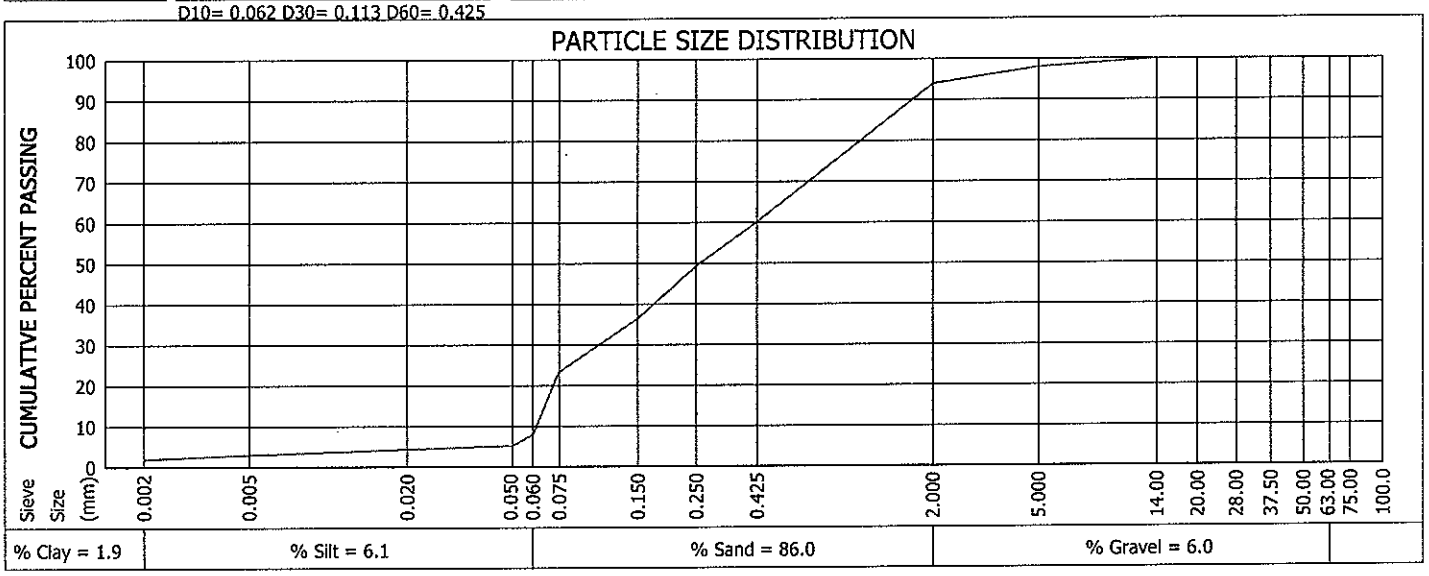
Soil Mortar	2.000 - 0.425	36
	0.425 - 0.250	12
	0.250 - 0.150	14
	0.150 - 0.075	14
	< 0.075	25
Effective Size		0.062
Uniformity Coefficient		6.9
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		5.9
Grading Modulus		1.20
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-4(0)

D10= 0.062 D30= 0.113 D60= 0.425









% Clay = 1.9	% Silt = 6.1	% Sand = 86.0	% Gravel = 6.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Attention : Aubrey Nonyana

Date Reported : 2021-06-17

Project : RDP Houses, Nababeep

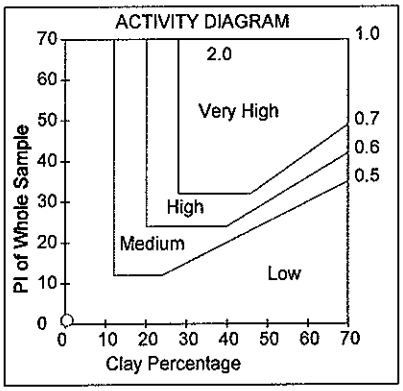
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

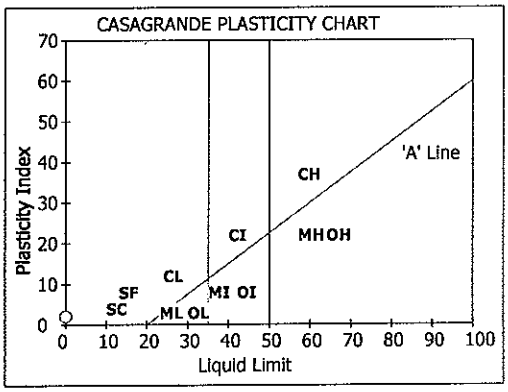
Sample No.	: U9825
Position	: TP 31; 0.0 - 0.3m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Gravel
Sample Type	: + Weathered Granite

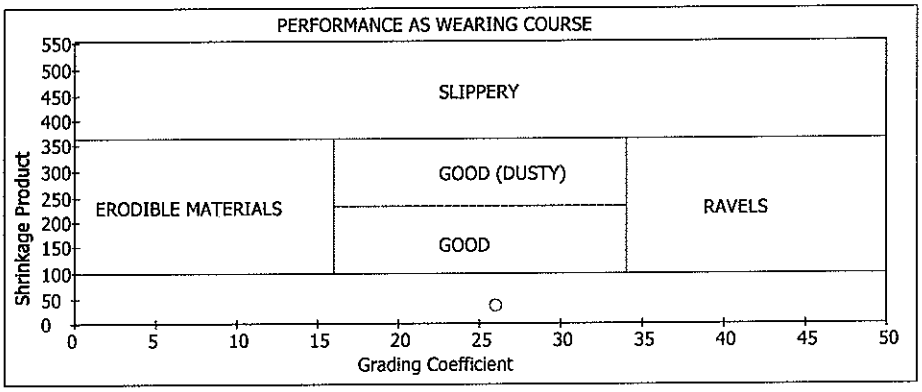
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	96
28.00	90
20.00	86
14.00	82
5.000	62
2.000	48
0.425	24
0.250	19
0.150	13
0.075	7.5
0.060	4.8
0.050	4.8
0.020	3.5
0.005	0.6
0.002	0.6

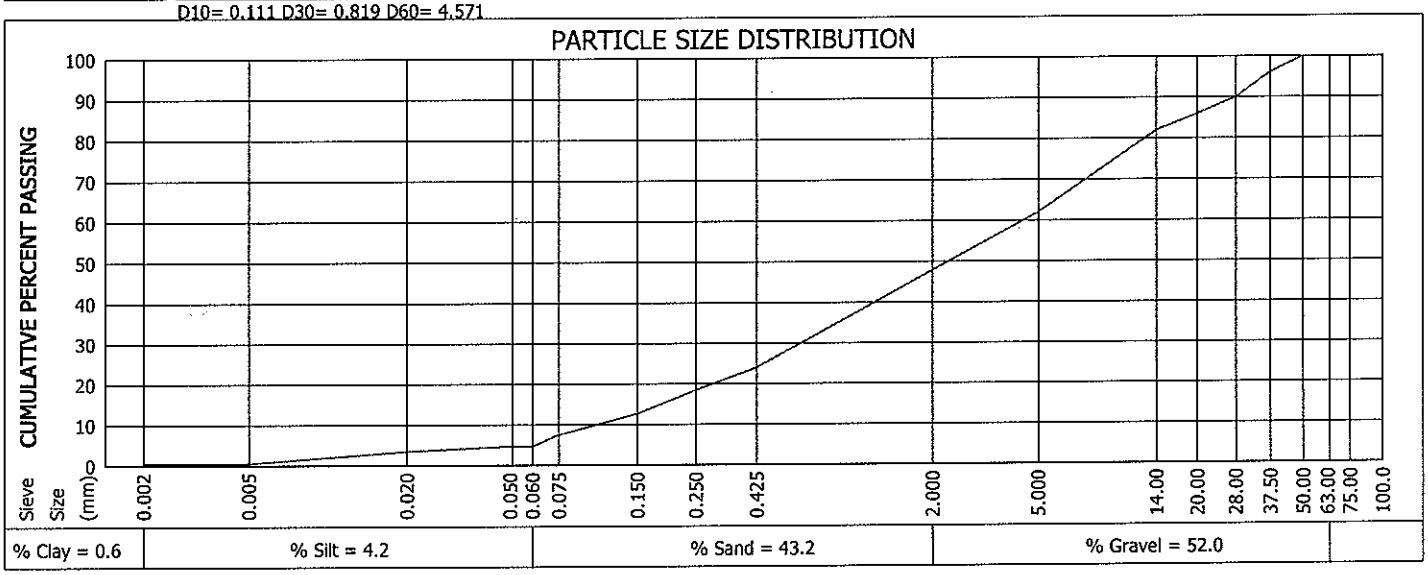
Soil Mortar	2.000 - 0.425	50
	0.425 - 0.250	11
	0.250 - 0.150	12
	0.150 - 0.075	10
	< 0.075	17
Effective Size		0.111
Uniformity Coefficient		41.2
Curvature Coefficient		1.3
Oversize Index		4.0
Shrinkage Product		36.0
Grading Coefficient		26.0
Grading Modulus		2.20
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	1.5
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-a(0)

D10= 0.111 D30= 0.819 D60= 4.571









% Clay = 0.6	% Silt = 4.2	% Sand = 43.2	% Gravel = 52.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Iceberg Trading
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Louis Trichardt
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Attention : Aubrey Nonyana

Date Reported : 2021-06-17

Project : RDP Houses, Nababeep

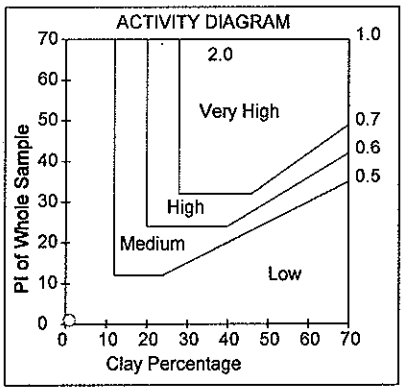
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

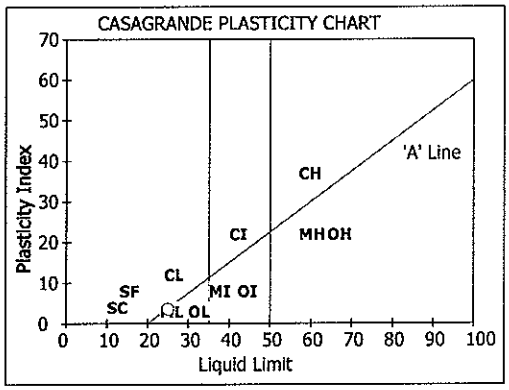
Sample No.	: U9827
Position	: TP 33; 0.4 - 0.7m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Gravel
Sample Type	: + Weathered Quartz S

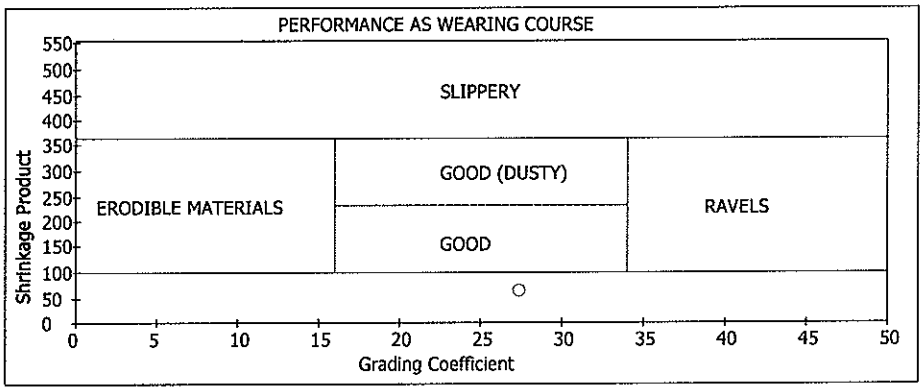
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	98
20.00	95
14.00	91
5.000	76
2.000	62
0.425	33
0.250	26
0.150	18
0.075	11
0.060	4.5
0.050	3.5
0.020	1.9
0.005	1.6
0.002	1.0

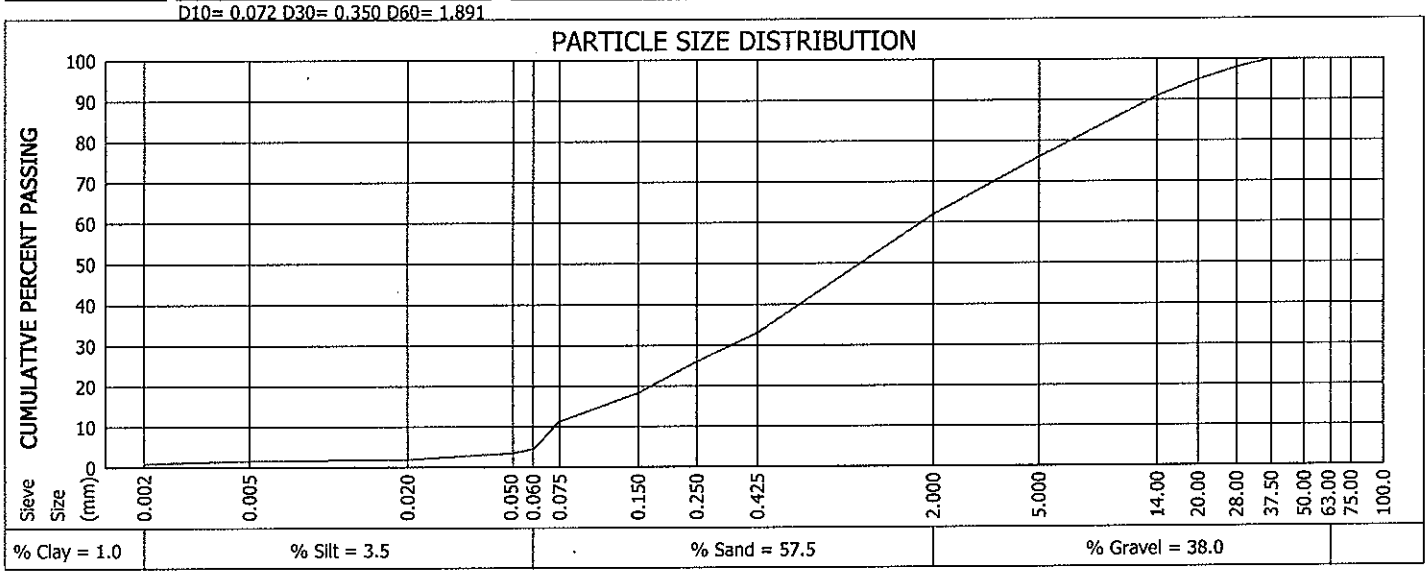
Soil Mortar	2.000 - 0.425	47
	0.425 - 0.250	11
	0.250 - 0.150	12
	0.150 - 0.075	12
	< 0.075	18
Effective Size		0.072
Uniformity Coefficient		26.3
Curvature Coefficient		0.9
Oversize Index		0.0
Shrinkage Product		66.0
Grading Coefficient		27.4
Grading Modulus		1.90
Atterberg Limits	Liquid Limit	25
	Plasticity Index	3.0
	Linear Shrinkage	2.0
	PI < 0.075	
Unified Soil Classification		SW-SM
US Highway Classification		A-1-b(0)

D10= 0.072 D30= 0.350 D60= 1.891









% Clay = 1.0	% Silt = 3.5	% Sand = 57.5	% Gravel = 38.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Report compiled by : Mareze Lategan

Roelof Lategan
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Prog.ver 10.7 (2019/11/07)

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Job Request No.: RU3988

Date Reported : 2021-06-17

Iceburg Trading 751 CC
P.O Box 1364
Louis Trichardt
0920

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9800			
HOLE NO./ Km / CHAINAGE		TP01			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.8m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		OrangeBrownGravel+			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm	100			
	63.0 mm	98			
	50.0 mm	94			
	37.5 mm	91			
	28.0 mm	88			
	20.0 mm	83			
	14.0 mm	81			
	5.0 mm	67			
	2.0 mm	51			
	0.425 mm	26			
	0.075 mm	10			
GM %		2.1			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	50			
COARSE FINE SAND	0.425 - 0.250	10			
MEDIUM FINE SAND	0.250 - 0.150	11			
FINE FINE SAND	0.150 - 0.075	9			
SILT CLAY	0.075	20			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	18			
	PLASTICITY INDEX	3.8			
	LINEAR SHRINKAGE	2.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G6			
	TRH 14	G7			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	4.9			
	MDD (kg/m³)	2118			
	COMP MC %	4.4			
SWELL % @	MOD | NRB | PRO	0.01 | 0.04 | 0.06			
C.B.R. SANS GR40	100 %	107			
	98 %	70			
	97 %	57			
	95 %	37			
	93 %	24			
	90 %	13			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Date Reported : 2021-06-17

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

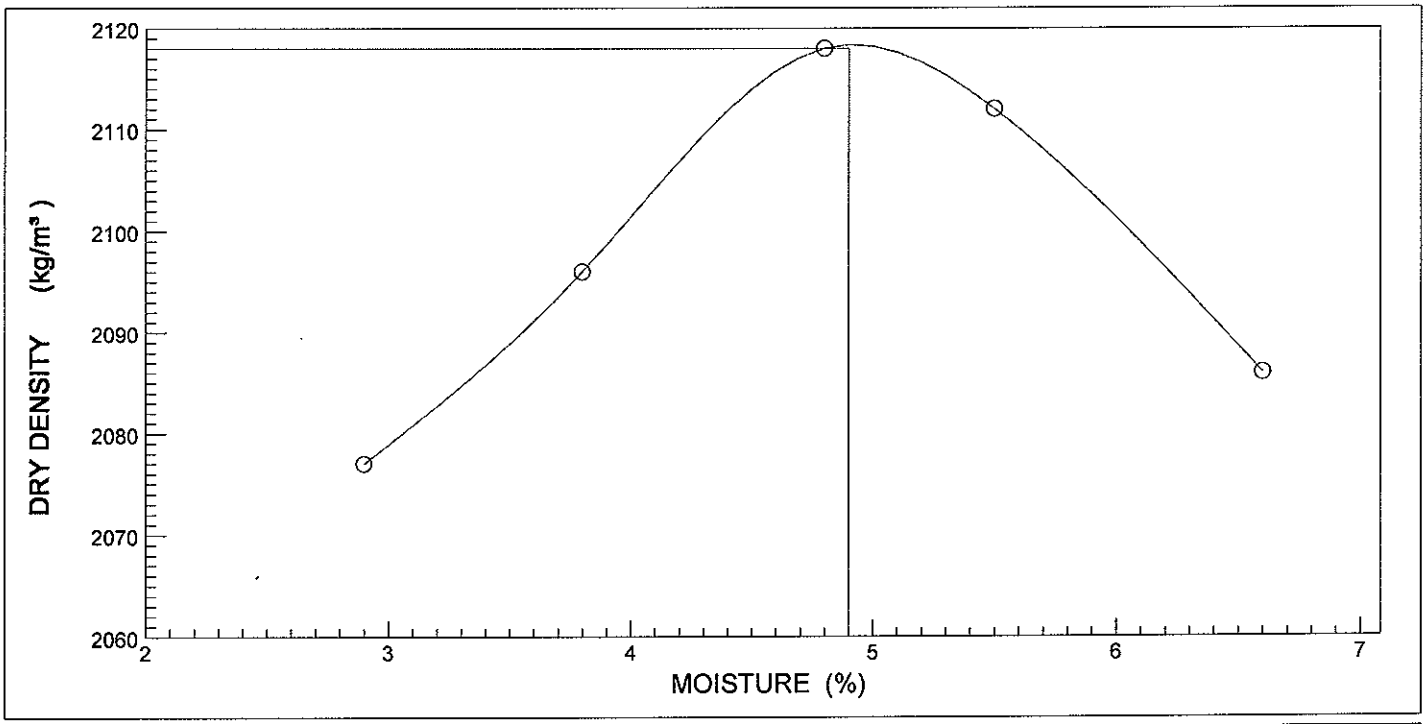
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9800
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	89kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.8m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 1
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Orange Brown Gravel +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2077	2096	2118	2112	2086			
MOISTURE (%)	2.9	3.8	4.8	5.5	6.6			

MAXIMUM DRY DENSITY (kg/m³) : 2118	OPTIMUM MOISTURE CONTENT (%) : 4.9



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9802			
HOLE NO./ Km / CHAINAGE		TP04			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.7m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightBrownSand+			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm				
	37.5 mm				
	28.0 mm	100			
	20.0 mm	99			
	14.0 mm	98			
	5.0 mm	95			
	2.0 mm	89			
	0.425 mm	48			
	0.075 mm	14			
GM %		1.5			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	46			
COARSE FINE SAND	0.425 - 0.250	13			
MEDIUM FINE SAND	0.250 - 0.150	13			
FINE FINE SAND	0.150 - 0.075	11			
SILT CLAY	0.075	16			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	0.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G6			
	TRH 14	G6			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.4			
	MDD (kg/m³)	2025			
	COMP MC %	5.7			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	88			
	98 %	62			
	97 %	52			
	95 %	37			
	93 %	26			
	90 %	15			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

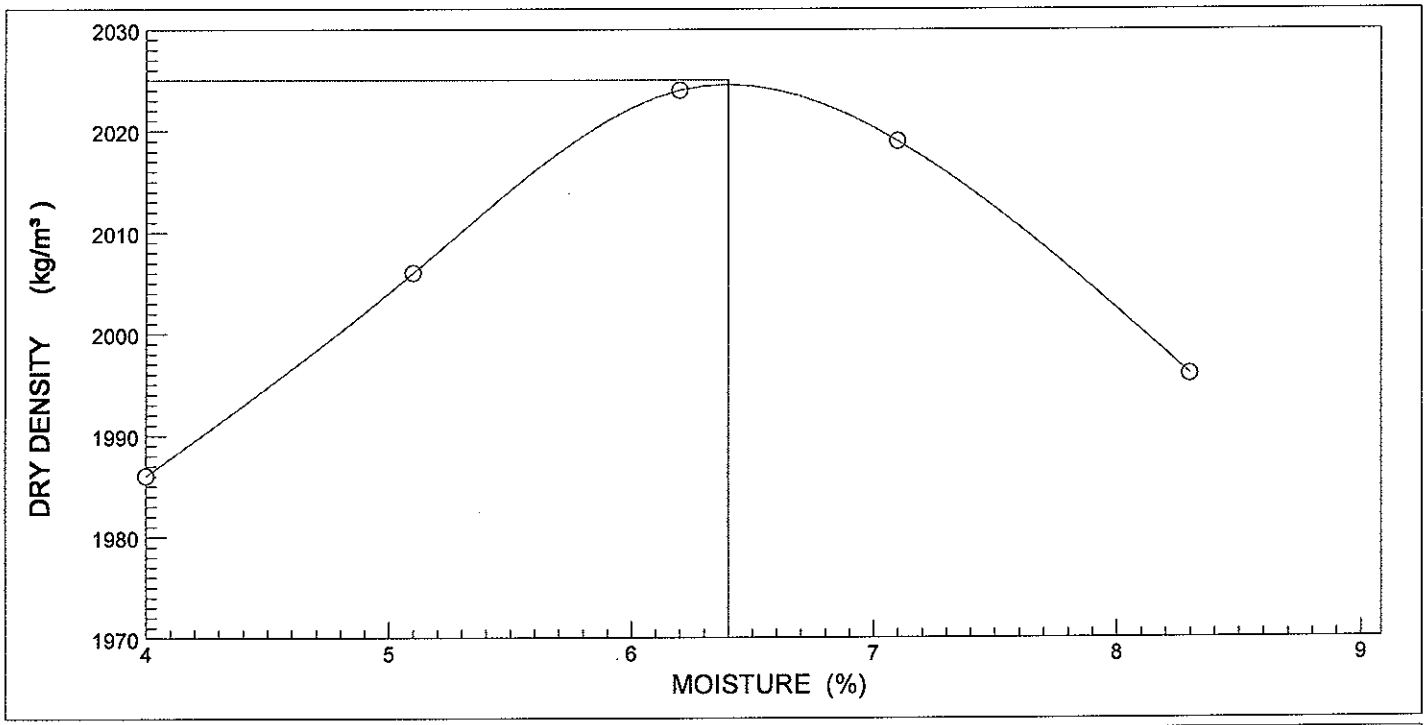
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9802
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	81kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.7m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 4
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Brown Sand +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	1986	2006	2024	2019	1996			
MOISTURE (%)	4.0	5.1	6.2	7.1	8.3			

MAXIMUM DRY DENSITY (kg/m³) : 2025	OPTIMUM MOISTURE CONTENT (%) : 6.4



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
The test results reported relate to the samples tested.
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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Job Request No.: RU3988

Date Reported : 2021-06-17

Iceburg Trading 751 CC
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Louis Trichardt
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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9804			
HOLE NO./ Km / CHAINAGE		TP06			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.4m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightOrangeBrownGrav			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm	100			
	63.0 mm	97			
	50.0 mm	94			
	37.5 mm	92			
	28.0 mm	88			
	20.0 mm	83			
	14.0 mm	78			
	5.0 mm	59			
	2.0 mm	48			
	0.425 mm	26			
	0.075 mm	9			
GM %		2.2			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	45			
COARSE FINE SAND	0.425 - 0.250	13			
MEDIUM FINE SAND	0.250 - 0.150	12			
FINE FINE SAND	0.150 - 0.075	11			
SILT CLAY	0.075	19			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	1.0			
CLASSIFICATION	H.R.B.	A-1-a(0)			
	COLTO	G5			
	TRH 14	G5			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	4.4			
	MDD (kg/m³)	2159			
	COMP MC %	4.6			
SWELL % @	MOD | NRB | PRO	0.00 | 0.01 | 0.02			
C.B.R. SANS GR40	100 %	113			
	98 %	83			
	97 %	71			
	95 %	52			
	93 %	38			
	90 %	24			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Roelof Lategan
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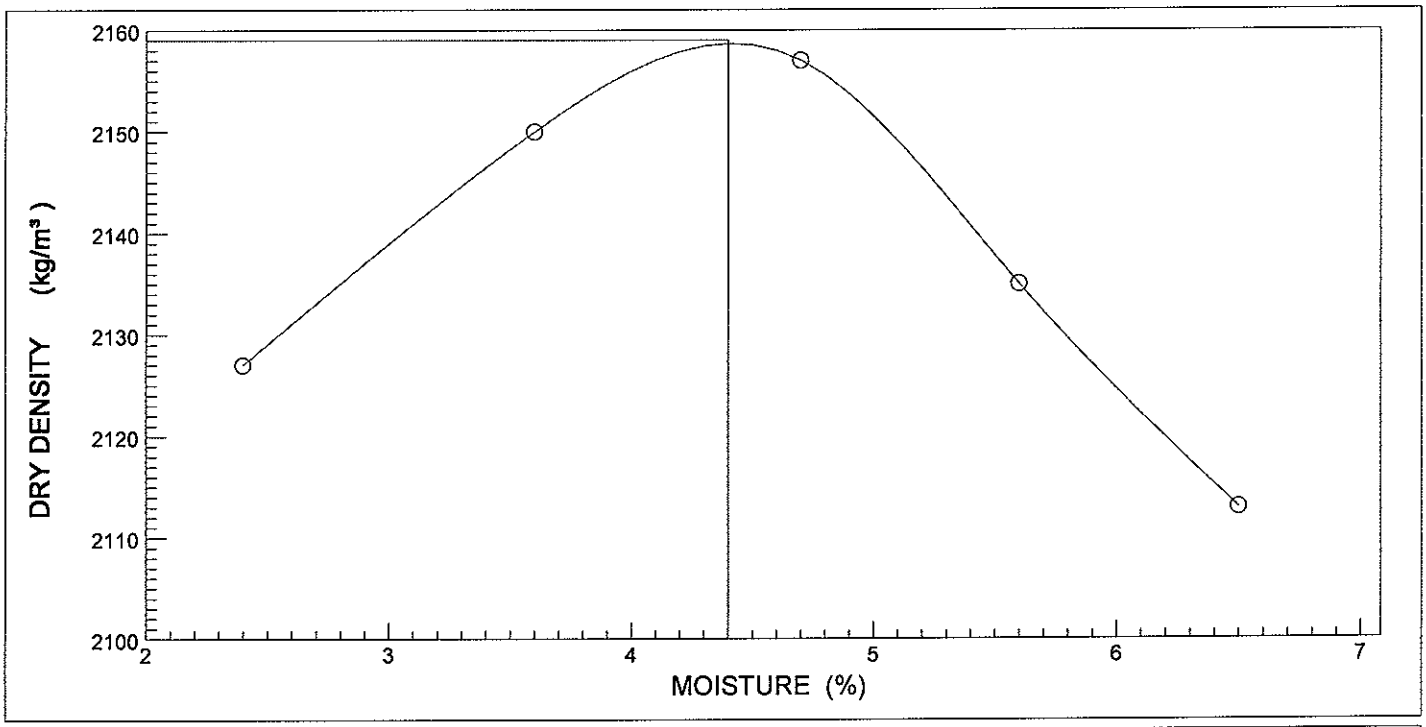
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9804
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	88kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.4m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 6
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Orange Brown Gravel +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2127	2150	2157	2135	2113			
MOISTURE (%)	2.4	3.6	4.7	5.6	6.5			

MAXIMUM DRY DENSITY (kg/m³) : 2159	OPTIMUM MOISTURE CONTENT (%) : 4.4



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9806			
HOLE NO./ Km / CHAINAGE		TP08			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.6m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		DarkBrownGravelSand+			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm	100			
	75.0 mm	95			
	63.0 mm	93			
	50.0 mm	87			
	37.5 mm	81			
	28.0 mm	77			
	20.0 mm	73			
	14.0 mm	70			
	5.0 mm	61			
	2.0 mm	52			
	0.425 mm	30			
	0.075 mm	13			
GM %		2.0			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	42			
COARSE FINE SAND	0.425 - 0.250	10			
MEDIUM FINE SAND	0.250 - 0.150	12			
FINE FINE SAND	0.150 - 0.075	11			
SILT CLAY	0.075	25			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	SP			
	LINEAR SHRINKAGE	1.5			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G6			
	TRH 14	G7			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	7.0			
	MDD (kg/m³)	2148			
	COMP MC %	6.5			
SWELL % @	MOD | NRB | PRO	0.00 | 0.02 | 0.04			
C.B.R. SANS GR40	100 %	100			
	98 %	65			
	97 %	52			
	95 %	34			
	93 %	22			
	90 %	11			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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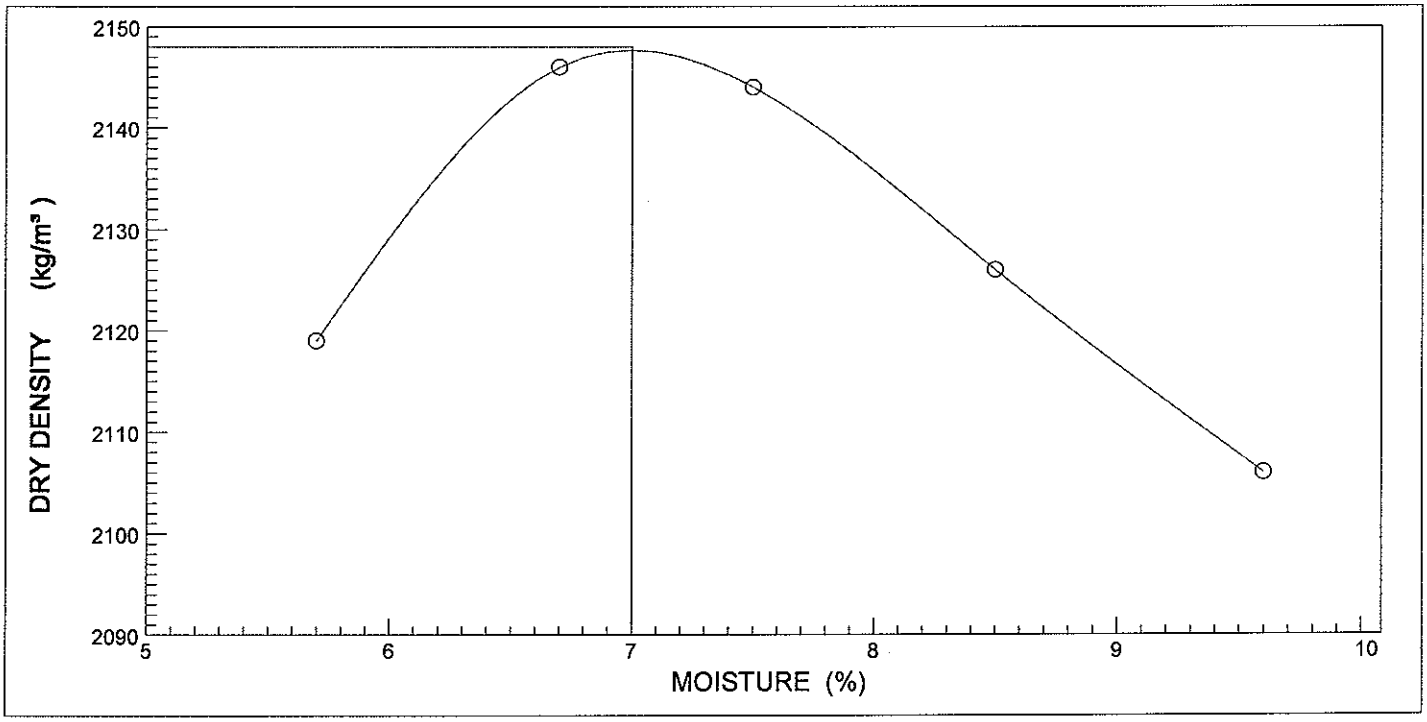
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9806
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	86kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.6m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 8
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Dark Brown Gravel Sand +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2119	2146	2144	2126	2106			
MOISTURE (%)	5.7	6.7	7.5	8.5	9.6			

MAXIMUM DRY DENSITY (kg/m³) : 2148	OPTIMUM MOISTURE CONTENT (%) : 7.0



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9808			
HOLE NO./ Km / CHAINAGE		TP10			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.8m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightOrangeBrownGrav			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm	100			
	37.5 mm	99			
	28.0 mm	98			
	20.0 mm	97			
	14.0 mm	96			
	5.0 mm	87			
	2.0 mm	68			
	0.425 mm	35			
	0.075 mm	14			
GM %		1.8			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	48			
COARSE FINE SAND	0.425 - 0.250	11			
MEDIUM FINE SAND	0.250 - 0.150	11			
FINE FINE SAND	0.150 - 0.075	10			
SILT CLAY	0.075	21			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	20			
	PLASTICITY INDEX	6			
	LINEAR SHRINKAGE	3.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G6			
	TRH 14	G7			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.3			
	MDD (kg/m³)	2101			
	COMP MC %	6.3			
SWELL % @	MOD | NRB | PRO	0.01 | 0.04 | 0.07			
C.B.R. SANS GR40	100 %	70			
	98 %	50			
	97 %	43			
	95 %	31			
	93 %	22			
	90 %	13			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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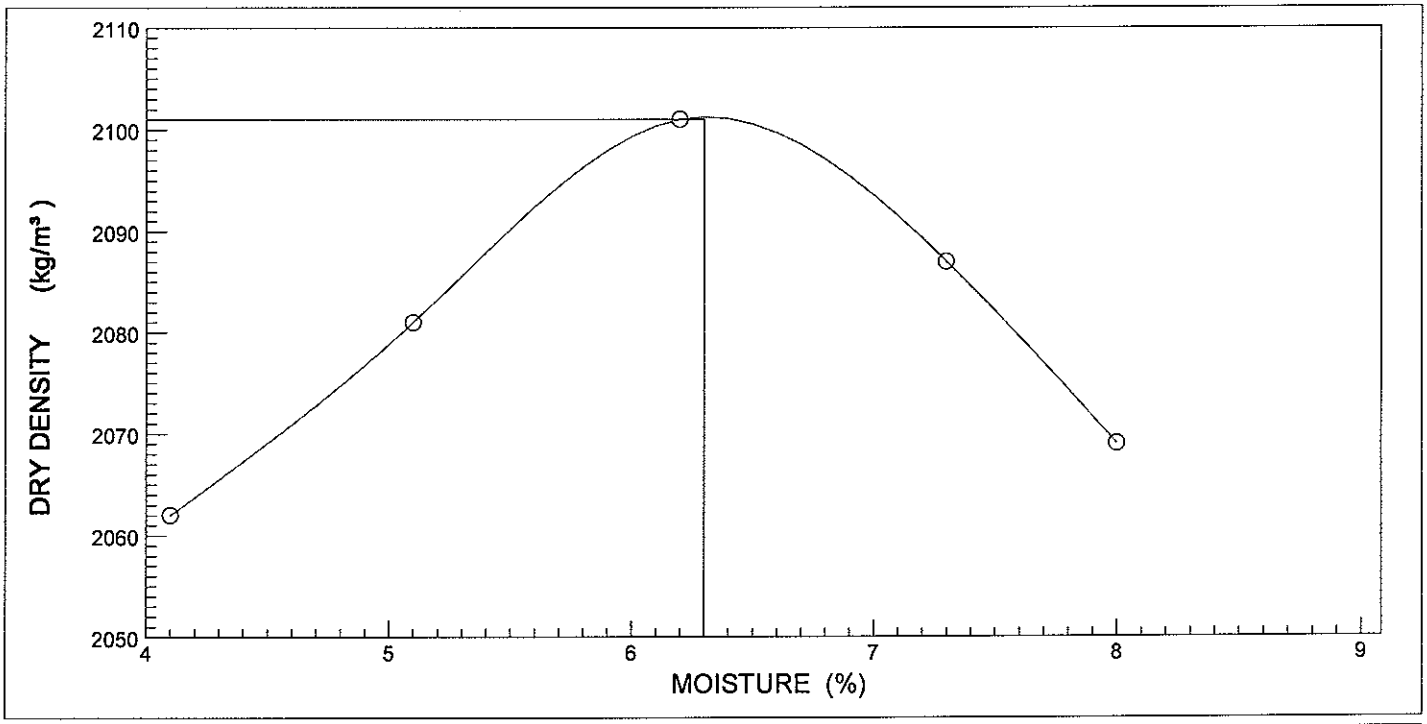
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9808
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	91kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.8m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 10
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Orange Brown Gravel +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2062	2081	2101	2087	2069			
MOISTURE (%)	4.1	5.1	6.2	7.3	8.0			

MAXIMUM DRY DENSITY (kg/m³) : 2101	OPTIMUM MOISTURE CONTENT (%) : 6.3



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9811			
HOLE NO./ Km / CHAINAGE		TP16			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.3m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		OrangeBrownGravel+			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm	100			
	63.0 mm	96			
	50.0 mm	93			
	37.5 mm	87			
	28.0 mm	80			
	20.0 mm	75			
	14.0 mm	71			
	5.0 mm	61			
	2.0 mm	55			
	0.425 mm	32			
	0.075 mm	13			
GM %		2.0			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	42			
COARSE FINE SAND	0.425 - 0.250	13			
MEDIUM FINE SAND	0.250 - 0.150	12			
FINE FINE SAND	0.150 - 0.075	10			
SILT CLAY	0.075	24			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	18			
	PLASTICITY INDEX	3.8			
	LINEAR SHRINKAGE	2.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G6			
	TRH 14	G7			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.2			
	MDD (kg/m³)	2155			
	COMP MC %	4.5			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	121			
	98 %	67			
	97 %	49			
	95 %	27			
	93 %	15			
	90 %	6			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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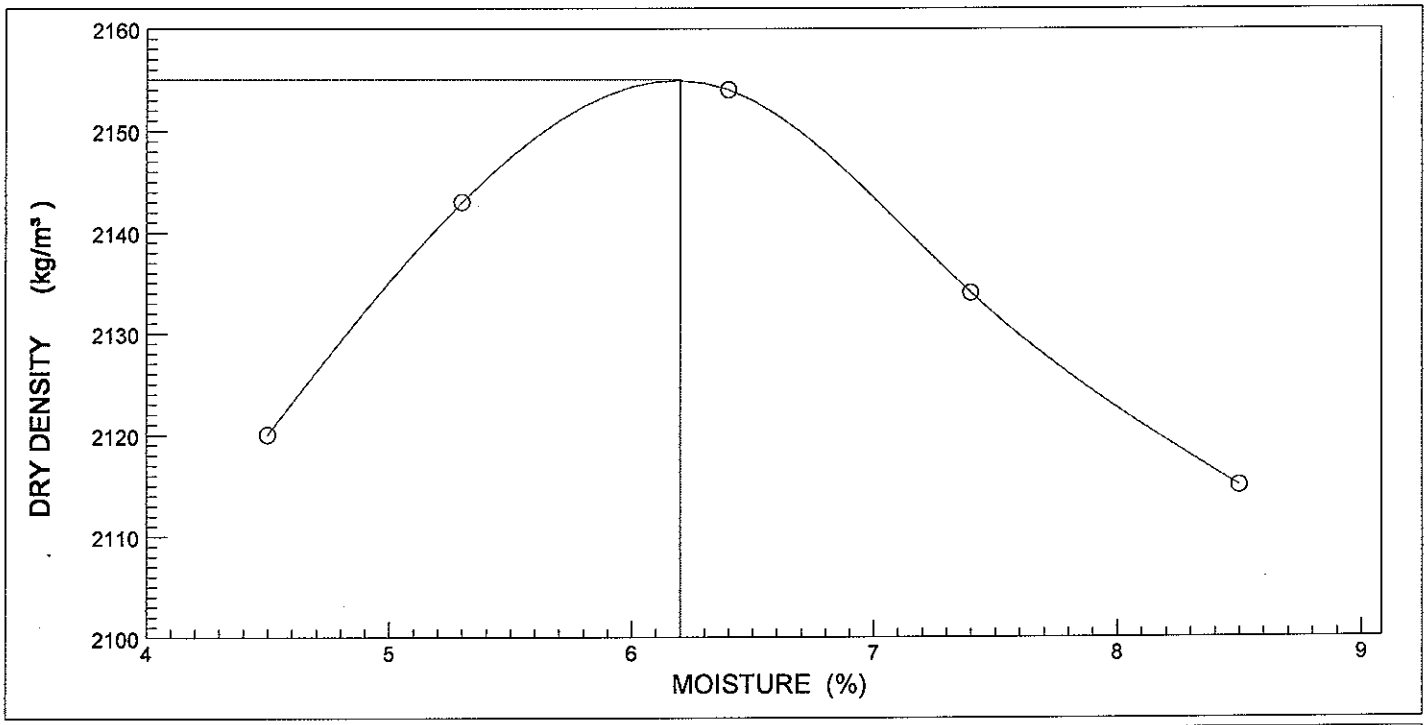
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9811
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	98kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.3m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 16
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Orange Brown Gravel +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2120	2143	2154	2134	2115			
MOISTURE (%)	4.5	5.3	6.4	7.4	8.5			

MAXIMUM DRY DENSITY (kg/m³) : 2155	OPTIMUM MOISTURE CONTENT (%) : 6.2



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9815			
HOLE NO./ Km / CHAINAGE		TP20			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.4m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		OrangeBrownGravel+			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm	100			
	37.5 mm	98			
	28.0 mm	92			
	20.0 mm	90			
	14.0 mm	87			
	5.0 mm	79			
	2.0 mm	73			
	0.425 mm	48			
	0.075 mm	19			
GM %		1.6			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	35			
COARSE FINE SAND	0.425 - 0.250	15			
MEDIUM FINE SAND	0.250 - 0.150	13			
FINE FINE SAND	0.150 - 0.075	12			
SILT CLAY	0.075	26			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	0.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G8			
	TRH 14	G8			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.3			
	MDD (kg/m³)	2182			
	COMP MC %	6.1			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	19			
	98 %	17			
	97 %	16			
	95 %	15			
	93 %	13			
	90 %	12			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Report compiled by : Mareze Lategan

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Job Request No.: RU3988

Date Reported : 2021-06-17

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

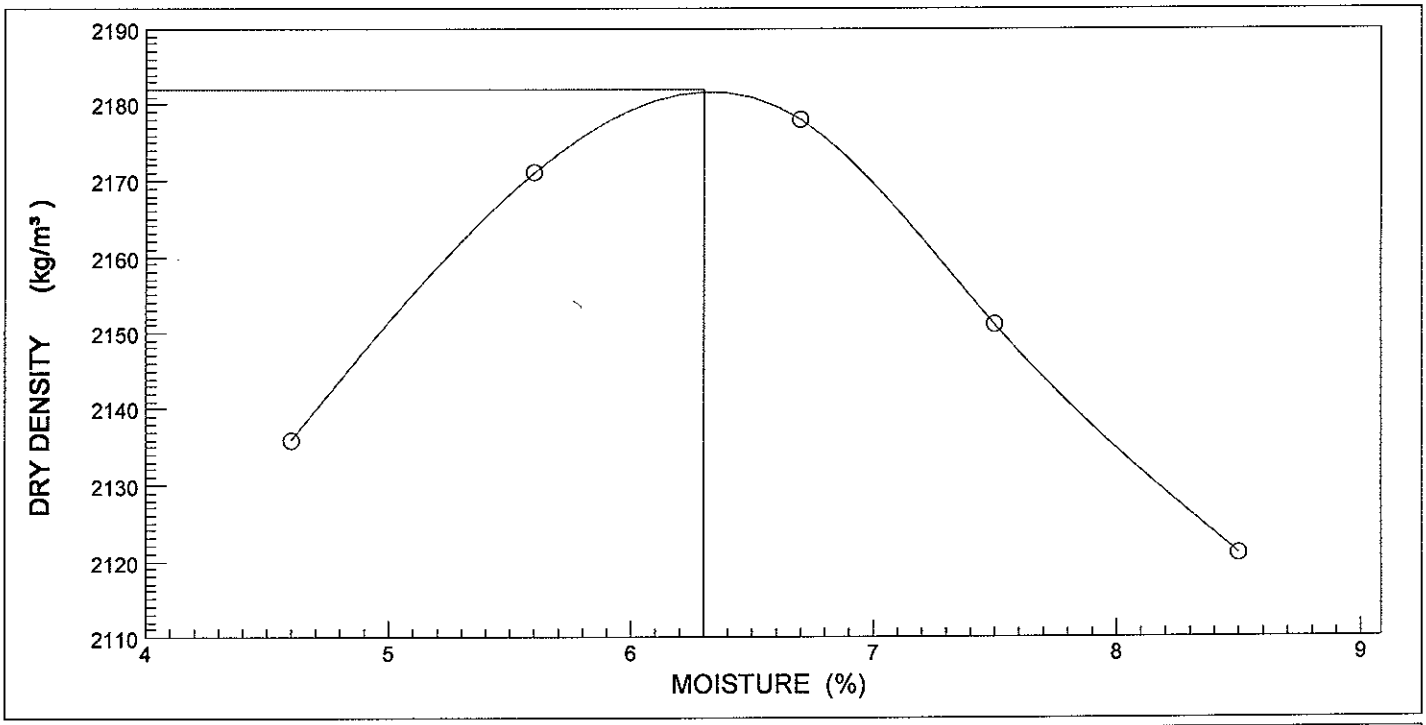
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9815
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	86kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.4m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 20
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Orange Brown Gravel +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2136	2171	2178	2151	2121			
MOISTURE (%)	4.6	5.6	6.7	7.5	8.5			

MAXIMUM DRY DENSITY (kg/m³) : 2182	OPTIMUM MOISTURE CONTENT (%) : 6.3



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Date Reported : 2021-06-22

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9818			
HOLE NO./ Km / CHAINAGE		TP23			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.8m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Light Brown Gravel			
TYPE OF SAMPLE		+ Quartz Stone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm	100			
	50.0 mm	98			
	37.5 mm	91			
	28.0 mm	82			
	20.0 mm	72			
	14.0 mm	62			
	5.0 mm	34			
	2.0 mm	25			
	0.425 mm	15			
	0.075 mm	7			
GM %		2.5			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	37			
COARSE FINE SAND	0.425 - 0.250	11			
MEDIUM FINE SAND	0.250 - 0.150	11			
FINE FINE SAND	0.150 - 0.075	12			
SILT CLAY	0.075	29			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	21			
	PLASTICITY INDEX	3.8			
	LINEAR SHRINKAGE	2.0			
CLASSIFICATION	H.R.B.	A-1-a(0)			
	COLTO	G8			
	TRH 14	G8			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	7.3			
	MDD (kg/m³)	2103			
	COMP MC %	6.8			
SWELL % @	MOD | NRB | PRO	0.01 | 0.03 | 0.05			
C.B.R. SANS GR40	100 %	23			
	98 %	19			
	97 %	18			
	95 %	15			
	93 %	13			
	90 %	10			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Date Reported : 2021-06-22

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

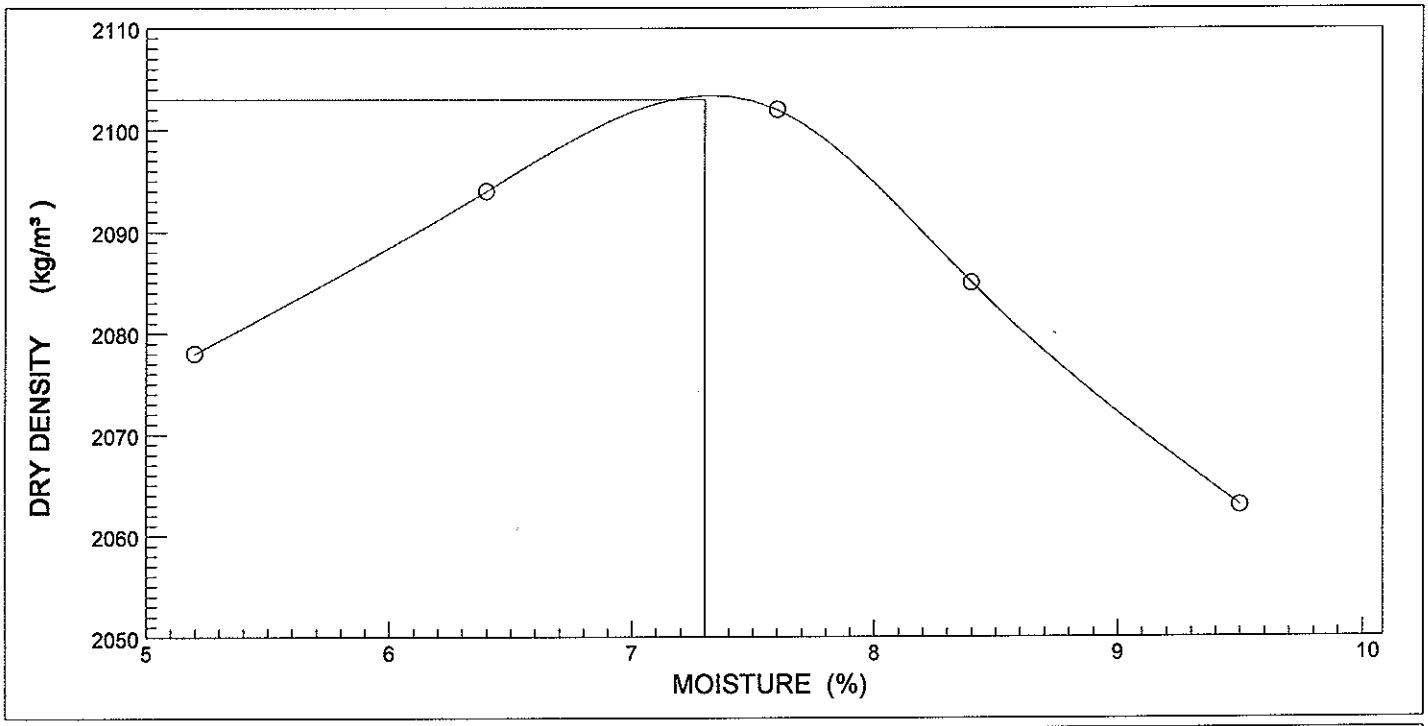
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9818
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	99kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.8m
MATERIAL DESCRIPTION	Quartz Stone
HOLE NO./ km / CHAINAGE	TP 23
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Brown Gravel +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2078	2094	2102	2085	2063			
MOISTURE (%)	5.2	6.4	7.6	8.4	9.5			

MAXIMUM DRY DENSITY (kg/m³) : 2103	OPTIMUM MOISTURE CONTENT (%) : 7.3



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Date Reported : 2021-06-22

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9821			
HOLE NO./ Km / CHAINAGE		TP26			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.6m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Light Brown Sand			
TYPE OF SAMPLE		+ Quartz Stone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm				
	37.5 mm				
	28.0 mm				
	20.0 mm	100			
	14.0 mm	99			
	5.0 mm	96			
	2.0 mm	89			
	0.425 mm	52			
	0.075 mm	23			
GM %		1.4			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	41			
COARSE FINE SAND	0.425 - 0.250	10			
MEDIUM FINE SAND	0.250 - 0.150	12			
FINE FINE SAND	0.150 - 0.075	12			
SILT CLAY	0.075	26			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	13			
	PLASTICITY INDEX	4.0			
	LINEAR SHRINKAGE	2.0			
CLASSIFICATION	H.R.B.	A-2-4(0)			
	COLTO	G6			
	TRH 14	G7			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.7			
	MDD (kg/m³)	2189			
	COMP MC %	5.9			
SWELL % @	MOD | NRB | PRO	0.01 | 0.03 | 0.05			
C.B.R. SANS GR40	100 %	65			
	98 %	48			
	97 %	41			
	95 %	31			
	93 %	23			
	90 %	15			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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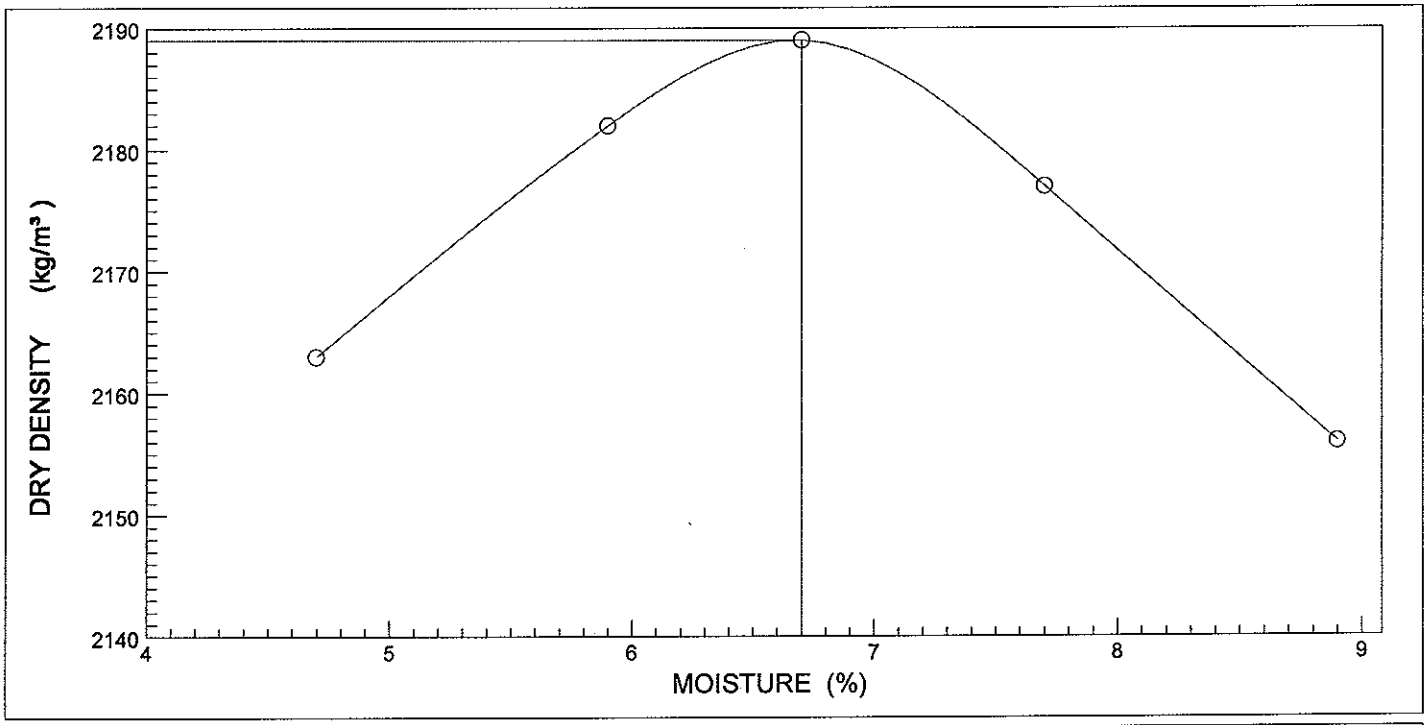
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9821
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	81kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.6m
MATERIAL DESCRIPTION	Quartz Stone
HOLE NO./ km / CHAINAGE	TP 26
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Brown Sand +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2163	2182	2189	2177	2156			
MOISTURE (%)	4.7	5.9	6.7	7.7	8.9			

MAXIMUM DRY DENSITY (kg/m³) : 2189	OPTIMUM MOISTURE CONTENT (%) : 6.7



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Date Reported : 2021-06-22

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9823			
HOLE NO./ Km / CHAINAGE		TP28			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.8m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Light Brown Gravel			
TYPE OF SAMPLE		+ Quartz			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm	100			
	63.0 mm	98			
	50.0 mm	96			
	37.5 mm	94			
	28.0 mm	87			
	20.0 mm	84			
	14.0 mm	81			
	5.0 mm	64			
	2.0 mm	51			
	0.425 mm	28			
	0.075 mm	9			
GM %		2.1			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	46			
COARSE FINE SAND	0.425 - 0.250	15			
MEDIUM FINE SAND	0.250 - 0.150	12			
FINE FINE SAND	0.150 - 0.075	10			
SILT CLAY	0.075	18			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	19			
	PLASTICITY INDEX	5			
	LINEAR SHRINKAGE	1.5			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G5			
	TRH 14	G5			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.6			
	MDD (kg/m³)	2163			
	COMP MC %	6.1			
SWELL % @	MOD | NRB | PRO	0.01 | 0.02 | 0.05			
C.B.R. SANS GR40	100 %	108			
	98 %	78			
	97 %	67			
	95 %	48			
	93 %	35			
	90 %	22			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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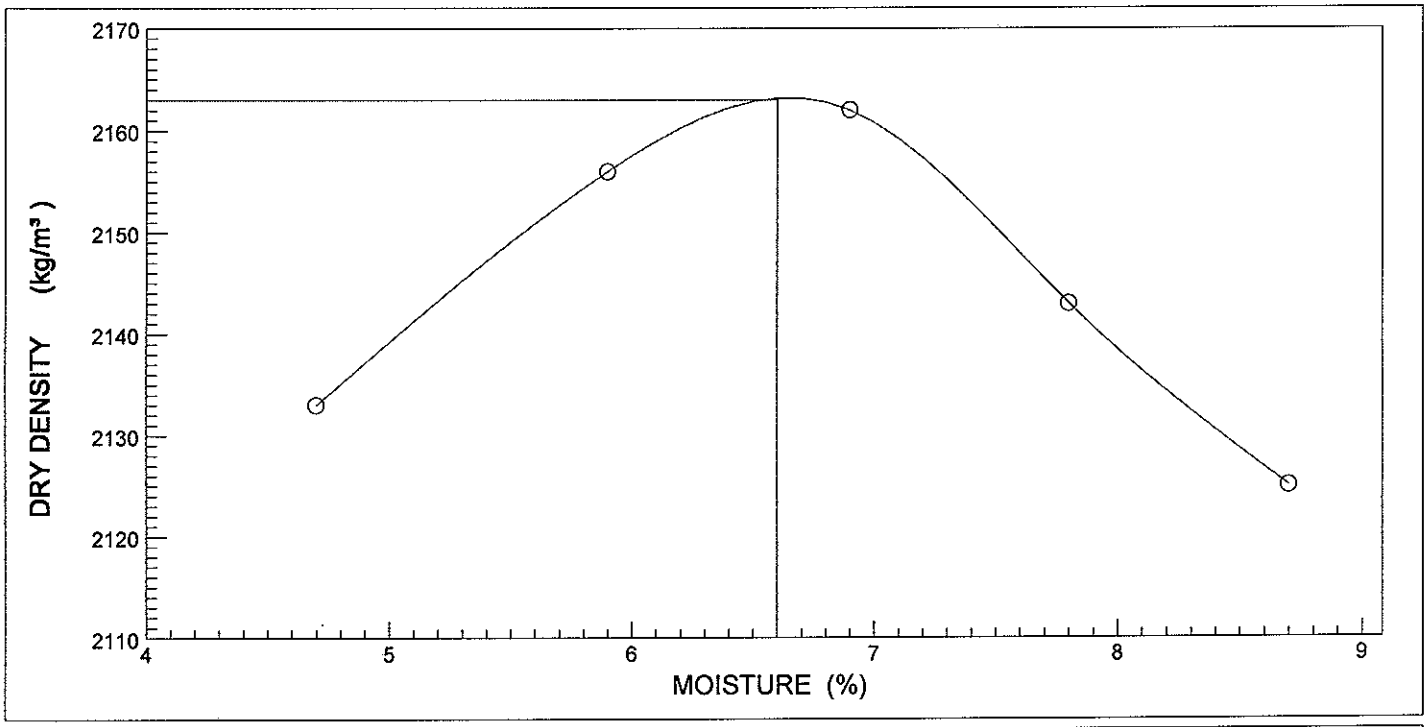
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9823
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	100kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.8m
MATERIAL DESCRIPTION	Quartz Stone
HOLE NO./ km / CHAINAGE	TP 28
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Brown Gravel +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2133	2156	2162	2143	2125			
MOISTURE (%)	4.7	5.9	6.9	7.8	8.7			

MAXIMUM DRY DENSITY (kg/m³) : 2163	OPTIMUM MOISTURE CONTENT (%) : 6.6



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9824			
HOLE NO./ Km / CHAINAGE		TP30			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.35m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Dark Brown Gravel +			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm	100			
	63.0 mm	92			
	50.0 mm	88			
	37.5 mm	82			
	28.0 mm	77			
	20.0 mm	73			
	14.0 mm	70			
	5.0 mm	54			
	2.0 mm	41			
	0.425 mm	20			
	0.075 mm	7			
GM %		2.3			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	51			
COARSE FINE SAND	0.425 - 0.250	13			
MEDIUM FINE SAND	0.250 - 0.150	11			
FINE FINE SAND	0.150 - 0.075	9			
SILT CLAY	0.075	17			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	SP			
	LINEAR SHRINKAGE	1.5			
CLASSIFICATION	H.R.B.	A-1-a(0)			
	COLTO	G5			
	TRH 14	G5			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	7.4			
	MDD (kg/m³)	2151			
	COMP MC %	6.9			
SWELL % @	MOD | NRB | PRO	0.00 | 0.02 | 0.03			
C.B.R. SANS GR40	100 %	102			
	98 %	74			
	97 %	63			
	95 %	46			
	93 %	34			
	90 %	21			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

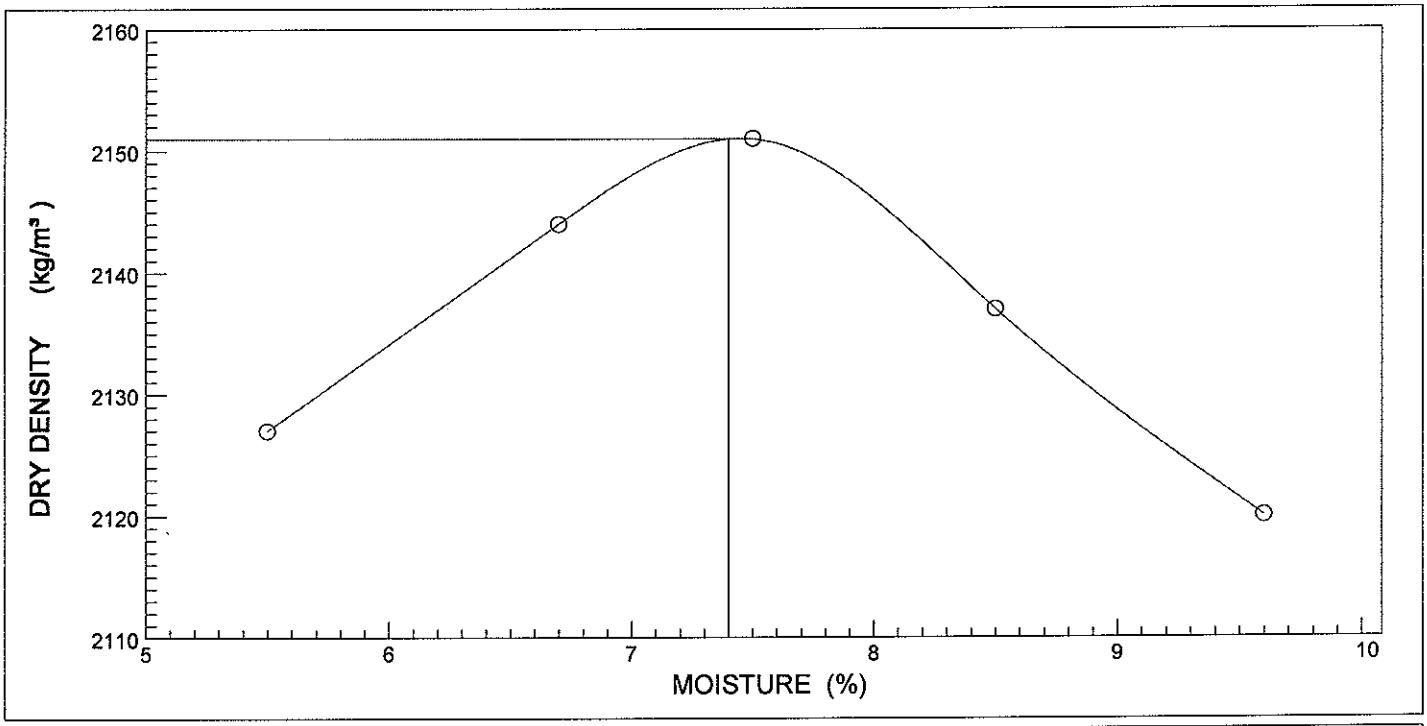
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9824
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	101kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.35m
MATERIAL DESCRIPTION	Weathered Quartz
HOLE NO./ km / CHAINAGE	TP 30
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Dark Brown Gravel

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2127	2144	2151	2137	2120			
MOISTURE (%)	5.5	6.7	7.5	8.5	9.6			

MAXIMUM DRY DENSITY (kg/m³) : 2151	OPTIMUM MOISTURE CONTENT (%) : 7.4



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
The test results reported relate to the samples tested.
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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Job Request No.: RU3988

Date Reported : 2021-06-22

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9826			
HOLE NO./ Km / CHAINAGE		TP32			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.5m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Dark Brown			
TYPE OF SAMPLE		Sand Clay			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm				
	37.5 mm				
	28.0 mm				
	20.0 mm				
	14.0 mm	100			
	5.0 mm	98			
	2.0 mm	93			
	0.425 mm	61			
	0.075 mm	33			
GM %		1.1			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	34			
COARSE FINE SAND	0.425 - 0.250	9			
MEDIUM FINE SAND	0.250 - 0.150	11			
FINE FINE SAND	0.150 - 0.075	10			
SILT CLAY	0.075	36			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	28			
	PLASTICITY INDEX	9			
	LINEAR SHRINKAGE	4.5			
CLASSIFICATION	H.R.B.	A-2-4(0)			
	COLTO	-			
	TRH 14	G10			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	8.6			
	MDD (kg/m³)	2027			
	COMP MC %	7.2			
SWELL % @	MOD | NRB | PRO	0.02 | 0.06 | 0.12			
C.B.R. SANS GR40	100 %	10			
	98 %	8			
	97 %	7			
	95 %	6			
	93 %	4			
	90 %	3			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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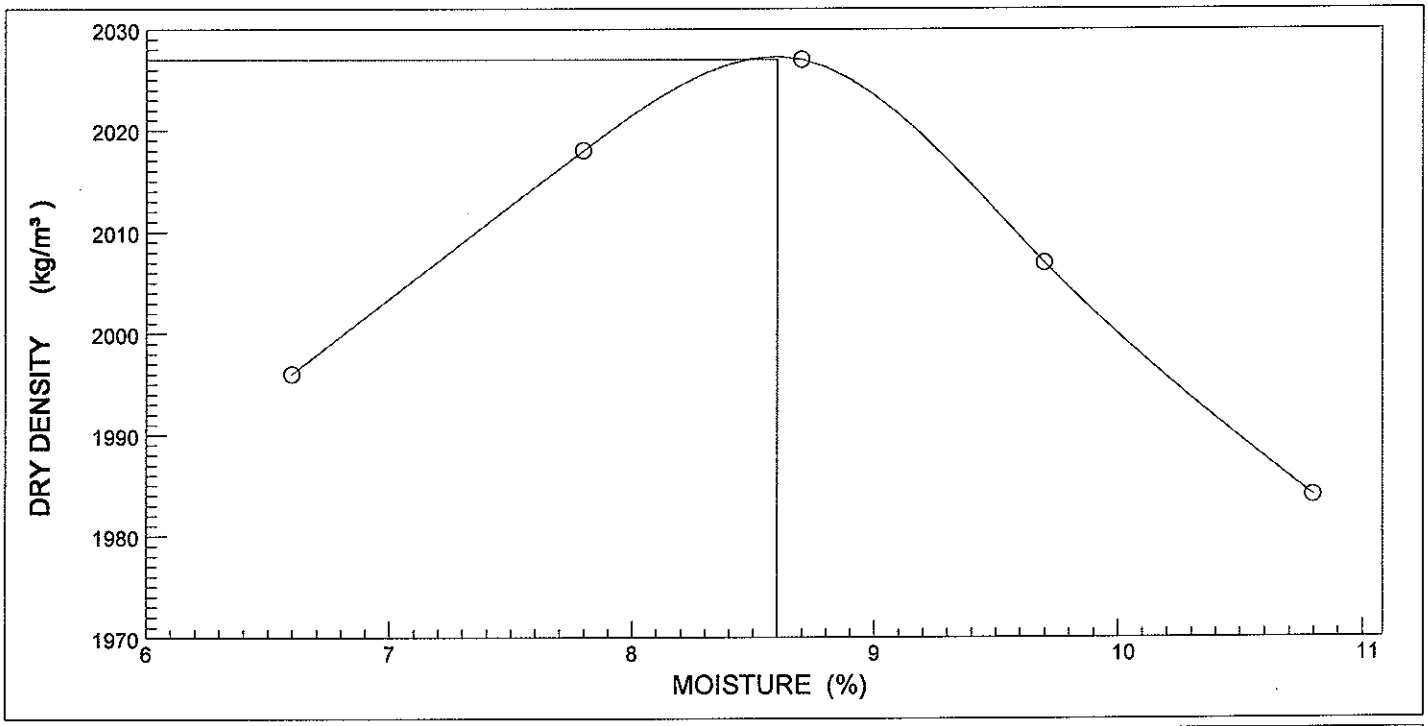
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9826
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	100kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.5m
MATERIAL DESCRIPTION	Sand
HOLE NO./ km / CHAINAGE	TP 32
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Dark Brown Sand

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	1996	2018	2027	2007	1984			
MOISTURE (%)	6.6	7.8	8.7	9.7	10.8			

MAXIMUM DRY DENSITY (kg/m³) : 2027	OPTIMUM MOISTURE CONTENT (%) : 8.6



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9829			
HOLE NO./ Km / CHAINAGE		TP36			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.5m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Light Brown Gravel			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm	100			
	50.0 mm	95			
	37.5 mm	85			
	28.0 mm	81			
	20.0 mm	76			
	14.0 mm	75			
	5.0 mm	60			
	2.0 mm	47			
	0.425 mm	25			
	0.075 mm	9			
GM %		2.2			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	46			
COARSE FINE SAND	0.425 - 0.250	11			
MEDIUM FINE SAND	0.250 - 0.150	12			
FINE FINE SAND	0.150 - 0.075	12			
SILT CLAY	0.075	19			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	SP			
	LINEAR SHRINKAGE	1.0			
CLASSIFICATION	H.R.B.	A-1-a(0)			
	COLTO	G5			
	TRH 14	G5			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	7.7			
	MDD (kg/m³)	2164			
	COMP MC %	7.2			
SWELL % @	MOD | NRB | PRO	0.00 | 0.02 | 0.04			
C.B.R. SANS GR40	100 %	132			
	98 %	93			
	97 %	78			
	95 %	55			
	93 %	38			
	90 %	23			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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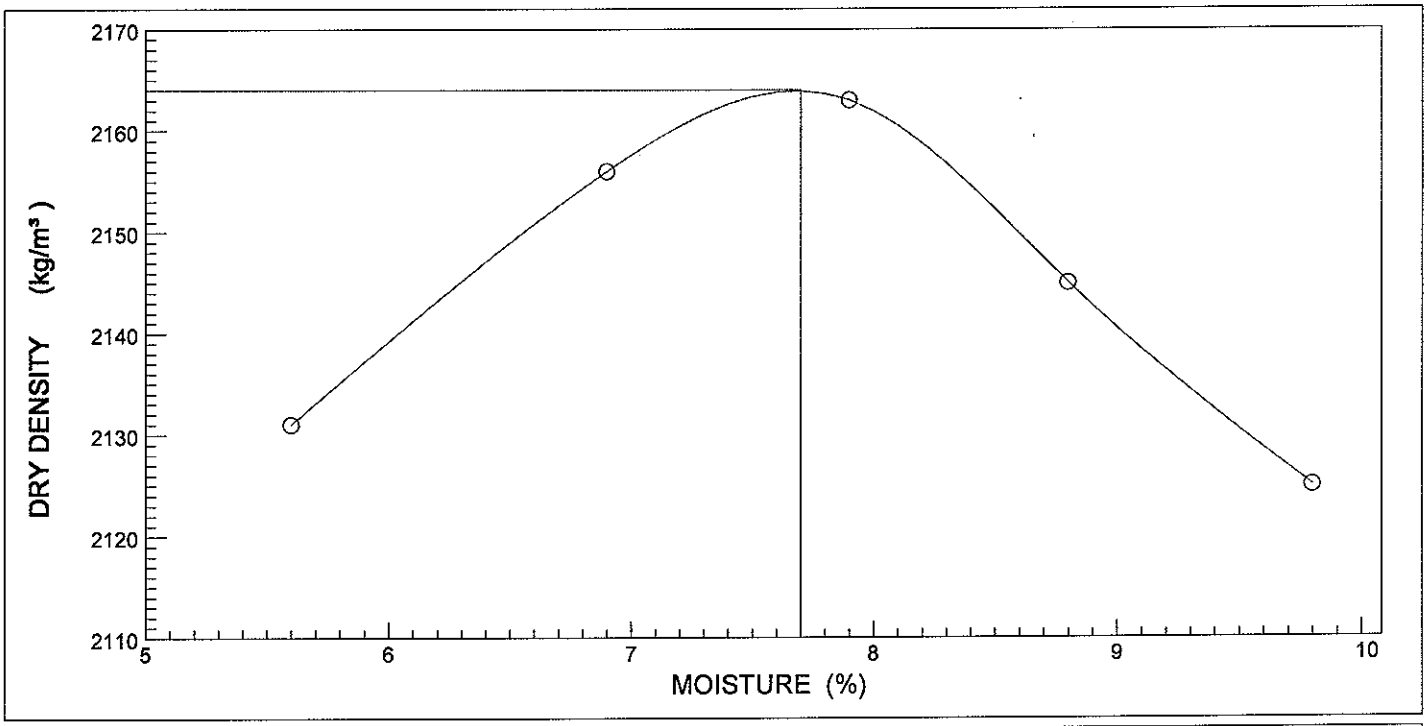
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9829
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	98kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.5m
MATERIAL DESCRIPTION	Weathered Quartz
HOLE NO./ km / CHAINAGE	TP 36
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Brown Gravel +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2131	2156	2163	2145	2125			
MOISTURE (%)	5.6	6.9	7.9	8.8	9.8			

MAXIMUM DRY DENSITY (kg/m³) : 2164	OPTIMUM MOISTURE CONTENT (%) : 7.7



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9830			
HOLE NO./ Km / CHAINAGE		TP38			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 1.6m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Dark Brown			
TYPE OF SAMPLE		Sand			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm				
	37.5 mm				
	28.0 mm				
	20.0 mm				
	14.0 mm	100			
	5.0 mm	99			
	2.0 mm	93			
	0.425 mm	54			
	0.075 mm	21			
GM %		1.3			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	42			
COARSE FINE SAND	0.425 - 0.250	11			
MEDIUM FINE SAND	0.250 - 0.150	13			
FINE FINE SAND	0.150 - 0.075	12			
SILT CLAY	0.075	23			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	SP			
	LINEAR SHRINKAGE	1.0			
CLASSIFICATION	H.R.B.	A-2-4(0)			
	COLTO	G6			
	TRH 14	G6			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.0			
	MDD (kg/m³)	2147			
	COMP MC %	6.1			
SWELL % @	MOD | NRB | PRO	0.00 | 0.02 | 0.04			
C.B.R. SANS GR40	100 %	87			
	98 %	65			
	97 %	57			
	95 %	43			
	93 %	32			
	90 %	21			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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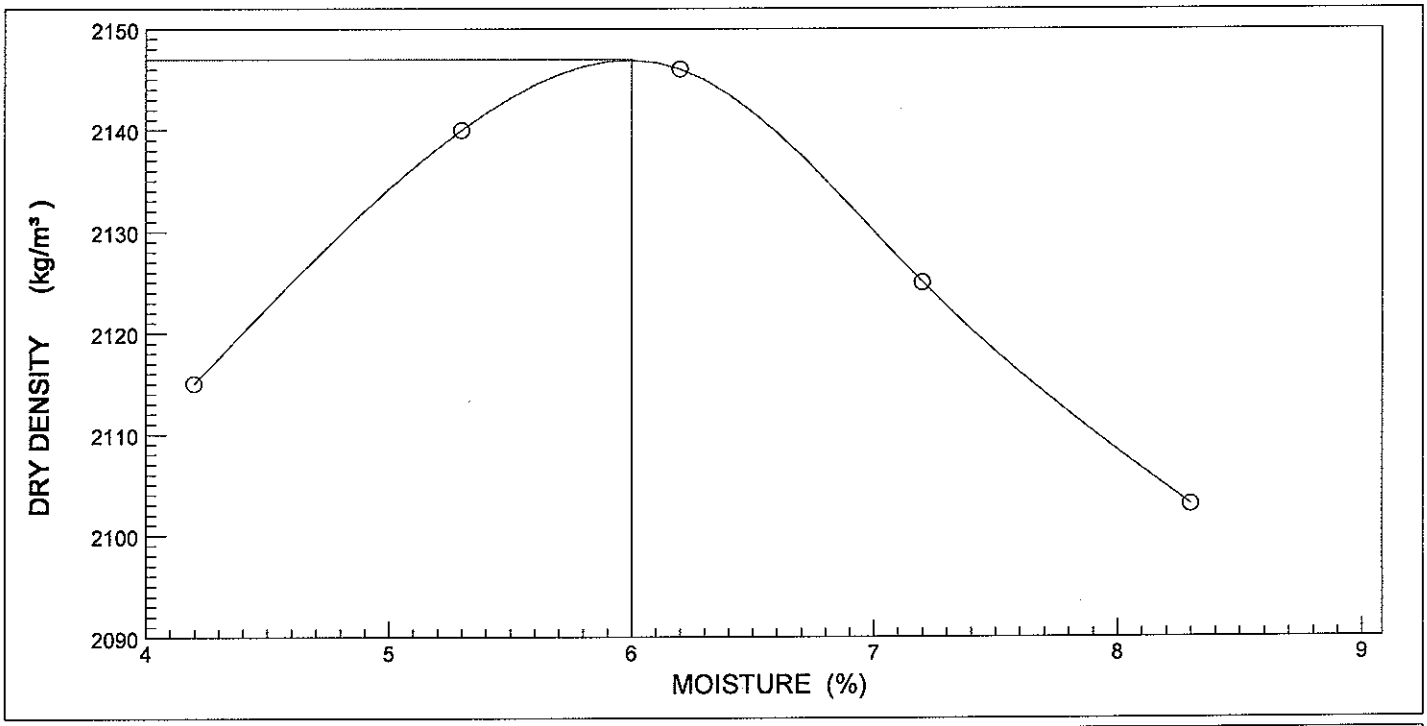
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9830
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	98kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 1.6m
MATERIAL DESCRIPTION	Sand
HOLE NO./ km / CHAINAGE	TP 38
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Dark Brown Sand

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2115	2140	2146	2125	2103			
MOISTURE (%)	4.2	5.3	6.2	7.2	8.3			

MAXIMUM DRY DENSITY (kg/m³) : 2147	OPTIMUM MOISTURE CONTENT (%) : 6.0



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9833			
HOLE NO./ Km / CHAINAGE		TP46			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.4m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Light Brown Gravelly			
TYPE OF SAMPLE		Sand + Quartz			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm	100			
	37.5 mm	99			
	28.0 mm	95			
	20.0 mm	93			
	14.0 mm	89			
	5.0 mm	81			
	2.0 mm	73			
	0.425 mm	38			
	0.075 mm	14			
GM %		1.8			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	48			
COARSE FINE SAND	0.425 - 0.250	11			
MEDIUM FINE SAND	0.250 - 0.150	11			
FINE FINE SAND	0.150 - 0.075	11			
SILT CLAY	0.075	19			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	SP			
	LINEAR SHRINKAGE	1.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G6			
	TRH 14	G6			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.2			
	MDD (kg/m³)	2165			
	COMP MC %	4.9			
SWELL % @	MOD | NRB | PRO	0.00 | 0.01 | 0.02			
C.B.R. SANS GR40	100 %	123			
	98 %	83			
	97 %	69			
	95 %	47			
	93 %	32			
	90 %	18			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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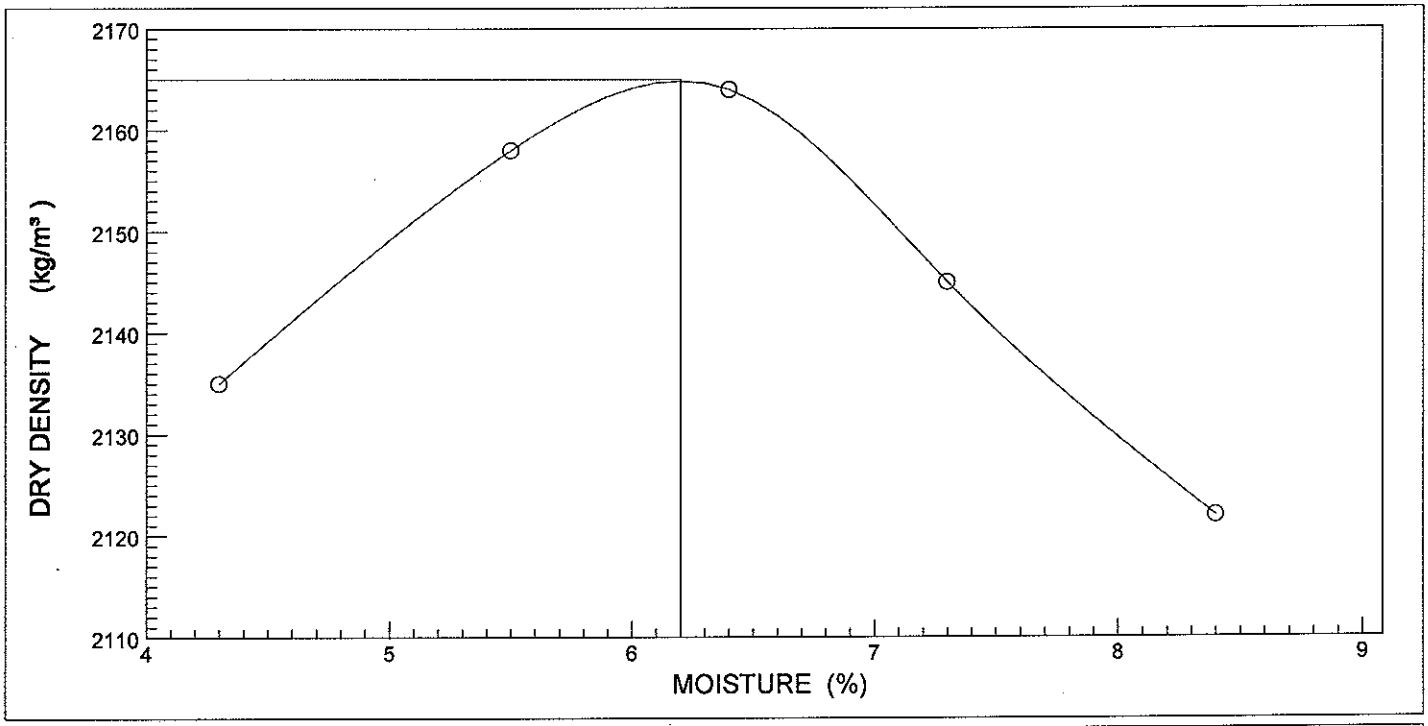
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9833
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	96kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.4m
MATERIAL DESCRIPTION	Sand Quartz Stone
HOLE NO./ km / CHAINAGE	TP 46
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Brown Gravelly

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2135	2158	2164	2145	2122			
MOISTURE (%)	4.3	5.5	6.4	7.3	8.4			

MAXIMUM DRY DENSITY (kg/m³) : 2165	OPTIMUM MOISTURE CONTENT (%) : 6.2



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9834			
HOLE NO./ Km / CHAINAGE		TP47			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.4m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightOrangeBrown			
TYPE OF SAMPLE		GravellySand+Quartz			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm	100			
	75.0 mm	97			
	63.0 mm	97			
	50.0 mm	89			
	37.5 mm	87			
	28.0 mm	85			
	20.0 mm	81			
	14.0 mm	79			
	5.0 mm	71			
	2.0 mm	65			
	0.425 mm	35			
	0.075 mm	12			
GM %		1.9			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	46			
COARSE FINE SAND	0.425 - 0.250	12			
MEDIUM FINE SAND	0.250 - 0.150	13			
FINE FINE SAND	0.150 - 0.075	11			
SILT CLAY	0.075	19			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	0.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G6			
	TRH 14	G6			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.4			
	MDD (kg/m³)	2101			
	COMP MC %	6.4			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	108			
	98 %	74			
	97 %	62			
	95 %	43			
	93 %	29			
	90 %	17			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Report compiled by : Mareze Lategan

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Job Request No.: RU3988

Date Reported : 2021-06-28

Iceburg Trading 751 CC
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0920

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

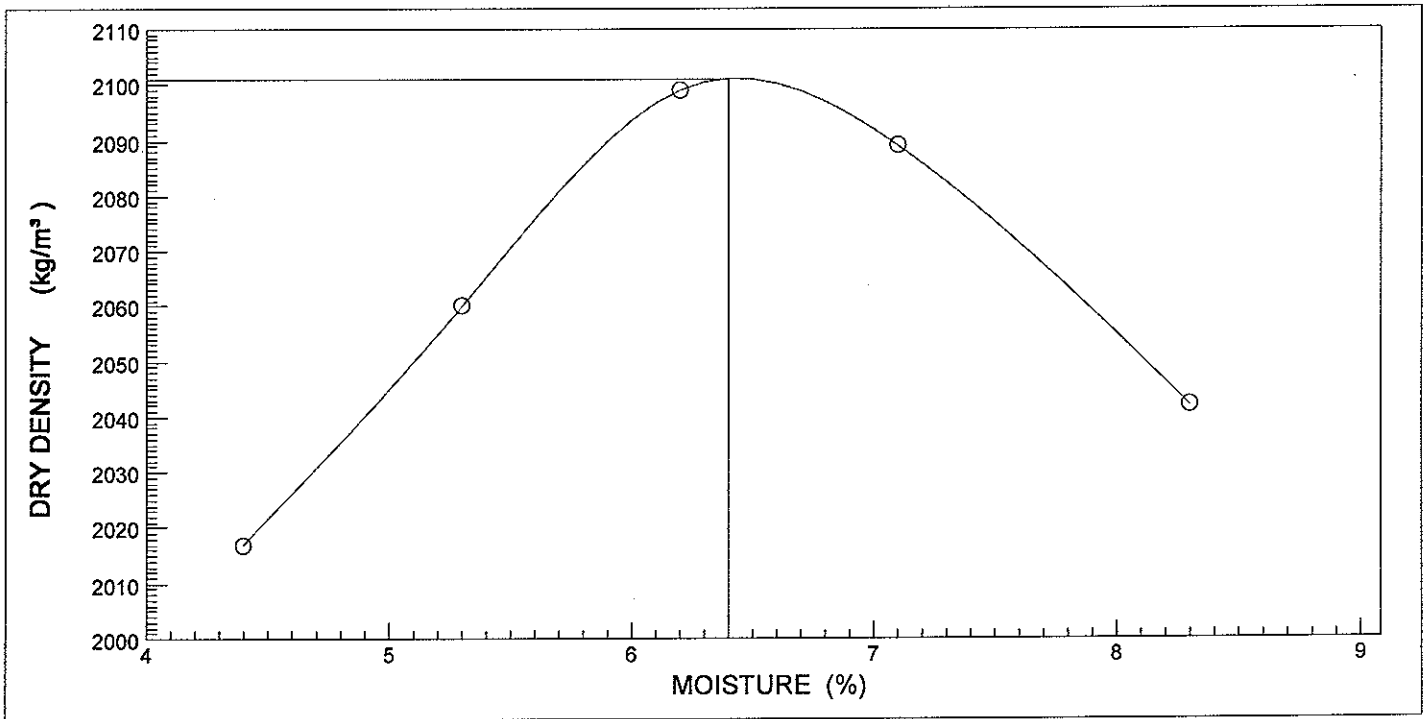
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9834
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	99kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.4m
MATERIAL DESCRIPTION	Sand + Quartz Stone
HOLE NO./ km / CHAINAGE	TP 47
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Orange Brown Gravelly

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2017	2060	2099	2089	2042			
MOISTURE (%)	4.4	5.3	6.2	7.1	8.3			

MAXIMUM DRY DENSITY (kg/m³) : 2101	OPTIMUM MOISTURE CONTENT (%) : 6.4



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9836			
HOLE NO./ Km / CHAINAGE		TP51			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.35m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightBrownGravelSand			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm	100			
	63.0 mm	98			
	50.0 mm	96			
	37.5 mm	94			
	28.0 mm	91			
	20.0 mm	89			
	14.0 mm	88			
	5.0 mm	80			
	2.0 mm	72			
	0.425 mm	39			
	0.075 mm	11			
GM %		1.8			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	45			
COARSE FINE SAND	0.425 - 0.250	15			
MEDIUM FINE SAND	0.250 - 0.150	13			
FINE FINE SAND	0.150 - 0.075	12			
SILT CLAY	0.075	15			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	0.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G6			
	TRH 14	G6			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	7.4			
	MDD (kg/m³)	2052			
	COMP MC %	6.8			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	121			
	98 %	86			
	97 %	73			
	95 %	52			
	93 %	37			
	90 %	22			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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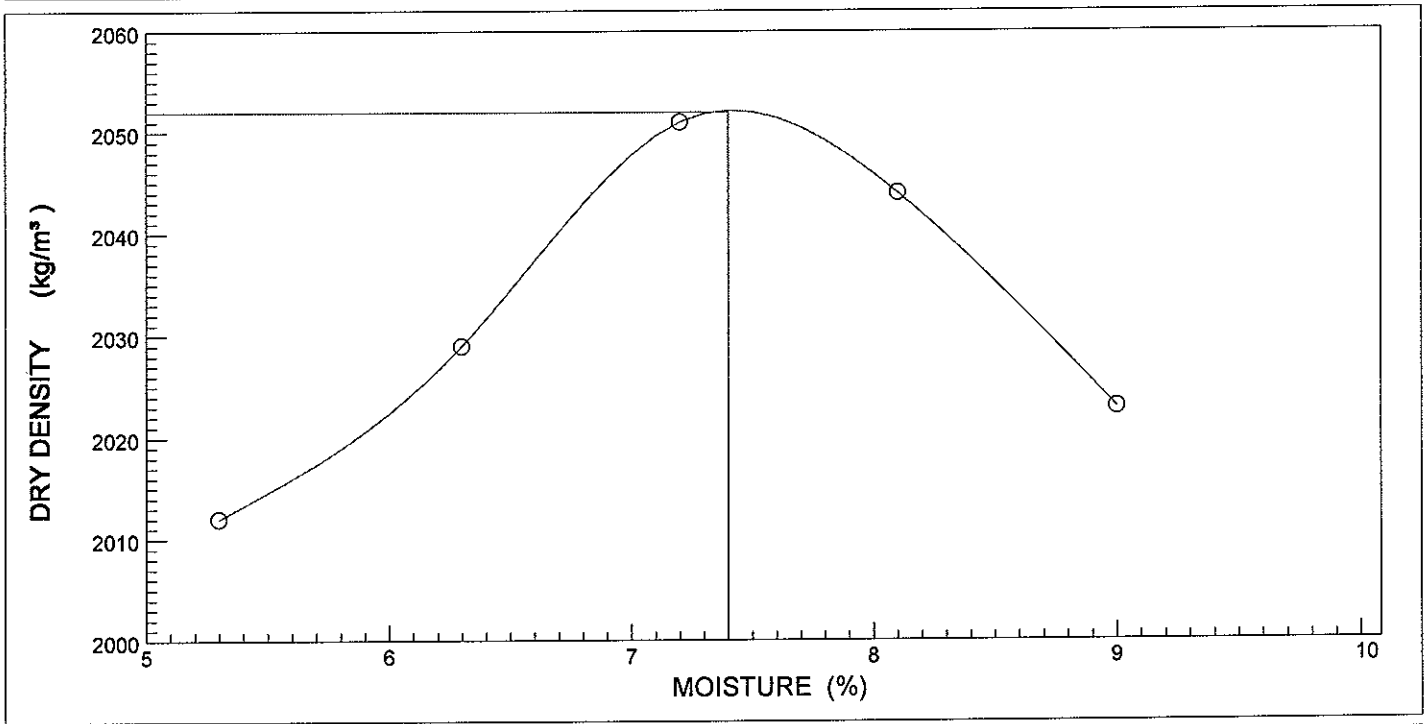
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9836
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	101kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.35m
MATERIAL DESCRIPTION	Sand + Weathered Quartz
HOLE NO./ km / CHAINAGE	TP 51
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Brown Gravelly

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2012	2029	2051	2044	2023			
MOISTURE (%)	5.3	6.3	7.2	8.1	9.0			

MAXIMUM DRY DENSITY (kg/m³) : 2052	OPTIMUM MOISTURE CONTENT (%) : 7.4



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9838			
HOLE NO./ Km / CHAINAGE		TP53			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.4m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Light Orange Sand			
TYPE OF SAMPLE		Sand			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm				
	37.5 mm				
	28.0 mm				
	20.0 mm				
	14.0 mm				
	5.0 mm	100			
	2.0 mm	95			
	0.425 mm	56			
	0.075 mm	15			
GM %		1.3			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	41			
COARSE FINE SAND	0.425 - 0.250	14			
MEDIUM FINE SAND	0.250 - 0.150	16			
FINE FINE SAND	0.150 - 0.075	14			
SILT CLAY	0.075	16			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	0.0			
CLASSIFICATION	H.R.B.	A-2-4(0)			
	COLTO	G6			
	TRH 14	G6			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.5			
	MDD (kg/m³)	2058			
	COMP MC %	6.2			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	69			
	98 %	51			
	97 %	44			
	95 %	33			
	93 %	25			
	90 %	16			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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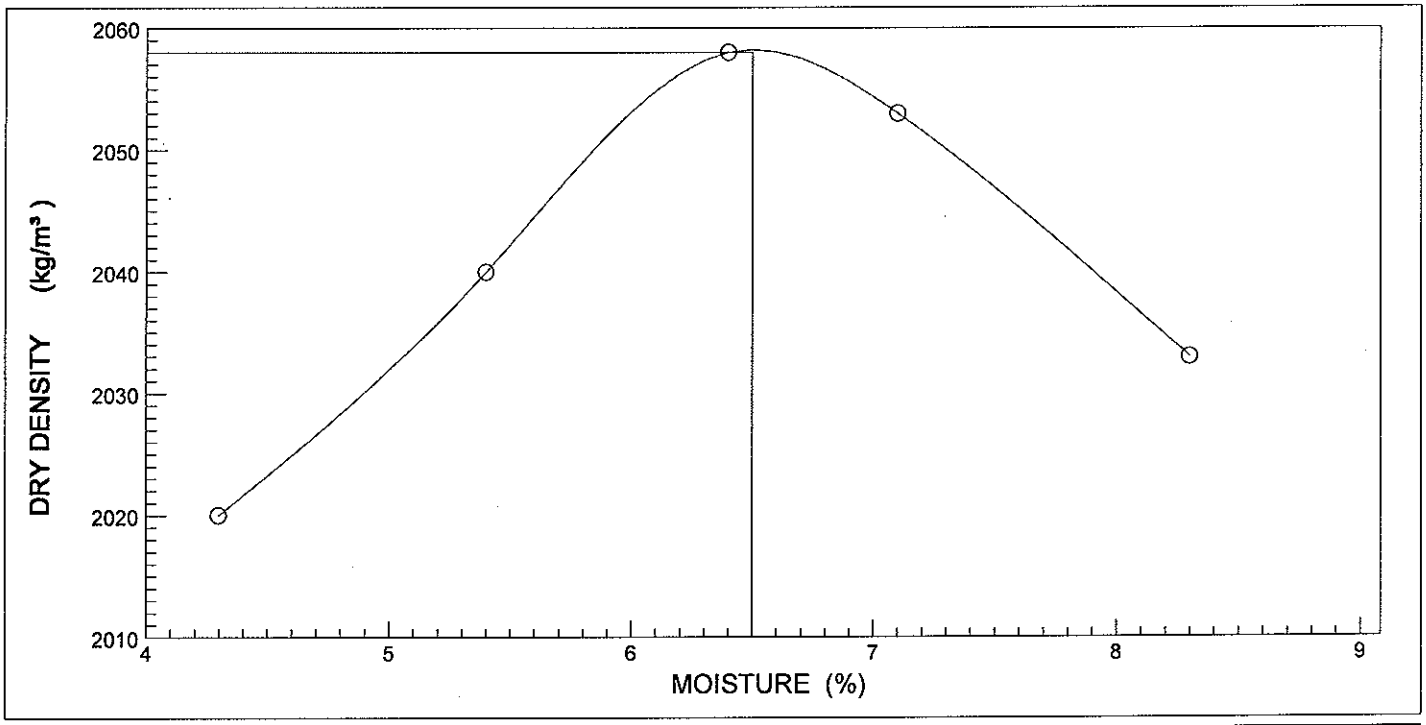
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9838
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	94kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.4m
MATERIAL DESCRIPTION	Sand
HOLE NO./ km / CHAINAGE	TP 53
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Orange Sand

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2020	2040	2058	2053	2033			
MOISTURE (%)	4.3	5.4	6.4	7.1	8.3			

MAXIMUM DRY DENSITY (kg/m³) : 2058	OPTIMUM MOISTURE CONTENT (%) : 6.5



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9840			
HOLE NO./ Km / CHAINAGE		TP56			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.4 - 0.9m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightBrownSand+			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm	100			
	37.5 mm	99			
	28.0 mm	99			
	20.0 mm	97			
	14.0 mm	97			
	5.0 mm	95			
	2.0 mm	91			
	0.425 mm	55			
	0.075 mm	16			
GM %		1.4			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	40			
COARSE FINE SAND	0.425 - 0.250	12			
MEDIUM FINE SAND	0.250 - 0.150	15			
FINE FINE SAND	0.150 - 0.075	15			
SILT CLAY	0.075	18			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	0.0			
CLASSIFICATION	H.R.B.	A-2-4(0)			
	COLTO	G8			
	TRH 14	G10			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30	OMC %	5.6			
MAX. DRY DENSITY	MDD (kg/m³)	2029			
	COMP MC %	6.0			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	94			
	98 %	53			
	97 %	39			
	95 %	22			
	93 %	12			
	90 %	5			

STABILISER IN LAB		N/A			
TEST TYPE		CBR			
SAMPLING METHOD		Client			
WEATHER WHEN SAMPLED		Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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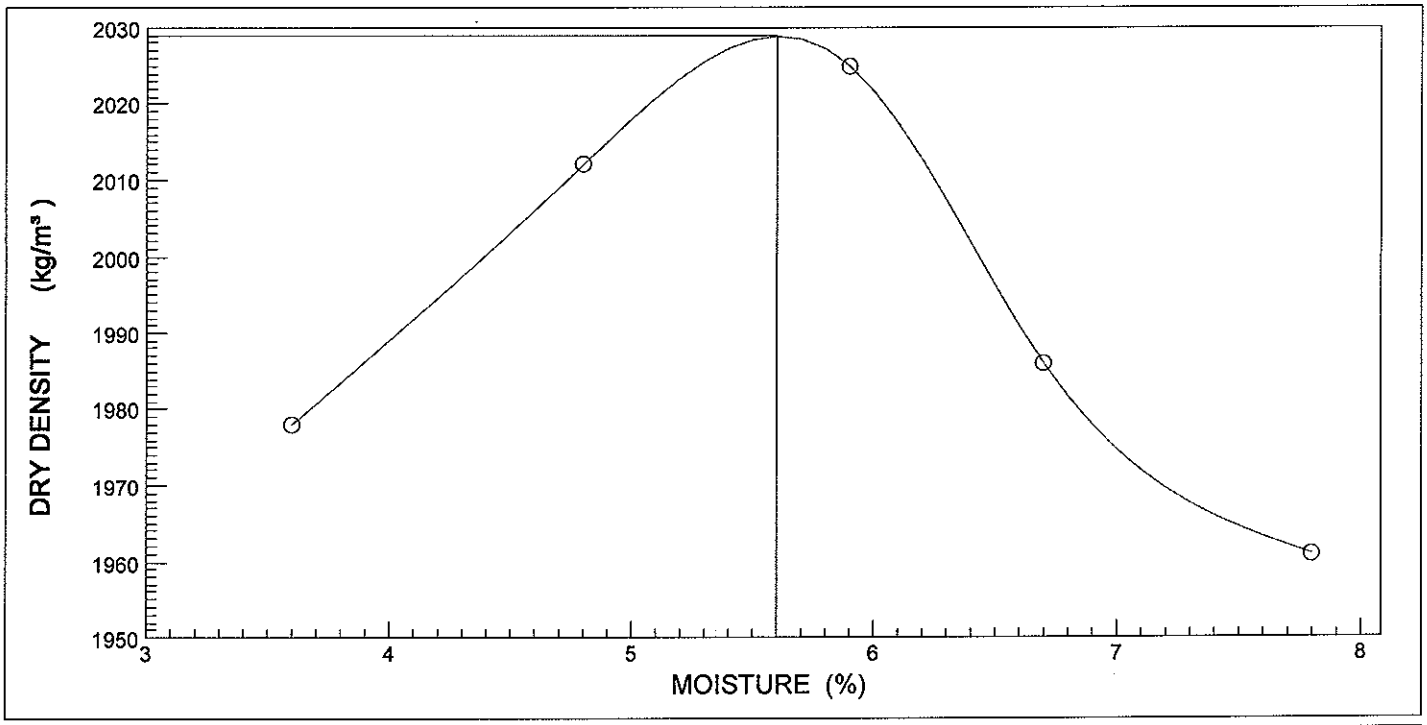
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9840
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	89kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.4 - 0.9m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 56
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Brown Sand

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	1978	2012	2025	1986	1961			
MOISTURE (%)	3.6	4.8	5.9	6.7	7.8			

MAXIMUM DRY DENSITY (kg/m³) : 2029	OPTIMUM MOISTURE CONTENT (%) : 5.6



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9842			
HOLE NO./ Km / CHAINAGE		TP60			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.15m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Dark Brown Sand			
TYPE OF SAMPLE		Weathered Quartz			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm	100			
	37.5 mm	99			
	28.0 mm	96			
	20.0 mm	93			
	14.0 mm	90			
	5.0 mm	77			
	2.0 mm	66			
	0.425 mm	42			
	0.075 mm	22			
GM %		1.7			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	36			
COARSE FINE SAND	0.425 - 0.250	8			
MEDIUM FINE SAND	0.250 - 0.150	11			
FINE FINE SAND	0.150 - 0.075	12			
SILT CLAY	0.075	33			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	18			
	PLASTICITY INDEX	4			
	LINEAR SHRINKAGE	2.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G7			
	TRH 14	G7			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.0			
	MDD (kg/m³)	2189			
	COMP MC %	6.1			
SWELL % @	MOD | NRB | PRO	0.01 | 0.03 | 0.06			
C.B.R. SANS GR40	100 %	21			
	98 %	20			
	97 %	20			
	95 %	19			
	93 %	18			
	90 %	16			

STABILISER IN LAB		N/A			
TEST TYPE		CBR			
SAMPLING METHOD		Client			
WEATHER WHEN SAMPLED		Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

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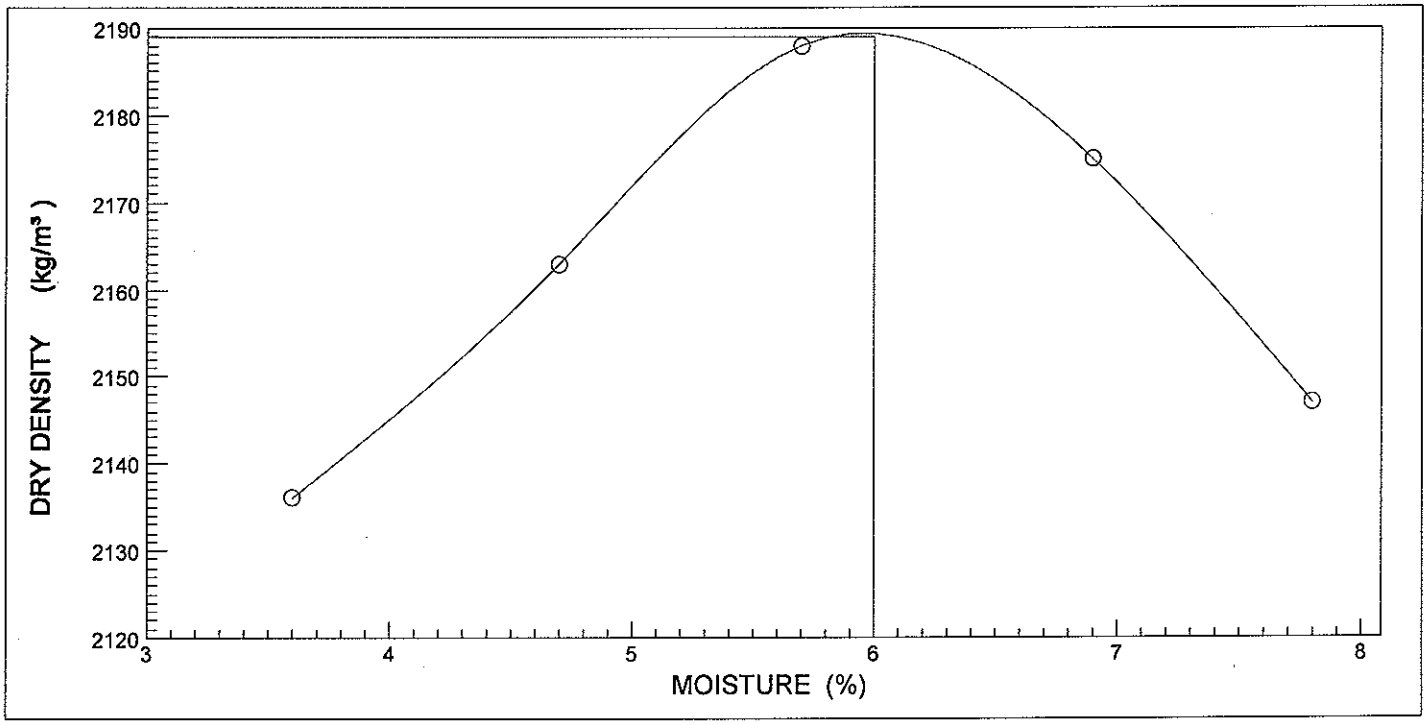
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9842
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	98kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.15m
MATERIAL DESCRIPTION	Sand + Weathered Quartz
HOLE NO./ km / CHAINAGE	TP 60
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Dark Brown Sand

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2136	2163	2188	2175	2147			
MOISTURE (%)	3.6	4.7	5.7	6.9	7.8			

MAXIMUM DRY DENSITY (kg/m³) : 2189	OPTIMUM MOISTURE CONTENT (%) : 6.0



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
The test results reported relate to the samples tested.
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Report compiled by : Mareze Lategan

Roelof Lategan
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Job Request No.: RU3988

Date Reported : 2021-06-28

Iceburg Trading 751 CC
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Louis Trichardt
0920

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9843			
HOLE NO./ Km / CHAINAGE		TP62			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.4m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightOrangeBrown			
TYPE OF SAMPLE		Gravelly+QuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm	100			
	50.0 mm	98			
	37.5 mm	97			
	28.0 mm	95			
	20.0 mm	93			
	14.0 mm	86			
	5.0 mm	61			
	2.0 mm	43			
	0.425 mm	23			
	0.075 mm	9			
GM %		2.3			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	47			
COARSE FINE SAND	0.425 - 0.250	10			
MEDIUM FINE SAND	0.250 - 0.150	11			
FINE FINE SAND	0.150 - 0.075	11			
SILT CLAY	0.075	21			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	17			
	PLASTICITY INDEX	1.5			
	LINEAR SHRINKAGE	1.0			
CLASSIFICATION	H.R.B.	A-1-a(0)			
	COLTO	G5			
	TRH 14	G5			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	5.9			
	MDD (kg/m³)	2180			
	COMP MC %	5.1			
SWELL % @	MOD | NRB | PRO	0.00 | 0.01 | 0.02			
C.B.R. SANS GR40	100 %	126			
	98 %	84			
	97 %	68			
	95 %	45			
	93 %	30			
	90 %	16			

STABILISER IN LAB		N/A			
TEST TYPE		CBR			
SAMPLING METHOD		Client			
WEATHER WHEN SAMPLED		Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
The test results reported relate to the samples tested.
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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

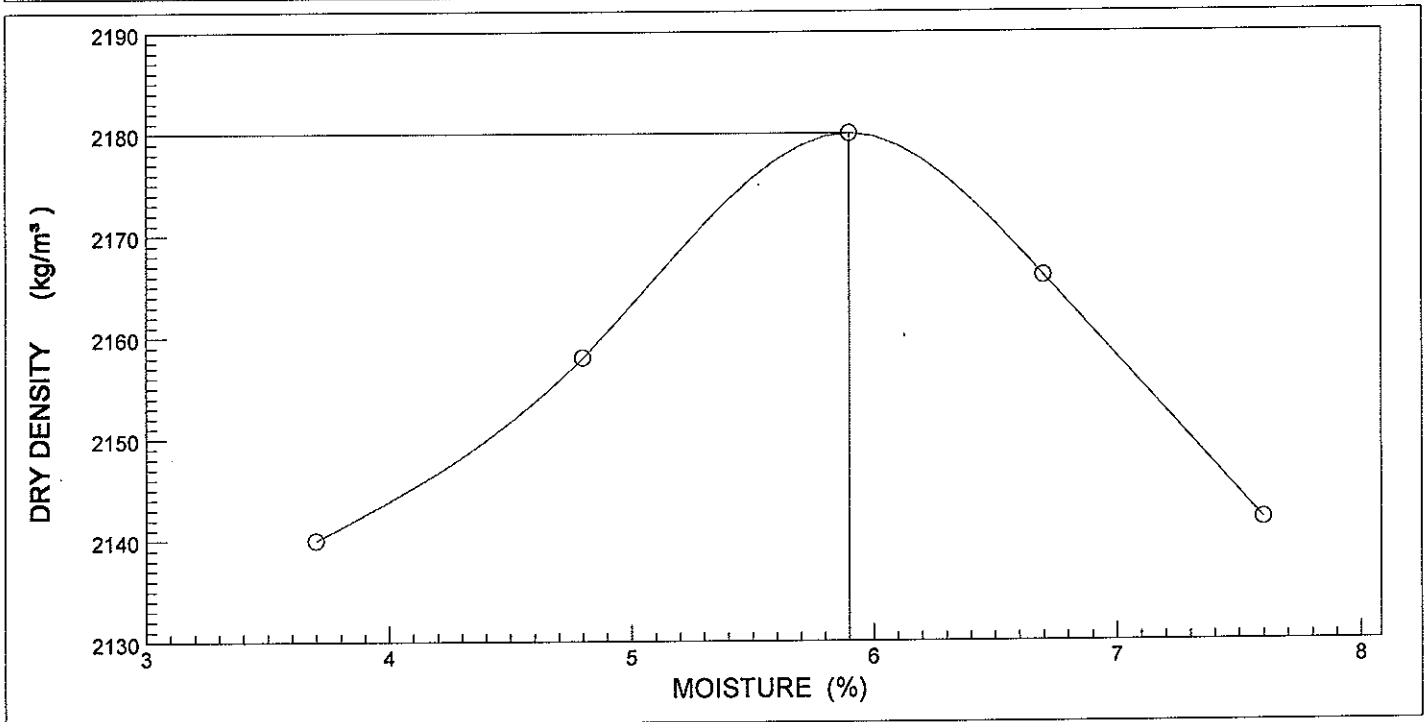
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9843
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	101kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.4m
MATERIAL DESCRIPTION	Gravel + Quartz Stone
HOLE NO./ km / CHAINAGE	TP 62
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Orange Brown

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2140	2158	2180	2166	2142			
MOISTURE (%)	3.7	4.8	5.9	6.7	7.6			

MAXIMUM DRY DENSITY (kg/m³) : 2180	OPTIMUM MOISTURE CONTENT (%) : 5.9



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9845			
HOLE NO./ Km / CHAINAGE		TP66			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.3m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightBrownSand+			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm				
	37.5 mm	100			
	28.0 mm	99			
	20.0 mm	96			
	14.0 mm	95			
	5.0 mm	87			
	2.0 mm	76			
	0.425 mm	39			
	0.075 mm	14			
GM %		1.7			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	49			
COARSE FINE SAND	0.425 - 0.250	11			
MEDIUM FINE SAND	0.250 - 0.150	11			
FINE FINE SAND	0.150 - 0.075	11			
SILT CLAY	0.075	18			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	0.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G6			
	TRH 14	G6			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.5			
	MDD (kg/m³)	2154			
	COMP MC %	6.4			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	150			
	98 %	105			
	97 %	88			
	95 %	62			
	93 %	43			
	90 %	26			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

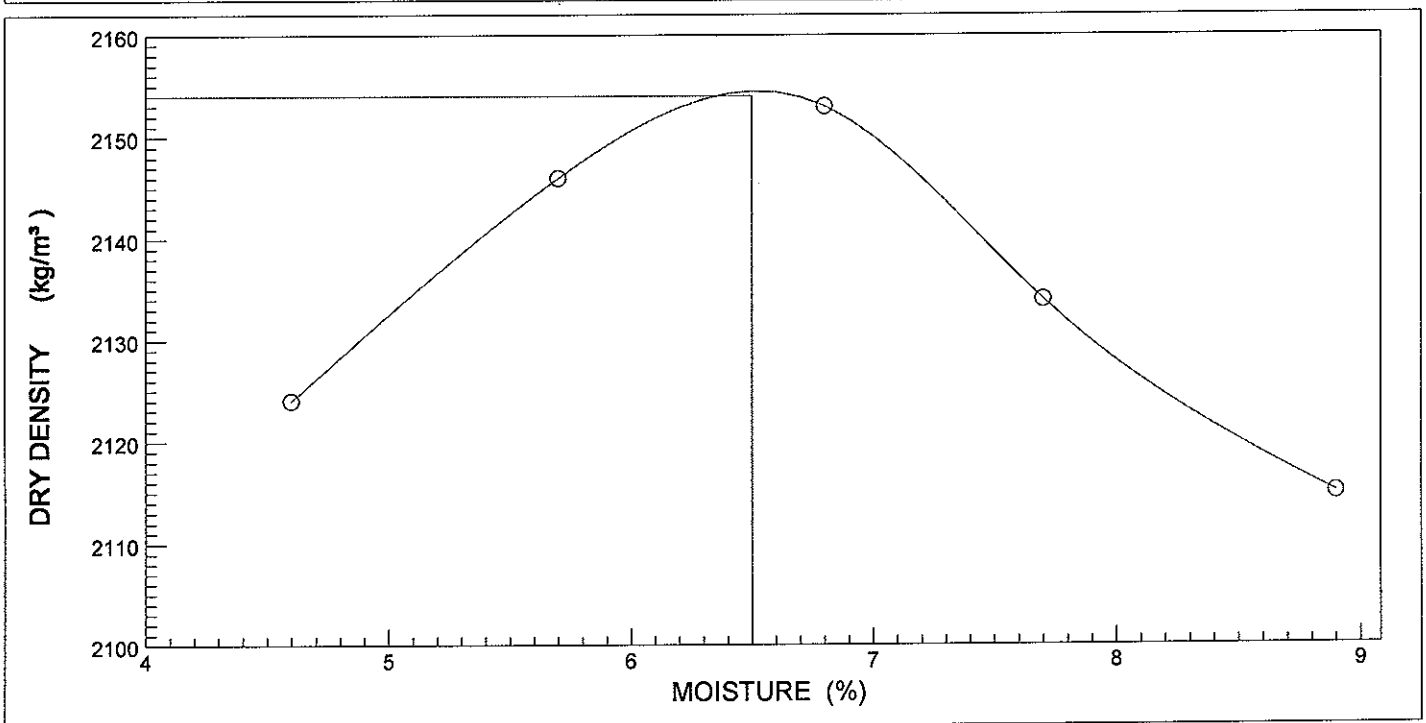
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9845
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	90kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.00 - 0.3m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 66
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Brown Sand

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2124	2146	2153	2134	2115			
MOISTURE (%)	4.6	5.7	6.8	7.7	8.9			

MAXIMUM DRY DENSITY (kg/m³) : 2154	OPTIMUM MOISTURE CONTENT (%) : 6.5



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Date Reported : 2021-06-28

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9847			
HOLE NO./ Km / CHAINAGE		TP69			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.6 - 1.0m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		DarkBrownGravellySan			
TYPE OF SAMPLE		WeatheredQuartzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm	100			
	50.0 mm	98			
	37.5 mm	96			
	28.0 mm	94			
	20.0 mm	90			
	14.0 mm	88			
	5.0 mm	70			
	2.0 mm	49			
	0.425 mm	25			
	0.075 mm	11			
GM %		2.2			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	49			
COARSE FINE SAND	0.425 - 0.250	10			
MEDIUM FINE SAND	0.250 - 0.150	11			
FINE FINE SAND	0.150 - 0.075	8			
SILT CLAY	0.075	23			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	23			
	PLASTICITY INDEX	7			
	LINEAR SHRINKAGE	3.5			
CLASSIFICATION	H.R.B.	A-2-4(0)			
	COLTO	G6			
	TRH 14	G6			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	7.3			
	MDD (kg/m³)	2107			
	COMP MC %	7.1			
SWELL % @	MOD | NRB | PRO	0.02 | 0.06 | 0.09			
C.B.R. SANS GR40	100 %	89			
	98 %	63			
	97 %	53			
	95 %	37			
	93 %	26			
	90 %	16			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Date Reported : 2021-06-28

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

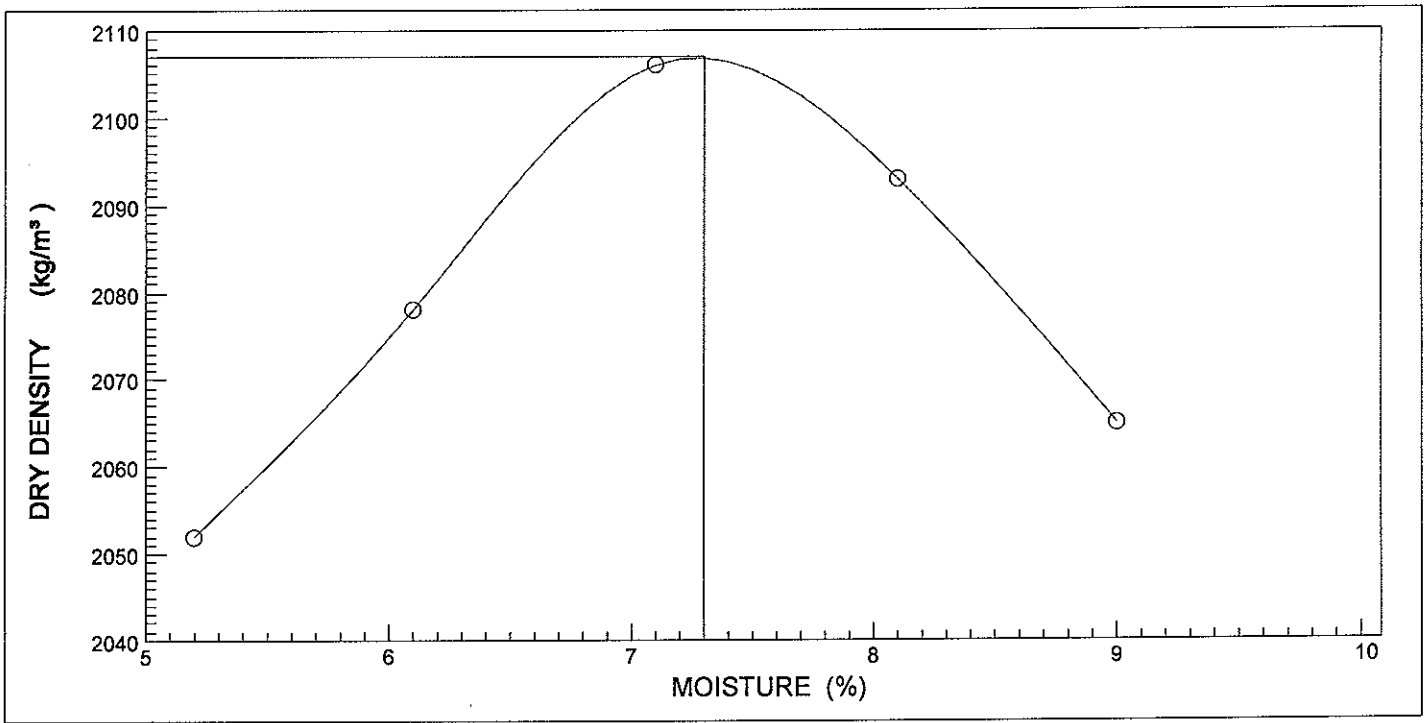
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9847
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	96kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.6 - 1.0m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 69
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Dark Brown Gravel +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2052	2078	2106	2093	2065			
MOISTURE (%)	5.2	6.1	7.1	8.1	9.0			

MAXIMUM DRY DENSITY (kg/m³) : 2107	OPTIMUM MOISTURE CONTENT (%) : 7.3



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Job Request No.: RU3988

Date Reported : 2021-07-14

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9860			
HOLE NO./ Km / CHAINAGE		TP92			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.5m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Orange Brown			
TYPE OF SAMPLE		Sand			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm				
	37.5 mm				
	28.0 mm				
	20.0 mm				
	14.0 mm	100			
	5.0 mm	93			
	2.0 mm	75			
	0.425 mm	43			
	0.075 mm	18			
GM %		1.6			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	43			
COARSE FINE SAND	0.425 - 0.250	13			
MEDIUM FINE SAND	0.250 - 0.150	12			
FINE FINE SAND	0.150 - 0.075	8			
SILT CLAY	0.075	24			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	17			
	PLASTICITY INDEX	3.9			
	LINEAR SHRINKAGE	2.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G7			
	TRH 14	G7			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	8.0			
	MDD (kg/m³)	2114			
	COMP MC %	7.8			
SWELL % @	MOD | NRB | PRO	0.01 | 0.03 | 0.05			
C.B.R. SANS GR40	100 %	24			
	98 %	22			
	97 %	21			
	95 %	20			
	93 %	18			
	90 %	16			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Job Request No.: RU3988

Date Reported : 2021-07-14

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

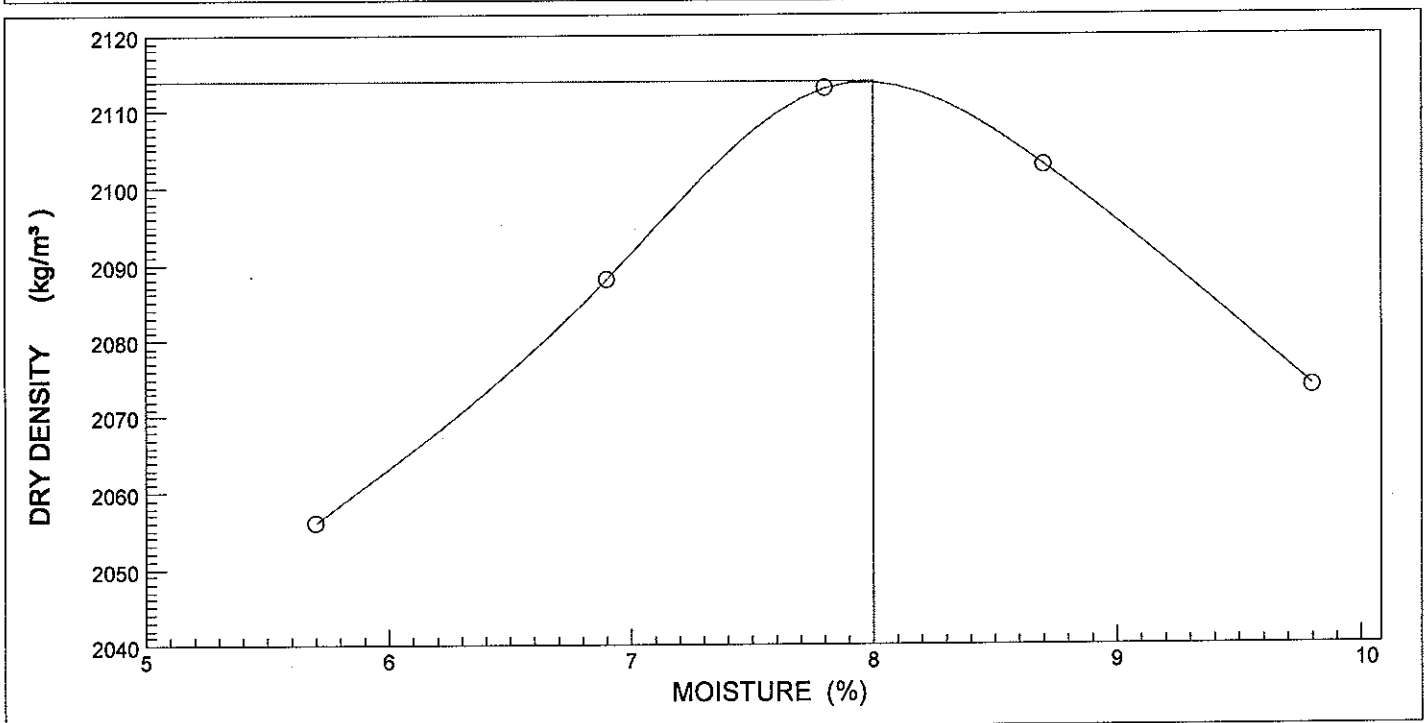
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9860
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	99kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.0 - 0.5m
MATERIAL DESCRIPTION	Sand
HOLE NO./ km / CHAINAGE	TP 92
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Orange Brown

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2056	2088	2113	2103	2074			
MOISTURE (%)	5.7	6.9	7.8	8.7	9.8			

MAXIMUM DRY DENSITY (kg/m³) : 2114	OPTIMUM MOISTURE CONTENT (%) : 8.0



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9868			
HOLE NO./ Km / CHAINAGE		TP107			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.3m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Orange Brown			
TYPE OF SAMPLE		Sand + Quartz			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm	100			
	37.5 mm	97			
	28.0 mm	95			
	20.0 mm	94			
	14.0 mm	94			
	5.0 mm	90			
	2.0 mm	85			
	0.425 mm	53			
	0.075 mm	17			
GM %		1.5			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	38			
COARSE FINE SAND	0.425 - 0.250	15			
MEDIUM FINE SAND	0.250 - 0.150	15			
FINE FINE SAND	0.150 - 0.075	13			
SILT CLAY	0.075	20			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT	19			
	PLASTICITY INDEX	5			
	LINEAR SHRINKAGE	1.0			
CLASSIFICATION	H.R.B.	A-2-4(0)			
	COLTO	G6			
	TRH 14	G6			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	7.9			
	MDD (kg/m³)	2076			
	COMP MC %	7.9			
SWELL % @	MOD | NRB | PRO	0.00 | 0.01 | 0.02			
C.B.R. SANS GR40	100 %	90			
	98 %	65			
	97 %	55			
	95 %	40			
	93 %	29			
	90 %	18			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
The test results reported relate to the samples tested.
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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Job Request No.: RU3988

Date Reported : 2021-07-14

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

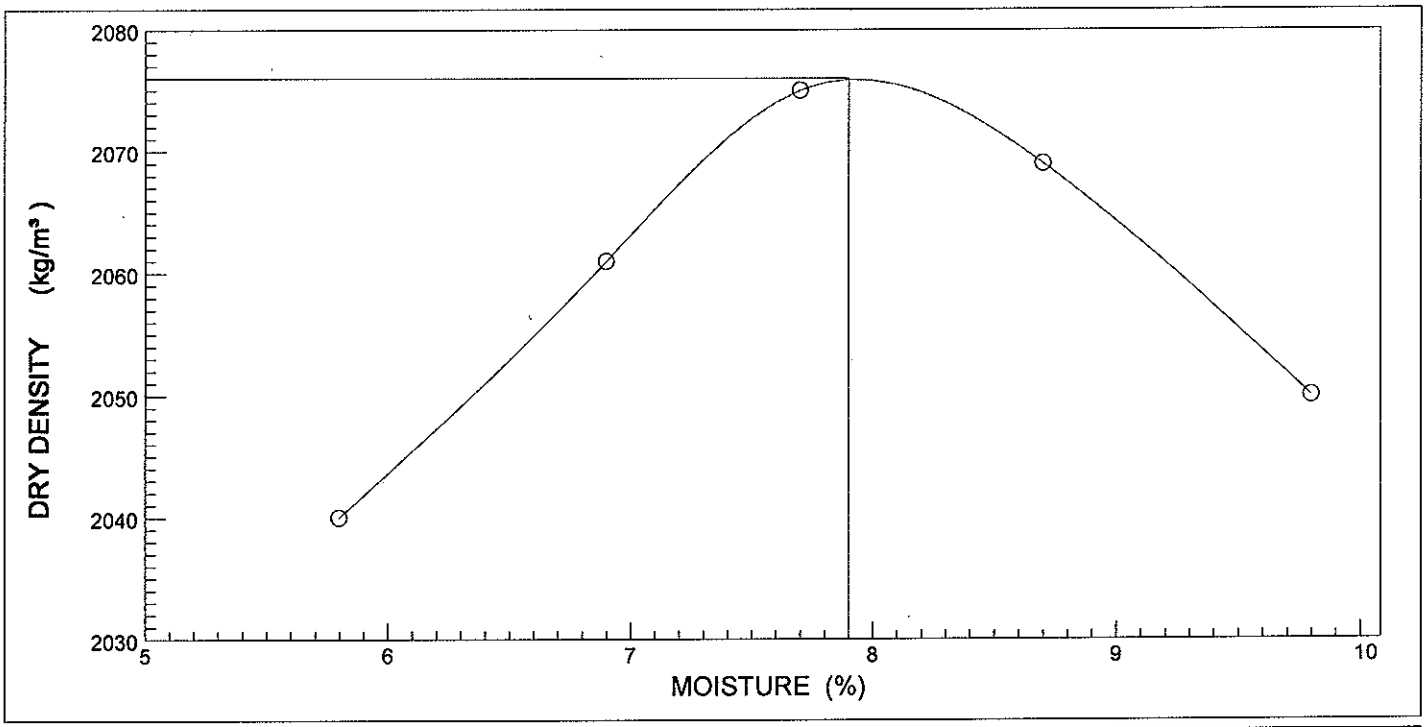
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9868
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	100kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.0 - 0.3m
MATERIAL DESCRIPTION	Sand + Quartz
HOLE NO./ km / CHAINAGE	TP 107
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Orange Brown

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2040	2061	2075	2069	2050			
MOISTURE (%)	5.8	6.9	7.7	8.7	9.8			

MAXIMUM DRY DENSITY (kg/m³) : 2076	OPTIMUM MOISTURE CONTENT (%) : 7.9



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9879			
HOLE NO./ Km / CHAINAGE		TP126			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.8m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		Light Brown			
TYPE OF SAMPLE		Sand			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm				
	37.5 mm				
	28.0 mm				
	20.0 mm	100			
	14.0 mm	99			
	5.0 mm	97			
	2.0 mm	93			
	0.425 mm	59			
	0.075 mm	19			
GM %		1.3			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	37			
COARSE FINE SAND	0.425 - 0.250	15			
MEDIUM FINE SAND	0.250 - 0.150	15			
FINE FINE SAND	0.150 - 0.075	13			
SILT CLAY	0.075	21			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	0.0			
CLASSIFICATION	H.R.B.	A-2-4(0)			
	COLTO	G7			
	TRH 14	G7			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	7.5			
	MDD (kg/m³)	2104			
	COMP MC %	7.9			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	25			
	98 %	22			
	97 %	21			
	95 %	19			
	93 %	17			
	90 %	15			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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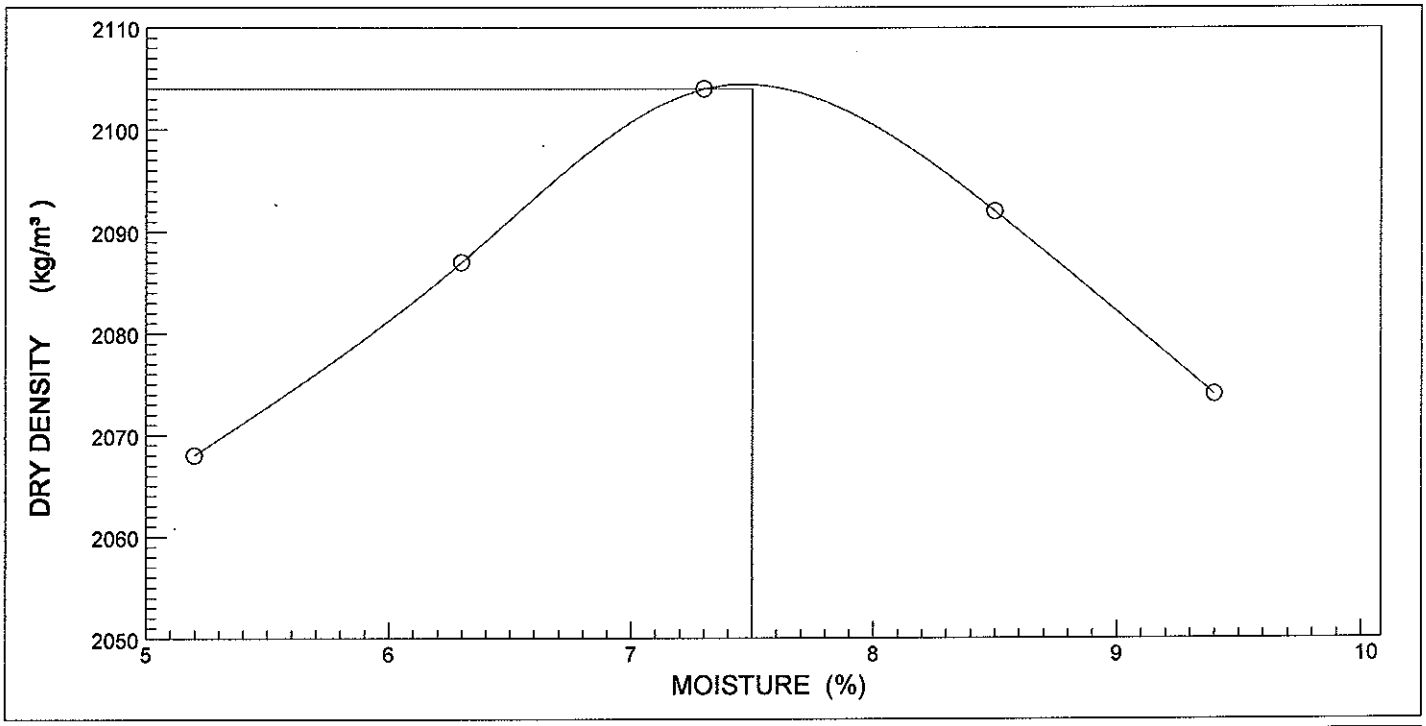
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9879
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	100kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.0 - 0.8m
MATERIAL DESCRIPTION	Sand
HOLE NO./ km / CHAINAGE	TP 126
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Brown

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2068	2087	2104	2092	2074			
MOISTURE (%)	5.2	6.3	7.3	8.5	9.4			

MAXIMUM DRY DENSITY (kg/m³) : 2104	OPTIMUM MOISTURE CONTENT (%) : 7.5



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9883			
HOLE NO./ Km / CHAINAGE		TP135			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.5m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightOrangeBrownGrav			
TYPE OF SAMPLE		Sand+WeatheredQuartz			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm	100			
	50.0 mm	98			
	37.5 mm	93			
	28.0 mm	88			
	20.0 mm	83			
	14.0 mm	78			
	5.0 mm	64			
	2.0 mm	53			
	0.425 mm	27			
	0.075 mm	9			
GM %		2.1			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	48			
COARSE FINE SAND	0.425 - 0.250	13			
MEDIUM FINE SAND	0.250 - 0.150	12			
FINE FINE SAND	0.150 - 0.075	9			
SILT CLAY	0.075	17			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	0.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G6			
	TRH 14	G6			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.2			
	MDD (kg/m³)	2208			
	COMP MC %	6.1			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	124			
	98 %	82			
	97 %	66			
	95 %	44			
	93 %	29			
	90 %	16			

STABILISER IN LAB		N/A			
TEST TYPE		CBR			
SAMPLING METHOD		Client			
WEATHER WHEN SAMPLED		Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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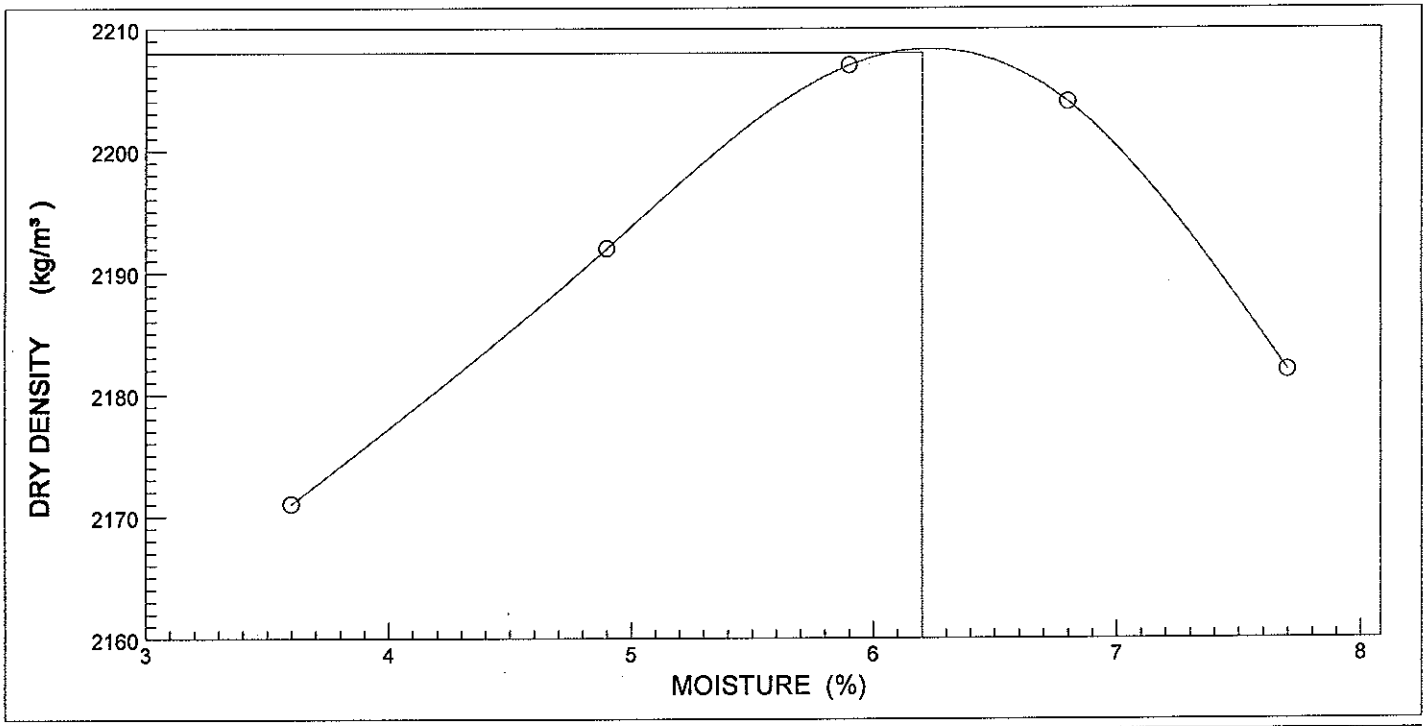
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9883
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	102kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.0 - 0.5m
MATERIAL DESCRIPTION	Sand + Weathered Quartz
HOLE NO./ km / CHAINAGE	TP 135
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light ORange Brown Gravelly

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2171	2192	2207	2204	2182			
MOISTURE (%)	3.6	4.9	5.9	6.8	7.7			

MAXIMUM DRY DENSITY (kg/m³) : 2208	OPTIMUM MOISTURE CONTENT (%) : 6.2



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9896			
HOLE NO./ Km / CHAINAGE		TP152			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.6m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightOrangeBrownGrav			
TYPE OF SAMPLE		+WeatheredQuarzStone			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm				
	50.0 mm	100			
	37.5 mm	98			
	28.0 mm	94			
	20.0 mm	92			
	14.0 mm	90			
	5.0 mm	80			
	2.0 mm	64			
	0.425 mm	36			
	0.075 mm	13			
GM %		1.9			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	44			
COARSE FINE SAND	0.425 - 0.250	12			
MEDIUM FINE SAND	0.250 - 0.150	12			
FINE FINE SAND	0.150 - 0.075	12			
SILT CLAY	0.075	20			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	SP			
	LINEAR SHRINKAGE	1.5			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G5			
	TRH 14	G5			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	6.3			
	MDD (kg/m³)	2143			
	COMP MC %	5.9			
SWELL % @	MOD | NRB | PRO	0.00 | 0.02 | 0.03			
C.B.R. SANS GR40	100 %	86			
	98 %	68			
	97 %	61			
	95 %	48			
	93 %	38			
	90 %	27			

STABILISER IN LAB	N/A			
TEST TYPE	CBR			
SAMPLING METHOD	Client			
WEATHER WHEN SAMPLED	Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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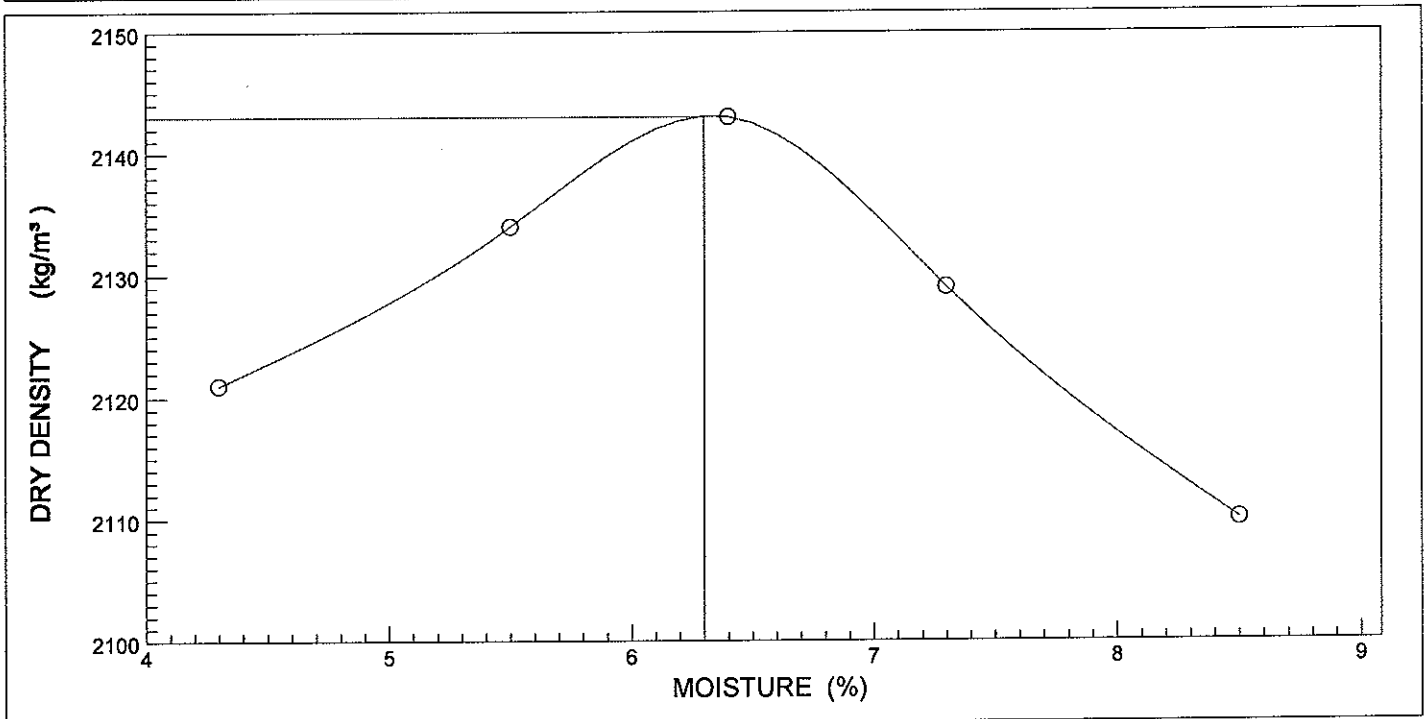
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9896
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	98kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.0 - 0.6m
MATERIAL DESCRIPTION	Weathered Quartz Stone
HOLE NO./ km / CHAINAGE	TP 152
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light Orange Brown Gravel +

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2121	2134	2143	2129	2110			
MOISTURE (%)	4.3	5.5	6.4	7.3	8.5			

MAXIMUM DRY DENSITY (kg/m³) : 2143	OPTIMUM MOISTURE CONTENT (%) : 6.3



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Determination of the California Bearting Ratio Test Report SANS 3001 - GR1 / GR10 / GR20 / GR30 / GR40 / PR5

SAMPLE INFORMATION AND PROPERTIES

SAMPLE NO.		U9898			
HOLE NO./ Km / CHAINAGE		TP157			
ROAD NO./ NAME Line 1 ROAD NO./ NAME Line 2		Not Specified Not Specified			
LAYER TESTED/SAMPLED		Not Specified			
SAMPLE DEPTH		0.0 - 0.8m			
DATE SAMPLED		Unknown			
COLOUR OF SAMPLE		LightOrangeGravelly			
TYPE OF SAMPLE		Sand+WeatheredQuartz			

SIEVE ANALYSIS - % PASSING SIEVES *(SANS 3001-GR1:2010, SANS 3001-GR2:2010)

SIEVE ANALYSIS (GR 1) % PASSING	100.0 mm				
	75.0 mm				
	63.0 mm	100			
	50.0 mm	97			
	37.5 mm	94			
	28.0 mm	90			
	20.0 mm	87			
	14.0 mm	85			
	5.0 mm	72			
	2.0 mm	64			
	0.425 mm	34			
	0.075 mm	10			
GM %		1.9			

SOIL MORTAR ANALYSIS (SANS 3001-PR5:2011)

COARSE SAND	2.000 - 0.425	46			
COARSE FINE SAND	0.425 - 0.250	15			
MEDIUM FINE SAND	0.250 - 0.150	12			
FINE FINE SAND	0.150 - 0.075	11			
SILT CLAY	0.075	16			

ATTERBERG LIMITS ANALYSIS - *(SANS 3001-GR10:2010)

ATTERBERG LIMITS (%) SANS GR10,GR11	LIQUID LIMIT				
	PLASTICITY INDEX	NP			
	LINEAR SHRINKAGE	0.0			
CLASSIFICATION	H.R.B.	A-1-b(0)			
	COLTO	G8			
	TRH 14	G8			

CALIFORNIA BEARING RATIO - *(SANS 3001-GR30:2010, SANS 3001-GR40:2010)

SANS GR30 MAX. DRY DENSITY	OMC %	7.0			
	MDD (kg/m³)	2099			
	COMP MC %	6.9			
SWELL % @	MOD | NRB | PRO	0.00 | 0.00 | 0.00			
C.B.R. SANS GR40	100 %	23			
	98 %	19			
	97 %	18			
	95 %	15			
	93 %	12			
	90 %	10			

STABILISER IN LAB		N/A			
TEST TYPE		CBR			
SAMPLING METHOD		Client			
WEATHER WHEN SAMPLED		Not Specified			

Deviation from Test Method : Client sampled material - this may have an influence on the validity of the results.
Remarks and Notes :

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Attention : Aubrey Nonyana

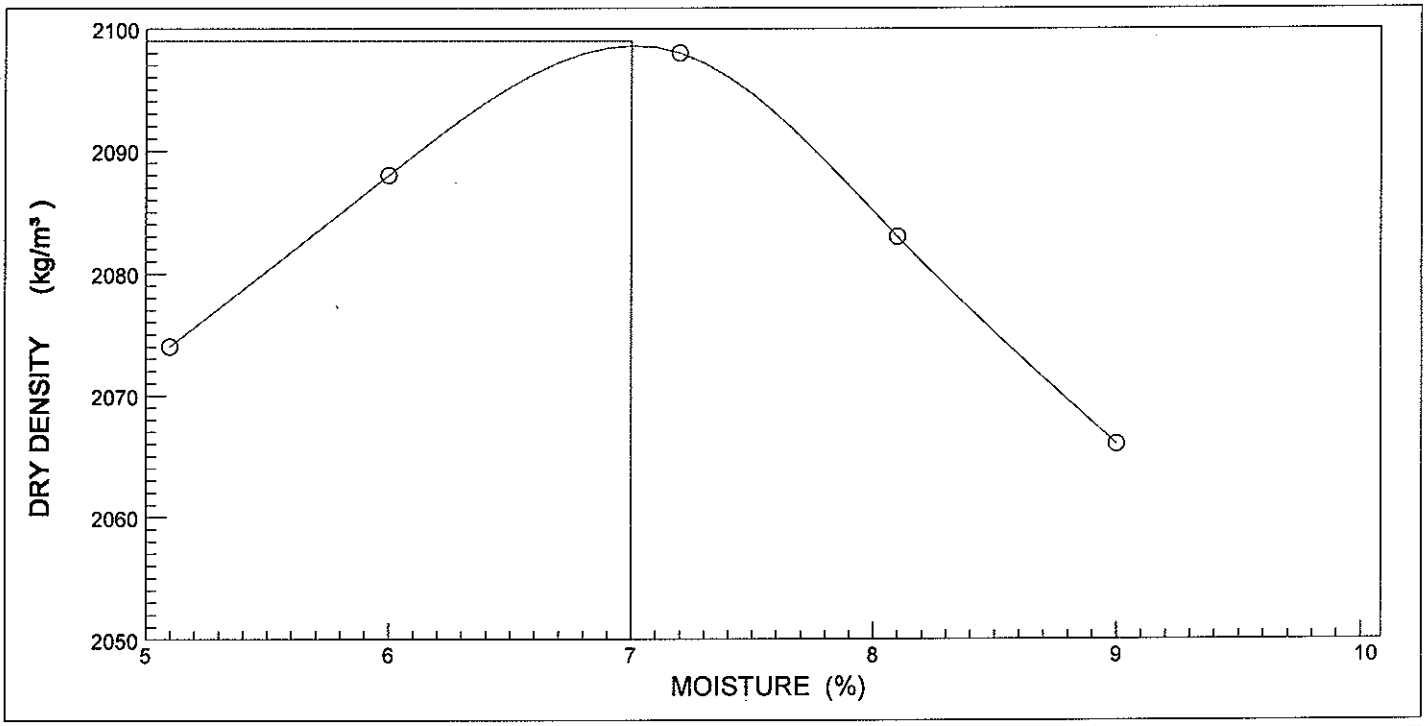
Determination Maximum Dry Density & Optimum Moisture Content Test Report

SANS 3001 - GR20 / GR30

SAMPLE NO.	U9898
CONTAINER FOR SAMPLING	Nylon Bag
SIZE / APPROX. MASS OF SAMPLE	99kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.0 - 0.8m
MATERIAL DESCRIPTION	Sand + Weathered Quartz
HOLE NO./ km / CHAINAGE	TP 157
ROAD NO.	Not Specified
DATE RECEIVED	2021-05-23
DATE SAMPLED	Unknown
CLIENT MARKING	Not Specified
COLOUR AND TYPE	Light ORange Gravelly

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2074	2088	2098	2083	2066			
MOISTURE (%)	5.1	6.0	7.2	8.1	9.0			

MAXIMUM DRY DENSITY (kg/m³) : 2099	OPTIMUM MOISTURE CONTENT (%) : 7.0



Deviation from Test Method : Client sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
The test results reported relate to the samples tested.
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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Job Request No.: RU3988
Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

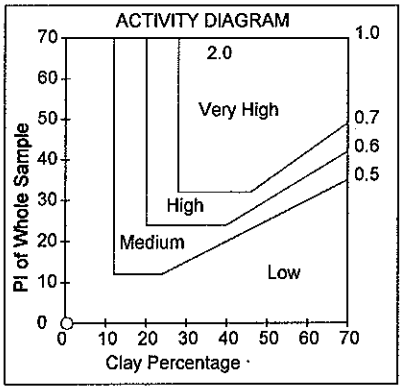
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

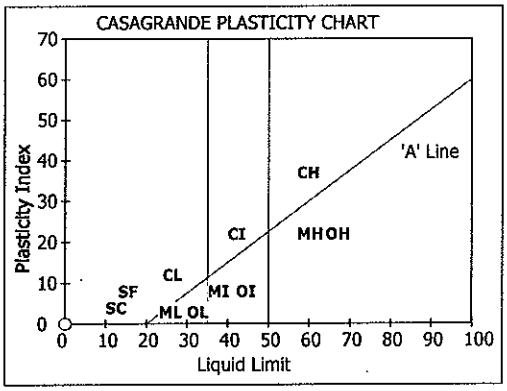
Sample No.	: U9812
Position	: TP 17; 0.0 - 0.2m
Layer Type	: Not Specified
Sample Colour	: Light Brown Sand
Sample Type	: + Quartz Stone

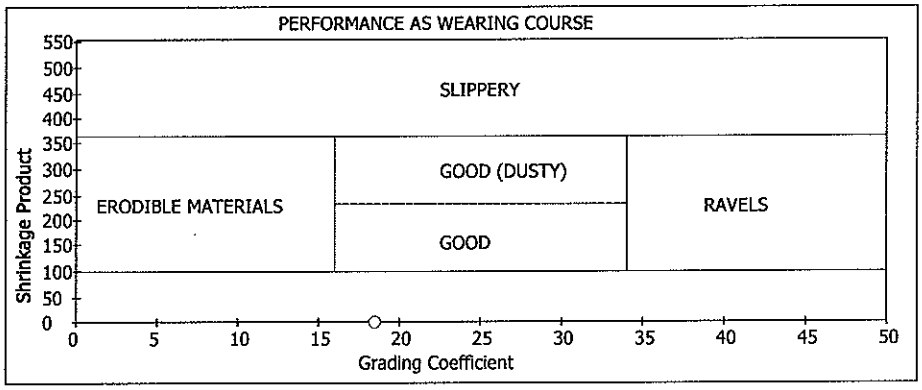
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	95
14.00	91
5.000	84
2.000	78
0.425	45
0.250	37
0.150	27
0.075	16
0.060	6.1
0.050	5.6
0.020	1.8
0.005	1.2
0.002	0.7

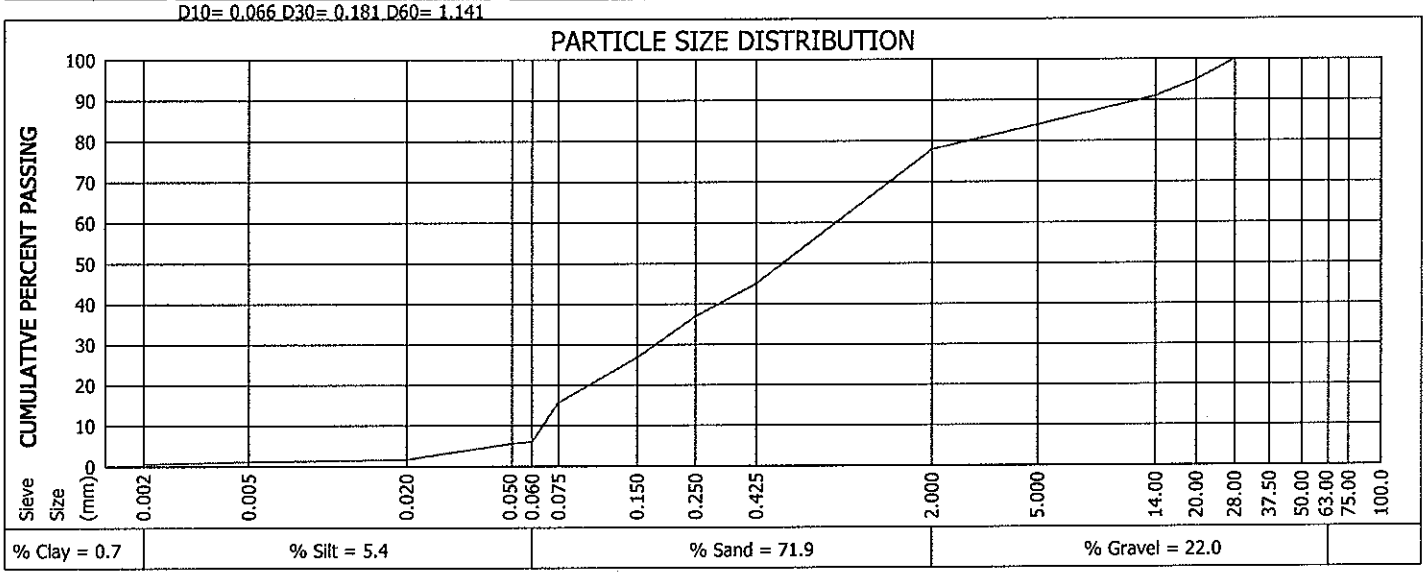
Soil Mortar	2.000 - 0.425	42
	0.425 - 0.250	11
	0.250 - 0.150	13
	0.150 - 0.075	14
	< 0.075	21
Effective Size		0.066
Uniformity Coefficient		17.3
Curvature Coefficient		0.4
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		18.5
Grading Modulus		1.60
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.066 D30= 0.181 D60= 1.141









% Clay = 0.7	% Silt = 5.4	% Sand = 71.9	% Gravel = 22.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Roelof Lategan
Manager

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Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

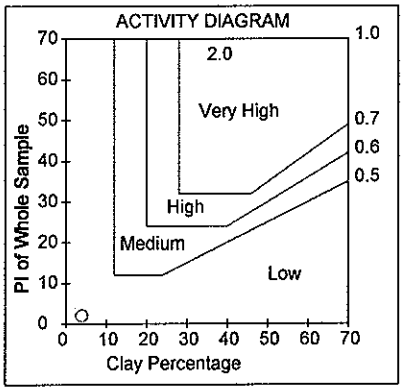
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

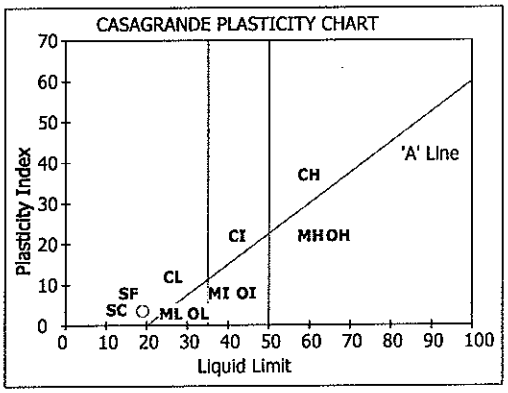
Sample No.	: U9828
Position	: TP 35; 0.0 - 0.5m
Layer Type	: Not Specified
Sample Colour	: DarkBrownGravellySil
Sample Type	: MixWeatheredGrQuartz

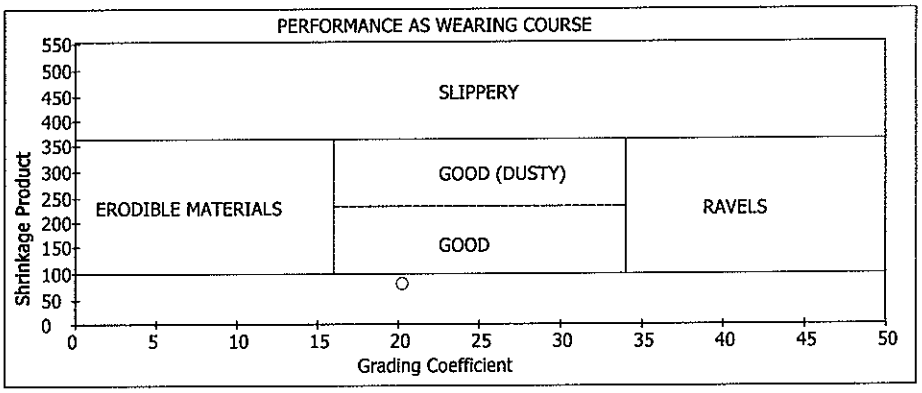
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	96
28.00	95
20.00	92
14.00	91
5.000	81
2.000	70
0.425	41
0.250	34
0.150	25
0.075	17
0.060	9.6
0.050	5.6
0.020	5.2
0.005	4.6
0.002	3.9

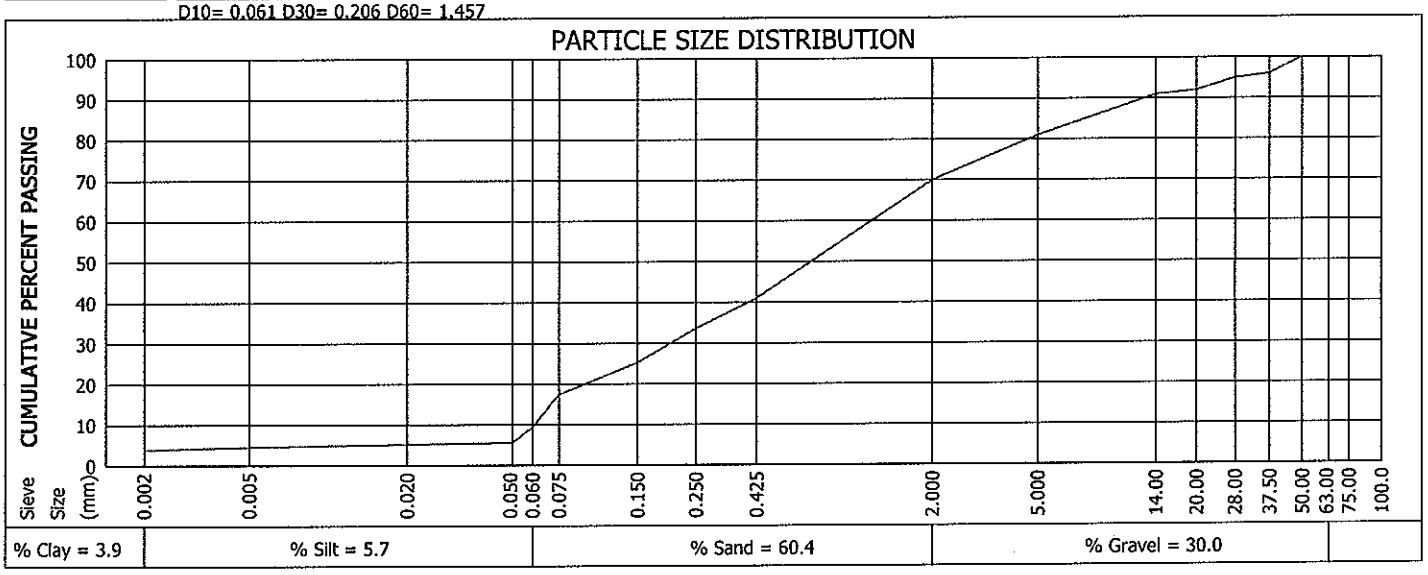
Soil Mortar	2.000 - 0.425	41
	0.425 - 0.250	10
	0.250 - 0.150	12
	0.150 - 0.075	12
	< 0.075	24
Effective Size		0.061
Uniformity Coefficient		23.9
Curvature Coefficient		0.5
Oversize Index		4.0
Shrinkage Product		82.0
Grading Coefficient		20.3
Grading Modulus		1.70
Atterberg Limits	Liquid Limit	19
	Plasticity Index	4.0
	Linear Shrinkage	2.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.061 D30= 0.206 D60= 1.457









% Clay = 3.9	% Silt = 5.7	% Sand = 60.4	% Gravel = 30.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Manager

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Louis Trichardt
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Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

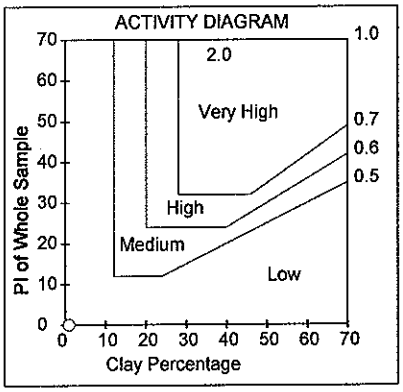
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

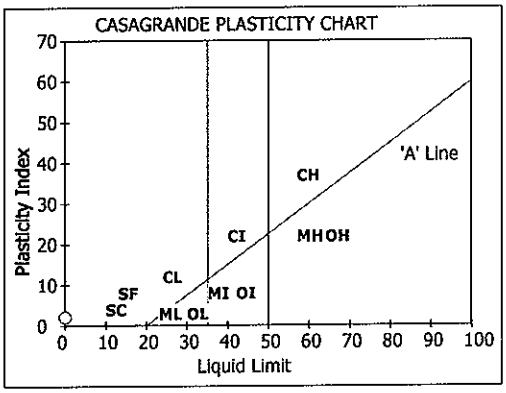
Sample No.	: U9831
Position	: TP 40; 0.0 - 0.35m
Layer Type	: Not Specified
Sample Colour	: LightBrownGravellyS/
Sample Type	: +WeatheredQuartz Sto

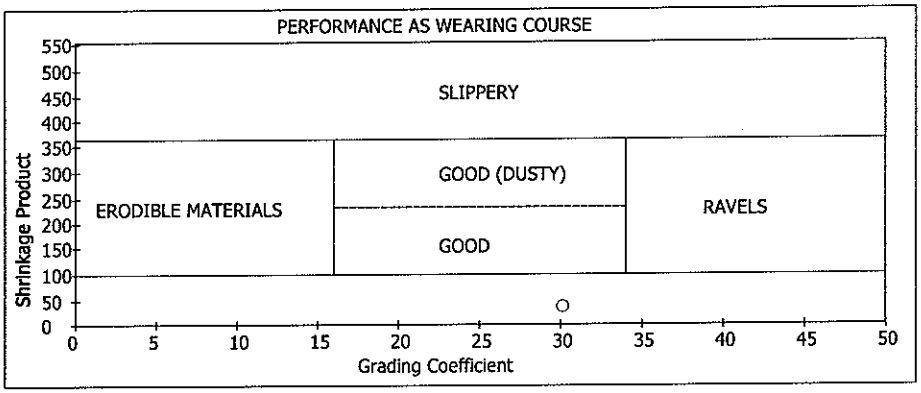
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	95
20.00	90
14.00	85
5.000	64
2.000	48
0.425	24
0.250	19
0.150	14
0.075	9.3
0.060	6.2
0.050	5.6
0.020	1.9
0.005	1.5
0.002	1.0

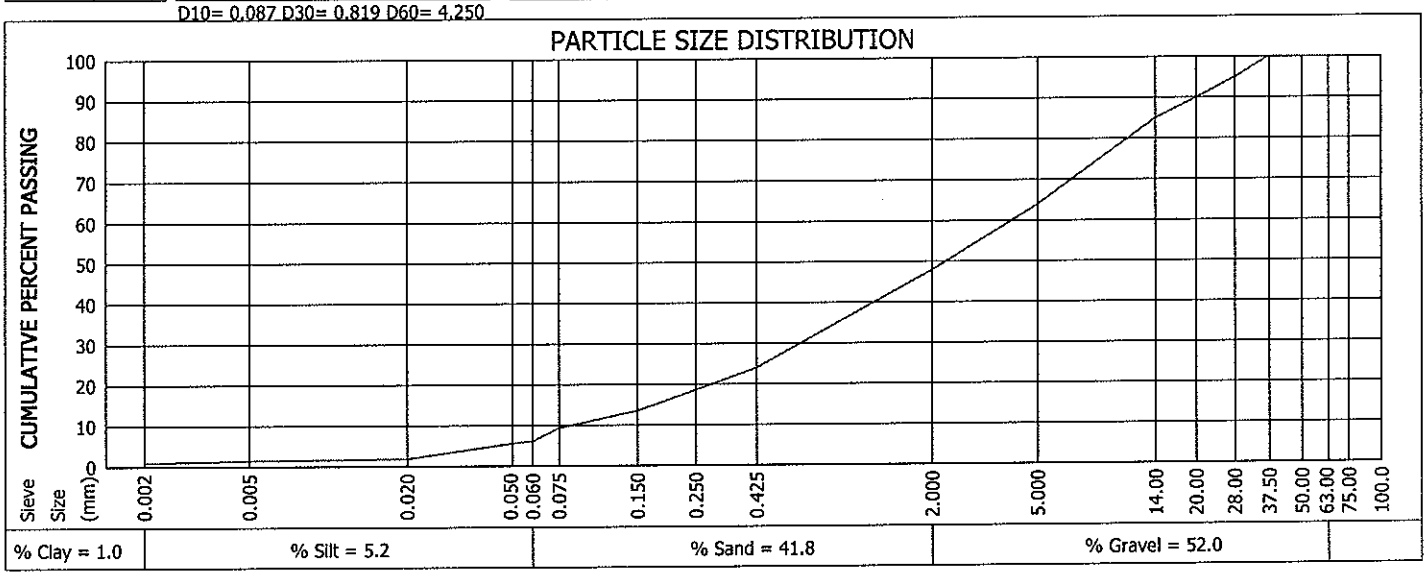
Soil Mortar	2.000 - 0.425	49
	0.425 - 0.250	12
	0.250 - 0.150	10
	0.150 - 0.075	10
	< 0.075	19
Effective Size		0.087
Uniformity Coefficient		48.9
Curvature Coefficient		1.8
Oversize Index		0.0
Shrinkage Product		36.0
Grading Coefficient		30.1
Grading Modulus		2.20
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	1.5
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-a(0)

D10= 0.087 D30= 0.819 D60= 4.250









% Clay = 1.0	% Silt = 5.2	% Sand = 41.8	% Gravel = 52.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Manager

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Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

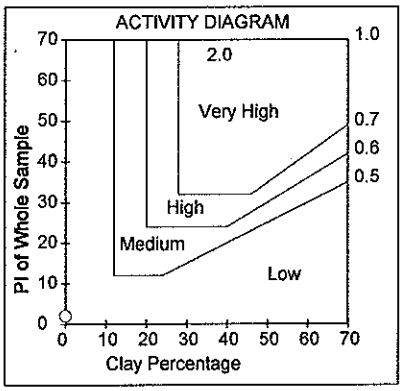
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

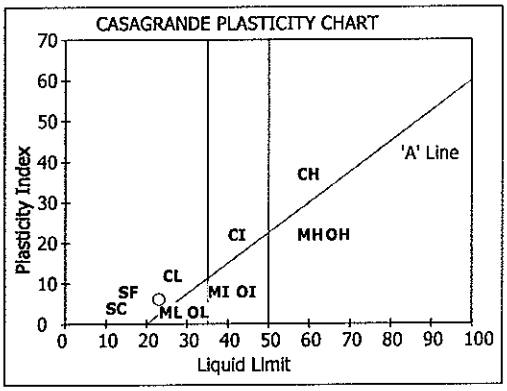
Sample No.	: U9832
Position	: TP 42; 0.8 - 1.3m
Layer Type	: Not Specified
Sample Colour	: LightBrownGravellyS/
Sample Type	: +Weathered Quartz

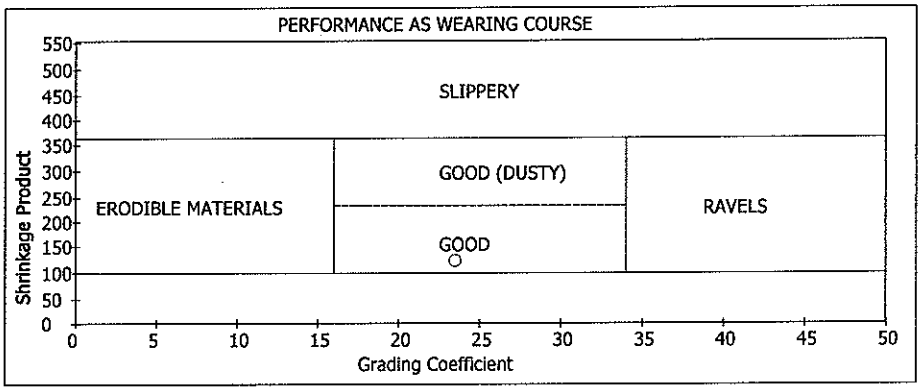
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	99
20.00	97
14.00	95
5.000	84
2.000	71
0.425	41
0.250	33
0.150	25
0.075	17
0.060	7.8
0.050	6.7
0.020	1.7
0.005	1.4
0.002	0.2

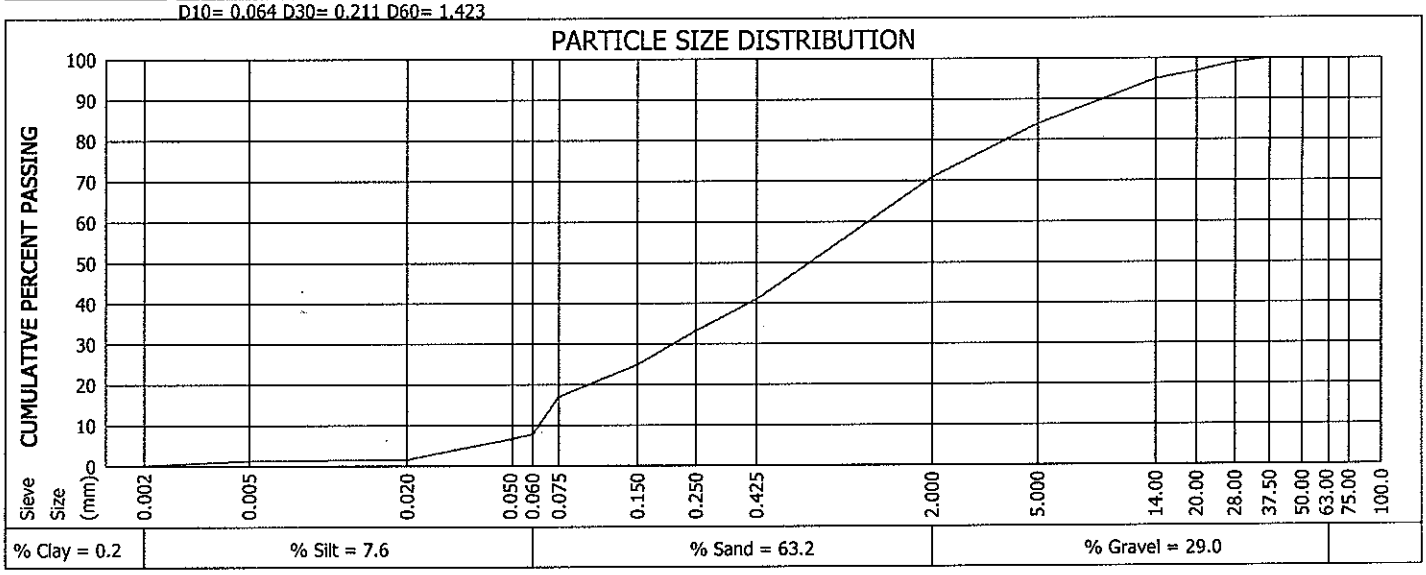
Soil Mortar	2.000 - 0.425	42
	0.425 - 0.250	11
	0.250 - 0.150	12
	0.150 - 0.075	11
	< 0.075	24
Effective Size		0.064
Uniformity Coefficient		22.2
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		123.0
Grading Coefficient		23.5
Grading Modulus		1.70
Atterberg Limits	Liquid Limit	23
	Plasticity Index	6
	Linear Shrinkage	3.0
	PI < 0.075	
Unified Soil Classification		SM-SC
US Highway Classification		A-1-b(0)

D10= 0.064 D30= 0.211 D60= 1.423









% Clay = 0.2	% Silt = 7.6	% Sand = 63.2	% Gravel = 29.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
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Manager

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Job Request No.: RU3988

Date Reported : 2021-07-20

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Louis Trichardt
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Attention : Aubrey Nonyana

Project : RDP Houses, Nababeep

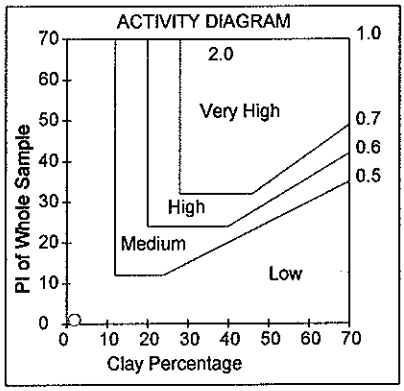
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

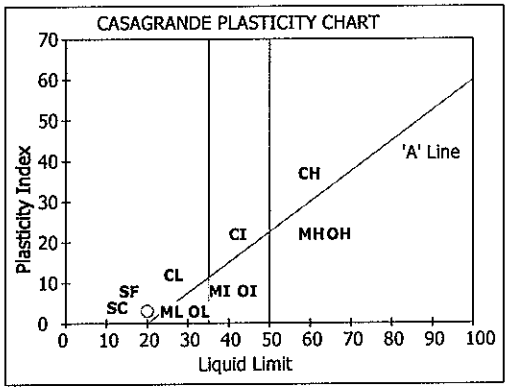
Sample No.	: U9835
Position	: TP 49; 0.0 - 1.2m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Gravel
Sample Type	: + Weathered Quartz S

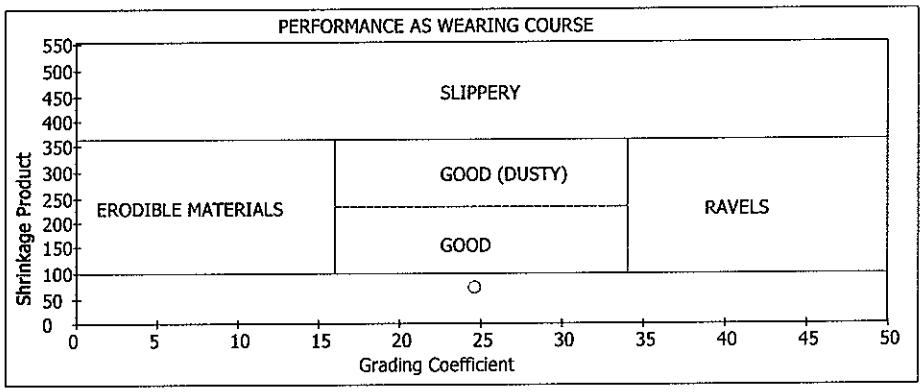
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	98
20.00	98
14.00	98
5.000	88
2.000	70
0.425	36
0.250	28
0.150	20
0.075	13
0.060	7.1
0.050	3.8
0.020	3.5
0.005	2.5
0.002	2.2

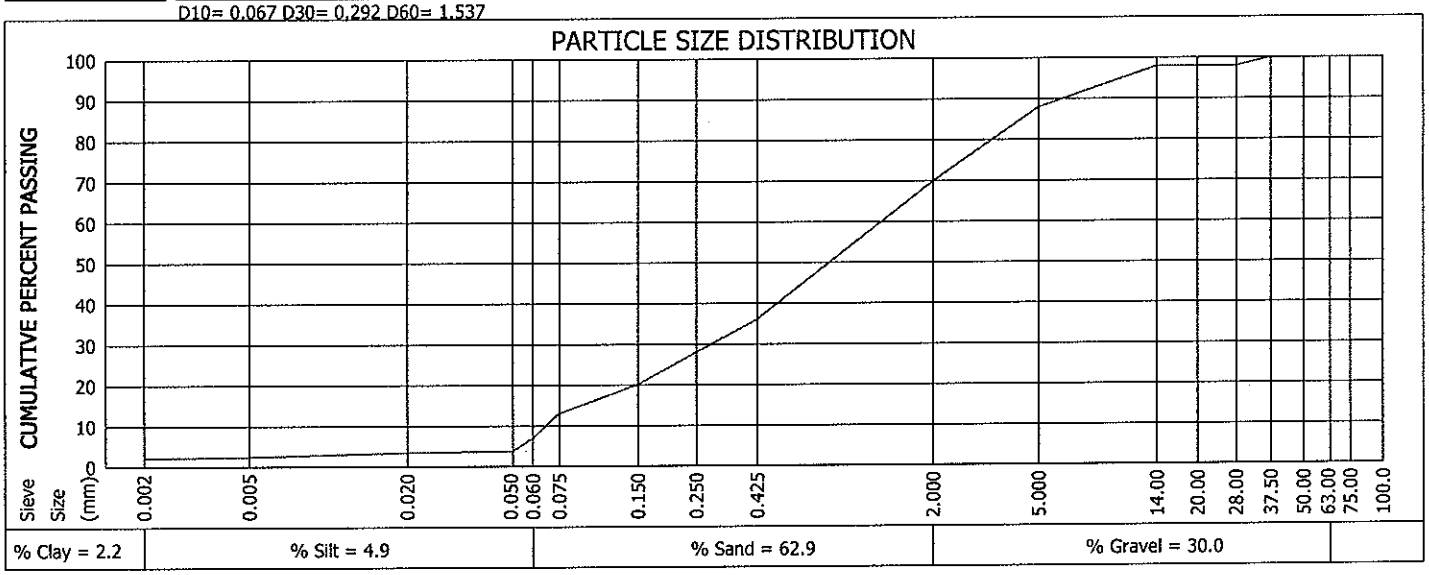
Soil Mortar	2.000 - 0.425	49
	0.425 - 0.250	11
	0.250 - 0.150	11
	0.150 - 0.075	10
	< 0.075	19
Effective Size		0.067
Uniformity Coefficient		22.9
Curvature Coefficient		0.8
Oversize Index		0.0
Shrinkage Product		72.0
Grading Coefficient		24.6
Grading Modulus		1.80
Atterberg Limits	Liquid Limit	20
	Plasticity Index	3.0
	Linear Shrinkage	2.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.067 D30= 0.292 D60= 1.537









% Clay = 2.2	% Silt = 4.9	% Sand = 62.9	% Gravel = 30.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
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Attention : Aubrey Nonyana

Date Reported : 2021-07-20

Project : RDP Houses, Nababeep

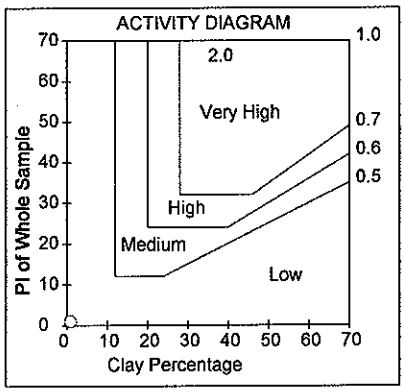
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

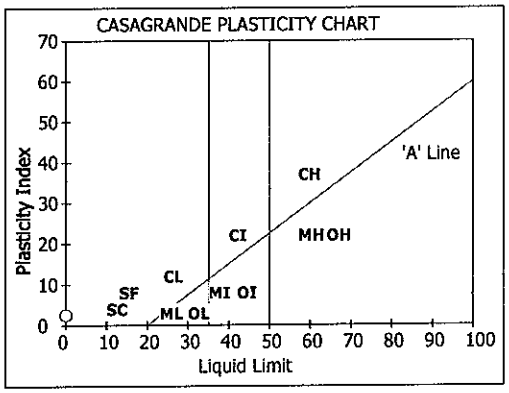
Sample No.	: U9899
Position	: TP 44; 0.0 - 0.15m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravel
Sample Type	: + Weathered Quartz S

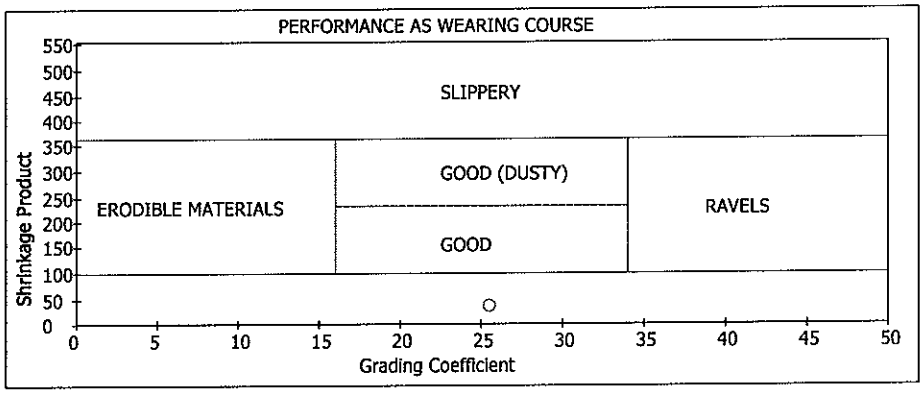
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	94
28.00	88
20.00	82
14.00	78
5.000	58
2.000	44
0.425	23
0.250	19
0.150	14
0.075	9.3
0.060	4.0
0.050	2.3
0.020	2.1
0.005	1.6
0.002	1.2

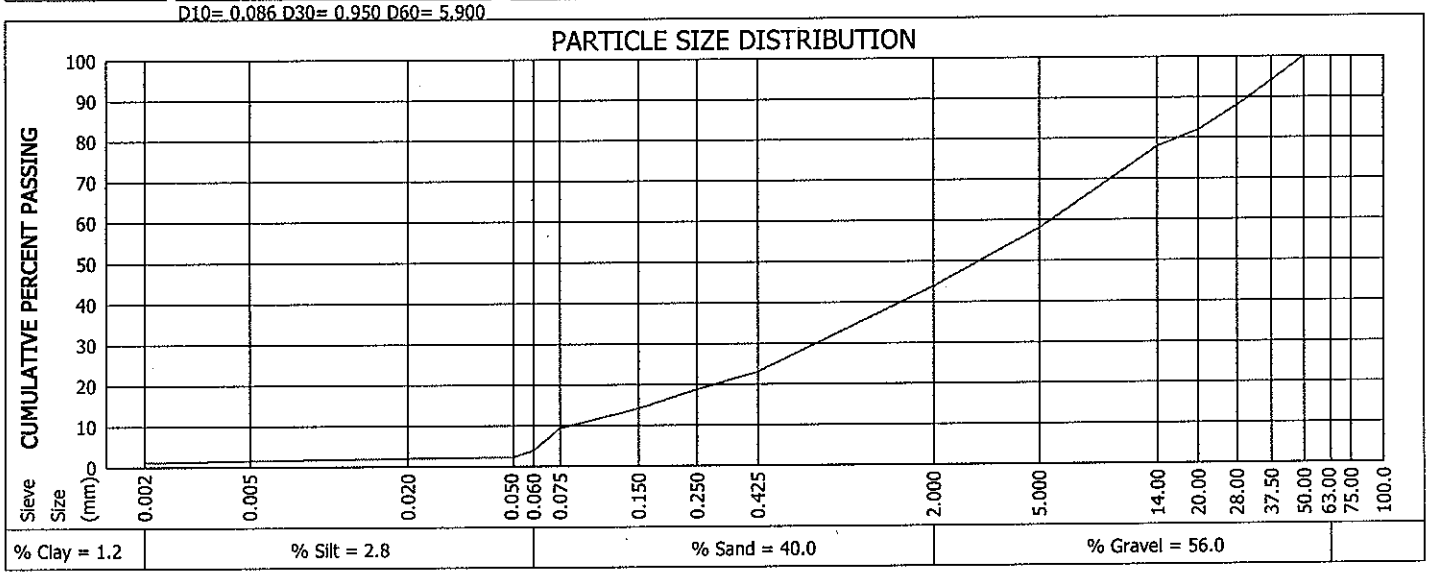
Soil Mortar	2.000 - 0.425	47
	0.425 - 0.250	10
	0.250 - 0.150	11
	0.150 - 0.075	12
	< 0.075	21
Effective Size		0.086
Uniformity Coefficient		68.6
Curvature Coefficient		1.8
Oversize Index		6.0
Shrinkage Product		34.5
Grading Coefficient		25.5
Grading Modulus		2.20
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	1.5
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-a(0)

D10= 0.086 D30= 0.950 D60= 5.900









% Clay = 1.2	% Silt = 2.8	% Sand = 40.0	% Gravel = 56.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Job Request No.: RU3988

Date Reported : 2021-07-20

Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

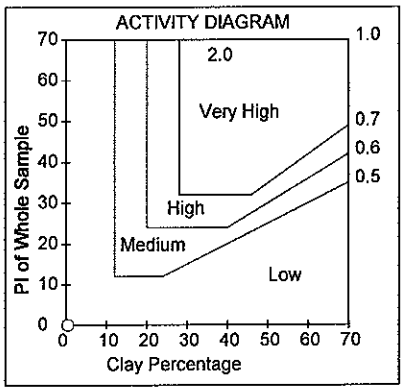
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

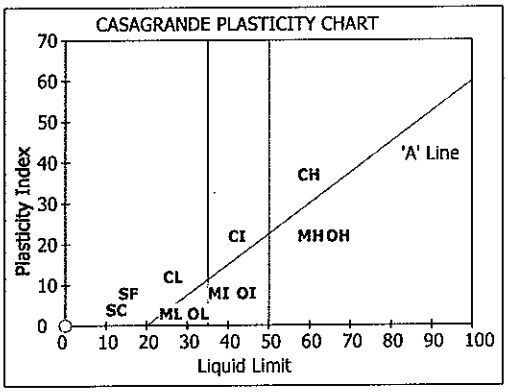
Sample No.	: U9837
Position	: TP 52; 0.0 - 0.5m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravelly
Sample Type	: Sand + Quartz Stone

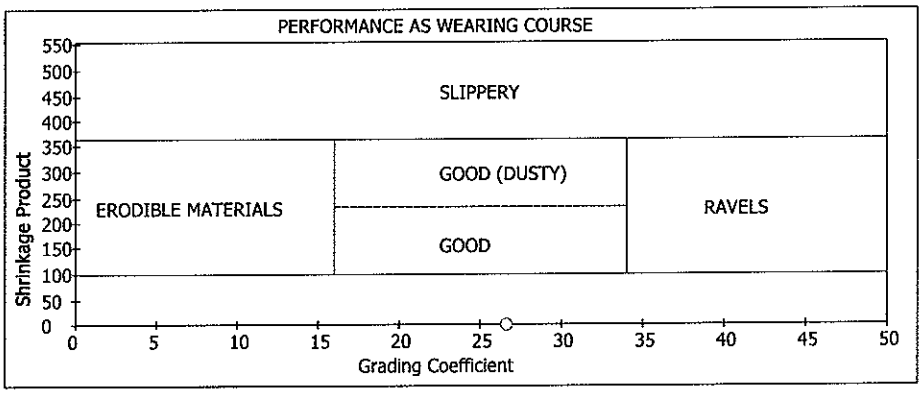
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	95
28.00	94
20.00	83
14.00	78
5.000	58
2.000	48
0.425	25
0.250	19
0.150	13
0.075	7.8
0.060	3.5
0.050	1.8
0.020	1.4
0.005	0.9
0.002	0.7

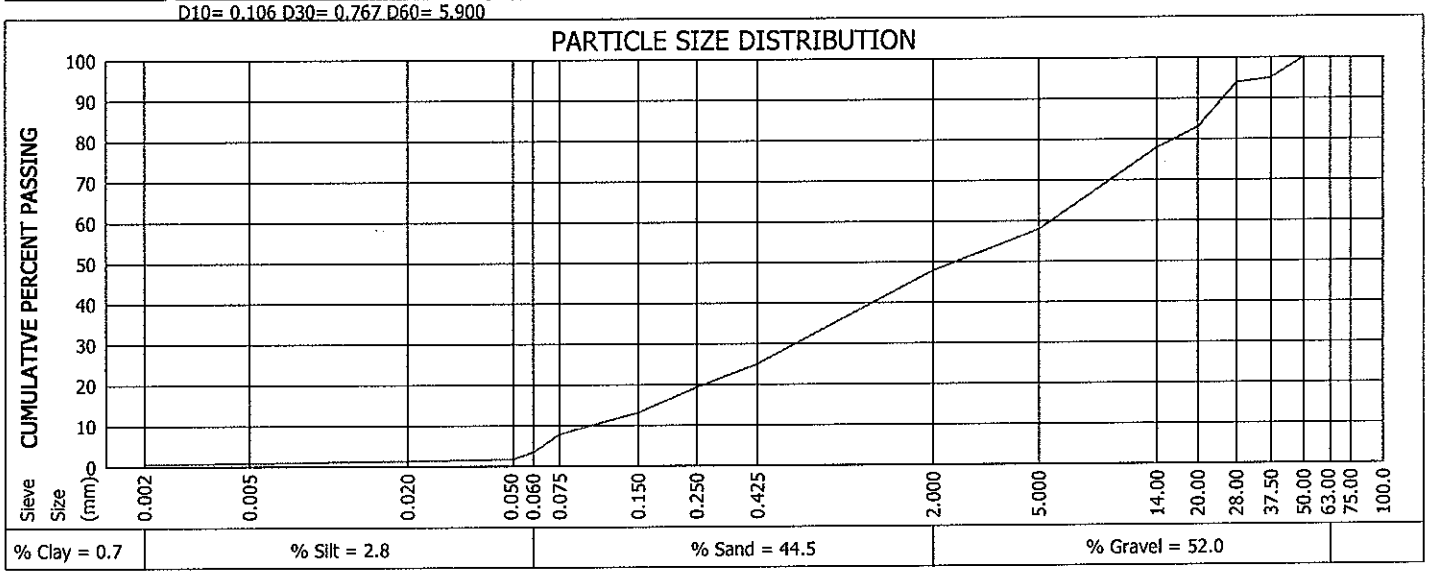
Soil Mortar	2.000 - 0.425	47
	0.425 - 0.250	13
	0.250 - 0.150	13
	0.150 - 0.075	11
	< 0.075	17
Effective Size		0.106
Uniformity Coefficient		55.7
Curvature Coefficient		0.9
Oversize Index		5.0
Shrinkage Product		0.0
Grading Coefficient		26.7
Grading Modulus		2.20
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-a(0)

D10= 0.106 D30= 0.767 D60= 5.900









% Clay = 0.7	% Silt = 2.8	% Sand = 44.5	% Gravel = 52.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Manager

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Job Request No.: RU3988
Iceberg Trading
PO Box 1364
Louis Trichardt
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Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

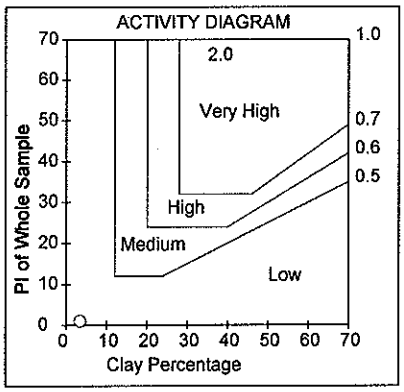
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

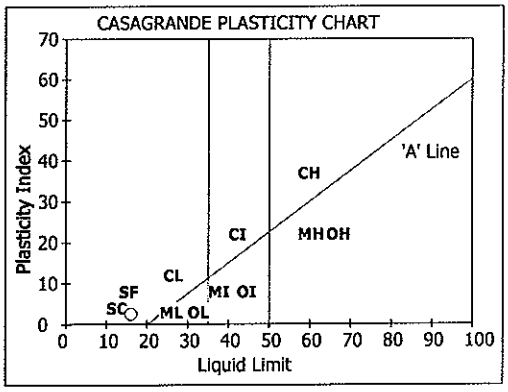
Sample No.	: U9839
Position	: TP 55; 0.0 - 0.9m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Sand
Sample Type	: + Quartz Stone

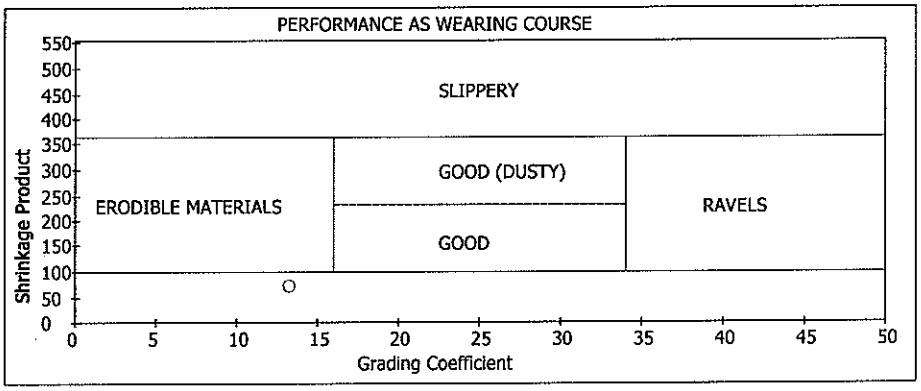
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	100
14.00	100
5.000	95
2.000	86
0.425	49
0.250	39
0.150	27
0.075	16
0.060	9.8
0.050	9.1
0.020	3.6
0.005	3.6
0.002	3.6

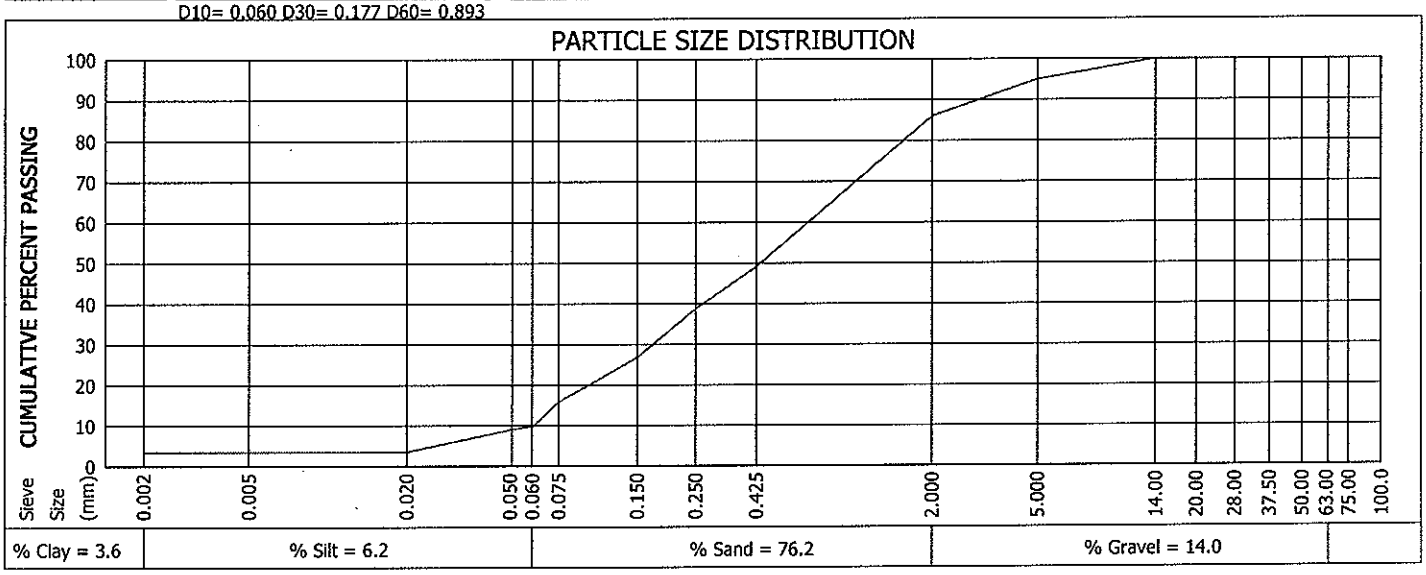
Soil Mortar	2.000 - 0.425	43
	0.425 - 0.250	12
	0.250 - 0.150	14
	0.150 - 0.075	13
	< 0.075	19
Effective Size		0.060
Uniformity Coefficient		14.9
Curvature Coefficient		0.6
Oversize Index		0.0
Shrinkage Product		73.5
Grading Coefficient		13.3
Grading Modulus		1.50
Atterberg Limits	Liquid Limit	16
	Plasticity Index	3.0
	Linear Shrinkage	1.5
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.060 D30= 0.177 D60= 0.893









% Clay = 3.6	% Silt = 6.2	% Sand = 76.2	% Gravel = 14.0

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Manager

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Job Request No.: RU3988

Date Reported : 2021-08-18

Iceberg Trading
PO Box 1364
Louis Trichardt
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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

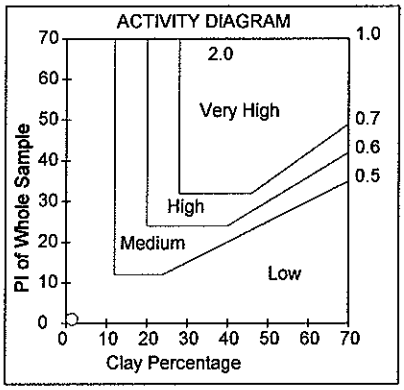
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

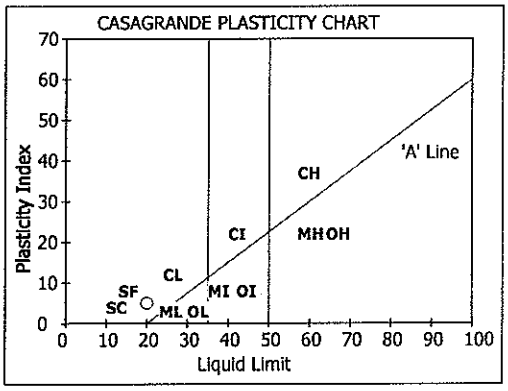
Sample No.	: U9841
Position	: TP 58; 0.0 - 0.6m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravel
Sample Type	: + Weathered Quartz S

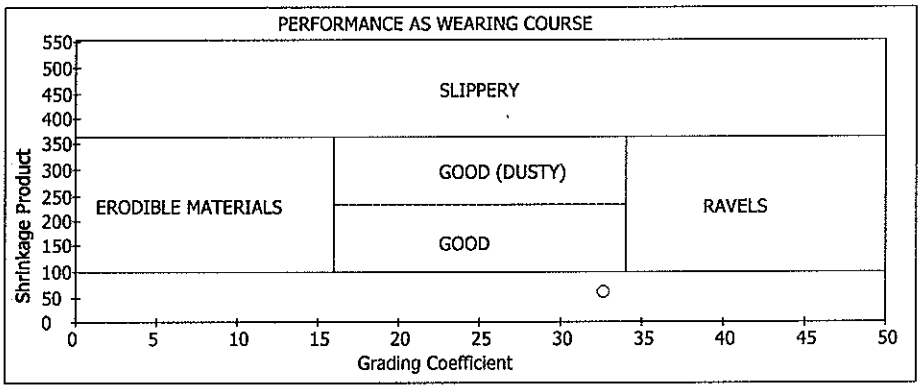
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	97
28.00	96
20.00	90
14.00	88
5.000	68
2.000	48
0.425	24
0.250	19
0.150	14
0.075	9.1
0.060	5.3
0.050	5.3
0.020	1.9
0.005	1.8
0.002	1.6

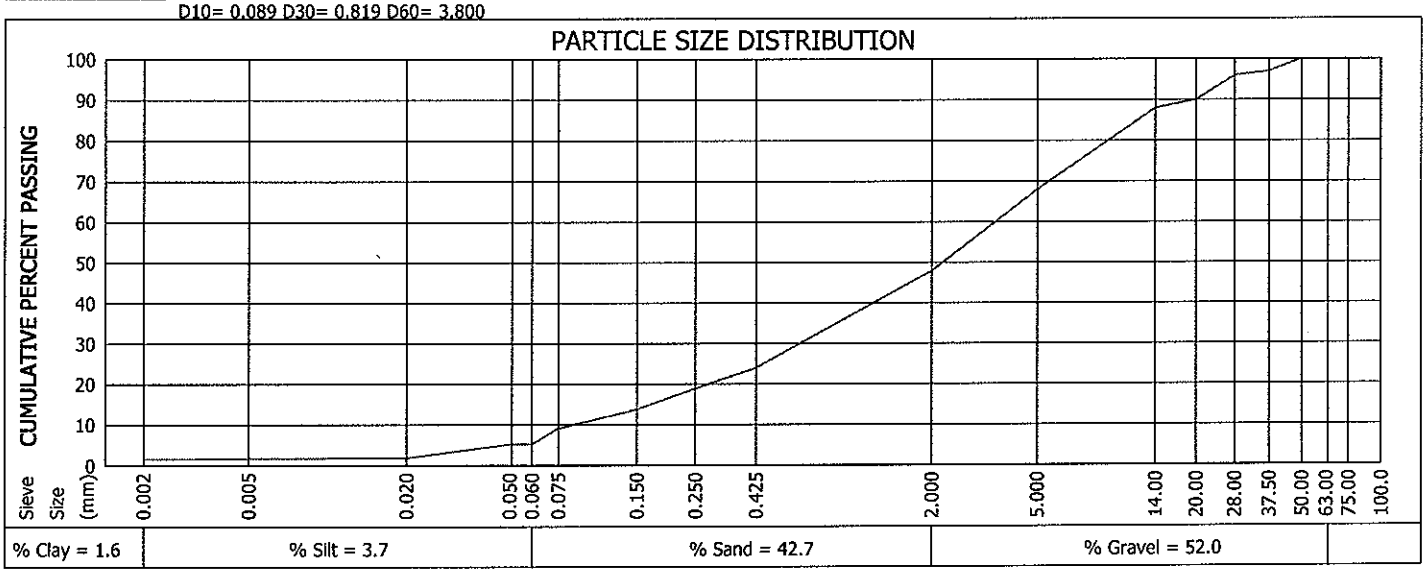
Soil Mortar	2.000 - 0.425	50
	0.425 - 0.250	11
	0.250 - 0.150	11
	0.150 - 0.075	10
	< 0.075	19
Effective Size		0.089
Uniformity Coefficient		42.7
Curvature Coefficient		2.0
Oversize Index		3.0
Shrinkage Product		60.0
Grading Coefficient		32.6
Grading Modulus		2.20
Atterberg Limits	Liquid Limit	20
	Plasticity Index	5
	Linear Shrinkage	2.5
	PI < 0.075	
Unified Soil Classification		SW-SM-SC
US Highway Classification		A-1-a(0)

D10= 0.089 D30= 0.819 D60= 3.800









% Clay = 1.6	% Silt = 3.7	% Sand = 42.7	% Gravel = 52.0

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Roelof Lategan
Manager

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Job Request No.: RU3988

Date Reported : 2021-08-18

Iceberg Trading
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Louis Trichardt
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Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

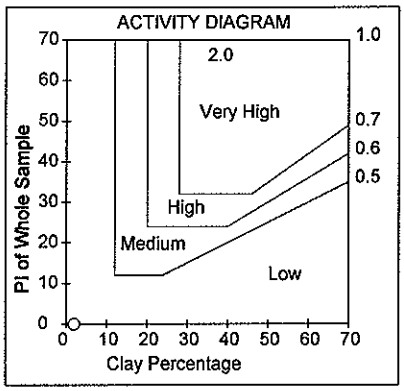
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

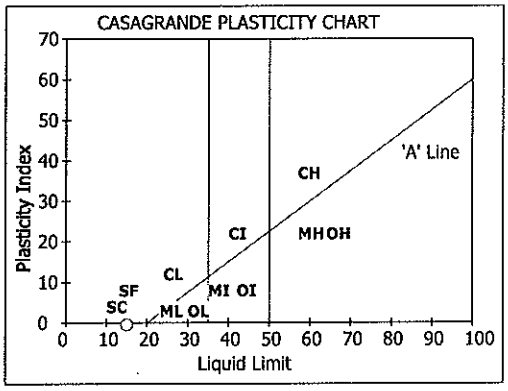
Sample No.	: U9844
Position	: TP 64; 0.0 - 0.5m
Layer Type	: Not Specified
Sample Colour	: Light Brown Sand
Sample Type	: + Quartz Stone

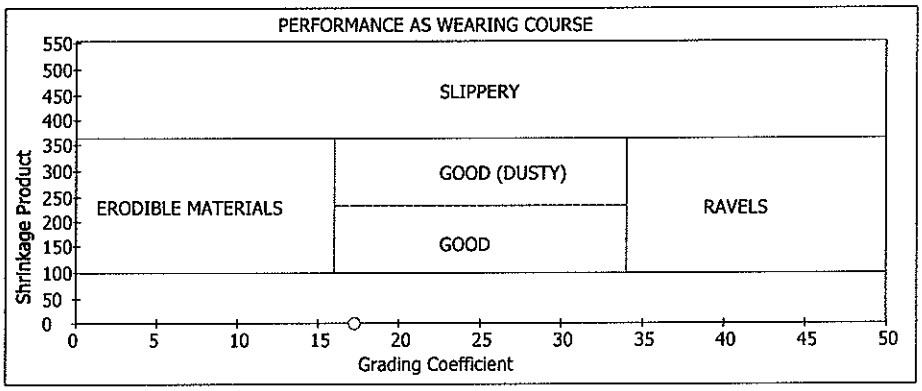
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	99
14.00	98
5.000	91
2.000	81
0.425	43
0.250	34
0.150	25
0.075	16
0.060	6.3
0.050	4.2
0.020	3.7
0.005	2.8
0.002	1.9

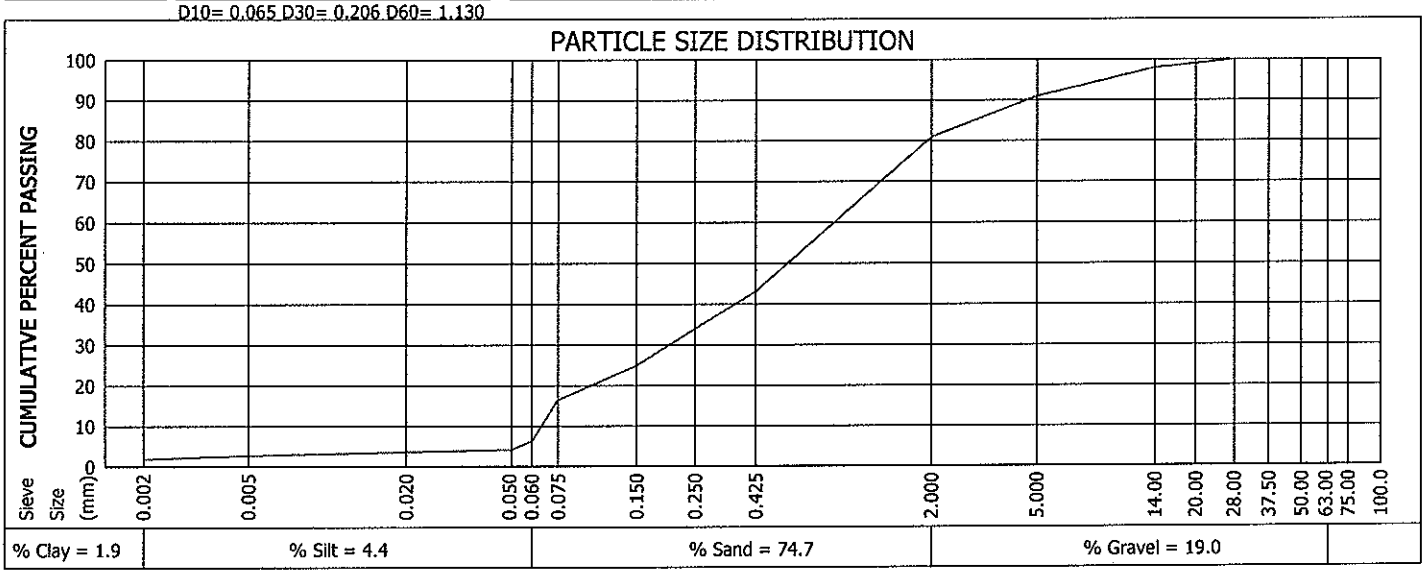
Soil Mortar	2.000 - 0.425	47
	0.425 - 0.250	11
	0.250 - 0.150	11
	0.150 - 0.075	11
	< 0.075	20
Effective Size		0.065
Uniformity Coefficient		17.4
Curvature Coefficient		0.6
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		17.3
Grading Modulus		1.60
Atterberg Limits	Liquid Limit	15
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.065 D30= 0.206 D60= 1.130









% Clay = 1.9	% Silt = 4.4	% Sand = 74.7	% Gravel = 19.0

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PO Box 1364
Louis Trichardt
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Attention : Aubrey Nonyana

Date Reported : 2021-07-20

Project : RDP Houses, Nababeep

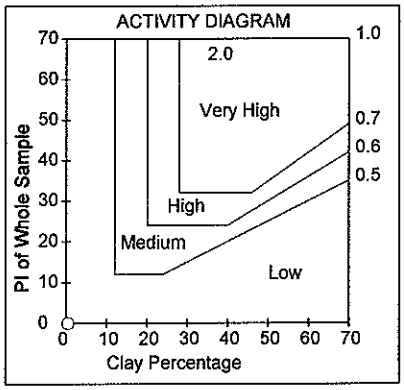
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

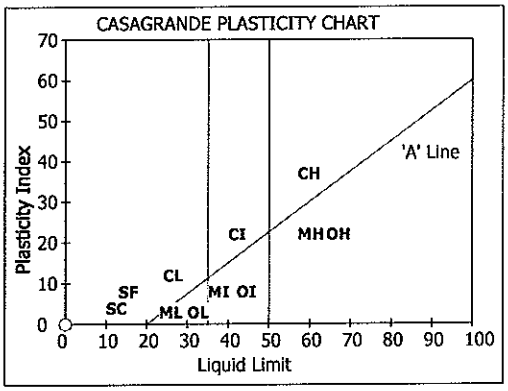
Sample No.	: U9846
Position	: TP 68; 0.0 - 0.2m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravelly
Sample Type	: Weathered Quartz Sto

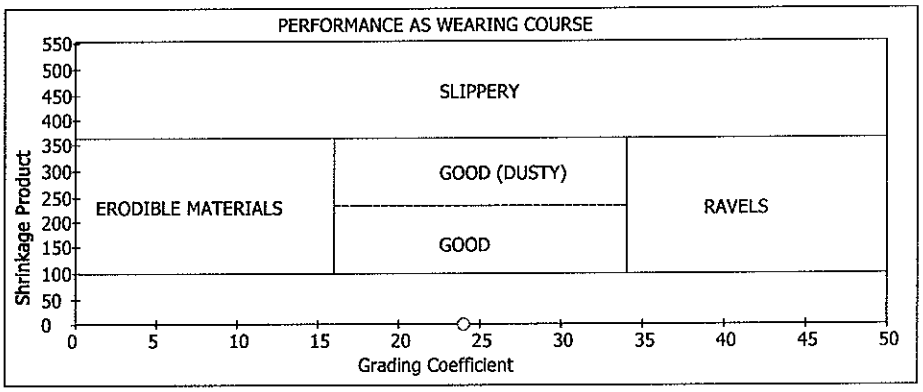
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	93
28.00	85
20.00	77
14.00	73
5.000	57
2.000	43
0.425	22
0.250	17
0.150	11
0.075	5.7
0.060	2.3
0.050	1.3
0.020	1.1
0.005	0.8
0.002	0.5

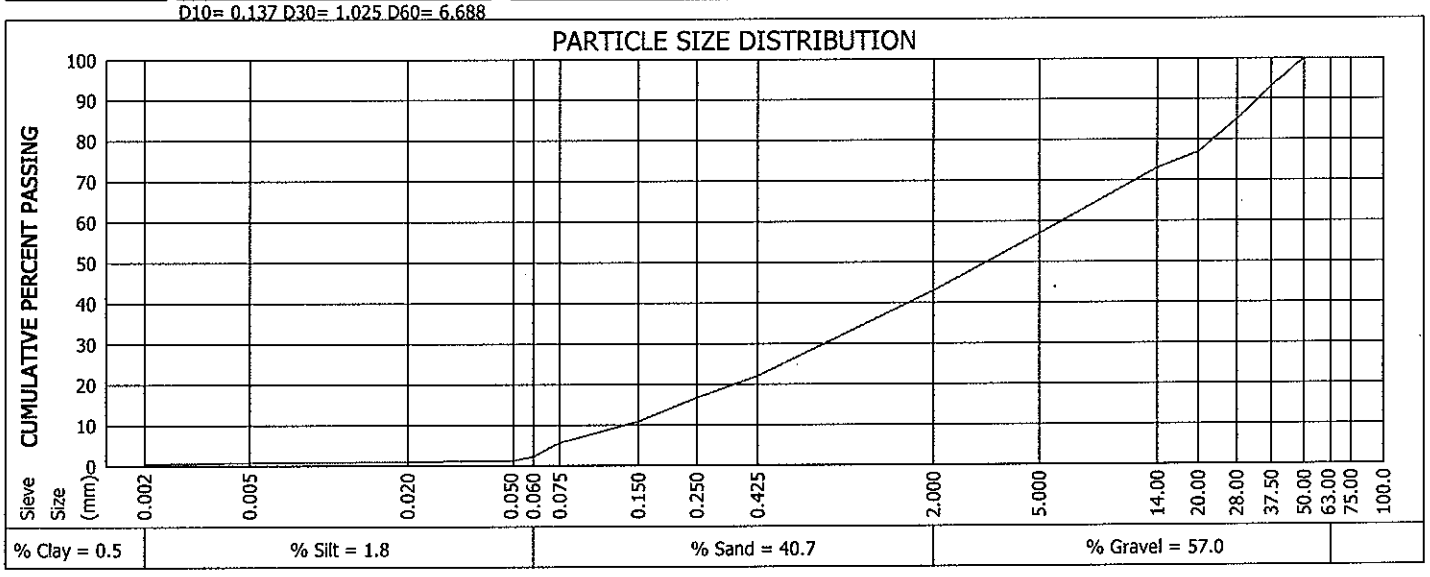
Soil Mortar	2.000 - 0.425	50
	0.425 - 0.250	12
	0.250 - 0.150	13
	0.150 - 0.075	11
	< 0.075	14
Effective Size		0.137
Uniformity Coefficient		48.8
Curvature Coefficient		1.1
Oversize Index		7.0
Shrinkage Product		0.0
Grading Coefficient		23.9
Grading Modulus		2.30
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-a(0)

D10= 0.137 D30= 1.025 D60= 6.688









% Clay = 0.5	% Silt = 1.8	% Sand = 40.7	% Gravel = 57.0

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Remarks and Notes :

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Attention : Aubrey Nonyana

Date Reported : 2021-07-21

Project : RDP Houses, Nababeep

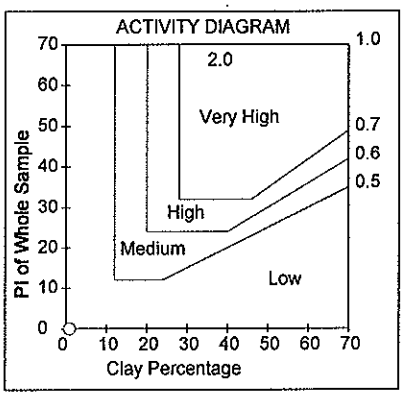
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

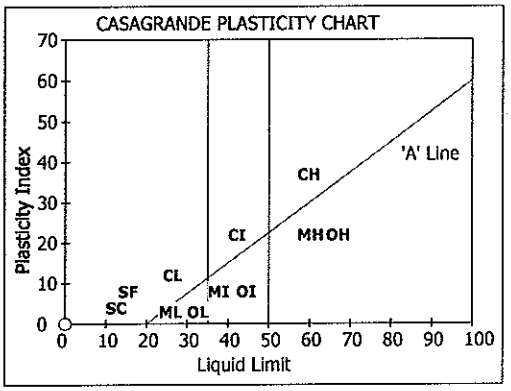
Sample No.	: U9848
Position	: TP 71; 0.0 - 0.25m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown G
Sample Type	: Sand + Weathered Qua

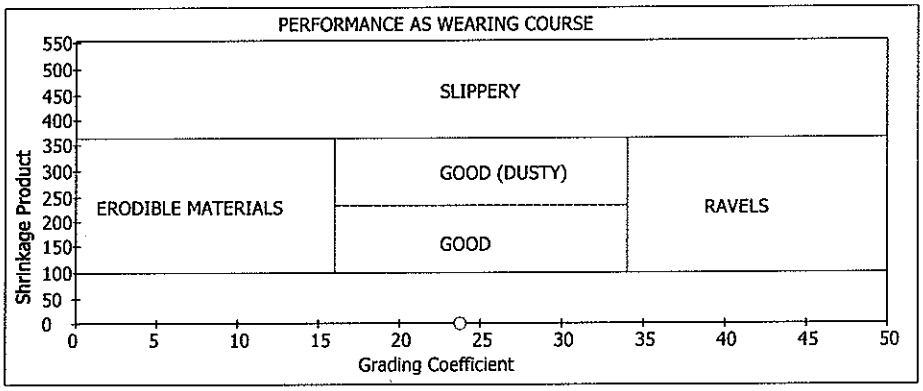
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	93
37.50	89
28.00	88
20.00	83
14.00	81
5.000	66
2.000	52
0.425	27
0.250	21
0.150	16
0.075	10
0.060	5.0
0.050	5.0
0.020	2.2
0.005	1.6
0.002	1.2

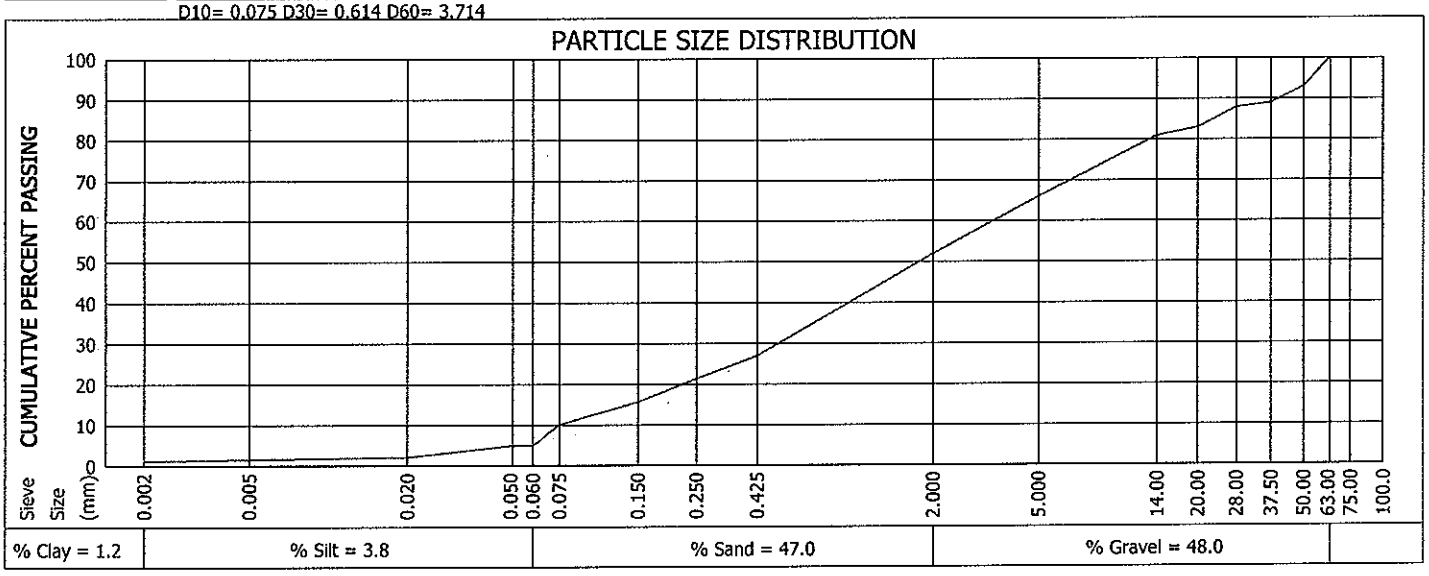
Soil Mortar	2.000 - 0.425	49
	0.425 - 0.250	10
	0.250 - 0.150	11
	0.150 - 0.075	11
	< 0.075	19
Effective Size		0.075
Uniformity Coefficient		49.5
Curvature Coefficient		1.4
Oversize Index		4.0
Shrinkage Product		0.0
Grading Coefficient		23.8
Grading Modulus		2.10
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.075 D30= 0.614 D60= 3.714









% Clay = 1.2	% Silt = 3.8	% Sand = 47.0	% Gravel = 48.0

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Web: www.roadlab.co.za

Job Request No.: RU3988

Date Reported : 2021-08-18

Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Project : RDP Houses, Nababeep

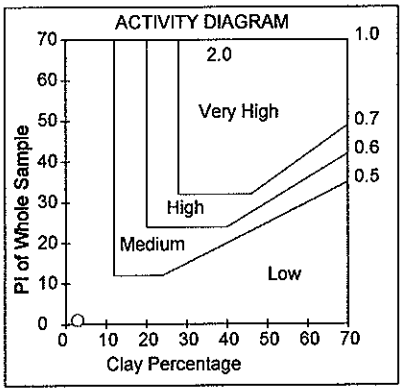
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

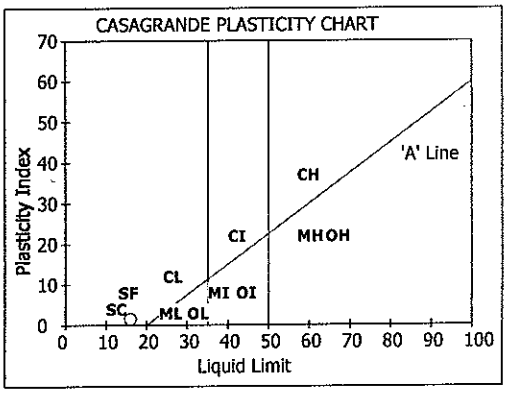
Sample No.	: U9851
Position	: TP 77; 0.0 - 0.3m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Sand
Sample Type	: + Granite Stone

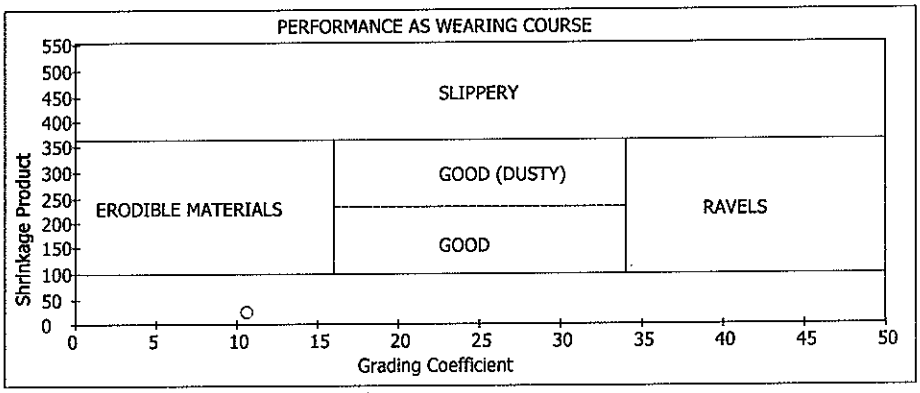
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	96
28.00	95
20.00	94
14.00	92
5.000	89
2.000	83
0.425	45
0.250	33
0.150	23
0.075	14
0.060	7.6
0.050	4.9
0.020	3.8
0.005	3.4
0.002	2.9

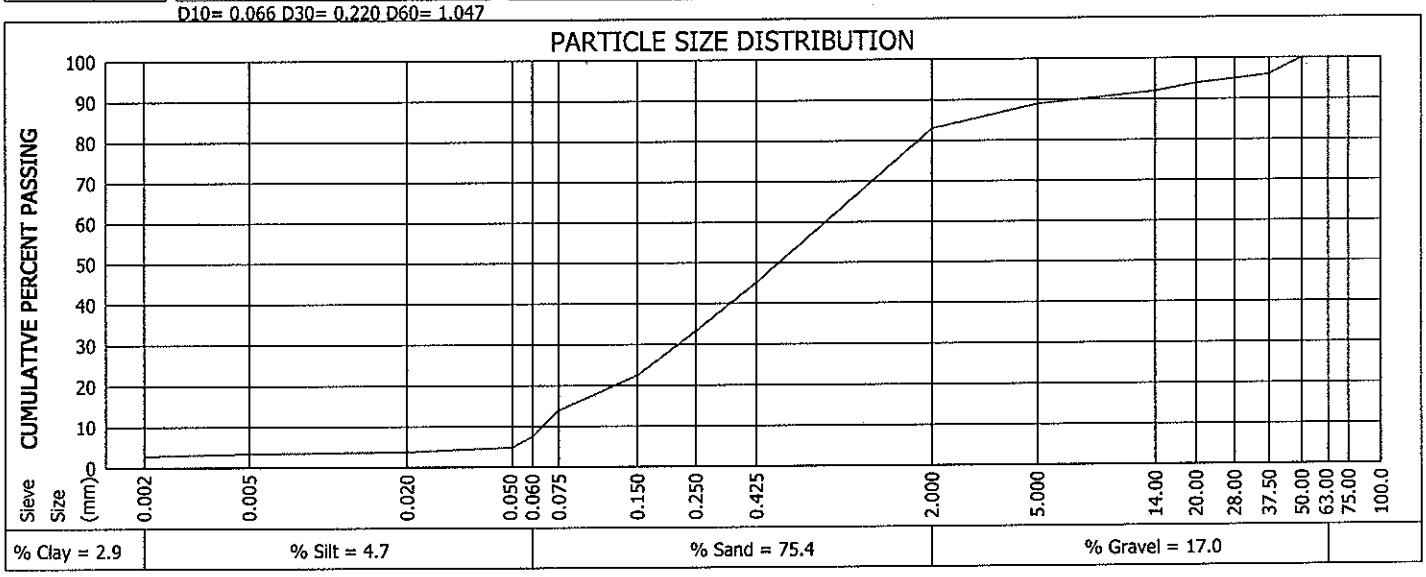
Soil Mortar	2.000 - 0.425	46
	0.425 - 0.250	14
	0.250 - 0.150	13
	0.150 - 0.075	10
	< 0.075	17
Effective Size		0.066
Uniformity Coefficient		15.9
Curvature Coefficient		0.7
Oversize Index		4.0
Shrinkage Product		22.5
Grading Coefficient		10.7
Grading Modulus		1.60
Atterberg Limits	Liquid Limit	16
	Plasticity Index	2.0
	Linear Shrinkage	0.5
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.066 D30= 0.220 D60= 1.047









% Clay = 2.9	% Silt = 4.7	% Sand = 75.4	% Gravel = 17.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

Prog.ver 10.7 (2019/11/07)

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Date Reported : 2021-07-20

Project : RDP Houses, Nababeep

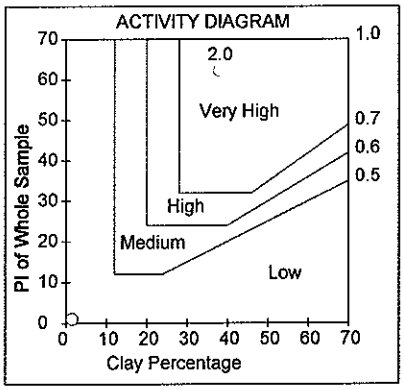
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

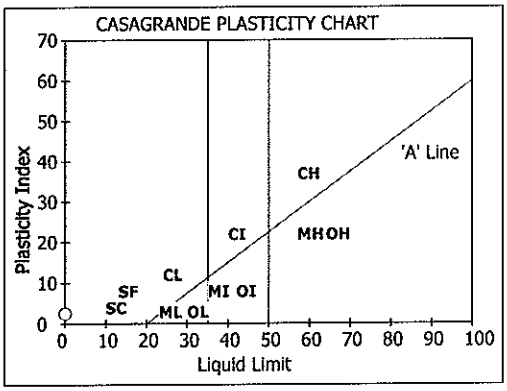
Sample No.	: U9853
Position	: TP 53; 0.0 - 1.0m
Layer Type	: Not Specified
Sample Colour	: Light Brown Sand
Sample Type	: + Quartz Stone

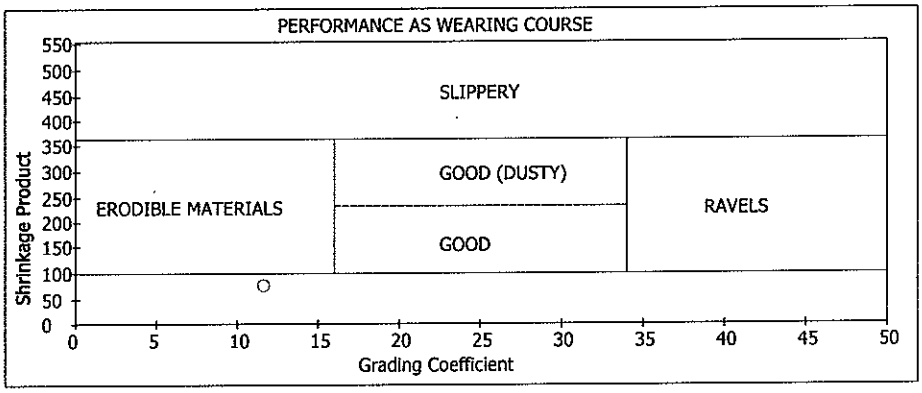
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	100
14.00	100
5.000	97
2.000	88
0.425	50
0.250	41
0.150	31
0.075	21
0.060	9.6
0.050	5.0
0.020	4.1
0.005	2.4
0.002	1.6

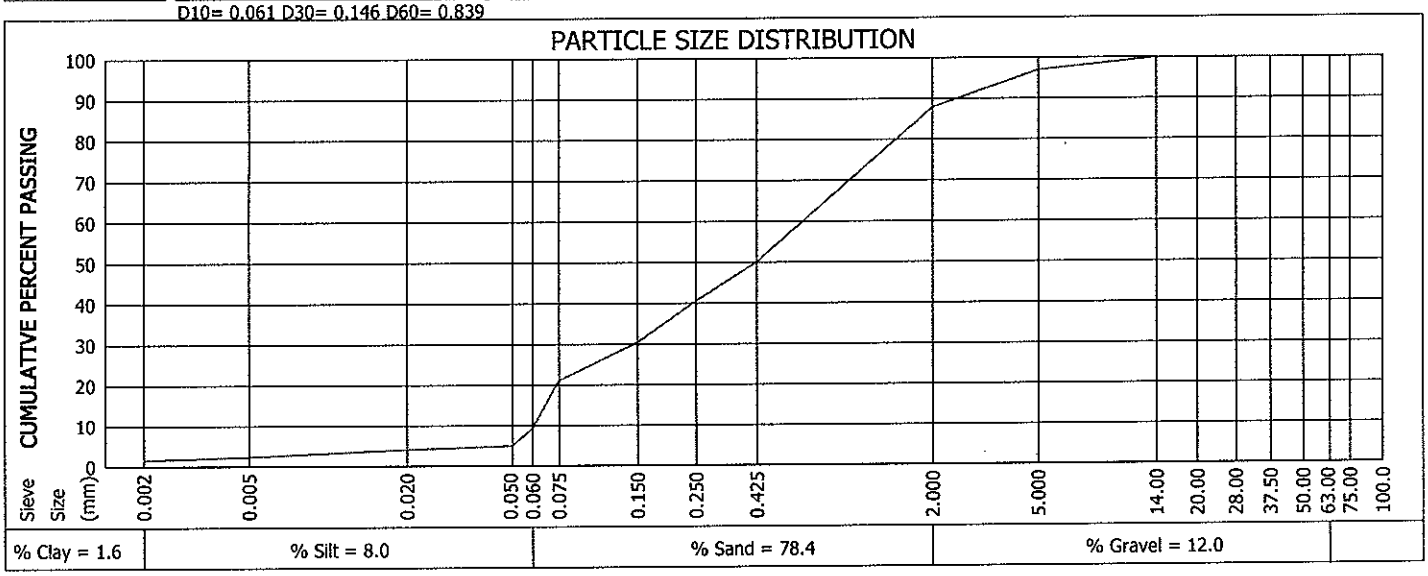
Soil Mortar	2.000 - 0.425	43
	0.425 - 0.250	11
	0.250 - 0.150	12
	0.150 - 0.075	11
	< 0.075	24
Effective Size		0.061
Uniformity Coefficient		13.8
Curvature Coefficient		0.4
Oversize Index		0.0
Shrinkage Product		75.0
Grading Coefficient		11.6
Grading Modulus		1.40
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	1.5
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.061 D30= 0.146 D60= 0.839









% Clay = 1.6	% Silt = 8.0	% Sand = 78.4	% Gravel = 12.0

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Roelof Lategan
Manager

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Date Reported : 2021-07-20

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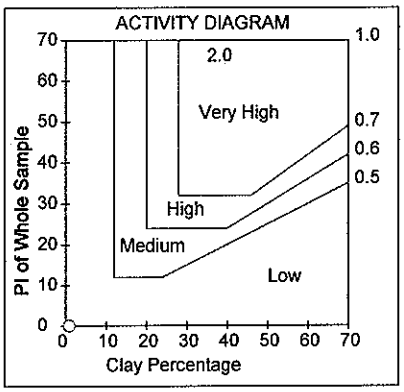
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

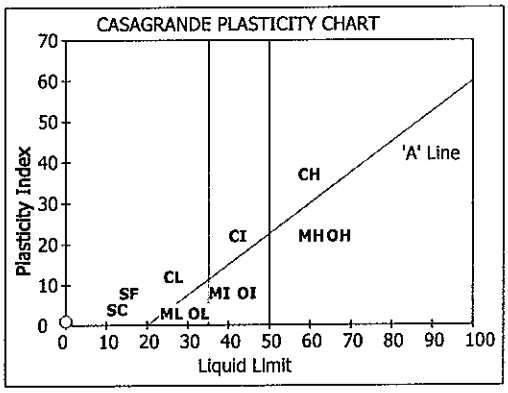
Sample No.	: U9859
Position	: TP 90; 0.0 - 0.5m
Layer Type	: Not Specified
Sample Colour	: Orange Brown Gravel
Sample Type	: Weathered Quartz Sto

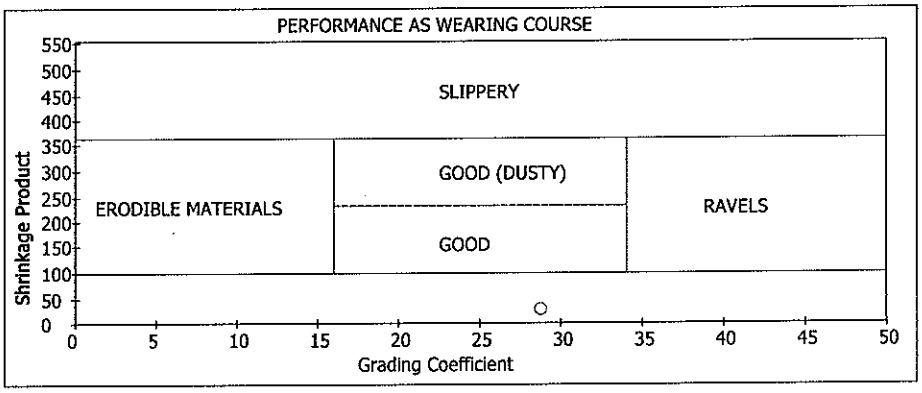
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	99
20.00	94
14.00	90
5.000	70
2.000	58
0.425	29
0.250	23
0.150	17
0.075	12
0.060	7.2
0.050	6.6
0.020	2.2
0.005	1.4
0.002	1.0

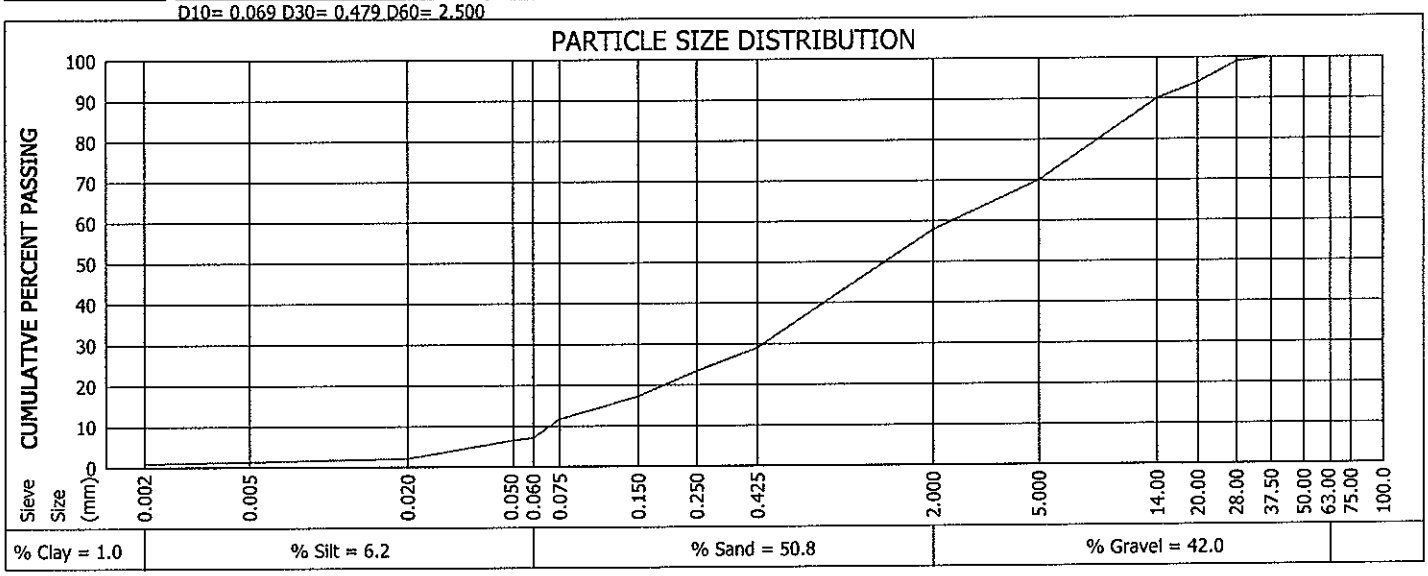
Soil Mortar	2.000 - 0.425	49
	0.425 - 0.250	10
	0.250 - 0.150	11
	0.150 - 0.075	9
	< 0.075	21
Effective Size		0.069
Uniformity Coefficient		36.2
Curvature Coefficient		1.3
Oversize Index		0.0
Shrinkage Product		29.0
Grading Coefficient		28.7
Grading Modulus		2.00
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	1.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.069 D30= 0.479 D60= 2.500









% Clay = 1.0	% Silt = 6.2	% Sand = 50.8	% Gravel = 42.0

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Manager

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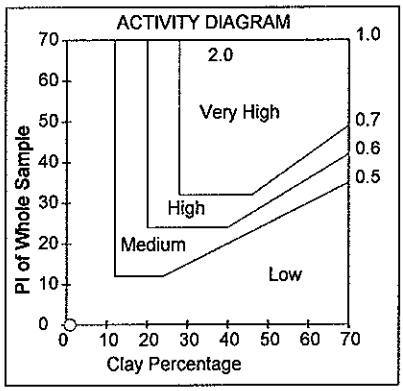
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

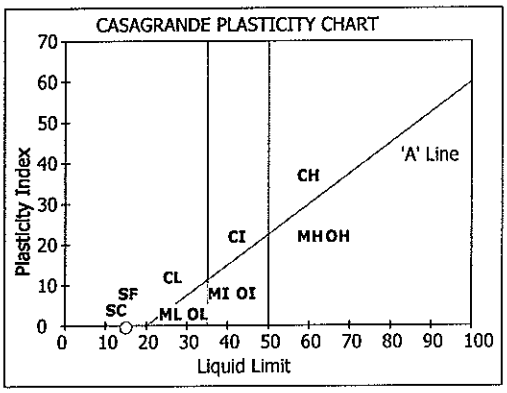
Sample No.	: U9861
Position	: TP 94; 0.0 - 0.5m
Layer Type	: Not Specified
Sample Colour	: Orange Brown Gravel
Sample Type	: + Quartz Stone

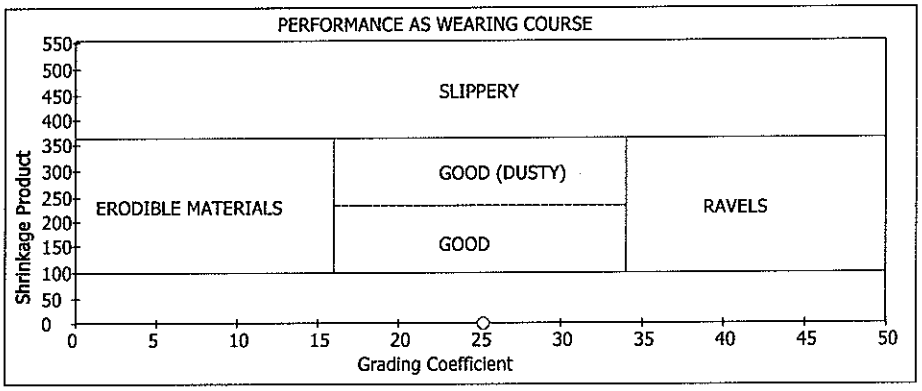
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	92
20.00	87
14.00	82
5.000	63
2.000	52
0.425	27
0.250	22
0.150	16
0.075	9.9
0.060	6.4
0.050	5.1
0.020	1.8
0.005	1.3
0.002	1.0

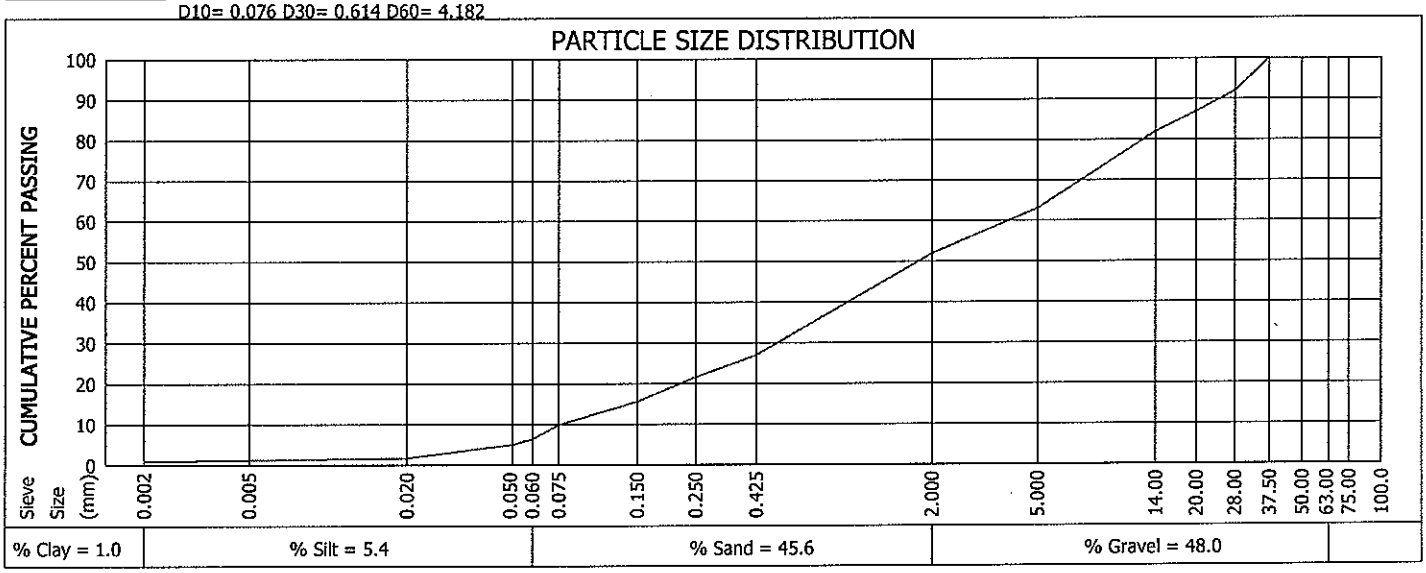
Soil Mortar	2.000 - 0.425	47
	0.425 - 0.250	11
	0.250 - 0.150	12
	0.150 - 0.075	11
	< 0.075	19
Effective Size		0.076
Uniformity Coefficient		55.0
Curvature Coefficient		1.2
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		25.2
Grading Modulus		2.10
Atterberg Limits	Liquid Limit	15
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.076 D30= 0.614 D60= 4.182









% Clay = 1.0	% Silt = 5.4	% Sand = 45.6	% Gravel = 48.0

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Project : RDP Houses, Nababeep

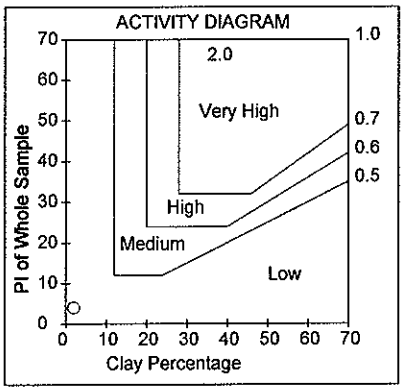
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

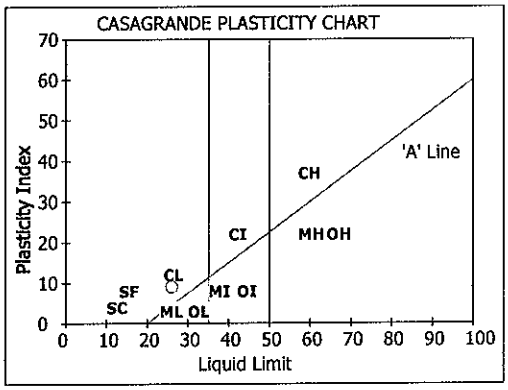
Sample No.	: U9862
Position	: TP 95; 0.5 - 0.7m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Sand +
Sample Type	: Weathered Quartz Sto

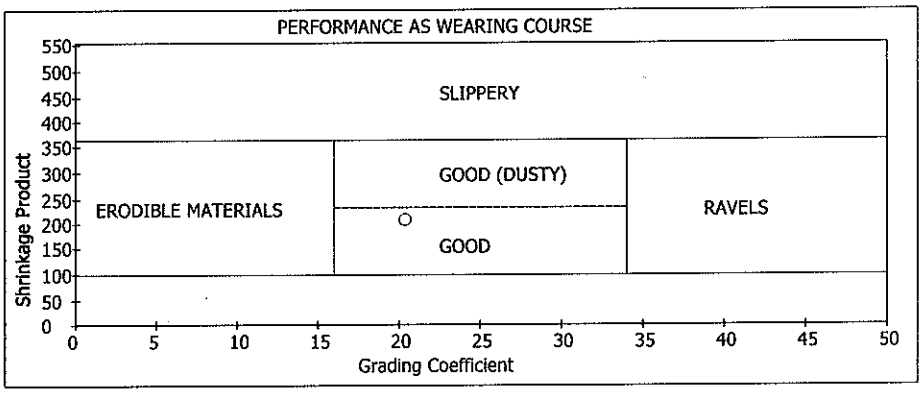
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	98
20.00	94
14.00	93
5.000	85
2.000	74
0.425	46
0.250	37
0.150	27
0.075	20
0.060	9.8
0.050	5.3
0.020	4.4
0.005	2.7
0.002	1.9

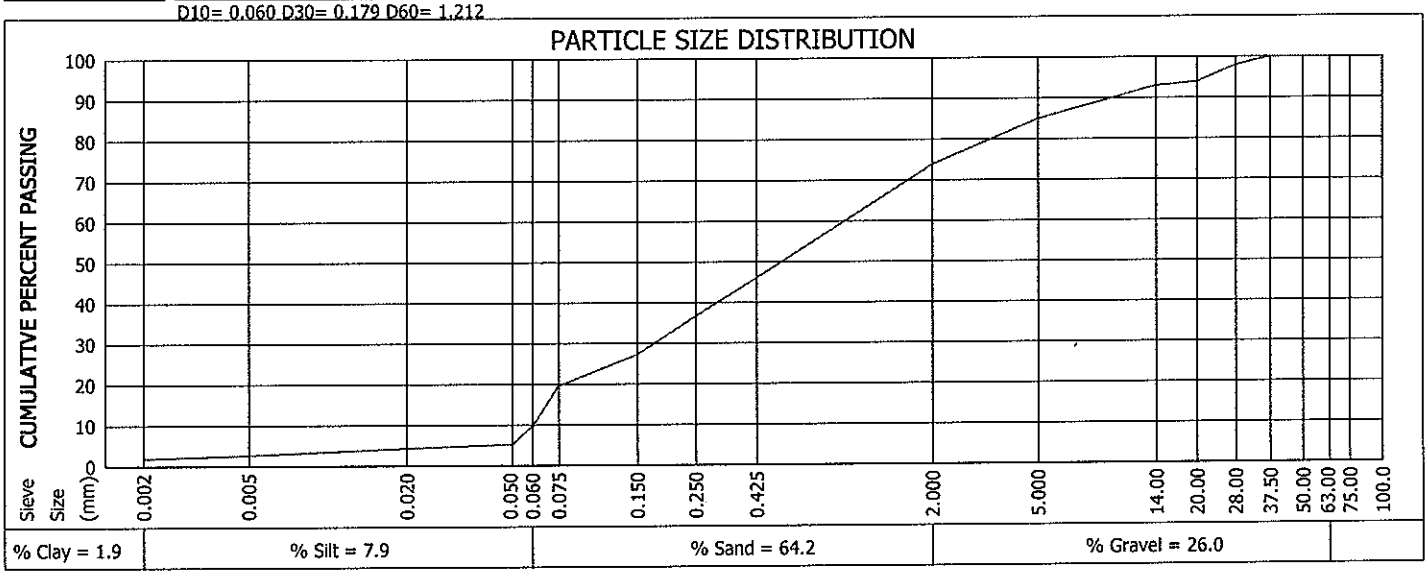
Soil Mortar	2.000 - 0.425	38
	0.425 - 0.250	12
	0.250 - 0.150	13
	0.150 - 0.075	10
	< 0.075	27
Effective Size		0.060
Uniformity Coefficient		20.2
Curvature Coefficient		0.4
Oversize Index		0.0
Shrinkage Product		207.0
Grading Coefficient		20.4
Grading Modulus		1.60
Atterberg Limits	Liquid Limit	26
	Plasticity Index	9
	Linear Shrinkage	4.5
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-4(0)

D10= 0.060 D30= 0.179 D60= 1.212









% Clay = 1.9	% Silt = 7.9	% Sand = 64.2	% Gravel = 26.0

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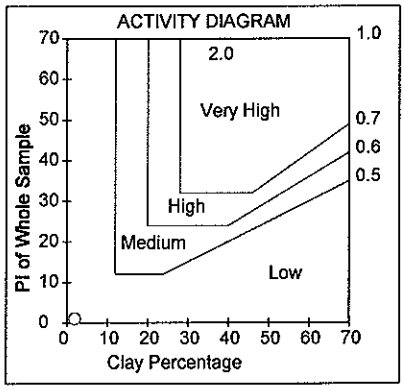
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

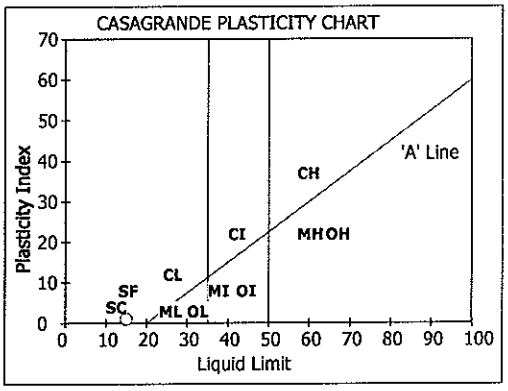
Sample No.	: U9865
Position	: TP 101; 0.0 - 0.4m
Layer Type	: Not Specified
Sample Colour	: Light Orange Sand
Sample Type	: + Quartz Stone

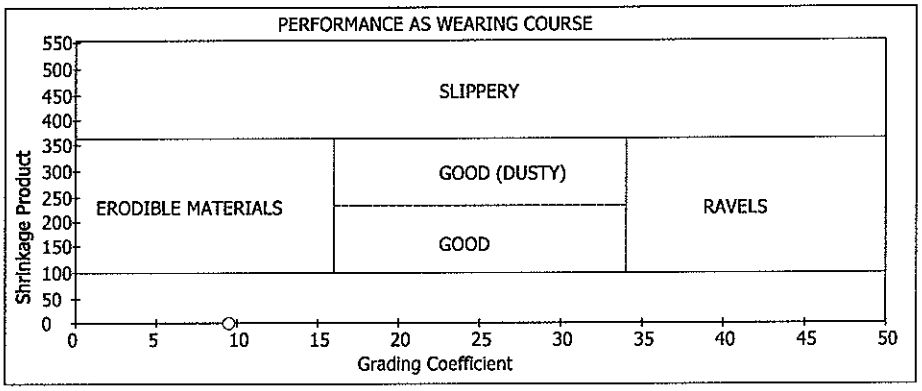
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	99
14.00	98
5.000	95
2.000	90
0.425	51
0.250	42
0.150	29
0.075	17
0.060	12
0.050	10
0.020	3.5
0.005	2.3
0.002	1.8

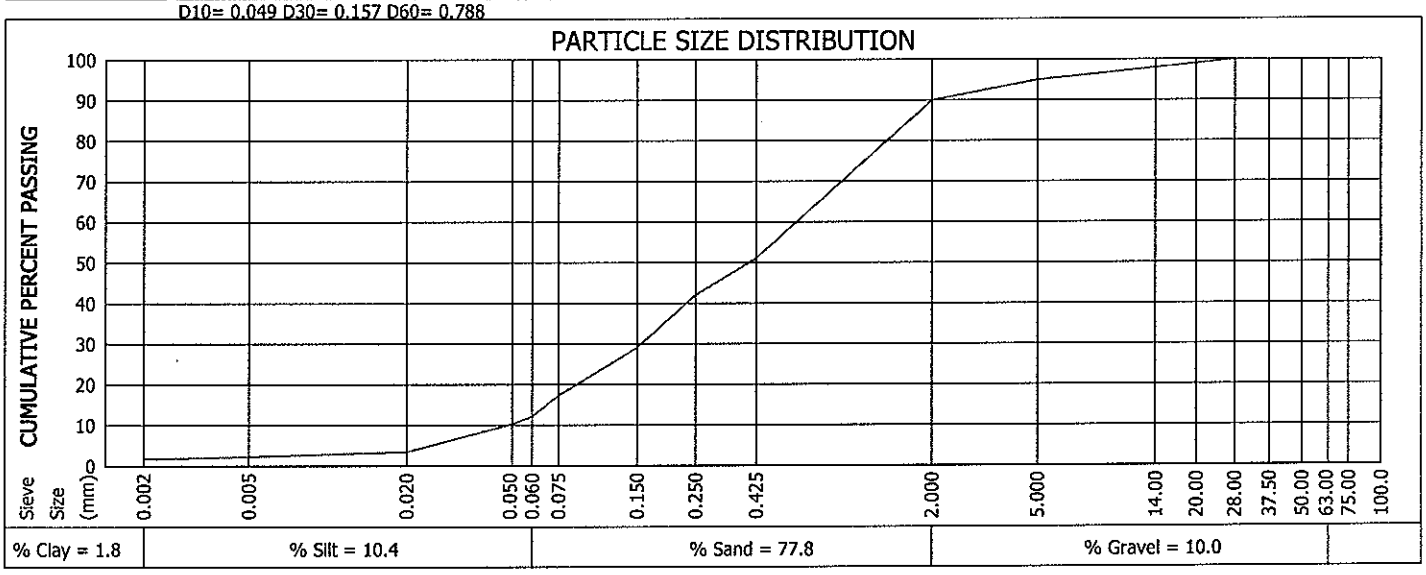
Soil Mortar	2.000 - 0.425	43
	0.425 - 0.250	10
	0.250 - 0.150	14
	0.150 - 0.075	14
	< 0.075	19
Effective Size		0.049
Uniformity Coefficient		16.1
Curvature Coefficient		0.6
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		9.5
Grading Modulus		1.40
Atterberg Limits	Liquid Limit	15
	Plasticity Index	1.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-4(0)

D10= 0.049 D30= 0.157 D60= 0.788









% Clay = 1.8	% Silt = 10.4	% Sand = 77.8	% Gravel = 10.0

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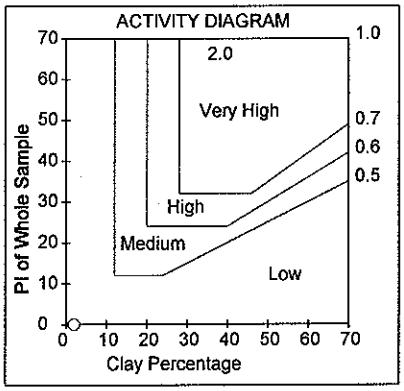
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

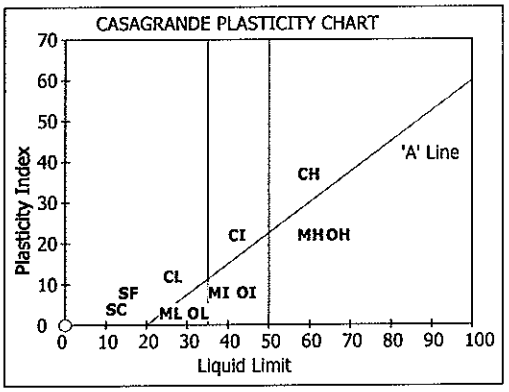
Sample No.	: U9867
Position	: TP 104; 0.0 - 0.2m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown
Sample Type	: Sand + Quartz Stone

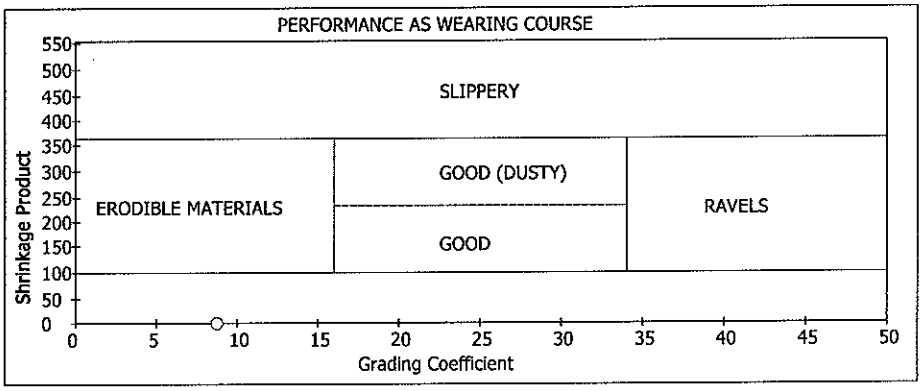
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	100
14.00	100
5.000	97
2.000	91
0.425	53
0.250	40
0.150	25
0.075	13
0.060	6.2
0.050	3.7
0.020	3.2
0.005	2.7
0.002	1.9

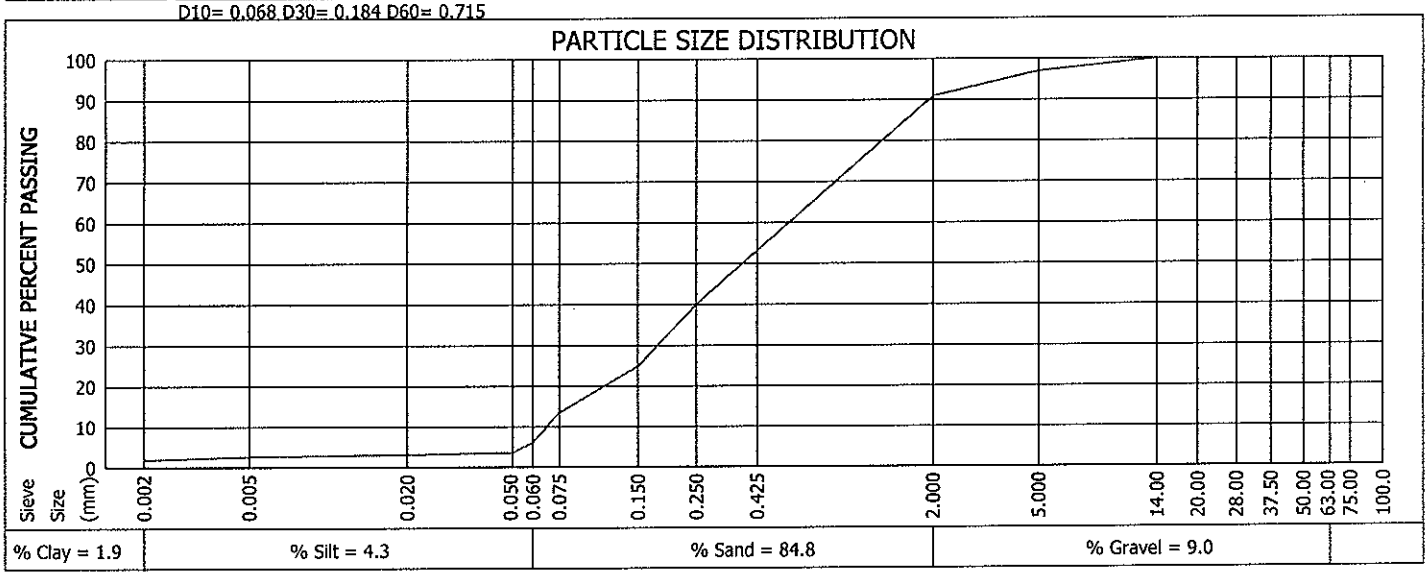
Soil Mortar	2.000 - 0.425	42
	0.425 - 0.250	15
	0.250 - 0.150	17
	0.150 - 0.075	13
	< 0.075	14
Effective Size		0.068
Uniformity Coefficient		10.5
Curvature Coefficient		0.7
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		8.7
Grading Modulus		1.40
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-4(0)

D10= 0.068 D30= 0.184 D60= 0.715









% Clay = 1.9	% Silt = 4.3	% Sand = 84.8	% Gravel = 9.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
The test results reported relate to the samples tested.
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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Job Request No.: RU3988
Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

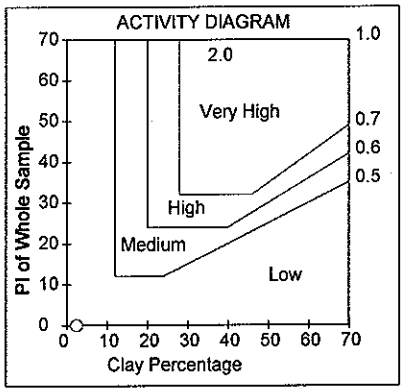
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

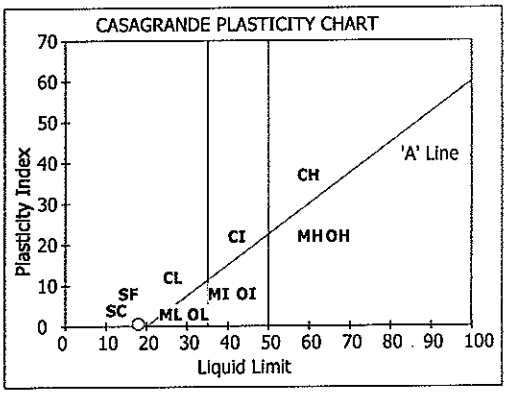
Sample No.	: U9869
Position	: TP 108; 0.0 - 0.8m
Layer Type	: Not Specified
Sample Colour	: Light Brown Sand
Sample Type	: + Quartz Stone

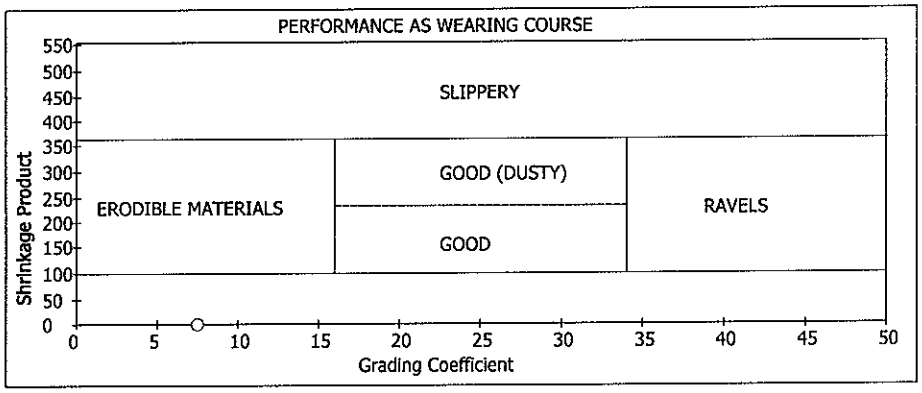
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	97
20.00	97
14.00	96
5.000	94
2.000	89
0.425	57
0.250	48
0.150	35
0.075	20
0.060	12
0.050	8.4
0.020	3.8
0.005	2.8
0.002	2.4

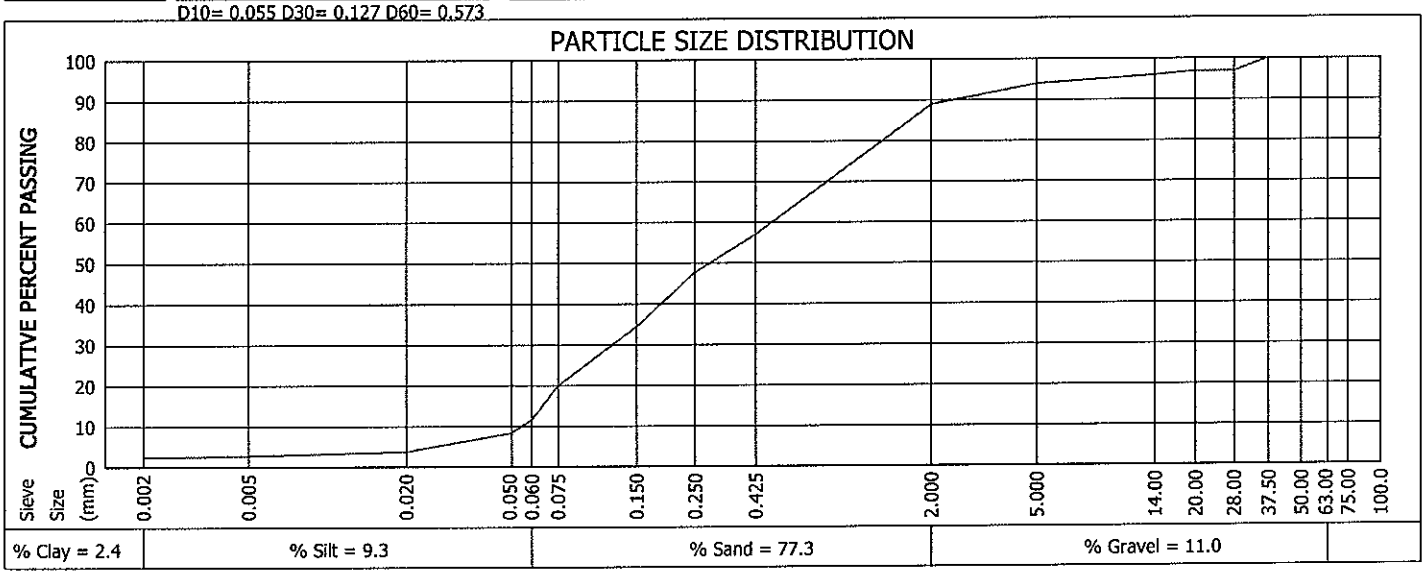
Soil Mortar	2.000 - 0.425	36
	0.425 - 0.250	10
	0.250 - 0.150	15
	0.150 - 0.075	16
	< 0.075	23
Effective Size		0.055
Uniformity Coefficient		10.4
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		7.5
Grading Modulus		1.30
Atterberg Limits	Liquid Limit	18
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-4(0)

D10= 0.055 D30= 0.127 D60= 0.573









% Clay = 2.4	% Silt = 9.3	% Sand = 77.3	% Gravel = 11.0

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Job Request No.: RU3988

Date Reported : 2021-07-20

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PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Project : RDP Houses, Nababeep

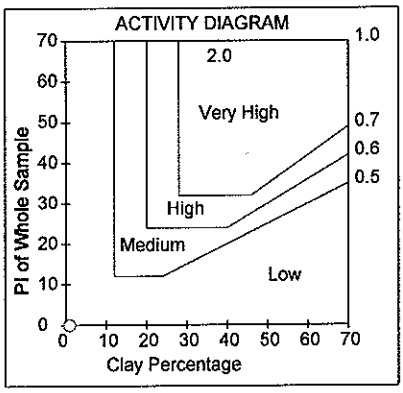
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

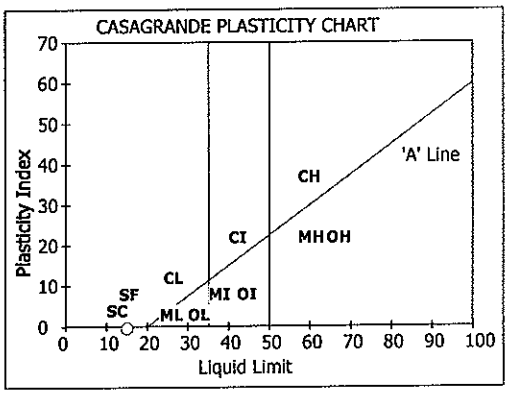
Sample No.	: U9870
Position	: TP 109; 0.0 - 0.7m
Layer Type	: Not Specified
Sample Colour	: Light Brown Sand
Sample Type	: Quartz Stone

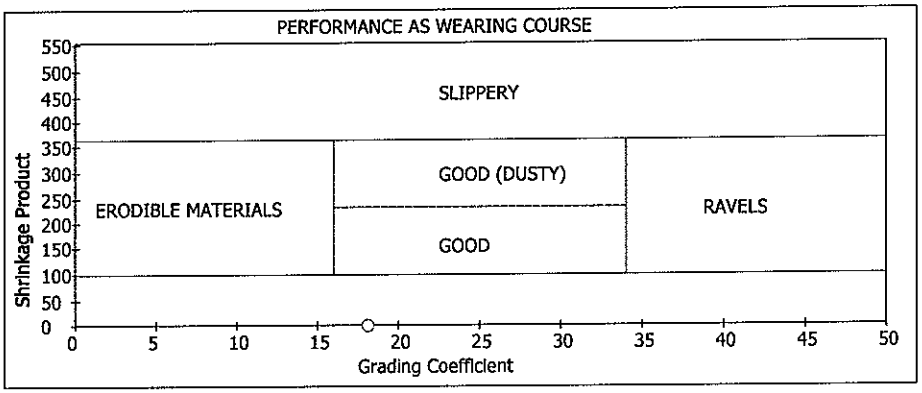
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	94
20.00	91
14.00	89
5.000	79
2.000	71
0.425	40
0.250	31
0.150	21
0.075	11
0.060	6.3
0.050	3.7
0.020	2.0
0.005	1.3
0.002	1.0

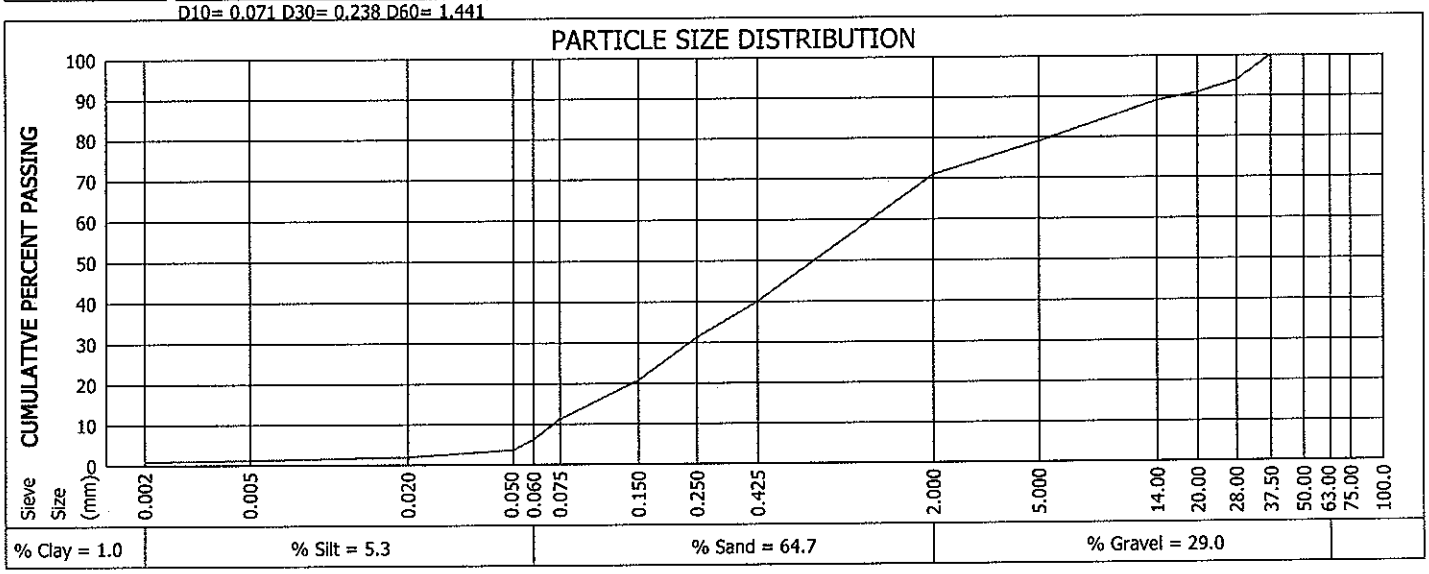
Soil Mortar	2.000 - 0.425	44
	0.425 - 0.250	12
	0.250 - 0.150	15
	0.150 - 0.075	14
	< 0.075	16
Effective Size		0.071
Uniformity Coefficient		20.3
Curvature Coefficient		0.6
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		18.2
Grading Modulus		1.80
Atterberg Limits	Liquid Limit	15
	Plasticity Index	-1.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.071 D30= 0.238 D60= 1.441









% Clay = 1.0	% Silt = 5.3	% Sand = 64.7	% Gravel = 29.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Roelof Lategan
Manager

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Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Date Reported : 2021-07-20

Project : RDP Houses, Nababeep

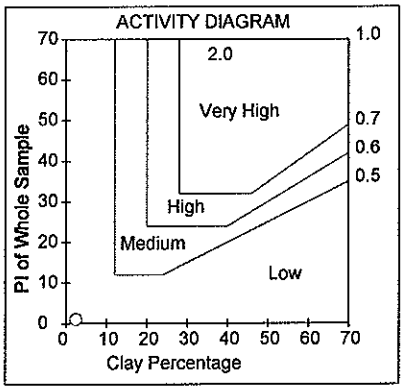
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

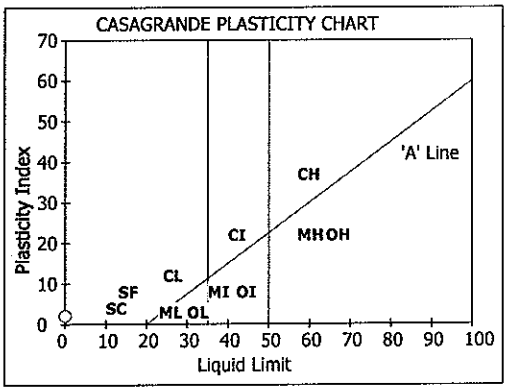
Sample No.	: U9872
Position	: TP 113; 0.0 - 0.6m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Sand
Sample Type	: + Quartz Stone

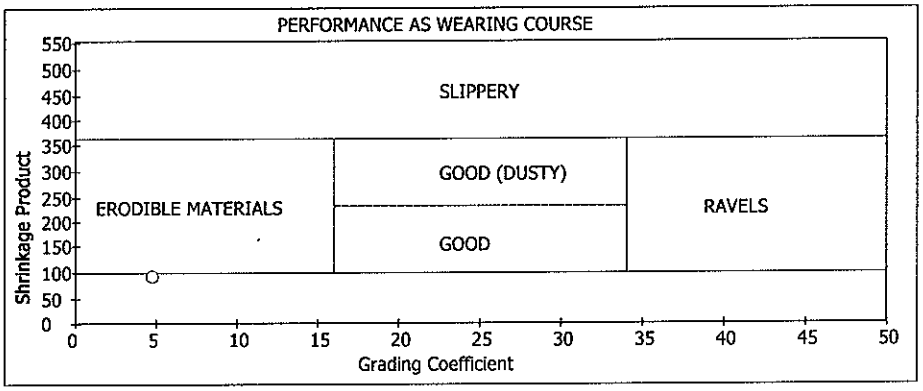
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	99
20.00	97
14.00	97
5.000	96
2.000	94
0.425	62
0.250	51
0.150	37
0.075	23
0.060	14
0.050	11
0.020	4.4
0.005	3.1
0.002	2.6

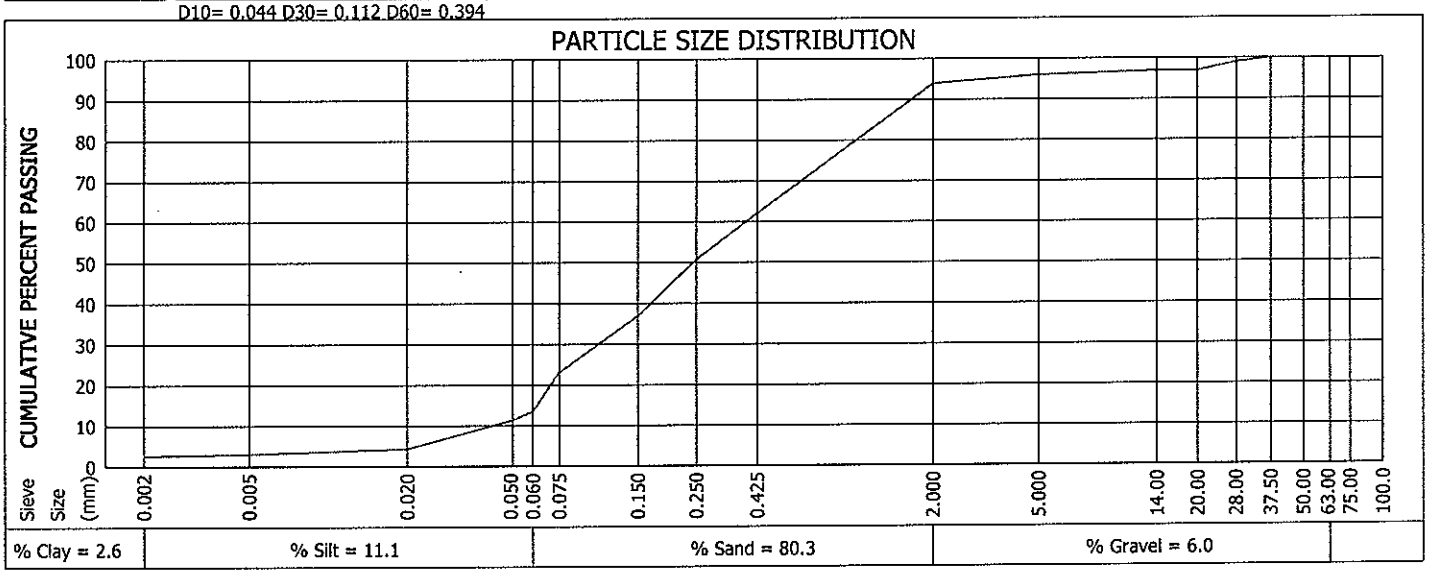
Soil Mortar	2.000 - 0.425	34
	0.425 - 0.250	12
	0.250 - 0.150	15
	0.150 - 0.075	15
	< 0.075	25
Effective Size		0.044
Uniformity Coefficient		9.0
Curvature Coefficient		0.7
Oversize Index		0.0
Shrinkage Product		93.0
Grading Coefficient		4.8
Grading Modulus		1.20
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	1.5
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-4(0)

D10= 0.044 D30= 0.112 D60= 0.394









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Manager

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Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

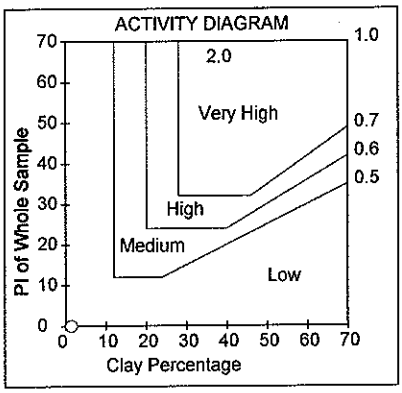
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

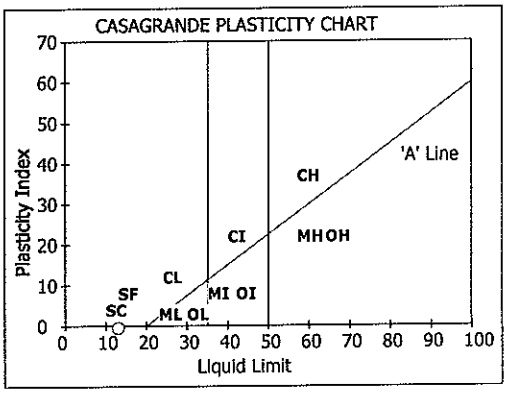
Sample No.	: U9873
Position	: TP 116; 0.0 - 0.6m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravelly
Sample Type	: + Quartz Stone

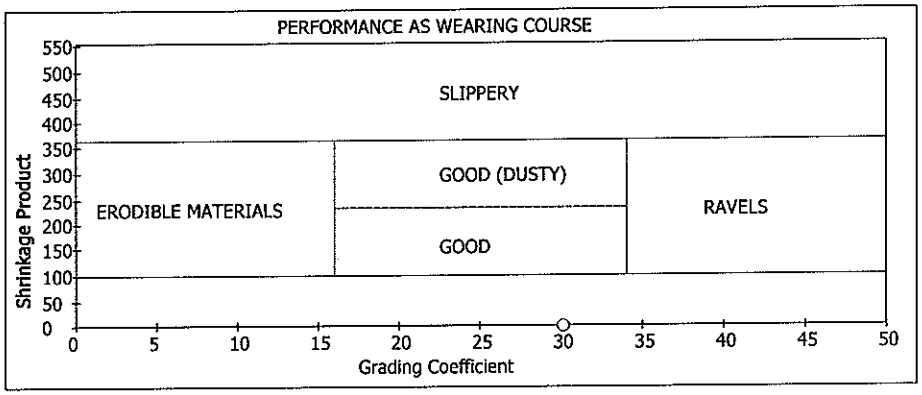
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	97
14.00	92
5.000	67
2.000	55
0.425	36
0.250	29
0.150	21
0.075	13
0.060	8.6
0.050	7.5
0.020	2.7
0.005	2.2
0.002	1.4

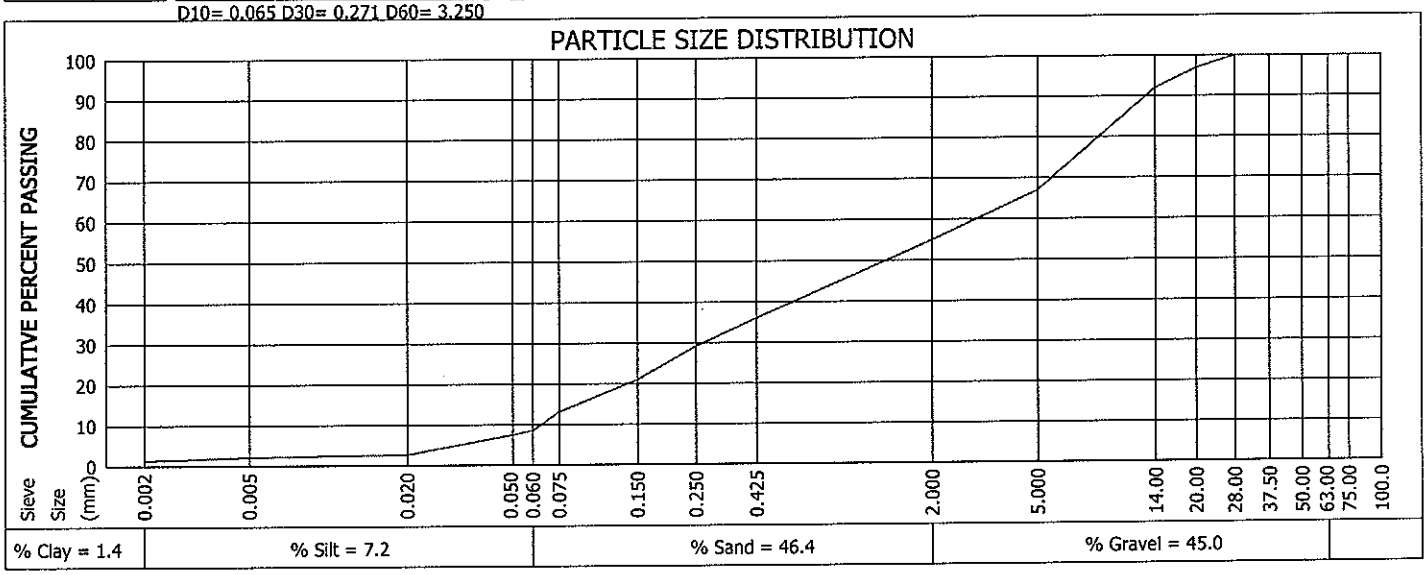
Soil Mortar	2.000 - 0.425	36
	0.425 - 0.250	12
	0.250 - 0.150	15
	0.150 - 0.075	15
	< 0.075	24
Effective Size		0.065
Uniformity Coefficient		50.0
Curvature Coefficient		0.3
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		30.1
Grading Modulus		2.00
Atterberg Limits	Liquid Limit	13
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.065 D30= 0.271 D60= 3.250









% Clay = 1.4	% Silt = 7.2	% Sand = 46.4	% Gravel = 45.0

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Job Request No.: RU3988

Date Reported : 2021-07-21

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Attention : Aubrey Nonyana

Project : RDP Houses, Nababeep

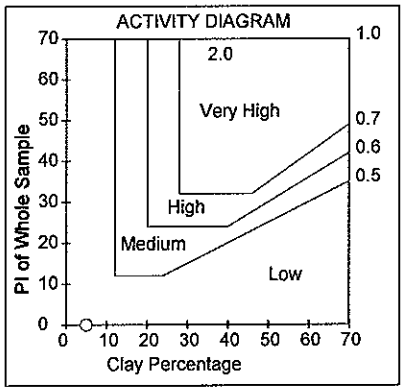
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

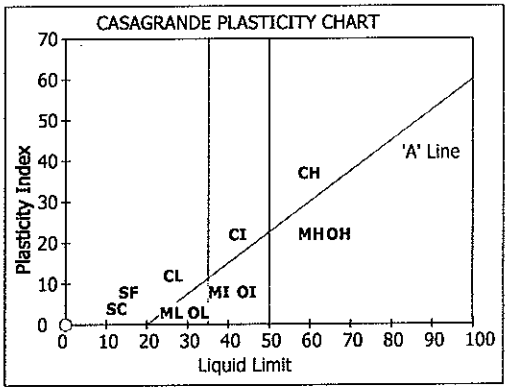
Sample No.	: U9874
Position	: TP 117; 0.0 - 0.4m
Layer Type	: Not Specified
Sample Colour	: Orange Brown
Sample Type	: Sand + Quartz Stone

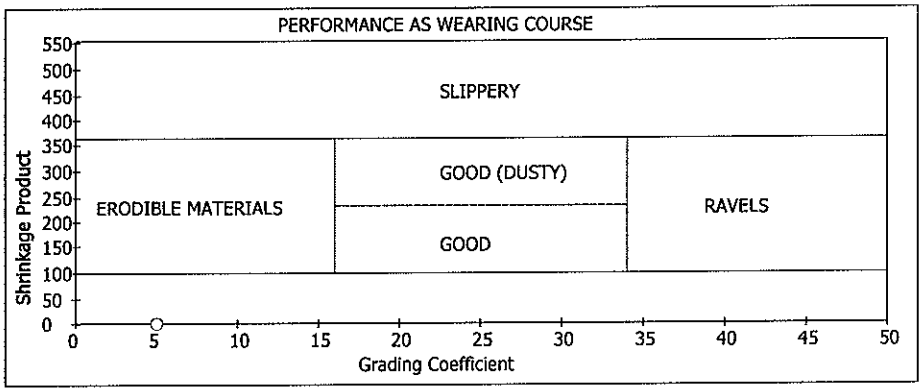
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	100
14.00	100
5.000	99
2.000	95
0.425	58
0.250	47
0.150	34
0.075	22
0.060	9.2
0.050	6.8
0.020	6.5
0.005	5.6
0.002	5.0

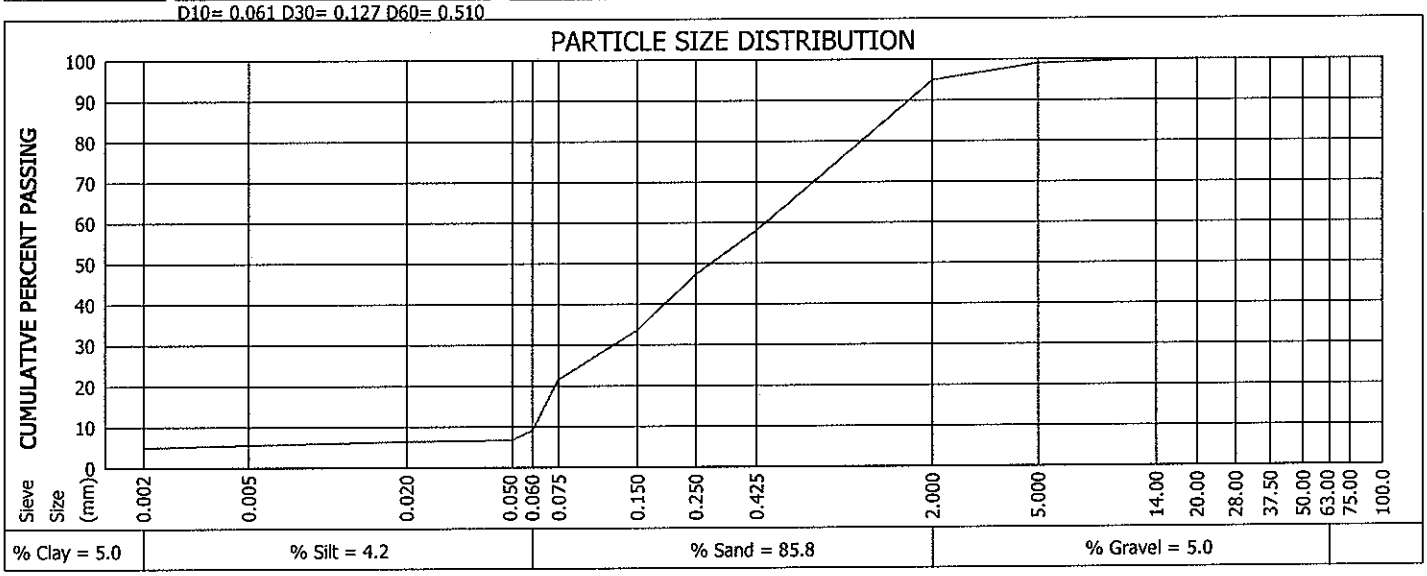
Soil Mortar	2.000 - 0.425	39
	0.425 - 0.250	11
	0.250 - 0.150	14
	0.150 - 0.075	12
	< 0.075	23
Effective Size		0.061
Uniformity Coefficient		8.4
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		5.0
Grading Modulus		1.20
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-4(0)

D10= 0.061 D30= 0.127 D60= 0.510









% Clay = 5.0	% Silt = 4.2	% Sand = 85.8	% Gravel = 5.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

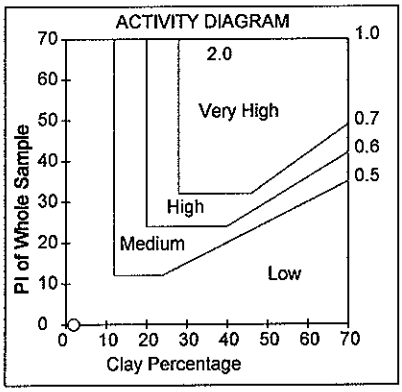
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

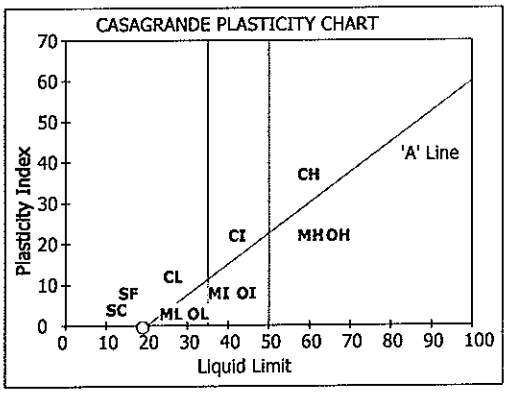
Sample No.	: U9875
Position	: TP 119; 0.0 - 0.2m
Layer Type	: Not Specified
Sample Colour	: Light Brown Sand
Sample Type	: + Quartz Stone

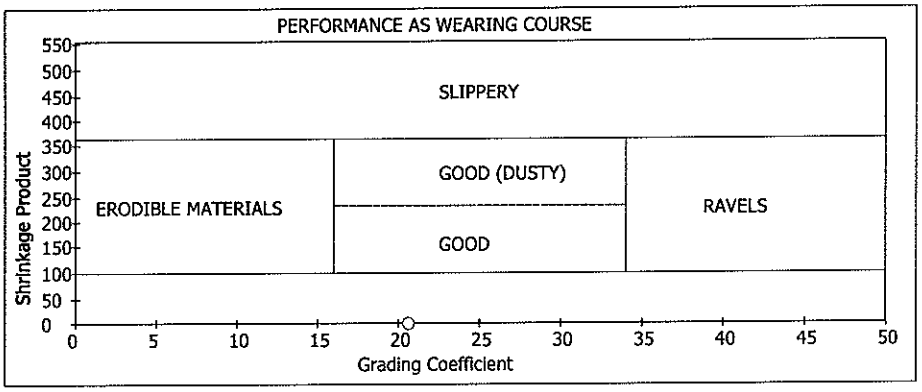
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	94
14.00	93
5.000	86
2.000	76
0.425	50
0.250	40
0.150	30
0.075	21
0.060	12
0.050	10
0.020	3.7
0.005	2.5
0.002	1.9

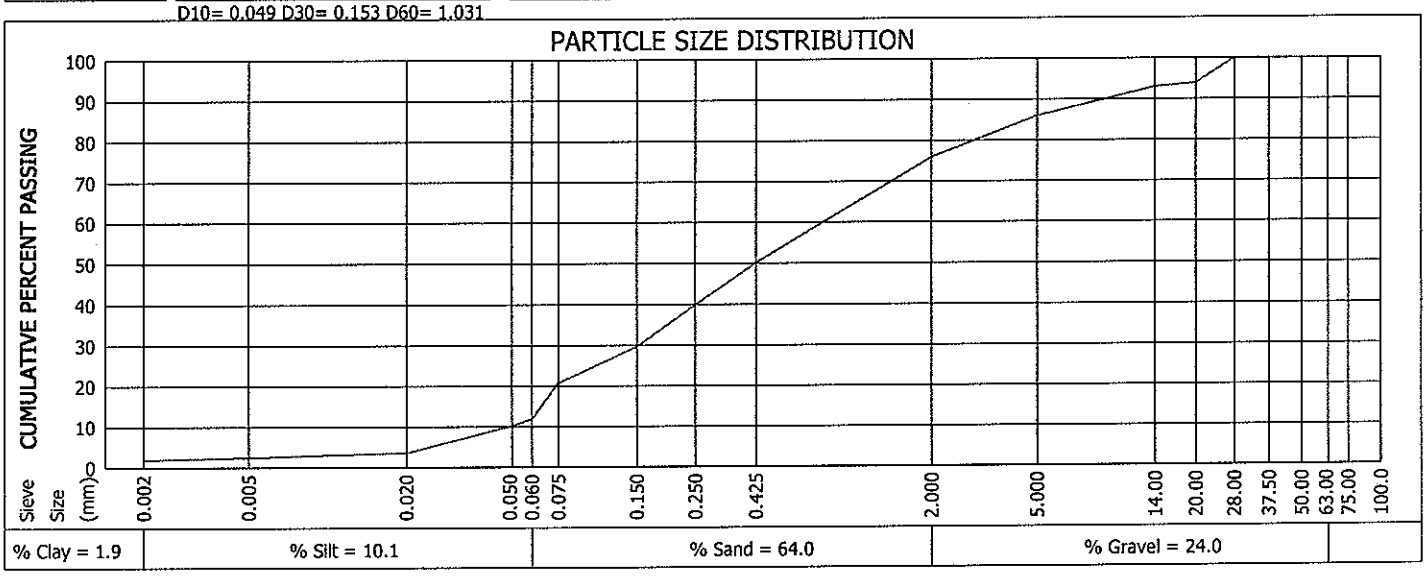
Soil Mortar	2.000 - 0.425	35
	0.425 - 0.250	13
	0.250 - 0.150	13
	0.150 - 0.075	11
	< 0.075	28
Effective Size		0.049
Uniformity Coefficient		21.0
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		20.6
Grading Modulus		1.50
Atterberg Limits	Liquid Limit	19
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.049 D30= 0.153 D60= 1.031









% Clay = 1.9	% Silt = 10.1	% Sand = 64.0	% Gravel = 24.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Job Request No.: RU3988
Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

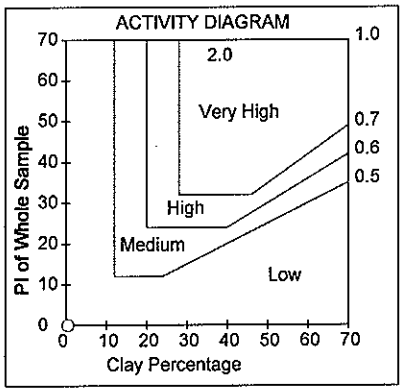
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

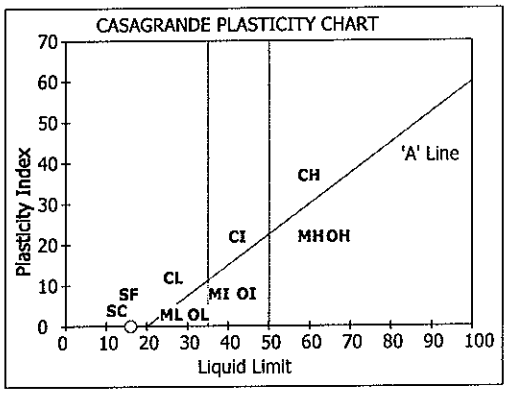
Sample No.	: U9876
Position	: TP 121; 0.0 - 0.35m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravel
Sample Type	: + Quartz Stone

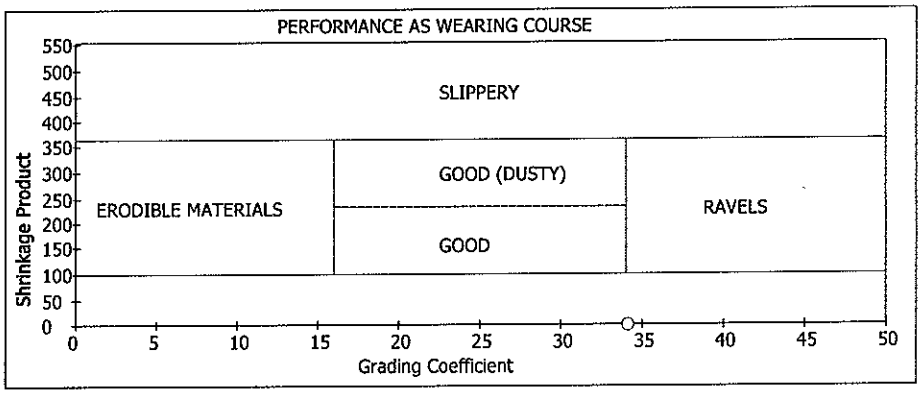
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	97
20.00	94
14.00	88
5.000	56
2.000	36
0.425	17
0.250	13
0.150	9.3
0.075	5.8
0.060	2.8
0.050	2.2
0.020	0.9
0.005	0.8
0.002	0.7

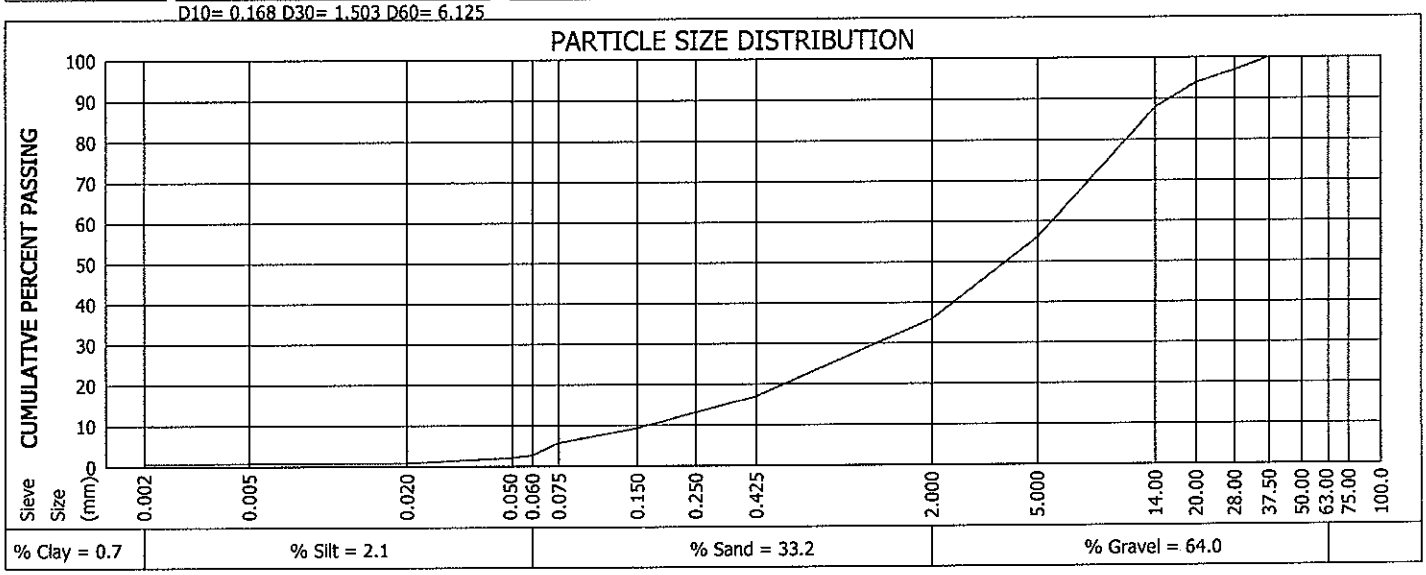
Soil Mortar	2.000 - 0.425	52
	0.425 - 0.250	11
	0.250 - 0.150	11
	0.150 - 0.075	9
	< 0.075	17
Effective Size		0.168
Uniformity Coefficient		36.5
Curvature Coefficient		2.2
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		34.2
Grading Modulus		2.40
Atterberg Limits	Liquid Limit	16
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-a(0)

D10= 0.168 D30= 1.503 D60= 6.125









% Clay = 0.7	% Silt = 2.1	% Sand = 33.2	% Gravel = 64.0

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Manager

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Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

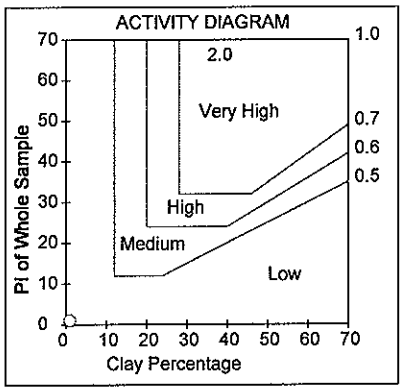
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

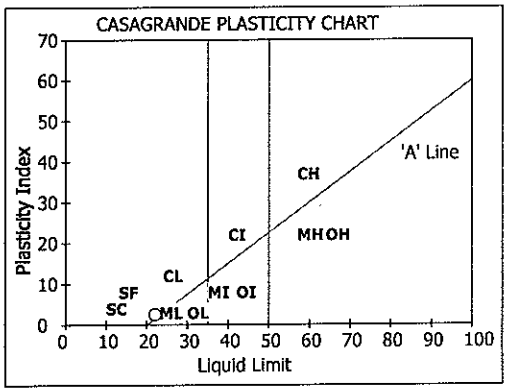
Sample No.	: U9877
Position	: TP 123; 0.0 - 0.5m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravel
Sample Type	: + Quartz Stone

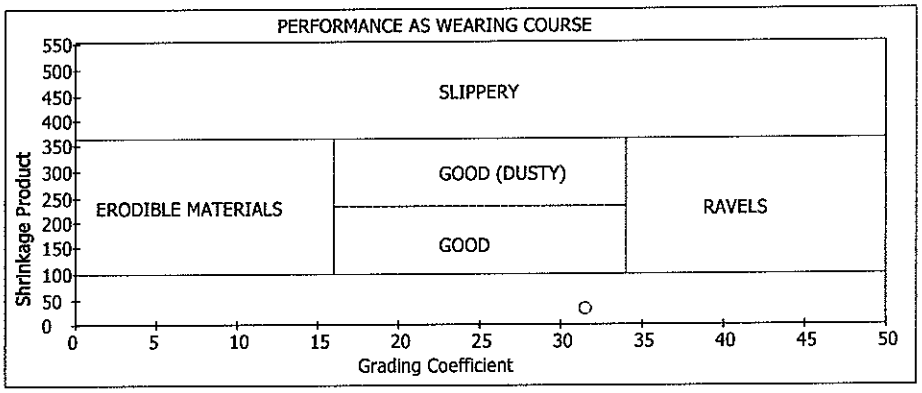
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	94
20.00	90
14.00	85
5.000	63
2.000	44
0.425	21
0.250	17
0.150	12
0.075	7.8
0.060	3.0
0.050	1.6
0.020	1.5
0.005	1.2
0.002	1.0

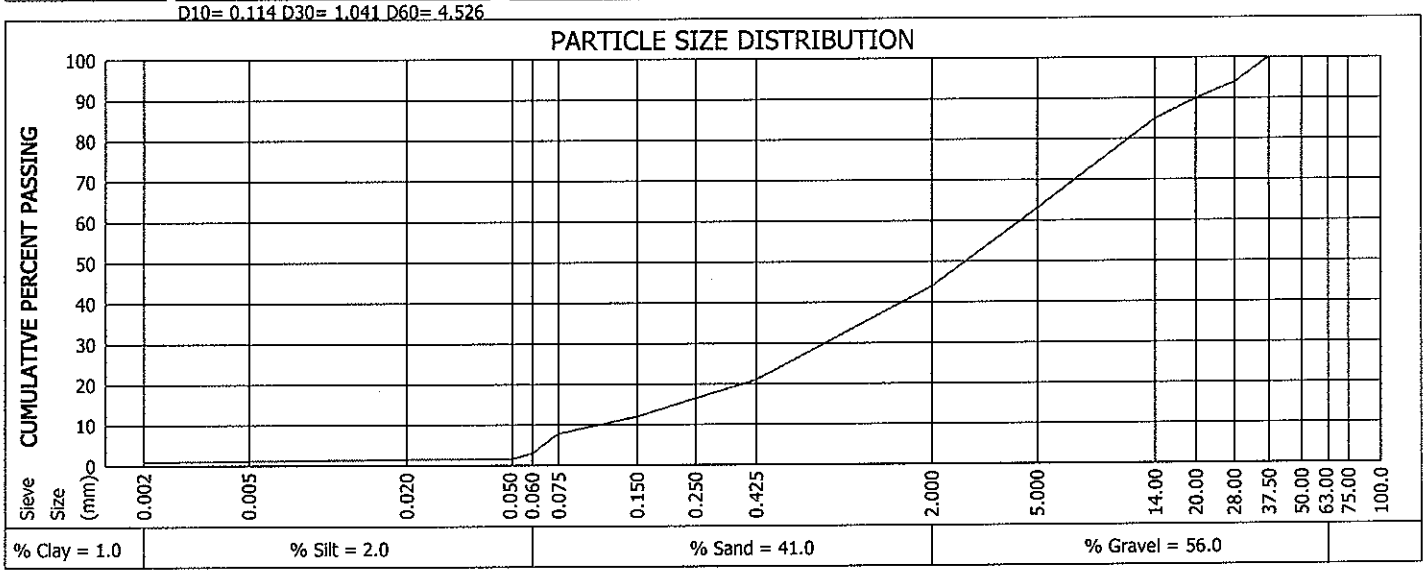
Soil Mortar	2.000 - 0.425	53
	0.425 - 0.250	10
	0.250 - 0.150	10
	0.150 - 0.075	9
	< 0.075	18
Effective Size		0.114
Uniformity Coefficient		39.7
Curvature Coefficient		2.1
Oversize Index		0.0
Shrinkage Product		31.5
Grading Coefficient		31.5
Grading Modulus		2.30
Atterberg Limits	Liquid Limit	22
	Plasticity Index	2.0
	Linear Shrinkage	1.5
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-a(0)

D10= 0.114 D30= 1.041 D60= 4.526









% Clay = 1.0	% Silt = 2.0	% Sand = 41.0	% Gravel = 56.0

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Attention : Aubrey Nonyana

Date Reported : 2021-07-21

Project : RDP Houses, Nababeep

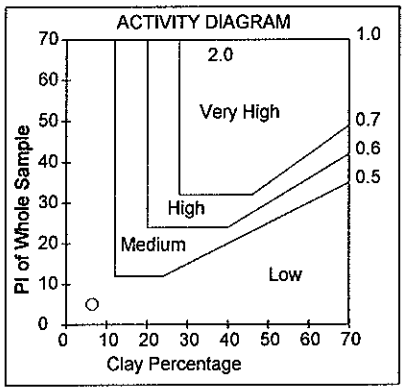
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

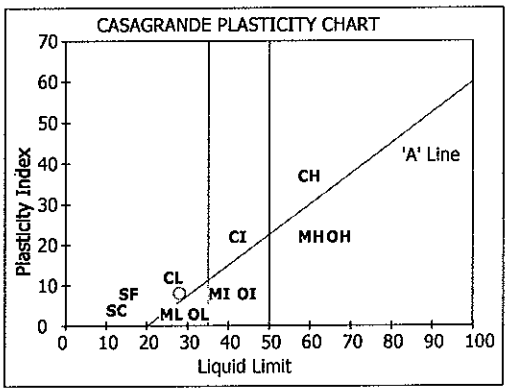
Sample No.	: U9880
Position	: TP 128; 0.0 - 0.7m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Gravel
Sample Type	: + Quartz Stone

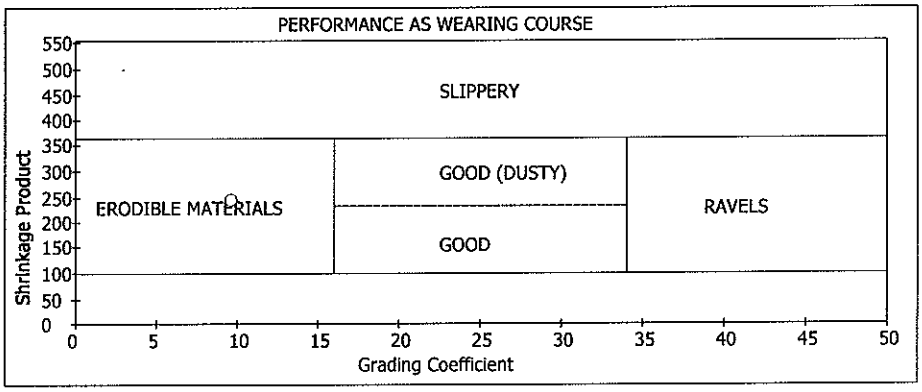
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	100
14.00	100
5.000	96
2.000	90
0.425	61
0.250	52
0.150	40
0.075	29
0.060	18
0.050	11
0.020	9.3
0.005	7.4
0.002	6.5

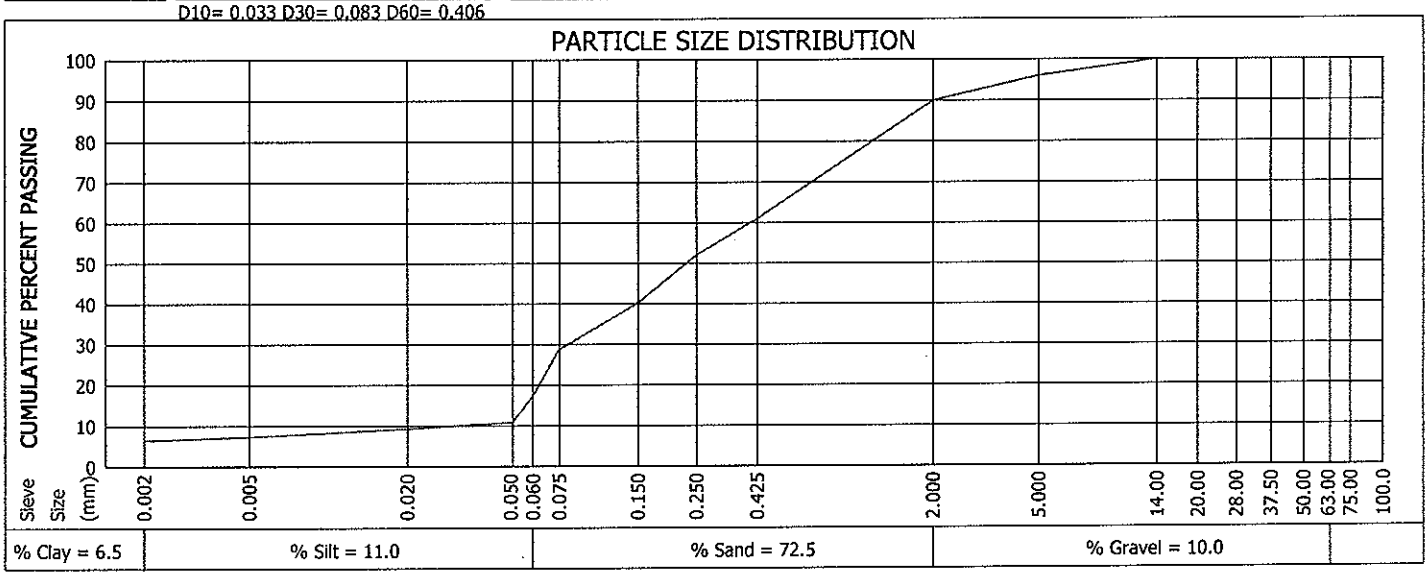
Soil Mortar	2.000 - 0.425	32
	0.425 - 0.250	10
	0.250 - 0.150	13
	0.150 - 0.075	13
	< 0.075	32
Effective Size		0.033
Uniformity Coefficient		12.3
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		244.0
Grading Coefficient		9.6
Grading Modulus		1.20
Atterberg Limits	Liquid Limit	28
	Plasticity Index	8
	Linear Shrinkage	4.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-4(0)

D10= 0.033 D30= 0.083 D60= 0.406









% Clay = 6.5	% Silt = 11.0	% Sand = 72.5	% Gravel = 10.0

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Manager

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Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

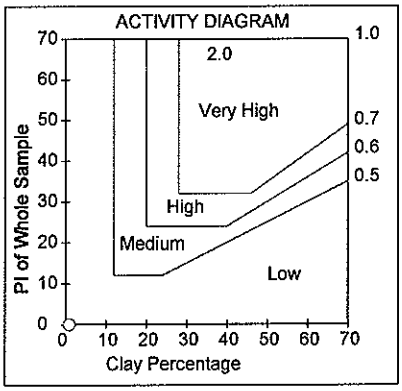
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

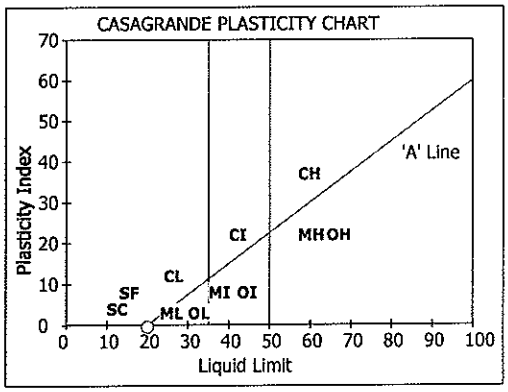
Sample No.	: U9900
Position	: TP 129; 0.0 - 0.2m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Sand Mix
Sample Type	: WeatheredQuartzGrani

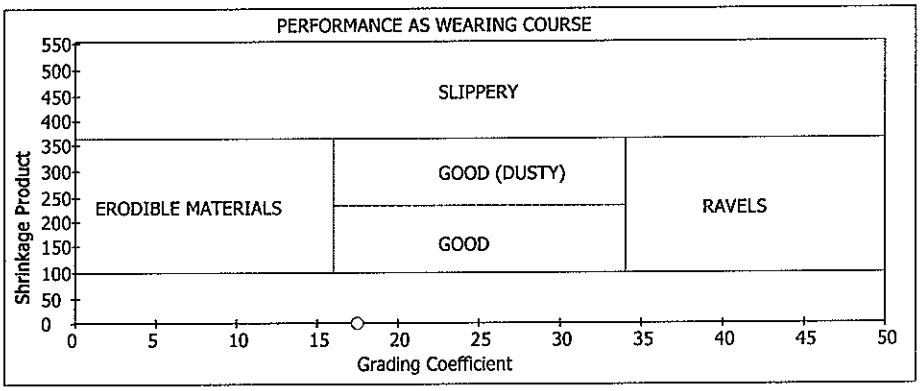
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	96
28.00	91
20.00	88
14.00	85
5.000	76
2.000	68
0.425	44
0.250	37
0.150	27
0.075	14
0.060	7.0
0.050	5.6
0.020	1.8
0.005	1.3
0.002	0.8

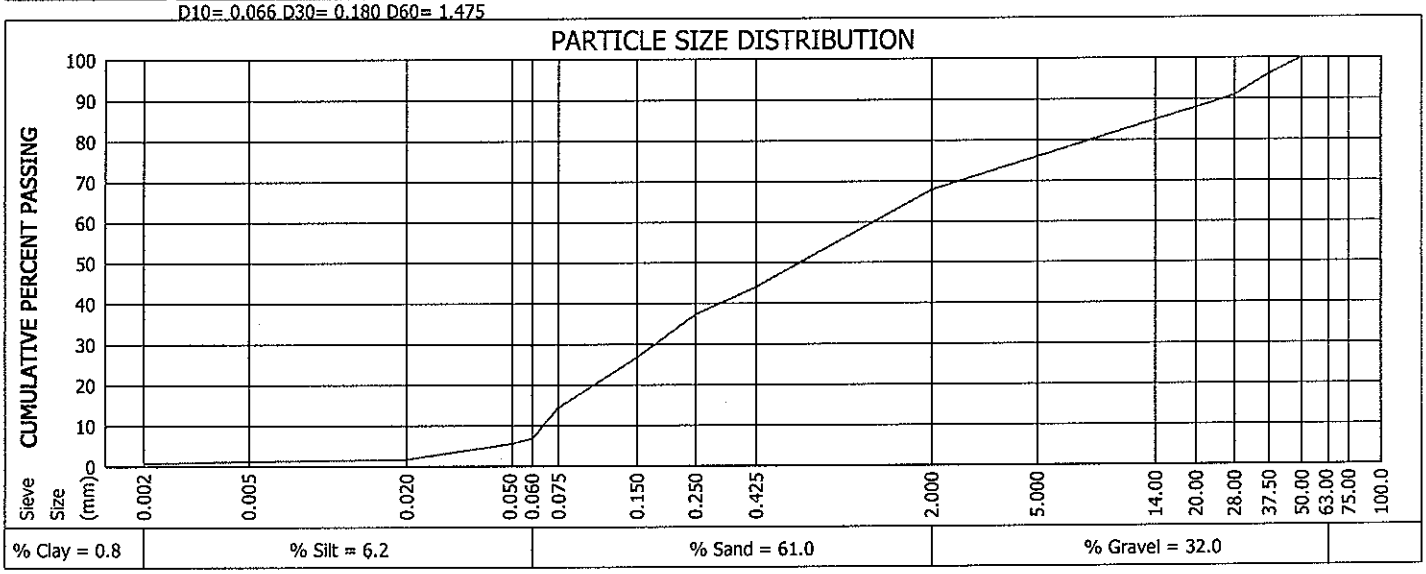
Soil Mortar	2.000 - 0.425	35
	0.425 - 0.250	11
	0.250 - 0.150	15
	0.150 - 0.075	19
	< 0.075	21
Effective Size		0.066
Uniformity Coefficient		22.3
Curvature Coefficient		0.3
Oversize Index		4.0
Shrinkage Product		0.0
Grading Coefficient		17.5
Grading Modulus		1.70
Atterberg Limits	Liquid Limit	20
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.066 D30= 0.180 D60= 1.475









% Clay = 0.8	% Silt = 6.2	% Sand = 61.0	% Gravel = 32.0

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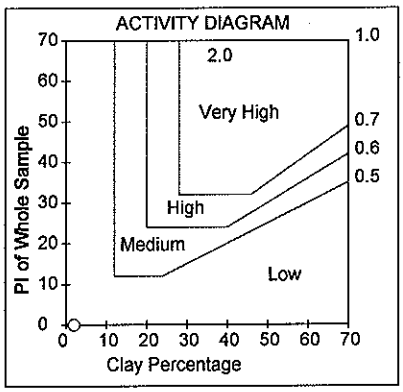
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

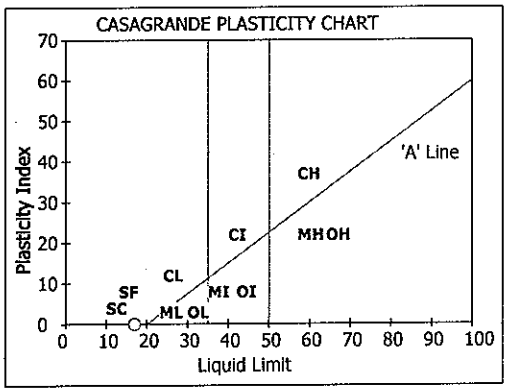
Sample No.	: U9881
Position	: TP 132; 0.0 - 0.1m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravelly
Sample Type	: + Quartz Stone

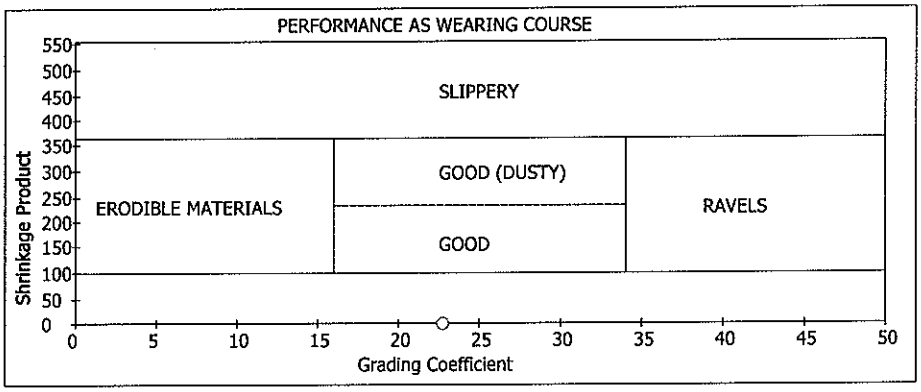
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	95
28.00	90
20.00	86
14.00	83
5.000	69
2.000	57
0.425	33
0.250	26
0.150	19
0.075	12
0.060	5.7
0.050	3.6
0.020	3.1
0.005	2.4
0.002	1.9

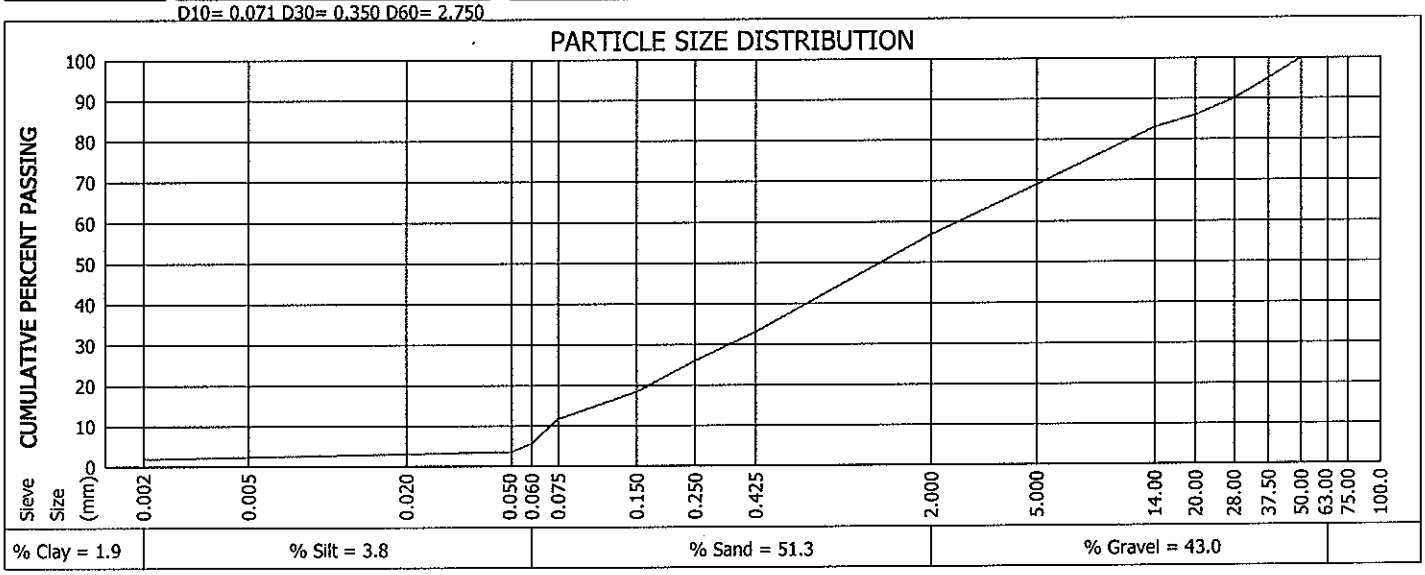
Soil Mortar	2.000 - 0.425	42
	0.425 - 0.250	12
	0.250 - 0.150	13
	0.150 - 0.075	11
	< 0.075	21
Effective Size		0.071
Uniformity Coefficient		38.7
Curvature Coefficient		0.6
Oversize Index		5.0
Shrinkage Product		0.0
Grading Coefficient		22.8
Grading Modulus		2.00
Atterberg Limits	Liquid Limit	17
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.071 D30= 0.350 D60= 2.750









% Clay = 1.9	% Silt = 3.8	% Sand = 51.3	% Gravel = 43.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
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Attention : Aubrey Nonyana

Project : RDP Houses, Nababeep

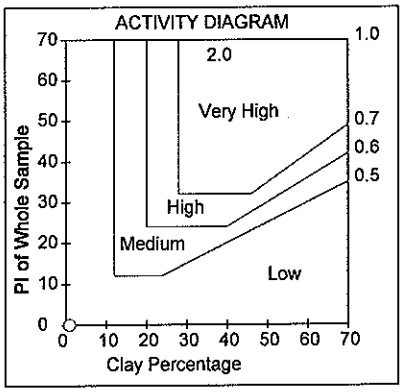
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

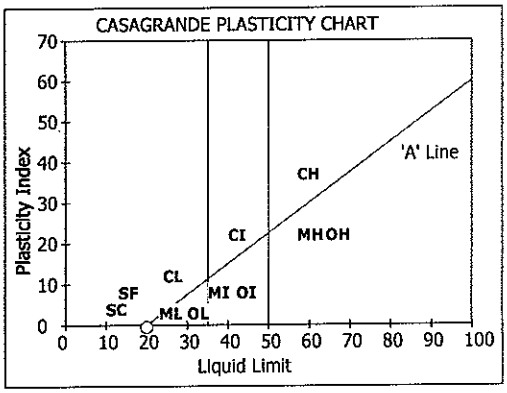
Sample No.	: U9884
Position	: TP 136; 0.0 - 0.5m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravelly
Sample Type	: + Quartz Stone

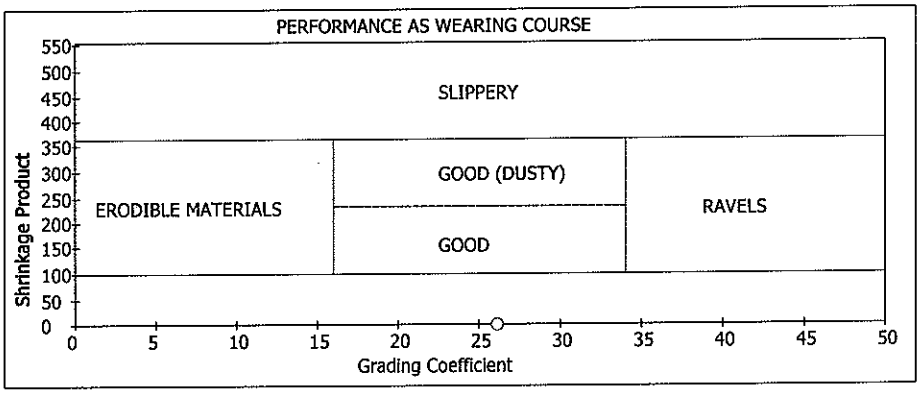
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	97
14.00	94
5.000	77
2.000	66
0.425	39
0.250	31
0.150	22
0.075	12
0.060	7.4
0.050	6.5
0.020	2.2
0.005	1.5
0.002	1.1

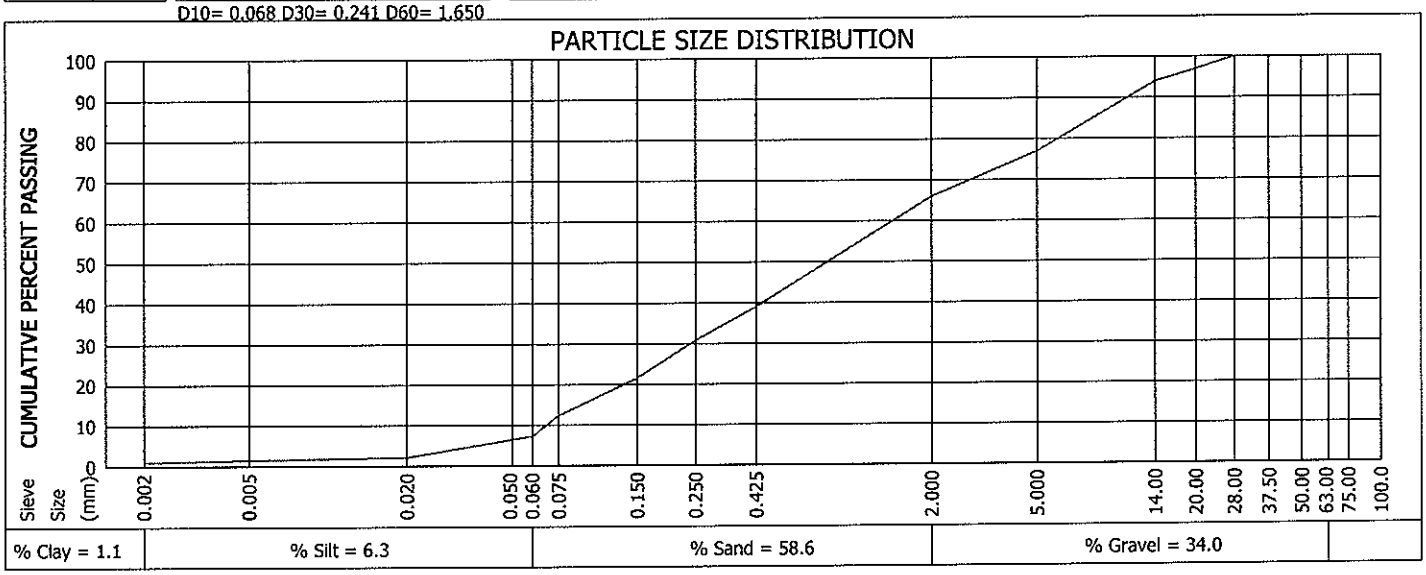
Soil Mortar	2.000 - 0.425	41
	0.425 - 0.250	12
	0.250 - 0.150	14
	0.150 - 0.075	15
	< 0.075	18
Effective Size		0.068
Uniformity Coefficient		24.3
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		26.2
Grading Modulus		1.80
Atterberg Limits	Liquid Limit	20
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.068 D30= 0.241 D60= 1.650









% Clay = 1.1	% Silt = 6.3	% Sand = 58.6	% Gravel = 34.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

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Job Request No.: RU3988
Iceberg Trading
PO Box 1364
Louis Trichardt
0920
Attention : Aubrey Nonyana

Date Reported : 2021-07-21

Project : RDP Houses, Nababeep

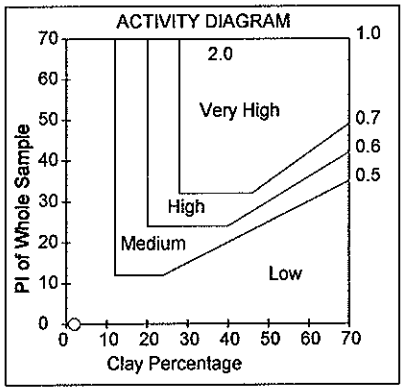
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

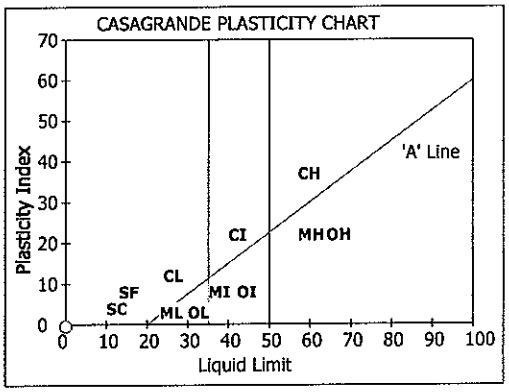
Sample No.	: U9885
Position	: TP 138; 0.0 - 0.5m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown
Sample Type	: Sand + Quartz Stone

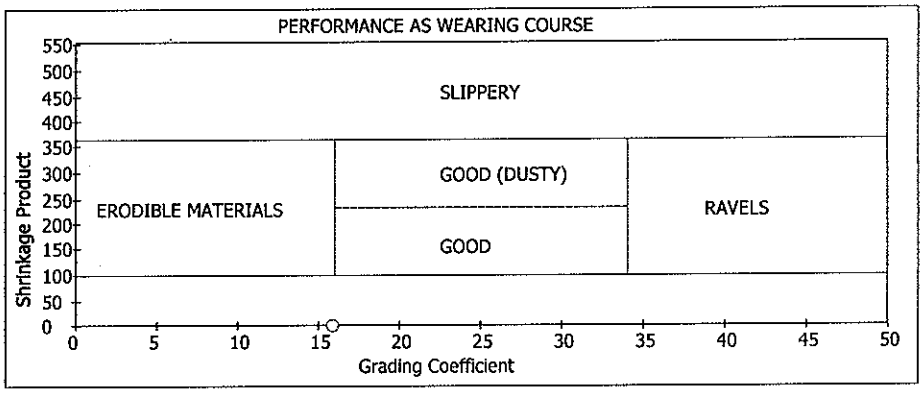
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	97
20.00	96
14.00	96
5.000	88
2.000	79
0.425	46
0.250	37
0.150	28
0.075	18
0.060	8.3
0.050	8.3
0.020	3.5
0.005	2.5
0.002	1.8

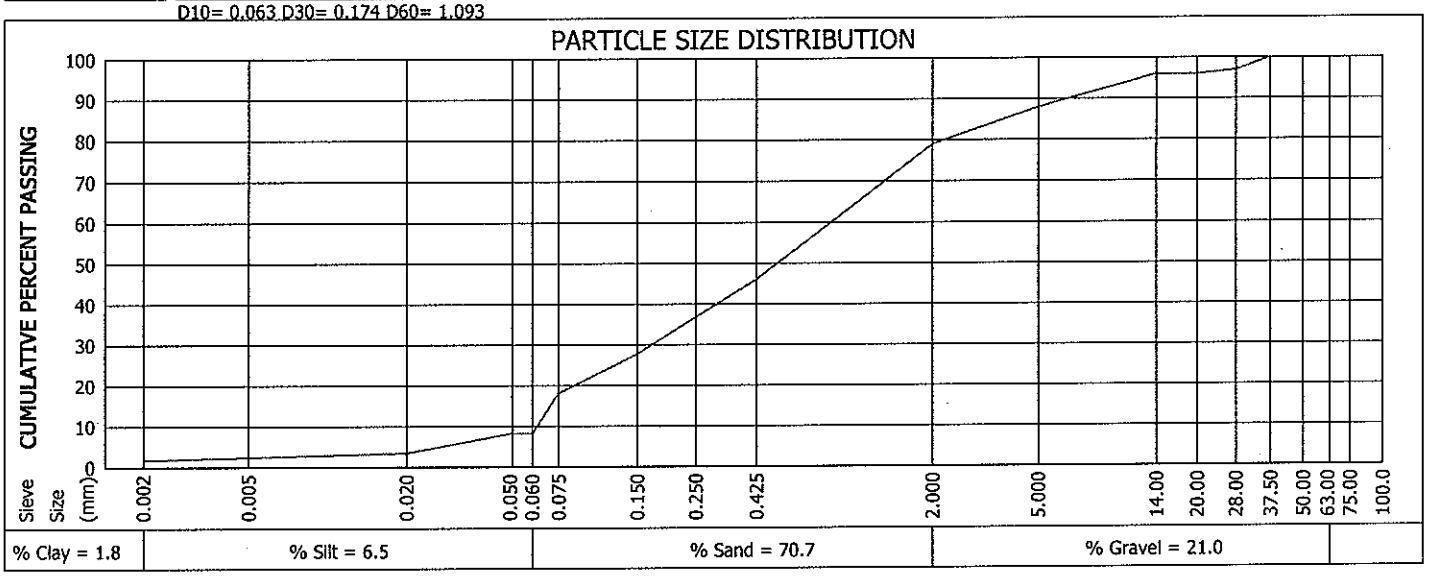
Soil Mortar	2.000 - 0.425	43
	0.425 - 0.250	11
	0.250 - 0.150	11
	0.150 - 0.075	12
	< 0.075	23
Effective Size		0.063
Uniformity Coefficient		17.3
Curvature Coefficient		0.4
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		15.8
Grading Modulus		1.60
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.063 D30= 0.174 D60= 1.093









% Clay = 1.8	% Silt = 6.5	% Sand = 70.7	% Gravel = 21.0

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Roelof Lategan
Manager

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Louis Trichardt
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Attention : Aubrey Nonyana

Project : RDP Houses, Nababeep

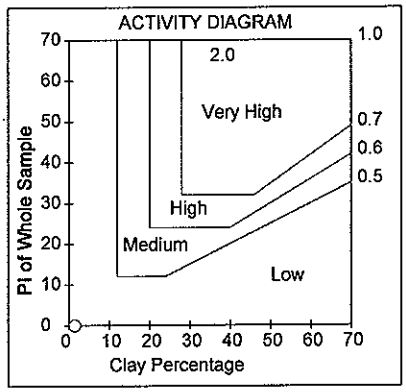
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

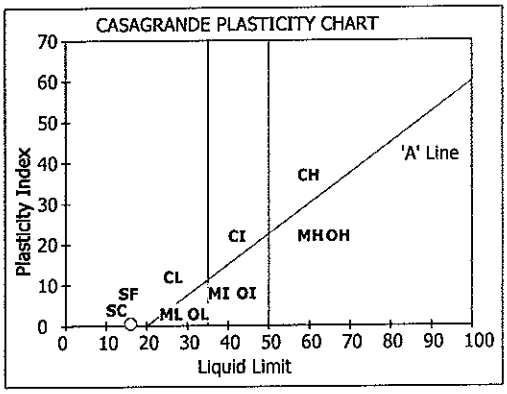
Sample No.	: U9886
Position	: TP 140; 0.0 - 0.6m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravelly
Sample Type	: + Quartz Stone

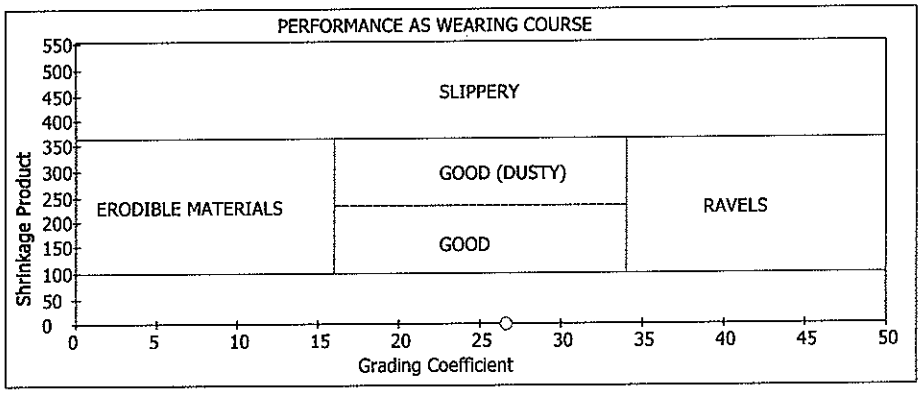
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	93
28.00	92
20.00	89
14.00	86
5.000	70
2.000	54
0.425	31
0.250	24
0.150	17
0.075	12
0.060	6.6
0.050	5.4
0.020	2.3
0.005	1.8
0.002	1.4

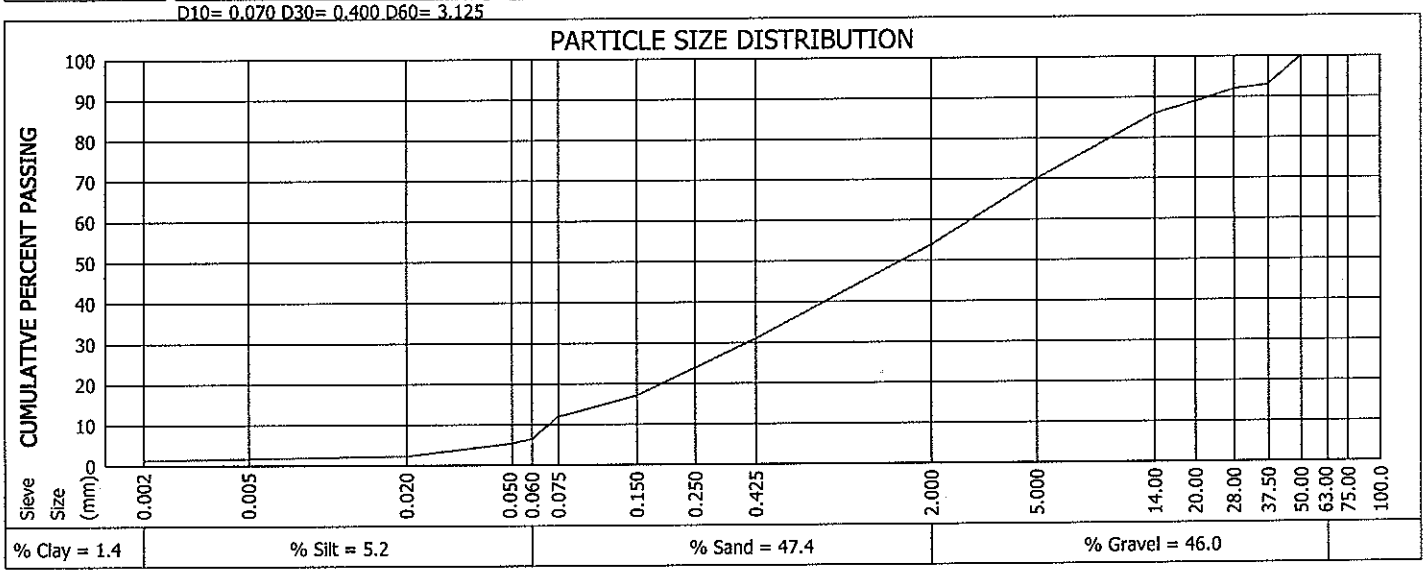
Soil Mortar	2.000 - 0.425	44
	0.425 - 0.250	12
	0.250 - 0.150	13
	0.150 - 0.075	9
	< 0.075	22
Effective Size		0.070
Uniformity Coefficient		44.6
Curvature Coefficient		0.7
Oversize Index		7.0
Shrinkage Product		0.0
Grading Coefficient		26.6
Grading Modulus		2.00
Atterberg Limits	Liquid Limit	16
	Plasticity Index	1.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.070 D30= 0.400 D60= 3.125









% Clay = 1.4	% Silt = 5.2	% Sand = 47.4	% Gravel = 46.0

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Remarks and Notes :

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Roelof Lategan
Manager

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Job Request No.: RU3988

Date Reported : 2021-08-18

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Louis Trichardt
0920

Project : RDP Houses, Nababeep

Attention : Aubrey Nonyana

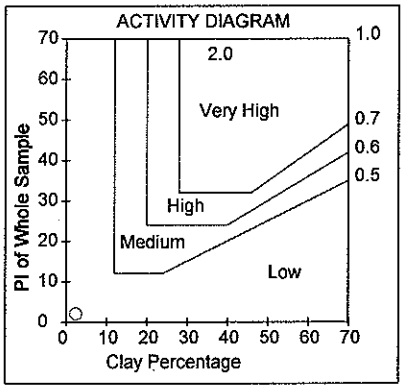
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

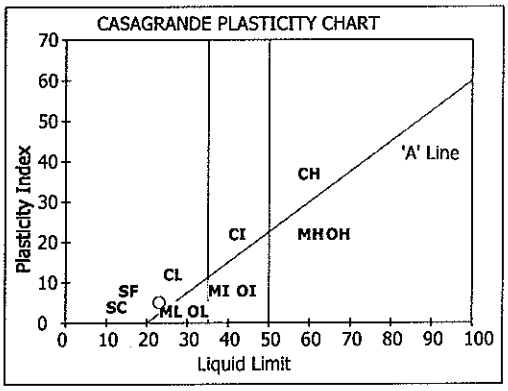
Sample No.	: U9887
Position	: TP 141; 0.0 - 0.3m
Layer Type	: Not Specified
Sample Colour	: Dark Brown Gravelly
Sample Type	: + Weathered Quartz S

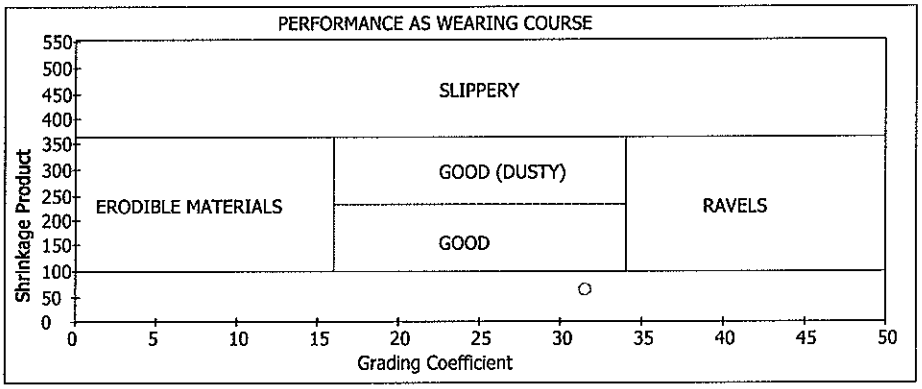
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	100
14.00	98
5.000	83
2.000	62
0.425	31
0.250	26
0.150	20
0.075	14
0.060	11
0.050	9.4
0.020	3.2
0.005	2.9
0.002	2.4

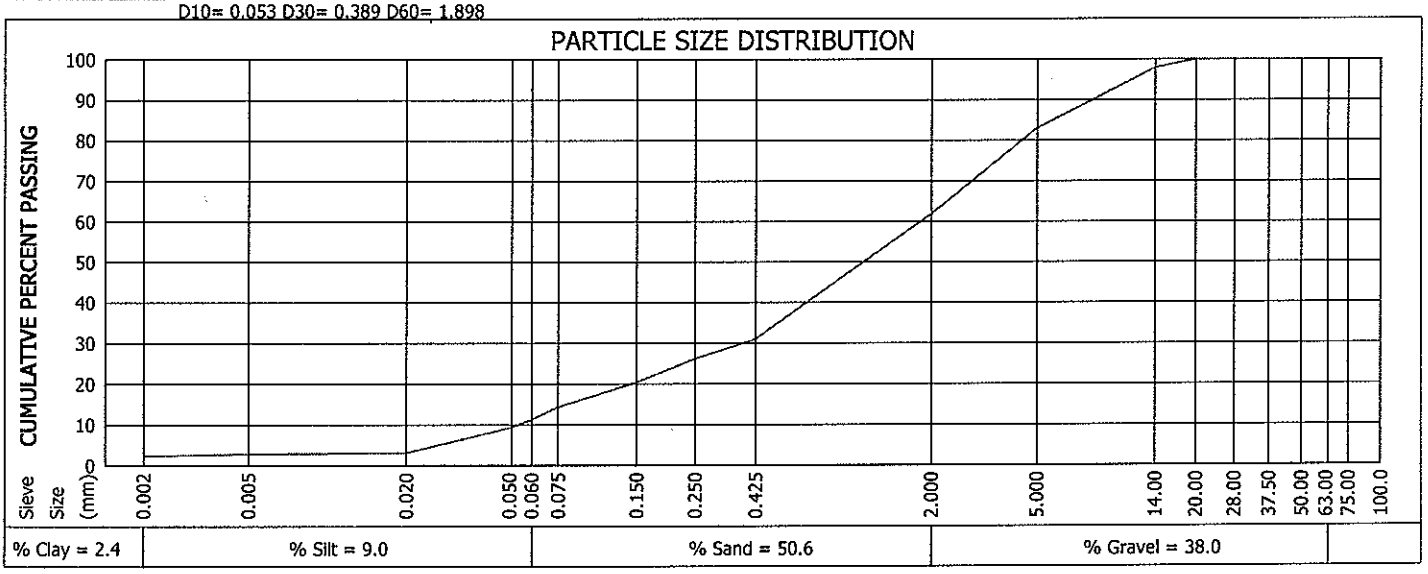
Soil Mortar	2.000 - 0.425	50
	0.425 - 0.250	8
	0.250 - 0.150	9
	0.150 - 0.075	10
	< 0.075	22
Effective Size		0.053
Uniformity Coefficient		35.8
Curvature Coefficient		1.5
Oversize Index		0.0
Shrinkage Product		62.0
Grading Coefficient		31.5
Grading Modulus		1.90
Atterberg Limits	Liquid Limit	23
	Plasticity Index	5
	Linear Shrinkage	2.0
	PI < 0.075	
Unified Soil Classification		SM-SC
US Highway Classification		A-1-b(0)

D10= 0.053 D30= 0.389 D60= 1.898









% Clay = 2.4	% Silt = 9.0	% Sand = 50.6	% Gravel = 38.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Job Request No.: RU3988

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Louis Trichardt
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Attention : Aubrey Nonyana

Project : RDP Houses, Nababeep

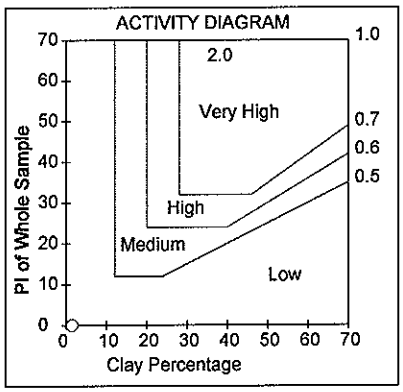
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

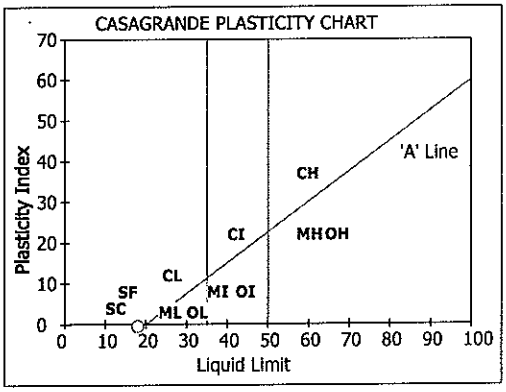
Sample No.	: U9889
Position	: TP 143; 0.0 - 0.4m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown S
Sample Type	: + Quartz Stone

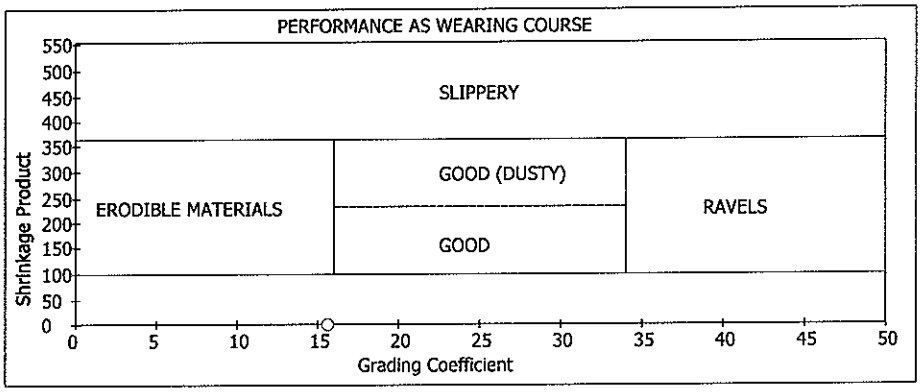
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	97
20.00	96
14.00	95
5.000	87
2.000	79
0.425	48
0.250	37
0.150	25
0.075	15
0.060	7.8
0.050	7.0
0.020	2.8
0.005	2.3
0.002	1.7

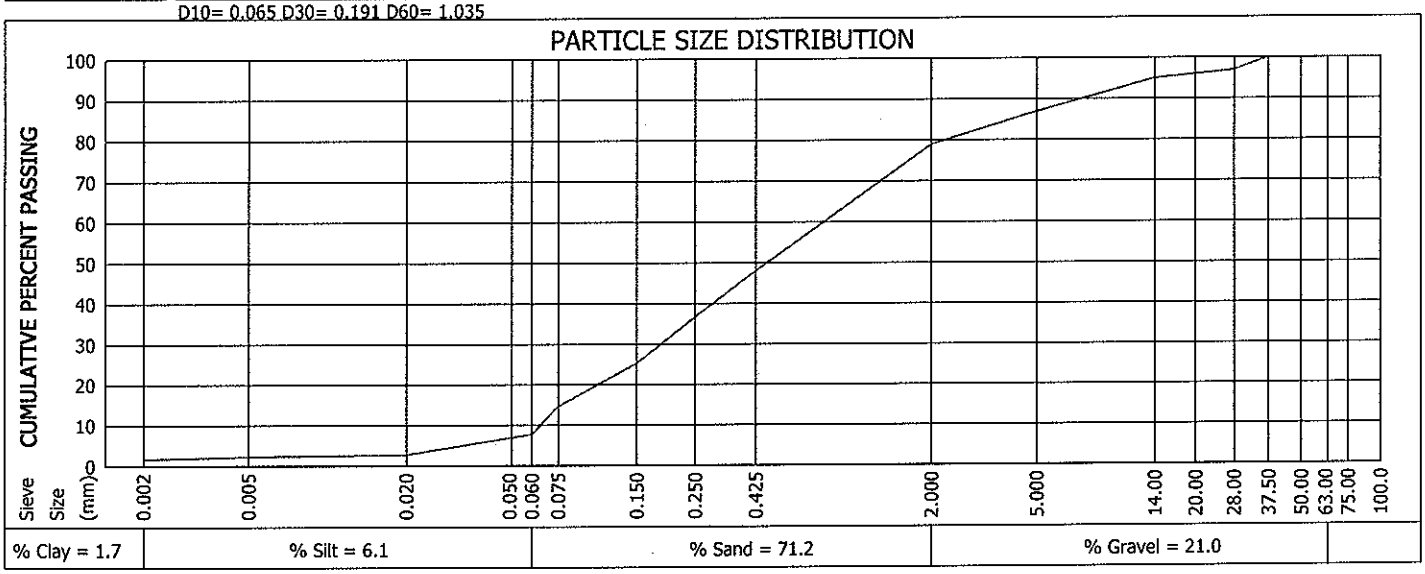
Soil Mortar	2.000 - 0.425	40
	0.425 - 0.250	14
	0.250 - 0.150	14
	0.150 - 0.075	14
	< 0.075	18
Effective Size		0.065
Uniformity Coefficient		15.9
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		15.7
Grading Modulus		1.60
Atterberg Limits	Liquid Limit	18
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.065 D30= 0.191 D60= 1.035









% Clay = 1.7	% Silt = 6.1	% Sand = 71.2	% Gravel = 21.0

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Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

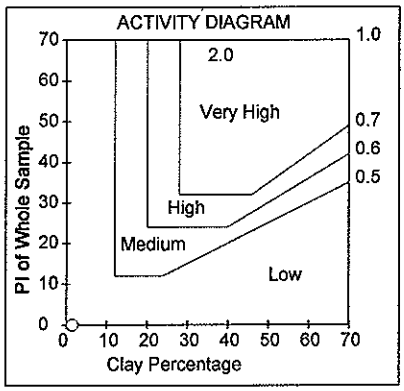
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

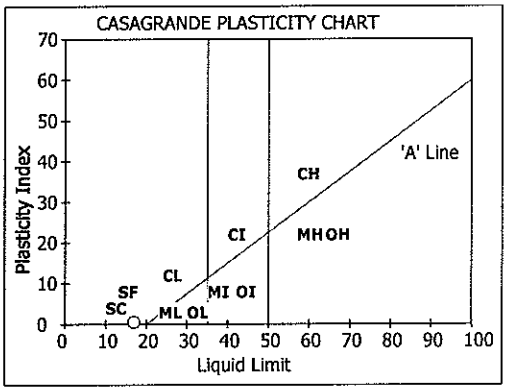
Sample No.	: U9890
Position	: TP 144; 0.0 - 0.6m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown S
Sample Type	: + Quartz Stone

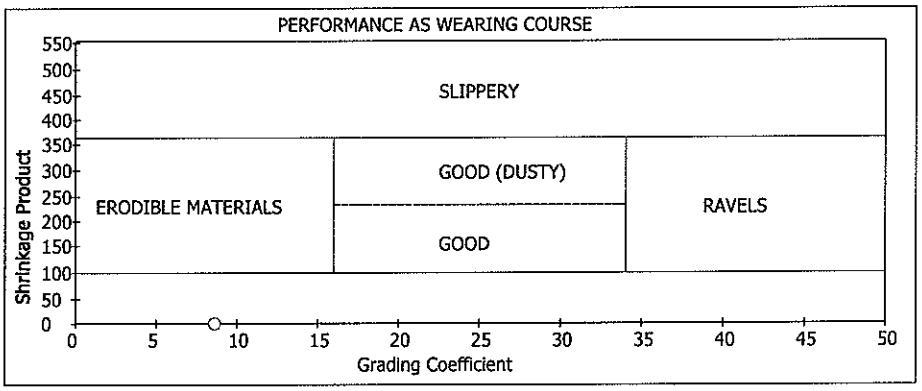
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	100
14.00	99
5.000	96
2.000	91
0.425	53
0.250	41
0.150	30
0.075	18
0.060	9.0
0.050	7.6
0.020	3.0
0.005	2.0
0.002	1.3

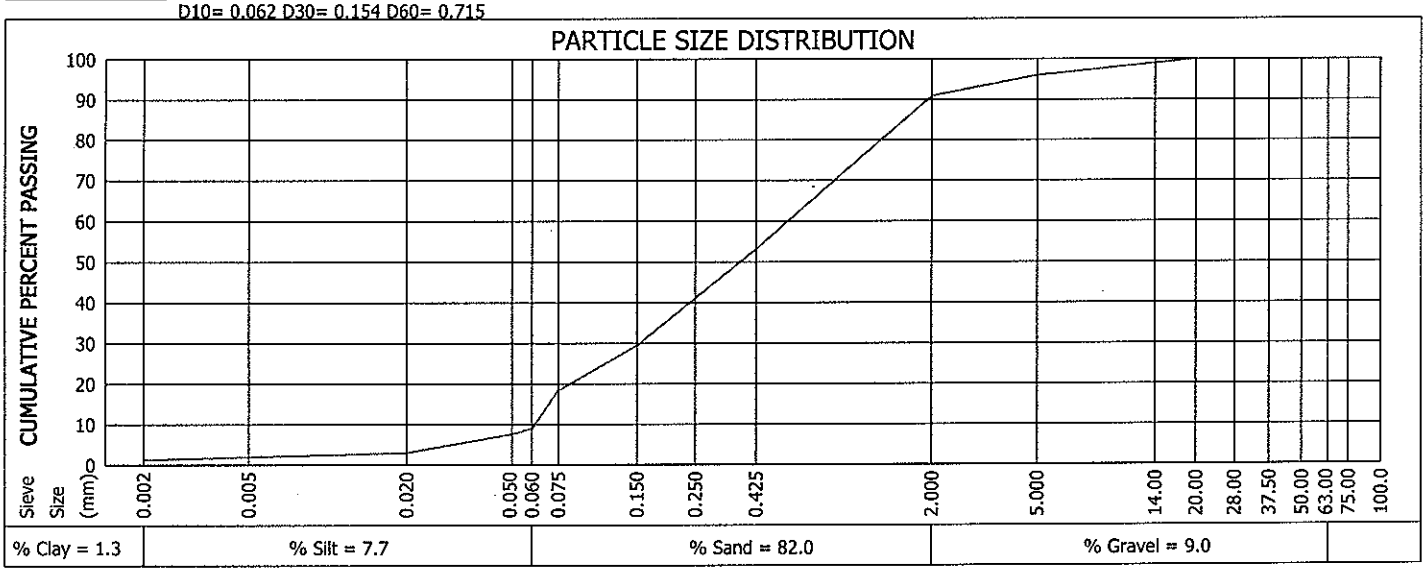
Soil Mortar	2.000 - 0.425	42
	0.425 - 0.250	13
	0.250 - 0.150	13
	0.150 - 0.075	13
	< 0.075	20
Effective Size		0.062
Uniformity Coefficient		11.5
Curvature Coefficient		0.5
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		8.6
Grading Modulus		1.40
Atterberg Limits	Liquid Limit	17
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-2-4(0)

D10= 0.062 D30= 0.154 D60= 0.715









% Clay = 1.3	% Silt = 7.7	% Sand = 82.0	% Gravel = 9.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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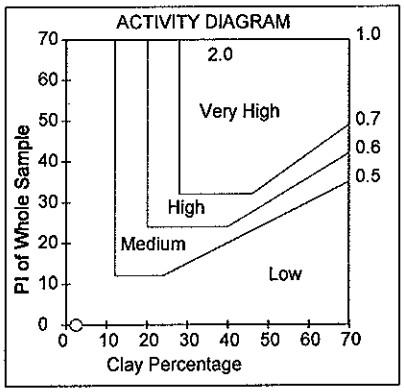
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

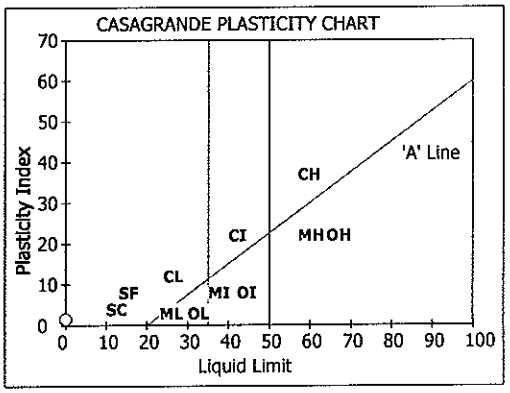
Sample No.	: U9891
Position	: TP 145; 0.0 - 0.8m
Layer Type	: Not Specified
Sample Colour	: Light Brown
Sample Type	: Sand + Quartz Stone

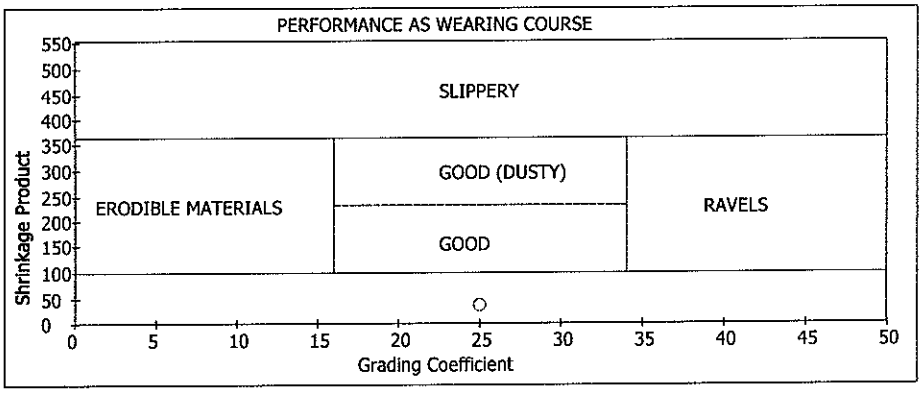
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	100
20.00	99
14.00	97
5.000	86
2.000	71
0.425	35
0.250	28
0.150	20
0.075	13
0.060	7.1
0.050	4.1
0.020	3.6
0.005	2.9
0.002	2.4

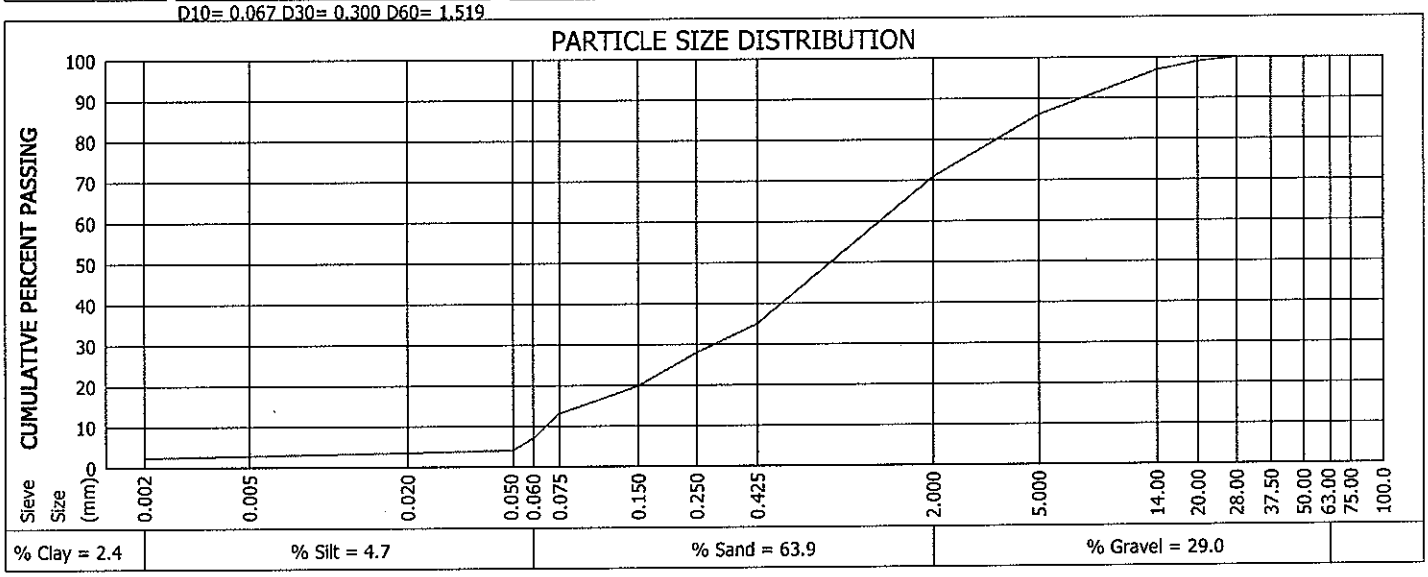
Soil Mortar	2.000 - 0.425	51
	0.425 - 0.250	10
	0.250 - 0.150	11
	0.150 - 0.075	10
	< 0.075	18
Effective Size		0.067
Uniformity Coefficient		22.7
Curvature Coefficient		0.9
Oversize Index		0.0
Shrinkage Product		35.0
Grading Coefficient		24.9
Grading Modulus		1.80
Atterberg Limits	Liquid Limit	
	Plasticity Index	SP
	Linear Shrinkage	1.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.067 D30= 0.300 D60= 1.519









% Clay = 2.4	% Silt = 4.7	% Sand = 63.9	% Gravel = 29.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
The test results reported relate to the samples tested.
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Report compiled by : Mareze Lategan

Roelof Lategan
Manager

Prog.ver 10.7 (2019/11/07)

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Web: www.roadlab.co.za

Job Request No.: RU3988
Iceberg Trading
PO Box 1364
Louis Trichardt
0920
Attention : Aubrey Nonyana

Date Reported : 2021-07-21

Project : RDP Houses, Nababeep

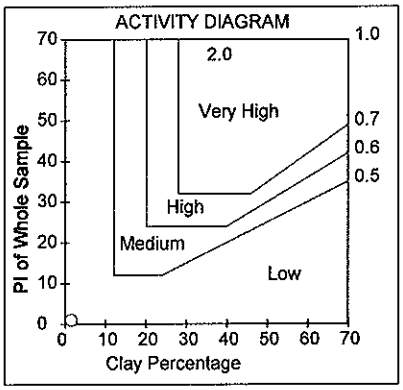
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

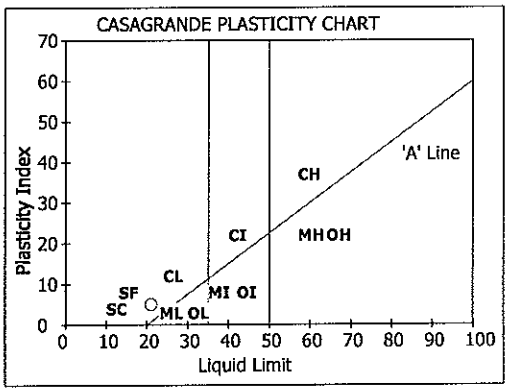
Sample No.	: U9893
Position	: TP 148; 0.0 - 0.4m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown G
Sample Type	: Sand+WeatheredQuartz

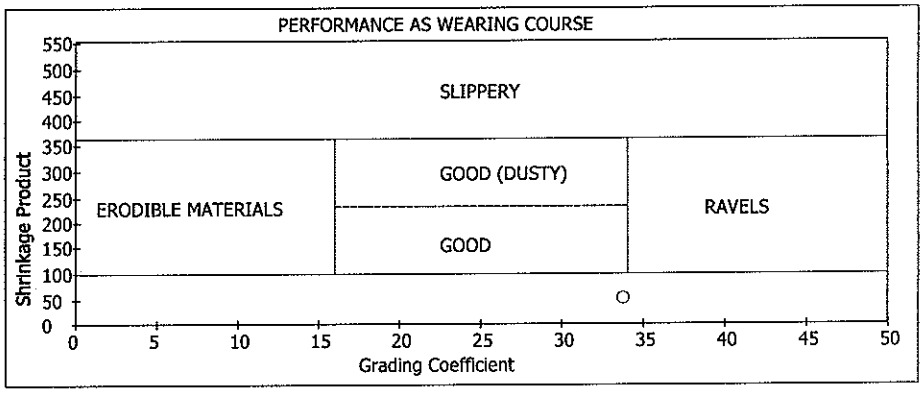
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	96
20.00	93
14.00	90
5.000	69
2.000	47
0.425	21
0.250	15
0.150	11
0.075	7.4
0.060	3.7
0.050	2.1
0.020	1.9
0.005	1.6
0.002	1.5

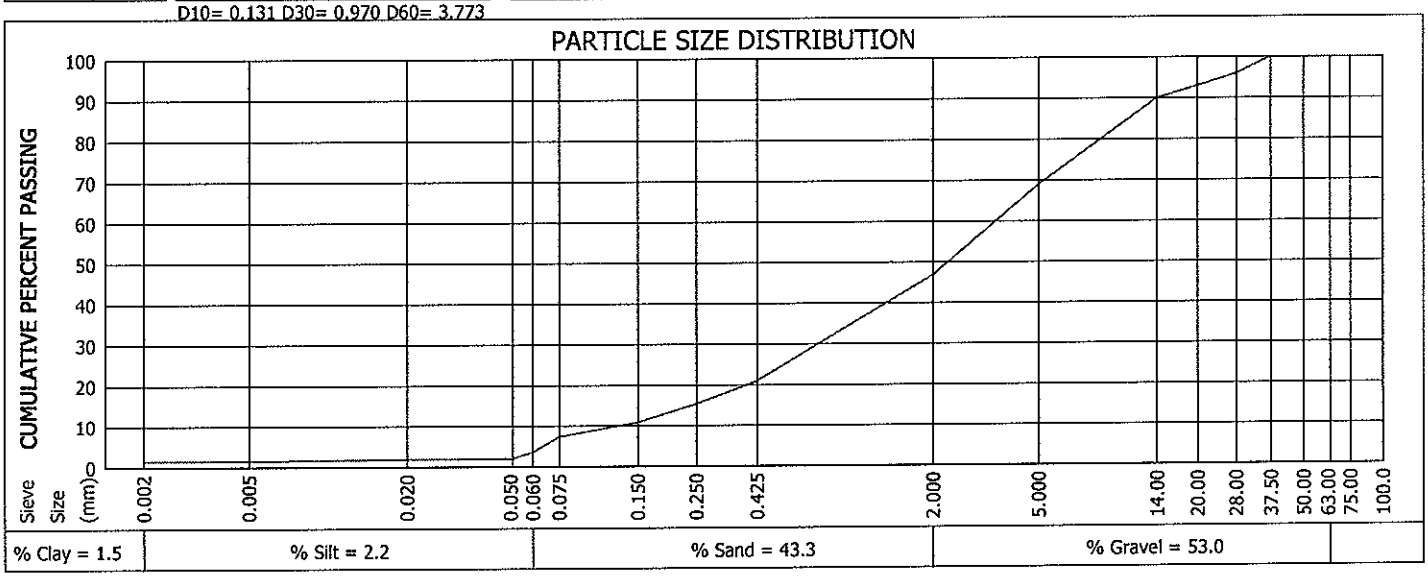
Soil Mortar	2.000 - 0.425	56
	0.425 - 0.250	11
	0.250 - 0.150	10
	0.150 - 0.075	8
	< 0.075	15
Effective Size		0.131
Uniformity Coefficient		28.8
Curvature Coefficient		1.9
Oversize Index		0.0
Shrinkage Product		52.5
Grading Coefficient		33.8
Grading Modulus		2.30
Atterberg Limits	Liquid Limit	21
	Plasticity Index	5
	Linear Shrinkage	2.5
	PI < 0.075	
Unified Soil Classification		SW-SM-SC
US Highway Classification		A-1-a(0)

D10= 0.131 D30= 0.970 D60= 3.773









% Clay = 1.5	% Silt = 2.2	% Sand = 43.3	% Gravel = 53.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Job Request No.: RU3988
Iceberg Trading
PO Box 1364
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0920

Attention : Aubrey Nonyana

Date Reported : 2021-07-21

Project : RDP Houses, Nababeep

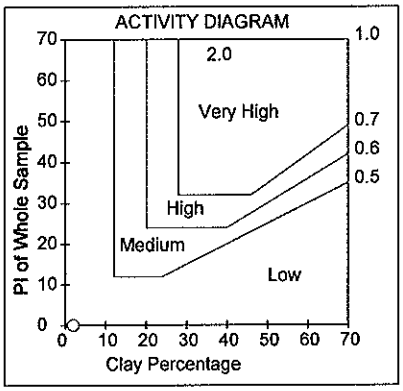
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

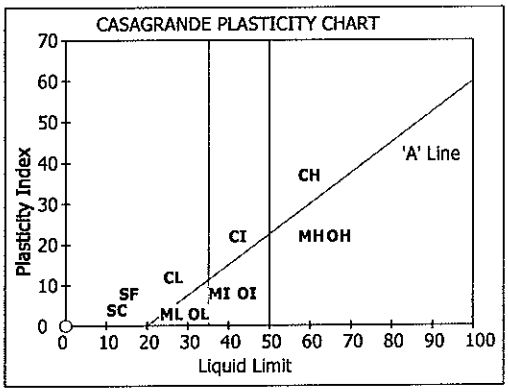
Sample No.	: U9894
Position	: TP 149; 0.0 - 0.1m
Layer Type	: Not Specified
Sample Colour	: Light Orange Brown
Sample Type	: Sand + Quartz Stone

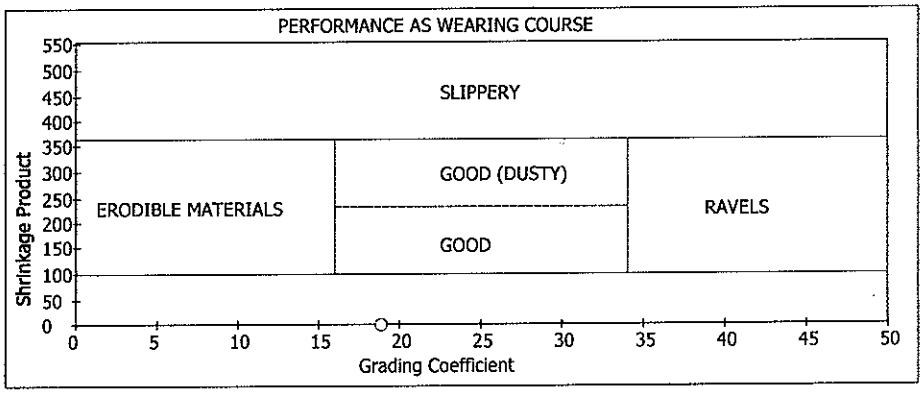
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	99
20.00	97
14.00	94
5.000	86
2.000	77
0.425	42
0.250	32
0.150	23
0.075	15
0.060	6.4
0.050	6.3
0.020	2.5
0.005	2.2
0.002	2.0

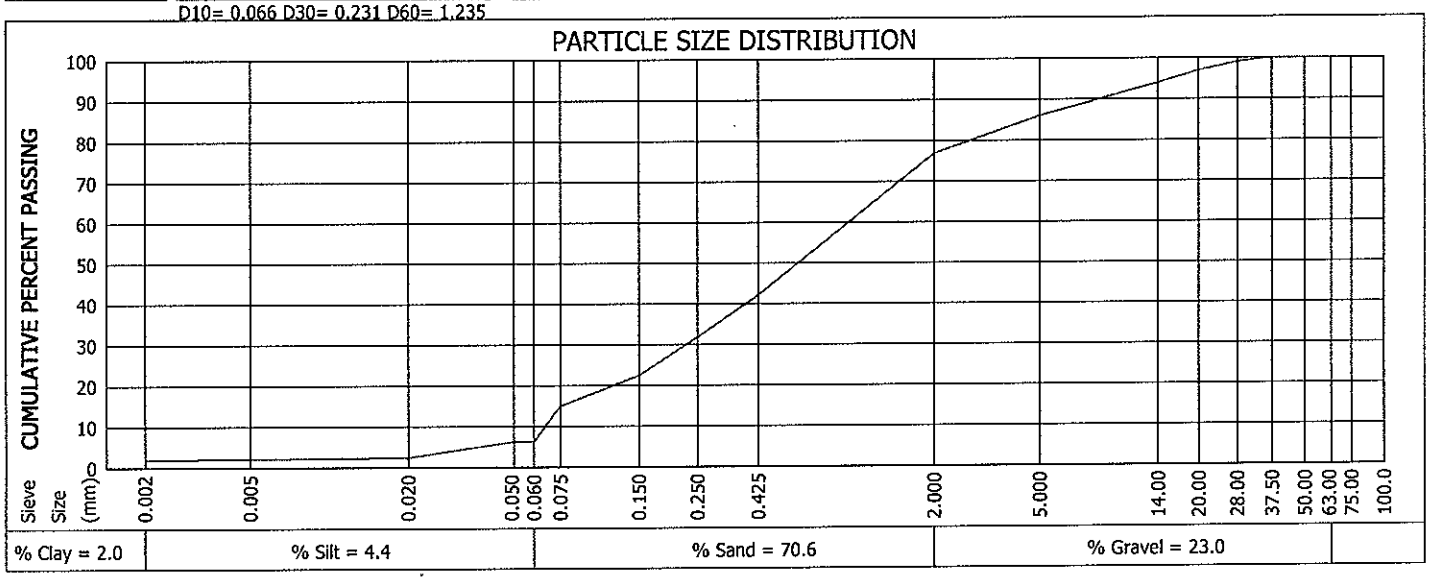
Soil Mortar	2.000 - 0.425	45
	0.425 - 0.250	14
	0.250 - 0.150	12
	0.150 - 0.075	10
	< 0.075	20
Effective Size		0.066
Uniformity Coefficient		18.7
Curvature Coefficient		0.7
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		18.9
Grading Modulus		1.70
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.066 D30= 0.231 D60= 1.235









% Clay = 2.0	% Silt = 4.4	% Sand = 70.6	% Gravel = 23.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

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Roelof Lategan
Manager

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Job Request No.: RU3988
Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Date Reported : 2021-07-21

Project : RDP Houses, Nababeep

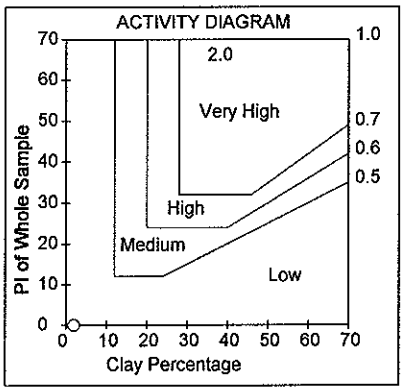
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

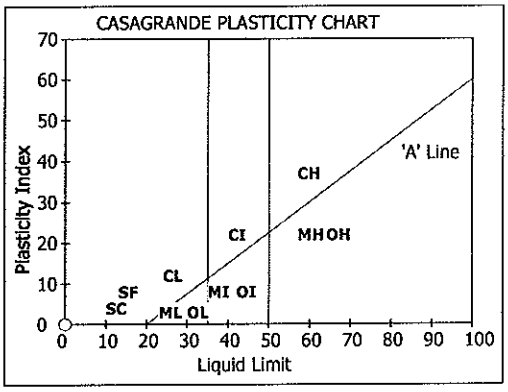
Sample No.	: U9895
Position	: TP 150; 0.0 - 0.5m
Layer Type	: Not Specified
Sample Colour	: Light Orange Sand
Sample Type	: + Weathered Quartz S

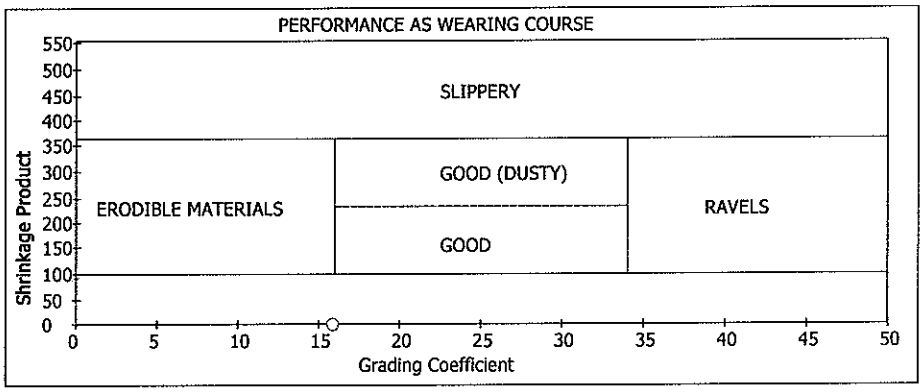
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	97
20.00	96
14.00	95
5.000	88
2.000	79
0.425	41
0.250	32
0.150	23
0.075	15
0.060	5.3
0.050	3.5
0.020	3.3
0.005	2.5
0.002	1.9

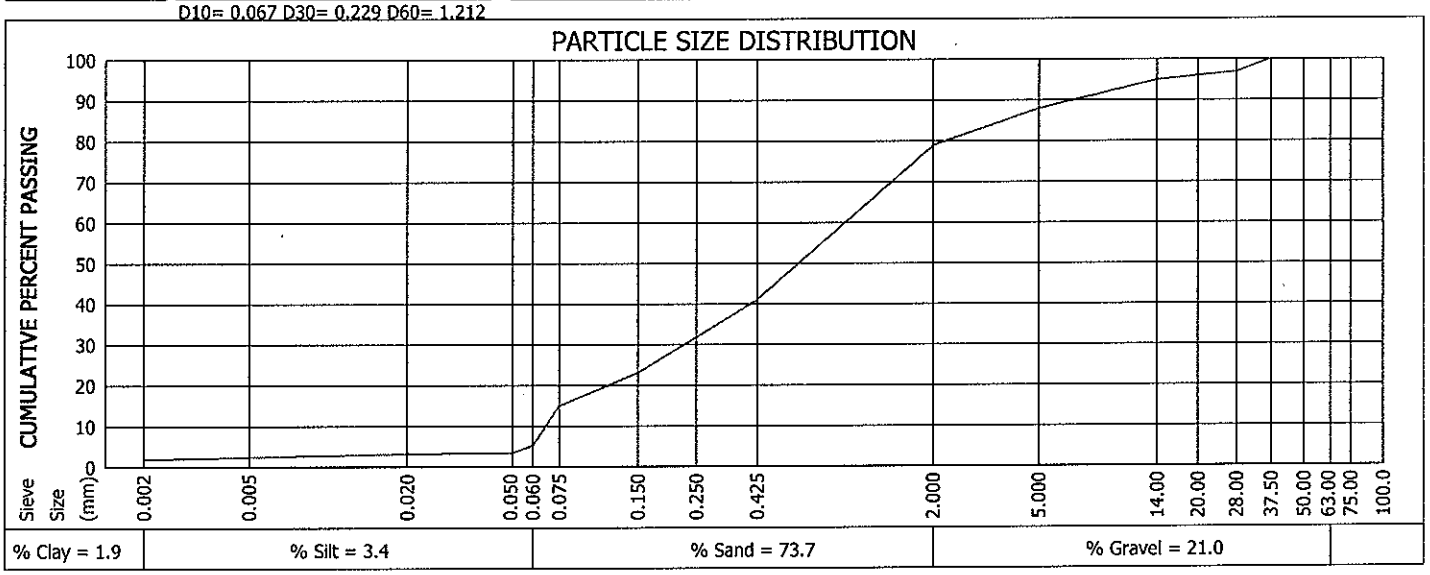
Soil Mortar	2.000 - 0.425	49
	0.425 - 0.250	11
	0.250 - 0.150	11
	0.150 - 0.075	10
	< 0.075	19
Effective Size		0.067
Uniformity Coefficient		18.1
Curvature Coefficient		0.6
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		15.8
Grading Modulus		1.60
Atterberg Limits	Liquid Limit	
	Plasticity Index	NP
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SC
US Highway Classification		A-1-b(0)

D10= 0.067 D30= 0.229 D60= 1.212









% Clay = 1.9	% Silt = 3.4	% Sand = 73.7	% Gravel = 21.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
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Roelof Lategan
Manager

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Job Request No.: RU3988
Iceberg Trading
PO Box 1364
Louis Trichardt
0920

Attention : Aubrey Nonyana

Date Reported : 2021-08-18

Project : RDP Houses, Nababeep

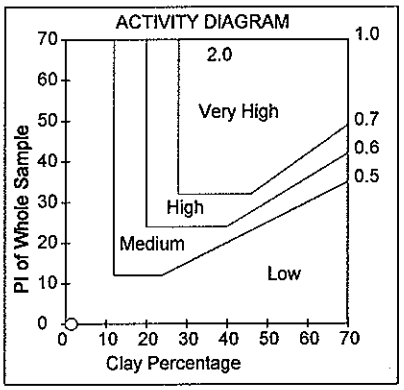
Foundation Indicator Test Report SANS 3001 - GR1 / GR3 / GR10

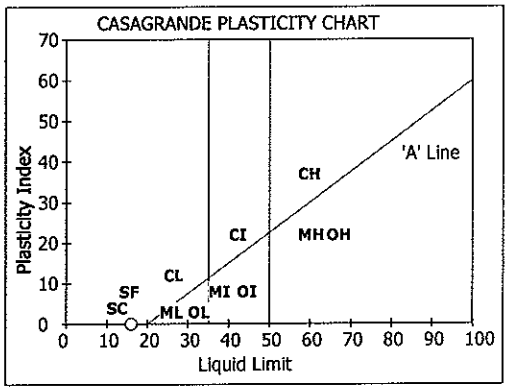
Sample No.	: U9897
Position	: TP 156; 0.0 - 0.6m
Layer Type	: Not Specified
Sample Colour	: Light Brown Gravel
Sample Type	: + Weathered Quartz S

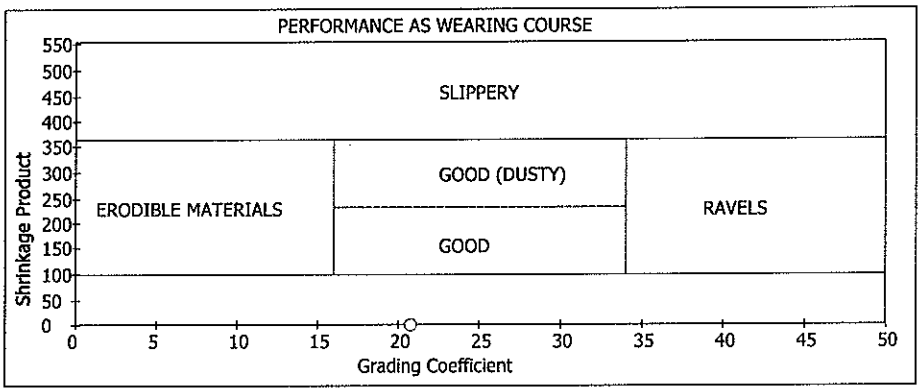
Sieve Size(mm)	% Passing
100.0	100
75.00	100
63.00	100
50.00	100
37.50	100
28.00	96
20.00	93
14.00	91
5.000	80
2.000	70
0.425	35
0.250	26
0.150	18
0.075	11
0.060	4.7
0.050	4.2
0.020	1.8
0.005	1.6
0.002	1.4

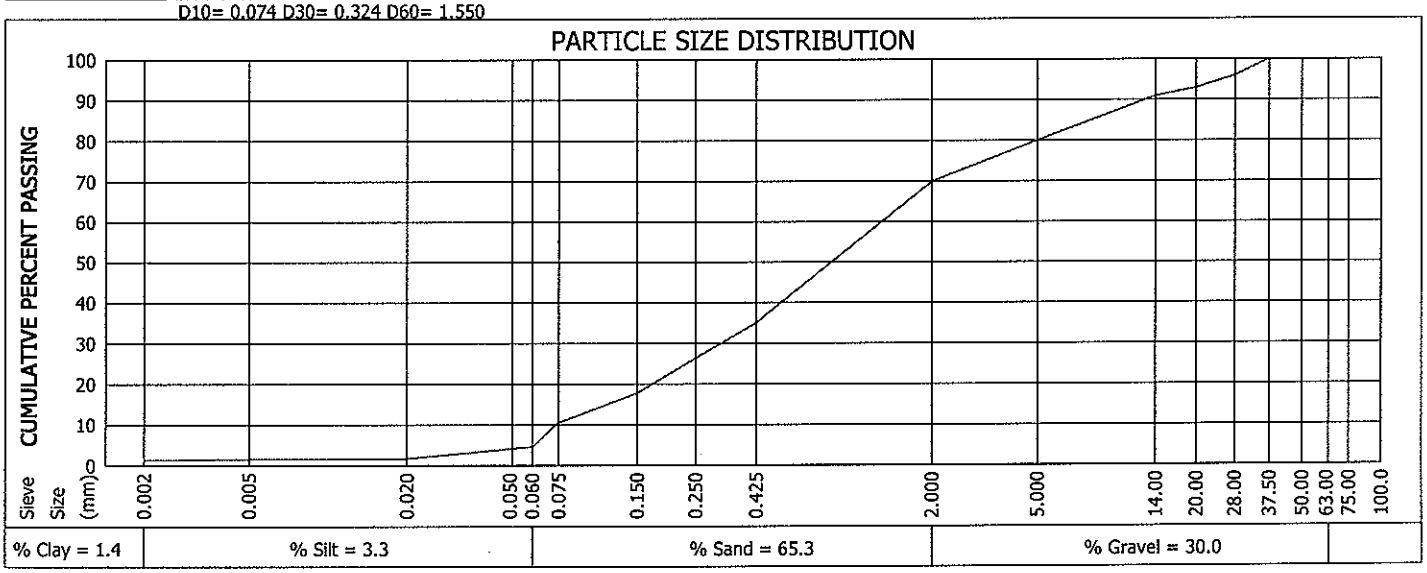
Soil Mortar	2.000 - 0.425	50
	0.425 - 0.250	12
	0.250 - 0.150	12
	0.150 - 0.075	11
	< 0.075	14
Effective Size		0.074
Uniformity Coefficient		20.9
Curvature Coefficient		0.9
Oversize Index		0.0
Shrinkage Product		0.0
Grading Coefficient		20.8
Grading Modulus		1.90
Atterberg Limits	Liquid Limit	16
	Plasticity Index	0.0
	Linear Shrinkage	0.0
	PI < 0.075	
Unified Soil Classification		SW-SC
US Highway Classification		A-1-b(0)

D10= 0.074 D30= 0.324 D60= 1.550









% Clay = 1.4	% Silt = 3.3	% Sand = 65.3	% Gravel = 30.0

Deviation from Test Method : Client Sampled, this may have an influence on the validity of the results.
Remarks and Notes :

Opinions and interpretations are not included in our scope of works.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).
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Job Request No.: RU4118 Date Reported: 2021/08/27

Iceburg Trading
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Louis Trichardt
0920
Attention: Aubrey Nonyana

Project: Nababeep RDP Houses

pH & Electrical Conductivity Report

SANS 5854 / SANS 6240

Sample Number	Hole Number	Material Description	Layer Tested	pH (SANS 5854)	Electrical Conductivity (SANS 6240)
U9945	TP17	Light Brown Sand & Quartz Stone	0.0 – 0.2m	8.33 @ 21.7°C	0.05 (S/m) @ 21.9°C 0.31 (Ohms)
U9946	TP25	Light Orange Brown Sand & Quartz Stone	0.0 – 0.7m	7.95 @ 21.6°C	0.08 (S/m) @ 21.7°C 0.21 (Ohms)
U9947	TP31	Dark Brown Gravel & Weathered Granite	0.0 – 0.3m	7.94 @ 21.6°C	0.07 (S/m) @ 22.0°C 0.26 (Ohms)
U9948	TP128	Dark Brown Gravel & Quartz Stone	0.0 – 0.7m	8.28 @ 21.6°C	0.71 (S/m) @ 21.3°C 0.02 (Ohms)
U9949	TP148	Light Orange Brown Gravelly Sand & Weathered Quartz	0.0 – 0.4m	7.94 @ 21.7°C	0.10(S/m) @ 22.0°C 0. 17 (Ohms)
Note: Samples were tested on materials passing the 0.425mm sieve.					

Opinions and interpretations are not included in our scope of works.

The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM).

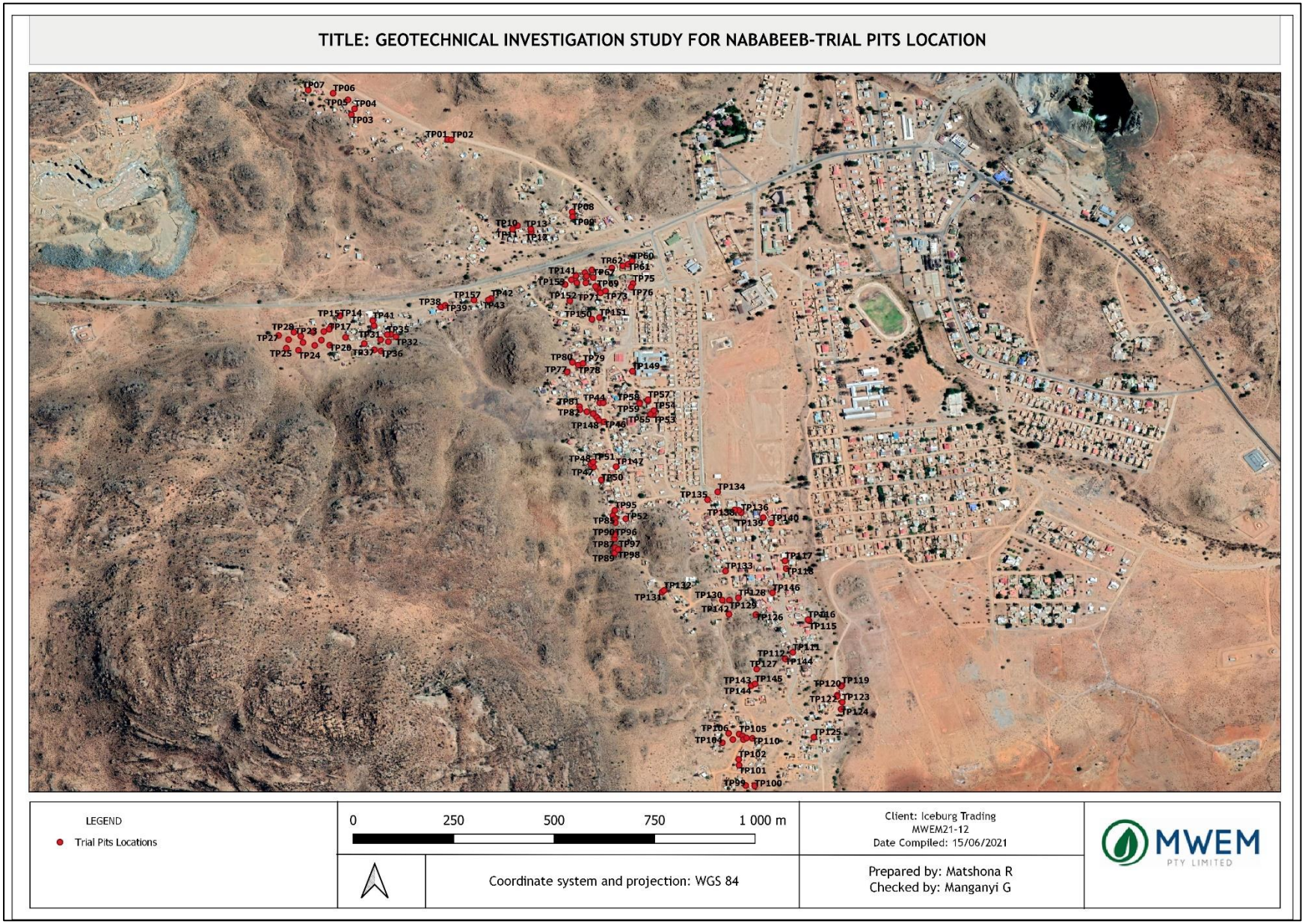
The test results reported relate to the samples tested.

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Roelof Lategan
Manager

Appendix C: Test Pits Layout


TITLE: GEOTECHNICAL INVESTIGATION STUDY FOR NABABEEB-TRIAL PITS LOCATION
LEGEND
Trial Pits Locations
0 250 500 750 1 000 m
Coordinate system and projection: WGS 84
Client: Iceburg Trading
MWEM21-12
Date Compiled: 15/06/2021
Prepared by: Matshona R
Checked by: Manganyi G
MWEM
PTY LIMITED

Appendix D: Foundation recommendation

ADDRESS	PLOT NO	Foundation recommendation
Bostraat 765	337	Normal/ Soil raft
Bostraat 347	278	Normal/ Soil raft
Bostraat 244	225	Normal/ Soil raft
Bostraat 476	262	Normal/ Soil raft
Bostraat 179	143	Normal/ Soil raft
Bostraat	518	Normal/ Soil raft
Gaatjie	422	Normal/ Soil raft
Gaatjie-Wes	475	Normal/ Soil raft
Bostraat	344	Normal/ Soil raft
Wyepoort	1271	Normal/ Soil raft
Gaatjie 673	527	Normal/ Soil raft
Gaatjies- Wes 55	487	Normal/ Soil raft
Vredehoek	1395	Normal/ Soil raft
Gaatjie- Wes 73	470	Normal/ Soil raft
Bostraat	145	Normal/ Soil raft
Bostraat	237	Normal/ Soil raft
Gaatjie	287	Normal/ Soil raft
Bostraat	463	Normal/ Soil raft
Bostraat 183	184	Normal/ Soil raft
Vredehoek	134	Normal/ Soil raft
Gaatjie- Wes	488	Normal/ Soil raft
Wyepoort 629	1359	Normal/ Soil raft

ADDRESS	PLOT NO	Foundation recommendation
3de Laan	16	Normal/ Soil raft
Vredehoek	170	Normal/ Soil raft
Bostraat 459	242	Normal/ Soil raft
Bostraat	249	Normal/ Soil raft
Bostraat	348	Normal/ Soil raft
Bostraat	446	Normal/ Soil raft
Vredehoek 163	1473	Normal/ Soil raft
Bostraat	337	Normal/ Soil raft
Wyepoort 652	1299	Normal/ Soil raft
Wyepoort 125	1291	Normal/ Soil raft
Vredehoek 159	1463	Normal/ Soil raft
Vredehoek	1482	Normal/ Soil raft
Wyepoort 107	1318	Normal/ Soil raft
Bostraat	748	Normal/ Soil raft
Bostraat 22	345	Normal/ Soil raft
Vredehoek 598	1397	Normal/ Soil raft
Bostraat 244	204	Normal/ Soil raft
Gaatjie- Wes 11	13	Normal/ Soil raft
Wyepoort	1458	Normal/ Soil raft
Bostraat	357	Normal/ Soil raft
Bostraat	396	Normal/ Soil raft
Plaatjie 4	1533	Normal/ Soil raft

ADDRESS	PLOT NO	Foundation recommendation
Bostraat 317	329	Normal/ Soil raft
Wyepoort 139	1324	Normal/ Soil raft
Plaatjie 730	1524	Normal/ Soil raft
Plaatjie 731	1525	Normal/ Soil raft
Gaatjie	423	Normal/ Soil raft
Vredehoek	1468	Normal/ Soil raft
Plaatjie	130	Normal/ Soil raft
Gaatjie- Wes 67	503	Normal/ Soil raft
Bostraat	147	Normal/ Soil raft
Bostraat 496	295	Normal/ Soil raft
Suikerhoek	411	Normal/ Soil raft
Bostraat	584	Normal/ Soil raft
Wyepoort	1368	Normal/ Soil raft
Vredehoek 547	141	Normal/ Soil raft
Vredehoek 168	1484	Normal/ Soil raft
Wyepoort 143	1308	Normal/ Soil raft
Wyepoort	1272	Normal/ Soil raft
Vredehoek	1263	Normal/ Soil raft
Gaatjie- Wes	495	Normal/ Soil raft
Bostraat	384	Normal/ Soil raft
Bostraat	371	Normal/ Soil raft
Bostraat	318	Normal/ Soil raft
Wyepoort	1357	Normal/ Soil raft
Bostraat	380	Normal/ Soil raft

ADDRESS	PLOT NO	Foundation recommendation
Bostraat 309	150	Normal/ Soil raft
Plaatjie	1557	Normal/ Soil raft
Vredehoek	1489	Normal/ Soil raft
Bostraat	390	Normal/ Soil raft
Wyepoort	1296	Normal/ Soil raft
Wyepoort	1290	Normal/ Soil raft
Bostraat	379	Normal/ Soil raft
Bostraat	341	Normal/ Soil raft
Bostraat	11	Normal/ Soil raft
Vredehoek	207	Normal/ Soil raft
Vredehoek	376	Normal/ Soil raft
Vredehoek	208	Normal/ Soil raft
Vredehoek	193	Normal/ Soil raft
Gaatjie	500	Normal/ Soil raft
Wyepoort	267	Normal/ Soil raft
Plaatjie	738	Normal/ Soil raft
Vredehoek	134	Normal/ Soil raft
Bostraat	231	Normal/ Soil raft
Plaatjie	1555	Normal/ Soil raft

ADDRESS	PLOT NO	Foundation recommendation
Vredehoek	159	Normal/ Soil raft
Suikerhoek	148	Normal/ Soil raft
Wyepoort	661	Normal/ Soil raft
Bostraat	369	Normal/ Soil raft
Gaatjie- Wes	514	Normal/ Soil raft
Wyepoort	234	Normal/ Soil raft
Wyepoort	337	Normal/ Soil raft
Wyepoort	148	Normal/ Soil raft
Bostraat	215	Normal/ Soil raft
Bostraat	1404	Normal/ Soil raft
Bostraat	1405	Normal/ Soil raft
Plaatjie	1534	Normal/ Soil raft
Gaatjie- Wes	514	Normal/ Soil raft

PART C 4:
SITE INFORMATION

C 4.1 Scope

C 4.2 Subsoil Investigations, and Test Results

C 4.3 Information about Piped and Other Services Below the Surface of the Site

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

C 4: SITE INFORMATION

C 4.1 SCOPE

The documentation included describes the site as at the time of tender to enable the Tenderer to price his tender and to decide upon his method of working and programming.

Work will be executed in a residential area and the Contractor will take **all** necessary steps to ensure the safety of people, animals and/or property.

C 4.2 SUBSOIL INVESTIGATIONS, AND TEST RESULTS

The material on site varies. Soil on site is classified as C1/S/R and medium raft foundation is recommended

C 4.3 INFORMATION ABOUT PIPED AND OTHER SERVICES BELOW THE SURFACE OF THE SITE FOR CONTRACTS INVOLVING GROUND WORKS, AND ABOUT HOOK-UP AND BOUNDARY DETAILS FOR CONTRACTS WITH PLANT INTERFACES, IN ADDITION TO ANYTHING ABOUT THE PHYSICAL SITE WHICH IMPACTS UPON THE CONTRACT

All existing services that could be indicated by the Employer are shown on the Drawings. The Contractor will however investigate on site with the Engineer to identify any existing services that are not indicated on the Drawings before any work commences in an area. As build drawings for sewer, water, roads and electricity will be issued on commencement of the project

VOLUME 2

DRAWINGS

DEPARTMENT OF CO-OPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS OF THE NORTHERN CAPE

TENDER NO. NC/12/2026

THE CONSTRUCTION OF 69 BNG HOUSES IN NABABEEP, NAMA-KHOI LOCAL MUNICIPALITY FOR THE NAMAKWA DISTRICT MUNICIPALITY

DRAWINGS NOTES

The client accepts the fact that the contractor is a Professional builder and a master of his trade. It is accepted that he has visited the site and has familiarized himself with the local conditions before his tender was submitted, to eliminate any possible chance that a misunderstanding might arise at a later stage due to his limited knowledge of the site.

All work to be carried out strictly in accordance with the local authority building regulations and by-laws.

All materials to be SABS approved (stamped). Proof of which to be supplied (official certification) on request when applicable.

Workmanship to comply with the relevant National Building Regulations and Building Standards Act (Act 103 of 1977 as amended) and the NHBRC home building Manual.

Foundations to be inspected and approved by the engineer before concrete is poured. This also applies to services in the ground.

Wall plate inspection and timber truss fixing to be approved before walls are plastered.

Trade names specified are purely to indicate the quality and standard required. These can be substituted with any product matching the quality subject to the engineer’s approval.

The contractor must check all the measurements and levels indicated on the drawings on site prior to the work commencing.

The setting out of the building work remains the sole responsibility of the contractor.

Do not scale the drawing. If uncertain about any of the dimensions, contact the Engineer.

Report any discrepancies between the drawings and/or contract documentation to the Engineer prior to the commencement of the work.

All the materials used must be of the best quality obtainable. The work must be done by skilled artisans and carried out in such a way as to ensure the highest quality workmanship obtainable in the local industry. The standard must at least be acceptable to members of the BIA and the M.B.A. Work not complying with afore said will be condemned and redone at the contractor’s expense.

All the materials, fittings and equipment used on the project must be applied/installed strictly according to the manufacturer's specifications and guidelines.

Great care must be taken when installing the damp proof courses to ensure that no damaged material is used. All joints to have 150mm overlaps and to be taped.

It is important to note that the safety of any material brought onto the site and paid for by the client remains the responsibility of the Contractor even though ownership has been transferred to the Client.

All materials on site must be stored properly to minimize any damage that might occur. Planning the work sequence is of the utmost importance when ordering materials to ensure that they are not stored for too long a period.

Plastered wall surfaces must be given sufficient time to dry out before any paintwork commences.

The contractor must insist that all site instructions be noted in writing in the site instruction book to avoid any later disputes.

Contractor must familiarize himself with the 'Occupational Health and Safety act no. 85 of 1993' and fully comply with the contents thereof. The safety of the public, visitors and of the workers on site is of the utmost importance and remains his sole responsibility for the duration of the contract.

The site must be kept clean at all times and builder's rubble removed from time to time Temporary toilet facilities must be provided by the contractor for the workers and kept clean at all times.

Contractor must not deviate from the plans and must notify the Engineer of any problems immediately as they arise.

This is to certify that I / we ……

of (Tenderer) ……

……

of (Address) ……

……

……

Telephone Number ……

Fax Number ……

on (Date) ……

have examined the drawing notes and its surroundings for which I/we am/are submitting this tender and have, so far as is practicable, familiarized myself/ourselves with all the information, risks, contingencies and other circumstances which may influence or affect my/our tender.

SIGNED ON BEHALF OF THE TENDERER: ……

SIGNED ON BEHALF OF THE CONSULTANT: ……

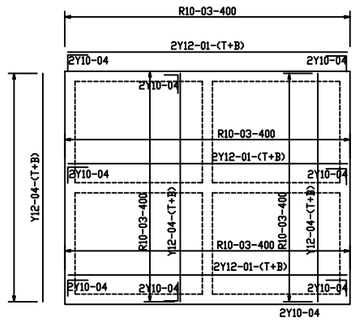
DATE: ……

MEMBER	No OF	BARS PER MEMB	DIA.	LENGTH	TOTAL NUMBER	MARK	S C	BENDING A	B	C	D	E/r
Raft Foundation	1	12	Y12	6900	12	01	20	500	150			
		32	Y10	1000	32	02	37	400				
		96	R10	1150	96	03	60					
		12	Y12	5650	12	04	20					

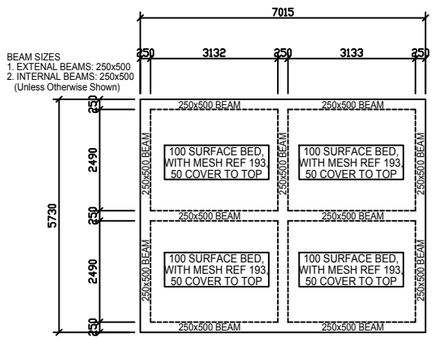
	8	10	12	16	20	25	32	40	TOT
R		77							77
Y		20	134						154
TOT		97	134						231

Date	2024/10/14
Det. by	T.T
Ref Dwg	SC-101-0
Job No	
Revision	0
Schedule No	001

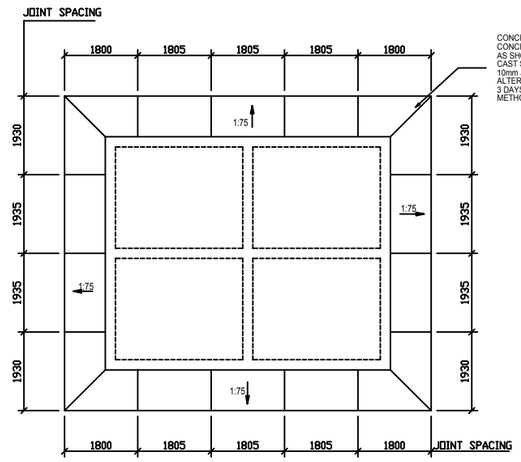
FOUNDATION FOOTINGS REINFORCING STEEL BENDING SCHEDULE
1:1



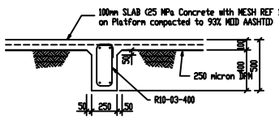
FOUNDATION REINFORCING LAYOUT
1:50



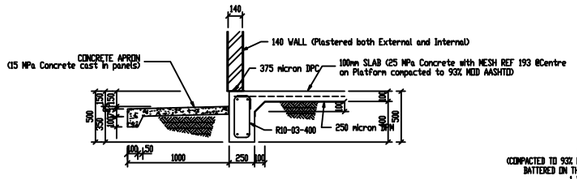
FOUNDATION FOOTINGS LAYOUT
1:50



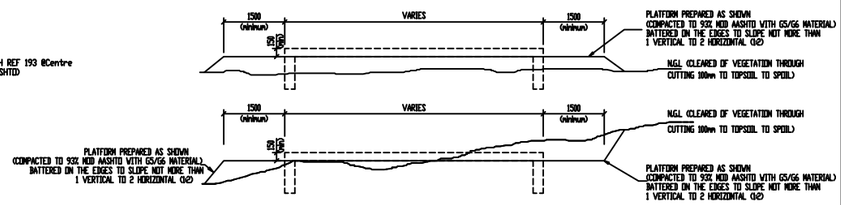
CONCRETE APRON LAYOUT
1:50



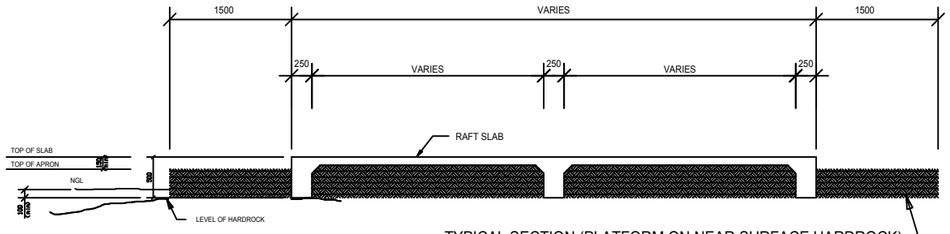
TYPICAL INTERNAL BEAMS: 250 x 500
1:20



TYPICAL EXTERNAL BEAMS: 250 x 500
1:20



PLATFORM PREPARATIONS DETAILS (FOR STORMWATER CONTROL)
(HORIZONTAL 1:50 & VERTICAL 1:25)



TYPICAL SECTION (PLATFORM ON NEAR SURFACE HARDROCK)
1:25

DRAWING NOTES:

PREPARATION OF BUILDING AREA
Remove all organic material within 1.5m of perimeter of foundation footprint.
Wet area to 1 - 2% of OMC (optimum moisture content). Compact with (Bomag) self propelled double roller vibrator compactor a min of 3x over - aim for 93% mod AASHTO. Fill and compact G6 imported filling in layers not exceeding 150mm with double roller vibrator compactor to AIM
for 93% mod AASHTO.

COMPACTION OF TRENCHES
Soak trenches with water and compact next day with impact compactor ("wacker") a minimum x3 times over. AIM for 93% mod AASHTO

COVER TO REINFORCING
Minimum lap length in mm:
Y10 => 400, Y12 => 480
Minimum lap length for mesh reinforcing: 200mm
Minimum concrete cover: Foundations: 50mm
Surface bed: 50mm top cover
Maximum spacing of cover blocks under mesh: 600 c/c

CONCRETE: (all concrete)
Concrete Strength: 25 MPa at 28 days
Max slump of concrete: 75 mm

SURFACE BEDS

Surface beds to be 100mm reinforced with mesh 193 Slabs to be power floated and continiously cured for a minimum of 7 days by covering with plastic sheeting
OR by ponding of water

BRICKFORCE 2.8mm diameter
Foundation walls: Every brick layer
Superstructure wall: Every 4th brick layer
Above lintel height: Every brick layer

REINFORCED CONCRETE LINTELS
Install over ALL windows and door openings

HDPE SHEETING
The 250 micron HDPE sheeting to be laid and overlapped such to prevent any leakages to the subbase.
Special attention should be taken from the foundation under the apron

WATER SERVICES
Water, sewage and drain pipes should be prevented from leakages and maintained at all times

SANS and NHBRC REQUIREMENTS
The contractor to conform to all the requirements of the applicable SANS building codes and NHBRC.

BUILDING BRICK WORK
Brickwork may commence after 3 days after pouring of concrete slab.

ACCREDITED LABORATORY TESTS
The contractor should provide the ENGINEER with concrete cube strength results sothat each foundation's concrete strength can be noted.

LABORATORY TESTS OF FILLING 400mm AND DEEPER
The contractor should provide the ENGINEER with compaction test results to confirm the compaction of filling 400mm and deeper

LEGEND
FD Founding Depth
FFL Finished Floor Level
NGL Natural Ground Level
HDW Hard Drawn Wires Diameter 5.6mm
OMC Optimum Moisture Content

NB: FOR AREAS WITH SOIL CLASSIFICATION P (UNCONTROLED FILL) - ALL UNCONTROLLED FILL TO BE REMOVED AND SPOILED BEFORE STARTING WITH THE FOUNDATION

REVISION TABLE

NO.	DATE	ID	DESCRIPTION
01	01/11/2024	R.M	ISSUED FOR CONSTRUCTION
0	21/10/2024	R.M	ISSUED FOR NHBRC ENROLLMENT

CLIENT:
COGHSTA
Department of Co-operative Governance, Human Settlements & Traditional Affairs Northern Cape

IMPLEMENTING AGENT:
icebung trading

PROJECT NAME:
THE CONSTRUCTION OF BNG HOUSES IN NABABEEP, NAMA KHOI LOCAL MUNICIPALITY

DRAWING DESCRIPTION:
FOUNDATION LAYOUT AND DETAILS

APPLICABLE GEOTECHNICAL REPORT:
PREPARED BY WTP ENVIRONMENTAL

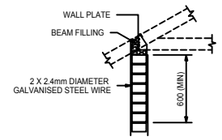
DESIGN SOIL CLASSIFICATION:
R1,C1,S1

DRAWING DEVELOPMENT

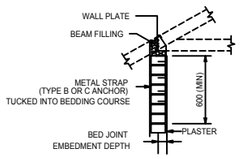
DESIGNED BY:	R.M.
DRAWN BY:	T.T
CHECKED BY:	R.M

DRAWING APPROVAL
NAME: RUDZANI PERCY MAMPHAGA
ECSA NO: 20030243
SIGNATURE: DATE:

DRAWING NO:	SHEET NO:	REV
2024-BERGSIG-101-01	1	01

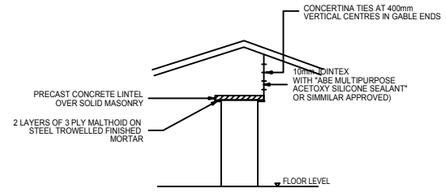


ROOF ANCHORING TYPE A
1:20

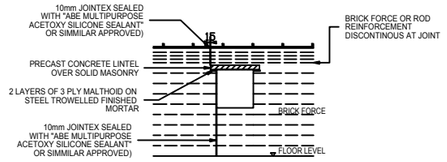


ROOF ANCHORING TYPE B AND C
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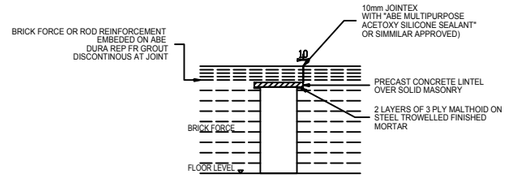
BED JOINT EMBEDMENT DEPTH
a) TYPE A (wire): 100mm
b) TYPE B and C (metal strip): 70mm



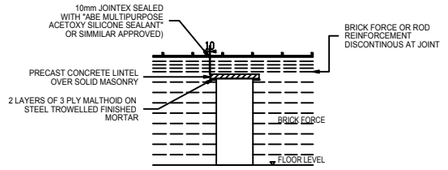
JOINT D2 (EXTERNALL DOORS-GABLE END)
1:50



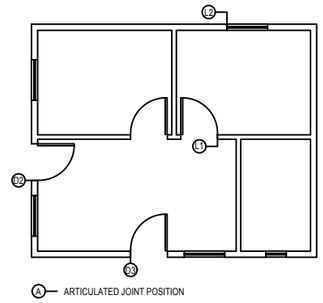
JOINT L2 (EXTERNAL WINDOW)
1:50



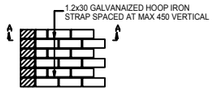
JOINT L1 (INTERNAL DOORS)
1:50



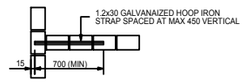
JOINT D3 (EXTERNAL DOORS)
1:50



ARTICULATION JOINTS LAYOUT
1:50



INTERSECTING WALLS DETAIL
1:20



PLAN SECTION A-A (INTERSECTING WALLS)
1:20

DRAWING NOTES:

PREPARATION OF BUILDING AREA
Remove all organic material within 1.5m of perimeter of foundation footprint.
Wet area to 1 - 2% of OMC (optimum moisture content). Compact with (Bomag) self propelled double roller vibrator compactor a min of 3x over - aim for 93% mod AASHTO. Fill and compact G6 imported filling in layers not exceeding 150mm with double roller vibrator compactor to AIM
for 93% mod AASHTO.

COMPACTION OF TRENCHES
Soak trenches with water and compact next day with impact compactor ("wacker") a minimum x3 times over. AIM for 93% mod AASHTO

COVER TO REINFORCING
Minimum lap length in mm:
Y10 => 400, Y12 => 480
Minimum lap length for mesh reinforcing:
200mm
Minimum concrete cover: Foundations: 50mm
Surface bed: 50mm top cover

Maximum spacing of cover blocks under mesh: 600 c/c

CONCRETE: (all concrete)
Concrete Strength: 25 MPa at 28 days
Max slump of concrete: 75 mm

SURFACE BEDS

Surface beds to be 100mm reinforced with mesh 193 Slabs to be power floated and continously cured for a minimum of 7 days by covering with plastic sheeting
OR by ponding of water

BRICKFORCE 2.8mm diameter
Foundation walls: Every brick layer
Superstructure wall: Every 4th brick layer
Above lintel height: Every brick layer

REINFORCED CONCRETE LINTELS
Install over ALL windows and door openings

HDPE SHEETING
The 250 micron HDPE sheeting to be laid and overlapped such to prevent any leakages to the subbase.
Special attention should be taken from the foundation under the apron

WATER SERVICES
Water, sewage and drain pipes should be prevented from leakages and maintained at all times

SANS and NHBRC REQUIREMENTS
The contractor to conform to all the requirements of the applicable SANS building codes and NHBRC.

BUILDING BRICK WORK
Brickwork may commence after 3 days after pouring of concrete slab.

ACCREDITED LABORATORY TESTS
The contractor should provide the ENGINEER with concrete cube strength results sothat each foundation's concrete strength can be noted.

LABORATORY TESTS OF FILLING 400mm AND DEEPER
The contractor should provide the ENGINEER with compaction test results to confirm the compaction of filling 400mm and deeper

LEGEND
FD Founding Depth
FFL Finished Floor Level
NGL Natural Ground Level
HDW Hard Drawn Wires Diameter 5.6mm
OMC Optimum Moisture Content

NB: FOR AREAS WITH SOIL CLASSIFICATION P (UNCONTROLED FILL) - ALL UNCONTROLLED FILL TO BE REMOVED AND SPOILED BEFORE STARTING WITH THE FOUNDATION

REVISION TABLE

NO.	DATE	ID	DESCRIPTION
01	20/09/2024	R.M	ISSUED FOR CONSTRUCTION
0	20/09/2024	R.M	ISSUED FOR NHBRC ENROLLMENT

CLIENT:
Client:
COGHSTA
Department of Co-operative Governance, Human Settlements & Traditional Affairs Northern Cape

IMPLEMENTING AGENT:
icebung trading

PROJECT NAME:
THE CONSTRUCTION OF BNG HOUSES IN NORTHERN CAPE

DRAWING DESCRIPTION:
TYPICAL JOINT DETAILS AND ROOF ANCHORAGE DETAILS

DRAWING DEVELOPMENT

DESIGNED BY:	T.T.
DRAWN BY:	J.M.
CHECKED BY:	R.M.

DRAWING APPROVAL
NAME: RUDZANI PERCY MAMPHAGA
ECSA NO: 20030243
SIGNATURE: DATE:

DRAWING NO:	SHEET NO:	REV
2024-BNG-103-01	1	01

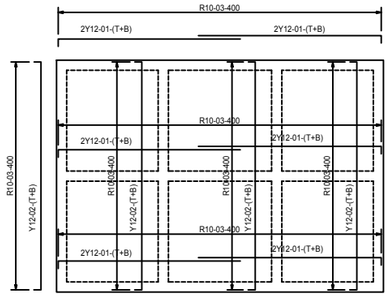
FOUNDATION LAYOUT AND DETAILS OF R.C. RAFT SLAB AND BEAMS FOR R1, C1, & S1 SOIL CONDITIONS

MEMBER	No OF	BARS PER MEMB	DIA.	LENGTH	TOTAL NUM-BER	MARK	S C	BENDING A	B	C	D	E/r
Raft Foundation	1	24	Y12	4600	24	01	37	120	4500			
		16	Y12	5800	16	02	38	120				
		112	R10	1300	112	03	60	400	150			

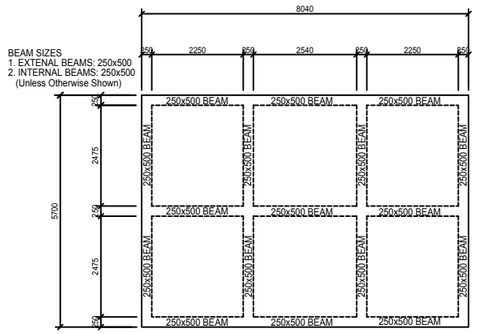
	8	10	12	16	20	25	32	40	TOT
R		90							90
Y			180						180
TOT		90	180						270

Date	2025/03/13
Det. by	T.T
Ref Dwg	SC-104-0
Job No	
Revision	0
Schedule No	001

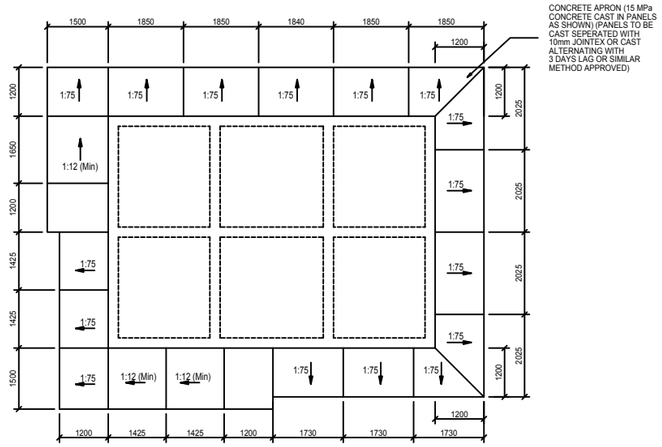
FOUNDATION FOOTINGS REINFORCING STEEL BENDING SCHEDULE
1:1



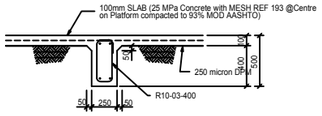
FOUNDATION REINFORCING LAYOUT
1:50



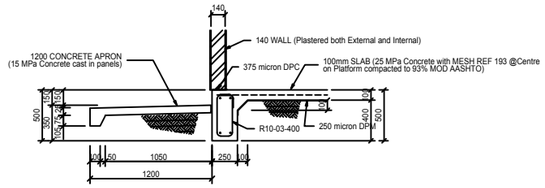
FOUNDATION FOOTINGS LAYOUT
1:50



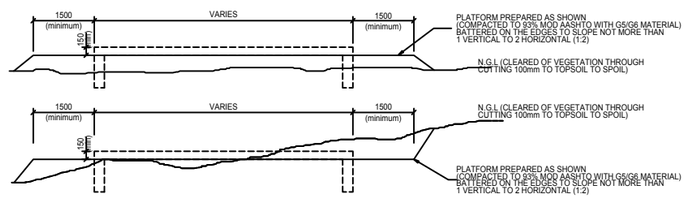
CONCRETE APRON LAYOUT



TYPICAL INTERNAL BEAMS: 250 x 500
1:20



TYPICAL EXTERNAL BEAMS: 250 x 500
1:20



PLATFORM PREPARATIONS DETAILS (FOR STORMWATER CONTROL)
(HORIZONTAL 1:50 & VERTICAL 1:25)

DRAWING NOTES:

PREPARATION OF BUILDING AREA
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LEGEND
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FFL Finished Floor Level
NGL Natural Ground Level
HDW Hard Drawn Wires Diameter 5.6mm
OMC Optimum Moisture Content

NB: FOR AREAS WITH SOIL CLASSIFICATION P (UNCONTROLED FILL) - ALL UNCONTROLLED FILL TO BE REMOVED AND SPOILED BEFORE STARTING WITH THE FOUNDATION

REVISION TABLE

NO.	DATE	ID	DESCRIPTION
0	14/03/2025	R.M	ISSUED FOR NHBRC ENROLLMENT

CLIENT:

Client:
COGHSTA
Department of Co-operative Governance, Human Settlements & Traditional Affairs Northern Cape

IMPLEMENTING AGENT:

iceburg trading

PROJECT NAME:

THE CONSTRUCTION OF BNG HOUSES IN NABABEEP, NAMA KHOI LOCAL MUNICIPALITY

DRAWING DESCRIPTION:
FOUNDATION LAYOUT AND DETAILS
45M2 DISABLED UNIT

APPLICABLE GEOTECHNICAL REPORT:
PREPARED BY WTP ENVIRONMENTAL

DESIGN SOIL CLASSIFICATION:
R1,C1,S1

DRAWING DEVELOPMENT

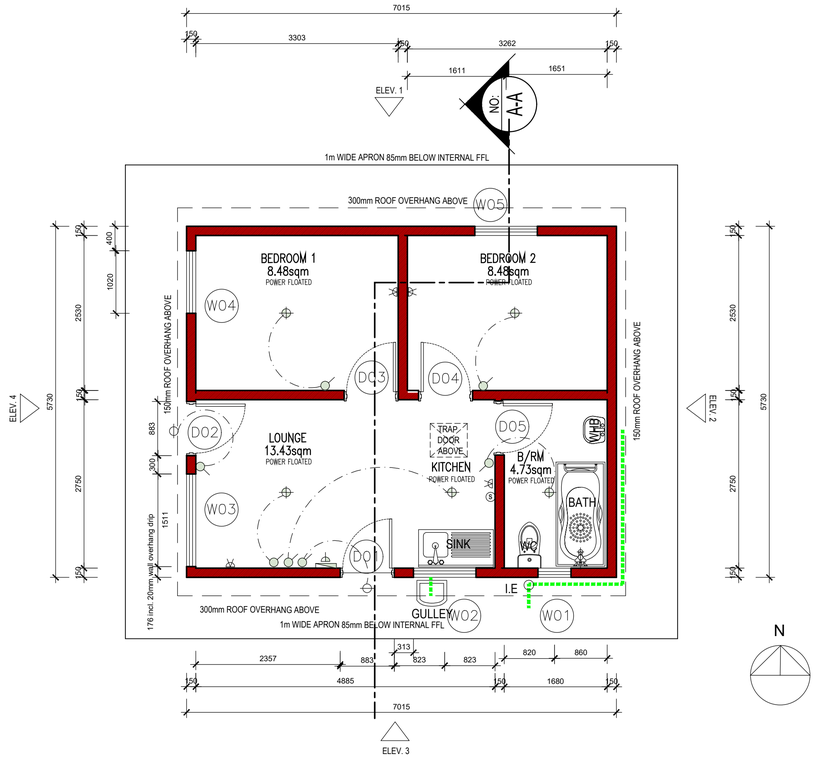
DESIGNED BY:	R.M.
DRAWN BY:	T.T
CHECKED BY:	R.M

DRAWING APPROVAL

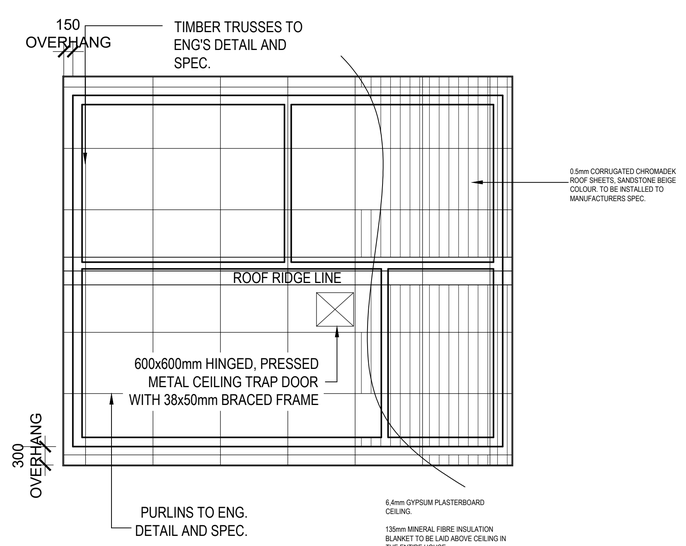
NAME: RUDZANI PERCY MAMPHAGA
ECSA NO: 20030243

SIGNATURE: DATE:

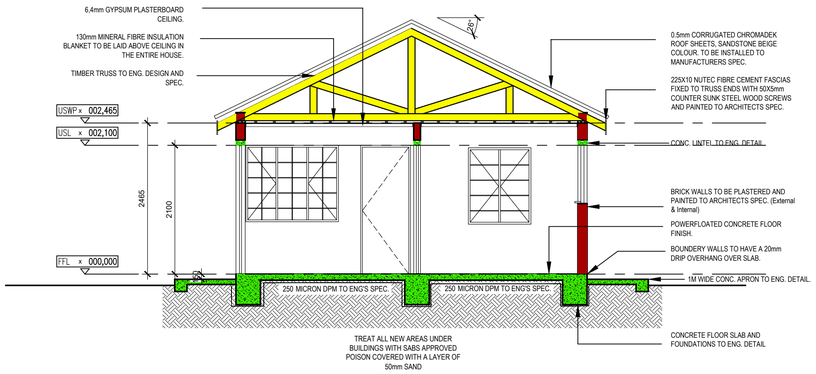
DRAWING NO:	SHEET NO:	REV
2024-NABABEEP-104-0	1	0



PLAN - 1/50



ROOF PLAN - 1/50



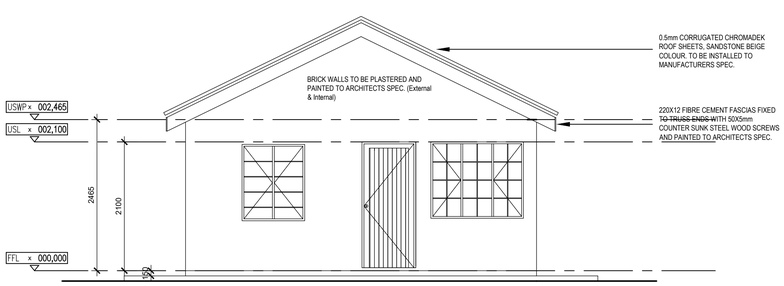
SECTION A-A: 1/50

ELECTRICAL LEGEND

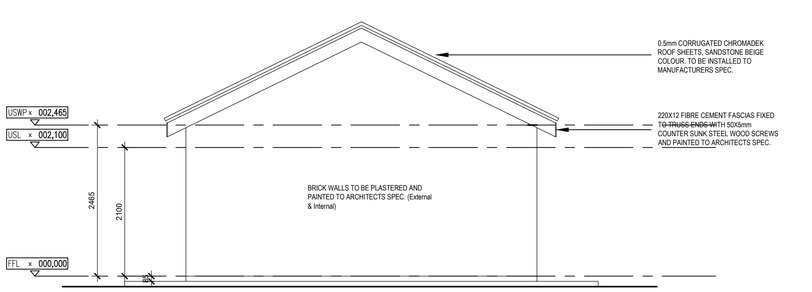
	Recessed DB with lid
	light switch at 1m above ffl
	Single wall plug (0.3m above ffl to u/side)
	Single wall plug (1.1m above ffl to u/side)
	ceiling mounted light point
	Wall mounted light point
S	Stove point

AREA SCHEDULE

Lounge/ketchen	13,43sqm
Bathroom	4.73sqm
Bedroom 1	8.48sqm
Bedroom 2	8.48sqm
Total Footprint	40,19sqm



ELEVATION 4: 1/50



ELEVATION 2: 1/50

NOTES:

All building materials to be SABS approved (stamped where applicable)
All workmanship to be carried out in accordance with National Building Regulations and Building Standards Act (Act 103 of 1977, as amended) and the NHBRC Home Building Manual. In case of uncertainty National Building Regulations and the NHBRC Home Building Manual should take precedence. All foundation inspection requests to be accompanied by the Engineer's certificate. Truss inspection to be done on un-plastered walls.

CONSTRUCTION SPECIFICATIONS:

FOUNDATIONS
* Foundations as per Contractor's engineer's design - to be approved by the Client's engineer and NHBRC.
* The land around the individual structures shall be shaped to avoid ponding of surface water and drainage precautionary measures such as flexible wet services pipe shall be provided. Floor must be at least 150mm from the natural ground level.

WALLS
* Intersection of internal and external walls must be done accordingly with hoop iron. 'Brickforce' must be place on every layer above window/door level.
* Internal walls to have 12mm 1:6 cement plaster with 1 x plaster primer, and 2 x pure acrylic emulsion paint.
* External walls to have 12mm 1:6 cement plaster with 1 x plaster primer, and 2 x Exterior pure acrylic emulsion paint.

DOORS & WINDOWS
* 2.0mm steel cottage section windows and 1.2mm thick steel doorframes with fixing lugs neatly built into brickwork. Windows to have standard fittings.
* Semi-face brick window sills inclusive of dpc.
High bedded Class II mortar and pointed at all exposed joints.
* Install precast lintels over all window and door openings.
* Exterior 2032 x 813 x 44mm fl&b door complete with 70mm weather board and 'Union' 3-lever lock set. Painted internal 2032 x 813 x 44mm hollow core doors (commercial veneer) to be fitted with 'Union' 2-lever lock set.
* Floor to have 20mm threshold below external door.

PLUMBING
* All plumbing to be carried out by a plumber registered with the local council/authorities.
* Build in 1700mm acrylic bath side wall and sand bed complete with 15mm chromium plated hot and cold taps, 40mm bath outlet and removable fibre cement inspection panel.
* Fit one 'Vaal AquasaveSlimline' code 750152 wc complete with 6 litre cistern, fitments, toilet seat and flush pipe.
* Provide and fit a 'Franke Trendline 711' - 1200 x 535mm code 311850 stainless steel single bowl sink unit OSA with 1 x chromium plated bib tap, 38mm chromed waste outlet and 40mmm pvc trap,on one pair 'Falcon' code 313852 brackets.
* Hot and cold water polycop lines to be neatly chased into walls to all sanitary fittings. Hot water to be blanked off at future geyser position.
* Install angle valves and a stop cock where applicable.

DRAINAGE
* Provide 1 x 15mm chromed threaded bib tap over a gully at the kitchen.
* Provide a 100mm vent valve at the head of the 100mm soil line.
* Waste water pipe system to have 50mm vent valve at highest point.
* Provide a marked rodding eye at the head of the soil drain and at a change of direction. All pipe connection on soil drain to have inspection eyes.

ELECTRICAL
* The Electrical Installation must be done by a person registered as an Electrical Contractor in terms of the Occupational Health and Safety Act of 1993 -'Electrical Installation Regulations', as well as be registered with the local council/authorities.
* Electrical conduits and fixtures to be chased within the walls.
* All electrical plugs to be double wall plugs.

FINISHES
* Floors to be power-floated to a smooth and level finish and kept damp for a period, as per engineer's requirements, before any brickwork commences.
* Steel window and door frames to have 1 x coat red oxide factory coated primer, 1 x universal undercoat and 2 x finishing coats.
* External timber door: well sanded and cleaned, apply 1 coat mahogany wood stain and 2 coats external polyurethane varnish.
* Internal doors: sand surfaces smooth and clean, apply 1 x coat timber primer (pink) and 1 x universal undercoat and 2 coats finishing coats.
* Window panes to be fitted with correctly prepared putty and only painted when surface is firm and dry - not to be left unpainted for too long, paint as per window frames.

ROOF
* Engineer's designed and certified timber trusses
* Truss design to allow for future geyser placing..
* 0.5 mm corrugated chromadek roof cladding color sandstone beige beldge installed according to manufacturer's specification.
* Intersection of internal & external walls must be done with hoop iron not "Brickforce".

CEILING
* 6.4mm gypsum ceiling R Value 3.38m2.K/W with 50x8mm cover strips on 38x38mm brandering @450mm centres one direction, with standard 70mm coved gypsum cornice fixed with 'Crestestone' OSA paste. Apply acrylic filler where needed and 2x white commercial PVA paint.
* 135 mm mineral fibreglass blanket R Value 0.06m2.K/W above ceiling insulation.
STORMWATER
* 1000 x 85mm In-situ concrete apron with positive fall away from walls. Provide 10mm expansion joints @ approx. 2500mm distances. See engineer's specifications.

LEVELS AND DIMENSIONS.

THE CONTRACTOR, SUB-CONTRACTOR AND SUPPLIER MUST VERIFY ALL DIMENSIONS AND LEVELS ON SITE AND DESCRIPANCIES MUST BE REPORTED TO THE ARCHITECT BEFORE COMMENCING ANY SHOP DRAWINGS AND/OR WORK.

FIGURED DIMENSIONS ARE TO BE TAKEN IN PREFERENCE TO SCALED DIMENSIONS AND LARGE SCALE DETAILS SUPERSEDE SMALL SCALE DRAWINGS.

Revisions

No.	Date	Description	By
A	03/04/2024	TENDER	JW
1	15/05/2025	DOOR 2 AND WINDOW 3 DIMENSIONED	JW
2	26/05/2025	WINDOW CODES CORRECTED CEILING AND INSULATION R VALUES INDICATED	JW
3	13/06/2025	TRUSS CHANGED FROM TIMBER TO STEEL	JW
4	17/07/2025	FOR TENDER	JW
5	25/11/2025	-PLUG POINT ADDED IN KITCHEN -CONDUITS TO BE CHASED WITHIN WALLS -LIGHT SWITCH POSITIONS TO FACE DOOR SWING DIRECTION. -FOR TENDER.	JW
6	28/01/2026	-PLUGS INDICATED AS DOUBLE WALL PLUGS -WC SPEC CONFIRMED. -PLUMBING PIPES INDICATED ON THE OUT-SIDE OF WALLS. - BRAND NAMES OMITTED. SWING DIRECTION. -FOR TENDER	JW

CLIENT

COGHSTA
Department:
Cooperative Governance, Human Settlement and Traditional Affairs
Northern Cape Province

CLIENT APPROVED

CLIENT'S NAME

CLIENT'S SIGNATURE

DATE

CONSULTANT:

iceburg trading
construction division
www.iceburgcc.co.za

BRUNEL PROJECTS

FOR TENDER

Project: CONSTRUCTION OF BNG HOUSING UNITS

Location: NORTHERN CAPE NAMAKWA

Drawing Title: PLANS/SECT/ELEVATIONS 40 sqm Units

Drawing Number: NM-101

Rev No.: 6

Scale: 1:50

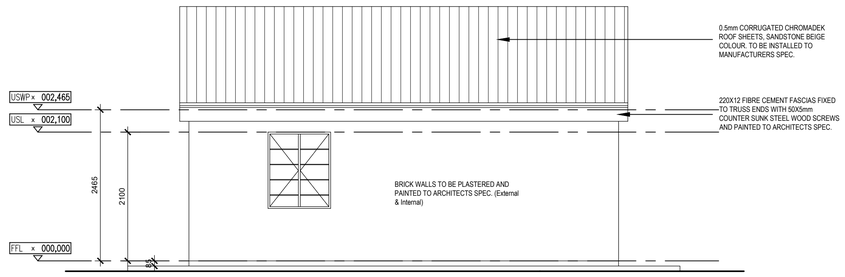
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Drawn: James Wafula

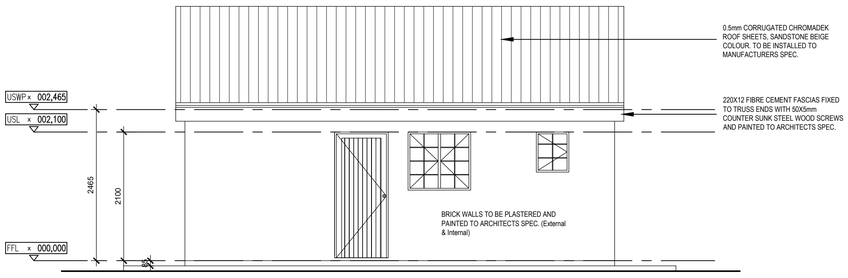
Checked: James Riunga

Date: 28/01/2026

On original drawing



ELEVATION 1: 1/50



ELEVATION 3: 1/50

		DESCRIPTION		LOUNGE	KITCHEN	BATH ROOM	BED ROOM 1	BED ROOM 2		SPECIFICATION
FLOORS	F1	TERMITE CONTROL	F1	●	●	●	●	●	F1	TERMITE POISON : TREAT ALL NEW AREAS UNDER BUILDINGS WITH SABS APPROVED POISON COVERED WITH A LAYER OF 50mm SAND. CONTRACTOR TO SUPPLY APPROVED APPLICATOR'S CERTIFICATE.
	F2	POWER FLOATED CONCRETE	F2	●	●	●	●	●	F2	POWER FLOATED CONCRETE TO A SMOOTH AND LEVEL FINISH AND KEPT DAMP FOR A PERIOD BEFORE CONSTRUCTION OF WALLS.
	F3	WOOD FLOATED SCREED	F3						F3	MIN. 25mm WOOD FLOATED SCREED WITH SAW CUT JOINTS AS PER ENGINEERS DETAIL AND SPECIFICATION.
SKIRTING	S1	MERANTI SKIRTING BOARD	S1						S1	170 X 22mm MERANTI SKIRTING NAILED TO WALLS. ALL NAIL HEADS TO BE STOPED WITH WOOD FILLER. - SKIRTING TO BE SANDED SMOOTH AND CLEANED BEFORE IT IS VARNISHED WITH MIN. 2 COATS POLYURETHANE CLEAR VARNISH.
	S2	CEMENT COVED SKIRTING	S2						S2	75mm 1:2 CEMENT COVED SKIRTING, COATED WITH POLYURETHANE COATING TO MATCH "F5" SPECIFICTION .
	S3	FACE BRICK DADO RAIL	S3						S3	FACEBRICK HEADER COURSE AS DADO TO PROTRUDE 15mm. REFER TO SECTIONS AND STRIP SECTIONS
WALLS	W1	FACE BRICK – INTERNAL	W1						W1	SELECTED FACEBRICK LAID IN STRETCHER BOND WITH FLUSH POINTED JOINTS. FULL BRICKS ARE TO BE USED, HALF BRICKS AND QUEEN QUARTERS ONLY WHERE NEEDED. COLOUR AND FINISH TO BE SATIN RED CLAY BRICK OR EQUAL AND APPROVED
	W2	PLASTER & PAINT–INTERNAL	W2	●	●	●	●	●	W2	12MM 1:6 CEMENT PLASTER WITH 1X PLASTER PRIMER AND 2X PURE ACRYLIC EMULSION PAINT, NATURAL WICKER COLOUR. PAINT TO HAVE A 7 YEAR MINIMUM PRODUCT GUARANTEE.
	W3	PLASTER & PAINT – EXTERNAL	W3	●	●	●	●	●	W3	12MM 1:6 CEMENT PLASTER WITH 1X PLASTER PRIMER AND 2X EXTERNAL PURE ACRYLIC EMULSION PAINT. COLOUR CHOICES TO BE EITHER BEIGE SAND, CAPE FOG OR CHALK STONE. PAINT TO HAVE A 7 YEAR MINIMUM PRODUCT GUARANTEE.
	W4	SPLASH BACK TILES	W4			●	●		W4	300 X 200mm WHITE GLAZED - 'A' GRADE TILES, WITH DOVE GREY WATERPROOF GROUT, LAID 2 COURSES ABOVE BASINS, SINKS AND WASH TROUGHS.
	W5	EXTERNAL HSE NUMBER SIGNAGE	W5	●					W5	PERSPEX PLACK 150mm HIGH BLACK ON SILVER.
CILLS	C1	INTERNAL/EXTERNALCILL	C1	●	●	●	●	●	C1	20 TO 30 mm THK CEMENT PLASTER SCREED WITH FINISH AS PER SURROUNDING WALLS.
	C2	INTERNAL TILED CILL	C2						C2	300 X 200mm WHITE GLAZED - 'A' GRADE TILES, WITH DOVE GREY WATERPROOF GROUT TO WINDOW CILL WHEN WINDOW CILL IS 1500 F-FFL OR BELOW. ALL CORNERS TO BE FITTED WITH WHITE PVC ROUND EDGE TRIMS.
CEILINGS	CL1	6.4mm GYPSUM	CL1	●	●	●	●	●	CL1	6,4 mm GYPSUM CEILING WITH 50X38mm COVER STRIPS ON 38X38mm BRANDERING @450mm CENTERS ONE DIRECTION WITH STD 70mm COVED GYPSUM CORNICE FIXED WITH CRESTESTON OSA PASTE . APPLY ACRYLICS FILLER WHERE NEEDED AND 2X WHITE COMMERCIAL PVA PAINT. TO HAVE A 7 YEAR MINIMUM PRODUCT GUARANTEE.
	CL2	TRAP DOOR	CL2		●				CL3	600 X 600 MILD STEEL TRAP DOOR CUT INTO CEILING BETWEEN BRANDERING. TRAP DOOR TO BE PAINTED WITH UNDERCOAT & 2 COATS EGGSHELL ENAMEL, COLOUR TO MATCH CEILING FINISH.
	CL3	CEILING INSULATION	CL3	●	●	●	●	●	CL4	135mm MINERAL FIBREGLASS BLANKET. ALL TO MANUFACTURERS SPECIFICATIONS.

FINISHES SCHEDULE

U/S OF CEILING	813	U/S OF CEILING
VARIES 2074 1016		VARIES 2032 1016
TYPICAL F.F.L.		TYPICAL F.F.L.
QUANTITY:	3	QUANTITY:
DOOR NUMBER:	003, 004, 005	DOOR NUMBER:
DOOR TYPE :	2032x813x44mm masonite hollow core door.	DOOR TYPE :
DOOR FINISH:	sand surfaces smooth and clean. Apply 1x coat timber primer (pink) and 1x universal undercoat and 2 coats plascon velvaglo finishing coats	DOOR FINISH:
FRAME:	1,2 mm steel door frame fitted to 150mm internal wall.	FRAME:
FRAME FINISH:	1X red coat red oxide factory coated primer 1x universal undercoat and 2x plascon velvaglo finishing coats	FRAME FINISH:
NOTES:	Door swing directions to be shown on the plan.	NOTES:
IRONMONGERY:	Union 2 lever mortice lockset	IRONMONGERY:

U/S OF CEILING	677 813	U/S OF CEILING
VARIES 2032 1016	50	VARIES 2032 1016
TYPICAL F.F.L.		TYPICAL F.F.L.
QUANTITY:	2	QUANTITY:
DOOR NUMBER:	001, 002	DOOR NUMBER:
DOOR TYPE :	Solid 813mm x 2032mm x 44mm solid meranti FL & B Flush door fixed to external wall with 1.2mm steel door frame and union 3 lever Mortice lockset [external] door	DOOR TYPE :
DOOR FINISH:	3 x coats clear varnish	DOOR FINISH:
FRAME:	1.2mm steel door frame and union 3 lever Mortice lockset	FRAME:
FRAME FINISH:	To manufacturers spec	FRAME FINISH:
NOTES:	Weather boards to be fitted to all external doors. Door swing directions to be shown on the plan.	NOTES:
IRONMONGERY:	3 lever Mortice lockset	IRONMONGERY:

DOOR SCHEDULE

	1022	533	1022	1511
	U/S OF LINTEL 940 1178	U/S OF LINTEL 654 1471	U/S OF LINTEL 1245 880	U/S OF LINTEL 1245 880
	TYPICAL F.F.L.	TYPICAL F.F.L.	TYPICAL F.F.L.	TYPICAL F.F.L.
TYPE	C7	ES1	D7	D4H
WIN. NO	W02	W01	W04, W05	W03
TOTAL	01	01	02	01
FRAME	2mm steel frame	2mm steel frame	2mm steel frame	2mm steel frame
GLASS	4mm CLEAR SAFETY GLAZING THROUGHOUT AS PER PART N – GLAZING OF SANS 10400	OBSCURE GLASS THROUGHOUT AS PER PART N – GLAZING OF SANS 10400	4mm CLEAR SAFETY GLAZING THROUGHOUT AS PER PART N – GLAZING OF SANS 10400	4mm CLEAR SAFETY GLAZING THROUGHOUT AS PER PART N – GLAZING OF SANS 10400
FITTINGS	STANDARD FACTORY FITTINGS	STANDARD FACTORY FITTINGS	STANDARD FACTORY FITTINGS	STANDARD FACTORY FITTINGS
BURGLAR BARS	NONE	NONE	NONE	NONE
FINISH	1X red coat red oxide factory coated primer 1x universal undercoat and 2x plascon velvaglo finishing coats	1X red coat red oxide factory coated primer 1x universal undercoat and 2x plascon velvaglo finishing coats	1X red coat red oxide factory coated primer 1x universal undercoat and 2x plascon velvaglo finishing coats	1X red coat red oxide factory coated primer 1x universal undercoat and 2x plascon velvaglo finishing coats
NOTES	–	–		

WINDOW SCHEDULE

		LOUNGE	KITCHEN	BATH ROOM	BED ROOM 1	BED ROOM 2		SPECIFICATION
WHB|WC	D1			1			D1	"Vaal Aquaslimline" code 750 152 WC complete with 6 litre cistern fitments, toilet seat and flush pipe.
	A1			1			A1	Locally manufactured vitreous china wall hung basin colour white with floor mounted pedestal, overall size 510x400x170mm with 1 taphole including intergrated overflow and chainstay hole and chrome plated basin waste, bolted to wall with 2no. 10mm bolts and sealed with silicone sealant where basin meets wall. Basin mixer to clients choice.
BATH	K1			1			K1	Acrylic rectangular bath colour white, overall size 1700x700x32mm high supported on 38x38mm timber battens fixed to adjacent walls and bed in 1:5 cement mortar on a brick bed, three bricks wide full length off bath with void between the bath and enclosing walls filled with 1:10 uncompacted cement mix and point all around with, all in accordance with the manufacturers recommendations supplied with waste pipe. Bath mixer to clients choice
SINK	X1		1				X1	Franke stainless stell single bowl sink projectline "seb pln611" (800x460mm) to be sealed with colourless silicon sealer supplied with 38mm pvc waste fittings with plugs. Provide black rubber P-trap with clamps.

SANITARY SCHEDULE

NOTES:

All building materials to be SABS approved (stamped where applicable)
All workmanship to be carried out in accordance with National Building Regulations and Building Standards Act (Act 103 of 1977, as amended) and the NHBRC Home Building Manual. In case of uncertainty National Building Regulations and the NHBRC Home Building Manual should take precedence. All foundation inspection requests to be accompanied by the Engineer's certificate. Truss inspection to be done on un-plastered walls.

CONSTRUCTION SPECIFICATIONS:

FOUNDATIONS
* Foundations as per Contractor's engineer's design - to be approved by the Client's engineer and NHBRC.
* The land around the individual structures shall be shaped to avoid ponding of surface water and drainage precautionary measures such as flexible wet services pipe shall be provided. Floor must be at least 150mm from the natural ground level.

WALLS
* Intersection of internal and external walls must be done accordingly with hoop iron. 'Brickforce' must be place on every layer above window/door level.
* Internal walls to have 12mm 1:6 cement plaster with 1 x plaster primer, and 2 x pure acrylic emulsion paint.
* External walls to have 12mm 1:6 cement plaster with 1 x plaster primer, and 2 x Exterior pure acrylic emulsion paint.

DOORS & WINDOWS
* 2.0mm steel cottage section windows and 1.2mm thick steel doorframes with fixing lugs neatly built into brickwork. Windows to have standard fittings.
* Semi-face brick window sills inclusive of dpc.
High bedded Class II mortar and pointed at all exposed joints.
* Install precast lintels over all window and door openings.
* Exterior 2032 x 813 x 44mm fl&b door complete with 70mm weather board and 'Union' 3-lever lock set. Painted internal 2032 x 813 x 44mm hollow core doors (commercial veneer) to be fitted with 'Union' 2-lever lock set.
* Floor to have 20mm threshold below external door.

PLUMBING
* All plumbing to be carried out by a plumber registered with the local council/authorities.
* Build in 1700mm acrylic bath side wall and sand bed complete with 15mm chromium plated hot and cold taps, 40mm bath outlet and removable fibre cement inspection panel.
* Fit one 'Vaal AquasaveSlimline' code 750152 wc complete with 6 litre cistern, fitments, toilet seat and flush pipe.
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* Hot and cold water polycop lines to be neatly chased into walls to all sanitary fittings. Hot water to be blanked off at future geyser position.
* Install angle valves and a stop cock where applicable.

DRAINAGE
* Provide 1 x 15mm chromed threaded bib tap over a gully at the kitchen.
* Provide a 100mm vent valve at the head of the 100mm soil line.
* Waste water pipe system to have 50mm vent valve at highest point.
* Provide a marked rodding eye at the head of the soil drain and at a change of direction. All pipe connection on soil drain to have inspection eyes.

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* The Electrical Installation must be done by a person registered as an Electrical Contractor in terms of the Occupational Health and Safety Act of 1993 -'Electrical Installation Regulations', as well as be registered with the local council/authorities.
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FINISHES
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* Steel window and door frames to have 1 x coat red oxide factory coated primer, 1 x universal undercoat and 2 x finishing coats.
* External timber door: well sanded and cleaned, apply 1 coat mahogany wood stain and 2 coats external polyurethane varnish.
* Internal doors: sand surfaces smooth and clean, apply 1 x coat timber primer (pink) and 1 x universal undercoat and 2 coats finishing coats.
* Window panes to be fitted with correctly prepared putty and only painted when surface is firm and dry - not to be left unpainted for too long, paint as per window frames.

ROOF
* Engineer's designed and certified timber trusses
* Truss design to allow for future geyser placing..
* 0.5 mm corrugated chromadek roof cladding color sandstone beige beldge installed according to manufacturer's specification.
* Intersection of internal & external walls must be done with hoop iron not "Brickforce".

CEILING
* 6.4mm gypsum ceiling R Value 3.38m2.K/W with 50x8mm cover strips on 38x38mm brandering @450mm centres one direction, with standard 70mm coved gypsum cornice fixed with 'Crestestone' OSA paste. Apply acrylic filler where needed and 2x white commercial PVA paint.
* 135 mm mineral fibreglass blanket R Value 0.06m2.K/W above ceiling insulation.

STORMWATER
* 1000 x 85mm In-situ concrete apron with positive fall away from walls. Provide 10mm expansion joints @ approx. 2500mm distances. See engineer's specifications.

LEVELS AND DIMENSIONS.

THE CONTRACTOR, SUB-CONTRACTOR AND SUPPLIER MUST VERIFY ALL DIMENSIONS AND LEVELS ON SITE AND DESCRIPANCIES MUST BE REPORTED TO THE ARCHITECT BEFORE COMMENCING ANY SHOP DRAWINGS AND/OR WORK.

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Revisions

No.	Date	Description	By
A	03/04/2024	TENDER	JW
1	15/05/2025	DOOR AND WINDOW SCHEDULES REVISED	
2	26/05/2025	WINDOW CODES CORRECTED CEILING AND INSULATION R VALUES INDICATED	JW
3	13/06/2025	TRUSS CHANGED FROM TIMBER TO STEEL	JW
4	17/07/2025	FOR TENDER	JW
5	25/11/2025	-PLUG POINT ADDED IN KITCHEN -CONDUITS TO BE CHASED WITHIN WALLS -LIGHT SWITCH POSITIONS TO FACE DOOR SWING DIRECTION. -FOR TENDER	JW
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CLIENT

COGHSTA
Department:
Cooperative Governance, Human Settlement and Traditional Affairs
Northern Cape Province

CLIENT APPROVED

CLIENT'S NAME

CLIENT'S SIGNATURE DATE

CONSULTANT

iceburg trading construction division
www.iceburgt.co.za

BANEL ENGINEERING

FOR TENDER

Project: CONSTRUCTION OF BNG HOUSING UNITS

Location: NORTHERN CAPE NAMAQUA

Drawing Title: SCHEDULES/ELEVATIONS 40 sqm Units

Drawing Number: NM-102

Rev No.: 6

Scale: 1:50

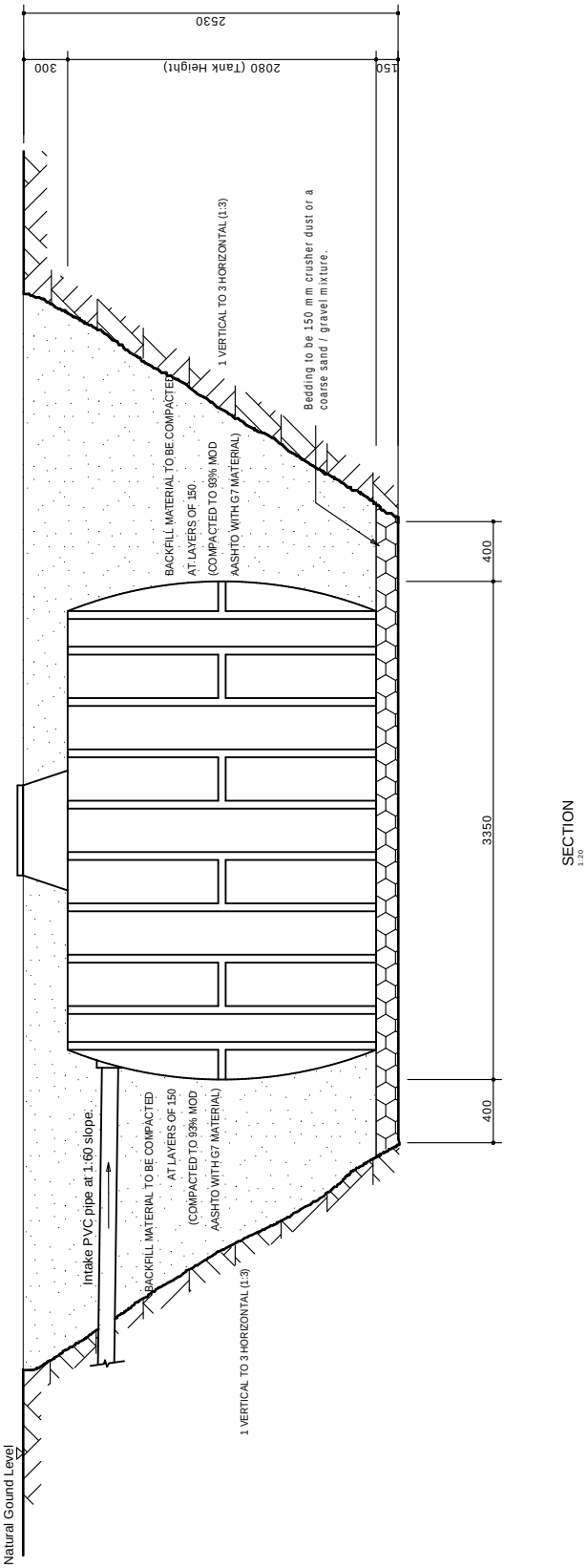
Designed: n/a

Drawn: James Wafula

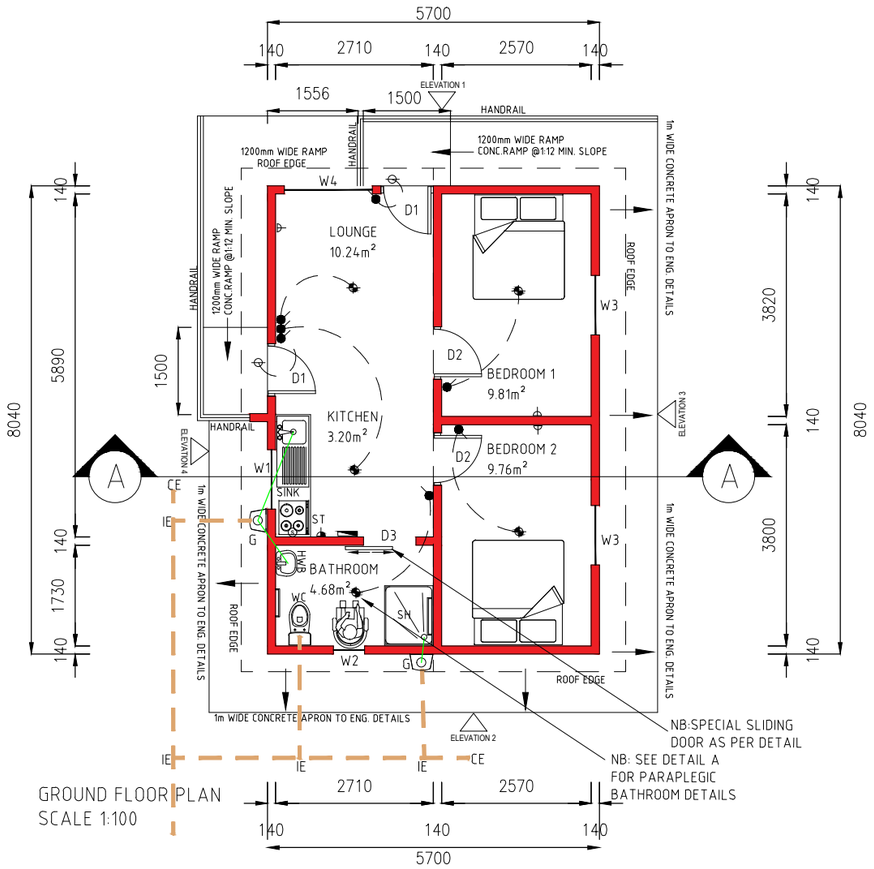
Date: 28/01/2026

Checked: James Riunga

On original drawing



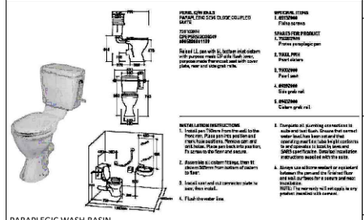
Refer Bending Schedule	2024-SC-104-0	Ref Dwg	
iceburg trading / BRUNEL ENGINEERING	CONCORDIA 29 SEPTIC TANK EXCAVATION SECTION	Revision	0
		Schedule No	



FINISHES SCHEDULE

	ROOM NAME	FLOORS				WALLS			CEILINGS		CORNICES		CILLS		
						INTER		EXTER	INTERNAL		TYPE		INTERNAL & EXTERNAL		
		FLOOR FINISH SKIRTING				WALLS/COLUMNS									
FINISH		85MM THICK CONCRETE SLAB NON SLIP FINISH	POWER FLOATED CONCRETE WITH 25MM POLISHED GRANOLITHIC SCREED	150MM HIGH PAINT SKIRTING COLOUR DEEP ORANGE ONE UNDERCOAT AND TWO COATS MATT ENAMEL	PLASTER AND PAINT ONE UNDERCOAT AND TWO COATS PVA	PLASTER AND PAINT ONE UNDERCOAT AND TWO COATS MATT ENAMEL	WOOD FLOAT PLASTER AND PAINT	PLASTER AND PAINT ON MAXI BRICK COLOUR PVA LIGHT GREY	6,4 mm GYPSUM CEILING WITH 50X38mm COVER STRIPS 38X38mm BRANDERING @450mm CENTERS ONE DIRECTION WITH STD 76mm COVED GYPSUM CORNICE WITH CRETESTEIN USA PASTE . APPLY ACRYLICS FILLER WHERE NEEDED AND 2X WHITE COMMERCIAL PVA PAINT. TO HAVE A 1 YEAR MINIMUM PRODUCT GUARANTEE	600 X 600 MILD STEEL TRAP DOOR CUT INTO CEILING BETWEEN BRANDERING. TRAP DOOR TO BE PAINTED WITH UNDERCOAT & 2 COATS GLOSSHELL ENAMEL. COLOUR TO MATCH CEILING FINISH.	135mm MINERAL FIBREGLASS BLANKET . ALL TO MANUFACTURERS SPECIFICATIONS.	76mm COVED PLASTER BOARD TO DETAIL PAINTED WHITE	PLASTER AND PAINT	BDE CILLS WITH DPC UNDER PLASTER AND PAINT
FLOOR PLAN	BEDROOM 1		●	●	●			●	●		●	●	●	●	
	BEDROOM 2		●	●	●			●	●		●	●	●	●	
	LOUNGE		●	●	●			●	●		●	●	●	●	
	BATHROOM		●	●		●		●	●		●	●	●	●	
	KITCHEN		●	●	●			●	●		●	●	●	●	
	APRON	●													
	RAILS														

SANITARY & FITTINGS SCHEDULE
PARAPLEGIC WC



QUANTITY

KITCHEN	BATHROOM
1	0

PARAPLEGIC WASH BASIN



Vaal Sanitaryware vitreous china 510 x 400 mm semi-rectangular Sola 510 medical basin with no tapholes, overflow or chainstay hole. Stainless steel elbow action tap.

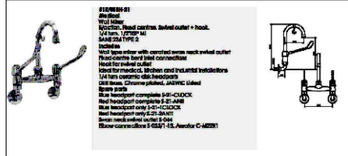
1	0

SINK KITCHEN

Kitchen stainless steel sit on-single bowl sink with suitable grade of steel, on 40mm veneer chipboard counter..
Wall mounted mixer as in Cobra water teck Carina sink mixer with swivel spout.

0	1

ELBOW ACTION (WALL MOUNTED MIXER)



0	1

ELBOW ACTION (OUTSIDE TAP)



0	1

SHOWER

Wall mounted lever stainless steel shower tap with thermostatic mixing valve temperature range 30 degrees - 40 degrees celcious, flow rate of 4 -6 litres a minute. Height adjustable showerhead, lever operation, large easy grip handle, with emergency stop feature and supportive grab bars

1	0

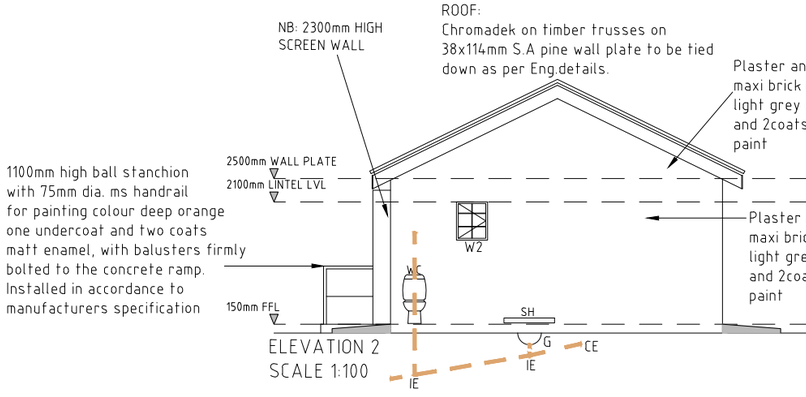
LEVELS AND DIMENSIONS.

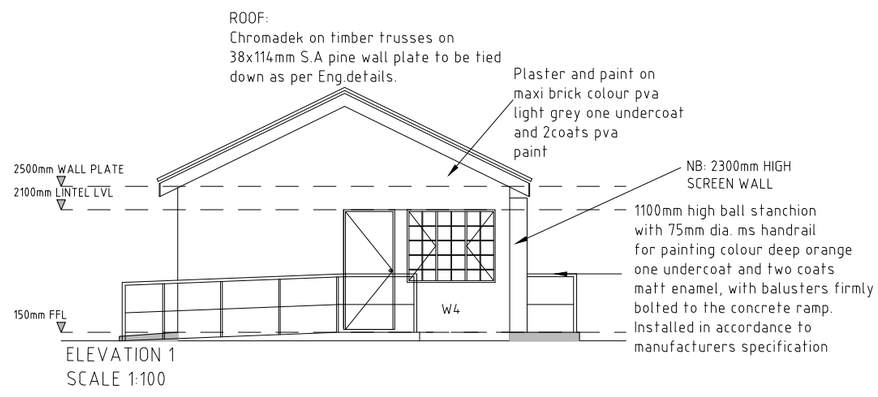
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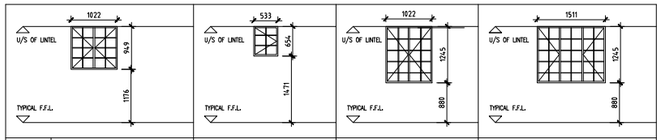
Revisions

No.	Date	Description	By
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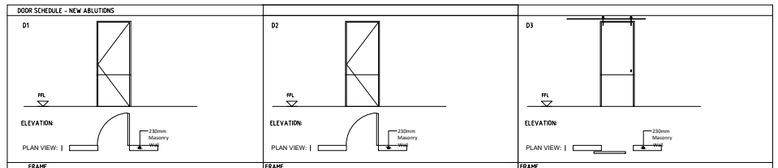


WINDOW SCHEDULE

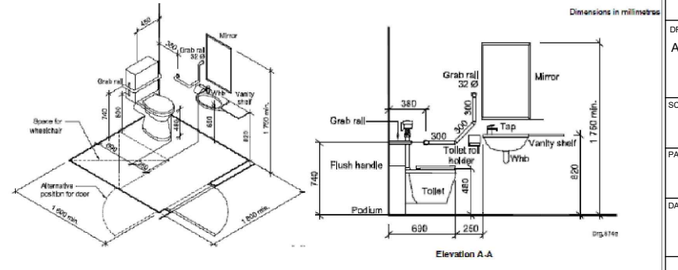


TYPE	C7	ES1	D7	D4
WIN. NO.	W1	W2	W3	W4
TOTAL	01	01	02	01
FRAME	2mm steel frame	2mm steel frame	2mm steel frame	2mm steel frame
GLASS	4mm CLEAR SAFETY GLAZING THROUGHOUT AS PER PART N – GLAZING OF SANS 10400	OBSCURE GLASS THROUGHOUT AS PER PART N – GLAZING OF SANS 10400	4mm CLEAR SAFETY GLAZING THROUGHOUT AS PER PART N – GLAZING OF SANS 10400	4mm CLEAR SAFETY GLAZING THROUGHOUT AS PER PART N – GLAZING OF SANS 10400
FITTINGS	STANDARD FACTORY FITTINGS	STANDARD FACTORY FITTINGS	STANDARD FACTORY FITTINGS	STANDARD FACTORY FITTINGS
BURGLAR BARS	NONE	NONE	NONE	NONE
FINISH	1X red coat red oxide factory coated primer 1x universal undercoat and 2x plascon velvaglo finishing coats	1X red coat red oxide factory coated primer 1x universal undercoat and 2x plascon velvaglo finishing coats	1X red coat red oxide factory coated primer 1x universal undercoat and 2x plascon velvaglo finishing coats	1X red coat red oxide factory coated primer 1x universal undercoat and 2x plascon velvaglo finishing coats
NOTES	–	–		

DOOR SCHEDULE – NEW ABLUTIONS



FRAME	16mm thick pressed double rebated steel frame on a 230mm brick wall, supplied complete with 1½ pairs butt hinges to suit, colour light orange.	FRAME Heavy duty, rust resistant stainless steel or powder coated aluminium or rustic soft-close barn door sliding rail mechanisms.
FRAME FINISH	Factory applied red oxide primer, with two coats matt enamel finish colour to architects specification.	FRAME FINISH
LEAF	Single solid core flush panel door exterior grade hardwood, size 900 x 2032 x 44mm suitable for painting	LEAF Marine Plywood or Solid hardwood door , size 900 x 2032 with a clearance gap of minimum 6mm to 10mm from the floor.
LEAF FINISH	Primed with suitable wood primer and finished with two coats matt enamel paint. Colour – deep orange.	LEAF FINISH Sealed on all sides with a marine-grade lacquer, heavy duty exterior grade varnish or polyurthenane to prevent moisture absorption and steam swelling.
IRONMONGERY	Paraplegic lockset – material chrome-plated with satin chrome finish, non slip lever handle with locking, unlocking and emergency release function, with visual indicators for locked or unlocked status with emergency release mechanism supplied by AssaAbloy or equivalent. Secondary lock. Euro profile cylinder lockset with satin stainless steel escutcheon All locks to be master key With overhead external quality door closer with 90degree hold open position Kickplate – 900mm stainless steel kickplate on both sides	IRONMONGERY Paraplegic lockset – material chrome-plated with satin chrome finish, non slip lever handle with locking, unlocking and emergency release function, with visual indicators for locked or unlocked status with emergency release mechanism supplied by AssaAbloy or equivalent. Secondary lock. Euro profile cylinder lockset with satin stainless steel escutcheon All locks to be master key Kickplate – 900mm stainless steel kickplate on both sides All installed to manufacturers specifications. Supplier ASSA ABLOY or equally approved. Floor mounted dome shaped stainless steel and rubber door stop installed to manufacturers specifications	IRONMONGERY Paraplegic lockset – material chrome-plated with satin chrome finish, non slip lever handle with locking, unlocking and emergency release function, with visual indicators for locked or unlocked status with emergency release mechanism supplied by AssaAbloy or equivalent. Secondary lock. Euro profile cylinder lockset with satin stainless steel escutcheon Kickplate – 900mm stainless steel kickplate on both sides Floor mounted dome shaped stainless steel and rubber door stop installed to manufacturers specifications



CLIENT:

COGHSTA
Co-operative Governance
Human Settlement & Traditional Affairs

CLIENT APPROVED:

CLIENT'S NAME:

CLIENT SIGNATURE: DATE:

CONSULTANT

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BRUNEL ENGINEERING

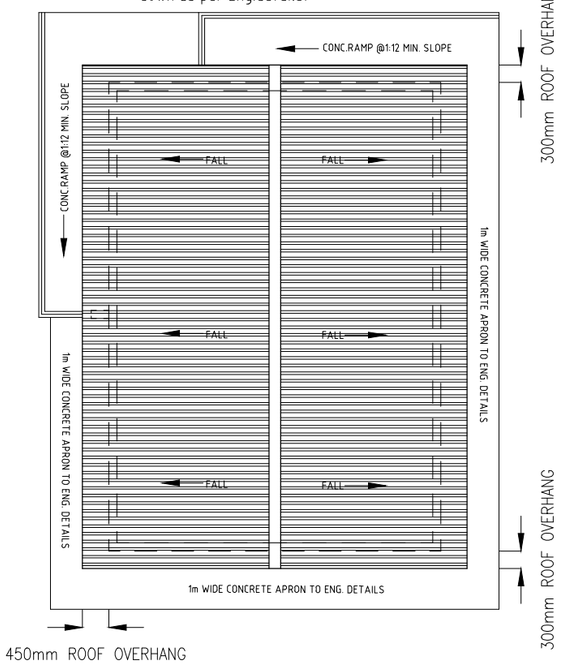
ISSUED FOR CONSTRUCTION

PROJECTS:
CONSTRUCTION OF NAMAKWA DISTRICT HOUSING PROJECT

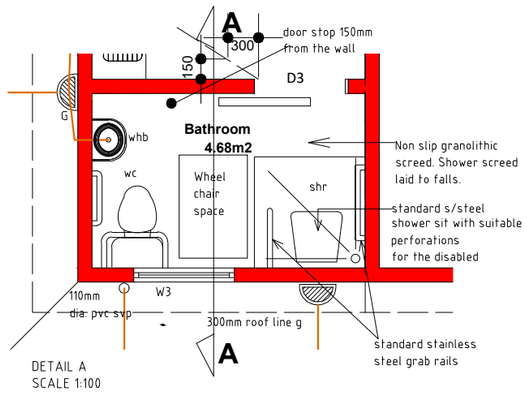
LOCATION:
NORTHERN CAPE PROVINCE

DRAWING TITLE:
TYPICAL DISABLED HOUSE UNIT 45m²

DRAWING NUMBER:	REV No:
ARCH-LO-01	1
SCALE: AS SHOWN	DESIGNED: R.MAMPHAGA
PAPER SIZE: A3	DRAWN: MK. KABINI
DATE: 20/05/2026	CHECKED: R.MAMPHAGA



ROOF PLAN
SCALE 1:100



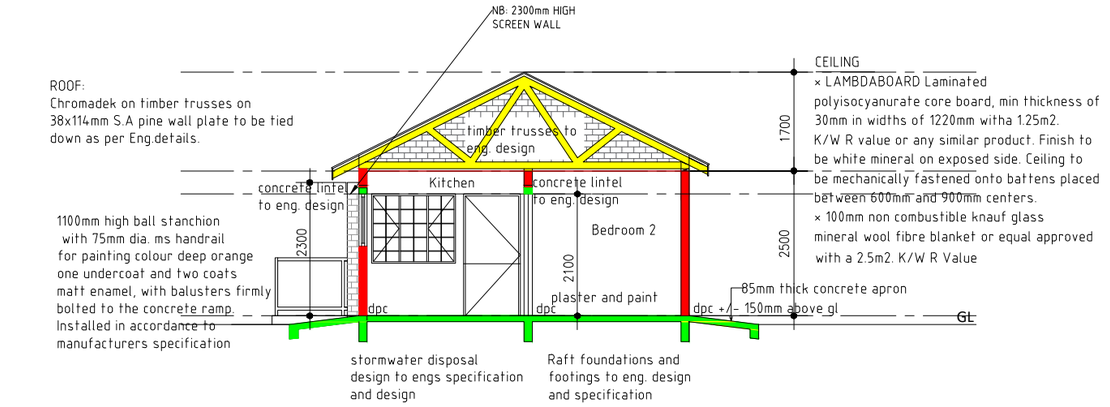
DETAIL A
SCALE 1:100

ELECTRICAL LEGEND

	Recessed DB with lid
	light switch at 1m above ffl
	Double wall plug (0.3m above ffl to u/side)
	Double wall plug (1.1m above ffl to u/side)
	Ceiling mounted light point
	Wall mounted light point
S	Stove point

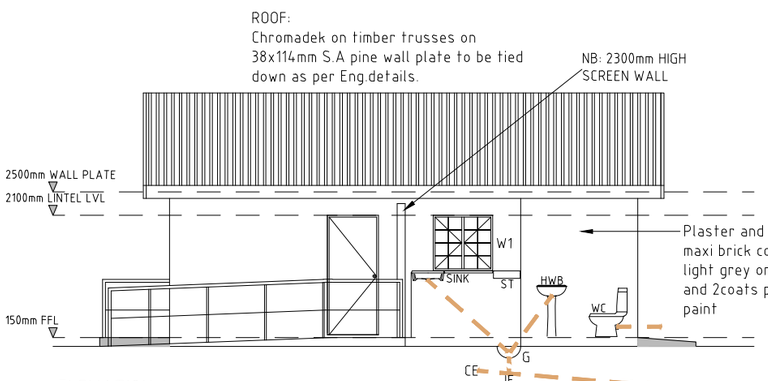
AREA SCHEDULE

Lounge/kitchen	13,44m²
Bathroom	4.68m²
Bedroom 1	9.81m²
Bedroom 2	9.76m²
Total Footprint	45m²



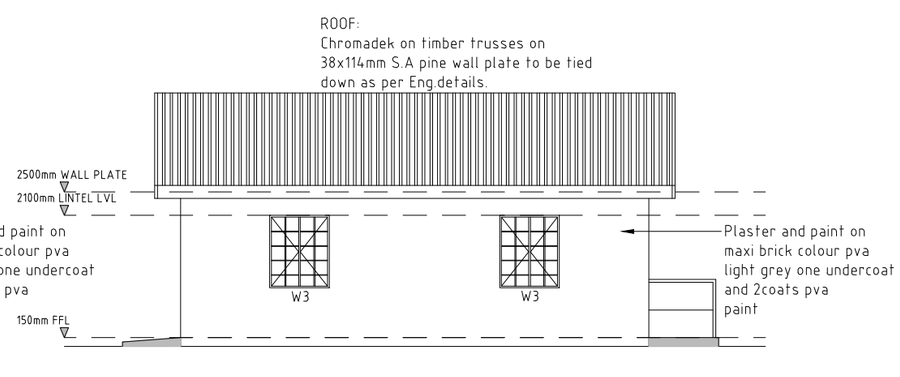
SECTION A-A
SCALE 1:100

CEILING
× LAMBDABOARD Laminated polyisocyanurate core board, min thickness of 30mm in widths of 1220mm witha 1.25m2. K/W R value or any similar product. Finish to be white mineral on exposed side. Ceiling to be mechanically fastened onto battens placed between 600mm and 900mm centers.
× 100mm non combustible knauf glass mineral wool fibre blanket or equal approved with a 2.5m2. K/W R Value



ELEVATION 4
SCALE 1:100

NB: Provide threaded bib tap with elbow action over a gully at the kitchen.
Provide a 100mm vent valve at the head of the 100mm soil line.
Waste water pipe system to have 50mm vent valve at highest point.
Provide a marked rodding eye at the head of the soil drain and at a change
of direction. All pipe connection on soil drain to have inspection eyes.



ELEVATION 3
SCALE 1:100

NOTES:
45 sqm Units
All building materials to be SABS approved (stamped where applicable)
All workmanship to be carried out in accordance with National Building Regulations and Building Standards Act (Act 103 of 1977, as amended) and the NHBRC Home Building Manual. In case of uncertainty National Building Regulations and the NHBRC Home Building Manual should take precedence. All foundation inspection requests to be accompanied by the Engineer's certificate.
Truss inspection to be done on unplastered walls.
CONSTRUCTION SPECIFICATIONS:

FOUNDATIONS
× Foundations as per Contractor's engineer's design - to be approved by the Client's engineer and NHBRC.
× The land around the individual structures shall be shaped to avoid ponding of surface water and drainage precautionary measures such as flexible wet services pipe shall be provided. Floor must be at least 150mm from the natural ground level.

WALLS
× Intersection of internal and external walls must be done accordingly with hoop iron. 'Brickforce' must be place on every layer above window/door level.
× Internal walls to have 12mm 1:6 cement plaster with 1 x plaster primer, and 2 x pure acrylic PVA paint.
× External – Plaster and paint on maxi brick colour pva light grey, one undercoat and 2 coats pva paint to Architects approval.

DOORS & WINDOWS
Build into masonry pressed steel door frame to suit external door size900mm x 2032mm to 140mm wall and pressed steel door frame to suit internal door size 900mm x 2032mm to 90mm. Ends of logs to be turned down and built into block cores filled solid with 10MPa infill concrete.
External doors to be 900 x 2032 mm FLB and B. Exposure class 2 SE - semi exterior and Perfomance class HD - heavy duty with satin finish 900mm high stainless steel kickplate.
Internal doors to be 900 x 2032 mm flush panel doors with satin finish 900mm high stainless steel kickplate on both sides. Exposure class 4 DI -dry interior and Perfomance class LD - light duty, all to SABS 545
Build into masonry small pane steel window frames as per window schedule.
Doors to be finished 2 coats internally or externally polyurethane varnish, 1st coat thinned 20% with mineral turpentine
DOOR HANDLES, LIGHT SWITCHES AND PLUG SOCKETS
Door handles shall be a lever type - With a lever of more than 150mm in length.
Door handles and light switches to be 1000mm max above FFL
Plug sockets to be mounted 500mm min above FFL
Plug sockets and switches to be 150mm above work top surfaces and at least 450 from the corners.

BATHROOM
Bathroom ceiling to be fibre cement painted with oil based paint.
GRAB RAILS
The wall where grab rails are installed shall be strenthened
The installation shall be sufficiently to withstand the loads imposed on them
The grab rails shall have an outside diameter of 32 - 38mm
Install 3 x 300mm long vertical grab rails, from 740mm above FFL (lower arm)
Diameter of the flange of the grab rails fixing shall be 75mm minimum, drilled with no fewer than 3 fixing holes.
1000mm long horizontal grab rails to be installed 680mm above FFL.

RAMPS
Shall have a gradient measured along the center that is not sleeper than 1:12
Trafficable surface not less than 1100mm wide
Finish surface shall be stable, firm and slip resistant under wet and dry conditions.
Slop of 1:2 shall has a maximum vertical rise of 150mm with a maximum landings of 1200mm.

PLUMBING
× All plumbing to be carried out by a plumber registered with the local council/authorities.
× Hot and cold water polycop lines to be neatly chased into walls to all sanitary fittings. Hot water to be blanked off at future geyser position.
× Install angle valves and a stop cock where applicable.

DRAINAGE
× Provide 1 x 15mm chromed threaded bib tap over a gully at the kitchen.
× Provide a 100mm vent valve at the head of the 100mm soil line.
× Waste water pipe system to have 50mm vent valve at highest point.
× Provide a marked rodding eye at the head of the soil drain and at a change of direction. All pipe connection on soil drain to have inspection eyes.
ELECTRICAL
× The Electrical Installation must be done by a person registered as an Electrical Contractor in terms of the Occupational Health and Safety Act of 1993 -"Electrical Installation Regulations", as well as be registered with the local council/authorities.
Electrical conduits and fixtures to be chased within the walls.
All electrical plugs to be double wall plugs.
FINISHES
× Floors to be power-floated to a smooth and level finish and kept damp for a period, as per engineer's requirements, before any brickwork commences.
× Steel window and door frames to have 1 x coat red oxide factory coated primer, 1 x universal undercoat and 2 x matt enamel finishing coats.
× External timber door: well sanded and cleaned, apply 1 coat mahogany wood stain and 2 coats matt enamel colour deep orange.
× Internal doors: sand surfaces smooth and clean, apply 1 x coat timber primer (pink) and 1 x universal undercoat and 2 coats finishing coats.
× Window panes to be fitted with correctly prepared putty and only painted when surface is firm and dry – not to be left unpainted for too long, paint as per window frames.

ROOF
× Engineer's designed and certified pre-fabricated timber roof trusses @ 26 degrees bedded in dagha.
× Truss design to allow for future geyser placing..
× 0.5 mm corrugated chromadek roof cladding color sandstone beige beldge installed according to manufacturer's specification.
× Intersection of internal & external walls must be done with hoop iron not "Brickforce".
× Trusses tied down as per Eng Details.
× Fit 225 x 10mm 'Nutec' fibre cement tiles to truss end with 50 x 5mm counter sunk steel wood screws. Prime screw heads and apply paint with 1x plaster primer, and 2x roof paint.
CEILING
6.4mm gypsum ceiling R Value 3.38m2.K/W with 50x8mm cover strips on 38x38mm brandering @450mm centres one direction, with standard 70mm coved gypsum cornice fixed with 'Crestestone' OSA paste. Apply acrylic filler where needed and 2x white commercial PVA paint.
135 mm mineral fibreglass blanket R Value 0.06m2.K/W above ceiling insulation.
STORMWATER
1000 x 85mm In-situ concrete apron with positive fall away from walls.
Provide 10mm expansion joints @ approx. 2500mm distances. See engineer's specifications.

STORMWATER
× 1200 x 85mm In-situ concrete apron with positive fall away from walls. Provide 10mm expansion joints @ approx. 2500mm distances. See engineer's specifications.

LEVELS AND DIMENSIONS.
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Co-operative Governance Human Settlement & Traditional Affairs

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CONSULTANT
iceburg trading
BRUNEL ENGINEERING

ISSUED FOR CONSTRUCTION

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NORTHERN CAPE PROVINCE

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TYPICAL DISABLED HOUSE UNIT 45m²

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