



CALL FOR BIDS

BID NO: ECDC /INFRA/33/042024

BID SUBJECT: CONSTRUCTION OF GWATYU ACCESS ROAD ON R351

Consisting Of:

- The Tender (Returnable) - This Document**
- The Bills of Quantities**
- Annexures**

BIDDER NAME:

CSD No:

CRS No.:

CLOSING DATE:	04 June 2024
CLOSING TIME:	12h00

.....

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

Black People	Means 'African', 'Indian' and 'Coloured' people who are citizens of the Republic of South Africa by birth; or are citizens of the Republic of South Africa by naturalisation before the commencement date of the Constitution of South Africa Act (1993); or became citizens of the Republic of South Africa after the commencement of the of the Constitution of South Africa Act(1993), but who for the Apartheid policy that has been in place to that date, would have been entitled to acquire citizenship by naturalisation prior to that date.
Specific goal	<p>2.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table in SBD 6.1 as may be supported by proof/ documentation stated in the conditions of this tender:</p> <p>2.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—</p> <p>(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</p> <p>(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.</p>
Close Family Member	Shall mean: - member of the same household, parent (including adoptive parent), parent-in-law, son (including adoptive son), son-in-law, daughter (including adoptive daughter), daughter-in-law, step-parent, step-son, step-daughter, brother, sister, grandparent, grandchild, uncle, aunt, nephew, niece, the spouse or unmarried partner with relation to any of the person's above.
Code of Ethics	Refer to the ECDC Code of Ethics for Management and Staff as may be amended from time to time.
Comparative Price	Means the price after the factors of a non-firm price and all the unconditional discounts that can be utilised have been taken into consideration.
Consortium or Joint Venture	Means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill, and knowledge in an activity for the execution of a contract.
Contract	Means the agreement that results from the acceptance of a bid by ECDC.
Designated Sector	Means a sector, sub-sector or industry that has been designated by the DTI in line with national development and industrial policies for local production, where on local produced goods or locally manufactured goods meet the stipulated minimum threshold for local production and content.
Duly Sign	Means a document that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility

	(close corporation, partnership or individual).
Exempt Micro Enterprise (EME)	Means an enterprise with a specified total annual revenue as per Department of Trade and Industry Codes of Good Practice on Broad Based Black Economic Empowerment.
Family Member	Means a husband or wife, any partner in a customary union according to indigenous law or any partner in a relationship where the parties live together in a manner resembling a marital partnership or a customary union; and any person related to either one or both persons referred above within the second degree through a marriage, a customary union, or a relationship or the third degree of consanguinity.
Firm Price	Means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract.
Fronting	Means a deliberate circumvention or attempted circumvention of the B-BBEE Act and the Codes. Fronting commonly involves reliance on data or claims of compliance based on misrepresentation of facts, whether made by the party claiming compliance or by any other person.
Functionality	Means the measurement according to predetermined norms, as set out in the tender documents, of a service or commodity that is designed to be practical or useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of the tenderer.
Imported Content	Means that portion of the tender price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the bidder or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour or intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African port of entry.
In the service of the state	Means: an employee of any municipality who has a performance contract with the municipality and is employed on a permanent, temporary, or short-term basis. an employee or public servant of any national or provincial government as defined in terms of Public Services Act. a member who – is a councillor of any municipal council as defined in the Local Government Municipal Structures Act (Act No 117 of 1998); is a politician serving in any provincial legislature; or is a politician serving in the National Assembly or the National Council of Provinces, a member of the board of directors of any municipal entity, an employee and a member of a government owned entity as defined in the Public Finance Management Act (Act No 1 of 1999); and / or such other meaning ascribed to it by National Legislation

	from time to time.
Local content	Means a portion of the tender price, which is not included in the imported content, provided that local manufacture does take place.
Non-firm prices	Means all prices other than "firm" prices.
Person	Includes a juristic person.
Price Quotation	An estimate describing the product, stating its price, time of shipment, and specifies the terms of the sale and terms of the payment.
Property	Includes all movable and immovable property and intellectual property belonging to ECDC.
Public Private partnership	Means a commercial transaction between ECDC and a private party in terms of which: the private party either performs a function o.b.o. ECDC for a specified or indefinite period or acquires the use of state property for its own commercial purposes for a specified or indefinite period. the private party receives a benefit for performing the function or by utilizing state property, either by way of: compensation from a revenue fund charges or fees collected by the private party from users or customers of a service provider to them; or a combination of such compensation and such charges or fees.
Qualifying Small Entity	Means an enterprise with a specified total annual revenue as per Department of Trade and Industry Codes of Good Practice on Broad Based Black Economic Empowerment.
Rand value	Means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties.
Related enterprise	Means an entity controlled by a measured entity whether directly or indirectly controlled by the natural persons who have direct or indirect control over that measured entity or the immediate family of those natural persons.
Service Level Agreement	Shall have the same meaning assigned as "Contract".
Shareholder	Means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.
State	Means: any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the PFMA any municipality or municipal entity national Assembly or the national Council of Provinces; or parliament.
Stipulated minimum threshold	Means that portion of local production and content as determined by the DTI.
Sub-Contract	Means the primary contractor's assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract.
Tender	The same meaning is assigned as "Bid" above.

Threshold	Shall mean the financial limits on the value of goods or services to be procured as set and prescribed in this policy which shall determine the manner in which these goods and services will be procured.
Total revenue	Means the total income of an entity from its operations as determined under South African Generally Accepted Accounting Practice.
Trust	Means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person.
Trustee	Means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.
Value for Money	Means that the item (public-private partnership agreement) results in a net benefit to ECDC defined in terms of cost, price, quality, quantity, or risk transfer, or a combination thereof.

Part T1: Tendering Procedures

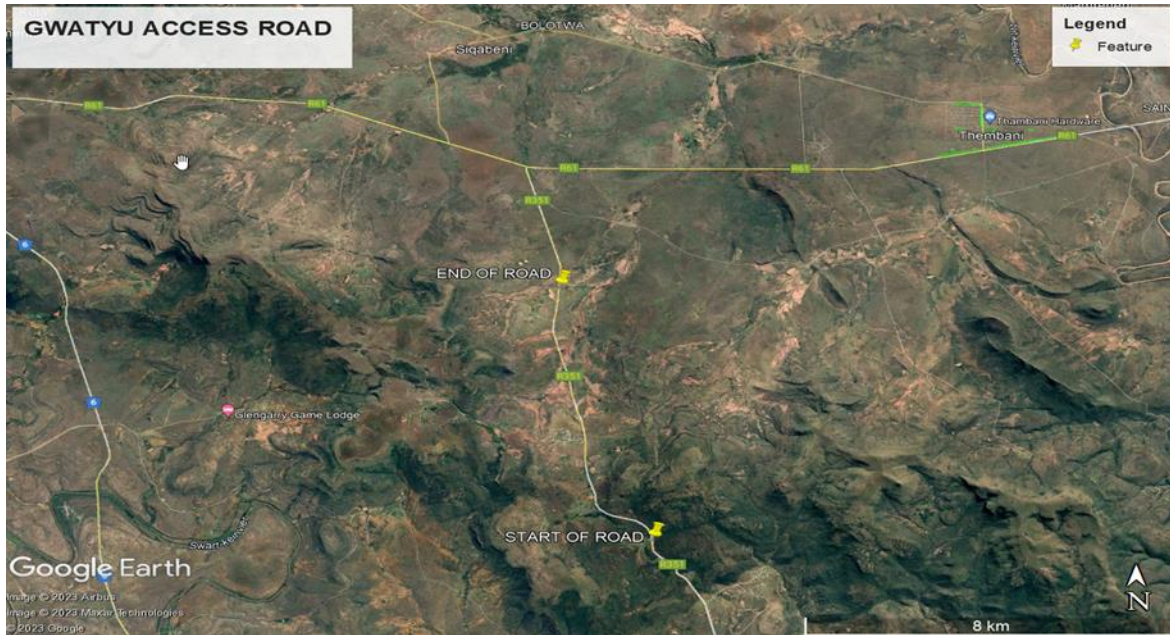
T.1.1

TENDER NOTICE AND INVITATION TO BID

1. Invitation to Bid

Eastern Cape Development Corporation (ECDC) wishes to engage with a suitable contractor with a CIDB Grading of **6CE** or Higher for the construction of Gwatyu Access Road (R351).

The new road is 8km and the construction will start about 3.7km from the turnoff of the R61 into R351 between Cofimvaba and Queenstown.



Coordinates	Start: S -32, 1205783, E 27,2399683 End: S -32,0555333, E 27,2184800
Province	Eastern Cape
District Municipality	Chris Hani District Municipality
Local Municipality	Enoch Mgijima Local Municipality

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

2. Eligibility to Bid

- a) Bidders should meet the Mandatory Requirements in order to be evaluated T2.1
- b) **It is estimated that bidders should have a CIDB grading of 6CE or Higher.**

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

3. Payment of Bid Document

No payment is due to obtain tender documents.

4. Collection /Availability of Documents

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

5. Queries on Bid Document

Queries relating to the issue of these documents may be addressed to Ms B Fukweni,
E- Mail at tenders@ecdc.co.za and cc bfukweni@ecdc.co.za

6. Estimated Timeline

Activity	Date	Time
1. Placing of Advert	Daily Dispatch, E-tender, CIDB, Load on ECDC Website for 21 Days. 03 May 2024	n/a
2. Compulsory Briefing Meeting	A compulsory briefing meeting to be held at the Chief's homestead at Gwatyu Farms on the 16th of May 2024 starting at 11h00.	
3. Last day of questions	5 days before closing date	16H00
4. Final date of submission of bids	04 June 2024	12h00
5. Bid Validity	90 days	

6.1. Briefing Session and Site Location

A compulsory briefing meeting to be held at Gwatyu Farms at the Chief's homestead (from Queenstown towards Cofimvaba) on the 16th of May 2024 at 11h00AM.

Coordinates are: Start: **S -32, 1205783, E 27,2399683, End: S -32,0555333, E 27,2184800**

For any enquiries relating to this Bid please email the procurement department at tenders@ecdc.co.za and cc bfukweni@ecdc.co.za, attention Ms B Fukweni.

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

Bidders must visit the site to ensure that their proper assessment of the site is done and that the Bill of Quantities is priced correctly.

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

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

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

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

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

T1.2 Tender Data

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

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

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

Clause number	Tender Data
A.1.1	The employer is Eastern Cape Development Cooperation (ECDC)
A.1.2	<p>The Tender Documents issued by the Employer comprise the following documents:</p> <p>THE TENDER</p> <p>Part T1: Tendering procedures</p> <p>T1.1 - Tender notice and invitation to tender T1.2 - Tender data</p> <p>Part T2: Returnable documents</p> <p>T2.1 - List of returnable documents 2.2 - Returnable schedules</p> <p>THE CONTRACT</p> <p>Part C1: Agreements and Contract data</p> <p>C1.1 - Form of offer and acceptance C1.2 - Contract data C1.3 – Performance Guarantee C1.4 – Adjudicator's Contract</p> <p>Part C2: Pricing data</p> <p>C2.1 - Pricing Instructions C2.2 - Bill of Quantities</p> <p>Part C3: Scope of work</p> <p>C3 - Scope of work</p> <p>Part C4 : Site Information/Drawings</p> <p>PA – Health and Safety Specification PC – Labour Intensive Methods C4 – Drawings</p>

A.1.4	<p>During Tender stage all communication shall be through the Procurement Department for attention: Name: Ms. B Fukweni Address: ECDC Head Office at Ocean Terrace Park Moore Street Quigney, East London</p> <p>Tel: 043 704 5644 E-mail: tenderes@ecdc.co.za cc bfukweni@ecdc.co.za</p>
A.2.1	<p>Only those tenderers who are registered with the CIDB or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with CIDB Regulations are eligible to have their tenders evaluated.</p> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> 1. every member of the joint venture is registered with the CIDB, 2. the lead partner has a contractor grading designation in the CE (Civil Engineering) class of construction work; not lower than one level below the required grading designation in the class of works of construction under consideration and possess the required recognition status. 3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 6CE or Higher class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.
A.2.1	<p>Not Applicable for this Bid</p> <p>The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated:</p> <ol style="list-style-type: none"> a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for an 7GB class of construction work; and b) contractors registered as potentially emerging enterprises with the CIDB who are registered in one contractor grading designation lower than that required in terms of a) above and who satisfy the following criteria **

A.2.7	<p>The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender.</p> <p>Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to, and tenders will be received only from those tendering entities appearing on the attendance list.</p>
A.2.12	<p>Not Applicable for this Bid</p> <p>Main tender offers are not required to be submitted together with alternative tenders.</p>
A.2.12	<p>No alternative tender offers will be considered.</p>
A.2.12	<p>Not Applicable for this Bid</p> <p>If a tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrably satisfies the Employer's standards and requirements, the details of which may be obtained from the Employer's Agent.</p> <p>Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal.</p> <p>Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements.</p> <p>The modified Pricing Data must include an amount equal to 5% of the amount tendered for the alternative offer to cover the Employer's costs in confirming the acceptability of the detailed design.</p>
A.2.13. 3	<p>One original duly signed (by authorised representative) and completed bid document (hardcopy) MUST be submitted inclusive of the terms and conditions of this bid document with any attachments/annexures /returnable required for this Bid.</p> <p>A PDF soft copy of the duly signed and completed original bid (e.g., PDF format in Flash drive/disc) should be submitted with the Original duly signed and completed hardcopy bid document however non-submission of a soft copy will not result in the Bid being disqualified.</p> <p>ECDC will not be responsible if your bid is not submitted on time. All bid documents are to be completed in permanent black ink.</p> <p>No alterations of the Bid Document will be allowed.</p> <p>No correction fluid will be allowed. Corrections should be initialled.</p>

<p>A.2.13.5</p> <p>A.2.15.1</p>	<p>Valid originally firmly bound signed complete tender document (by authorized representative) must be placed in the Bid Box on or before the final date and time of submission.</p> <p>The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are:</p> <p>a) Location of tender box:</p> <p>Bid Reference Number: ECDC/INFRA/33/042024</p> <p>Project Name: CONSTRUCTION OF GWATYU ACCESS ROAD ON R351</p> <p>Delivered at Physical Address: ECDC Head Office at ECDC House, Ocean Terrace Park, Moore Street, Quigney, East London.</p> <p>Bids/Tender offers must be submitted on or before the final date and time of submission of bids as indicated in the Tender Notice and invitation to Tender.</p> <p>It is the Bidders responsibility to ensure that all the documents are received on time. The bid box is open on weekdays between 08h00 and 16h30</p>
<p>A.2.13.6</p> <p>A.3.5</p>	<p>Not Applicable for this Bid</p> <p>A two-envelope procedure is required.</p>
<p>A.2.13.9</p>	<p>Telephonic, email, telegraphic, telex, email, or facsimile tender offers will not be accepted.</p>
<p>A.2.15</p>	<p>The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.</p>
<p>A.2.16</p>	<p>The tender offer validity period is 90 days.</p>
<p>A.2.18</p>	<p>Not applicable to this bid</p> <p>The tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the Labour-Intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements. Tenders to submit the associated names being part of the returnable documents failure to submit can result in the tender being eliminated.</p>
<p>A.2.19</p>	<p>Access shall be provided for the following inspections, tests, and analysis:</p> <p>The site is available for viewing the location of the works.</p>
<p>A.2.20</p>	<p>The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Contract Data/Contract of this procurement document.</p>
<p>A.2.22</p>	<p>Not Applicable for this Bid</p> <p>Return all retained tender documents within 28 days after the expiry of the validity period.</p>

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

A.3.11.3 Evaluation Criteria

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

The procedure for evaluation of tenders is as follows:

<p>Stage 1</p>	<p>Service Providers are to meet all the Mandatory Requirements to be evaluated further. Failure to submit the Mandatory Requirements as required will result in the bid being disqualified.</p> <p>Involves a valuation of local production and content (goods) only. At this stage Bidders must meet the minimum threshold for local production and content as determined by the DTI for local content before they will be evaluated in terms of preferential procurement points.</p> <p>Bidders to complete the Declaration for Local Production and Content for Designated Sectors and Local Content Declaration: Summary Schedule (Annex C)</p>
<p>Stage 2</p>	<p>Functionality: Involves an evaluation of Functionality only – At this stage Bidders must score a minimum score of 70% (49/70 points) for functionality (services) to be evaluated for Stage 3 (Preferential procurement points).</p>
<p>Stage 3</p>	<p>Preferential Procurement points: Price: Points will be calculated for price on the relevant prices in accordance with the preference point system, 80/20.</p>

Functionality Criteria	Maximum number of points
Completed Similar Projects	30
Experience and Qualifications of the Key Personnel	30
Programme	5
Methodology	5
Maximum possible score for functionality (M_s)	70

A.3.11.3	<p>The evaluation criteria and maximum score in respect of each of the criteria are as follows: (Details on Functionality Evaluation are on T2.1)</p> <p>Functionality shall be scored by not less than three evaluators in accordance with the Functionality Criteria Evaluation below.</p> <p>The minimum percentage to be achieved for functionality is 70% (or 49/70 points).</p>
A.3.13	<p>Tender offers will only be accepted if:</p> <ul style="list-style-type: none"> a) the tenderer is Tax Compliant <ul style="list-style-type: none"> ✓ tenderers must ensure compliance with their tax obligations. ✓ in Bids where Consortia/Joint venture/Sub-Contractors are involved; each party must submit a separate proof of Tax Compliance Status. ✓ the tenderer Tax status will be verified on the CSD prior to the bid award and where the preferred bidder is not compliant, 7 working days will be granted for remedy, failing which the bidder will be disqualified. b) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation. c) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement. d) the tenderer has not: <ul style="list-style-type: none"> i) abused the Employer's Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect. e) the tenderer is able, in the opinion of the employer, to perform the contract free of conflicts. f) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2003, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. g) the tenderer can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise, and the personnel, to perform the contract. h) the tenderer has the legal capacity to enter the contract. i) the tenderer is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing; j) the tenderer complies with the legal requirements, if any, stated in the tender data; and
A.3.17	<p>The number of paper copies of the signed contract to be provided by the employer is one (1).</p>

Part T2: Returnable documents

T2.1 - List of returnable
documents

T2.2 - Returnable
schedules

1. Evaluation Criteria

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

The procedure for evaluation of tenders is as follows:

Stage 1	<p>Service Providers are to meet all the Mandatory Requirements in order to be evaluated further. Failure to submit the Mandatory Requirements as required will result in the bid being disqualified.</p> <p>Stage 1 involves a valuation of local production and content (goods) only. At this stage Bidders must meet the minimum threshold for local production and content as determined by the DTI for local content before they will be evaluated in terms of preferential procurement points.</p> <p>Bidders to complete the Declaration for Local Production and Content for Designated Sectors and Local Content Declaration: Summary Schedule (Annex C)</p>
Stage 2	<p>Functionality: Involves an evaluation of Functionality only – At this stage Bidders must score a minimum score of 70% (49/70) for functionality (services) in order to be evaluated for Stage 3 (Preferential procurement points).</p>
Stage 3	<p>Preferential Procurement points: Price: Points will be calculated for price on the relevant prices in accordance with the preference point system, 80/20.</p>

2.1 MANDATORY LIST OF TENDER RETURNABLES

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

Description	Disqualification if not submitted with Bid Document or Bidder is found to be Non-Compliant at the Time of Bid Close	Mandatory Requirement for Award
<p>1. Bidders must be registered on the National Treasury Central Supplier Database (CSD). The following information will be verified on the National Treasury Central Supplier Database:</p> <ul style="list-style-type: none"> • Business Registration including details of directorship and membership, - The bidders' Business Registration Status will be verified on the CSD prior to the bid award and where the preferred bidder's status is under deregistration, 7 working days will be granted for remedy, failing which the bidder will be disqualified. • ID Number, • Government Employee • Tender Defaulting and Restriction Status. Should the Tender be a restricted supplier or a defaulting supplier they will be disqualified. <p><u>Onus on the Service Provider</u></p> <p>Onus is on the Service Provider to make sure that all these are active and compliant on the CSD at the time of bid closing and tender award. ECDC will verify if the Service Provider has been registered on CSD. Service Provider to submit CSD Number as required in the Cover Page. It is the responsibility of the Service Provider to ensure that the correct CSD Number is provided.</p> <p>If Service Provider is not registered on CSD by the time of closing of the bid, they will not be</p>	<p style="text-align: center;">Yes</p>	<p style="text-align: center;">Yes</p>

	<p>considered for evaluation.</p> <p><u>Directors in the Service of State</u></p> <p>Where a person within the Bidding Entity is an Employee of the State, Bidder should</p> <ol style="list-style-type: none"> a. submit a signed letter on a letter head from their Accounting Officer/Accounting Authority (AO/AA of the Government Institution where they are employed) stating that they are not prohibited from conducting business with the State in terms of Section 8 of the Public Administration Management Act, 2012 (Act No.11 of 2014- "The PFMA") b. submit a signed letter on a letter head from their AO/AA granting permission to perform other remunerative work outside of their employment where the PAMA does not apply to such an employee. <p>ECDC reserves the right to verify such information from their AO/AA.</p> <p><u>JV's and Consortium</u></p> <p>Where the Bidder is a JV/Consortium, each firm must be registered on the CSD.</p>		
2.	<p>Tax Compliance Requirements:</p> <ul style="list-style-type: none"> • Bidders must ensure compliance with their tax obligations. • The bidders' Tax status will be verified on the CSD prior to the bid award and where the preferred bidders is not compliant, 7 working days will be granted for remedy, failing which the bidder will be disqualified. • In Bids where Consortia/Joint venture/sub-contractors are involved, each party must submit a separate proof of Tax Compliance Status Certificate/SARS Pin Number/CSD Number. 	No	Yes

3.	<p>CIDB Requirements:</p> <p>Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a 6CE (Civil Engineering) or higher class of construction work, are eligible to have their tenders evaluated.</p> <p>Joint ventures are eligible to submit tenders provided that:</p> <ol style="list-style-type: none"> 1. every member of the joint venture is registered with the CIDB. 2. the lead partner has a contractor grading designation in the CE (Civil Engineering) class of construction work; not lower than one level below the required grading designation in the class of works construction works under considerations and possess the required recognition status. 3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a GB class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations. <p>ECDC will verify whether the Bidders have an active and valid CIDB registration as required above</p>	Yes	Yes 6CE or Higher
4.	<p>Annexure C – Supplier Information (Completed and Signed by the Delegated Authority) Attach Delegation of Authority</p>	Yes	Yes
5.	<p>Annexure L – C.1.1 Form of Offer and Acceptance Offer (Completed and Signed by the Delegated Authority) Attach Delegation of Authority.</p>	Yes	Yes
6.	<p>Annexure G - (SBD 4): Bidders disclosure. (Completed and Signed by the Delegated Authority) Attach Delegation of Authority.</p>	Yes	Yes
7.	<p>Annexure H: Statement of consent to data processing (Completed and Signed by the Delegated Authority) Attach Delegation of Authority.</p>	No	Yes

8.	<p>Declaration with regards to Company /Firm Location</p> <p>Attach a proof of address to claim points for the Eastern Cape base locality as the specific goal as advised in the tender / quotation qualifies the company/firm for the PPR of 2022 preference points claim.</p> <p>Failure to submit the declaration and proof of address for eachJV /Consortium member may result in awarding of 0 (zero) points preference points under Eastern Cape Locality.</p> <p>This information will be verified from the FICA documents (PhysicalAddress, Utility Bill, Telephone, Tax Clearance, lease agreement submitted by the bidder).</p> <p>Failure to submit the declaration and proof of address may result in awarding of 0 (zero) points preference points under Eastern Cape locality.</p>	No	Yes
9.	<p>Annexure I – (SBD 6.1.): Preferential Points Claim (Signed andCompleted).</p> <p>CSD report will be used to confirm other specific goals listed inTable 1 of the SBD 6.1 document.</p> <p>Failure to submit the preference points claim and proof of address may result in awarding of 0 (zero) points preference points under Eastern Cape locality.</p>	No	No
10.	<p>Duly signed Letter of Authority MUST be submitted authorising the individual to sign on behalf of the bidder if:</p> <p>a) If there are more than one Owner/ Director / Shareholder / Member / Trustee etc. OR</p> <p>b) If there is only one Director / Shareholder / Member / Trustee / Owner etc. and they are not the one completing the bid document.</p> <p>Note: The Letter of Authority MUST be signed by all directors of the Bidder (or a signed Board Resolution authorising the signatory will be accepted).</p>	Yes	Yes
11.	<p>ANNEXURE J (which includes local content annexures C, D & E): Declaration of Local Content (SBD 6.2) (Completed and Signed by the Delegated Authority) Attach Delegation of Authority</p>	Yes	Yes
12.	<p>Priced Bills of Quantities completed in black ink.</p>	Yes	Yes

The following will be applicable to Joint Ventures/Consortium		
Consortium/Joint Venture Agreement to enter in a Consortium / Joint Venture signed by all Consortium Members who are Duly Authorized.	Yes	Yes
Resolution of the Board of Directors to enter into a Consortium or Joint Venture from each member firm of the Consortium/Joint Venture for this Bid.	Yes	Yes
Letter of Authority of Signatory (individual) authorizing the Signatory to sign on behalf of the Consortium/JV. The Letter of Authority should be from each member firm and must be signed by all directors of each member firm (or Board Resolution will be accepted).	Yes	Yes
Declaration with regards to Company / Firm Location Attach a proof of address to claim points for the Eastern Cape base locality as the specific goal as advised in the tender / quotation qualifies the company/firm for the PPR of 2022 preference points claim. Failure to submit the declaration and proof of address for each JV / Consortium member may result in awarding of 0 (zero) points preference points under Eastern Cape Locality. This information will be verified from the FICA documents (Physical Address, Utility Bill, Telephone, Tax Clearance, lease agreement submitted by the bidder). Failure to submit the declaration and proof of address may result in awarding of 0 (zero) points preference points under Eastern Cape locality.	No	Yes
Annexure I – (SBD 6.1.): Preferential Points Claim (Signed and Completed). CSD report will be used to confirm other specific goals listed in Table 1 of the SBD 6.1 document. Failure to submit the preference points claim and proof of address may result in awarding of 0 (zero) points preference points under Eastern Cape locality.	No	No

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

Bidders shall take note of the following conditions:

1. The successful bidder will be required to submit a Letter of Good Standing from the Compensation Commission within 14 days after award and before the contract can be signed.
2. Performance Guarantee to be submitted within 14 days after award.
3. The Bid Validity period is 90 days.
4. An approved and project specific Health and Safety file within 14 days upon appointment.
5. A Proposed Project Execution Plan & Program to proceed with works with occupied buildings within 14 days upon appointment.
6. Submission of a Construction Works Insurance for all works upon appointment.
7. No correction fluid to be used and all errors to be initialled.
8. Tenderers to complete and sign annexures C, D and E even if they claim 100% of local content.

Queries relating to the issue of these documents may be addressed in writing to:

Ms B Fukweni

tenders@ecdc.co.za or bfukweni@ecdc.co.za

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

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

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

1. General Conditions

- 1.1 ECDC Supply Chain Management policy makes provision for the promotion of local production and content.
- 1.2 ECDC Supply Management Policy prescribes that in the case of designated sectors, tenders must be advertised with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3 Where necessary, for tenders referred to in paragraph 1.2 above, a three-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage functionality with a minimum threshold of 70% and third stage of price and specific goals.
- 1.4 A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5 The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where:

x is the imported content in Rand 27

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

y is the bid price in Rand excluding value added tax (VAT) Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

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

2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid: Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in table 1 below.

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

- 3.3 Table 1 provides the stipulated minimum threshold for local content and production for steel products and components for construction (as described in 3.2)

Table 1a: Minimum local content for Steel Value-added Products

Steel Construction Materials	Components	Local Content Threshold
Fabricated Structural Steel	Latticed steelwork, reinforcement steel, columns, beams, plate girders, rafters, bracing, cladding supports, stair stringers & treads, ladders, steel flooring, floor grating, handrailing and balustrading, scaffolding, ducting, gutters, launders, downpipes and trusses	100%
Joining/Connecting Components	Gussets, cleats, stiffeners, splices, cranks, kinks, doglegs, spacers, tabs, brackets	100%
Frames	Doors and Windows	100%
Roof and Cladding	Bare steel cladding, galvanised steel cladding, colour coated cladding	100%
Fasteners	Bolts, nuts, rivets and nails	100%
Wire Products	All fencing products: all barbed wire and mesh fencing, fabric/mesh reinforcing, gabions, wire rope/strand and chains, welding electrodes, nails/tacks, springs and screws	100%
Ducting and Structural Pipework	Non-conveyance tubing fabricated from steel sheeting and plate with structural supports	100%
Gutters, downpipes & launders	Fabricated materials made from sheeting associated with roof drainage systems	100%

Table 1b: Minimum local content for Primary Steel Products

Steel Construction Materials	Local Content Threshold
Plates (>4.5mm thick and supplied in flat pieces)	100%
Sheets (<4.5mm thick and supplied in coils)	100%
Galvanised and Colour Coated Coils	100%
Wire Rod and Drawn Wire	100%
Sections (Channels; Angles, I-Beams and H-Beams)	100%
Reinforcing bars	100%

3.1 The stipulated minimum threshold percentages for local production and content in respect of bagged and bulk cement produced using locally produced raw materials are as follows:

Cement type	Description	Application	Stipulated Minimum Threshold
Cem I	Pure portland cement with a 95-100% clinker.	All civil and building construction as appropriate	100%
Cem II	Portland cement containing varying additions of secondary materials, i.e. fly ash, pozzolana, slag, silica fume, or limestone	All civil and building construction as appropriate	100%
Cem III	blast furnace cement, 50% OPC, 50% blast furnace slag	All civil and building construction as appropriate	100%
Cem IV	pozzolanic cement, OPC and fly ash	All civil and building construction as appropriate	100%
Cem V	composite cement: slag and ash cement. Blended cements with more than one blending material	All civil and building construction as appropriate	100%
Masonry cement	Mixture of Portland cement and plasticizing materials such as limestone to improve setting time	use in mortar, brick, block, and stone masonry construction	100%

.....

SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS:

.....

.....

WITNESSES:

1.

2.

STAGE 2 - FUNCTIONALITY

Involves an evaluation of Functionality only – At this stage Bidders must score a minimum score of **70%** for functionality (services) to be evaluated for stage 3 (Preferential procurement points).

Bidder to note the following for Functionality Evaluation:

- 3.1.1. Adequate proof supporting the points claimed must be provided. (e.g., documents, agreements, qualifications, previous experience, certifications, etc.)
- 3.1.2. Failure to submit relevant information with supporting document and adequate proof may result in ECDC not being able to allocate points for the Evaluation Criteria outlined below.

Table 1: Functionality Evaluation Criteria – Stage 2

<u>EXPERIENCE (Read with Schedule T.2.2.2(a) requirements)</u>	Allocated Points
<p>Reference letters for similar roads or earthworks related projects with stormwater installation</p> <p>5 or more acceptable reference letters 30 4 or less than 5 acceptable reference letters 20 3 or less than 4 acceptable reference letters 15 2 or less than 3 acceptable reference letters 10 Less than 2 acceptable reference letters 0</p> <p><u>Document to be submitted for points allocation</u> The Bidder must demonstrate that they have the relevant experience in road works by submitting completed T.2.2.2 (a) reference forms or reference letters of completed Road Works (Read with Schedule T.2.2.2(a) requirements) Reference letter should indicate the following:</p> <ul style="list-style-type: none"> • Signature of the client • Client's Letter head or Client Stamp • Company name, contact person, contact details (telephone number and email address) • Value of the project • Description Works carried out • Works have been completed on time /within the stipulated contract period • Good or better quality of workmanship • Assessment of the quality of work performed 	
<p><u>EXPERTISE (CV's & Certified Copies of Qualifications of Key Personnel to be included in Returnable)</u></p> <p>Bidder must submit certificate of qualification (Built Environment) and CV's indicating experience gained</p> <p>Construction Manager</p> <p>- BSc / BEng / BTech with 10 years or more post graduate experience in road / earthworks and stormwater related civil contracts. 10 - BSc / BEng / BTech with 5 years but less than 10 years' post graduate experience in road / earthworks and stormwater related civil contracts. 8 - BSc / BEng / BTech with 3 years but less than 5 years post graduate experience in road / earthworks and stormwater related civil contracts. 5 - BSc / BEng / BTech with less than 3 years' post graduate experience in road / earthworks and stormwater related civil contracts. 0</p>	

Construction Supervisor	
NDip / TVET N6 with 10 years or more post graduate experience in road / earthworks and stormwater related civil projects.	10
NDip / TVET N6 with 5 years but less than 10 years' post graduate experience in road/earthworks and stormwater related civil projects.	8
NDip / TVET N6 with 3 years but less than 5 years post graduate experience in road/earthworks and stormwater related civil projects.	5
NDip / TVET N6 with less than 3 years' post graduate experience in roads/earthworks and stormwater related civil projects.	0
Health and Safety Officer	
10 years or more post registration experience as a Health and Safety Officer in construction.	10
5 years but less than 10 years post registration experience as a Health and Safety Officer in construction.	8
3 years but less than 5 years post registration experience as a Health and Safety Officer in construction.	5
Less than 3 years post registration experience as a Health and Safety Officer in construction.	0
(To qualify for the points above, bidder must submit a certificate of registration with the SACPCMP as a registered Construction Health and Safety Officer and CV indicating experience gained)	
<u>PROJECT IMPLEMENTATION PLAN/METHODOLOGY</u>	
Project implementation plan that clearly details the execution on civil projects.	5
Project implementation plan with no detailed execution on civil projects.	0
<u>CONSTRUCTION PROGRAM</u>	
Bidder needs to submit a construction program to claim full points (5 max).	
Project specific detailed program covering all construction aspects clearly defining the critical path and dependencies.	5
Not a project specific detailed program	0
TOTAL MAXIMUM ACHIEVABLE POINTS	70
MINIMUM POINTS REQUIRED	49

- Only bids that have achieved the minimum qualifying score for functionality will be evaluated further in terms of preferential procurement points (Stage 3).
- All bids that fail to achieve the minimum score will be disqualified.
- The minimum qualifying score (in a percentage) for functionality shall be calculated as follows:

$$P_s = \frac{S_o}{M_s} \times 100 \quad \text{Where:}$$

P_s = percentage scored for functionality by bid under consideration

S_o = Total score for bid under consideration

M_s = Maximum possible score

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

Stage 3 – Preference Procurement Point - Evaluation Criteria

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

CRITERIA	POINTS
Price	80
Specific Goal	20
TOTAL POINTS	100

- 3.1 Points awarded for price will be based on the 80/20 Preference point systems
- 3.2 The points scored by the tenderer/bidder for Price will be added to the points scored for ECDC specific goal to obtain the bidder’s total points scored out of 100 points.
- 3.3 In the event that two or more bids have scored equal total points, the successful bid will be the one scoring the highest number of preference points for ECDC specific goal.
- 3.4 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for specific goal, the successful bid must be the one scoring the highest score for functionality.
- 3.5 Should two or more bidders/tenderers be equal in all respects; the award shall be decided by the drawing of lots.
- 3.6 The bidder obtaining the highest number of total points will be awarded the contract.
- 3.7 Points scored will be rounded off to the nearest 2 decimal places.
- 3.8 **Price**
 - 3.8.1 The lowest acceptable bid will score 80 points for price.
 - 3.8.2 The following formula will be used to calculate the points out of 80 for price in respect of the bid/tender.
 - 3.8.3 Preference points for price shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.

DETAILS	80/20 PREFERENCE POINT SYSTEM
Rand value (competitive bids or quotations) all applicable taxes included.	<ul style="list-style-type: none"> • Equal and above R30 000 to R50 million, inclusive of all applicable taxes. Below R30 000 if and when considered to be appropriate
Formulae	$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$ <p>Ps = Points scored for comparative price of bid / offer under consideration Pt = Comparative price of bid / offer under consideration Pmin = Comparative price of lowest acceptable bid / offer</p>

Annex A

Standard Conditions of Tender

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

A.1 General

A.1.1 Actions

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

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

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

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

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

A.1.2 Tender Documents

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

A.1.3 Interpretation

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

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

A.1.3.3 For the purposes of these conditions of tender, the following definitions apply:

- a) **conflict of interest** means any situation in which:
 - i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially.
 - ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - iii) in compatibility or contradictory interests exist between an employee and the tenderer who employs that employee.
- b) **comparative offer** means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration.
- c) **corrupt practice** means the offering, giving, receiving, or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process.
- d) **fraudulent practice** means the misrepresentation of the facts to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels.

A.1.4 Communication and employer's agent

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

A.1.5 Cancellation and Re-Invitation of Tenders

A.1.5.1 An employer may, prior to the award of the tender, cancel a tender if-

- a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation.
- b) funds are no longer available to cover the total envisaged expenditure; or

- c) no acceptable tenders are received.
- d) there is a material irregularity in the tender process.

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

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

A.1.6 Procurement procedures

A.1.6.1 General

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

A.1.6.2 Competitive negotiation procedure

A.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of A.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of A.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

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

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

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

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

A.2 Tenderer's obligations

A.2.1 Eligibility

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

A.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

A.2.2 Cost of tendering

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

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

A.2.3 Check documents

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

A.2.4 Confidentiality and copyright of documents

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

A.2.5 Reference documents

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

A.2.6 Acknowledge addenda

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

A.2.7 Clarification meeting

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

A.2.8 Seek clarification

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

A.2.9 Insurance

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

A.2.10 Pricing the tender offer

A.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the tender data.

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

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

A.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

A.2.11 Alterations to documents

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

A.2.12 Alternative tender offers

A.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

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

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

A.2.13 Submitting a tender offer

Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

A.2.13.1 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

A.2.13.2 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

A.2.13.3 Sign (Signature by authorized personnel) the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

A.2.13.4 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

A.2.13.5 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

A.2.13.6 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.

A.2.13.7 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

A.2.13.8 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

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

Accept that tender offers, which do not provide all the data or information requested

completely and, in the form, required, may be regarded by the employer as non-responsive.

A.2.15 Closing time

A.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

A.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

A.2.16 Tender offer validity

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

A.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

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

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

A.2.17 Clarification of tender offer after submission

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

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

A.2.18 Provide other material

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

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

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

A.2.19 Inspections, tests and analysis

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

A.2.20 Submit securities, bonds and policies

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

A.2.21 Check final draft

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

A.2.22 Return of other tender documents

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

A.2.23 Certificates

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

A.3 The employer's undertakings

A.3.1 Respond to requests from the tenderer

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

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

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

compromise the outcome of the prequalification process.

A.3.2 Issue Addenda

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

A.3.3 Return late tender offers

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

A.3.4 Opening of tender submissions N/A

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

A.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points ECDC specific goal and time for completion for the main tender offer only.

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

A.3.5 Two-envelope system

A.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

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

A.3.6 Non-disclosure

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation

price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

A.3.7 Grounds for rejection and disqualification

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

A.3.8 Test for responsiveness

A.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

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

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

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

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

A.3.9 Arithmetical errors, omissions and discrepancies

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

A.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with A.3.11 for:

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

A.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

A.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

- a) If bills of quantities or pricing schedules apply and there is an error in the line-item total resulting from the product of the unit rate and the quantity, the line-item total shall govern, and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line-item total as quoted shall govern, and the unit rate shall be corrected.
- b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

A.3.10 Clarification of a tender offer

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

A.3.11 Evaluation of tender offers

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

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

The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:	
Requirement	Qualitative interpretation of goal
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

The activities associated with evaluating tender offers are as follows:

- a) Open and record tender offers received.
- b) Determine whether or not tender offers are complete.
- c) Determine whether or not tender offers are responsive.
- d) Evaluate tender offers
- e) Determine if there are any grounds for disqualification.
- f) Determine acceptability of preferred tenderer
- g) Prepare a tender evaluation report.
- h) Confirm the recommendation contained in the tender evaluation report.

A.3.11.1 General

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

A.3.12 Insurance provided by the employer

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

A.3.13 Acceptance of tender offer

Accept the tender offer; if in the opinion of the employer, it does not present any risk and only if the tenderer:

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

A.3.14 Prepare contract documents

A.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- a) addenda issued during the tender period,
- b) inclusion of some of the returnable documents and other revisions agreed between the employer and the successful tenderer.

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

A.3.15 Complete adjudicator's contract

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

A.3.16 Registration of the award

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

A.3.17 Provide copies of the contracts

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

A.3.18 Provide written reasons for actions taken

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

ANNEXURE B

ADDITIONAL CONDITIONS OF TENDER OF ECDC

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

1.1 Alteration or withdrawal of Proposals

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

1.2 Alternative Bid

Alternative Bids will not be accepted.

1.3 Costs for preparation of Proposals/presentations

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

1.4 Ownership of Proposals and presentations

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

1.5 Tax Clearance Certificate requirement

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

The bidders' Tax status will be verified on the CSD prior to the bid award and where the preferred bidder is not compliant, **7 working days** will be granted for remedy, failing which the bidder will be disqualified.

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

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

1.6 Confidentiality

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

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

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

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

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

1.7 Inventions Patent and Copy-Rights

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

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

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

1.8 Ethics

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

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

1.9 Competition

Bidders and their respective officers, employees and agents are prohibited from engaging in any collusive action with respect to the bidding process which serves to limit competition amongst bidders.

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

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

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

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

In this regard bidders are required to complete the Certificate of Independence Bid Determination, failing which the Bidder shall be automatically disqualified from further participation in the Bid or call for proposals. The disqualification will be applicable at any stage of the bidding and / or engagement process.

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

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

1.10 Cancellation of Bid Process

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

1.11 Interviews

In terms of the bid evaluation process short listed bidders may be interviewed. This will entail

the bidder being invited to a venue as determined by the bid committee. All transport and accommodation costs incurred by the bidder will be for the bidder's account and will not be reimbursed in any way. Failure to attend a scheduled interview will lead to immediate disqualification from the bid process. The ECDC reserves the right to appoint a bidder without conducting interviews.

1.12 Contract award

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

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

As a guideline regarding the content of the service level agreement, the bidder is referred to the **General Conditions of Contract for Construction Works, Third Edition (2015) (hereinafter referred to as the "GCC")**

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

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

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

1.13 Supplier Due Diligence

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

1.14 Disclaimer

This Bid document has been prepared for the purpose of providing information to interested Bidders. The provision of any additional information about the organization to Bidders, are

disclosed and will be made available to enable the prospective Bidders to submit comprehensive proposals.

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



HOTLINE DETAIL Ethics & Fraud Hotline

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

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

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

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

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

T2.2. - Returnable schedules

T2.2.1 – Declarations

T2.2.2 – Functionality Evaluation Schedules

ANNEXURE C: SUPPLIER INFORMATION/COMPANY ENTERPRISE QUESTIONNAIRE

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

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

Legal Name of Bidder: (Same as CSD)	
Trading Name of Bidder: (Same as CSD)	
Registration Number (Same as CSD)	
Physical Address	
Postal Address	
Contact Person (of the JV if the Bidder is a JV)	
Title/Position in the Firm	
Mobile Number (of the JV if the Bidder is a JV)	
Bidder Telephone Number (of the JV if the Bidder is a JV)	
Facsimile Number	
Email Address of Contact Person (of the JV if the Bidder is a JV)	
Email Address of Bidder (of the JV if the Bidder is a JV)	
VAT Registration Number (Same as CSD)	

Central Supplier Database Number		MAAA	
CIDB Registration Number (CRS Number)			
Are the Accredited Representative in South Africa for the Goods/Services/Works Offered?	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes enclose Proof)	Are you a foreign based supplier for the Goods/Services/Works Offered?	<input type="checkbox"/> Yes <input type="checkbox"/> No (If Yes, answer the questionnaire Below)
QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS			
Is the Entity a resident of the Republic of South Africa (RSA) Does the Entity have a branch in the RSA?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Does the Entity have a permanent establishment in the RSA?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Does the Entity have any source of income in the RSA		<input type="checkbox"/> Yes <input type="checkbox"/> No	
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 (SARS) and if not register			
<u>VERY IMPORTANT</u>			
Where a person within the Bidding Entity is an Employee of the State, Bidder should			
a. submit a signed letter on a letter head from their Accounting Officer/Accounting Authority (AO/AA of the Government Institution where they are employed) stating that they are not prohibited from conducting business with the State in terms of Section 8 of the Public Administration Management Act, 2012 (Act No.11 of 2014- "The PFMA")			
b. submit a signed letter on a letter from their AO/AA granting permission to perform other remunerative work outside of their employment where the PAMA does not apply to such an employee			
ECDC reserves the right to verify such information from their AO/AA			

SERVICE PROVIDER ACKNOWLEDGEMENT OF REQUEST AND TERMS AND CONDITIONS:

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

.....

(NAME OF BIDDER).

Print Name

Designation

Date

Signature

Annexure D: Location

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

Annexure G: BIDDER'S DISCLOSURE (SBD4)

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

1. PURPOSE OF THE FORM

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

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

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES/NO**

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

Full Name	Identity Number	Name of State institution

2.2. Do you or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution?

YES/NO

2.2.1 If so, furnish particulars:

.....
.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract?

2.4 YES/NO

2.4.1 If so, furnish particulars:

.....
.....

3 DECLARATION

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

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT. I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature Date

.....
Position Name of bidder

SIGNATURE OF BIDDER OF DELEGATED AUTHORITY		DATE	
---	--	-------------	--

ANNEXURE H: STATEMENT OF CONSENT TO DATA PROCESSING

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

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

Identity number _____ (**"the applicant"**)

do hereby grant my consent to the Eastern Cape Development Corporation ("the ECDC") and its appointed processor to process my personal data for the purpose of any or all of the undermentioned actions, being the legitimate reasons for processing and/or using my personal data.

2. I accept that my personal information will only be utilized for the purposes it was collected, that the information will only be retained for as long as is necessary and required by law, and that I have the right to view such information at any time, as well as requested correction or deletion of my personal information held by the ECDC.
3. I am aware that I may withdraw my consent at any time by using the relevant Data Subject Consent Withdrawal Form.
4. I herewith consent to the ECDC official / staff member / employee or agent collecting and having access to my personal information.
5. I expressly consent to the ECDC official / staff member / employee or agent to collect and process this information for the purpose of **considering my application for funding / leasing / employment alternatively for considering our bid document.**
6. I expressly consent to the ECDC or its official / staff member / employee or agent having access to my personal information contained in my application for lease, employment, funding, my bid document or any other administrative document required by the ECDC for processing.
7. I expressly consent to the ECDC or its official / staff member / employee or agent using my personal information to communicate with me in person / via telephone / email / video call / fax / WhatsApp / any form of social media.
8. I expressly consent that the ECDC or its official / staff member / employee or agent may discuss any of my personal information with any of its officials / staff members / employees or agents that may at any stage of my application be involved in considering same and forward any such information to any ECDC relevant committee or forum.
9. I expressly consent to the ECDC or its official / staff member / employee or agent **handing over any outstanding accounts to debt collection third parties (applicable to properties/development finance and business support unit).**
10. I expressly consent to the ECDC or its official / staff member / employee or agent handing over my personal information for purposes of verification of my credit profile or record, references or any purpose required in terms of the law.

SIGNATURE of the DELEGATED AUTHORITY		DATE	
---	--	-------------	--

SBD 6.1

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

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

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

1. GENERAL CONDITIONS

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

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

1.2 **Principle applicable for this tender /quotation is:**

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

1.3 Points for this tender shall be awarded for:

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

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

	POINTS
PRICE	80
SPECIFIC GOALS	
51% and above black owned enterprise	10
Eastern Cape Based Supplier	05
51 % and above woman owned enterprises.	03
51 % and above youth owned enterprises	02
Total points for Price and SPECIFIC GOALS	100

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

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

2. DEFINITIONS

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

- (a) provide goods or services through price quotations, competitive tendering process or any other method 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).

2.1 FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

2.2 POINTS AWARDED FOR PRICE

2.3 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	
$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$	or	$P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$	
Where			
P _s	=	Points scored for price of tender under consideration	
P _t	=	Price of tender under consideration	

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

2.4.1. POINTS AWARDED FOR PRICE

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

80/20	or	90/10	
$P_s = 80 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right)$	or	$P_s = 90 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right)$	

Where:

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{max} = Price of highest acceptable tender

3. POINTS AWARDED FOR SPECIFIC GOALS

- 3.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:
- 3.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—
- (c) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
 - (d) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,
- then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

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

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

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

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
SPECIFIC GOALS				
51% and above black owned enterprises		10		
Eastern Cape Based Supplier		05		
51 % and above woman owned enterprises		03		
51 % and above youth owned enterprises		02		

DECLARATION WITH REGARD TO COMPANY/FIRM

3.3. Name of company/firm

.....

3.4. Company registration number:

.....

3.5. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE
BOX]

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

.....

.....

.....

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

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

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

1. General Conditions

- 1.1 ECDC Supply Chain Management policy makes provision for the promotion of local production and content.
- 1.2 ECDC Supply Management Policy prescribes that in the case of designated sectors, tenders must be advertised with the specific bidding condition that only locally produced or manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3 Where necessary, for tenders referred to in paragraph 1.2 above, a three-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage functionality with a minimum threshold of 70% and third stage of price and specific goals.
- 1.4 A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5 The local content (LC) as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = 1 - [x / y] \times 100$$

Where:

- x imported content
y bid price excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date, one week (7 calendar days) prior to the closing date of the bid as indicated in paragraph 4.1 below.

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

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

2. Definitions

- 2.1 “bid”** includes advertised competitive bids, written price quotations or proposals
- 2.2 “bid price”** price offered by the bidder, excluding value added tax (VAT);
- 2.3 “contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- 2.4 “designated sector”** means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production,
- 2.5** where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;
- 2.6 “duly sign”** means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).
- 2.7 “imported content”** means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and
- 2.8** which costs are inclusive of the costs abroad, plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;
- 2.9 “Local content”** means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;
- 2.10 “Stipulated minimum threshold”** means that portion of local production and content as determined by the Department of Trade and Industry; and
- 2.11 “sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract in the execution part of a project in terms of the contract.

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

Table 1 (Refer to Annexure C for more details)

Designated Sector / Sub-sector / Industries	Minimum threshold for local content
Steel Products	100%
Cement (All classes)	100%

3. Does any portion of the services, works or goods offered have any imported content? (Tick Applicable Box)

YES	NO
-----	----

3.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date, one week (7 calendar days) prior to the closing date of the bid.

The relevant rates of exchange information is accessible on www.reservebank.co.za. Indicate the rate(s) of exchange against the appropriate currency in the table below:

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

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

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

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

.....

IN RESPECT OF BID No. _____

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

.....

NB

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

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

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

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

Declaration D and E should be kept by the Bidder for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

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

The facts contained herein are within my own personal knowledge.

I have satisfied myself that

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

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

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

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.

The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Policy Framework Act (PPFA), 2000 (Act No. 5 of 2000).

NAME: _____

SIGNATURE: _____ **DATE:** _____

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

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

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

- **Declaration C SATS 1286.2011**

- Local Content Declaration – Summary Schedule

- **Declaration D SATS 1286.2011**

- Imported Content Declaration – Supporting Schedule to declaration C

- **Declaration E SATS 1286.2011**

- Local Content Declaration _- Supporting Schedule to declaration C

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

NB: Tenderers to complete and sign annexures C, D and E even if they claim 100% of local content.

Templates of Declarations C, D and E follow:

Annex C

Note: VAT to be excluded from all calculations

<i>(C1)</i> Tender No.	ECDC/INFRA/33/042024		
<i>(C2)</i> Tender description:	Construction of Gwatyu Access Road on R351		
<i>(C3)</i> Designated product(s)	Steel & Cement		
<i>(C4)</i> Tender Authority:	Eastern Cape Development Corporation		
<i>(C5)</i> Tendering Entity name:			
<i>(C6)</i> Tender Exchange Rate:	USF		EU
<i>(C7)</i> Specified local content %			GBP

Tender item No's (BoQ reference)	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)
<i>C8</i>	<i>C9</i>	<i>C10</i>	<i>C11</i>	<i>C12</i>	<i>C13</i>	<i>C14</i>	<i>C15</i>
	STEEL PRODUCTS						
	Temporary Traffic-Control Facilities						
3.3.2	Portable Stop and GO-RY signs						100,00%
3.3.3	Road Signs, R nd TR-series						100,00%
3.3.4	Road Signs, TW series						100,00%
3.3.5	Delineators (DTG50J)						100,00%
7.7.1	High-Tensil Steel Bars						100,00%
7.8	Dowels for joining old and new concrete						100,00%
	CEMENT PRODUCTS						
7.3.1	(Portal & Rectangular Culverts):Without Prefabricated Floor Slabs 2,4m wide x 1,2m						100,00%
7.5	Extra Over item 7,4,1 for constructing inclined culverts						100,00%
7.6.1	In Floor Slabs for Portal or Rectangular Culverts, including Formwork, joints and Class U2 surface finish, 25MPa/19mm						100,00%
7.6.2	Inlet and Outlet structures, skewed endsm catchpits, manholes, thrust and anchor bolts excluding surface finish 25MPa/19mm						100,00%
7.6.3	Formwork of concrete Class 35/19 Mpa at 28 days						100,00%
10.2	Chemical stabilising Agent @3,5%: Ordinary portland cement 150mm						100,00%

Tender Qty	Total tender value	Total exempted imported content	Total Imported content
<i>C16</i>	<i>C17</i>	<i>C18</i>	<i>C19</i>
no 2			
no 6			
no 6			
no 200			
2,5ton			
116kg			
74m			
61m			
38m3			
63m3			
115m2			
95ton			

Signature of Tenderer from Annex B

Date: _____

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

Annex D

Imported Content Declaration - Supporting Schedule to Annex C

(D1) Tender No.	ECDC/INFRA/33/042024	0	0	0	Note: VAT to be excluded from all calculations
(D2) Tender description:	Construction of Gwatyu Access Road on R351	0	0	0	
(D3) Designated Products:	As before (Annex C)				
(D4) Tender Authority:	ECDC				
(D5) Tendering Entity name:					
(D6) Tender Exchange Rate:	Pula		EU	GBP	

A. Exempted imported content

Tender item no's	Description of imported content	Local supplier	Overseas Supplier	Calculation of imported content						Summary	
				Foreign currency value as per Commercial Invoice	Tender Exchange Rate	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Exempted imported value
(D7)	(D8)	(D9)	(D10)	(D11)	(D12)	(D13)	(D14)	(D15)	(D16)	(D17)	(D18)
(D19) Total exempt imported value											

This total must correspond with Annex C - C 21

B. Imported directly by the Tenderer

Tender item no's	Description of imported content	Unit of measure	Overseas Supplier	Calculation of imported content						Summary	
				Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Tender Qty	Total imported value
(D20)	(D21)	(D22)	(D23)	(D24)	(D25)	(D26)	(D27)	(D28)	(D29)	(D30)	(D31)
(D32) Total imported value by tenderer											

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

Description of imported content	Unit of measure	Local supplier	Overseas Supplier	Calculation of imported content						Summary	
				Foreign currency value as per Commercial Invoice	Tender Rate of Exchange	Local value of imports	Freight costs to port of entry	All locally incurred landing costs & duties	Total landed cost excl VAT	Quantity imported	Total imported value
(D33)	(D34)	(D35)	(D36)	(D37)	(D38)	(D39)	(D40)	(D41)	(D42)	(D43)	(D44)
(D45) Total imported value by 3rd party											

D. Other foreign currency payments

Type of payment	Local supplier making the payment	Overseas beneficiary	Calculation of foreign currency payments		Summary of payments	
			Foreign currency value paid	Tender Rate of Exchange	Local value of payments	
(D46)	(D47)	(D48)	(D49)	(D50)	(D51)	
(D52) Total of foreign currency payments declared by Tenderer and/or 3rd party						

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

This total must correspond with Annex C - C 23

Signature of Tenderer from Annex B

Date: _____

Annex E

Local Content Declaration - Supporting Schedule to Annex C

(E1) Tender No.	ECDC/INFRA/33/042024	Note: VAT to be excluded from all calculations
(E2) Tender description:	Construction of Gwatyu Access Road on R351	
(E3) Designated products:	As before (Annex C)	
(E4) Tender Authority:	ECDC	
(E5) Tendering Entity name:		

Local Products (Goods, Services and Works)	Description of items purchased	Local suppliers	Value
	(E6)	(E7)	(E8)
	STEEL PRODUCTS		
	Temporary Traffic-Control Facilities		
	Portable Stop and GO-RY signs		
	Road Signs, R nd TR-series		
	Road Signs, TW series		
	Delineators (DTG50J)		
	High-Tensil Steel Bars		
	Dowels for joining old and new concrete		
	CEMENT PRODUCTS		
	(Portal & Rectangular Culverts):Without Prefabricated Floor Slabs 2,4m wide x 1,2m		
	Extra Over item 7,4,1 for constructing inclined culverts		
	In Floor Slabs for Portal or Rectangular Culverts, including Formwork, joints and Class U2 surface finish, 25MPa/19mm		
	Inlet and Outlet structures, skewed endsm catchpits, manholes, thrust and anchor bolts excluding surface finish 25MPa/19mm		
	Formwork of concrete Class 35/19 Mpa at 28 days		
	Chemical stabilising Agent @3,5%: Ordinary portland cement 150mm		
	(E9) Total local products (Goods, Services and Works)		

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

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

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

(E13) **Total local content**

This total must correspond with Annex C - C24

Signature of Tenderer from Annex B

Date: _____

T2.3 - Functionality Evaluation Schedules

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

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

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

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

OR

Submit a reference letter that indicates the following:

Signature of the Client

On Clients Letter Head or Client Stamp

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

Value of the Project

Scope of works carried out

Works have been completed on time/within stipulated contract period



Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Sir/Madam,

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

Tenderers Company Name

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

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

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

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

2. TIME PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

3. FINANCIAL PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

4. WAS THE WORKS COMPLETED SATISFACTORY?

YES / NO (please circle)

If no, please provide details below:

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

Tel: _____

E-mail Address _____

Signature: _____ Date: _____



Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Sir/Madam,

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

Tenderers Company Name

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

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

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

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

2. TIME PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

3. FINANCIAL PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

4. WAS THE WORKS COMPLETED SATISFACTORY?

YES / NO (please circle)

If no, please provide details below:

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

Tel: _____

E-mail Address _____

Signature: _____ Date: _____



Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Sir/Madam,

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

Tenderers Company Name

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

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

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

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

2. TIME PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

3. FINANCIAL PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

4. WAS THE WORKS COMPLETED SATISFACTORY?

YES / NO (please circle)

If no, please provide details below:

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

Tel: _____

E-mail Address _____

Signature: _____ Date: _____



Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Sir/Madam,

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

Tenderers Company Name

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

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

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

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

2. TIME PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

3. FINANCIAL PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

4. WAS THE WORKS COMPLETED SATISFACTORY?

YES / NO (please circle)

If no, please provide details below:

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

Tel: _____

E-mail Address _____

Signature: _____ Date: _____



Reference No 5

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Sir/Madam,

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

Tenderers Company Name

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

NAME OF EMPLOYER	NAME OF PROJECT	CONTRACT PERIOD	VALUE OF WORK

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

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

2. TIME PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

3. FINANCIAL PERFORMANCE

EXCELLENT	VERY GOOD	GOOD	FAIR	POOR
5	4	3	2	1

4. WAS THE WORKS COMPLETED SATISFACTORY?

YES / NO (please circle)

If no, please provide details below:

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

Tel: _____

E-mail Address _____

Signature: _____ Date: _____

T2.2.2 b – Construction Method Statement

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Work Organization Program and Scheduling

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

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

Work organization program and scheduling to be attached here.

T2.2.2 c – Key Personnel Qualifications

(Construction Manager)

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Attach documents & Certified Copies of Qualifications here

**T2.2.2 f – Key Personnel Qualifications
(Construction Supervisor)**

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Attach documents & Certified Copies of Qualifications here

T2.2.2 f – Key Personnel Qualifications

(Construction Health and Safety Officer)

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Attach documents & Certified Copies of Qualifications here

T2.2.2 f – Key Personnel Qualifications

(Artisan)

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Attach documents & Certified Copies of Qualifications here

T2.2.2 g – Key Personnel

(Skilled Staff)

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Attach documents & Certified Copies of Qualifications here

T2.2.2 h – Key Personnel Experience

(Semi-Skilled Support Staff)

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Attach documents & Certified Copies of Qualifications here

T2.2.2 i – Company Experience

(1) Practical Completion Certificate (completed projects)

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

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

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

Attach document here

T2.2.2 J – Contactable References

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

Attach document here

T2.2.2 k – Scope of Works and Detailed Specifications

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

Project title:	CONSTRUCTION OF GWATYU ACCESS ROAD ON R351
Bid No:	ECDC/INFRA/33/042024

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

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

Company Name:

.....

Tenderer Name

.....Signature.....Date.....

Company Authorised/

Accountable Person Name

.....Signature.....Date.....

Company Stamp:

THE CONTRACT

Part C1: Agreements and Contract data

C1.1 - Form of Offer and
Acceptance

C1.2 - Contract Data

C1.3 - Form of Guarantee

C1.1 - Form of offer and acceptance

Annexure L:

C.1.1 FORM OF OFFER AND ACCEPTANCE OFFER

Note:

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

OFFER

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

PROJECT: CONSTRUCTION OF GWATYU ACCESS ROAD ON R351

Bid No: ECDC/INFRA/33/042024

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

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

R..... (in figures)

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

Rand (in words)

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

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

Company or close corporation:

.....
..... And:
whose registration number is:

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

Trading under the name and style of:

<p>AND WHO IS:</p> <p>Represented herein, and who is duly authorized to do so, by:</p> <p>Mr/Mrs/Ms:</p> <p>.....</p> <p>.....</p> <p>In his/her capacity as:</p> <p>.....</p> <p>.....</p>	<p>Note:</p> <p>A resolution/power of attorney, signed by all the directors/ members/ partners of the legal entity must accompany this offer, authorizing the representative to make this offer.</p>
--	---

SIGNED FOR THE TENDERER:

--	--	--

Name of Representative	Signature	Date
-------------------------------	------------------	-------------

SIGNED BY WITNESS:

--	--	--

Name of Representative	Signature	Date
-------------------------------	------------------	-------------

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

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

Other contact details of the tenderer are:

Telephone no:

.....

Cellular phone no:

.....

Fax no:

.....

Postal address

.....

Banker:

.....

Branch:

.....

ACCEPTANCE

By signing this part of this form of offer and acceptance, ECDC accepts the bidder's offer. Acceptance of the bidder's offer shall form an agreement between the ECDC and the bidder upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract are contained in the contract to be concluded.

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

Deviations from and amendments to the documents listed in the bid data and any addenda thereto as listed in the bid schedules as well as any changes to the terms of the offer agreed by the bidder and ECDC during this process of 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 agreed by both parties.

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

Notwithstanding anything contained herein, this agreement comes into effect on the date when the bidder receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the bidder within five working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

Signed for the ECDC:

Name of representative	Capacity	Date
.....		
Address	Signature	

Witnessed by:

Name of witness	Signature	Date

Schedule of deviations

Notes:

1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited 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 becomes the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender document and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.
4. Any change or addition to the tender document arising from the above agreements and recorded here, shall also be incorporated into the final draft of the Contract.

1	Subject	
	Details	
2	Subject	
	Details	
3	Subject	
	Details	

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

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

Signed for the ECDC

Name of Representative	Capacity	Signature

Signed by Bidder:

Name of Representative	Capacity	Signature

C1.2 - Contract data

C1.2 CONTRACT DATA

PART 1: DATA PROVIDED BY THE EMPLOYER

CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works 3rd Edition (2015), published by the South African Institution of Civil Engineering, is applicable to this Contract and is incorporated herein by reference.

Copies of these Conditions of Contract may be obtained from the South African Institution of Civil Engineering, Tel. No. +27 11 805-5947 or www.saice.org.za.

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

The Contract Data and General Conditions of Contract shall have precedence over the Drawings, Scope of Work and Standardised Specifications in the interpretation of any ambiguity or inconsistency.

The following contract specific data are applicable to this Contract:

CONTRACT SPECIFIC DATA	
Clause	Data
1.1.1.13	The Defects Liability Period is: Twelve (12) calendar months measured from the date of the Certificate of Completion separately applicable to each phase.
1.1.1.14	The time for achieving Practical Completion for this project is: (6) calendar months from the Commencement Date.
1.1.1.15	The name of the Employer is: Eastern Cape Development Corporation (ECDC)
1.1.1.16	The name of the Employer's Agent is: CIBA CONSORTIUM The Employer's Agent means any Director, Associate or Professional Engineer appointed generally or specifically by the Management of the CIBA Consortium to fulfil the functions of the Employer's Agent in terms of the Conditions of Contract. Wherever the name " Engineer " appears in the document, it shall be read to mean the " Employer's Agent ".
1.1.1.26	The Pricing Strategy is: Re-measurement Contract

1.1.1.35	<p>The following additional definition applies:-</p> <p>"Drawings": Means all drawings, calculations and technical information forming part of the Contract Documents and any modifications thereof or additions thereto from time to time approved in writing by the Employer's Agent or delivered to the Contractor by the Employer's Agent.</p>
1.1.1.36	<p>The following additional definition applies:-</p> <p>Letter of Notification": Means the letters of formal notification, signed by the Employer, of the decision of the Supply Chain Management Bid Adjudication Committee sent to all tenderers.</p>
1.2.1.2	<p>Delivery of Notices</p> <p>The following two additional sub-clauses, covering alternative methods of communication, apply: -</p>
1.2.1.2.1	<p>Sent by facsimile or any like communication irrespective of it being during office hours or otherwise.</p>
1.2.1.2.2	<p>Posted to the addressee for certified delivery by the postal Authorities</p>
1.2.1.2	<p>The address of the Employer for receipt of communications is:</p> <p>Attention: Ms. B Fukweni</p> <p><u>Physical address:</u> Eastern Cape Development Corporation Ocean Terrace Park Moore Street Quigney, East London 5201</p> <p>Tel : +27 43 704 5644</p>

2.1.4	<p>The following additional clause applies:-</p> <p>"Without limiting the generality of the afore going, the Schedule of Rates and Prices shall include:</p> <p>The provision and use of all labour, plant, tools instruments, templates, materials, transport and all other appliances that may be required for satisfactorily protecting and efficiently carrying out the works without interruption or delay.</p> <p>The provision and housing of adequate staff and labour force and the provision of false work of every kind and description necessary for the due and proper performance of the Contract.</p> <p>The execution of the Works in orderly and progressive manner until it has been completed. Time being of the essence of the Contract the progressive development of the Works shall be arranged so that the time from the start to the finish of the construction of the said Works shall not exceed the time laid down in the Tender.</p> <p>The inclusion in the tendered rates for all and any of the general liabilities such as Establishment Charges, legal contingencies, regulations, risks or damage, Royalties and all other overhead charges.</p> <p>The submission of a tender shall be considered prima facie evidence that the Contractor has complied with the requirements of this clause and has satisfied himself as to all circumstances and local conditions which may influence or affect his Tender."</p>
2.4.3	<p>The following additional clause applies:-</p> <p>In the event of any discrepancy or conflict between any parts of the Contract Documents, the order of precedence shall be as follows :</p> <ol style="list-style-type: none"> 1. Project Specifications 2. Special Conditions of Contract 3. General Conditions of Contract 4. Conditions of Tender 5. Standardised/Particular Specifications 6. Contract Drawings 7. Schedule of Quantities

2.5.2	<p>The following additional clause applies: -</p> <p>The Employer may make direct payments to suppliers on behalf of the Contractor subject to the receipt of a specific request from the Contractor and subject to the following conditions:</p> <p>An original of the invoice together with a signed Cession Form is submitted together with a certificate approved by the Employer's Agent.</p> <p>The Contractor cedes, transfers and assigns all the rights, title and interest in and to the materials and goods to the total value of the invoice.</p> <p>The cession shall become effective as soon as payment is made by the Employer or on behalf of the Employer.</p> <p>The Contractor indemnifies the Employer against any loss or damage whatsoever to the said material and goods whilst they are in the Contractors possession and in transit to the site and until such time as they are safely and properly stored on the site, and the Contractor undertakes to effect adequate insurance against these risks. Such insurance shall be for the full value of the materials and goods and goods certified for payment and the insurance policy ceded in full to the Employer.</p>
3.2.3	<p>The Employer's Agent shall obtain the specific approval of the Employer before executing any of his functions or duties according to the following Clauses of the General Conditions of Contract:</p> <p>Clause 3.3.1 Nomination of Employer's Agent's Representative Clause 3.3.4 Employer's Agent's authority to delegate Clause 5.8.1 Non-working times Clause 5.11.1 Suspension of the Works Clause 5.12.4 Acceleration instead of extension of time</p>
3.2.5	<p>The following additional clause applies:-</p> <p>The onus rests with the Contractor to raise any item about which the Contractor may be uncertain, with the Employer's Agent's Representative. Any advice given to the Contractor by the Employer's Agent's Representative in response to matters so raised shall not be construed as instructions and shall be held to have been given without prejudice.</p>
3.3.6	<p>The following additional clause applies:-</p> <p>The Employer or the Employer's Agent under delegated authority, reserves the right to obtain the services of consultants on any matter pertaining to this contract; the employment of such consultants forms no part of this contract; a consultant's advice and/or documentation is to be followed only if the Employer's Agent or the Employer's Agent's Representative so instructs.</p>

4.1	All references to "design" are deemed to be deleted and the Contractor shall bear no liability in respect of the Projects design, other than the temporary works and items clearly indicated to design on drawings.
4.3.3	<p>The following additional clause applies:-</p> <p>The Employer and the Contractor shall enter into an agreement to complete the work required for the construction of the works in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (Act 85 of 1993) and the Construction Regulations promulgated thereunder.</p> <p>An agreement is included in the Contract Document (C1.1 of Contract Data) and shall be completed and submitted to the Employer together with a letter of good standing from the Compensation Commissioner (if not insured with a Licenced Compensation Insurer) within fourteen (14) days after the Commencement Date. The Contractor shall ensure that any letter of good standing shall be timeously renewed in order that it remains in full force for the duration of the Contract.</p>
4.4.1	The total value of work executed by subcontractors shall be agreed on by the Client and awarded Bidder upon acceptance of appointment.
5.3.1	<p>The documentation required before commencing with the Works execution are:</p> <ul style="list-style-type: none"> • Health and Safety Plan (Refer to Clause 4.3) • Initial programme (Refer to Clause 5.6) • Security (Refer to Clause 6.2) • Insurance (Refer to Clause 8.6.1.3) • Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer)
5.3.2	<p>The time to submit the documentation required before commencement of the Works is:</p> <p>14 calendar days</p>
5.4.2	Access and possession of site shall not be exclusive to the Contractor but will be shared by the Employers management / maintenance and operational staff on site.
5.4.3	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.
5.1.1 & 5.8.1	<p>The non-working days are: Saturdays and Sundays.</p> <p>The special non-working days are:</p> <p>(1) All gazetted public holidays falling outside the year end break. (2) The year end break commencing on 13 December 2024 and ending on 06</p>

	January 2025 both days included.
5.8.3	<p>The following additional clause shall apply:</p> <p>Should the Employer's Agent permit work outside of normal Employer working hours (viz Mondays to Fridays inclusive sunrise to sunset) and on Saturdays, Sundays or on any of the non-working days stated in the Appendix and if he deems the presence of the Employer's Agent's Representative or other duly authorised representative to be necessary, the Contractor will be liable for the cost of such supervision (calculated at a daily rate of 1/130 of the annual salary of such representative). Where the Employer's Agent has ordered such work, the salary of the representative will be to the account of the Employer.</p> <p>A minimum of 24 hours notification of intent to work outside normal working hours shall be regarded as sufficient notice as set out in 5.8.1"</p>
5.13.1	The penalty for failing to complete the Works is: 5.75 cents per R100 of the project cost (excl. VAT) per calendar day
5.14.1	The requirements for achieving Practical Completion shall mean: the commissioning and full operation as listed in the scope of works.
5.14.7	Different dates to achieve Practical Completion will not be permitted.
5.16.3	The latent defect period is: Twelve (12) months.
6.5.1.2.3:	<p>The percentage allowances to cover overhead charges for day work are as follows:</p> <ul style="list-style-type: none"> • 15% of the gross remuneration of workmen and foremen actually engaged in the day work; • 15% on the net cost of materials actually used <p>No allowance will be made for work done, or for materials and equipment for which day work rates have been quoted at tender stage.</p>
6.6.1	The provisional sums stated in the Schedule of Quantities are net amounts covering the actual expenditure which the Employer may incur.
6.7.6	The following additional clause shall apply: The Works are measured in accordance with the current SANS 1200 and the standard system of measurement of Civil Engineering quantities for South Africa, published by the South African Institution of Civil Engineers. No claims arising from the method of measurement will be entertained.
6.8.2	<p>Contract Price Adjustment: Is not applicable</p> <p>The value of certificates issued shall be adjusted in accordance with the Contract</p>

	<p>Price Adjustment Schedule with the following values:</p> <p>The value of $x = 0.15$ The value of coefficients are: $a = 0.30$ $b = 0.30$ $c = 0.35$ $d = 0.05$</p> <p>The province wherein the larger part of the Site is located is the Eastern Cape.</p> <p>The applicable industry for the Producer Price Index for materials is Civil Engineering.</p> <p>The area for the Producer Price Index for fuel is Inland.</p> <p>The base month is the month prior to tender closing.</p>
6.8.3	Price adjustment for variations in the cost of special materials are: Not allowed
6.10.1.5:	The % advance on materials not yet built into the Permanent Works is 80%. The percentage advance on Plant not yet supplied to site is not required.
6.10.3:	The limit of retention money on amounts due to the contractor is 10% and the limit on retention is 5% of the contract sum .
8.6.1.1.2:	The value of Plant and materials supplied by the Employer to be included in the insurance sum is: Nil .
8.6.1.1.3:	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is 20% of the Contract Sum.
8.6.1.3:	Public Liability: R20 Million per incident
10.5.3	The number of Adjudication Board Members to be appointed is: One .
10.7.1:	<p>Additional</p> <p>Disputes are to be settled in terms of paragraph 106 of the SCM Policy, which reads as follows:</p> <p>(1) The accounting officer must appoint an independent and impartial person, not directly involved in the supply chain management processes:</p> <p>(a) to assist in the resolution of disputes between the Municipality and other persons regarding:</p> <p>(i) any decisions or actions taken in the implementation of the supply chain management system; or</p> <p>(ii) any matter arising from a contract awarded in the course of the</p>

	<p style="text-align: center;">supply chain management system; or</p> <ul style="list-style-type: none">(b) To deal with objections, complaints or queries regarding any such decisions or actions or any matters arising from such contract. <ul style="list-style-type: none">(2) The accounting officer, or another official designated by the accounting officer, is responsible for assisting the appointed person to perform his or her functions effectively.(3) The person appointed must:<ul style="list-style-type: none">(a) strive to resolve promptly all disputes, objections, complaints or queries received; and(b) Submit monthly reports to the accounting officer on all disputes, objections, complaints or queries received, attended to or resolved.(4) A dispute, objection, complaint or query may be referred to the provincial treasury if:<ul style="list-style-type: none">(a) the dispute, objection, complaint or query is not resolved within 60 days; or(b) No response is forthcoming within 60 days.(5) If the provincial treasury does not or cannot resolve the matter, the dispute, objection, complaint or query may be referred to the National Treasury for resolution.(6) This section must not be read as affecting a person's rights to approach a court at any time.
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The additional Conditions of Contract are:

Clause	Data
4.13	<p>Add new sub clause 4.13:</p> <p>Applicable labour laws</p> <p>The Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice No R63 of 25 January 2002, as reproduced below, shall apply to works described in the scope of work as being labour-intensive and which are undertaken by unskilled or semi-skilled workers.</p> <p>1 Introduction</p> <p>1.1 This document contains the standard terms and conditions for workers employed in elementary occupations on a Special Public Works Programme (SPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of a SPWP.</p> <p>.2 In this document –</p> <p>(a) “department” means any department of the State, implementing agent or contractor;</p> <p>(b) “employer” means any department, implementing agency or contractor that hires workers to work in elementary occupations on a SPWP;</p> <p>(c) “worker” means any person working in an elementary occupation on a SPWP;</p> <p>(d) “elementary occupation” means any occupation involving unskilled or semi-skilled work;</p>
	<p>(e) “management” means any person employed by a department or implementing agency to administer or execute an SPWP;</p> <p>(f) “task” means a fixed quantity of work;</p> <p>(g) “task-based work” means work in which a worker is paid a fixed rate for performing a task;</p> <p>(h) “task-rated worker” means a worker paid on the basis of the number of tasks completed;</p> <p>(i) “time-rated worker” means a worker paid on the basis of the length of time worked.</p> <p>2 Terms of work</p> <p>2.1 Workers on a Special Public Works Programme (SPWP) are employed on a temporary basis.</p> <p>2.2 A worker may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.</p> <p>2.3 Employment on a SPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.</p> <p>3 Normal hours of work</p> <p>3.1 An employer may not set tasks or hours of work that require a worker to work–</p> <p>(a) more than forty hours in any week;</p> <p>(b) on more than five days in any week; and</p>

The additional Conditions of Contract are:

- (c) For more than eight hours on any day.
- 3.2 An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.
- 3.3 A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

4 Meal breaks

- 4.1 A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.
- 4.2 An employer and worker may agree on longer meal breaks.
- 4.3 A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.
- 4.4 A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

5 Special conditions for security guards

- 5.1 A security guard may work up to 55 hours per week and up to eleven hours per day.
- 5.2 A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

6 Daily rest period

Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

7 Weekly rest period

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work ("emergency work").

8 Work on Sundays and public holidays

- 8.1 A worker may only work on a Sunday or public holiday to perform emergency or security work.
- 8.2 Work on Sundays is paid at the ordinary rate of pay.
- 8.3 A task-rated worker who works on a public holiday must be paid –
- (a) the worker's daily task rate, if the worker works for less than four hours;
 - (b) Double the worker's daily task rate, if the worker works for more than four hours.
- 8.4 A time-rated worker who works on a public holiday must be paid –
- (a) the worker's daily rate of pay, if the worker works for less than four hours on the public holiday;
 - (b) Double the worker's daily rate of pay, if the worker works for more than four hours on the public holiday.

9 Sick leave

- 9.1 Only workers who work four or more days per week have the right to claim sick-pay in

The additional Conditions of Contract are:

terms of this clause.

- 9.2 A worker who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the worker has worked in terms of a contract.
- 9.3 A worker may accumulate a maximum of twelve days sick leave in a year.
- 9.4 Accumulated sick leave may not be transferred from one contract to another contract.
- 9.5 An employer must pay a task-rated worker the worker's daily task rate for a day's sick leave.
- 9.6 An employer must pay a time-rated worker the worker's daily rate of pay for a day's sick leave.
- 9.7 An employer must pay a worker sick pay on the worker's usual pay day.

- 9.8 Before paying sick pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –
 - (a) absent from work for more than two consecutive days; or
 - (b) absent from work on more than two occasions in any eight-week period.**8**
- 9.9 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.
- 9.10 A worker is not entitled to be paid sick leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

10 Maternity leave

- 10.1 A worker may take up to four consecutive month's unpaid maternity leave.
- 10.2 A worker is not entitled to any payment or employment-related benefits during maternity leave.
- 10.3 A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
- 10.4 A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.

The additional Conditions of Contract are:

- 10.5 A worker may begin maternity leave –
- (a) four weeks before the expected date of birth; or
 - (b) on an earlier date –
 - (i) if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or
 - (ii) if agreed to between employer and worker; or
 - (c) On a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.
- 10.6 A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.
- 10.7 A worker who returns to work after maternity leave, has the right to start a new cycle of twenty-four months employment, unless the SPWP on which she was employed has ended.

11 Family responsibility leave

- 11.1 Workers who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances:
- (a) when the employee's child is born;
 - (b) when the employee's child is sick;
 - (c) in the event of a death of
 - (i) the employee's spouse or life partner;
 - (ii) The employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

12 Statement of conditions

- 12.1 An employer must give a worker a statement containing the following details at the start of employment:
- (a) the employer's name and address and the name of the SPWP;
 - (b) the tasks or job that the worker is to perform; and
 - (c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;
 - (d) the worker's rate of pay and how this is to be calculated;
 - (e) The training that the worker will receive during the SPWP.
- 12.2 An employer must supply each worker with a copy of these conditions of employment.

The additional Conditions of Contract are:

13 Keeping records

13.1 Every employer must keep a written record of at least the following:

- (a) the worker's name and position;
- (b) in the case of a task-rated worker, the number of tasks completed by the worker;
- (c) in the case of a time-rated worker, the time worked by the worker;
- (d) Payments made to each worker.

13.2 The employer must keep this record for a period of at least three years after the completion of the SPWP.

14 Payment

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

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

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

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

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

14.6 Payment in cash or by cheque must take place –

- (a) at the workplace or at a place agreed to by the worker;
- (b) during the worker's working hours or within fifteen minutes of the start or finish of work;
- (c) In a sealed envelope which becomes the property of the worker.

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

- (a) the period for which payment is made;
- (b) the numbers of tasks completed or hours worked;
- (c) the worker's earnings;
- (d) any money deducted from the payment;
- (e) The actual amount paid to the worker.

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

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

15 Deductions

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

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

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

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

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

The additional Conditions of Contract are:	
	available for the balance of the 24-month period.
	<p>19 Certificate of service</p> <p>19.1 On termination of employment, a worker is entitled to a certificate stating –</p> <ul style="list-style-type: none"> (a) the worker’s full name; (b) the name and address of the employer; (c) the SPWP on which the worker worked; (d) the work performed by the worker; (e) any training received by the worker as part of the SPWP; (f) the period for which the worker worked on the SPWP; (g) Any other information agreed on by the employer and worker."

PART 2: DATA PROVIDED BY THE CONTRACTOR

The Contractor is advised to read the General Conditions of Contract for Construction Works, Third Edition, 2015 published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, in order to understand the implications of this data which is required to be completed.

Copies of these conditions of contract may be obtained from www.saice.org.za.

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

Clause	Data														
1.1.1.9	The name of the Contractor is:														
1.2.1.2	The address of the Contractor for receiving notices is: <u>Physical Address:</u> <u>Postal Address:</u> Telephone: Facsimile: E-mail:														
6.2.1	<table border="1"> <thead> <tr> <th data-bbox="380 1113 1151 1209">Type of Security</th> <th data-bbox="1151 1113 1484 1209">Contractor's Choice Indicate "Yes" or "No"</th> </tr> </thead> <tbody> <tr> <td data-bbox="380 1209 1151 1285">The security to be provided by the Contractor shall be one of the following:</td> <td data-bbox="1151 1209 1484 1285"></td> </tr> <tr> <td data-bbox="380 1285 1151 1331">Cash deposit of 10% of the Contract Sum, incl. VAT</td> <td data-bbox="1151 1285 1484 1331"></td> </tr> <tr> <td data-bbox="380 1331 1151 1407">Performance guarantee of 10% of the Contract Sum, incl. VAT</td> <td data-bbox="1151 1331 1484 1407"></td> </tr> <tr> <td data-bbox="380 1407 1151 1453">Retention of 10% of the value of the works.</td> <td data-bbox="1151 1407 1484 1453"></td> </tr> <tr> <td data-bbox="380 1453 1151 1528">Cash deposit of 5% of the Contract Sum plus retention of 5% of the value of the works.</td> <td data-bbox="1151 1453 1484 1528"></td> </tr> <tr> <td data-bbox="380 1528 1151 1604">Performance Guarantee of 5% of the Contract Sum plus a retention of 5% of the value of the works.</td> <td data-bbox="1151 1528 1484 1604"></td> </tr> </tbody> </table>	Type of Security	Contractor's Choice Indicate "Yes" or "No"	The security to be provided by the Contractor shall be one of the following:		Cash deposit of 10% of the Contract Sum, incl. VAT		Performance guarantee of 10% of the Contract Sum, incl. VAT		Retention of 10% of the value of the works.		Cash deposit of 5% of the Contract Sum plus retention of 5% of the value of the works.		Performance Guarantee of 5% of the Contract Sum plus a retention of 5% of the value of the works.	
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Performance Guarantee of 5% of the Contract Sum plus a retention of 5% of the value of the works.															
6.5.1.2.3	The percentage allowance to cover overhead charges is %														

C1.3 – Form of Guarantee

PERFORMANCE GUARANTEE

PRO FORMA

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

Contract No: ECDC/INFRA/33/042024

Project Name: CONSTRUCTION OF GWATYU ACCESS ROAD ON R351

WHEREAS: **Eastern Cape Development Corporation**

(hereinafter referred to as the Employer")

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means

Physical address:

"Employer" means:

"Contractor" means:

"Guarantor" means:

"Employers Agent" means:.....

"Works" means:

"Site" means:

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

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

Amount in words:

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

Amount in words:

Type of Performance Guarantee: (Insert Variable or Fixed)

"Expiry Date" means: (Give date) or any other later date set by the Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

CONTRACT DETAILS

Employer's Agent Issues: Interim Payment Certificates, Final Payment Certificate and the Certificate of Completion of the Works as defined in the Contract.

1. PERFORMANCE GUARANTEE

- 1.1 Where a Fixed Performance Guarantee has been selected, the Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
- 1.2 The Guarantor's period of liability shall be from and including the date on which the Performance Guarantee is signed, up to and including the Expiry Date, or the date of the issue by the Employer's Agent of the Certificate of Completion of the Works, or the date of payment in full of the Guaranteed Sum, whichever occurs first.
- 1.3 The Employer's Agent 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.

2. CONDITIONS APPLICABLE TO VARIABLE AND FIXED PERFORMANCE GUARANTEES

- 2.1 The Guarantor hereby acknowledges that:
 - 2.1.1 Any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be constructed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship.
 - 2.1.2 Its obligation under this Performance Guarantee is restricted to the payment of money.
- 2.2 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon the receipt of the documents identified in 3.2.1 to 3.2.3:
 - 2.2.1 A copy of the first written demand issued by the Employer to the Contractor stating that the payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment with seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 3.2.2;
 - 2.2.2 A first writing 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 3.2.1 and the sum certified has still not been paid;
 - 2.2.3 A copy of the aforesaid payment certified which entitles the Employer to receive payment in terms of the Contract of the sum certified in 3.2.

- 2.3 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, 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:
- 2.3.1 The Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 3.3; or
- 2.3.2 A provisional or final sequestration or liquidation court order has been granted against the Contractor and that a Performance Guarantee is called up in terms of 3.3; and
- 2.3.3 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.
- 2.4 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1.
- 2.5 Where the Guarantor has made payment in terms of 3.3, the Employer shall upon the date of issue of the Final Payment Certificate submit and 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 and 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 made by the Guarantor to the Employer until the date of refund.
- 2.6 Payment by the Guarantor in terms of 3.2 and 3.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 2.7 Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.
- 2.8 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider 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.
- 2.9 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

2.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, 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.

2.11 The performance Guarantee, with the required demand notices in terms of 3.2 or 3.3, shall be regarded as a liquid document for the purposes of obtaining a court order.

2.12 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrates' Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of and 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):

PART.4 AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT (ACT No. 85 OF 1993)

THIS AGREEMENT made between:

.....
(hereinafter referred to as "the Employer") of the one part, herein represented by:

.....
In his capacity as

AND:
(hereinafter referred to as "the Mandatory") of the other part, herein represented by:

.....
In his capacity as

And being duly authorised to act as Mandatory on behalf of the Contractor;
WHEREAS the Employer is desirous that certain works be constructed, viz (Contract No.)

(Title).....
and has accepted a bid by the Mandatory for the construction, completion and defects correction of such works and whereas the Employer and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Occupational Health and Safety Act No 85 of 1993.

NOW THEREFORE THIS DOCUMENT WITNESSETH AS FOLLOWS:

- 1. The Mandatory shall execute the work in accordance with the Contract Documents pertaining to this Contract.
- 2. This Agreement shall hold good from its Commencement Date, which shall be the date of a written notice from the Employer or Employers Agent requiring him to commence the execution of the Works, to either:
 - a) The date of the Final Approval Certificate issued in terms of Clause 5.16.1 of the General Conditions of Contract for Construction Works, Third Edition (2015) (hereinafter referred to as the "GCC").

- b) The date of termination of the Contract in terms of Clauses 9.2 or clause 9.3 of the GCC.
3. The Mandatory declares himself to be conversant with the following:
- a) All the requirements, regulations and standards of the Occupational Health and Safety Act (Act 85 of 1995), hereinafter referred to as "The Act", together with its amendments and with special reference to the following Sections of The Act:
 - i) Section 8: General duties of employers to their employees;
 - ii) Section 9: General duties of employers and self-employed persons to persons other than employees;
 - iii) Section 37: Acts or omissions by employees or mandatories, and
 - iv) Subsection 37(2) relating to the purpose and meaning of this Agreement.
 - b) The procedures and safety rules of the Employer as pertaining to the Mandatory and to all his subcontractors.
4. In addition to the requirements of Clause 6.3 of the GCC and all relevant requirements of the above-mentioned Volume 3, the Mandatory agrees to execute all the Works forming part of this Contract and to operate and utilise all machinery, plant and equipment in accordance with the Act.
5. The Mandatory is responsible for the compliance with the Act by all his subcontractors, whether or not selected and/or approved by the Employer.
6. The Mandatory warrants that all his and his subcontractors' workmen are covered in terms of the Compensation for Occupational Injuries and Diseases Act, 1995 which cover shall remain in force whilst any such workmen are present on site. A letter of good standing from the Compensation Commissioner to this effect must be produced to the Employer upon signature of the agreement.
7. The Mandatory undertakes to ensure that he and/or subcontractors and/or their respective employers will at all times comply with the following conditions:
- a) The Mandatory shall assume the responsibility in terms of Section 16.1 of the Occupational Health and Safety Act. The Mandatory shall not delegate any duty in terms of Section 16.2 of this Act without the prior written approval of the Employer. If the Mandatory obtains such approval and delegates any duty in terms of section 16.2 a copy of such written delegation shall immediately be forwarded to the Employer.

- b) All incidents referred to in the Occupational Health and Safety Act shall be reported by the Mandatory to the Department of Labour as well as to the Employer. The Employer will further be provided with copies of all written documentation relating to any incident.
- c) 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 into any incident involving the Mandatory and/or his employees and/or his subcontractors

In witness thereof, the parties hereto have set their signatures hereon in the presence of the subscribing witnesses:

Atfor and behalf of the Employer
 on this the day of 20.....

SIGNATURE:.....

CAPACITY:.....

WITNESSES:

SIGNATURES: (1)
 (2)

NAMES: (1)
 (2).....

At for and behalf of the MANDATORY
 on this the day of 20.....

SIGNATURE:

CAPACITY:

WITNESSES:

SIGNATURES: (1).....
 (2).....

NAMES: (1)
 (2).....

Part C2: Pricing data

C2.1 - Pricing instructions

C2.1 - Pricing instructions

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

- C2.1.1.1 **All** prices shall be quoted in the currency of the Republic of South Africa and will be held to be firm unless otherwise stated, in which case sufficient information must be afforded at the time of tendering to indicate the basis on which payment shall be adjusted.
- C2.1.1.2 The Tenderer shall enter a price against each item in the schedule of prices. If the Tenderer fails to enter a price against any item in the schedule of prices the relevant cost for such item shall be regarded as being covered by other prices in the schedule of prices. **Should an item specifically be excluded from the offersubmitted, such tender will be regarded as non-responsive and not be considered.**
- C2.1.1.3 The prices quoted against each item of these schedules shall cover the full inclusive cost of everything required for the execution of the work under the item plus an apportionment of any cost involved in meeting the obligations and liabilities imposed by the conditions of contract and in complying with the specifications.
- C2.1.1.4 The prices quoted for the supply of plant and equipment shall include for all handling, loading, transporting and of-loading required for the delivery of the plant and equipment to the site, including in the case of of-site storage for double handling at the store.
- C2.1.1.5 The prices quoted for erection and installation shall include for all handling, loading, transporting and of- loading, to take plant and equipment to place on site where required, erection, installation, painting, commissioning, operating, testing, adjusting, handing over in proper working order and upholding for a period of 12 months, all as specified.
- C2.1.1.6 Any additional charges in connection with of-site storage which there may be over and above the prices quoted in the various sections of these schedules of prices shall be set out in detail by the Tenderer.
- C2.1.1.7 The tendered rates and amounts must exclude Value Added Tax (VAT) but must include all levies, other taxes and duties on items to which they apply. Separate provision has been made in the Tender Summary for the purpose of VAT.
- C2.1.1.8 Amounts allowed for contingencies will be spent in part or as a whole at the sole discretion of the Principal Agent.
- C2.1.1.9 Schedule of Prices shall be completed and signed in **black ink**. Corrections must be done by deleting, rewriting and initialling next to the amendment.
- C2.1.1.10 **The Bills of Quantities are not to be used for the purpose of ordering materials**

**C2.2 - Bill of
Quantities
(See Attached)**

GWATYU ACCESS ROAD
SUMMARY OF SECTIONS

SECTION	DESCRIPTION	AMOUNT
1300	Contractor's establishment on site and General obligations	
1400	Housing Offices and Laboratory for the Engineer's site personnel	
1500	Accommodation of traffic	
1700	Clearing and Grubbing	
1800	Dayworks (Rate Only)	
2100	Drains	
2200	Prefabricated Culverts	
3300	Earthworks and Pavement layers	
3400	Pavement layers of Gravel Material	
3500	Stabilization	
5600	Ancillary Roadworks: Roadsigns	
5900	Finishing the road and road reserve and treating old roads	
SUB TOTAL 1		
CONTINGENCIES		R 570 000,00
SUB TOTAL 2		
ADD 15% VAT		
PROJECT TOTAL		

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	1300	SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS				
1,1	B13.01	Contractors General Obligations				
1.1.1.		a) Fixed Obligation	Sum	1		
1.1.2		b) Value Related Obligation	Sum	1		
1.1.3		c) Time Related Obligation	Month	6		
1,2		Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Lump Sum	1		
1,3		Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	Month	6		
1,4		Provision of full time Construction Safety Officer	Month	6		
1,5		Submission of the Health and Safety File	Lump Sum	1		
1,6		Community Liaison Persons (Monthly Wage = R7180.80)	Man Months	6	7 180,80	R 43 084,80
1,7		Contract Sign Board	No	2		
1,8		Environmental management				
1.8.1		The contractor's obligation in respect of Environmental Management				
1.8.1.1		(a) Designated environmental officer	Month	6		
1.8.1.2		(b) Environmental aspects and impacts	Month	6		
1.8.1.3		(c) Provision of environmental emergency measures	Prov Sum	1	100 000,00	100 000,00
1.8.1.4		(d) Contractor's charge to allow for handling costs and profit	%	100 000		
1,9		PSC reimbursement for montly PSC meetings @ R300 per sitting x 6 members	Months	6	1 800,00	10 800,00
1.10		Accredited Training: 2 xStudents @R7000/month for 6months	Prov Sum	1	84 000,00	84 000,00
TOTAL OF SECTION 1300 CARRIED FORWARD TO SUMMARY						

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2	1400	SECTION 1400: HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL				
2,1	14.00	HOUSING, OFFICES AND LABORATORY FOR THE ENGINEER'S SITE PERSONNEL				
	14.01	Provision for Commercial Laboratory testing				
2.1.1		(a) Actual cost of testing	PC Sum	1	40 000,00 R	40 000,00
2.1.2		(b) Contractors charge in respect of sub item (a)	%	40000		
2.1.3		(c) Ablution units	m ²	10		
	14.02	Office and laboratory furniture:				
2.1.4		(d) Chairs	No	12		
2.1.5		(e) Desks, complete with drawers and locks	No	2		
2.1.6		(f) Drawing tables	No	2		
2.1.7		(g) Conference tables	No	1		
	B14.03	Office and laboratory fittings Installations and equipment				
		(a) Items measured by number:				
2.1.8		(i) 220/250 volt power points	No	4		
2.1.9		(iii) Double 80 watt fluorescent light fittings complete with ballast and tubes	No	8		
2.1.10		(x) Fire extinguishers, 9,0 kg, all purpose dry powder type, complete, mounted on wall with brackets	No	2		
2.1.11		(xi) Air conditioning units with 2,2 kW minimum capacity, mounted and with own power connection	No	1		
2.1.12		(xiv) General-purpose steel cupboards with shelves	No	2		
2.1.13		(xv) Steel filing cabinets with drawers	No	2		
2.1.14		(xviii) Voltage Stabilisers and UPS units	L/Sum	1		
2.1.15		(xxi) Independent two-way communication radios	Pair	2		
2.1.16		(xxii) Plan holder with steel frame and aluminium clamps	No	2		
	B14.04	Car ports:				
2.1.17		(a) Car ports, as specified, at offices and laboratory	No	2		
TOTAL OF SECTION 1400 CARRIED FORWARD TO SUMMARY						

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3	1500	SECTION 1500: ACCOMMODATION OF TRAFFIC				
3,1		<u>Temporary deviations</u>				
3.1.1	15,01	Accommodation traffic and maintaining temporary deviations	Km	8,4		
3,2	15,02	Earthworks for temporary deviations				
3.2.1		(a) Shaping of temporary deviations	km	0,2		
3,3	15,03	Temporary traffic-control facilities				
3.3.1		(a) Flagmen	man-day	660		
3.3.2		(b) Portable STOP and GO-RY signs	No	2		
3.3.3		(e) Road signs, R and TR-series	No	6		
3.3.4		(f) Road signs, TW-series	No	6		
3.3.5		(h) Delineators (DTG50J)				
3.3.6		(ii) Mounted back to back	No	200		
3.3.7		(m) Two-way communication devices	No	4		
3,4	15,07	Blading by road grader of:				
3.4.1		(b) Existing roads used as temporary deviations	km-pass	2		
3,5	15,10	Accommodation of traffic during construction	Km	2,00		
TOTAL OF SECTION 1500 CARRIED FORWARD TO SUMMARY						

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4	1700	SECTION 1700: CLEARING AND GRUBBING				
4,1	17,01	Clearing and Grubbing	ha	2,00		
4,2	17,04	Clearing and grubbing at inlets and outlets of hydraulic structures	m ²	500		
4,3	17,05	Cleaning out of hydraulic structures				
4.3.1		(d) Box culverts exceeding 1.5m vertical direction	m ³	50		
TOTAL OF SECTION 1700 CARRIED FORWARD TO SUMMARY						

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5		SECTION 1800: DAYWORKS				
5,1		Labour Charges				
5.1.1		a) Labourer	h	10		Rate Only
5.1.2		b) Chargehand	h	10		Rate Only
5.1.3		c) Foreman	h	2		Rate Only
5.1.4		d) Artisan	h	5		Rate Only
5.1.5		e) Plant Operator	h	2		Rate Only
5.1.6		f) Flagman	h	10		Rate Only
5.1.7		g) Driver	h	5		Rate Only
5,2		Material Charges				
5.2.1		a) Actual Cost of Material excl vat	PC Sum		20 000,00	Rate Only
5.2.2		b) Handling cost in respect of subitem B.1802	%			Rate Only
5,3		Plant Charges				
5.3.1		a) Backhoe / Loader	h	10		Rate Only
5.3.2		b) Tractor	h	10		Rate Only
5.3.3		c) Trailer	h	10		Rate Only
5.3.4		d) Tip Truck i) 6cum Capacity	h	5		Rate Only
5.3.5		e) Walk behind Vibrating Roller 1 ton	h	10		Rate Only
5.3.6		f) Plate Compactor	h	10		Rate Only
5.3.7		g) Water Cart 9000l	h	10		Rate Only
5.3.8		h) Water Cart 3000l	h	10		Rate Only
5.3.9		i) Concrete Mixer	h	10		Rate Only
5.3.10		j) Dumper	h	10		Rate Only
TOTAL OF SECTION 1800 CARRIED FORWARD TO SUMMARY						

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6	2100	SECTION 2100: DRAINS				
6,1	21.02	Clearing and Shaping Existing open drains	m ³	3 000		
6,2	21,16	Backfilling existing eroded side drains	m ³	1 500		
TOTAL OF SECTION 2100 CARRIED FORWARD TO SUMMARY						

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
7	2200	SECTION 2200: PREFABRICATED CULVERTS				
7.1	22,01	Excavation				
7.1.1		a) Excavation of soft material situated within the following depth ranges below the surface level:				
7.1.1.1		(i) 0m up to 1.5m	m ³	965,00		
7.1.1.2		(b) Extra over subitem 22.01(a) for excavation in hard material. Irrespective of depth	m ³	45,00		
7.2	22,02	Backfilling				
7.2.1		b) Using imported selected material	m ³	555,00		
7.3	22,03	Concrete pipe culverts				
7.3.1		(c) On class C bedding 600mm diam 100D (Refer to departmental drawing ECS/22/2/D1 and ECS/22/2/D2)	m	632		
7.4	22,05	Portal and rectangular culverts				
7.4.1		b) Without prefabricated floor slabs 2,4m wide concrete x 1.2m (Refer to departmental drawing ECS/22/1/D1)	m	74		
7.5	22,06	Extra over item 7.4.1 for constructing inclined culverts	m	61		
7.6	22,07	Cast in situ concrete and framework				
7.6.1		b) In floor slabs for portal or rectangular culverts, including formwork, joints and class U2 surface finish, 25MPa/19mm	m ³	38		
7.6.2		c) In inlet and outlet structures, skewed ends, catchpits, manholes, thrust and anchor blocks, excluding surface finish 25MPa/19mm (Refer to departmental drawing ECS/22/2/D2)	m ³	63		
7.6.3		d) Formwork of concrete Class 35/19 MPa at 28 days	m ²	115		
7.7	22,10	Steel reinforcement				
7.7.1		b) High-tensile steel bars	ton	2,5		
7.8	22,11	Dowels for joining old and new concrete	kg	116		
7.9	22,12	Removing existing concrete				
7.9.1		b) Reinforced concrete	m ³	20,4		
7.10	22,13	Removing and re-laying existing pipes	m	96		
7.9	22,14	Removing and stacking existing prefabricated culverts	m	384		
7.10	22,25	Overhaul on excavated material carted to spoil, backfill material (but excluding Portland cement in case of soil cement), existing structures demolished and removed to spoil, and removing and relaying, and and removing and stacking existing prefabricated culverts, for haul in excess of the free-haul distance	m ³ -km	149,87		
TOTAL OF SECTION 2200 CARRIED FORWARD TO SUMMARY						

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
8	3300	SECTION 3300: MASS EARTHWORKS				
		SERIES 3000: EARTHWORKS AND PAVEMENT LAYERS OF GRAVEL OR CRUSHED STONES				
8.1	33,01	Cut and borrow to fill, including free-haul up to 0.5km				
8.1.1		a) Material in compacted layer thickness of 200mm and less				
8.1.1.1		(i) compacted to 90% MOD AASHTO	m ³	11191		
8.2	33,07	Removal of unsuitable material (incl free-haul of 0.5km)				
8.2.1		a) In layer thickness of 200mm or less				
8.2.1.1		(ii) unstable material	m ³	2707		
8.3	33.09	Material bladed to windrow	m ³	960		
8.4	33.10	Roadbed preparation and compaction of material				
8.4.1		a) Compaction to 90 % Mod AASHTO	m ³	10797		
8.5	33,11	Three roller passes compaction:				
8.5.1		c) Grid roller	m ²	4750		

TOTAL OF SECTION 3300 CARRIED FORWARD TO SUMMARY	
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ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
9	3400	SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL				
9.1	34,01	Pavement layers constructed from gravel taken from cut or borrow, and designated pits DOT borrow pit no. 627 and no. 656 No overhall shall apply				
9.1.1		(a) Gravel selected layer compacted to				
9.1.1.1		(i) 93% of modified AASHTO density layer thickness of 150mm. G5 Quality material	m³	10797		
9.1.2		(h) Gravel wearing course				
9.1.2.1		(ii) 95% of modified AASHTO density layer thickness of 150mm. G5 Quality material	m³	5200		
9.1.3	34,03	(o) Gravel Wearing Course (stabilized)				
9.1.3.1		(ii) 95% Mod AASHTO Density layer thickness of 150mm G5 Quality material	m³	5200		
9.1.4	34,04	In situ reconstruction of existing pavement layers as:				
9.1.4.1		(a) Gravel selected layer compacted to 93% of modified ASSHTO density, using:				
9.1.4.1.1		(ii) Cemented material 150mm thickness	m³	1500		
9.1.4	37,07	Extra over item 9.1.4.1.1 for temporarily blading the material to windrow	m³	500		
TOTAL OF SECTION 3400 CARRIED FORWARD TO SUMMARY						

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
10	3500	SECTION 3500:Stabilization				
10.1	35,01	Chemical stabilization extra over unstabilized compacted layers 150mm	m³	1500		
10.2	35,02	Chemical stabilizing agent @ 3,5%				
10.2.1		(a) Ordinary portland cement 150mm	t	95,00		
10.3	35,04	Provision and application of water for curing	kl	50,00		
TOTAL OF SECTION 3500 CARRIED FORWARD TO SUMMARY						

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
11	5600	SECTION 5600: ANCILLARY ROADWORKS: ROADSIGNS <i>Refer to departmental drawings ECS/56/1/C1</i>				
11.1	56.01	Road sign boards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class 1 retro-reflective material, where the sign board is constructed from:				
11.1.1		c) Prepainted galvanized steel plate (chromadeck 1,6 mm thick or approved equivalent):				
11.1.1.1		iii) Area exceeding 10 m ²	m ²	17,0		
11.2	56.02	Extra over Item 11.1.1.1 for using:				
11.2.1		a) Background of retro-reflective material of:				
11.2.1.1		1) Class 1	m ²	17,0		
		b) Lettering, symbols, numbers, arrows, emblems and borders of retro-reflective material:				
		1) Class 1	m ²	17,0		
11.3	56.03	Road sign supports:				
11.3.1		b) Timber				
11.3.1.1		1) 75 - 125 mm top diameter	No	102,0		
11.4	56.05	Excavation and backfilling for road sign supports (not applicable to kilometre posts)	m ³	30,0		
11.5	56.06	Extra over Item 11.4 for cement-treated soil backfill	m ³	30,0		
11.5.1		Danger plates				
11.5.1.1		a) Danger plates at culverts-W401/W402 (Refer to departmental ECS/56/1/C6)	No	66,0		
11.5.1.2		Cast in-situ concrete Class 15/19 to footings for signs	m ³	30,0		
TOTAL OF SECTION 5600 CARRIED FORWARD TO SUMMARY						

ITEM	PAY REF	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
12	5900	SECTION 5900: FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS				
12,1	59.01	Finishing the road and road reserve:				
12.1.1		b) Single Carriageway road	km	8		
TOTAL OF SECTION 5900 CARRIED FORWARD TO SUMMARY						

Part C3: Scope of Work
C3.1 - Scope of Works

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STATUS

Background To ECDC Vision

To be an innovative leader in promoting sustainable economic growth and development of the Eastern Cape.

Mission

To promote sustainable economic development in the Eastern Cape through focused:

- a) Provision of innovative development finance
- b) Leveraging of resources, strategic alliances, investment and partnerships.

Legislative Mandate

ECDC draws its mandate directly from the Eastern Cape Development Corporation Act (Act 2 of 1997) and is led by the economic development priorities of the provincial government, as detailed in the Provincial Growth and Development Plan (PGDP), Eastern Cape Provincial Industrial Development Strategy (PIDS), the policy statement and budget speech of the Member of the Executive Council (MEC) of Economic Development, Environment Affairs and Tourism (DEDEAT)

Section 3 of the ECDC Act states that the Corporation shall “plan, finance, co-ordinate, market, promote and implement development of the Province and its people in the field of industry, commerce, agriculture, transport and finance”.

PROJECT SPECIFICATIONS

STATUS

Should any requirement of the Project Specifications conflict with any requirement of the Standardised or Particular Specifications listed in clause PS10, the requirement of the Project Specification shall prevail.

PORTION 1: THE WORKS

PS1 DESCRIPTION OF THE WORKS

PS1.1 SCOPE

The works comprise the supply and construction of all materials and equipment to construct 8km of gravel access road.

- Stormwater installation will comprise: 600m of 600mm diameter stormwater pipe culverts installed with inlet and outlet structures
- 6 no. of 2.4 x 1.2m rectangular culverts installed with inlet and outlet structures
- 16km of existing open side drains to be cleaned and shaped
- Where the topography allows, mitre drains will be cut along the road to discharge runoff
- Layer works
 - Subbase – 150mm G5 obtained from borrow pit
 - Subgrade – 150mm G7 fill from a site cut to borrow to fill
 - Insitu cut and full rip and recompacted
- Gravel will be sourced from Departmental borrow pits to be pointed out to the bidders
- Establishment and removal
- Carry out project in terms of the Expanded Public Works Program rules
- Sub-contract to Local Enterprises as specified
- Target Local Labour as specified
- Target Local Enterprises
- Defects Liability Period is 12 months
- Contract Period is 6 months

PS1.2 DESCRIPTION OF SITE AND ACCESS

The road construction will form part of an existing road R351 linking the R61 and the town of Cathcart. The road constitutes of an upgrade of an 8km section of the R351. Access: From N6 to R61 and turnoff to R351. The road is 3km from the turnoff.

The table below describes the project location

Coordinates	Start: 32° 7'14.08"S , 27°14'23.89"E End: 32° 3'19.92"S , 27°13'6.53"E
Province	Eastern Cape
District Municipality	Chris Hani District Municipality
Local Municipality	Enoch Mgijima Local Municipality

PS1.3 NATURE OF GROUND

The area is located in the Beaufort Sediments, with dolerite intrusions. Trenching will be in soft, intermediate and hard material. Sheet rock will be encountered in places. The above information is given in good faith and is approximate. Should the Contractor require further information in order to properly determine his rate, he shall have done so at his own expense and prior to submitting his tender. See Site Information for the Geotechnical Survey information.

PS1.4 DETAILS OF CONTRACT

The Contract shall comprise the supply of all management, labour, materials, workmanship, machinery, equipment, transport, attendance on others and everything stated or implied which is, or may be, necessary in and for the entire completion of all the following works:

- Stormwater installation will comprise: 600m of 600mm diameter stormwater pipe culverts installed with inlet and outlet structures
- 6 no. of 2.4 x 1.2m rectangular culverts installed with inlet and outlet structures
- 16km of existing open side drains to be cleaned and shaped
- Where the topography allows, mitre drains will be cut along the road to discharge runoff

- Layer works
 - Subbase – 150mm G5 obtained from borrow pit
 - Subgrade – 150mm G7 fill from a site cut to borrow to fill
 - Insitu cut and full rip and recompacted

- Gravel will be sourced from Departmental borrow pits to be pointed out to the bidders
- Establishment and removal
- Carry out project in terms of the Expanded Public Works Program rules
- Sub-contract to Local Enterprises as specified
- Target Local Labour as specified
- Target Local Enterprises
- Defects Liability Period is 12 months
- Contract Period is 6 months

PS2 ENGINEERING

PS2.1 WORKS DESIGNED BY (PER DESIGN STAGE)

- (i) Concept, feasibility and overall process – Employer
- (ii) Basic Engineering and detail layouts to tender stage – Employer
- (iii) Final design to construction stage – Employer

(a) Contractor to provide as-built information.

PS3 PROCUREMENT

PS3.1 METHOD

Tenders will be adjudicated on Method 2 – Price and Preferences.

PS3.2 TARGETED CONSTRUCTION: PARTICIPATION OF TARGETED LABOUR (SANS 1914-5)

PS3.2.1 Definitions

PS3.2.1.1 Targeted Labour

Individuals, employed by the Contractor in the performance of the contract, who are defined as the target group in the contract and who permanently reside in the target area or who are recognized as being residents of the target area on the basis of identification and association with a recognition by the residents of the target area.

The Project Steering Committee will direct where labour is drawn from as a priority before drawing labour under their guidance from a wider area. A Community Liaison Officer shall be employed (see cl PS3.4). A project wage rate is set (cl PS3.5) and the work shall be labour intensive (Particular Specification PC).

PS3.2.1.2 Target Group

For this project the contract does not specify the target group based on gender, age or disability, but a broad representation from each group shall be employed according to the task needs and in consultation with the CLO. However, specifically excluded from the Target Group is the Contractor's own staff unless such staff are also from the Target Area.

PS3.2.1.3 Target Area

For this project, the target area is defined as the communities directly affected by the project and identified by the PSC.

PS3.2.1.4 Contract Participation Targets

Contract participation is a process by which the employer implements Government's policies on Black Economic Empowerment and small contractor development. The employer sets targets for construction by specified entities that rand value for which is based on the goods, services and work undertaken by the specified entities and measured as a percentage of the Contractor's net amount (excluding VAT, contingency and escalation). The Contractor is obliged to commit to the targets set by the employer. For this contract the targets are as follows:

- (i) Target Labour minimum 5% of net amount excluding VAT and Contingency

Targeted labour employed by any Joint Venture Partner or sub-contractor shall rank toward this goal.

PS3.2.1.5 Contract Participation Goals (CPG's)

The Contractor is obliged to participate in the employer's commitment to achieving Government's empowerment objectives by itself committing to perform beyond on the relevant returnable schedules. Tenderers who commit to goals less than the targets set will cause their tenders to be declared unresponsive in terms of condition to tenders F.3.8 and F.2.1

PS3.2.2 Conditions Associated with Achieving Goals

The tenderer, undertakes to:

- 1) Engage one or more targeted labour in accordance with the provisions of the SANS 1914-5 as varied in Section 3 hereunder;
- 2) accept the sanctions set out in Section 4 below should such conditions be breached;

- 3) Complete the Tender Target Declaration form contained in Section 5 below; and
- 4) Complete the Supporting Contract Participation Goal Calculation contained in Section 6 below.

PS3.2.3 Variation to the Targeted Construction Procurement Specification SANS 1914-5

The variations to SANS 1914-5 are set out below. Should any requirements of the variations conflict with requirements of SANS 1914-5, the requirements of the variations shall prevail.

Requirements: Contract Participation Goal (3.1)

It must be clearly understood that the Participation Goal is a minimum and that the work shall be carried out in accordance with the Expanded Public Works Program principles and Particular Specification PC – Labour Intensive Methods, and that the goal may well be exceeded in compliance with this specification.

The Contractor is to report on persons employed in accordance with the prescribed format: (electronic) on a monthly basis with his progress payment.

PS3.2.4 Sanctions

In the event that the tenderer fails to substantiate that any failure to achieve the Contract Participation Goal relating to the granting of a preference was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor’s control which may be acceptable to the Employer, it shall be liable to pay to the Employer a financial penalty calculated in the following manner:

$$P = \frac{0,05 \times (D - D_o) \times N_A}{100}$$

- Where D = tendered Contract Participation Goal percentage
- D_o = the Contract Participation Goal which the Employer’s representative based on the credit passed, certifies as being achieved upon completion of the contract. Payments to labour shall be verified by means of appropriate transactional documentation.
- N_A = Net Amount (Actual contract expenditure, excluding VAT)
- P = Rand value of penalty payable

PS3.2.5 Tender Goal in Respect of Targeted Labour

I/We hereby tender a Contract Participation Goal of% (minimum 5%)

Supporting Targeted Labour (CPG) calculation

TYPE OF TARGETED LABOUR	WORKING HOURS	AVERAGE RATE	TOTAL WAGE COST
Permanent labour*			
Temporary labour			
SMME labour			
		TOTAL	
		Tender Net Amount (excl VAT, provisional sums, contingency and escalation)	
		% of Tender Sum	

*(from target area)

This form is included in Volume 1.

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

PS3.3 TARGETED CONSTRUCTION: PARTICIPATION OF TARGETED ENTERPRISES (Refer SANS 1914-1: 2002)

PS3.3.1 Definitions

PS3.3.1.1 Targeted Enterprises and Targeted Sub-Contractors

Targeted enterprises (for material supplies and off-site service providers) are suppliers (as defined) or other service providers (meeting the definition of an enterprise) such as bed and breakfasts, transport companies, material suppliers etc. who have registered trading enterprises in the Enoch Mgijima Local Municipal area.

Targeted sub-contractors are suppliers (as defined) who have a valid CIDB grading less than that of the main contract and who have a registered trading enterprise in the Chris Hani District Municipality, and who are registered on the Chris Hani District Municipality Data Base.

PS3.3.1.3 Target Area

For this project, the target area is defined Engcobo/Cofimvaba for material supplies and off-site service providers and the Chris Hani Municipal area in respect of construction sub-contractors.

The onus of proof of satisfying this requirement for all Targeted Partners lies with the Main Contractor. This onus shall be discharged on the production of official documentation which indicates that each Targeted Partner has a registered office in the Target Area as defined.

PS3.3.1.4 Contract Participation Targets

Contract participation is a process by which the employer implements Government's policies on Black Economic Empowerment and small contractor development. The employer sets targets for construction by specified entities that rand value for which is based on the goods, services and work undertaken by the specified entities and measured as a percentage of the Contractor's net amount (excluding VAT, contingency and escalation). The Contractor is obliged to commit to the targets set by the employer. For this contract the targets are as follows:

(i) Targeted Enterprises:

1. Minimum 2.5% of net amount in respect of material supplies and off-site service providers.
2. Minimum 30% of net amount in respect of construction subcontracts in the construction of the works.

And

Targeted sub-contractors used by any Joint Venture Partner or selected sub-contractor shall rank toward this goal provided they are from the Targeted Area and registered.

PS3.3.1.5 Contract Participation Goals (CPG's)

The Contractor is obliged to participate in the employer's commitment to achieving Government's empowerment objectives by itself committing to perform beyond on the relevant returnable schedules. Tenderers who commit to goals less than the targets set will cause their tenders to be declared unresponsive in terms of condition to tenders F.3.8 and F.2.1.

PS3.3.2 Conditions Associated with Achieving Goals

The tenderer, undertakes to:

- 1) Engage one or more targeted enterprises in accordance with the provisions of the SANS 1914-1 as varied in Section 3 hereunder;
- 2) Accept the sanctions set out in Section 3.3.4 below should such conditions be breached;
- 3) Complete the Tender Target Declaration form contained in PS3.3.5.

Accredited Registration

All targeted sub-contractors shall be registered with the CIDB and proof of valid registration, or proof of application to be registered, must be submitted at the time of tendering and be registered on the Chris Hani Municipality Data Base.

PS3.3.3 Variation to the Targeted Construction Procurement Specification SANS 1914-1

The variations to SANS 1914-1 are set out below. Should any requirements of the variations conflict with requirements of SANS 1914-1, the requirements of the variations shall prevail.

- i) Verification of Status (3.2.2)
Include the following with Form T2.1.6 for every targeted sub-contractor:
 - Affidavit from sub-contractor as per Annex C to Form T2.1.6
 - Valid CIDB certificate
 - Registration with Chris Hani District Municipality
 - Proof of being a local Chris Hani District Municipality Enterprise (eg. Recent services account)
- ii) Contract Participation Goal credits (3.3)
 - (b) 50% should read 100% for suppliers
 - (t) omit
- iii) Records (5.2) (b)

Add a schedule of actual payments made to the targeted sub-contractor including payment amount and date.

PS3.3.4 Sanctions

In the event that the tenderer fails to substantiate that any failure to achieve the Contract Participation Goal relating to the granting of a preference was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor's control which may be acceptable to the Employer, it shall be liable to pay to the Employer a financial penalty calculated in the following manner:

$$P = \frac{0,05 \times (D - D_o)}{100} \times N_A$$

Where

D	=	tendered Contract Participation Goal percentage
D _o	=	the Contract Participation Goal which the Employer's representative based on the credit passed, certifies as being achieved upon completion of the contract. Payments to labour shall be verified by means of appropriate transactional documentation.

NA = Net Amount (Actual contract expenditure, excluding VAT)
P = Rand value of penalty payable

Sanctions shall apply separately to each of the aspects i) and ii) contracted for in PS3.3.5 below.

PS3.3.5 Tender Goal in Respect of Targeted Enterprises

- i) I/We hereby tender a Contract Participation Goal of% (minimum 2.5%) in respect of material suppliers and off-site service providers.

- ii) I/We hereby tender a Contract Participation Goal of% (minimum 30%) in respect of construction sub contracts in the construction of the Works.

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

PS3.4 EXPANDED PUBLIC WORKS PROGRAM AND LABOUR INTENSIVE WORKS

The project is being implemented as a labour intensive project under the "Expanded Public Works Programme."

A project requiring a CIDB contractor grading designation of 6CE or higher shall have a site agent / manager with an NQF level 4, and team leader of NQF level 2.

On a project requiring a CIDB contractor grading of 6CE or less, the manager shall be registered on a skills program for NQF level 2 or higher. All the supervisory staff shall be registered on a skills program NQF2 or higher.

The relevant certificate shall be lodged with the Engineer prior to work commencing.

PS3.5 COMMUNITY LIAISON OFFICER (CLO)

The Contractor shall, in his dealings with the communities affected by the project, work with the Project Steering Committee (PSC) which has been elected by the ISD Consultant / Social Facilitator appointed by the Employer. The PSC acts as a communication structure between the project and the community. The process of appointing the Community Liaison Officer (CLO) is also facilitated by the Social Facilitator together with the PSC. The CLO acts as a link between the contractor and the labourers and the PSC, and attends to all labour related issues. The CLO facilitates labour recruitment through the PSC. The CLO and the Executive structure of the PSC (Chairperson, Vice-Chairperson and the Secretary) attend monthly project progress report meetings (site) besides the PSC meetings attended by the full PSC. The Contractor must include in his rates the costs of attending an average of one meeting each month. The CLO is appointed for the period of physical construction, plus a period of 14 days prior to this period. The Contractor will provide office and stationery to the CLO to be able to perform his or her duties.

The ISD Consultant shall prepare and facilitate the signing of the contract between the CLO and the Contractor. Remuneration of the CLO is R7 180.00 per month and will be adjusted annually for the period of employment as per gazetted rates and will change in accordance with change in rates from the Department of Labour.

A CLO who fails in the responsibilities he/she is given will be replaced following the procedures as stipulated in his or her contract with the Contractor.

One CLO will be appointed.

The Terms of reference for the CLO shall be provided by the ISD Consultant.

The CLO will liaise with the following people in performing these activities:-

Contractor:

- Organise and assist the Contractor in explaining to all workers the labour-based construction model.
- Ensure labourers understand their task and the principles behind task work.
- Ensure labourers are informed of their conditions of temporal employment.
- Attend all site meetings and briefing for work procedures.
- Keep written record of interviews and community liaison which should be summarised and included in the monthly progress reports.
- Collect monthly welfare reports and submit to social facilitators.
- Ensure that Contractor's workers are paid what is due to them and in time.

- Assist in the recruitment of labour.
- Promote and maintain sound relations with community stakeholders and other role players.
- Screen the supplied labour by the community through Project Steering Committees to ensure compliance with the agreed upon recruitment policy and the government's labour employment targets.
- Inform local labour about their conditions of temporary employment, to ensure their timeous availability and inform them timeously when they would be relieved, where the rotation of labour is applicable.
- Keep the labour register of labour and manage records of project local labourers and be able to Provide reports on employment statistics.
- Consult on all decisions regarding local problems and any matters of importance that, in any way will be of relevance to the Contract.
- To be on site on a daily basis.
- To register concerns / perceptions and raise them in the PSC meetings.
- Attend site and PSC meetings to present monthly report on the local community labour involvement and site matters.
- Identify possible labour dispute and any disciplinary matter and advise the site agent / foreman and assist in the resolution, where necessary must call for the assistance of the Social Consultant for the resolution of the conflicts.
- Assist the Contractor in preparing records of project employees. Assist the Contractor in making task measurements and the records thereof.
- Monitor the production of individual task workers and arrange replacement of those workers who fail to produce a reasonable task output.
- Attend disciplinary proceedings to ensure that hearings are fair and reasonable.
- Communicate daily with the Contractor to determine additional labour requirements with regard to numbers and skills and pass this to the PSC.
- Attend weekly meetings with the Contractor and make a weekly written report which shall be a prerequisite to being paid.

Social Facilitators:

- Assist in convening of workshops.
- Disseminate information to PSC members.
- Articulate implementing agency policies to PSC members.
- Communicate labour requirements.
- Attend induction training programmes for workers and induct labourers.
- Submit monthly welfare reports to the social facilitators PSC.
- Communicate labour and skills requirements to the PSC.
- Assist in the recruitment and engagement of work force.
- Verify labour records and ensure all engaged qualify as per the Contract requirements.

- Investigate and report all labour dispute matters to the PSC, advise site agent on resolution.

PS3.6 CONDITIONS OF EMPLOYMENT OF LOCAL LABOUR

It is a requirement of this Contract that local labour is employed wherever possible, and that the Contractor limits the use of non-local employees to key personnel only. Local labour shall be given “on-the-job” training in the various skills required on this contract.

The minimum task rate will be in accordance with Government Notice: *R. 872 Basic Conditions of Employment Act (75/1997): Amendment of Sectoral Determination 2: Civil Engineering Sector*. A task is taken to be then amount of work which would be performed by a person working at an average pace through a work day of approximately 8 hours.

The PSC or its substructure, the Labour Desk, will co-ordinate the recruitment of labour from the community.

Employment shall be in accordance with the following conditions.

LABOUR INTENSIVE COMPONENT AND EMPLOYMENT OF LOCAL LABOUR AND USE OF LOCAL RESOURCES

This project is being implemented as a labour intensive project under the “Expanded Public Works Programme”.

Payment for the labour-intensive component of the works

Payment for works identified in the Scope of Work as being labour-intensive shall only be made if the works are constructed strictly in accordance with the provisions of the Labour Intensive Specification. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

PS4 CONSTRUCTION

PS4.1 WORKS SPECIFICATION

PORTION A

APPLICABLE COLTO STANDARDS

The latest edition as at date of tender of the following Standardised Specifications for Road and Bridge Works for State Road Authorities shall apply:

1200 -	General Requirements
1300 -	Contractor's Establishment on site and General Obligations
1400 -	Housing Offices and Laboratory for the Engineer's site personnel
1500 -	Accommodation of Traffic
1700 -	Clearing and Grubbing
1800 -	Dayworks
2100 -	Drains
3300 -	Earthworks and Pavement layers
3400 -	Payment layers of Gravel material

- 5600 - Ancillary Roadworks: Road signs
- 5900 - Finishing the road and road reserve and treating old roads

PORTION B

In addition, the following Particular Specifications that are bound into this document shall apply:

- PA - Health and Safety Specification
- PC - Labour Intensive Methods

PS4.2 EXISTING SERVICES

PS4.2.1 Known Services

All above ground services, including manholes etc., are designated as known services.

Prior to construction the Contractor and Engineer shall consult the drawings and all Service Providers to ascertain the presence and position of all services.

PS4.2.2 Interruption of Local Activities

Where construction or associated activities are to interrupt any of the local activities, eg. breaking through stock fences, trenching through lands, interrupting water and/or other utility services, etc. the Contractor is to notify the responsible authority and the Engineer at least 14 days before the occurrence of such an event and are to abide by any conditions prescribed by such an authority or the Engineer.

Where individual properties are accessed, a sketch drawing showing the nature and extent of access and interference shall be prepared by the Contractor and signed by the occupant. Before and after photographs shall be taken.

PS4.2.3 Protection of Existing Works

The Contractor shall take all the necessary steps to ascertain the location of existing services before commencing any section of the Works and shall exercise the greatest care when working in the vicinity of such services. No more than three weeks and no less than one week before commencing his operations in any particular area, the Contractor shall request from the Engineer the latest available drawings showing the location of services already installed.

The Contractor shall take all necessary steps to protect any existing works whatsoever against damage which may arise as a result of his operations on Site. The Contractor shall bear the cost of location, protection and repair of damage to any service, the possible existence of which could reasonable have been ascertained by him in good time.

Where the Contractor is responsible for the cost of repairs carried out by a Service Authority, the Contractor will be billed directly by the Service Authority concerned.

PS4.2.4 Access to Properties

The Contractor shall organize the work in such a manner as to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work included in the Contract.

Written authority and conditions of occupation would have to be agreed with the local headman.

PS4.3 COURTESY

In all dealings with the public the Contractor shall bear in mind their right to enjoy the use of the roads

and services and access to their properties and that the Employer desires to interfere as little as possible with these rights.

At all points of contact with the public the Contractor and his staff are requested to handle discussions and disputes with deliberate courtesy and understanding. To assist the Contractor in his dealings with the public, use should be made by him of the Community Liaison Officers (CLO's) on site. On occasions where the Contractor liaises directly with the public, the CLO should be informed of the outcome to be able to maintain a coherent picture of developments in the area.

PS4.4 DRAWINGS AND SPECIFICATIONS TO BE PROVIDED

As provided for in the General Conditions of Contract, the Contractor shall be entitled to receive free of charge, the following:-

- a) Three (3) paper copies of each drawing; and
- b) One (1) copy of the signed Contract Document.

PS4.5 CERTIFICATES OF PAYMENT

The statement to be submitted by the Contractor in terms 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 three sets of A4-size copies or electronic as agreed.

The contractor shall supply with his monthly claim, employment details in the format prescribed.

All costs resulting from the preparation and submission of the statements shall be borne by the Contractor.

PS4.6 CONSTRUCTION IN LIMITED AREAS

In certain cases, working space may be limited. The method of construction in these restricted areas will depend largely on the Contractor's plant and methods. However, the Contractor must note that measurement and payment will be according to the specified cross-sections and dimensions irrespective of the method used to achieve these cross-sections and dimensions, and that the rates and prices tendered shall be deemed to include full compensation for any difficulty encountered while working in limited areas and narrow widths, and that no extra payment will be made, nor will any claim for payment due to these difficulties be considered.

The working space restrictions are scheduled on the drawings.

PS4.7 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL

If during the time for completion of the Works or any extension thereof, abnormal rainfall or wet conditions occur, the Contractor may submit a claim for an extension of time in accordance with Clause 10.1 of the General Conditions of Contract. If an extension of time is granted, then any standing time costs of construction machinery as a consequence of the abnormal rainfall shall be deemed to have been included in the Time related costs of the Schedule of Quantities.

The method whereby the amount of extension of time due to the effect of abnormal rainfall and the prevalence of wet conditions will be determined, is the actual number of days where delay occurs

less the number of days n in the table below which represents the average delays which the Contractor should allow for in his programming and costing.

For a delay claim to be valid, the work so delayed would have to fall on the critical path.

Rainfall data for the project is:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nn (Days)	3.0	3.5	3.0	1.5	1.0	0.5	0.5	0.5	1.0	1.5	2.5	2.5

The total extension of time shall be the algebraic sum of all monthly totals for the period under consideration, but if the total is negative the time for completion shall not be reduced due to subnormal rainfall. Extensions of time for part of a month shall be calculated using pro rata values of Nn.

PS4.8 EXCAVATION AND BACKFILL

Owing to labour intensive methods, the excavation and backfill of trenches are scheduled separately as per PSD – Labour Intensive Methods and the excavation methods are varied for trench excavation.

PS4.9 ACCOMMODATION OF TRAFFIC

The Contractor shall ensure the safe and expeditious passage of traffic at all times and shall provide all necessary temporary road traffic signs, barricades, flagmen, etc. to safeguard the travelling public. Any detours or by-passes constructed by the Contractor shall be adequately signposted, as per the South African Road Traffic Signs Manual, and maintained to provide safe and easy passage of traffic.

PS4.10 ACCESS ROAD

Access roads required by the Contractor for construction purposes are not scheduled separately and the Tenderer must make provision for these roads under other scheduled rates and items.

PS4.11 SITE FACILITIES AVAILABLE

PS4.11.1 Water Supply

The Contractor will have to make his own arrangements for the provision of potable water for human consumption and other uses and will enter into a consumer agreement with the local government should they obtain it from them. Water for construction purposes should be obtained from natural stream flow.

PS4.11.2 Power Supply

The Contractor will have to make his own arrangement for a temporary power supply to his camp, if so required, with Eskom.

PS4.11.3 Camp Sites

Arrangements have been made with the Local Municipality to locate the site camp as shown on the drawings. The Contractor may locate at other sites, but must obtain and submit appropriate rental documentation.

Will be indicated during the tender meeting and site inspection.

PS4.11.4 Telephone Facilities

The Contractor will have to make his own arrangements with this authority.

PS4.11.5 Rail Facilities

Rail facilities are available at Queenstown.

PS4.11.6 Housing

No housing is available for the Contractor's employees, and the Contractor shall make his own arrangements to house his permanent employees and to transport them to the site of the Works.

PS4.11.7 Crushed Stone

Crushed stone for concrete will have to be obtained from a commercial quarry operating from Komani or similar.

PS4.11.8 Sand for Concrete

Must be obtained from commercial sources

PS4.12 SITE FACILITIES REQUIRED**PS4.12.1 Engineer's Office**

Offices are required as per specification.

PS4.12.3 Engineer's Survey Equipment

None required.

PS5 MANAGEMENT**PS5.1 PROGRAMMING**

The Contractor shall submit to the Engineer a detailed construction program within 14 days of the written instruction to commence work. The program shall be prepared on the basis that the works will be completed over a period not exceeding 6 months. The program shall be supported by bar chart and or critical path network and shall also reflect the projected cash flows.

Hard copy and electronic program updates in MS Project shall be submitted 3 days prior to the monthly site meeting.

The program shall distinguish between the various work packages and sites.

Each work package will show the various main activities and manufacturing lead times.

PS5.2 SEQUENCE OF WORKS

The sequence shall be in accordance with good practice.

PS5.3 METHOD STATEMENTS

Attention is drawn to the method statements required in terms of the Environmental Management Plan.

Other method statements will be required. See also PS 5.5.

PS5.4 SITE RECORDS

Site records will be required. The nature and extent will be agreed with the Engineer.

PS5.5 QUALITY CONTROL PLAN

The Contractor will be required to submit a Quality Control Plan and Procedures for approval by the Engineer for the manufacture of items under the construction methods and sequences.

The Employer or his agent will carry out inspections (e.g. welding and final release certificate inspection) from time to time on all items fabricated off-site.

To avoid delays the Contractor shall give the Engineer/Employer prompt notice of such inspections. Such notice shall not be less than 48 hours.

Approval by the Employer at any stage of fabrication is merely an authorization for the Contractor to proceed with the next stage of fabrication/installation and does not in any way relieve the Contractor of his contractual responsibilities.

The Contractor will be required to work in accordance with a Quality Control Plan where the following "Hold Points" will apply:-

The Road

- 1) Setting out
- 2) Bulk Earthworks
- 3) Varying material
- 4) Stormwater positioning
- 5) Foundation Works
- 6) Sub-grade levels
- 7) Sub-base levels
- 8) Wearing course
- 9) Sampling of material and compaction
- 10) Trimming of site

The Engineer/Clients representative shall inspect production of materials in off-site factories and appropriate access shall be arranged by the Contractor.

PS5.6 OCCUPATIONAL HEALTH AND SAFETY ACT 1993 (OHSA)

The client will appoint an agent in his stead to perform the client's duties in respect of the regulations.

The tenderer shall refer to the particular specification – PA Health and Safety.

The tenderer must allow, in the item provided under preliminary and general, for all costs relating to health in specification not covered in any of the rates tendered in the schedule of quantities.

PART C3.2: CONDITIONS OF SCOPE OF WORK

C3.2.1 RESPONSIBILITIES AND DUTIES

Notwithstanding the fact that a description of the services has been provided above, ECDC shall be entitled to request additional services related to deliverables required to ensure the successful completion of the services set out above on such further terms and conditions as may be agreed between the parties in writing.

The service provider shall at all times faithfully and timeously carry out and perform the Services and shall use its best endeavours to properly conduct, improve, extend and develop the business of ECDC in the provisioning of the services.

The Services Provider shall as part of his duties, attend such meetings as may be required by ECDC from time to time and submit weekly or monthly progress reports on the services as may be required and requested by ECDC.

C3.2.2 OBLIGATION TO PERFORM AND SUB-CONTRACTING

The bidder shall notify ECDC in writing of all subcontracts awarded under this contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the bidder from any liability or obligation under the contract.

The bidder shall not assign, in whole or in part, its obligations to perform under the contract, except with ECDC's prior written consent.

C3.2.3 PERFORMANCE GUARANTEE

Within fourteen (14) days of receipt of the notification of contract award, the successful bidder shall furnish to ECDC the performance security of the amount specified above.

The proceeds of the performance security shall be payable to ECDC as compensation for any loss resulting from the bidder's failure to complete his obligations under the contract.

The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to ECDC and shall be in one of the following forms:

A bank guarantee or an irrevocable letter of credit issued by a reputable bank located in South Africa, acceptable to ECDC, in the form provided in the bid documents or another form acceptable to ECDC; or

A cashier's or certified cheque

The performance security will be discharged by ECDC and returned to the bidder not later than thirty (30) days following the date of completion of the bidder's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.

Notwithstanding the provisions above, the bidder shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in

performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

C3.2.4 ANTI-DUMPING AND COUNTERVAILING DUTIES AND RIGHTS

When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, ECDC is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to ECDC or ECDC may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him.

C3.2.5 ECDC FACILITIES

Unless otherwise agreed in writing by ECDC, the Service Provider will work from its own office and provide its own facilities, such as transport, telephone, cell phone, fax and computer facilities to perform the services.

The service provider may use certain facilities made available by ECDC to assist in performing the services, including but not limited to computer facilities, telephone and fax facilities and stationery. In this regard the service provider agrees to:

Abide by the health, safety and security measures as prescribed by ECDC from time to time;

To use such accommodation and facilities entirely at his own risk and ECDC shall not be liable for any loss or damage whatsoever and howsoever caused arising out of or in connection with the use of these items, other than loss or damage caused as a result of ECDC's own wilful misconduct.

C3.2.6 FORGE MAJEURE

If a force majeure situation arises, the bidder shall promptly notify ECDC in writing of such condition and the case thereof. Unless otherwise directed by ECDC in writing, the bidder shall continue to perform its obligations under the contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

C3.2.7 SPARE PARTS (Not Applicable)

The bidder may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the bidder:

Such spare parts as ECDC may elect to purchase from the bidder, provided that this election shall not relieve the bidder of any warranty obligations under the contract; and In the event of termination of production of the spare parts:

Advance notification to ECDC of the pending termination, in sufficient time to permit ECDC to procure needed requirements; and

Following such termination, furnishing at no cost to ECDC, the blueprints, drawings, and specifications of the spare parts, if requested.

C3.2.8 INSURANCE

The contractor shall affect and maintain all required and/or necessary insurances in accordance with Clause 8.6 and Subclauses of the GCC2015 third edition contract (GCC 2015), as applicable.

C3.2.9 RESPONSIBILITY TO PERFORM

Delivery of the goods and performance of services shall be made by the bidder in accordance with the time schedule prescribed by ECDC in the contract.

If at any time during performance of the contract, the bidder or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the bidder shall promptly notify ECDC in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the bidder's notice, ECDC shall evaluate the situation and may at his discretion extend the bidder's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.

ECDC reserves the right to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the bidder's point of supply is not situated at or near the place where the supplies are required, or the bidder's services are not readily available.

A delay by the bidder in the performance of its delivery obligations may render the bidder liable to the imposition of penalties, unless an extension of time is agreed upon without the application of penalties.

ECDC shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance.

ECDC may also consider termination of the contract.

C3.2.10 DURATION OF THE CONTRACT

The construction project duration is estimated to be **6 Months** from date of appointment.

The successful Bidder shall be required to complete and submit the signed and duly completed **client recommended Services Level Agreement**.

Upon any delay beyond the delivery period in the case of a supplies contract, ECDC shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the bidder's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the bidder. (N/A)

C3.2.11 PAYMENTS AND TAX

Payments shall only be made in accordance with the fees as quoted in this documentation. Prices charged by the bidder for goods delivered and services performed under the contract shall not vary from the prices quoted by the bidder in this bid, with the exception of any price adjustments authorized at ECDC's request for bid validity extension, as the case may be.

ECDC will reimburse the service provider for expenses and disbursements incurred subject to the submission of satisfactory proof that such expenses and disbursements have been incurred and subject to it being within the budget as indicated in this documentation.

The service provider shall from time to time during this contract duration furnish ECDC with a VAT compliant tax invoice accompanied by a copy of the delivery note and upon fulfilment of other obligations stipulated in the contract.

Each invoice must be accompanied by a detailed timesheet and expense claim forms substantiating the amount claimed.

Payments shall be made promptly by ECDC in Rand, but in no case later than thirty (30) days after submission of a VAT compliant tax invoice and supporting documentation by the service provider if the services have been properly executed as agreed.

The service provider shall retain all proof of expenditure and maintain such accounts and records as are reasonably necessary, claimed above, should ECDC require an audit to substantiate that expenditure and allows ECDC's own personnel or an independent auditor access to those records.

Should the above audit reveal that ECDC has been overcharged, the Service Provider will reimburse the ECDC the amount overcharged within 30 days inclusive of interest calculated at prime plus 2% per annum;

A foreign bidder shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Republic of South Africa.

A local bidder shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to ECDC.

C3.2.12 CONTRACTOR'S DOMESTIC SUBCONTRACTORS

The successful bidder shall be required to subcontract, to local emerging Small, Medium, Micro-size Enterprises (SMME's), a minimum percentage of 30% of the works. Bidders shall make allowance in their preliminaries and general for any additional costs in this regard, for example, for the preparation of work packages, management of the subcontractors including site supervision, drafting and conclusion of subcontract agreements, subcontractor OHS plan approvals, etc, that may arise due to this commitment.

A compiled database of the local subcontractors will be made available to the contractor.

The contractor shall appoint all domestic subcontractors in terms of an agreement that provides for fair and equitable conditions of contract compatible with this agreement.

All work or installations and the associated risks related to domestic subcontractors shall be the direct responsibility of the contractor.

Variation in the Scope of Work

The Client retains the right to omit specific sections of the work prior to signing the contract and in the event that such omissions are incorporated in the contract it is hereby agreed that no claim for loss of profit will be entertained. In addition, tenderers are required to price all work in a "stand-alone fashion" so that profit/mark-up etc are such that omission of any of the tendered works will NOT render the remaining contract work viable.

1. Temporary works, etc.

Not required.

2. General

2.1 Damage to other services

The Contractor shall assume full responsibility in the event where he or any person in his service is directly or indirectly responsible for any damages caused to other services already installed (water, sewerage, storm water, roads, surveyors' pegs, etc.) Any such damage shall immediately be reported to the Principal Agent.

The Contractor shall be held fully responsible for the repair of such damage to the satisfaction of the Principal Agent.

The costs for the repair of such damage shall be borne by the Contractor. Claims by the Contractor in this connection will not be considered. Should any portion of the works in terms of this Contract, for which the Contractor is responsible, be damaged by other Contractors, the Contractor shall repair such damage at the tendered rate and shall submit full details of such damage to the Principal Agent so that he can recover such costs from the responsible party.

This repair work may only be done on the written instruction from the Principal Agent. The contractor shall make provision for a full scan of the area to determine the position of services in the area.

3. Local labour and local authorities

Local Labour:

It is intended that the project must make maximum possible use of local labour which is presently unemployed in the area of which the project is performed. All unskilled labour shall be from the Local Municipal Supply area. Engagement of local labour shall be controlled in a formal manner through the client's labour liaison body. It is furthermore expected that the labour liaison body will assist in the monitoring of labour goals.

4. Liaison with Local Authorities

The contractor will have to liaise with local authorities regarding the following matters:

- 4.1.1 Locating of existing underground services.
- 4.1.2 Protection of existing services during construction.

It is the contractor's onus to immediately contact all these authorities and to accommodate their involvement in his programme of work.

The contractor should also warn the authorities at least 48 hours before the actual work commences.

Compensation for delays, losses or accidents will not be considered should the contractor at any time have failed to keep the local authorities informed.

The Principal Agent or employer must immediately be notified, should the contractor experience any problem regarding work, which involves a local authority.

5. Community Liaison and Community Relation

In all dealings with the community and workers employed from within the community, the Contractor shall take due cognisance of the character, culture and circumstances of the community involved and shall at all times use his best endeavours to avoid the development of disputes and to foster a spirit of co-operation and harmony towards the project.

The Contractor shall at all times, keep the Principal Agent fully informed on all matters affecting the contractor and the community, and shall attend all community meetings relating to the project as may be reasonably required by the Principal Agent.

All matters concerning the community shall be discussed and where possible, resolved at such meetings. Where any resolution of a community meeting shall be contrary to the terms and provisions of the Contract, the Contractor shall not give effect thereto without a prior written instruction from the Principal Agent.

Where the Contractor is of the opinion that any instruction of the Principal Agent issued in terms of this clause will result in the incurring of additional costs which were not provided for in his tendered rates and/or that a delay in the progress of the works will result, he shall be entitled to submit a claim in terms of the conditions of contract.

6. Occupational Health and Safety Act (Act 85 of 1993)

Contractors shall meet the health and safety requirements as stipulated in health and safety plan, to be prepared by the Employer's Agent and issued to the contractor.

6.1.1 Safety Precautions

Notwithstanding the fact that the Contractor is solely responsible for the actions of his staff and any duly appointed sub-contractors, the Principal Agent reserves the right for himself, or his nominated representative, to inspect and monitor working methods and materials handling to ensure that safe working practices are being adhered to at all times.

6.1.2 Health and Safety Specifications

Please refer to Annexure A for the Health and Safety Specification and Baseline Risk Assessment.

CONDITIONS SPECIFIC TO THIS BID:

7. SMME Sub-contracting requirements

30% of the building work will be allocated to SMME Sub-contractors where feasible. Contractors will be required to supply verified monthly statements/schedules (verified by their auditors) indicating the % achieved for that month. A cumulative schedule also needs to be maintained for each month that has passed.

7.1 Responsibilities and duties

Notwithstanding the fact that a description of the services has been provided above, ECDC shall be entitled to request additional services related to deliverables required to ensure the successful completion of the services set out above on such further terms and conditions as may be agreed between the parties in writing.

The service provider shall at all times faithfully and timeously carry out and perform the Services and shall use its best endeavours to properly conduct, improve, extend and develop the business of ECDC in the provisioning of the services.

The Services Provider shall as part of his duties, attend such meetings as may be required by ECDC from time to time and submit weekly or monthly progress reports on the services as may be required and requested by ECDC.

7.2 Obligation to perform and sub-contracting

The bidder shall notify ECDC in writing of all subcontracts awarded under this contract if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the bidder from any liability or obligation under the contract.

The bidder shall not assign, in whole or in part, its obligations to perform under the contract, except with ECDC's prior written consent.

7.3 Performance guarantee

Within fourteen (14) days of receipt of the notification of contract award, the successful bidder shall furnish to ECDC the performance security of the amount specified above.

The proceeds of the performance security shall be payable to ECDC as compensation for any loss resulting from the bidder's failure to complete his obligations under the contract.

The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to ECDC and shall be in one of the following forms:

A bank guarantee or an irrevocable letter of credit issued by a reputable bank located in South Africa, acceptable to ECDC, in the form provided in the bid documents or another form acceptable to ECDC; or

A cashier's or certified cheque

The performance security will be discharged by ECDC and returned to the bidder not later than thirty (30) days following the date of completion of the bidder's performance obligations under the contract, including any warranty obligations, unless otherwise specified in SCC.

Notwithstanding the provisions above, the bidder shall not be liable for forfeiture of its

performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.

PARTICULAR SPECIFICATIONS

PARTICULAR SPECIFICATIONS

PA – HEALTH AND SAFETY SPECIFICATION

PROJECT SPECIFIC OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

MANAGED ON BEHALF OF

(THE “CLIENT”)



agriculture, land reform
& rural development

Department:
Agriculture, Land Reform and Rural Development
REPUBLIC OF SOUTH AFRICA

Department of Agriculture, Land Reform and Rural Development (DALRRD)

PREPARED BY:

Lumcus Training and Consulting PTY LTD



PROJECT:

GWATYU ACCESS ROAD

SECTION C: OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS

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C1 INTRODUCTION

C1.1 List of Abbreviations

CHSA	Construction Health and Safety Agent
CHSO	Construction Health and Safety Officer
DALRRD	Department of Agriculture, Land Reform and Rural Development
DME	Department of Mineral and Energy
DMR	Department of Mineral Resources
DoEL	Department of Employment and Labour
DSTI's	Daily Safe Task Instructions
EA	Employers Agent
EAR	Employers Agents Representative
EEA	Employers Environmental Agent
FEMA	Federated Employers Mutual Association
H&S	Health and Safety
HIRA	Hazard Identification Risk Assessment
MH&SA	Mine Health and Safety Act No. 29 of 1996 (as amended)
OHS	Occupational Health and Safety
OHSA	Occupational Health and Safety Act No. 85 of 1993 (as amended)
PSHSS	Project Specific Health and Safety Specification
PC	Principal Contractor
PPC	Personal Protective Clothing
PPE	Personal Protective Equipment
SANS	South African National Standards (Authority)
SoP's	Safe Operating Procedures
SWP	Safe Work Procedure
TMS	Technical Method Statement
WCC	Workman's Compensation Commissioner

C1.2 Definitions

The definitions used will be those set out in the Regulation Gazette No 37305 of 7th February 2014 with the following additions or amendments;

Client:

Hereafter referred to as the Employer in terms of the Contract.

Employers Agent:

Means a competent person appointed by the Client to design, supervise and monitor construction on their behalf.

Hazard Identification and Risk Assessment (HIRA) and Risk Control:

Means a documented plan, which identifies hazards, assesses the risks and details the control measures and safe working procedures which are to be used to mitigate and control the occurrence of hazards and risks during construction or operational phases.

Induction Training:

Means once off introductory training on general health and safety issues given to all employees and visitors to the site before commencement of work on site.

Mine:

Any excavation from which material (soil, gravel, stone etc.) is taken for use on the construction site.

Site:

Means the area in the possession of the Principal Contractor for the construction of the works. Where there is no demarcated boundary it will include all adjacent areas and haul roads which are reasonably required for the activities for the Principal Contractor, and approved for such use by the Engineer.

The Act:

Means, unless the context indicates otherwise, the Occupational Health and Safety Act, No. 85 of 1993 and Regulations promulgated thereunder, as amended.

Health and Safety Plan:

The Pre-Construction Health and Safety Plan is the foundation upon which the health and safety management of the construction phase of a project needs to be based.

Induction Training:

Means once off introductory training on general health and safety issues given to all employees and visitors to the site before commencement of work on site.

Principal Agent:

Means a competent person appointed by the Client to design, supervise and monitor the construction on their behalf.

Risk:

Means the probability or likelihood that a hazard can result in injury or damage.

Regulation/s:

Shall mean the relevant regulation/s promulgated in terms of the Occupational Health and Safety Act, No. 85 of 1993.

Site:

Means the area in the possession of the Principal Contractor for the construction of the works. Where there is no demarcated boundary it will include all adjacent areas, which are reasonably required for the activities for the Principal Contractor, and approved for such use by the Designer.

The Act:

Means, unless the context indicates otherwise, the Occupational Health and Safety Act, No. 85 of 1993 and Regulations promulgated thereunder, as amended.

Worker:

means any person who works in an employer's workplace including an employee of the employer or contractor, a self-employed person or volunteer 3;

Workplace:

means any premises or place where a person performs work;

C1.3 Key Role-Players

Client	DALRRD represented by the Head of Department and/or such other person or persons, authorised thereto in writing.
Designer / Engineer	As appointed in terms of the Contract. The Designer/Engineer as referred to in CR6 is hereafter referred to as the Employers Agent.
CHS Agent	As appointed by the Employer in terms of CR5.2(5) of the OHS Act
Principal Contractor	As appointed in terms of CR5.1(k) of the OHS Act.
Contractor	A Contractor appointed by the Principal Contractor in terms of CR7.1(c)(v) of the OHS Act.

C1.4 Key References

Occupational Health and Safety Act No. 85 of 1993 and Regulations (as amended)
Mine Health and Safety Act and Regulations No. 29 of 1996 (as amended)
Compensation for Injury and Occupational Diseases Act No. 100 of 1993 (as amended)
Committee of Land Transport Officials (COLTO) South African Roads Specifications for Road and Bridge Construction
South African National Standards
General Conditions of Contract 2015 (GCC) Edition 3
Traffic Safety Manual (SARTSM) Chapter 13, Volume 2 of 1999
Road Traffic Act No. 93 of 1996 (as amended)
Compensation for Injury and Occupational Diseases Act No. 100 of 1993 (as amended)

C2 PURPOSE OF THIS PROJECT SPECIFIC HEALTH AND SAFETY SPECIFICATION (PSHSS)

This PSHSS highlights the aspects to be implemented over and above the minimum requirements of current legislation. Requirements may be changed should new risks or issues be identified that could not have been foreseen during the design phase of the project.

C2.1 Preamble

Each year fatalities and serious injuries mar the reputation of the Construction Industry. The DALRRD has a responsibility to limit such injuries by ensuring a zero tolerance approach to Contractors and those affiliated to a particular project. Thus a high premium is placed on the Health and Safety DALRRD stakeholders, which include its employees, professional service providers, public and its physical assets. The responsibilities that the DALRRD and relevant stakeholders have toward its employees are captured in this document. The responsibilities stem from both moral, civil and a variety of legal obligations.

The Principal Contractor is to take due cognisance of the above statement.

This PSHSS is a performance specification to ensure that the DALRRD and any bodies that enter into formal agreements with the DALRRD, i.e. Engineers, Principal Contractors (PC) and Contractors, achieve an acceptable level of OHS compliance.

No advice, approval of any document required by this PSHSS (i.e. hazard identification and risk assessment, action plans) or any other form of communication from the Client shall be construed as an acceptance by the Client. Nor shall such communication relieve or absolve the PC from any obligation or from achieving compliance with legal requirements. The PC remains responsible for achieving the required performance levels.

C3 IMPLEMENTATION OF THE PROJECT SPECIFIC HEALTH AND SAFETY SPECIFICATION (PSHSS)

This PSHSS forms an integral part of the Contract, and the Principal Contractor is required to make it an integral part of their Contracts with Contractors and Suppliers. A PSHSS is to be available for each level of Contract and Contractor, and must be complied with.

This PSHSS must be read in conjunction with the OHSA, its Regulations (as amended) and any other standards relating to work being done, and ensure compliance thereto. The information relative to the

scope of the project, the works etc. is detailed in the tender document, and is to be taken into account when developing the H&S Plan and associated documentation.

The Employers baseline design risk assessment is included, as is a summary of risks identified. Refer to **Annexure J** in these specifications

C3.1 Summary of Risks Identified During Design

- C3.1.1 General Requirements and Provisions (Series 1000)
- C3.1.2 Drainage (Series 2000)
- C3.1.3 Earthworks (Series 3000)
- C3.1.5 Ancillary Roadwork's (Series 5000)
- C3.1.9 Specified Hazardous Chemical Substances

Should there be design changes, or change in the scope of works, an amended PSHSS may be issued. Where amended PSHSSs are issued, the PC will be required to ensure a resubmission of an amended H&S Plan and OHS BoQ for approval. Further to this, the PC must ensure that a similar system must be implemented between all their Contractors and Suppliers.

C4 REQUIREMENTS AT TENDER STAGE

C4.1 Documentation required from the Tenderer;

- C4.1.1 Declaration – Fulfilment of the Construction Regulations 7th February 2014 and any subsequent additions
- C4.1.2 OHS BoQ - Adequate pricing for Occupational Health and Safety is required, and the appropriate section in the BoQ is to be completed.

These documents can be found in the Tender Document and are to be completed by the tenderer where applicable. These documents shall be deemed to form part of the returnable Contract Documents.

C5 REQUIREMENTS PRE-COMMENCEMENT OF WORKS

C5.1 Documentation required from the Principal Contractor;

- C5.1.1 The successful tenderer must provide a Project Specific Health and Safety Plan within 14 days of the award of the tender. Refer to “**Annexure A**” in these specifications.
- C5.1.2 Mandatory Agreement “SECTION 37.2”

C5.2 Documentation required from the Employers Agent;

- C5.2.1 Construction Specification and Scope of Works
- C5.2.2 Contract Construction Drawings
- C5.2.3 Geotechnical Reports

C5.3 Documentation required by the Employer or his/her appointed CHSA;

- C5.3.1 Letter of Approval of the PC’s OHS Plan.
- C5.3.2 Notification of “CONSTRUCTION WORK ANNEXURE 2”

The Contractor must acquire a “Notification of construction work” from the Department of Employment and Labour.

Work may not commence without the “Notification to do Construction Work” form being completed by the contractor and accepted by the Department of Employment and Labour. This includes, inter alia, the Contractor’s Health and safety Plan as accepted by the Client

It should be noted that this OHSS in no way relieves the Contractor of any of his responsibilities set out in the Act and Regulations.

The Principal Contractor must keep a copy of the notification of construction work in the health and safety file.

Should any changes be made to the Construction manager and Construction health and safety officer as per the submitted notification of construction work, the Principal Contractor must ensure to amend the annexure 2 as submitted to the Department of Employment and Labour.

C6 REQUIREMENTS FOR COMMENCEMENT OF THE WORKS

No work may commence until the following has been complied with;

Notification of Construction work issued by the Department of Employment and Labour to the Employer/CHSA
Health and Safety File approval by the Health and Safety Agent.

C7 REQUIREMENTS DURING THE CONSTRUCTION STAGE

C7.1 Requirements from the Principal Contractor

- C7.1.1 Compilation and continuous updating of the H&S Plan. Refer to “**Annexure B**” in these specifications
- C7.1.2 Action plans as well as close out reports for all non-conformances issued by the Employer, his/her Agent, CHSA or any other parties who have the necessary powers to conduct legal inspections on the construction site
- C7.1.3 Construction Appointments. Refer to “**Annexure C**” in these specifications.

C7.2 Requirements from the Employer/CHSA

- C7.2.1 Conduct at least a monthly or more frequently if deemed necessary OHS Compliance Audit of the PC's H&S File as well as the Works
- C7.2.2 All activities on the site and all appropriate documentation will be monitored and reported on to the Client, Engineer and PC.
- C7.2.3 Discuss all findings of an audit with the PC and/or his/her representative
- C7.2.4 Submit an audit report with findings within seven (7) days of the actual audit taking place
- C7.2.5 Issue the PC with a non-conformance report within seven (7) days for action by the PC
- C7.2.6 Non-conformance close out to be completed within 3 days of issue of audit report.
- C7.2.6 Penalties or work stoppage instructions will be issued where appropriate.
- C7.2.7 Communication between the CHSA and the PC will be through the Employers Agent.

C8 APPOINTMENTS

C8.1 Appointment of Competent Site Personnel

The CEO (OHSA S16.1) of the PC will take overall responsibility for the appointment of competent site personnel for the duration of the contract. Should the CEO not be personally involved in the project, the H&S responsibilities are to be delegated to the Construction Manager (OHSA 16.2. and CR8.1)

In terms of the OHSA the PC is required to make the following minimum appointments for the duration of the Contract (or part thereof).

C8.1.1 Construction Manager (CR8.1)

- Appointment of the Construction Manager (CR8.1) is subject to approval by the Employer in terms of the Contract Data
- In the absence of the CR8(1) an alternate manager suitably qualified shall be appointed to manage the site.

C8.1.2 Assistant Construction Managers (CR8.2)

Appointment of Assistant Construction Manager(s) (CR8.2) is subject to the size and complexity of the Contract as determined by the PC.

C8.1.3 Construction Work Supervisors (CR8.7)

Appointment of construction work supervisors shall be concluded by the construction manager for construction activities.

C8.1.4 Construction Health and Safety Officer (CR8.5)

PC's H&S obligations

For this Contract it is a requirement that the PC appoint at least one (1) approved full-time CHSO to manage the on site OHS for the duration of the Contract.

The above CHSO's will report directly to the Construction Manager and The PC's Construction Health and Safety Manager.(if applicable)

Targeted subcontractor(s) H&S obligations

Furthermore to the above the PC is required to appoint an additional at least one (1) approved full-time CHSO to manage the appointed targeted subcontractor work packages on site for the duration of the works.

Please note that the full time CHSO appointed to manage the H&S obligations of targeted subcontractor(s) shall be assisted by Health and Safety Representatives (as referred to in "Clause C8.2.2" of this specification) as appointed by the targeted subcontractor(s). The targeted subcontractor CHSO will report directly to the PC CHSO.

CHSO's CV's , qualifications and SACPCMP registration certificates are to be submitted to the Engineer and CHSA for approval.

Candidate Construction Health and Safety Officers will not be accepted.

Approval of the CHSO's is subject to the following minimum requirements:

Professionally registered with the South African Council for the Project and Construction Management Professions (SACPCMP) at a minimum as a Professional Construction Health and Safety Officer (Pr CHSO).

Accredited Qualifications regarding the Occupational Health and Safety Act Procedures and Regulations.

Valid South African driver's license

Minimum two (2) years' experience related to Health and Safety on road construction projects.

The PC is required to provide each of the approved CHSO's with the following minimum resources:

Suitable dedicated construction vehicle

Mobile phone and airtime

Computer with internet access and printer

Camera with; Time, Date and GPS stamp facilities

Vehicle dash camera for daily site video recording. (Allow for digital storage capacity)

Two way radios for communication

Any other equipment or facilities to enable him/her to carry out their duties effectively

Restrictions applicable to the approved CHSO's:

May not be appointed or be responsible for any other work activity on site.

May not be appointed as the Traffic Safety Officer in terms Clause B1502 (i), Section B, Part 3 of 4 of the Contract.

In the case of a contract where Contractors are employed, the CHSO must have the competence to evaluate the Contractors Health and Safety Plans.

The Construction Manager assisted by the CHSO's will be held responsible for all H&S on the project. Senior Site Staff, Supervisors and Contractors are to follow systems, instructions etc. given by the CHSO at all times. No new workers or Contractors may commence work without the required site inductions and approval of the H&S Plan as submitted by Contractors.

The CHSO will be responsible for ensuring that daily Traffic Management is adequately managed for the entire construction site.

A monthly report compiled by the CHSO of all H&S activities and incidents is required by the end of the first week of each month, or at a date agreed to by the CHSA and the CHSO. Refer to "Annexure G" in these specifications.

The CHSO will be responsible for collating the H&S documentation (electronically) at the close out of the project. A list of the typical aspects are included in these specifications. Refer to "Annexure D" in these specifications.

If the CHSO is replaced the Principal contractor is required to submit the changes and update the Annexure 2 with the Department of Employment and Labour:

1. Applicant CV
2. Applicant Competency
3. SACPCMP Letter of Goodstanding

Failure to do so will be considered a serious offence and penalties /stoppage of site will apply.

C8.2 Health and Safety Representatives and Committee (OHS Act 17 & 19)

C8.2.1 H&S Representatives are to be appointed following the start-up of the project, to be made up from both Principal Contractor, Contractors and targeted labour. Representatives from targeted labour can be appointed to represent such labour for the duration of the contract. Targeted labour should not be responsible for H&S duties unless appropriate training has been provided and the CHSO deems such labour competent to do so. Development in H&S of such labour would be an advantage to the community and the PC. H&S Representatives are to be actively involved with H&S and serve on the H&S Committee.

The CHSO shall ensure that there is a H&S Committee made up of active site staff and H&S Representatives, representing each work area, including all Contractors. Meetings will be held at least monthly, and more frequently if so instructed. Key site staff is to be appointed. Issues arising from the CHSA audits are to be discussed, as well as all H&S related issues.

Minutes are to be distributed and discussed among all workers and Contractors and records kept thereof.

H&S Committee Meetings are to be held in the first week of each month

C8.2.2 The Health and safety Representatives as appointed by the targeted subcontractor Contractors will also be required to train Safety Representatives for their respective works packages in the following fields to assist the CHSO appointed to manage the H&S for the targeted subcontractor's

Safety Representative
HIRA
Incident Investigation
Level One First Aid
Basic Fire Fighting

C8.3 Appointment of Competent Contractors (CR7.3)

C8.3.1 The Principal Contractor is to ensure compliance with the Clients minimum standards and all legislative requirements. The same H&S standards required of the PC are to be applied to all Contractors. A register of all Contractors and Suppliers is to be on file and kept updated at all times. The PC is to ensure there is sufficient funding for H&S compliance by each Contractor.

The following minimum aspects are applicable to any Contractor appointed:

The CHSO is to ensure a Contractors appointment and approval of H&S documentation at least seven (7) working days prior to commencing work.

No Contractor may work under the PCs Compensation Registration Number. If required the PC may assist targeted subcontractors with their registration with the Compensation Commissioner. However, such Contractors will not be able to commence work until proof of registration or Letter of Good Standing has been received.

No work may commence without the following documentation in place:

- * The Contractor is to have an appointment letter
- * Mandatory (37.2) agreements between parties in place.
- * Valid letters of Good Standing or proof of application (not older than 3 months)
- * OHS Plan Approval Letter issued by the PC

C8.3.2 The following aspects are applicable to Suppliers or short-term works (surveying, repairs, servicing, deliveries etc.). Cognisance is to be taken of the level of risk involved and the CHSO is to ensure the level of H&S documentation is appropriate:

Mandatory Agreements in place
Letter of Good Standing
TMS and Risk Assessments
Competencies for drivers and operators of delivery vehicles

C9 GENERAL RISK MANAGEMENT

C9.1 Health Risks and Medical Surveillance

A Contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed as per **Annexure I** and issued by an Occupational Health Practitioner CR7.8.

Medical surveillance will commence at pre-employment. All workers (including Professional Team, Principal Contractor and Contractors) are required to be in possession of a medical certificate of fitness prior to commencing work. Annual medical surveillance is required (unless identified as being required more frequently), as well as an exit medical.

Given the potential health risks the following aspects are to be included in each medical surveillance intervention:

Full medical, surgical and occupational history;
Full physical examination of all systems, and
Referral if required for the management of identified health issues that may affect the worker.

Specific testing for existing conditions and limitations relative to exposure could include, but are not limited to:

Audiometry (hearing tests);
Spirometry (lung function testing);
Chest X-rays;
Liver function testing (volatiles), and
Any other tests identified as relevant

C9.1.1 Noise Risks

All plant and equipment is to be measured for noise levels as soon as the majority of plant is on site (including Contractors construction plant and equipment).

The CHSO shall provide a list of all plant on site with their individual noise levels as assessed. Findings are to be discussed at the H&S Committee and H&S Representatives and Supervisors are to ensure that noise zones are identified and wearing of the appropriate PPE is enforced.

C9.1.2 General Environmental Conditions

Compliance with the Environmental Regulations (as amended), among others is required. Environmental monitoring of ventilation, lighting and dusts may be deemed to be required by the Approved Inspection Authority used to measure the environment.

Copies of the relevant reports and actions taken in respect of these are to be placed in the H&S file. Testing and reporting for airborne silica as required by the 2021 amendment to the HCA Regulations is required.

The contractor is required to ensure that any oil spillages from plant and equipment must be treated immediately.

Drip trays shall also be provided in construction areas for all stationary plant (such as compressors) and for "parked" plant.

All vehicles and equipment shall be kept in good working order and serviced regularly. Leaking equipment shall be repaired immediately or removed from the Site.

Contractor to ensure that maintenance of all plant and equipment to be done in designated workshop where, drip trays shall be used to collect the waste oil and other lubricants.

Failure to do so will be considered a serious offence.

C9.2 Emergency Procedures

Attention to emergency planning and procedures is very important. The full emergency plan must form part of the supporting documentation with the H&S Plan. The CHSA approval of all emergency plans and procedures is required prior to commencement on site. It is advised that the system should be simple and easy for any worker to follow. The plan must be updated should new information or risks be identified.

First aiders shall be available in each working team, and be able to work as a team when responding to any emergency on the project.

The procedure shall detail the response plan in relation to the works, and include at least (but are not limited to) the following key elements:

Appointment of a competent emergency response co-ordinator and wardens;

Lists of first aiders, and

Requirement in terms of identified risks:

Fire;

Explosions;

Falls from heights, and

Motor vehicle accidents.

The emergency plan is to ensure the inclusion of relevant local service providers. Such arrangements should be made with these persons prior to the commencement of the project. Local emergency telephone numbers must be displayed and made part of the emergency procedure.

C9.2.1 First Aiders and First Aid Equipment

Competent, trained First Aiders are to be formally appointed for the project. If the project is in a remote area, at least 3 workers are to be trained to Level 3. In urban areas and close to medical assistance 2 Level 3 first aiders are required. First aiders are to be available at all times and be able to cover each working team. Further first aiders from the community or targeted subcontractors, if not already accredited, are to be sent for SAQA accredited first aid training. Contractors are expected to ensure compliance and manage their own first aiders and equipment.

The PC shall provide an on-site First Aid Station with first aid facilities, including first aid boxes containing, at least the requirements to manage the type of emergencies identified. All Supervisors are to carry a Regulation 3 first aid kit in their vehicles at all times.

C9.2.2 Fires and Emergency Management

The PC shall ensure that any fire risks will be managed appropriately. Trained fire fighters shall be appointed at offices or areas where fire risks are deemed high. The emergency plan shall include the risk of fire at site camps, on site and related to any specific activities.

Fire extinguishers are to be appropriate for the risk and in sufficient numbers to deal with the type of fires that could occur. Every item of heavy plant, e.g. Graders, TLBs, Rollers etc., must be fitted with at least a 4.5Kg DCP fire extinguisher.

C9.2.3 Incident Management and Compensation Claims

The PC will ensure there is a management system to investigate all incidents. All serious incidents involving any form of disabling injury or fatality are to be reported to the Engineer and CHSA telephonically immediately. This shall be confirmed in writing as soon as possible after the incident. Full details are to be included in the H&S meetings, and each site meeting. The details are also to be included in the CHSO monthly report.

Any person who contracts the Covid-19 Virus may need to be reported to the Compensation Commissioner as an occupational disease where their work is to monitor and in contact with others. Such details are provided in the Compensation for Injuries and Diseases Act (COIDA).

Failure to comply with emergency provisions will be considered a serious offence, and the operation or project may be stopped if deemed inadequate for the work at the time of assessment or site inspection.

C9.3 Personal Protective Equipment (PPE) and Clothing (PPC)

The wearing of the identified SANS approved PPE and PPC at all times is non-negotiable. The PC shall ensure that all workers (Including Contractors and other PCs) are issued with and shall wear PPE/PPC as per the OHS BoQ.

Adequate quantities of PPE shall be kept on site at all times. This shall include necessary PPE for visitors.

C9.4 Occupational Health and Safety Signage

On-site H&S signage is required. Signage shall be posted up at the appropriate fixed or temporary working areas, on scaffolding, and other potential risk areas/operations including vehicles. These signs shall be in accordance with the requirements of the General Safety Regulations or SANS requirements as amended. Signage is to be noted on the site drawings indicating where fixed signage is required.

Signage is to include (but not be limited to) the following:

'no unauthorised entry';
'report to site office';
'site office';
'beware of overhead work';
'hard hat area' or other PPE / PPC requirements noted;
First aid box positions (including vehicles), and
Fire extinguishers

Signs shall be posted permanently or temporarily at areas of work onsite indicating that a construction site is being entered and that persons should take note of safety requirements.

The Contractor shall establish a system for controlling and recording entrance to the Site Office and camp area, which shall include a visitors site induction

C9.5 Induction of Employees and Visitors, General H&S Training

A formal induction programme is to be submitted as an addendum for approval with the H&S plan. Inductions must be carried out for all workers and visitors to the site. Pre-task training is required to ensure workers are familiar with the risks and H&S measures of the work or tasks to be done. Such training is to be done at least daily. Records of inductions and pre-task training are to be kept in the H&S file.

Any person found on site without proof of induction will be removed from site until the proof of their induction is supplied.

C9.6 Testing Laboratory and the use of Radioactive Equipment

A joint laboratory may be required, or a service provider will be appointed for the project. The service provider will be seen as a Contractor, or where appointed as a joint laboratory, as a PC. All the H&S rules and requirements are to be met. Where appointed as a PC, the CHSA will be responsible for approving the initial H&S plan and ensuring on-going compliance. All other requirements of the construction PC are to be met. Each PC is to be familiar with the H&S rules of each party. Mandatory Agreements, Inductions and Emergency requirements among other are to be addressed and managed to ensure limitation of H&S risks.

The use of radioactive equipment for the measuring of compaction parameters shall conform to the requirements of the "Code of Practice for the safe use of soil moisture and density gauges containing radioactive sources" as published by the Department of Health: Directorate: Radiation Control Soil revised September 2001. TMS, risk assessments and the appropriate training will be required.

C9.8 Quarries, Borrow Pits

It must be noted that the use of quarries and borrow pits falls under the Mine Health and Safety Act 29 of 1966 and its Regulations. Work in these areas must comply with these requirements and separate appointments and CoP's will be required.

Where single or multistage crushers are established on site, for quarries or borrow pits, the requirements of the MH&SA as well as the OH&SA and Regulations shall apply.

The Department of Mineral Resources (DMR), as well as the CHSA will carry out audits on this aspect of the project. Non-conformances raised by either party will require closeout within specified time periods negotiated at the time.

C9.9 Management of Plant and Equipment

A substantial amount of large plant and equipment will be used. Close control of the PCs plant and equipment is required, including that of Contractors.

Daily monitoring of all plant and equipment is required prior to commencing work. Full lists of hired and own plant are to be available during the CHSA's audit. Copies of all daily inspection records are to be retained in the H&S file. Registers are not to be more than 1 week behind. Plant Hire or Haulage Contractors are to comply with the requirements, and comply with all H&S standards for the project. All supervisory vehicles and construction plant are to be fitted with beacon/s *capable of emitting an intermittently-flashing amber light in any direction.*

All operators on site are to be competent and medically fit.

The following documentation is to be supplied for each operator on site:

- Valid medical certificate issued by an OH Practitioner and Annexure 3
- Valid driver's licence
- Applicable PrDP for vehicle or plant
- Appointment letter
- Competency certificate for the specific vehicle or plant to be operated

Movement of plant in closures and in confined working areas is to be closely monitored and managed by the CHSO and CTSO and Supervisors. The blind spots of plant are to be taken into account and workers and Contractors protected accordingly.

C9.10 Excavations

Steep slopes require careful management. A Geotechnical report is available and is to be utilised to assess ground conditions. Shoring may be required, where indicated in the Geotechnical report or by the Engineer. The PC is to ensure that the Community Liaison Officer (CLO) and the local community, schools and general public are aware of the dangers of open excavations.

All excavations are to be securely barricaded at all times. Only barrier netting will be allowed. Initial barricading will be the responsibility of the Excavation Inspector. Once the excavations have been barricaded this information will be submitted to the CHSO for continuous monitoring. Continuous monitoring of all barricading around excavations will be the responsibility of the Excavations Inspector CM, CHSO and CTSO.

C9.11 Inclement Weather

High levels of humidity and temperatures during the summer months may be experienced. Workers are at greater risk of heat exhaustion where the discomfort index rises above 100. A weather station has been allowed for to monitor temperature and humidity specifically. Should the discomfort index rise above 105, work may be partially or totally stopped.

During winter in areas known for cold weather, notice must be taken of the wind-chill factor. Workers must be supplied with adequate protective clothing and shelters provided as necessary.

Flooding may occur during the rainy season. High winds may be experienced and to limit dust or danger when working at heights, a wind speed should be set at which work may be stopped or the workers in an affected area moved.

The emergency plan is to include how these and other weather extremes identified are to be managed. The general aspects as detailed in the Environmental Regulations will be applied.

All decisions regarding work stoppage will be decided between the PC, the CHSO and the Engineer.

C9.12 Internal Auditing

The PC will ensure that all their Contractors are internally audited by the CHSO at least monthly prior to the CHSA monthly audit by the CHSO and these audit reports are to be available for perusal by the CHSA during the audit.

The PC audits may be done more frequently where short term contracts are in place, or deemed high risk. Audit results will be acted upon and non-conformances and penalties issued. The Client, Engineer or CHSA may act or require further outcomes if non-compliances are noted or unsafe acts are noted on site. Internal audits are to include site conditions as well as ensuring H&S files are appropriate, and compliant.

C9.13 Communication on Site

All communication on site will be done through the Engineer to the PC and be in writing, including the issue and responses to non-conformances and H&S audit results.

C9.14 Care of Workers on Site (Welfare)

Toilets for each sex where applicable, will be within reasonable distance of workers, or placed with each working team in safety, with reasonable privacy. Only bacterial or enzyme based products may be used in portable toilets; the use of products containing Formaldehyde is not allowed. The ratio of portable toilets on site will be a minimum of 1:30. Daily cleaning and increased removal of waste may be required if deemed necessary. Proof of safe disposal of waste will be required. Waste Removal Contractors or the PC are to ensure the appropriate H&S systems are available to limit exposure to sewage.

Hand washing facilities will be provided. The Environmental and Facilities Regulations will be adhered to at all times.

C9.15 Discipline, Alcohol and Substance Abuse

All employees (management included) are to follow instructions given in the interest of H&S. Disciplinary action is to be imposed on those who do not follow such instructions or company rules or policies.

No person is allowed to work or access site if under the influence of alcohol or other substances that could impact on their own or others safety. The PC is to have a drug and alcohol policy available to manage such instances.

C9.16 Electrical Equipment

In addition to the requirements of the Electrical Machinery Regulations and the General Machinery Regulations any electrical distribution board used for construction work shall be fitted with suitable earth leakage protection. Leads must be properly and firmly connected, they should be so placed as to avoid damage especially if they cross portions of the site. Plugs and sockets shall be in good and safe condition.

All electrical apparatus, other than electrical hand tools, shall have a physical "lock out" system which will prevent any operation other than that authorized by a supervisor. A "lock out" sign shall be displayed when the apparatus is not in use.

TMS and Safe Work Procedures will be required for all work involving electrical apparatus.

The relevant certificate of compliance (COC) must be issued for the site camp and any other establishment with regards to the project.

C9.17 Traffic Accommodation

Traffic accommodation is covered under section 1500 of the COLTO specifications which form part of this contract and as amended by the requirements listed in the Amendments to the Standard Specification.

Traffic accommodation drawings will be according to SARTSM Chapter 13 Volume 2, and any changes suggested or required are to be discussed with the Engineer.

Speed controls must be clearly stipulated and managed.

Speed limits must be strictly adhered to by all construction traffic. Unreasonable limits may be revised by the Engineer and/or CHSA. Additional care must be taken where workers and construction traffic interface. This should be in the form of trained competent flag persons to direct vehicular traffic and adequate signage as directed by the Engineer.

C9.18 Transportation of Workers to and on Site

Transportation of workers shall comply with the relevant legislative requirements. Vehicles used to transport workers to, from, or on site, shall have secure seats with seat belts and be covered. No equipment or materials shall be transported in the same vehicle at the same time as workers.

The CTO's and their teams are to have vehicles which are designed to safely transport employees as well as equipment at the same time. Preferably crew cab type vehicles.

Tenderers must indicate in their OHS Plans what type of transport is envisaged for the general employees and how this will be managed.

C10 HEALTH AND SAFETY FILE CLOSEOUT AT THE END OF THE PROJECT

The H&S File shall be closed out following the hand-over of the project.

For closeout requirements refer to “Annexure D” in these specifications.

C11 NON-CONFORMANCES

Should, at any time, the works, or part of the works, be stopped due to unsafe acts or non-compliance with the Clients or PCs H&S Plan; neither the PC nor any other Contractor shall have a claim for extension of time or any other compensation.

The following constitute examples of the types of non-conformances that will attract penalties:

Minor Penalty: R500.00 / count	Medium Penalty: R1000.00 / count and a non-conformance	Severe Penalty: R5000.00 / count, a non-conformance and / or activity stoppage
Non-use of PPE supplied	Toilets not supplied or regularly serviced Lack of drinking water	Contractors working without Health and Safety Plan approval
Non completion of registers for plant and equipment on site	Contractors not audited	Workers transported in contravention of the OHS plan or legal requirements
Lack of H&S signage at work areas	Working without training or the appropriate H&S TMS	Invalid Letters of Good Standing
Tools and equipment identified in poor condition during inspections	Legal non-conformances identified during the previous audit and not addressed within the agreed time frame	Non-compliance with traffic accommodation requirements: layout or physical conditions
	No monthly OHS report at site meeting to report on	Fall protection harness not tied off / not worn
	No certificates of fitness for workers as required	Any breach of legal requirements
	Working without approved TMS	

C11.1 Failure to Comply with Provisions

Failure or refusal on the part of the contractor to take the necessary steps to ensure the safety of workers and the general public in accordance with these specifications or as required by statutory authorities or ordered by the engineer or the Client’s H&S Agent, shall be sufficient cause for the engineer to apply penalties as follows:

- C11.1.1 A penalty as shown in the Table above shall be deducted for each and every occurrence of non-compliance with any of the requirements of the PSHSS.
- C11.1.2 In addition a time-related penalty of R500.00 per hour over and above the fixed penalty shall be deducted for non-compliance to rectify any non-conformance within the allowable time after a site instruction to this effect has been given by the ER or Engineer. The site instruction shall state the agreed time, which shall be the time in hours for reinstatement of the defects. Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

FAILURE TO COMPLY WITH ANY OF THE ABOVE AS WELL AS ANY OTHER LEGAL REQUIREMENT WILL BE CONSIDERED A SERIOUS OFFENCE.

C12 MEASUREMENT AND PAYMENT

Payment items to cover the Principal Contractor’s cost related to Occupational Health and Safety Compliance are included in the bill of quantities. These items are described under SCHEDULE A – GENERAL in SECTION C: OCCUPATIONAL HEALTH AND SAFETY in SECTION C : OCCUPATIONAL HEALTH AND SAFETY.

Item **Unit**

C10.01 Preparation of Principal Contractor's site specific Health and Safety Planlump sum

The lump sum tendered shall include full compensation for the Principal Contractor to prepare and submit, for approval by the Employer’s Health and Safety Agent, a site specific health and safety plan as detailed in these specifications.

Payment of the once-off tendered lump sum shall be made only once the Employer’s Agent has issued the instruction to commence the works.

Item **Unit**

C10.02 Principal Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulationslump sum

The lump sum tendered shall include full compensation for the Principal Contractor’s initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations as detailed in these specifications.

Payment of the once-off tendered lump sum shall be made only once the Employer’s Health and Safety Agent has verified that the Principal Contractor has fulfilled the required initial obligations.

Item **Unit**

C10.03 Principal Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulationsmonth

The tendered rate per month represents full compensation for that part of the Principal Contractor’s obligations in respect of the Occupational Health and Safety Act and Construction Regulations which are mainly a function of construction time.

The tendered rate will be paid monthly, pro-rata for parts of a month, from the date on which the Employer’s Agent issue the instruction to commence the works to the date on which the Employer’s Agent issue the Certificate of Completion in terms of the contract.

Payment shall be made when the Employer’s Health and Safety Agent has verified the Principal Contractor’s compliance as part of his monthly audit report.

Item **Unit**

C10.04 Provision of personal protective equipment (PPE):

(a to) As per Bill of Quantities..... number (No)

The unit of measurement shall be the number of each type of PPE, specified in the bill of quantities, issued to targeted labours employed by the Principal Contractor in terms of the contract.

The tendered rate shall include full compensation for the procurement, delivery, storage, issuing and maintenance (replacement PPE) of all PPE required by targeted labours of the Principal Contractor. Payment shall be based on first time issuing of PPE, specified in the bill of quantities, to targeted labours employed by the Principal Contractor in terms of the contract. The issue register for PPE as kept by the Construction Health and Safety Officer shall be used to verify quantities of PPE claimed under this item.

General:

Only first PPE items, specified in the bill of quantities, issued to targeted labours employed by the Principal Contractor shall be paid for under this pay item. Replacement PPE issued to targeted labours shall not be paid for under this pay item and the cost thereof shall be deemed to be included in the rate of each type of PPE as specified in the bill of quantities. Any other PPE, not specified in the bill of quantities, issued to targeted labours such as standard overalls and standard workshop safety equipment shall be at the Principal Contractor's own cost.

The cost of required PPE for the Principal Contractor's site staff, operators and skilled labours shall be at the Principal Contractor own cost.

Item **Unit**

C10.05 Provision of full time Construction Health and Safety Officer:

- (a) To manage the Principal Contractor's H&S obligations on site (No. required).....month
- (b) To manage the appointed targeted subcontractor's H&S obligations on site (No. required).....month

The tendered rate per month represents full compensation for providing full time Construction Health and Safety Officer(s) in terms of these specifications; to manage the Principal Contractor's H&S obligations on site for subitem C10.05(a) and to manage the appointed targeted subcontractor's H&S obligations on site for subitem C10.05(b).

The tendered rate shall include full compensation for employment of full time Construction Health and Safety Officer(s) in terms of these specifications, overheads, provision of transport and all other equipment and resources necessary to carry out their duties effectively.

The tendered rate will be paid monthly, pro-rata for parts of a month for:

Subitem C10.05(a), from the date on which the Employer's Agent issue the instruction to commence the works to the date on which the Employer's Agent issue the Certificate of Completion in terms of the contract

Subitem C10.05(b), from the date on which the first targeted subcontractor is appointed by the Principal Contractor to the completion of the last targeted subcontractor works.

Item **Unit**

C10.06 Costs of medical certificates and medical surveillance:

- (a) Initial (baseline) medical, including audiometric and lung function testingNumber (No)
- (b) Annual or Periodic examinationsNumber (No)
- (c) Exist examinationsNumber (No)

The unit of measurement shall be the number of medical testing and surveillance of targeted labours employed by the Principal Contractor in terms of the contract.

The tendered rates shall include full compensation for the obtaining of baseline, periodic (at least annually) and exit medical certification and conducting medical surveillance for all workers and especially operators of construction vehicles and mobile plant as contemplated in CR 23; Workers at Heights CR16 and workers exposed to hazardous chemicals including bituminous fumes under Regulation 7 of the HCSR; for temporary workers and workers exposed to noises at or above the limits given in the Noise-Induced Hearing Loss Regulations, as stipulated above.

Chest X-rays will be required in the case of targeted labours who may be exposed to high concentrations of dust (silica) working in the quarry and/or borrow pits

Medicals and medical surveillance of the Principal Contractor’s site staff, operators and skilled labours shall be at the Principal Contractor’s own cost.

Item **Unit**

C10.07 Environmental monitoring:

- (a) Air quality monitoring.....Number (No)
- (b) Compliance with Amendment of the Occupational Exposure Control Limit for Silica in Table 1 of the Hazardous Chemical Substances Regulations (February 2010)Number (No)
- (c) Air sampling in situNumber (No)
- (d) Analysing sampleNumber (No)
- (e) Tests on workers.....Number (No)

The unit of measurement shall be the number environmental monitoring, sampling and testing required in terms of the contract.

The tendered rate shall include full compensation for testing and monitoring the environment in respect of general health hazards including the presence of hazardous chemicals, as required by the Construction Regulations and the Mine Health and Safety Act. Furthermore the costs shall include for all air monitoring, air sample testing and tests on workers for silica exposure as required by the above amendment. It should be noted that these items must be under the control of an authorised inspection authority which would normally be a registered H&S Hygienist or Occupational Health Practitioner familiar with the Hazardous Chemical Regulations and include for all necessary costs in this regard including travelling to and from site and all required reporting.

Item **Unit**

C10.08 Establishment of noise zonesNumber (No)

The unit of measurement shall be the number of noise zones established on site in terms of Regulation 9, of the Noise-Induced Hearing Loss Regulations.

The tendered rate shall include full compensation for establishment of noise zones on site, including any workshops, in terms of Regulation 9, of the Noise-Induced Hearing Loss Regulations.

All equipment established on site by the Principal Contractor are required to have noise zones established before coming onto site and therefor any noise level testing for establishment of noise zones are at the Principal Contractor’s own cost.

Where a zone has previously been established for a particular item of equipment within the last two years, the test need not be repeated but must be kept valid for the duration of the contract.

Item **Unit**

C10.09 Payment for Health and Safety Representatives at meetingshour (hr)

The unit of measurement shall be the number of hours appointed Health and Safety Representatives attend monthly meetings.

The tendered rate shall include full compensation for the loss of productive time while attending monthly meetings as specified in these specifications.

Payment shall be based on attendance registers of monthly meetings submitted to the Employer's Health and Safety Agent for verification.

Item **Unit**

C10.10 Provision of First Aid BoxesNumber (No)

The unit of measurement shall be the number of first aid boxes provided by the Principal Contractor on site.

The tendered rate shall include full compensation for the provision and maintenance of first aid boxes in terms of these specifications.

Item **Unit**

C10.11 Transportation of workers.....month

The tendered rate per month represents full compensation for the safe transportation of workers in terms of these specifications.

The tendered rate will be paid monthly, pro-rata for parts of a month, from the date on which the Employer's Agent issue the instruction to commence the works to the date on which the Employer's Agent issue the Certificate of Completion in terms of the contract.

Item **Unit**

C10.12 Submission of the Occupational Health and Safety Filelump sum

The lump sum tendered shall include full compensation for the Principal Contractor's to fulfil all his close-out obligations in respect of the Occupational Health and Safety Act and the Construction Regulations and has submitted his Health and Safety File complete as envisaged in these specifications to the Employer's satisfaction.

The Principal Contractor's Health and Safety File must be submitted to the Employer's Health and Safety Agent prior to the Employer's Agent issuing the Certificate of Completion in terms of the contract.

ANNEXURE A CONTENTS AND NUMBERING FOR THE H&S PLAN

1. Index of the H&S Plan
2. Letter of Good Standing from Workman's Compensation Commissioner or with a licensed compensation insurer as contemplated in COIDA
3. Appointment letter from the Employer
4. Signed Section 37(2) Agreement between the Employer and the Principal Contractor
5. Occupational Health & Safety Policy
6. Quality Policy
7. Environmental Policy
8. Waste Management Policy
9. HIV AIDS Policy
10. Alcohol / Drug Policy
11. PPE / PPC Policy
12. Health & Safety BoQ
13. Employers Site Specific Safety Specification
14. Project Specific Baseline Hazard Identification and Risk Assessment
15. Site Specific Risk Assessment
16. Technical Method Statements, Safe Operating Procedures and Safe Work Procedures for the first three (3) months planned project works
17. Site Specific Organogram
18. Signed Appointment Letters and CV's for the following Site Personnel
 - 18.1 Responsible Person 16.2
 - 18.2 Construction Manager CR8.1
 - 18.3 Assistant Construction Manager CR8.2
 - 18.4 Construction Health and Safety Officer CR8.5
 - 18.5 Construction Supervisor CR8.7
 - 18.6 Risk Assessor CR9
 - 18.7 Construction Traffic Safety Officer S 8(2)(d)
 - 18.8 Incident Investigator GAR9
 - 18.9 First Aider GSR3.4
19. A Site Plan indicating the following;
 - 19.1 Positions of emergency assembly points and equipment at the site camp, or each fixed working area
 - 19.2 Traffic routes for plant and pedestrians as well as parking areas
 - 19.3 Storage areas (flammable stores, materials etc.)
 - 19.4 Location of facilities
 - 19.5 Electrical installations
20. First Aid, Accident, Incident and Emergency management procedure
21. Safety and Access Signage management procedure
22. Traffic Safety management procedure
23. Waste management procedure
24. Hazardous chemical substances management procedure
25. Construction plant and machinery management procedure
26. Public Health and Safety management procedure
27. Employee facilities management procedure
28. PPE management procedure
29. Occupational medical examinations procedure
30. Safety inspections and Inspection register management
31. Internal Audit management procedure
32. Contractor management procedure

ANNEXURE B CONTENTS AND NUMBERING SYSTEM FOR THE H&S FILE

Approved H&S Plan (as submitted at Pre-Construction Stage for approval by the Employer)

All Construction/TMS and SWP are to be generated by senior site personnel, and the appropriate Risk Assessments developed therefrom in conjunction with the CHSO.

The TMS and SWP are to be signed by the CM, CHSO and EAR on site

The construction team is to ensure that the CHSO is kept up to date with all planned activities, to ensure all H&S requirements are met.

1. Index of the H&S File
2. Updated COIDA Letter of Good Standing
3. Updated organizational organogram and signed Letters of Appointment
4. Registrations, qualifications and other proof of competency
5. Training and Competency Matrix
6. Medical Certificates of Fitness
7. Risk monitoring and review records
8. Procedures
 - 8.1 Training and OHS competency
 - 8.2 General record keeping
 - 8.3 Issue based risk, risk review and risk monitoring management procedure
 - 8.4 Night work
 - 8.5 Excavation management (include hard rock)
 - 8.6 Temporary work management
 - 8.7 Fall protection plan
 - 8.8 Demolition management
 - 8.9 Electrical management
 - 8.10 Delivery, offloading, stacking, storage and housekeeping
 - 8.11 Concrete and batching management
 - 8.12 Hired plant and machinery management
 - 8.13 Lifting and rigging management
 - 8.14 Water environments
9. Registers
 - 9.1 Issue based Risk Assessments
 - 9.2 Inspection Registers
 - 9.3 DSTI records
 - 9.4 MS & SWP training records
 - 9.5 Induction training programme & records
 - 9.6 Visitor Induction records
 - 9.7 Inspection & Maintenance records
 - 9.8 PPE Issue and Condition check
 - 9.9 Incident registers & Investigation reports
10. COIDA accident and incident management
11. Waste manifests
12. Safety Data Sheets
13. Internal audits
14. Letters of Approval Contractors H&S plan
15. Letters of Appointment of Contractors
16. Audits by Employers Agent
17. Corrective/Preventive action plans for clients audits
18. Contractors audits
19. Certified documents and Permits (CoC – PV Test – Lifting Equipment Certificates – Haz.Substance Permits)
20. Archived Documents

ANNEXURE C CONSTRUCTION APPOINTMENTS

No	Designation	Legal Reference
1	Principal Contractor	CR 5.1(k)
2	Contractor	CR 7.1(c)(v)
3	Construction Manager	CR 8.1
4	Assistant Construction Manager	CR 8.2
5	Construction Health and Safety Officer	CR 8.5
6	Construction Supervisor	CR 8.7
7	Assistant Construction Supervisor	CR 8.8
8	Risk Assessor	CR 9.1
9	Fall Protection Plan Developer	CR 10.1(a)
10	Fall Protection Plan Supervisor	CR 10
11	Temporary Works Designer	CR 12.1
12	Temporary Works Supervisor	CR 12.2
13	Excavation Supervisor	CR 13
14	Blaster	CR 13.2(k)
15	Demolition Supervisor	CR 14
16	Explosive Method Plan Designer	CR 14.11
17	Scaffold Supervisor	CR 16.1
18	Suspended Platform Supervisor	CR 17.1
19	Rope Access Work Supervisor	CR 18.1(a)
20	Material Hoist Inspector	CR 19.6
21	Material Hoist Inspector	CR 19.7(a)
22	Bulk Mixing Plant Supervisor	CR 20.1
23	Bulk Mixing Plant Operator	CR 20.2
24	Explosive Actuated Fastening Device Controller	CR 21.2(g)(i)
25	Construction Vehicle and Mobile Plant Inspector/Operator	CR 23.1(d)(k)
26	Electrical Installation Controller	CR 24(c)
27	Electrical Installation Inspector	CR 24(d)
28	Housekeeping Supervisor	CR 27
29	Stacking and Storage Supervisor	CR 28
30	Fire Extinguisher Inspector	CR 29(h) & PER 19
31	Assigned Responsibilities	OHSA S 16.2
32	Scaffold Inspector	SANS 10085-1:2003 Item 16.1(c)
33	Scaffold Erector	SANS 10085-1:2003 Item 16.1(a)
34	Traffic Control Planner	OHSA S 8.2(d)
35	Traffic Control Supervisor	OHSA S 8.2(i)
36	Emergency / Fire Co-ordinator	OHSA S 8
37	Incident Investigator	GAR 9
38	First Aider	GSR 3
39	Ladder Inspector	GSR 13A
40	Lifting Machine Operator	DMR 18
41	Portable Electrical Equipment Inspector	EMR 9
42	Radiation Protection Officer	National Nuclear Regulatory Act 1999
Additional appointment could be added as and when required		

ANNEXURE D CLOSE OUT REQUIREMENTS

CONSOLIDATED HEALTH & SAFETY FILE			
Construction Regulations - February 2014 7(1b,e & f)			
1	DEFINITION: CONSOLIDATED HEALTH AND SAFETY FILE		
	A file or other means containing record in permanent form, of the information required as contemplated in the Construction Regulations of February 2014: Regulation 7(1b, e & f)		
	<p>The H&S files for the Principal Contractors and all Contractors require closure and handover to the Client at the completion of the project.</p> <p>The following list is an example of what should be included, but is not exhaustive.</p> <p>The OHS Agent or the Client may require further information at the time of completion and the Principal Contractor is to ensure that all instructions are met. Documentation would include all records from the start of the project.</p> <p>Daily or monthly plant inspection records are not required unless they are related to an accident.</p> <p>All records to be in electronic format and submitted to the OHS agent for approval in adequately formatted lists and folders.</p> <p>Layout should be logical and in the same order as in the site files.</p>		
REQUIRED DOCUMENTATION			
2	The Principle Contractor submits a formal letter to the project appointed Agent, consolidating and Confirming the H & S history of the project.		INCLUDED
	The following summary of information is required in the letter, but not limited to:		YES NO
a	Client H&S Specification		
b	Principal Contractor's OHS Plan(s)		
c	Organograms		
d	Legal Appointments		
e	Notification of Construction Work with the Department of Employment and Labour		
f	Letters of Good Standing for the Project		
g	Full files for all Contractors as well as their close out reports		
i	List of Contractors		
ii	Letters of Approval of Contractors		
iii	Mandatory Agreements		
iv	Letters of Good Standing		
v	Appointments		
h	Incident Records		
	Non- Conformance records		
	Agent's Audits		
	TMS		
	Risk Assessments		
	Safe Work Procedures		
	Medical surveillance certificates of fitness. Medical records are to be kept according to the OH&S Act as amended.		
	All drawings for temporary structures (suspended beams/scaffolds etc)		
	Copies of test results, policies and procedures for environmental monitoring (silica, noise, dusts etc.)		
Please Note:			
3	The Client's appointed OHS Agent will verify the submission of the Principal Contractor in writing before handing the above documentation to the Client		
4	The Client / Agent need to evaluate the SHE performance of the Principal Contractor i.e. Compliance, Performance, Quality and refer same in their cover letter which will be added to the Principal Contractor's portfolio of evidence.		
Defect and Liability Period			
5	The H&S files are to be kept 'live' for the defect and liability period by the Principal Contractor, including those of their Contractors. Any work required during the defect and liability period will require an assessment of the H&S file by the OH&S Agent prior to any work commencing. A copy of the as-built Drawings is to be placed on file by the Designers once complete.		

ANNEXURE E SPECIFIED HAZARDOUS CHEMICAL SUBSTANCES

PRODUCT	POTENTIAL HEALTH OR OTHER RISKS
CEM II grade 32,5N / Cement	Hand mixing may occur, will be used for structures, stabilizing. 50kg bags delivered on pallets, ergonomic risk from handling, dust exposure, chromates. Eye, skin and respiratory irritant
Shutter Oil	Usually hand application prior to placing formwork in position. Volatiles present. Skin and respiratory irritant.
Penetration grade bitumen 70/100	Vapours, overexposure to fumes- loss of consciousness, respiratory problems.
Polymer modified bitumen-Class S-E1 (Hot applied)	Avoid skin contact with hot emulsions, Burns
Polymer modified emulsion (cold Applied)	Principal Contractor to ensure use of SDSs and appropriate protection measures
Petroleum based pre-coating fluid	Danger of cutaneous absorption, irritation to the skin
Polymer modified binder conforming to class A-E2	Principal Contractor to ensure use of SDSs and appropriate protection measures
Asphalt	Inhalation will cause headaches, nausea, respiratory, eye and skin irritation. Carcinogen. Burns from hot mix. Hydrogen Sulphide and carbon monoxide emitted as by-product. Breaking or cutting will release silica (crystalline)
Retro-reflective Road paint	High levels of volatiles, Products have narcotic effect. Carcinogen
Lime	Dust, eye and respiratory irritation
Petrol/Diesel/Lubricants	Storage tanks/ bowsers on site. Fire, spillage, fumes
Superphosphate Fertilizers	Eye, respiratory and skin irritant
Limestone Ammonium Nitrate Fertilizer (LAN)	Prolonged skin or eye contact could cause irritation. Explosive and will release toxic fumes if heated
Formula 2:3:2 Fertilizer	Prolonged skin or eye contact could cause irritation. Explosive and will release toxic fumes if heated.
Creosote (pre-treated poles)	Eye and skin irritation and minor burns, carcinogen
Herbicides and Ant Poison	Type not specified, but will be used. Principal Contractor to ensure use of SDSs and appropriate protection measures
Epoxies and Epoxy Resins	Type not specified, but will be used. Principal Contractor to ensure use of SDSs and appropriate protection measures
Coatings	Type not specified, but will be used. Principal Contractor to ensure use of SDSs and appropriate protection measures
Grouts	Will be determined by the Principal Contractor; various grouts will be required, cementitious or other, may contain silica (crystalline - quartz), hexavalent chromium, respiratory, skin and eye irritant

ANNEXURE F CONSTRUCTION HEALTH AND SAFETY OFFICER MONTHLY REPORT

MONTH ENDING:

YEAR:

Manpower Returns		Current Month	Project to Date
Total Number Principal Contractors employees			
Total Number Contractor employees			
Total Number of Contractors			
No. Shifts/Days Worked (incl. Weekend & Public Holidays)			
Man Hours Worked			
Total for Principal Contractor			
Total for Contractor/s			
Total All Man-Hours For Current Month	Total All Man-Hours Worked	LTI Free Hours (From Last Incident)	Target LTI Free Hours

List of Contractors	No. of Employees	No. of Vehicles

Incident Report	Current Month	Project to Date	Investigation Status
No. of First Aid Cases			
No. of Medical Cases			
No. of Lost Time Injury (LTI) excluding Fatalities			
No. of Occupational Disease Cases			
No. of Fatalities			
No. of Reportable Incidents			
No. of Environmental Incidents			
No. of Property Damage			
No. of Near Misses			
No. of Vehicle related Accidents			
Disabling Injury Frequency Rate	Current Month	Project to Date	
(LT Injuries x 200 000) / man hours			

Incident Details

Incident No.	Brief Details (incl. Nature of Injury, e.g. Laceration on Right Hand)	Status of Injured Employee/s	Incident Type (e.g. Fall to Below, Struck By)

Incident Analysis and Trends and Action Plans		
(Including new or revised risk assessments)		
Corrective Actions Implemented	Actioned By	Date Completed

OHS Training	Current Month	Year to Date
Induction		
Safety Representative		
First Aid		
Fire Fighting		
Scaffold Erection and Inspection		
Vehicle (stipulate)		
Safety Harness		
Other		
Other		

Site Audits & Inspections			
Management			
Client			
External			
Additional Comments / Remarks (e.g. site issues or concerns)			
<u>Awards or Achievements:</u>			
Submitted By			
Name	Designation	Signature	Date

ANNEXURE H NON CONFORMANCE CLOSEOUT REPORT

**NON CONFORMANCE REPORT
HEALTH AND SAFETY SITE AUDIT**

Project			
Client			
Principal Agent			
Principal Contractor			
CHSA			
OHS Audit No		Date of Audit	
Non-Conformance No		Non-Conformances to Date	
ASPECTS NOTES IN OHS AUDIT	COMMENTS BY THE AUDITOR	PENALTY	CLOSE-OUT DATE
		500,00	
		500,00	
		500,00	
		500,00	
		500,00	
		500,00	
Penalty's to Date	5 000,00	TOTAL	3 000,00

PHOTOGRAPHIC EVIDENCE

1	2
3	4
5	6
Engineer's Representative (RE)	Principal Contractors - CM (8.1)
Date	Date
Principal Contractors CHSO (8.5)	Client / CHSA
Date	Date

NON-CONFORMANCE CLOSE-OUT REPORT			
Project			
Client			
Principal Agent			
Principal Contractor			
CHSA			
OHS Audit No		Date of Audit	
Non-Conformance No		Non-Conformances to Date	
COMMENTS ON WHAT WAS DONE (ATTACH PROOF IF AVAILABLE)	DATE COMPLETED	VERIFIED BY CLIENT / AGENT	
PHOTOGRAPHIC EVIDENCE			
1		2	
3		4	
5		6	
Engineer's Representative (RE)		Principal Contractors - CM (8.1)	
Date		Date	
Principal Contractors CHSO (8.5)		Client / CHSA	
Date		Date	

ANNEXURE I EXAMPLE OF MEDICAL CERTIFICATE OF FITNESS

ANNEXURE 3 OCCUPATIONAL HEALTH AND SAFETY ACT, 85 OF 1993 CONSTRUCTION REGULATIONS, 2014 Medical Certificate of Fitness			
Name of Employee:	ID Number:	Co. Number:	
*Occupation e.g. General Worker, Welder, Bricklayer, Steel Fixer, Mobile Crane Operator, etc.	*Possible Exposures e.g. Noise, Heat, Fall Risk, Confined Space, etc.	*Job Specific Requirements e.g. Operating Mobile Crane, Digging Trenches, Erecting Formwork & Support Work, etc.	*Protective Equipment e.g. Dust Respirator, (Light Duty), Welding Gloves, etc.
* The Employer to complete the information in the spaces marked with an * before sending the Employee for a medical examination			
Declaration by the Medical Examiner: I certify that I have, by examination and testing, using the above criteria specified by the employer, satisfied myself that the above mentioned employee is fit to perform the duties as described by the employer in the matrix above.			
Occupational Medicine Practitioner / Occupational Health Nursing Practitioner: (Please Print Name: _____)			
Signature: _____		Practice Number: _____	
Address: _____		Date : _____	

GWATYU ACCESS ROAD

ANNEXURE J DESIGN HAZARD IDENTIFICATION AND RISK ASSESSMENT

DESIGN HAZARD IDENTIFICATION AND RISK ASSESSMENT				Low	Med	High
Risk Rating Multiplier: Low = 1; Medium = 2; High = 3				1	4	12
Baseline Raw Design Risk - Typical behaviour given the design / factors present				2	6	18
Residual Risk - The extra factors noted that must be in place to reduce the risk				3	8	27
Low Risk - Does not mean that the activity is safe, or that potential injuries and / or fatalities are eliminated						
Key Risks will be assessed and reported on in the Site Specific H&S Specification						
New tasks require re-assessment as the project progresses						
GAR	General Administration Regulations	GMR	General Machinery Regulation			
GSR	General Safety Regulations	OHS Act	Occupational Health and Safety Act and Regulations 85 of 1993			
SANS	South African National Standards	SWP	Safe Work Procedures			
SABS	South African Bureau of Standards	MS	Technical Method Statements			
NIHL	Noise Induced Hearing Loss	HCS	Hazardous Chemical Substances			
		PrDP	Professional Driving Permit			

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
SERIES 1000 - GENERAL REQUIREMENTS AND PROVISIONS												
1202	Services- Eskom, Telkom lines, underground water, and sewage. Telkom and Eskom will remove own services where required.	Yes	PC will expose and protect services.	2	2	2	8	Competent supervision and adequate pre-task training will be required	2	2	1	4

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
1202		Yes	May be illegal connections	2	2	2	8	Removal of asbestos pipe to be according to the Asbestos Regulations	2	2	1	4
1219	Water	Yes	All water will be treated as contaminated and maybe unfit for human consumption	3	2	2	12	Treatment of contaminated water will be required, water testing will take place regularly. Tankers of water may be required to be brought in from other sources	3	2	1	6
1219	Water	Yes	Potable water is available in the towns and rural water schemes are available for use. Alternate water sources/supplies will have to be approved by DWA	3	2	2	12		3	2	1	6
1302	Construction plant workshops and camps to be established and maintained by the contractor for the duration of the contract	Yes	A number of camps may be established and maintained for various activities to construct what is required to undertake the works	2	3	3	18	The PC will be required to submit with his pre-tender H&S plan the TMS, risk assessments and supporting documentation to ensure overall activities are managed.	2	3	2	12

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
1402	Offices and Laboratories	Yes	Offices required for staff and a Laboratory for onsite testing	2	3	3	18	All buildings to be to SANS requirements and according to specifications in the tender document	2	3	2	12
1403	Housing	Yes	Housing for the engineers employees who operate the laboratory	2	3	3	18	All buildings to be to SANS requirements and according to specifications in the tender document	2	3	1	6

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
1404	Electricity, Telkom, Water, Sewerage, Gas and Sanitation	Yes	Depends on the site chosen by the PC. May be septic tanks and or French drainage system. Temporary chemical toilets for use by workers Local or imported water supply, ESKOM, Telkom and gas supply River water is to be treated as contaminated, and workers may well be exposed when working around bridges and culverts	2	3	2	12	The ECO to provide the requirements relative to sanitary requirements on site. The PC will be required to submit with his pre-tender H&S plan the TMS, risk assessments and other supporting documentation to ensure start up activities are adequately managed. Please ensure adequate servicing of portable toilets in the very hot months, as the chemicals deteriorate more rapidly. Formaldehyde is used in the portable toilets	2	3	1	6

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
1502(a)	Traffic Safety	Yes	The whole site will require traffic accommodation All deviations and Stop/Go controls to be conspicuously sign posted There will be public and construction traffic on the road during construction	3	3	3	27	Construction drawings to be provided, all accommodation in line with SARTSM Ch. 13 Vol. 2. TMS and risk assessments to reflect management of same. Dedicated Traffic Safety Officer is to be employed to control these requirements	3	3	2	18
1502(b)(f)	Temporary deviations	Yes	All deviations and Stop/Go controls to be conspicuously sign posted There will be public and construction traffic on the road during construction	3	3	3	27	Construction drawings to be provided, all accommodation in line with SARTSM Ch. 13 Vol. 2. TMS and risk assessments to reflect management of same. Dedicated Traffic Safety Officer is to be employed to control these requirements	3	2	1	6

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
1502(e)(h)	Are there specific concerns regarding public access?	Yes	All deviations and Stop/Go controls to be conspicuously sign posted There will be public and construction traffic on the road during construction	3	3	3	27	Construction drawings to be provided, all accommodation in line with SARTSM Ch. 13 Vol. 2. TMS and risk assessments to reflect management of same. Dedicated Traffic Safety Officer is to be employed to control these requirements	3	3	2	18
1502(i)	Traffic Safety Officer (TSO) will be appointed?	Yes	All deviations and Stop/Go controls to be conspicuously sign posted There will be public and construction traffic on the road during construction	3	3	3	27	Adequate competent TSO's to be appointed. TSO shall not be H&S Officer	3	3	2	18

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
1503(a)	Construction will be under traffic?	Yes	Construction in half widths and single lane closures will be used for the project (24 hr) Stop/Go required	3	3	3	27	Traffic safety teams to maintain 24 hour closures, construction drawings to be provided, all accommodation in line with SARTSM Ch 13 Vol 2. Stop/Go controllers are not to exceed specified shift hours	3	3	2	18
1503(b)	Erection of signage	Yes	Digging of holes and mounting of signs on poles, planting of poles, use of lifting equipment	3	3	3	27	PPE, Method Statement, Training, Lifting equipment to be certified as per DMR and other requirements of the OHS Act	3	3	2	18
1511	Dust from vehicles on the road	Yes	Dust suppression to be carried out in built areas and where employees are working and to improve driving visibility	3	3	3	27	Water tankers to spray roads as and when required	3	3	2	18
1700	Clearing and Grubbing	Yes	All Material to be stock piled for further use. Conservation of top soil	3	3	3	27	Permission from the engineer for the disposal of materials TMS and Environmental approval	3	3	2	18

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
SERIES 2000 - DRAINAGE												
2100	Drains	Yes	Open earth drains, Banks and dykes and sub-soil drains	2	2	2	8	Trenches kept to a minimum depth/ Excavations checked on a daily basis by competent person TMS, Risk Assessments, PPE	2	2	1	4
2200	Prefabricated culverts Concrete kerbing, concrete	Yes	Where insitu casting is not preferred	2	2	2	8	Prefabricated culverts are to be to design specification. PPE, moving of castings with lifting equipment, Method Statement and Risk Assessment	2	2	1	4

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
2300	Channelling, chutes and down pipes and concrete linings for open drains	Yes	Pre-cast kerbs, insitue concrete pavement construction in rural areas	2	2	2	8	Trenches kept to a minimum depth/ Excavations checked on a daily basis by competent person TMS, Risk Assessments, PPE	2	2	1	4
SERIES 3000 - EARTHWORKS AND PAVEMENT LAYERS OF GRAVEL OR CRUSHED STONE												
3100	Borrow Pits	Yes	Borrow pits will be spread to cover most of the site.	3	3	2	18	All borrow pits are to be fenced and only authorised personnel granted access. TMS All operators to be competent in their specific operations Rehabilitation of borrow pits	3	2	1	6

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
3200	Stock piling	Yes	Stock piling will take place at the different sites along the route	3	3	2	18	Permission from the engineer for the disposal of materials TMS and Environmental approval are to be fenced and are to comply with the relevant safety regulations	3	2	1	6
3300	Haulage of material in tipper trucks	Yes	Material will be hauled on the entire project from a commercial source and borrow pits	3	3	2	18	Dust management, suppression, daily registers and competent operators TMS and SWP required	3	2	1	6
3400	Pavements	Yes	Excavation, compaction and placement of pavement	3	2	2	12	Alternative safe pedestrian passage is required where pavements are under construction TMS and SWP required	3	2	1	6
3500	Stabilization	Yes	Use of chemicals to be in line with safety regulations and MSDS's	2	3	3	18	PPE, MSDS, Method statements and SWP required	2	3	2	12
SERIES 5000 - ANCILLARY WORKS												
5100	Stonework	Yes	Transportation of material to site. Manual labour. Vehicle traffic	3	3	3	27	TMS and SWP required PPE, DD Green gloves	3	3	2	18

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
5600/5700	Road signs & markings	Yes	Manual labour on roadway while open to traffic Use of crane truck - Use of ladders	3	3	3	27	Competent contractor should be employed for this task Inspections of equipment and inspector of equipment to be appointed Load test of equipment required Approved traffic control and daily plans	3	3	2	18
5800	Landscaping	Yes	Use of chemicals and manual labour Poisons, Phosphates and Herbicides	3	3	3	27	TMS and SWP required SDS's, PPE and training	3	3	2	18
OHS SPECIFICATIONS												
OHS Specification	Weather	Yes	High as well as low temperatures as well as humidity will be encountered	3	3	3	27	Weather station to monitor weather conditions	2	3	2	12
	Labour	Yes	Targeted labour as well as targeted subcontractor 's will be used	3	3	3	27	Targeted labour to have a medical. targeted subcontractor 's to produce H&S Plans before commencement of work on site	2	3	2	12

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
	All materials will be considered containing Silica	Yes	Risk Assessments, medical surveillance and chest x-rays for all workers and operators	3	3	3	27	PC is to ensure compliance and medical surveillance is adequately managed	3	3	2	18
	Crane Work	Yes	Cranes could be used to position bridge beams and / or culverts	3	3	3	27	Certified contractor, TMS, certified operators	3	2	1	6
OHS Specification	Transportation	Yes	Vehicles will be used on entire project	3	3	3	27	All operators to have a valid licence, PrDP (P.G.D.) Certificate of competence and a valid medical certificate issued by an Occupational Health Practitioner Vehicles to have amber flashing lights, reverse warning hooters and daily check checks	3	3	2	18
	Hazardous Chemicals	Yes	HCS's will be used during the project Construction Vehicles	3	3	3	27	Medicals are required for persons using HCS Medical certificate issued by an Occupational Health Practitioner TMS and SWP are to be in place	3	3	2	18

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
	Transportation	Yes	All vehicles to be identified as	3	3	3	27	Amber flashing lights, licensed competent operators	3	3	2	18
	Lifting Equipment	Yes	Lifting equipment will be used on the project	3	3	3	27	All lifting equipment is to be on a register All equipment to be tested according to DMR 18	2	3	1	6
	Fire Fighting Equipment	Yes	Firefighting equipment will be used on site	2	3	2	12	All fire fighting equipment to be recorded and tested according to SANS 1475	3	2	1	6
OHS Specification	First Aid Equipment	Yes	First Aid equipment will be used on site	3	3	3	27	All first aid equipment to be recorded and checked according to OHS Act GSR 3 Rural area and availability to emergency services is to be taken into account. Injuries resulting from the type of operations are to be taken into consideration for the provision of first aid equipment	3	2	1	6

GWATYU ACCESS ROAD

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				Extra control measures necessary to reduce risk / Redesign	Residual Risk			
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category		Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category
	River work will be required in the dry season	Yes	There may be a need to construct coffer dams or pump water from excavations	3	3	3	27	Work in dry season, emergency plan, risk assessment, method statements and safe work procedures	3	2	2	12

ANNEXURE K
BILL OF QUANTITIES FOR HEALTH AND SAFETY

Item	Description	Unit	Quantity	Rate	Total
C10.01	Preparation of the Contractor's site-specific Health and Safety Plan	lump sum			
C10.02	Principal Contractor's initial obligations in respect of the Occupational Health and Safety Act / Construction	lump sum			
C10.03	Principal Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	month			
C.10.04	Provision of Personal Protective Equipment (PPE)				
(a)	Reflective vests	Item			
(b)	Hard hats	Item			
(c)	Protective foot wear	Item			
(d)	Earplugs	Item			
(e)	Dust masks	Item			
(f)	Gloves	Item			
(h)	High visibility overalls to SARTSM Chapter 13 Level 3	Item			
(i)	Ear Defenders SABS approved	Item			
(j)	Overalls	Item			
C10.05	Provision of a full-time Construction Health and Safety Officer registered with SACPCMP	Monthly			
	Provision of a full-time Traffic Safety Officer with relevant qualifications	Monthly			
C10.06	Cost of medical certificates and medical surveillance				
(a)	Initial (baseline) medical examinations	prime cost (PC) sum			
(b)	Periodic and exit examinations	prime cost (PC) sum			
	Contractor's charges to allow for handling costs and profit in respect of sub items C.06 (a) and (b)	%			
C10.07	Environmental Monitoring	Sum			
C10.08	Noise monitoring				

GWATYU ACCESS ROAD

(a)	Establishment of noise zones (plant)	Item			
(b)					
	Audiograms (personnel)	Item			
C10.09	Health and Safety Representative Meetings				
C10.10	Provision of First Aid Boxes to GSR requirements	Item			
C10.11	Transportation of Workers				
C10.12	Submission of a Health and Safety File	lump sum			

PC – LABOUR INTENSIVE METHODS

PC LABOUR INTENSIVE METHODS

PC1 SCOPE

This Particular Specification covers the requirements wherever labour intensive methods of construction in accordance with the Tender Conditions are specified.

PC2 INTERPRETATIONS

PC2.1 Supporting Specifications

Where this Particular Specification is applicable, the following specifications shall, inter alia, form part of the contract document.

- 1200 General Requirements
- 1300 Contractor's establishment on site and General obligations
- 1400 Housing Offices and Laboratory for the Engineer's site personnel
- 1500 Accommodation of traffic
- 1700 Clearing and Grubbing
- 1800 Dayworks
- 2100 Drains
- 3300 Earthworks and Pavement layers
- 3400 Pavement layers of Gravel Material
- 5600 Ancillary Roadworks: Roadsigns
- 5900 Finishing the road and road reserve and treating old roads

PC2.2 Application

This Particular Specification contains clauses that are applicable wherever labour intensive methods of construction are to be employed.

Machine applications shall only be allowed by the Engineer for the specific operations listed hereunder or, if so directed, by unforeseen or special circumstances on site.

Loss of contract time owing to unsatisfactory progress, poor contract management or whatsoever related reason will not be regarded as "unforeseen or special circumstances", unless ruled to the contrary by the Engineer on a motivation submitted by the Contractor.

The Contractor shall request permission from the Engineer in writing, at least fourteen calendar days in advance, (if possible), of his intention to use machine operations for work reserved for hand labour execution. The request is to be substantiated by a proper motivation.

No machine operations subject to the above request are to commence without the prior written approval of the Engineer and no additional payment of whatsoever nature shall be allowed should the Engineer agree to the request submitted by the Contractor. The tendered rates and prices applicable to hand labour execution shall suffice.

PC2.3 Definitions

Labour Intensive – An activity that is undertaken by labour only, specifically excluding the use of any plant or mechanical equipment, except hand tools and related equipment.

Task – A quantified activity or operation.

Daily Rate – The remuneration of a day's work, regardless of output and only applicable when unable to define tasks.

Task Rate – The remuneration for a completed task.

Labour-Intensive Construction – The economically efficient employment of as great a portion of labour as is technically feasible to produce as high a standard of construction as demanded by the specifications;

thus the effective substitution of labour for equipment. (Note: This definition is not Contract-specific, but applies to the project as a whole. This Contract is a part of such a project.)

Labour-Based Construction – see Labour-Intensive Construction

PC3 ACTIVITIES THAT MAY MAKE USE OF MACHINE INTENSIVE OPERATIONS

The activities listed hereunder may be executed by machine intensive means, if not listed hereunder the execution shall be labour intensive.

- i) Excavation in Classes 1 or 2 materials as for restricted excavations.
- ii) Excavations in Machine Class or Class 1 materials as for bulk excavations
- iii) Excavations in any Class materials as for bulk excavations in excess of 50 Cu m from a single position, subject to the Engineer's prior approval.

- iv) Excavations in Pickable material as for restricted excavations where the utilization of hand labour has been proved to be impracticable, subject to the Engineer's prior approval.

- v) Confined excavation with total depth in excess of 1.5 m.

- vi) Stripping and stockpiling of overburden at approved borrow areas.

- vii) Loosening and/or stockpiling of borrow material at approved borrow areas.

- viii) Hauling (including loading) of all materials beyond 150 m.

- ix) Pumping and transporting of water.

- x) Mixing of concrete for water retaining structures where strength and reinforced concrete is specified and the volume of a particular cast exceeds 5 Cu m.
- xi) Handling and laying of pipes with an individual mass exceeding 350 kg per pipe length.

- xii) Compaction of fill and in-situ material

- xiii) Construction of controlled road layers and maintenance of haul roads.

- xiv) Execution of major road crossings where time is of the essence.

- xv) Site clearance that requires breaking up of concrete and other permanent structures.

- xvi) Placing of bedding and backfill in trenches with collapsing sides

- xvii) Any operation as may be specified by the Engineer.

PC4 MATERIALS

The requirements of the applicable SABS specification and/or Project Specification shall apply except where superseded by this Particular Specification.

PC5 PLANT

Where plant is to be used, as authorised by this Particular Specification, the requirements of the applicable SABS 1200 Specification and/or Project Specification shall apply except where superseded by this Particular Specification.

PC6 CONSTRUCTION

The requirements of the applicable SABS 1200 Specification and/or Project Specification shall apply. Elements manufactured or designed by the contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. In addition, the items shall be large enough so that four workers can conveniently and simultaneously acquire a proper hand hold on them.

PC7 TOLERANCES

The requirements of the applicable SABS 1200 Specification and/or Project Specification shall apply.

PC8 TESTING

The requirements of the applicable SABS 1200 Specification and/or Project Specification shall apply.

PC9 MEASUREMENT AND PAYMENT

The requirements of the applicable SABS 1200 Specification and/or Project Specification shall apply except where superseded by this Particular Specification.

PC10 PENALTY FOR NON-COMPLIANCE

Should the Contractor during the execution of the Work reserved for labour intensive execution:

- a) use unspecified plant; or
 - b) contravene the requirements of Particular Specification PA
- then the Contractor shall pay to the Employer the penalty as set out hereunder and the Employer may without prejudice to any other method of recovery deduct the amount of such penalty from any monies in the hands due or which may become due to the Contractor.
- a) R1 000.00 per occurrence; plus
 - b) 15% of the value of work so executed calculated as the product of the quantity (calculated by the Engineer) and the applicable tendered rate.

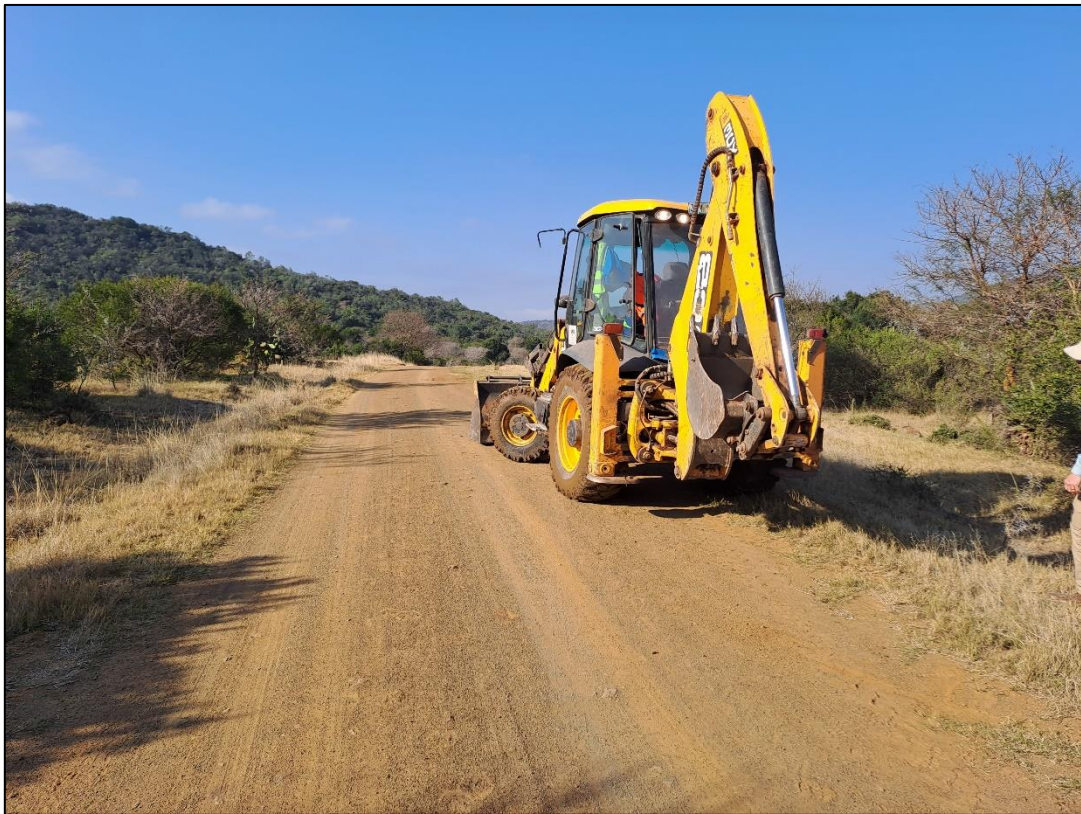
C4 – SITE INFORMATION/DRAWINGS

Geotechnical Report

***Report to Ciba Consortium for a Geotechnical Investigation
– Gwatyu Access Road Upgrades – Eastern Cape***

Reference: 23-734

Dated: October 2023



DELTA
GEOTECH

Report to Ciba Consortium for a Geotechnical Investigation – Gwatyu Access Road Upgrades – Eastern Cape

Reference : 23-734	Dated : October 2023
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Appendix A: Test Pit Profiles

Appendix B: Dynamic Cone Penetration (DCP) Results

Appendix C: Borrow Pit Assessment Sheets

Appendix D: Laboratory Results

Report to Ciba Consortium for a Geotechnical Investigation – Gwatyu Access Road Upgrades – Eastern Cape

Reference : 23-734

Dated : October 2023

1. INTRODUCTION AND TERMS OF REFERENCE

At the request of Mr. T Tleane of BVI Consulting Engineers, on behalf of the CIBA Consortium, Delta Geotech (Pty) Ltd provided a proposal to investigate 8.1km of existing gravel surface roads and stormwater for proposed upgrades. The proposal indicated the methodology and cost to undertake a geotechnical investigation as per client requirements. Delta Geotech's quote was successful and asked to proceed with the investigations on the 14th July 2023.

2. SCOPE OF REPORT

The geotechnical report sets out the findings of the geotechnical investigation. The objectives of the investigation were as follows:

- a) An assessment of groundwater and bedrock conditions (if present).
- b) A summary of the engineering properties of the soil derived from laboratory tests.
- c) Borrow pit assessment based on laboratory results.
- d) Assessment of the excavatability of the soil.
- e) Identification of potential problematic soil conditions on the site.
- f) Culvert Assessment.
- g) Recommendations on suitable materials based on laboratory test results and recommendations on subgrade conditions to assist in road design.

3. INFORMATION SUPPLIED

The following information was utilized during the investigation:

- A KMZ file indicating the location of the start and end points of the proposed upgrades.
- 34694.17-L-004 (DALRRD - Delta Geotech Request for Soils Investigation).PDF
- Licensed Borrowpits in Lukhanji.PDF
- Remote Colour Imagery – Google (2020)



- The 1:250 000 geological map – 3226 – King Williams Town (Council for Geoscience)
- Brink A.B.A (1985). Engineering Geology of South Africa - Post Gondwana Deposits. Volume 4. Building Publications. South Africa. 332pp.

4. SITE DESCRIPTION

A geotechnical roads investigation was requested for a section of the R351, a gravel road. Access to the road section is gained off the R61 to the southeast of Queenstown (Figure 1 – Locality Plan). The gravel road to be investigated was indicated by the client in a KMZ file with start and end pin locations showing the ~8km section of road. The start of the road lies to the south and traverses moderately to slightly undulating ground and skirts or bisects a number of drainage lines (Plate 5). The existing gravel roads are degraded in places with potholes extending through existing layerworks (GWC), especially where the subgrade is finer grained and where sloping ground increases. Evidence of slippery and soft material was observed in the form of entrenched vehicular tracks penetrating the GWC layers (plates 1 and 2).

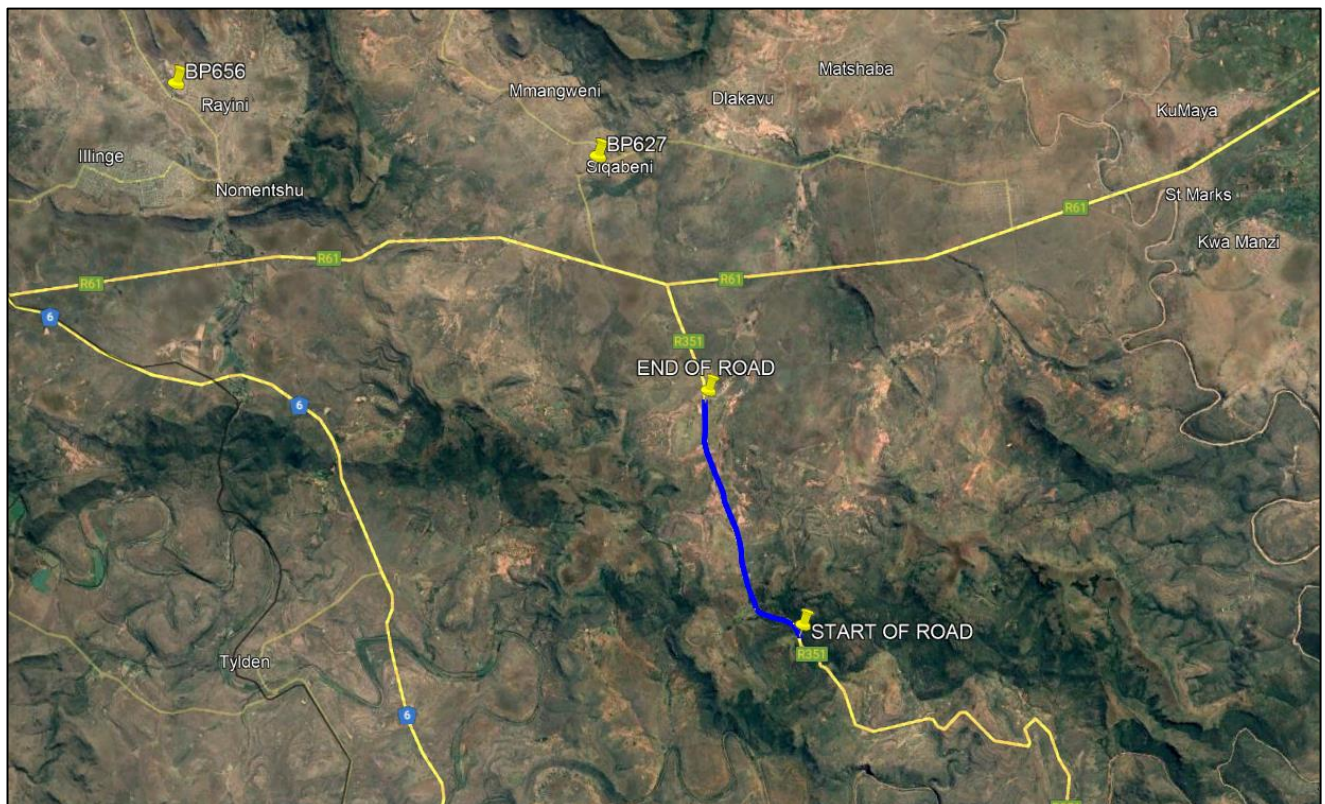


Figure 1: Locality Plan indicating the road upgrades route in blue and existing licensed borrow pits BP627 and BP656 to the north and north west of the site.

A number of bridges and pipe culverts occur along the route. Undermining and erosion was observed particularly at the bridge structures crossing the main drainage features to the north of the site (see plates

5 and 6). Bridge structures are underlain by fill limiting free drainage of stream, resulting in floodwater forced over the road way at bridge sites.

Plate 1 - 6 overleaf provides an indication of the topography and conditions encountered on site.



Plate 1 (Left): Worn and entrenched tracks through existing road layers underlain by fine grained materials between TP1 and TP2. Plate 2 (Right): Surface pooling on fine grained subgrade at TP1.



Plate 3 (Left): Deeper transported finer grained soils at TP1 and TP2. Plate 4 (Right): Sporadic rock at surface between TP5 and TP6. Note TP6 with weathered mudstone from surface throughout cut extent.



Plate 5 (Left): drainage line on the downriver side of the stream crossing near TP7. Note Alluvial banks underlain by sedimentary rock. Plate 6 (Right): Existing stream crossing/culvert at TP7 with undermining at the abutments – Note poor drainage of the upriver section through the bridge fill material.

As per clients' recommendations 2 No. existing and licenced borrow pits were investigated, namely BP656 and BP627 with approximate locations indicated in Figure 1.

5. NATURE OF INVESTIGATION

The fieldwork for the site investigation was carried out on the 8th March 2023.

The fieldwork comprised the following:

- Test Pit Excavations, profiling and sampling.
- Borrow pit assessment and sampling.
- Dynamic Cone Penetration (DCP) tests.

5.1 Test Pitting

Test pits were positioned on the LHS, Centre and RHS at each location and repeated at 1km intervals along the designated 8km section of road as per supplied KMZ file with a total of 24 No. test pits excavated along the route.

The detailed logs of the profiles are provided in Appendix A with approximate test pit locations indicated in Figure 2.

Test pits were advanced to depths of between 0.50m and 1.80m begl (meters below existing ground level) and were profiled¹.

5.2 DCP Tests

A total of 24 No. DCP tests were conducted from natural ground level (NGL) adjacent test pit positions or within selected test pits below very dense material. The DCP tests extended to depths of between 0.03m and 0.93m begl.

The results of the DCP tests are provided in Appendix B.

5.3 Borrow Pit Assessment

As per clients' recommendations 2 No. existing and licenced borrow pits were investigated, namely BP656 and BP627 with approximate locations indicated in Figure 1.

¹ Geoterminology Workshop (2002) – Guidelines for Soil and Rock Logging - SAIEG-AEG-SAICE (Geotech Div) pp47

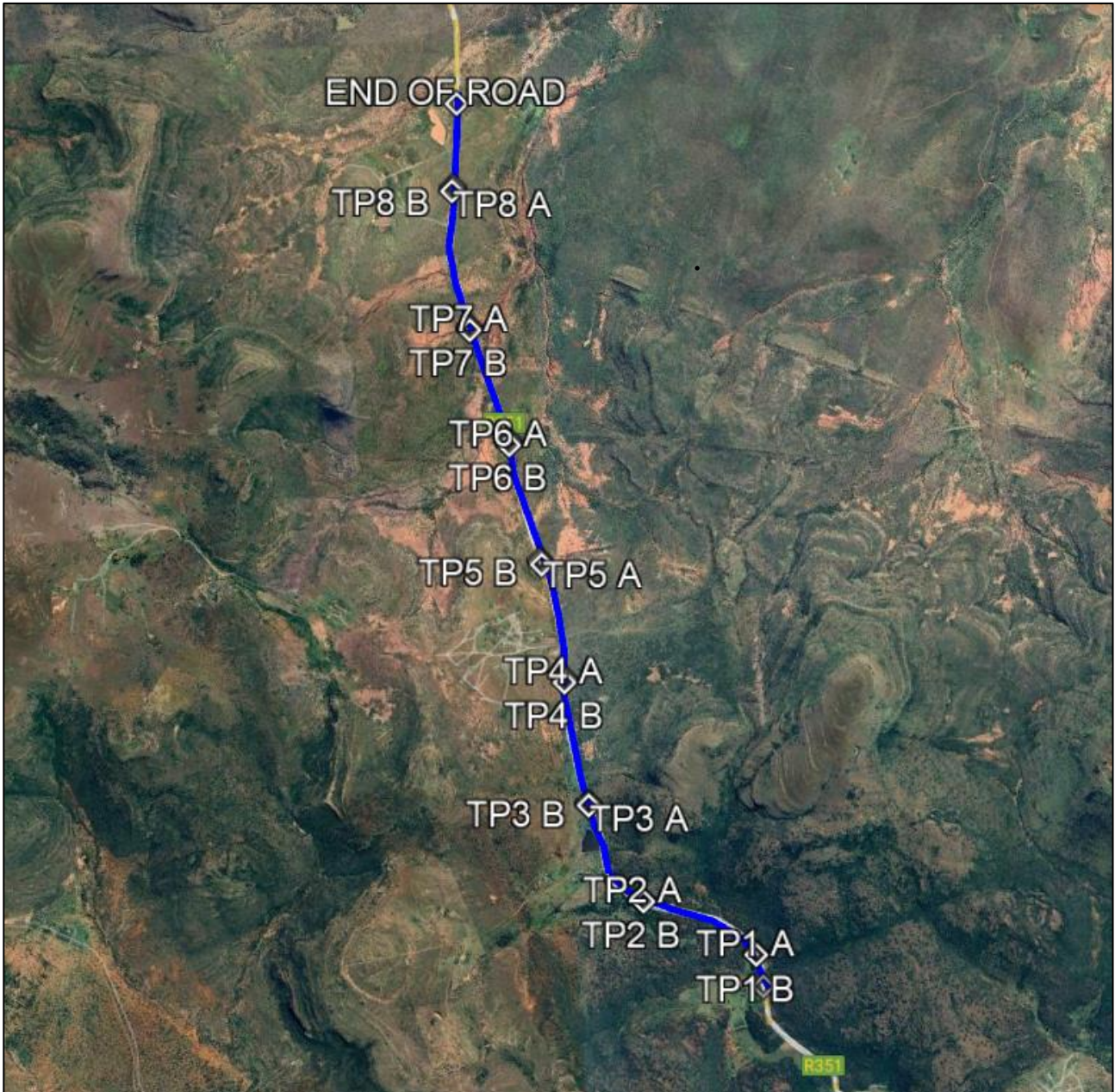


Figure 2: Site plan indicating test pit locations from TP1 (ABC) in the south to TP8 (ABC) to the north

6. GEOLOGY AND GROUNDWATER CONDITIONS

6.1 General Geology of the Area

The general geology of the area comprises sedimentary rocks of the Karoo Supergroup as well as Jurassic aged Igneous dolerite dykes and sills. The site is underlain by the Katburg and Burgersdorp Formation of the Beaufort Group – Karoo Supergroup comprising mudstone and sandstone while dolerite sills and dykes also occur sporadically especially to the south between TP1 and TP3 and near TP4. (Figure 3 - Geological Plan over page).

6.2 Site Geology

Locally the site is underlain by made ground (GWC and selected subgrades), colluvium, alluvium, pedogenic, residual and sedimentary and igneous rock.

6.2.1 Fill

Gravel wearing course (GWC) was intersected from surface to depths of between 0.02m to 0.30m begl in all the test pits except TP5(A,B,C), TP6(A,B,C) and TP7C. The GWC comprising granular silty sandy gravels, clayey/silty sandy gravels and clayey silty gravelly sands (with sporadic cobbles in localised areas).

Selected Subgrade was intersected underlying GWC layers in TP2A, TP4B, TP4C and TP8C and extend to depths of between 0.30m to 0.78m begl. The selected subgrade comprises granular silty/clayey gravelly sand and silty sands (likely sourced from local natural soils).

A **rockfill** layer was encountered in TP7A near a pipe culvert that extended to 0.90m begl and comprises clayey silty sandy gravels with abundant angular to subangular cobbles of mudstone origin.

6.2.2 Colluvium

Colluvial soils occur in TP2(ABC), TP3(ABC), TP4(ABC), TP5(ABC) and TP8(ABC). They are variable in composition but are cohesive in the southern extent of the site surrounding and between TP2 and TP3 comprising silty sandy clays and gravelly silty sandy clays while granular variants occur in the remaining test pits and comprise clayey silty sand and silty sands. Where the colluvium occurs, they generally underlie the GWC or selected subgrade layers except at TP5 (ABC) where they occur from surface. The colluvium extends to depths of between 0.30m to 1.65m begl and may contain sporadic cobbles of mixed origin.

6.2.3 Alluvium

Alluvial soils were intersected in TP1 (ABC) and TP7 (ABC) underlying made ground (GWC/SS/Rockfill) and extend to depths of between and in excess of 0.70m to 1.30m begl. The alluvium comprises cohesive sandy silty clay with traces of cobbles and pedogenic calcrete precipitate in TP1(ABC) and silty sands in TP7(ABC).

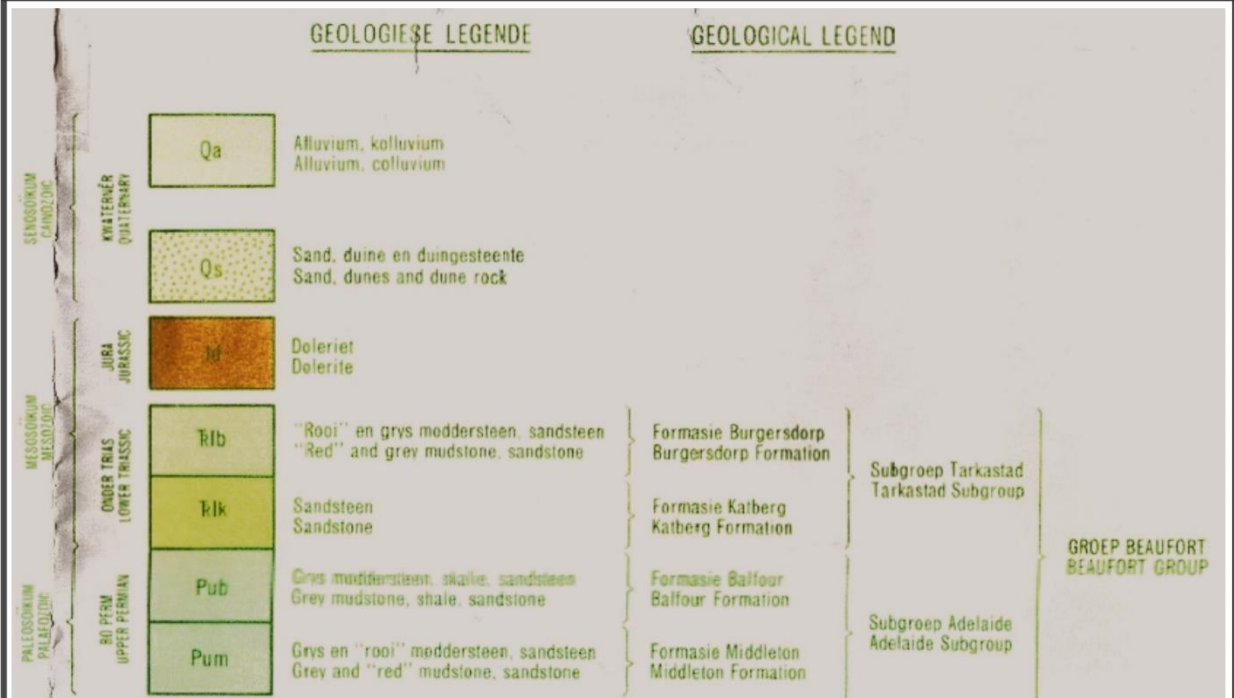
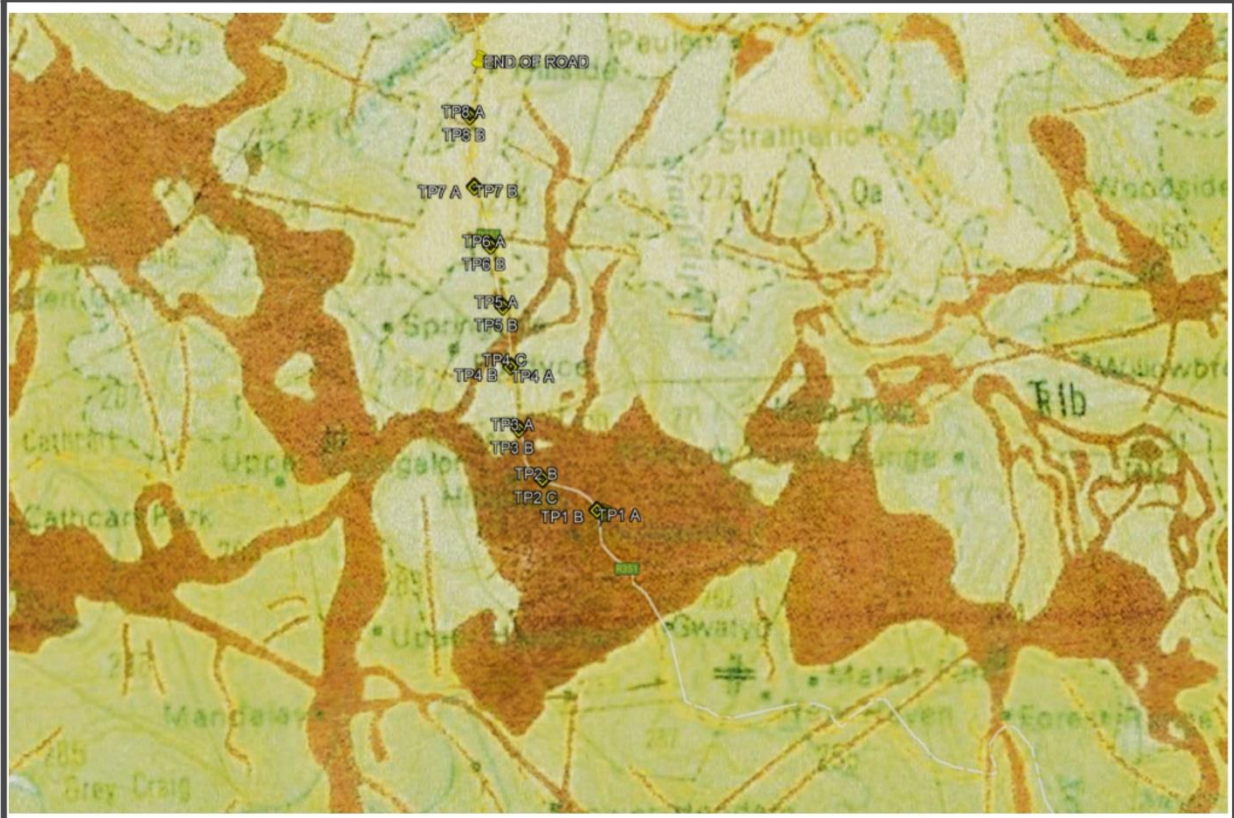


FIGURE 3

GEOLOGICAL PLAN OF THE STUDY SITE WITH TEST PIT LOCATIONS INDICATED OVERLYING LOWER TRIASSIC BEAUFORT GROUP ROCKS OF THE KAROO SUPERGROUP

6.2.4 Pedogenic

A pedogenic horizon was intersected in TP5(ABC) at depths of between 0.75m to 0.90m which extend to depths of between and in excess of 1.00m to 1.30m begl comprising gravelly clayey silty sand.

6.2.5 Residual

Residual soils were only intersected in TP8A between 0.50m to 0.80m begl and comprise cohesive gravelly silty sandy clays.

6.2.6 Rock

Rock was intersected in TP3C, TP6(ABC) and TP8(ABC) from surface (TP6 ABC) or below soils at depths of between 0.50m to 1.65m. TLB machine refusal occurred in TP6(ABC) in highly to moderately weathered mudstone at depths 0.50m to 0.85m begl and in TP8B and TP8C at 1.00m and 0.90m begl respectively in siltstone rock.

6.3 Borrow Pit Assessments

Two existing licensed borrow pits were assessed as per the clients request, namely BP627 and BP656. The borrow pits were described and rated according to:

- Geology
- Weathering
- Excavatabilty
- Hardness
- Jointing
- Water and;
- Access

BP627 occurs roughly 12km due north of the site and exploits sedimentary mudstone rock that is overlain by a sandstone capping up to approximately 1m thick. The potential reserves are fairly high below the flat and level existing ground in the exploited areas to the north of the borrow pit, while the site dips and slopes to the south and southwest in areas of thickly developed mudstone increasing yield potential (with depth of reserve) with access along the existing dirt road skirting the south-western boundary.

BP656 is an existing dolerite borrow pit in Machabini village approximately 40km (using the N6 entrance to the northwest) from the site. At this borrow pit highly weathered dolerite occurs form surface.

The borrow pits are summarized as follows:

Table 1: Borrow pit assessment forms summary

Borrow Pit No.	Material	Scores							Total Rating
		Geology	Weathering	Excavatability	Hardness	Jointing	Water	Access	
627	Mudstone	20	15	5	20	7	5	4	80
656	Dolerite	25	18	6	20	6	4	3	82

Borrow Pit assessment sheets are provided in Appendix C.

6.4 Groundwater

No groundwater seepage was encountered during the investigation, however the occurrence of pedogenic precipitates indicates that seasonal perched groundwater can occur. Significant drainage lines occur between TP6 and TP8 as well as in the vicinity of TP1. Stormwater runoff and flooding of streams during peak rainfall will likely develop large volumes of water along the roadway and where drainage lines bisect the road centreline.

During the time of the investigation the granular soils north of TP2 were generally dry to slightly moist.

7. LABORATORY TESTING

Eighteen (18) Foundation Indicator samples, collected and sent for laboratory testing, were required to determine the particle size distribution of materials. Whilst eighteen (18) moisture-density (MOD) and Californian Bearing Ratio (CBR) tests together with three road indicators were required to determine the compactive strength of materials.

The points below provide a summary of the laboratory tests undertaken:

- Foundation Indicator testing comprising Atterberg Limits, Particle Size Distribution and Hydrometer analysis
- Road Indicator testing comprising Atterberg Limits and Particle Size Distribution
- Moisture density using CBR moulds to determine the maximum dry density (MDD) and compaction curve
- California Bearing Ratio strength test providing a CBR strength value.

The laboratory results are provided in Table 1 and interpreted in Table 2. The full laboratory results are included in Appendix D.

Table 1:
Summary of Results of Particle Size Distribution Analysis, Atterberg Limit Determinations and MOD/CBR Tests.

TP No.	Depth (m)	Description	Particle Size Distribution %				Atterberg Limits %			GM	Modified AASHTO		CBR Values (%)					Swell (%)	Classification
			Clay	Silt	Sand	Gravel	LL	PI	LS		MDD (kg/m ³)	OMC %	90	93	95	98	100		
1B	0,00-0,30	GWC/FILL	7	16	44	33	27	11	5.5	1.55	2034	11.2	1	2	4	9	15	1.8	A-2-6(0); SC; Low heave potential; Less than G9 COTO quality.
1C	0,00-0,12	GWC	18		43	39	28	10	5.0	1.83	2070	10.9	6	9	12	18	24	1.4	A-2-4(0); G9 COTO quality.
2A	0,00-0,28	GWC	18		48	34	30	12	5.5	1.76	2028	10.6	5	8	10	15	19	1.7	A-2-6(0); G9 COTO quality.
3A	0,00-0,20	GWC	15	12	61	12	21	8	4.5	0.83	2001	9.6	2	8	11	16	21	1.0	A-4(1); SC; Low heave potential; G9 COTO quality.
8B	0,00-0,15	GWC	12		47	51	21	7	3.5	1.99	2169	8.0	9	15	17	20	22	1.3	A-2-4(0); G7 COTO Quality.
2A	0,28-0,70	Selected Subgrade	12	12	53	22	26	12	5.5	1.41	2038	11.5	4	6	7	10	13	1.4	A-2-6(0); SC; Low heave potential; Potentially G9 COTO quality.
4B	0,02-0,30	Fill/Selected Subgrade	20	20	53	6	17	3	1.5	0.78	2013	9.1	3	9	16	37	65	0.6	A-4(0); SM; Low heave potential; G8/G9 COTO quality.
7A	0,00-0,90	Rockfill	9	9	39	43	41	22	10.5	1.77	2065	9.8	10	10	11	11	12	3.3	A-2-4(0); SM; Low heave potential; Less than G9 COTO quality.
2B	0,09-1,00	Colluvium	44	25	31	1	43	23	12.0	0.34	-	-	-	-	-	-	-	-	A-7-6(15); CL; Medium heave potential; Weston Swell 4.5.

TP No.	Depth (m)	Description	Particle Size Distribution %				Atterberg Limits %			GM	Modified AASHTO		CBR Values (%) Compaction MDD (%)					Swell (%)	Classification
			Clay	Silt	Sand	Gravel	LL	PI	LS		MDD (kg/m ³)	OMC %	90	93	95	98	100		
3C	0,12-0,55	Colluvium	14	19	46	20	22	7	3.5	1.07	1991	9.2	2	5	7	13	19	1.3	A-4(0); SC-SM; Low heave potential; Less than G9 COTO quality.
4A	0,11-0,75	Colluvium	18	28	41	13	19	7	3.5	0.81	1885	10.1	4	6	7	9	11	1.3	A-4(0); SC; Low heave potential; possible G9 COTO quality.
5A	0,30-0,75	Colluvium	14	18	36	32	23	10	5.0	1.47	1863	10.3	1	2	2	4	5	2.4	A-2-4(0); SC; Low heave potential; Less than G9 COTO quality.
8B	0,15-0,50	Colluvium	4	6	52	37	21	7	3.5	1.77	2152	7.4	12	17	22	32	41	1.4	A-2-4(0); SC-SM; Low heave potential; G7 COTO quality.
1C	0,30-0,75	Alluvium	25	21	48	6	47	23	12.0	0.64	-	-	-	-	-	-	-	-	A-7-6(9); CL; Medium heave potential; Weston Swell 5.8.
7B	0,15-1,10	Alluvium	8	12	66	14	17	3	1.5	1.19	2078	8.1	3	6	9	17	25	0.9	A-2-4(0); SM; Low heave potential; Possible G9 COTO quality.
5A	0,75-1,10	Pedogenic	24	21	48	6	24	12	6.0	0.66	1874	12.2	0	1	2	5	10	2.7	A-6(2); SC; Low to borderline medium heave potential; Less than G9 COTO quality.
8A	0,50-0,80	Residual	18	16	55	11	31	15	7.5	0.99	-	-	-	-	-	-	-	-	A-6(1); SC; Low to borderline medium heave potential.
6B	0,00-0,35	Comp to highly Mudstone	3	11	35	51	22	11	5.5	2.09	2180	7.5	6	9	12	19	25	7.5	A-2-6(0); SC; Low heave potential; G8/G9 COTO quality.

TP No.	Depth (m)	Description	Particle Size Distribution %				Atterberg Limits %			GM	Modified AASHTO		CBR Values (%)					Swell (%)	Classification
			Clay	Silt	Sand	Gravel	LL	PI	LS		MDD (kg/m ³)	OMC %	90	93	95	98	100		
6A	0,47-0,75	Highly to Mod Mudstone	2	2	24	72	23	12	6.0	2.50	2178	7.1	9	11	12	15	17	1.5	A-2-6(0); SP-SC; Low heave potential; G8 COTO quality.
BP 627	0,20-0,50	Moderately Mudstone	0	1	5	93	22	11	5.5	2.88	2161	7.5	8	14	19	30	42	1.4	A-2-6(0); GP; Low heave potential; Anticipate G7 COTO quality where GM less than 2.70.
BP 656	0,00-0,10	Highly Dolerite	2	2	56	40	27	3	1.5	2.24	2060	8.5	10	16	22	34	45	0.7	A-1-b(0); SP; Low heave potential; G7 COTO quality.

LL - Liquid Limit
PI - Plasticity Index
LS - Linear Shrinkage

GM - Grading Modulus
OMC - Optimum Moisture Content

Classification in Terms of: COLTO
Unified Soil Classification System²
Van der Merwe³
TRH14(1985)⁴

² ASTM D 2487-06 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System). June 2006

³ D.H. Van Der Merwe (1964) The Prediction of Heave from the Plasticity Index and Percentage Clay Fraction of Soils. The Civil Engineer, pp 103-107

⁴ TRH 14 (1985) - Guidelines for Road Construction Materials; Technical Recommendations for Highways, South African National Institute for Transport and Road Research

To aid in the clarity of interpreting the laboratory results the interpretation of the materials has been summarized in Table 2.

Table 2: Materials Classification and Usage for Construction

Material Type	Classification Details	Laboratory result evaluation
GWC	<p>Silt & Clay = 12 to 27% Sand = 43 to 61% Gravel = 12 to 51% PI = 7 to 12 LL = 21 to 30 GM = 0.83 to 1.99 LS = 3.5 to 5.5</p> <p>CBR = 1 to 9 @ 90% MDD CBR = 2 to 15 @ 93% MDD CBR = 4 to 17 @ 95% MDD CBR = 9 to 20 @ 98% MDD CBR = 15 to 24 @ 100% MDD</p> <p>A-2-6(0), A-2-4(0), A-4(1); SC; Low heave potential G7 to G9 according to COTO.</p>	<p>Predominately granular sand and gravel component with moderately raised CBR strength that classify as G7 and G9 quality material according to COTO specifications for the five samples tested. Where at least medium dense the GWC will suffice as an in-situ subgrade beneath new road layers. Alternatively, if required, this material could be ripped removed and stockpiled and then reintroduced and compacted as a selected subgrade or GWC where higher quality varieties occur. Control testing would be required to confirm the quality post compaction.</p> <p>Precautions will be required along the southern portion of the site that are underlain by active cohesive soils, such as removal of stockpiling for reuse of the GWC and replacement, of the in-situ soils with geotechnically inert materials. The stockpiled GWC can be reintroduced as selected subgrade upon compaction.</p>
Selected Subgrade	<p>Silt & Clay = 24 to 40% Sand = 53% Gravel = 6 to 22% PI = 3 to 12 LL = 17 to 26 GM = 0.78 to 1.41 LS = 1.50 to 5.50</p> <p>CBR = 3 to 4 @ 90% MDD CBR = 6 to 9 @ 93% MDD CBR = 7 to 16 @ 95% MDD CBR = 10 to 37 @ 98% MDD CBR = 13 to 65 @ 100% MDD</p> <p>A-4(0), A-2-4(0); SM; Low heave potential; G8 to G9 according to COTO.</p>	<p>Predominately granular sand and gravel fractions, however can contain up to 40% combined fines content. Atterberg limits are low indicating low heave potential materials. CBR values indicate moderately low to high post compaction strength which classify as G8 to G9 quality material according to COTO specifications.</p> <p>Where at least medium dense the selected subgrade could be considered as an in-situ subgrade beneath new road layers.</p> <p>Removal of this layer, along the southern portion of the site will be required to undertake ground improvement in the active colluvial and alluvial soils. If effectively removed without mixing of the natural soils and stockpiled the selected subgrade could be reintroduced as selected subgrade upon compaction.</p>

Material Type	Classification Details	Laboratory result evaluation
Rockfill	<p>Silt & Clay = 18% Sand = 39% Gravel = 43% PI = 22 LL = 41 GM = 1.77 LS = 10.5</p> <p>CBR = 10 @ 90% MDD CBR = 10 @ 93% MDD CBR = 11 @ 95% MDD CBR = 11 @ 98% MDD CBR = 12 @ 100% MDD</p> <p>A-2-4(0); SM; Low heave potential; Less than G9 quality according to COTO.</p>	<p>Predominately granular sand and gravel material of weathered mudstone origin. Soil mortar analysis indicates elevated Atterberg limits not necessarily representative of the whole sample. This said the rockfill is low heave potential.</p> <p>CBR strength values are low for the rockfill most likely due to the removal of the larger fragments for MOD/CBR testing. Therefore, the CBR values are likewise not necessarily representative, where this material should normally form G7 quality upon compaction.</p> <p>However, where encountered and at least medium dense would suffice as a competent in-situ subgrade beneath new road layers.</p>
Colluvium	<p>Silt & Clay = 10 to 69% Sand = 31 to 52% Gravel = 1 to 37% PI = 7 to 23 LL = 19 to 43 GM = 0.34 to 1.77 LS = 3.5 to 12.0</p> <p>CBR = 1 to 12 @ 90% MDD CBR = 2 to 17 @ 93% MDD CBR = 2 to 22 @ 95% MDD CBR = 4 to 32 @ 98% MDD CBR = 5 to 41 @ 100% MDD</p> <p>A-2-4(0), A-4(0), A-7-6(15), SM, CL, SC-SM, SC, Low to medium heave potential.</p>	<p>Variable material across the site from cohesive to granular but generally with combined fines above 30%. Coarse granular variant intersected in TP8B. High Atterberg limit values on the colluvium tested at TP2B indicate medium heave potential here and will require precautions such as removal or stabilization. Elsewhere (north of TP2) along the proposed road upgrade route the colluvial soils are low heave potential materials and would suffice as in-situ subgrades for imported road layers where at least medium dense.</p> <p>The colluvial soils underlying the existing road layers at TP8B would form G7 quality materials once compacted according to COTO.</p>
Alluvium	<p>Silt & Clay = 20 to 46% Sand = 48 to 66% Gravel = 6 to 14% PI = 3 to 23 LL = 17 to 47 GM = 0.64 to 1.19 LS = 3.5 to 12.0</p>	<p>Variable material encountered surrounding TP1 and TP7</p> <p>The finer grained variety at TP1 exhibits elevated Atterberg limits that are medium heave potential materials and would require precautions such as removal to spoil and replaced or stabilized.</p> <p>The more granular variety near TP7 exhibits low Atterberg limits and are correspondingly low heave materials that</p>

Material Type	Classification Details	Laboratory result evaluation
	CBR = 3 @ 90% MDD CBR = 6 @ 93% MDD CBR = 9 @ 95% MDD CBR = 17 @ 98% MDD CBR = 25 @ 100% MDD A-7-6(9), A-2-4(0); CL, SM; Low to medium heave potential. Possibly G9 COTO quality.	should have fair workability where they could possibly (marginal CBR strength at 93% of MDD) form G9 quality material on compaction and suffice as suitable in-situ subgrade for new imported road layers.
Pedogenic	Silt & Clay = 45% Sand = 48% Gravel = 6% PI = 12 LL = 24 GM = 0.66 LS = 6.0 CBR = 0 @ 90% MDD CBR = 1 @ 93% MDD CBR = 2 @ 95% MDD CBR = 5 @ 98% MDD CBR = 10 @ 100% MDD A-6(2); SC; Low to borderline medium heave potential. Less than G9 COTO quality.	Only intersected in TP5 (A-C). The pedogenic soils are almost equal portions combined fines to sand content with only slightly elevated Atterberg limits. This indicates they are potentially borderline moderately active material in the presence of moisture. Very low CBR strength values indicate the pedogenic soils are less than G9 according to COTO and should not be considered as a construction material but should suffice as an in-situ subgrade beneath new imported road layers where sufficiently dense.
Residual	Silt & Clay = 34% Sand = 55% Gravel = 11% PI = 115 LL = 31 GM = 0.99 LS = 7.5 A-6(1); SC; Low to borderline medium heave potential.	The residual soils only intersected at TP8 are sub cohesive with moderately high Atterberg limits approaching potentially borderline moderately active material in the presence of moisture. The residual soils should form suitable in-situ subgrades for new imported road layers. However, attention should be given to elevated clayey variants which may require precautions.
Completely to highly weathered mudstone	Silt & Clay = 14% Sand = 35% Gravel = 51% PI = 11 LL = 22 GM = 2.09	Predominately granular gravel material and with low Atterberg limits indicates the completely to highly weathered mudstone horizon intersected at surface surrounding the cut area at TP6 location is low heave potential material and with moderately elevated CBR

Material Type	Classification Details	Laboratory result evaluation
	LS = 5.8 CBR = 6 @ 90% MDD CBR = 9 @ 93% MDD CBR = 12 @ 95% MDD CBR = 19 @ 98% MDD CBR = 25 @ 100% MDD A-2-6(0); SC; Low heave potential; G8/G9 COTO quality.	<p>strength values makes these materials G8-G9 quality according to COTO specifications.</p> <p>The completely to highly weathered mudstone would form a competent in-situ subgrade for imported road layers as well as a selected subgrade or GWC layer where any excess material is available.</p>
Highly to moderately weathered mudstone (Road centreline and BP627)	Silt & Clay = 0 to 4% Sand = 35% Gravel = 73 to 93% PI = 11 to 12 LL = 22 to 23 GM = 2.50 to 2.88 LS = 5.5 to 6.0 CBR = 8 to 9 @ 90% MDD CBR = 11 to 14 @ 93% MDD CBR = 12 to 19 @ 95% MDD CBR = 15 to 30 @ 98% MDD CBR = 17 to 42 @ 100% MDD A-2-6(0); SP-SC, GP; Low heave potential; G7/G8 COTO quality.	<p>Predominantly granular gravel materials that have low Atterberg limits and are low heave materials. Elevated CBR strength values indicate the highly to and/or moderately weathered mudstone is G7 to G8 according to COTO specifications.</p> <p>Where encountered along the proposed road upgrades the highly to moderately weathered rock would form a suitable in-situ subgrade beneath new imported road layers. Where any excess material occurs from cut areas these could be used as selected subgrade quality or gravel wearing course material.</p> <p>The moderately weathered rock tested from BP627 would be suitable for use as selected subgrade and GWC layers for the envisioned upgrades where they should classify as G7 according to COTO specifications if correctly screened.</p>
Highly weathered dolerite (BP656)	Silt & Clay = 4% Sand = 56% Gravel = 40% PI = 3 LL = 27 GM = 2.24 LS = 1.5 CBR = 10 @ 90% MDD CBR = 16 @ 93% MDD CBR = 22 @ 95% MDD CBR = 34 @ 98% MDD CBR = 45 @ 100% MDD	<p>Almost entirely sand and gravels components with low Atterberg limits, low heave potential and high GM indicates good workability. With correspondingly high CBR strength values indicate the highly weathered dolerite would form G7 quality according to COTO specifications on compaction. Moderately weathered dolerite which may occur in proximity underlying the highly weathered rock would possibly form G6 COTO quality material. Together these materials would suffice as selected subgrade, GWC and subbase quality road layers.</p>

Material Type	Classification Details	Laboratory result evaluation
	A-1-b(0); SP; Low heave potential. G7 COTO quality.	

8. GEOTECHNICAL EVALUATION

8.1 Engineering and Materials Characteristics

On the basis of the desk study and the available geotechnical investigation information, the following points relating to the site geotechnical conditions and constraints, may be made:

- a) Field tests and DCP data indicate generally dense to very dense material and localised areas of medium dense consistencies for the **GWC**. It appears that the GWC and/or selected subgrade near TP1 is locally disturbed vehicle movements and saturated soils after rain events. Laboratory results indicate the GWC are G7 to G9 COTO quality materials that would form suitable in-situ subgrades (provided not underlain by problematic soils) for imported road layers or removed and reintroduced to form selected subgrade layers once compacted. However, where underlain by active colluvial or alluvial soils the GWC should be removed to undertake ground improvements on the active in-situ soils. Note that the GWC and selected subgrade surrounding TP1 and TP2 are generally variably thin (collectively between 90mm to 300mm thick) and therefore effective removal without mixing of the underlying cohesive soils may prove difficult.
- b) DCP data indicates the **selected subgrade** layers are medium dense to very dense and therefore moderately to slightly compressible throughout their profile. As per Table 2, the selected subgrade will form suitable in-situ subgrades for new imported road layers except where underlain by active colluvial and alluvial soils in which case should be removed to undertake ground improvements. If effectively removed (without mixing of the problematic natural soils) and where this horizon occurs, the selected subgrade can generally be reintroduced as selected subgrade quality material where it classifies at between G8 to G9 according to COTO.
- c) DCP data indicates the **colluvium** is at least medium dense/stiff to dense/very stiff throughout. The colluvium will form suitable in-situ subgrades beneath new imported road layers where sufficiently dense/stiff, except where encountered surrounding and between TP2 and TP1. As indicated in points *a* and *b* above, the colluvium underlying areas surrounding TP2 will require precautions such as removal or stabilization.

- d) DCP data indicates very stiff/dense to very dense material for the **alluvial** soil horizons encountered at TP1 and TP7. As per Table 2 the cohesive alluvium intersected at TP1 is moderately active and will require ground improvements such as stabilization or removal while at TP7 the alluvium will form suitable in-situ subgrades for new imported road layers where sufficiently dense and would possibly form G9 quality layers once compacted.
- e) Field tests indicate at least medium dense to dense material for the **pedogenic** soils, while with reference to Table 2, the pedogenic soils are borderline cohesive soils that are approaching medium heave potential levels and are less than G9 COTO quality materials on compaction. However, where encountered the pedogenic soils should form suitable in-situ subgrades for new imported road layers.
- f) **Residual** soils were only intersected in TP8A and are at least firm in consistency according to field tests. With reference to Table 2 the residual soils, provided no elevated clayey variants occur, should form suitable in-situ subgrades for new imported road layers.
- g) The **completely to highly** weathered **mudstone** encountered from surface surrounding the cutting near TP6 forms G8 to G9 according to COTO specifications upon compaction and would form a competent in-situ subgrade beneath new road layers or where excess material occurs would form suitable selected subgrade layers beneath imported road layers.
- h) The underlying **highly to moderately** or **less** weathered **mudstone** would form a suitable in-situ subgrade underlying the proposed upgrades or where imported from **BP-627** the highly to moderately weathered mudstone would suffice as selected subgrade or GWC quality layers where they classify as G7 to G8 according to COTO when correctly screened.
- i) The highly weathered dolerite tested from **BP-656** classifies as G7 quality while any moderately weathered dolerite would likely classify as at least G6 according to COTO. Together these would form suitable selected subgrade to subbase quality road material for use in the proposed road upgrades.
- j) No perched groundwater was intersected in any of the test pits, however, if encountered during the construction phase precautions to reduce pore water pressures and moisture beneath the road surface should be considered particularly where underlain by cohesive soils. Sufficient road

camber to facilitate drainage and side drains to direct stormwater runoff must be considered. Existing bridge and culverts at drainage lines will require upgrades and ongoing maintenance.

9. RECOMMENDATIONS

The following items are recommended for the proposed road upgrades.

9.1 Pavements

For the southern roughly 2.5 km of roadway, box cuts and removal of the active cohesive soils to beyond the zone of influence, with sand and bidum separation layer can be considered with imported selected subgrade and GWC thereafter.

But mostly throughout the site the existing GWC, selected subgrade, and natural soils where medium dense and all the rock encountered will form suitable in-situ subgrades for new imported road layers from borrow pits. Material from BP627 and BP656 should provide G5/G6 (highly to moderately weathered dolerite and moderately weathered mudstone) to G7/G8 (highly weathered dolerite/mudstone).

9.2 Excavatability

Excavation in the existing road layers, natural soils and completely weathered rock classifies as "soft excavation".

At the borrow pits and possibly certain sections of the road, "Intermediate excavation" is anticipated for highly weathered medium hard rock, this material will require hard to very hard ripping with larger plant machines i.e. an excavator, or the use of rock bucket and pneumatic hammer before removal.

Additionally, Hard rock excavation could occur at borrow pits within the moderately and less weathered rock, this would require blasting or, wedging and splitting techniques.

The nature of excavation requirements in terms of SANS 1200 D are further indicated:

- Soft excavation: material (Soils and completely weathered rock) that can be efficiently removed by a back hoe / digger loader
- Intermediate excavation: material (highly weathered rock) which requires hard to very hard ripping with larger plant machines i.e. excavator, or the use of pneumatic tools before removal.

- Hard rock excavation: material (moderately weathered to un-weathered rock) that cannot be removed without blasting or wedging and splitting.

9.3 Drainage

As indicate in section 8 sufficient road camber to facilitate drainage and side drains to direct stormwater runoff are recommended. Existing bridge and culverts at drainage lines will require significant upgrades together with ongoing maintenance throughout the site.

10. CONCLUSIONS

Active soils occur along the southern approximately 2.5km of the site, here box cuts and removal of the active cohesive soils with sand and bidum separation layer can be considered. This with imported selected subgrade and GWC thereafter. But generally, the existing road layers, natural soils, where at least medium dense, and rock will form suitable in-situ subgrade for new imported selected subgrade and GWC from borrow pits.



The two licensed borrow pits at BP627 and BP656 contain potentially large reserves and G5/G6 to G7/G8 quality materials according to COTO specifications.

Drainage measures to direct stormwater runoff away from the road and bridge upgrades to accommodate potentially large volumes of water at drainage lines are required on site.

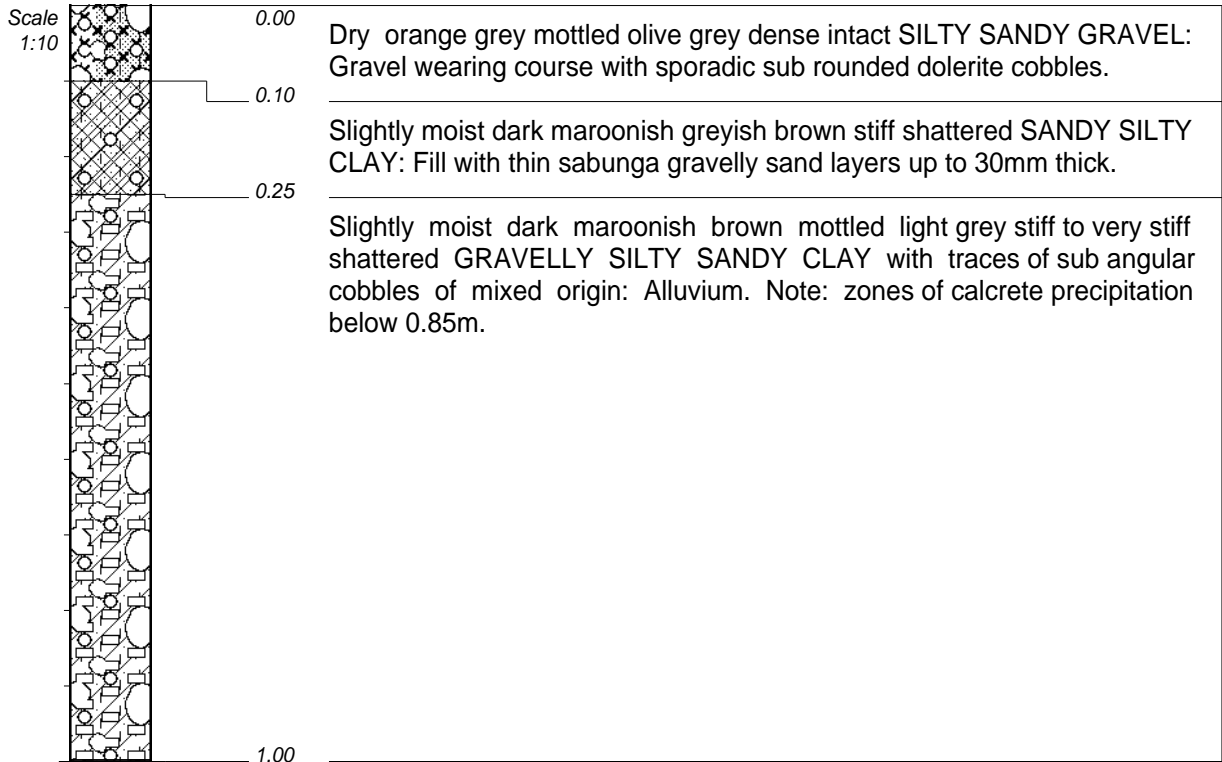
Lastly, the ground conditions described in this report refer specifically to point sources encountered in test pits and at DCP test positions. It is therefore possible, or probable, that conditions at variance with those discussed may be encountered. Important then is that Delta Geotech (Pty) Ltd carry out periodic inspections during construction, before *in situ* subgrade treatment is carried out. Any change from the anticipated ground conditions could then be taken into account to avoid unnecessary expense. In this regard, it is important that the construction phase of the project be treated as an augmentation of the geotechnical investigation. This additional work can be conducted on a time and cost basis.

We trust that the information provided meets with your requirements. Should you have any queries do not hesitate to contact us.

DELTA GEOTECH (PTY) LTD

	Compiled by	Reviewed and approved by
Date	October 2023	October 2023
Name	Daniel Miller	Matthew Jones
Qualifications / Registrations	BSc Geol Hons	Pr.Sci.Nat SAIEG
Signature		

APPENDIX - A



NOTES

- 1) End of hole @ 1.00m.
- 2) TLB stopped @ 1.00m.
- 3) No groundwater
- 4) No sample.

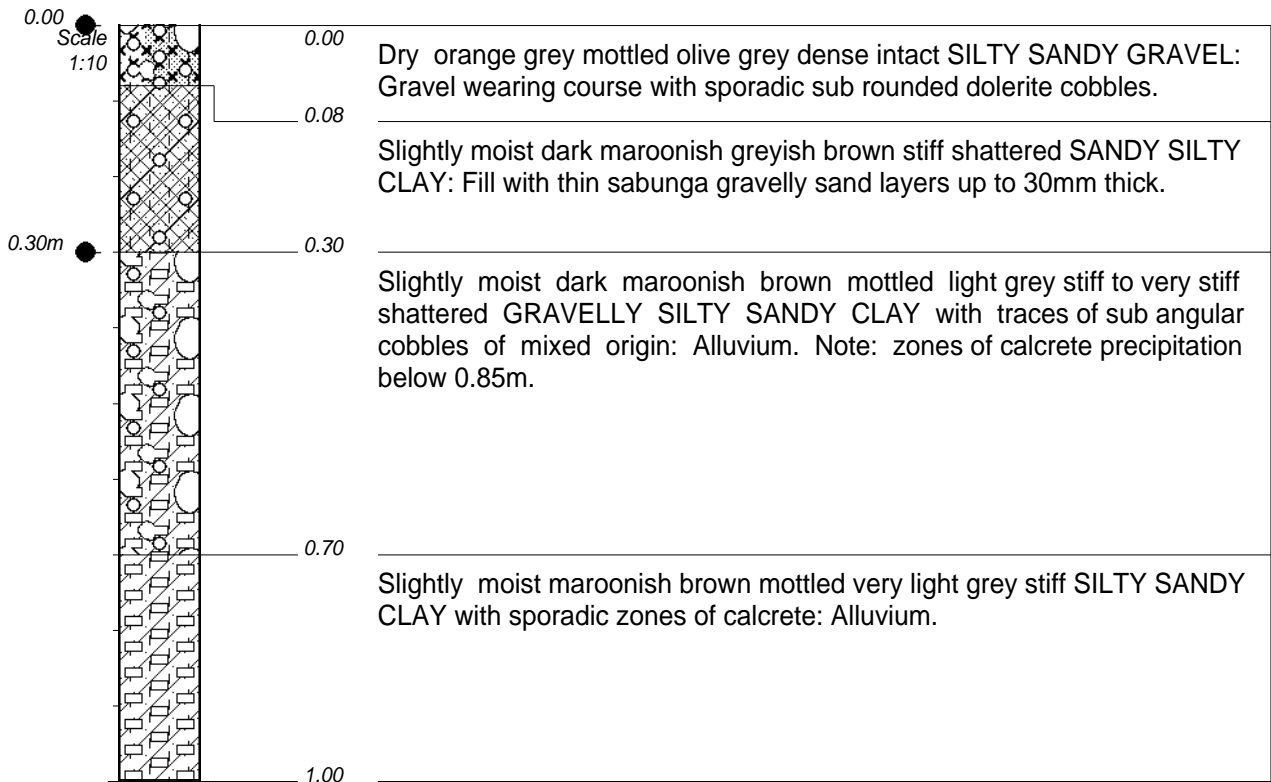
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DRILLED BY :
PROFILED BY : DM

TYPE SET BY : DM
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE :

DATE : 12/10/2023 14:25
TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :
X-COORD : 32 07 05.9
Y-COORD : 27 14 22.3



NOTES

- 1) End of hole @ 1.00m.
- 2) TLB stopped @ 1.00m.
- 3) No groundwater.
- 4) Bulk sample @ 0.00 to 0.30m.

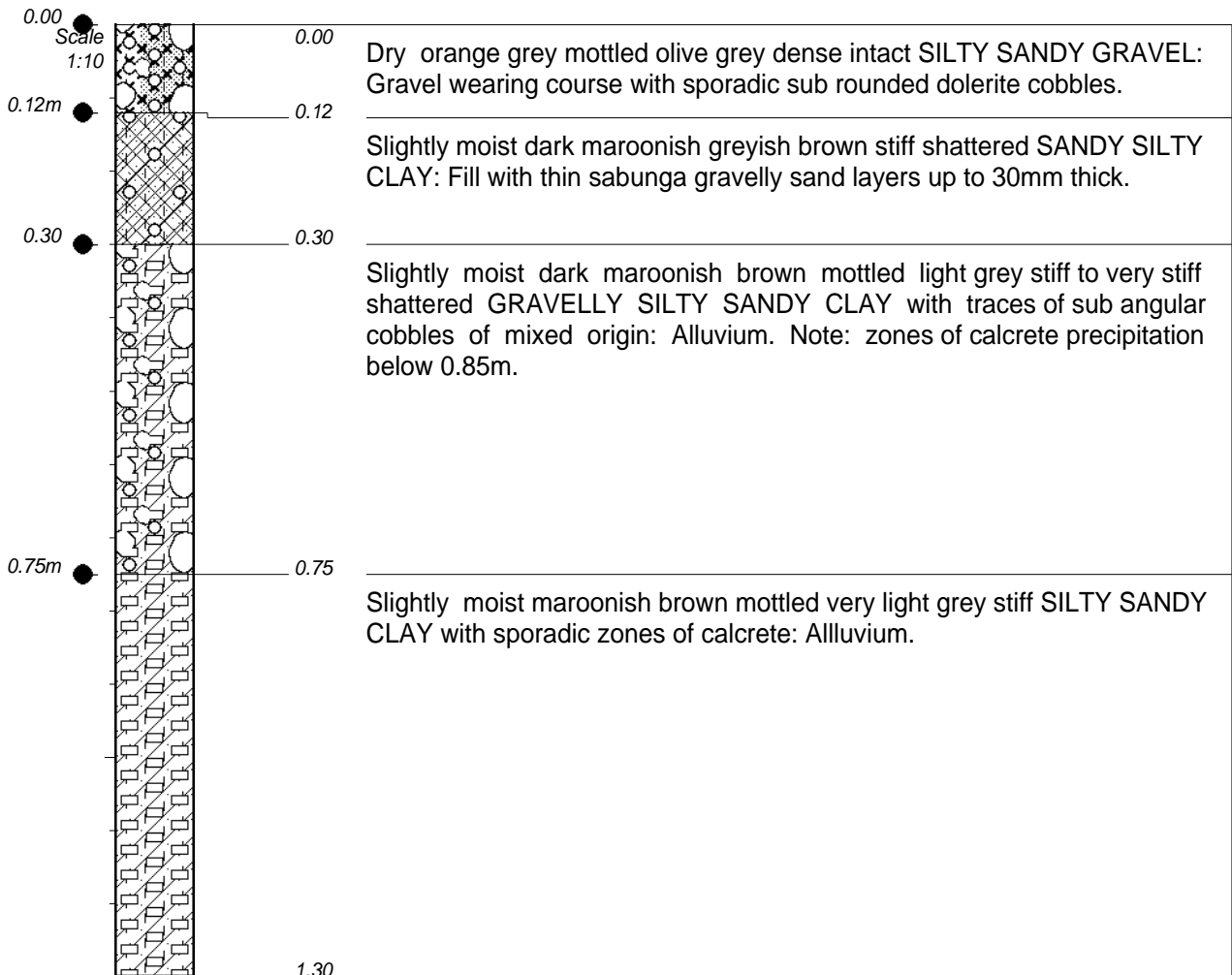
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 PROFILED BY : DM

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 DIAM :
 DATE :
 DATE :

ELEVATION :
 X-COORD : 32 07 05.7
 Y-COORD : 27 14 22.3

TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt



NOTES

- 1) End of hole @ 1.30m.
- 2) TLB stopped @ 1.30m.
- 3) No groundwater
- 4) Small sample @ 0.30 to 0.75m.
- 5) Bulk sample @ 0.00 to 0.12m.

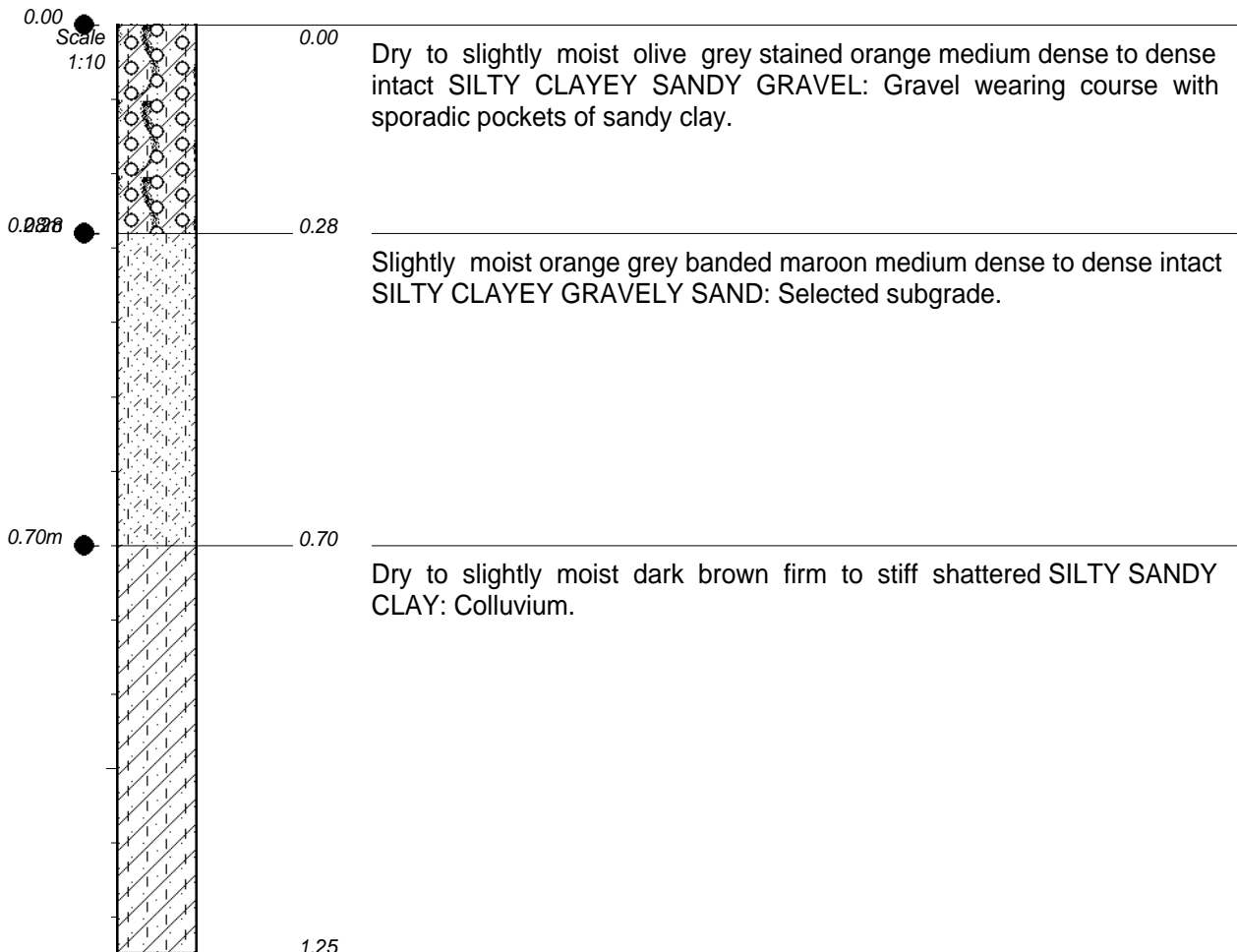
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 PROFILED BY : DM

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 DIAM :
 DATE :
 DATE :

ELEVATION :
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 Y-COORD : 27 14 22.1

TYPE SET BY : DM
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DATE : 12/10/2023 14:25
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NOTES

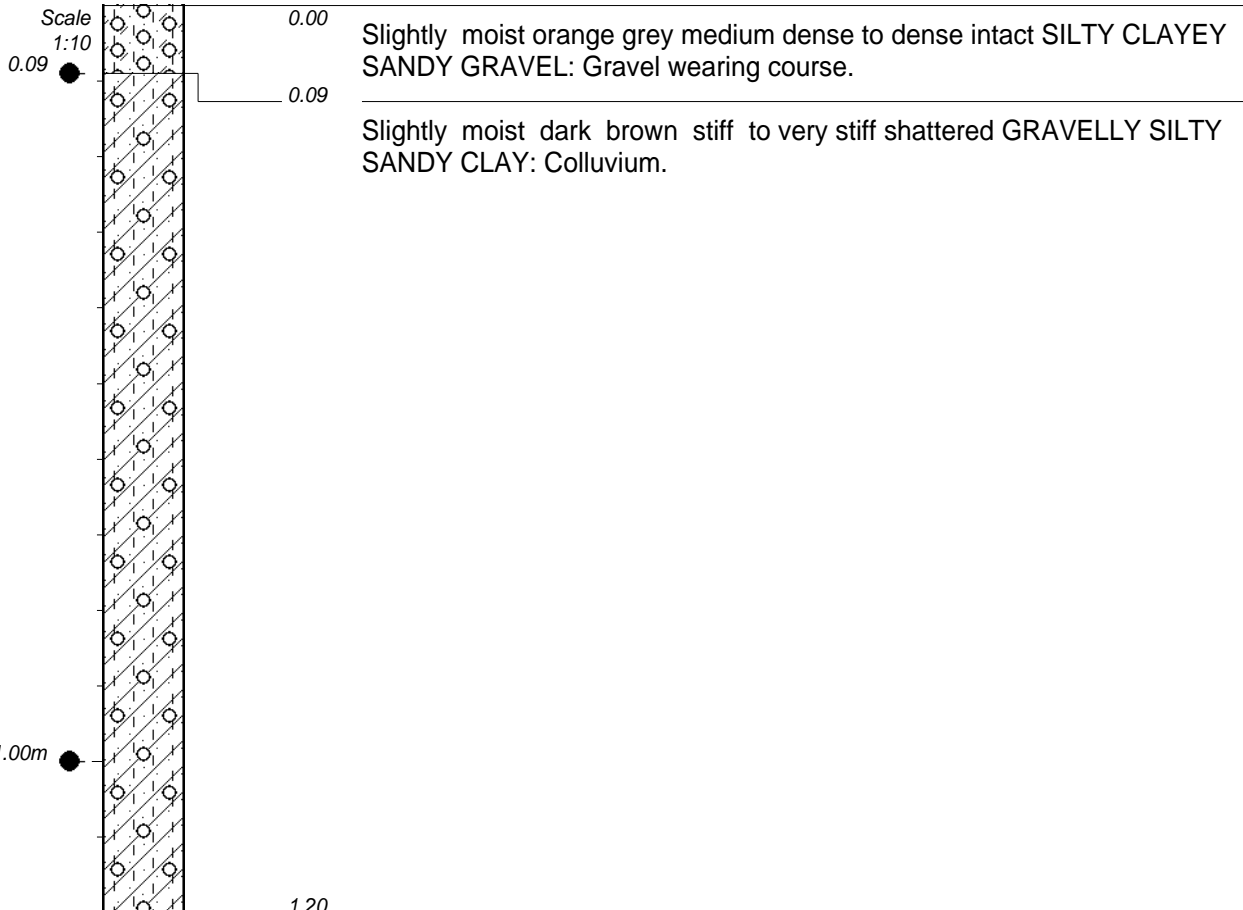
- 1) End of hole @ 1.25m.
- 2) TLB stopped @ 1.25m.
- 3) No water
- 4) Sample @ 0.00 to 0.28m (GWC)
- 5) Sample @ 0.28 to 0.70m (SS)

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM
 TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

INCLINATION :
 DIAM :
 DATE :
 DATE :
 DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :
 X-COORD : 32 06 50.0
 Y-COORD : 27 13 48.8

HOLE No: TP2A
Gwatyu



NOTES

- 1) End of hole @ 1.20m.
- 2) TLB stopped @ 1.20m.
- 3) No water.
- 4) Small sample @ 0.09 to 1.00m.

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM
 TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

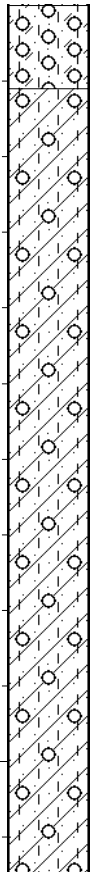
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ELEVATION :
 X-COORD : 32 06 49.6
 Y-COORD : 27 13 48.4

HOLE No: TP2B
Gwatyu



Scale
1:10



0.00

Slightly moist orange grey medium dense to dense intact SILTY CLAYEY SANDY GRAVEL: Gravel wearing course.

0.11

Slightly moist dark brown stiff to very stiff shattered gravelly SILTY SANDY CLAY: Colluvium

1.15

NOTES

- 1) End of Hole @ 1.15m.
- 2) TLB stopped @ 1.15m.
- 3) No water.
- 4) No sample.

CONTRACTOR :
MACHINE : TLB
DRILLED BY :
PROFILED BY : DM

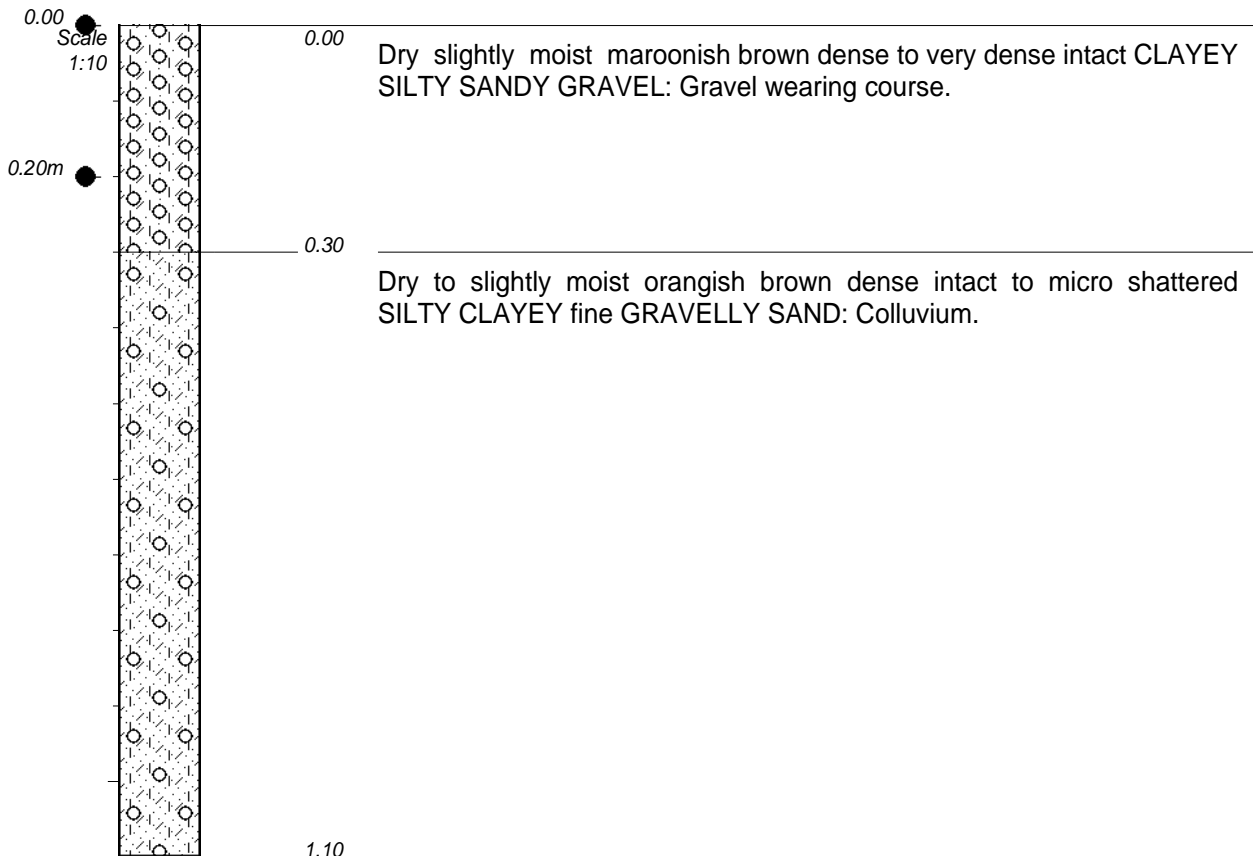
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INCLINATION :
DIAM :
DATE :
DATE :

DATE : 12/10/2023 14:25
TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :
X-COORD : 32 06 49.4
Y-COORD : 27 13 48.1

HOLE No: TP2C
Gwatyu Access Road



NOTES

- 1) End of hole @ 1.10m.
- 2) TLB stopped @ 1.10m.
- 3) No water.
- 4) Bulk sample @ 0.00 to 0.20m (GWC)

CONTRACTOR :
MACHINE : TLB
DRILLED BY :
PROFILED BY : DM

TYPE SET BY : DM
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE :

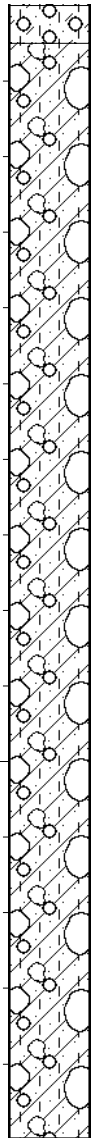
DATE : 12/10/2023 14:25
TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :
X-COORD : 32 06 24.2
Y-COORD : 27 13 33.9

HOLE No: TP3A
Gwatyu Access Road



Scale
1:10



0.00

Dry slightly moist maroonish brown dense to very dense intact CLAYEY SILTY SANDY GRAVEL: Gravel wearing course.

0.05

Moist to slightly moist reddish brown stiff shattered GRAVELLY SILTY SANDY CLAY: Colluvium with sporadic sub-angular cobbles of mixed origin.

1.50

NOTES

- 1) End of hole @ 1.50m.
- 2) TLB stopped @ 1.50m.
- 3) No water.
- 4) No sample.

CONTRACTOR :

MACHINE : TLB

DRILLED BY :

PROFILED BY : DM

TYPE SET BY : DM

SETUP FILE : STANDARD.SET

INCLINATION :

DIAM :

DATE :

DATE :

DATE : 12/10/2023 14:25

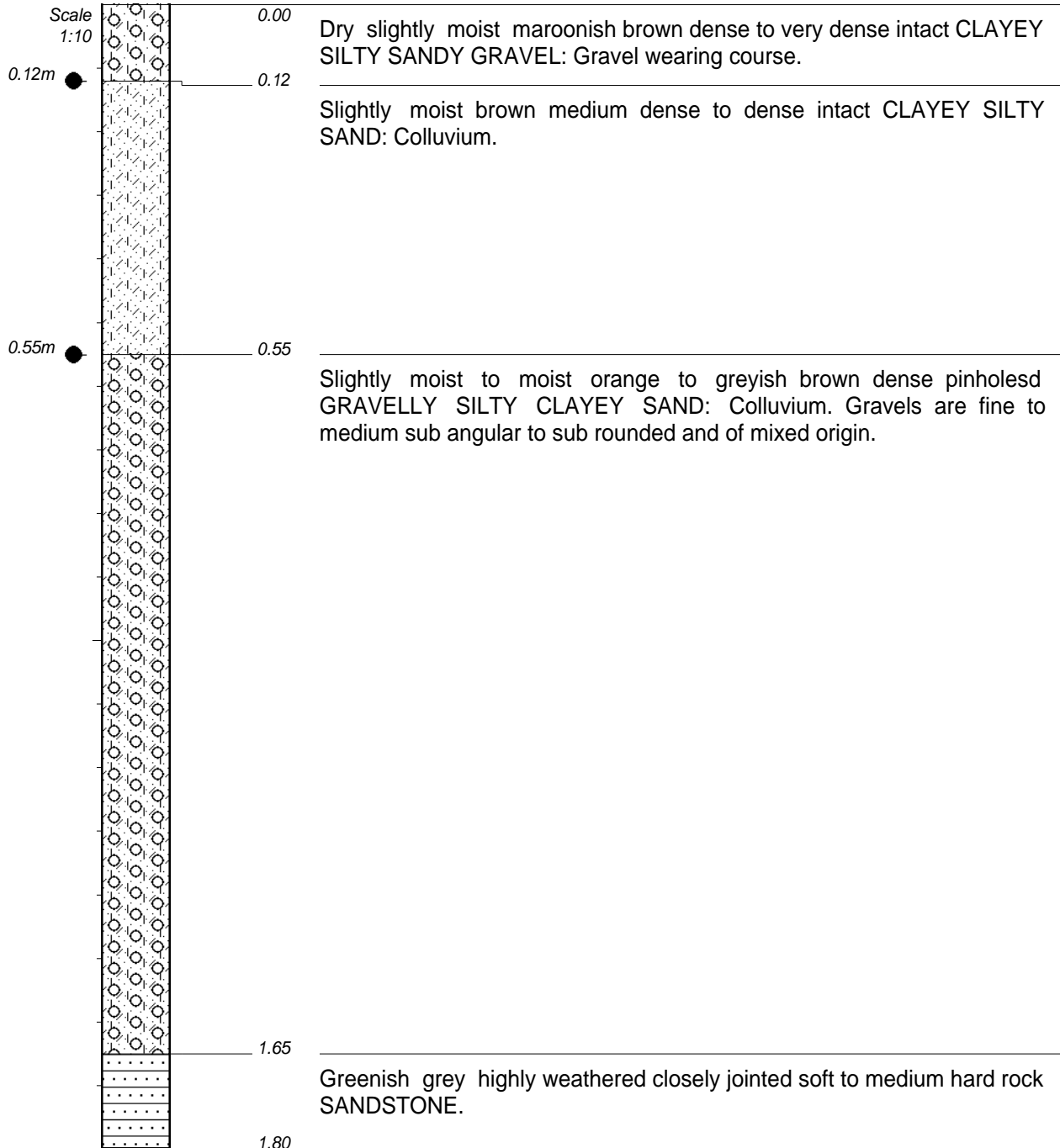
TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :

X-COORD : 32 06 23.8

Y-COORD : 27 13 33.9

HOLE No: TP3B
Gwatyu Access Road



NOTES

- 1) End of hole @ 1.80m.
- 2) TLB stopped @ 1.80m
- 3) No water.
- 4) Bulk sample @ 0.12m to 0.55m.

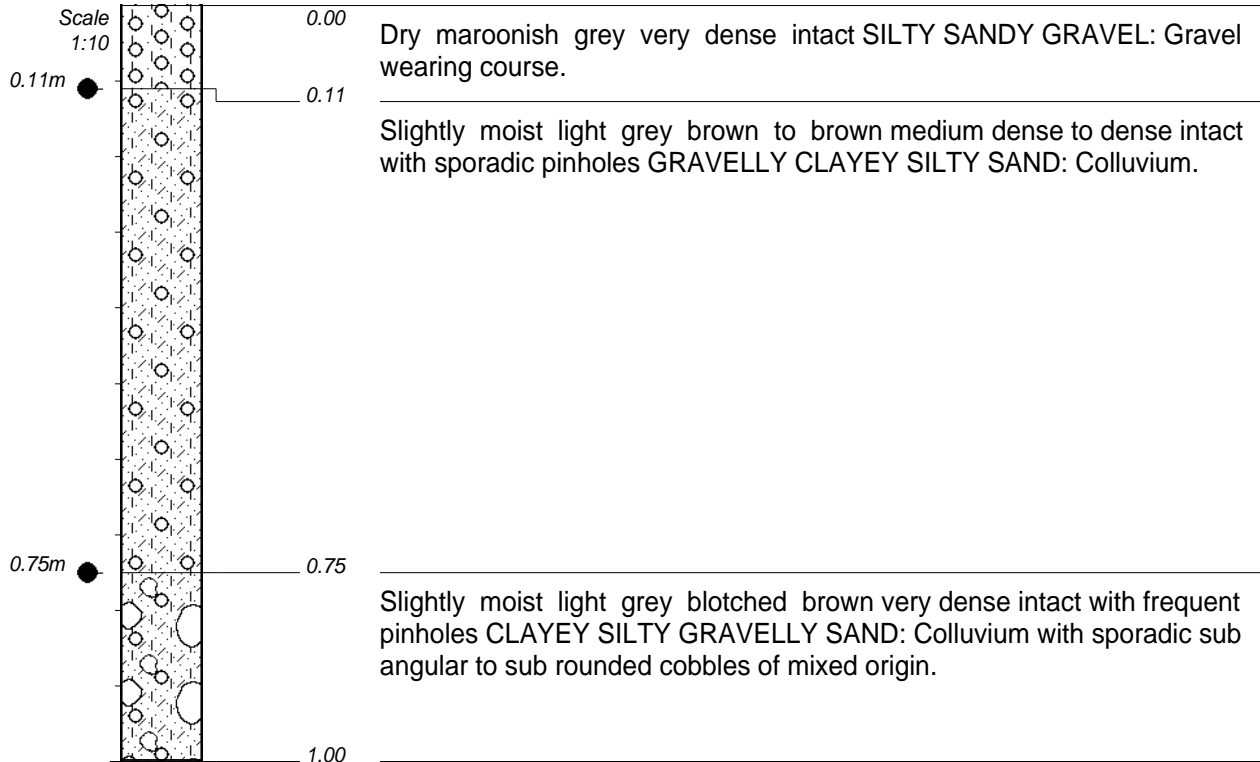
CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM

INCLINATION :
 DIAM :
 DATE :
 DATE :

ELEVATION :
 X-COORD : 32 06 23.4
 Y-COORD : 27 13 33.9

TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt



NOTES

- 1) End of hole @ 1.00m.
- 2) TLB stopped @ 1.00m.
- 3) No water.
- 4) Bulk sample @ 0.11m - 0.75m.

CONTRACTOR :
MACHINE : TLB
DRILLED BY :
PROFILED BY : DM

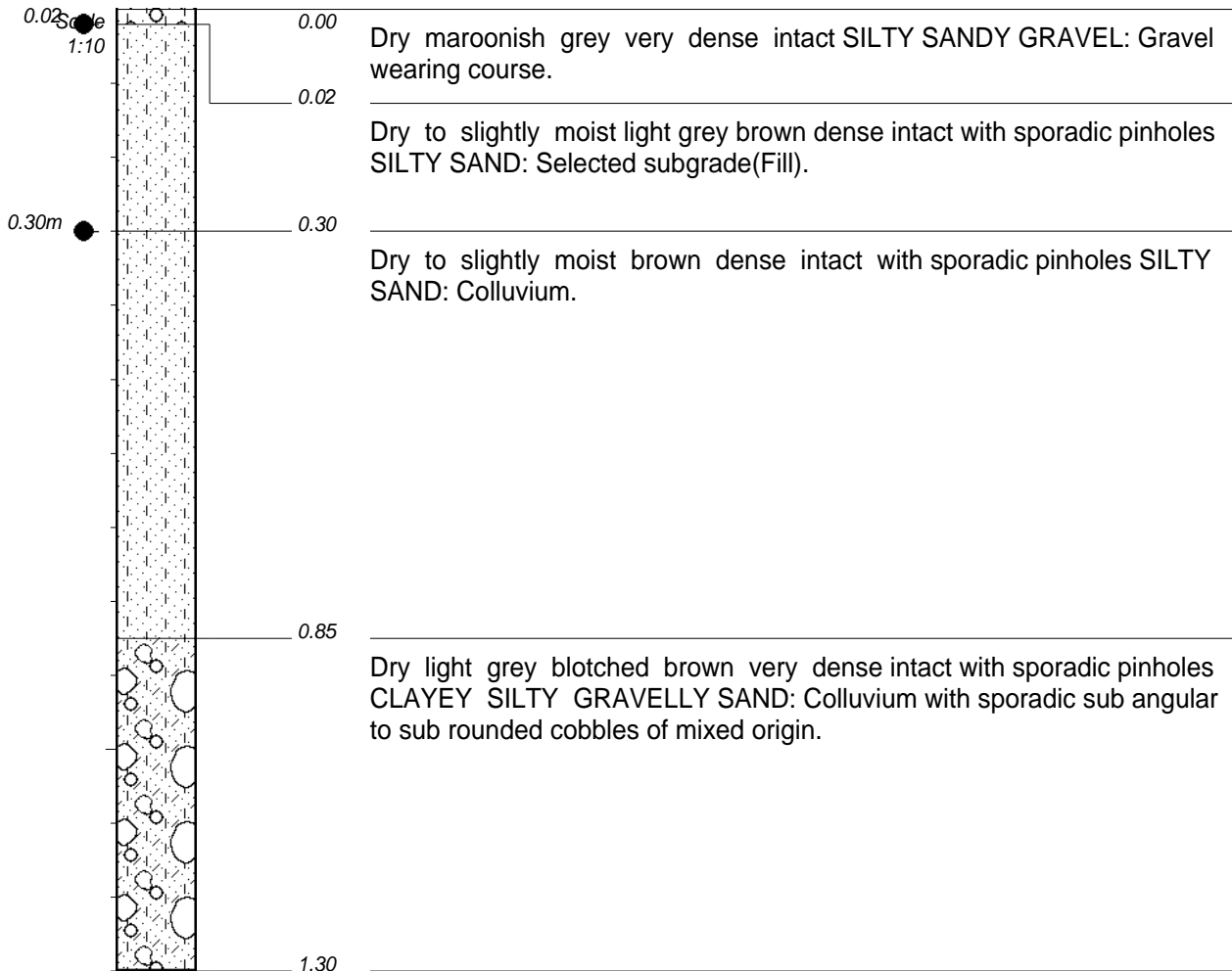
TYPE SET BY : DM
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE :

DATE : 12/10/2023 14:25
TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :
X-COORD : 32 05 52.0
Y-COORD : 27 13 28.9

HOLE No: TP4A
Gwatyu Access Road



NOTES

- 1) End of hole @ 1.30m.
- 2) TLB stopped @ 1.30m.
- 3) No water.
- 4) Bulk sample @ 0.02 to 0.30m. Fill.

CONTRACTOR :
MACHINE : TLB
DRILLED BY :
PROFILED BY : DM

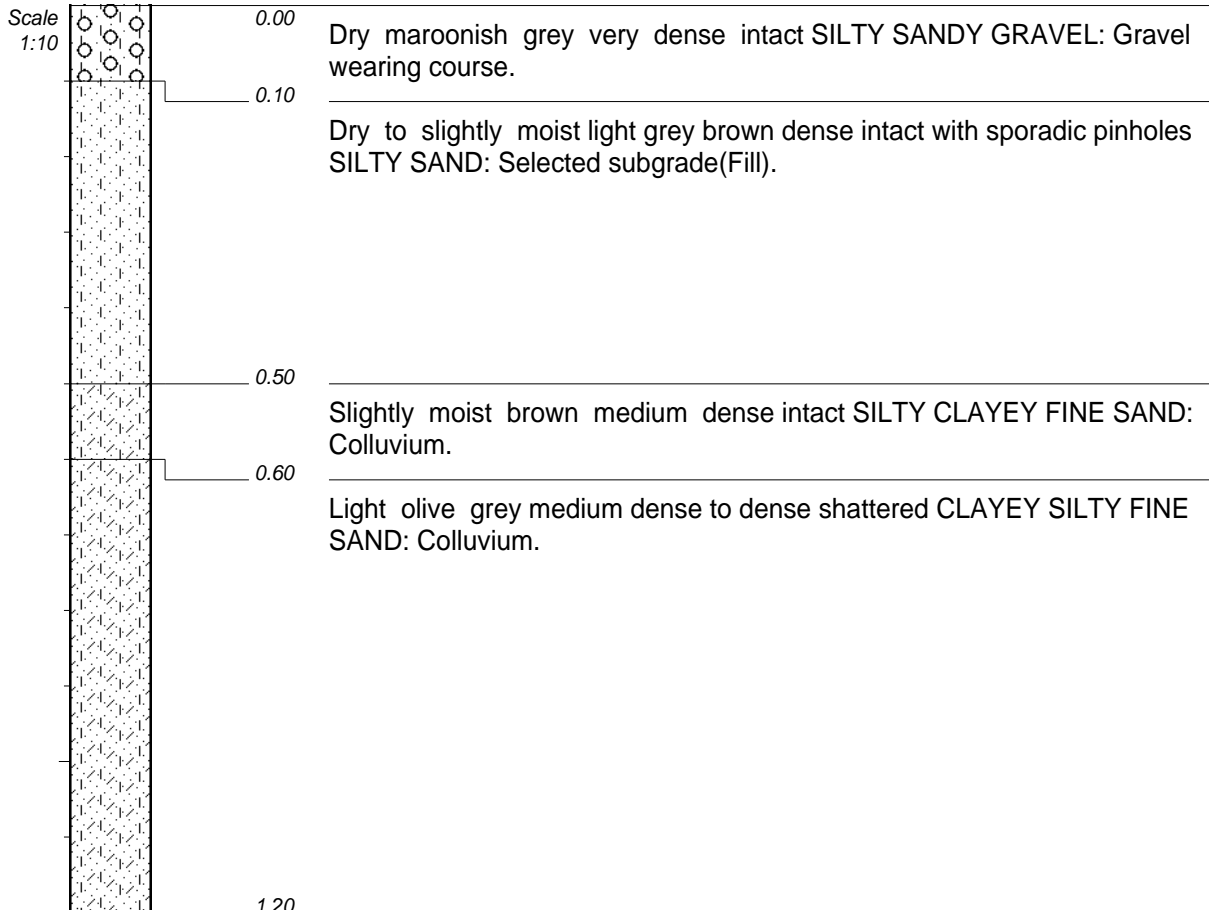
TYPE SET BY : DM
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE :

DATE : 12/10/2023 14:25
TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :
X-COORD : 32 05 51.5
Y-COORD : 27 13 29.0

HOLE No: TP4B
Gwatyu Access Road



NOTES

- 1) End of hole @ 1.20m.
- 2) TLB stopped @ 1.20m.
- 3) No water.
- 4) No sample.

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM

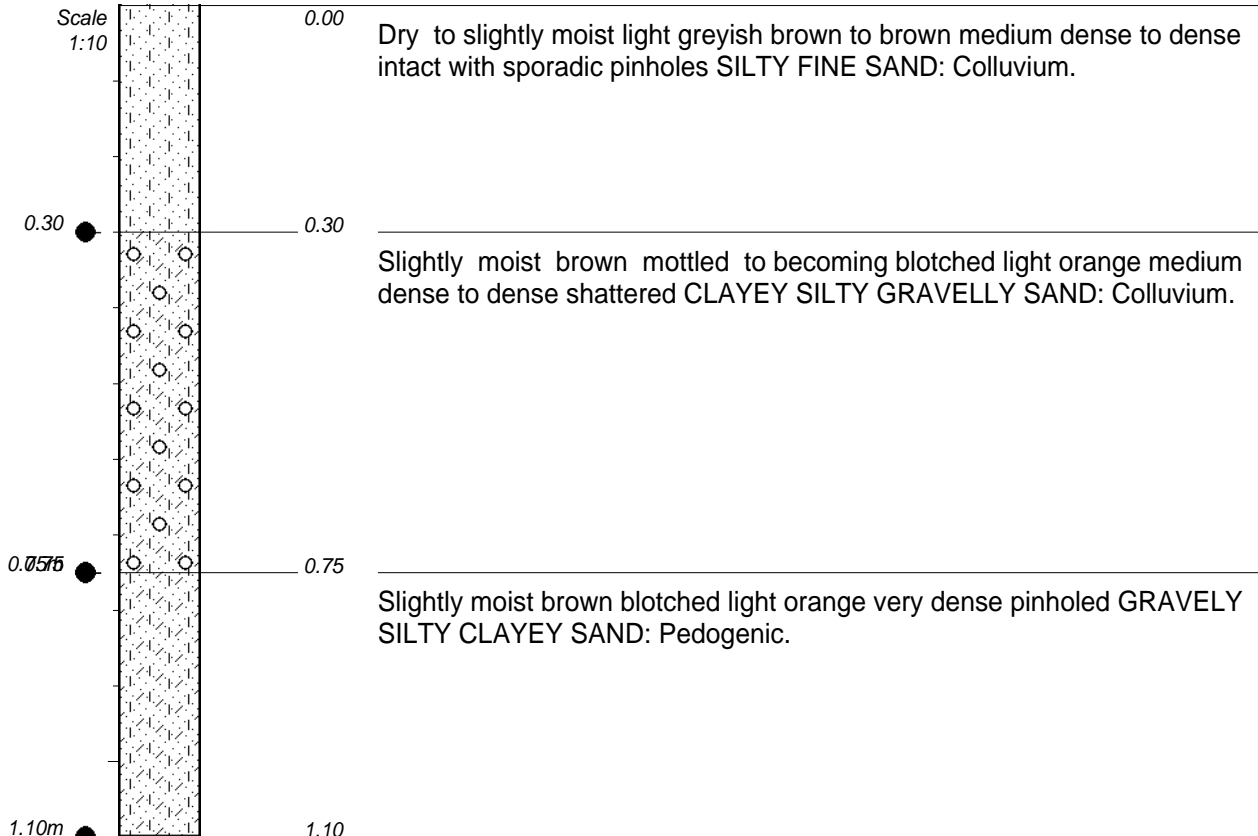
INCLINATION :
 DIAM :
 DATE :
 DATE :

ELEVATION :
 X-COORD : 32 05 51.0
 Y-COORD : 27 13 29.1

TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt

HOLE No: TP4C
Gwatyu Access Road



NOTES

- 1) End of hole @ 1.10m.
- 2) TLB stopped @ 1.10m.
- 3) No water.
- 4) Bulk sample @ 0.30 to 0.75m
- 5) Bulk sample @ 0.75 to 1.10m.

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM

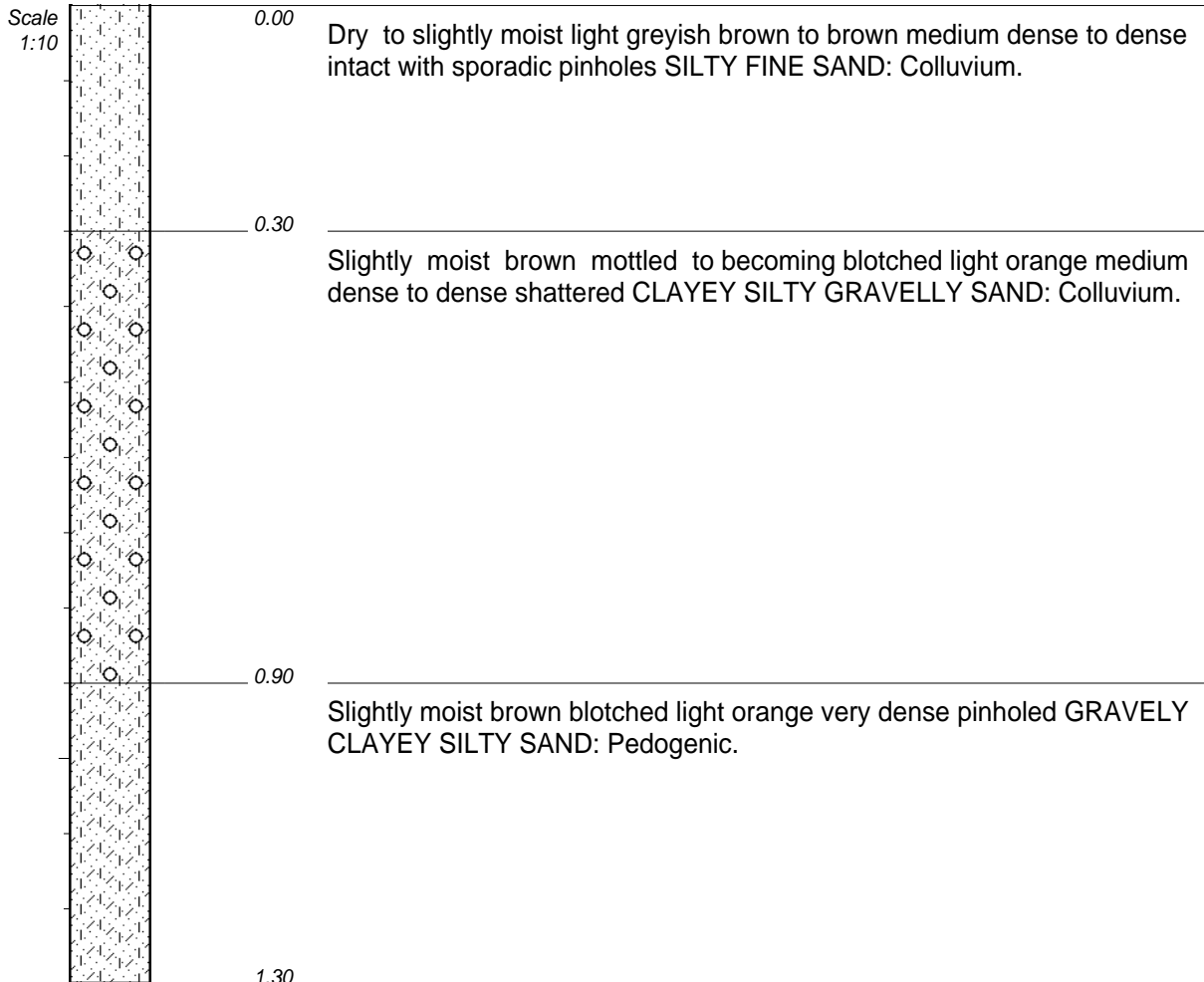
INCLINATION :
 DIAM :
 DATE :
 DATE :

ELEVATION :
 X-COORD : 32 05 21.2
 Y-COORD : 27 13 24.1

TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt

HOLE No: TP5A
Gwatyu Access Road



NOTES

- 1) End of hole @ 1.30m.
- 2) TLB stopped @ 1.30m.
- 3) No water.
- 4) No sample.

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM

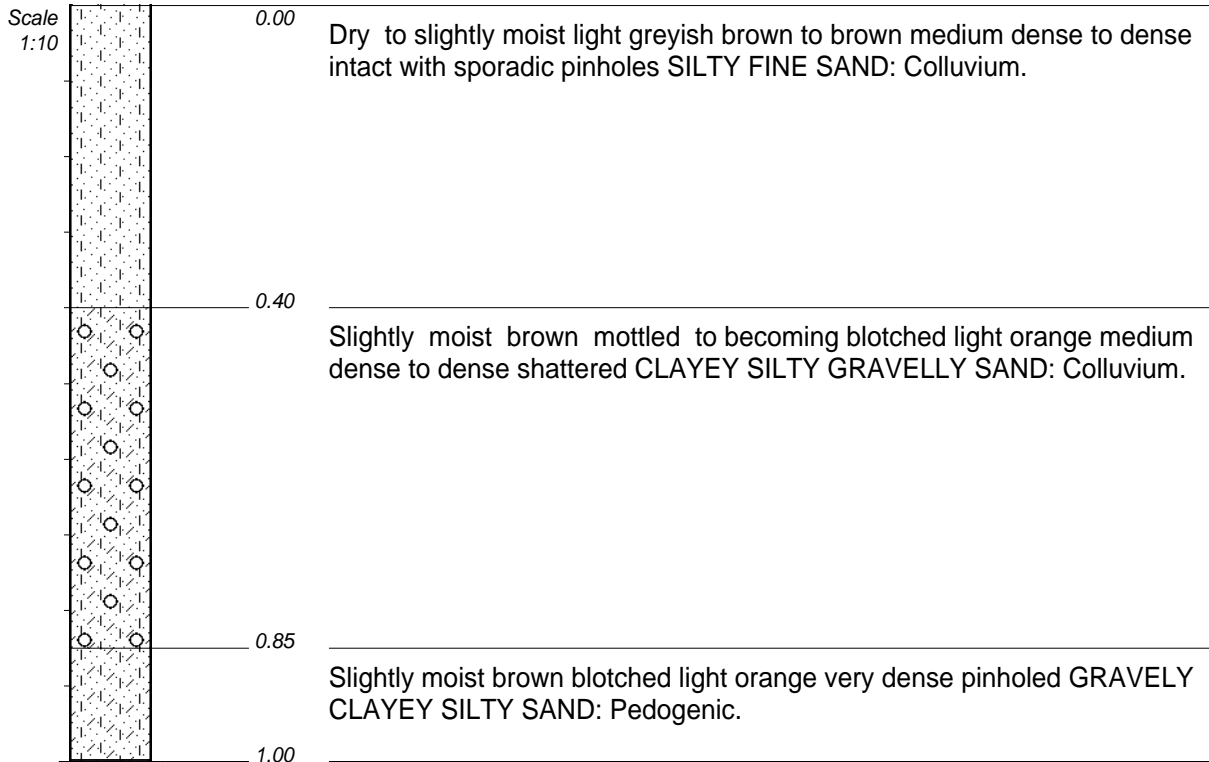
INCLINATION :
 DIAM :
 DATE :
 DATE :

ELEVATION :
 X-COORD : 32 05 20.6
 Y-COORD : 27 13 23.9

TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt

HOLE No: TP5B
Gwatyu Access Road



NOTES

- 1) End of hole @ 1.20m.
- 2) TLB stopped @ 1.20m.
- 3) No water.
- 4) No sample.

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM

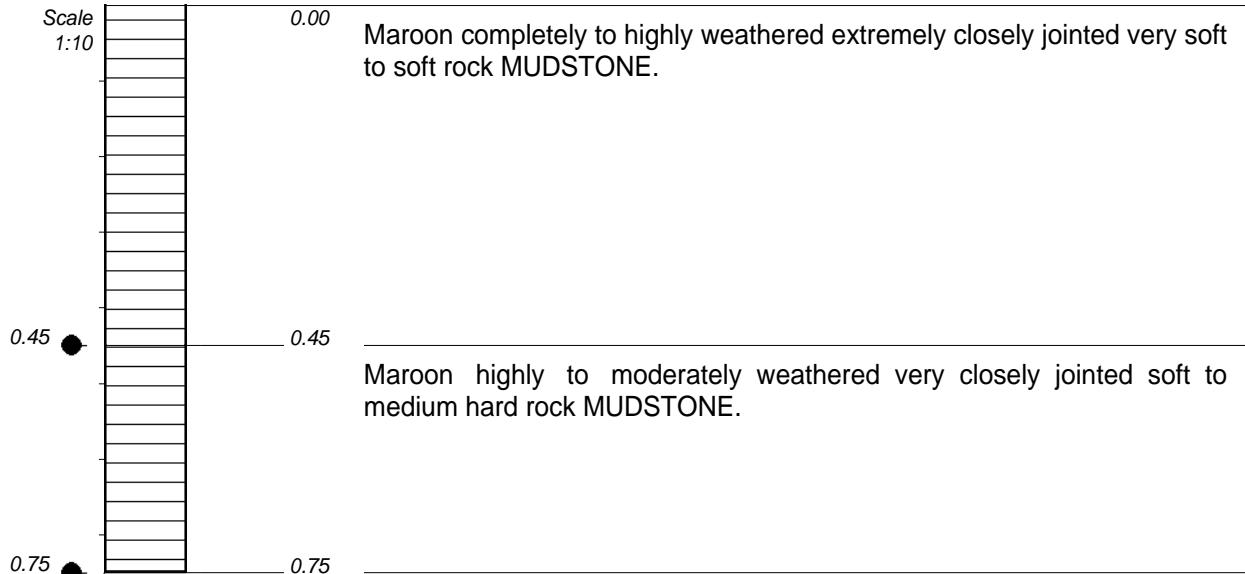
INCLINATION :
 DIAM :
 DATE :
 DATE :

ELEVATION :
 X-COORD : 32 05 20.0
 Y-COORD : 27 13 23.6

TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt

HOLE No: TP5C
Gwatyu Access Road



NOTES

- 1) End of hole @0.75m.
- 2) TLB refusal @ 0.75m.
- 3) No water.
- 4) Bulk sample @ 0.45 - 0.75.

CONTRACTOR :
MACHINE : TLB
DRILLED BY :
PROFILED BY : DM

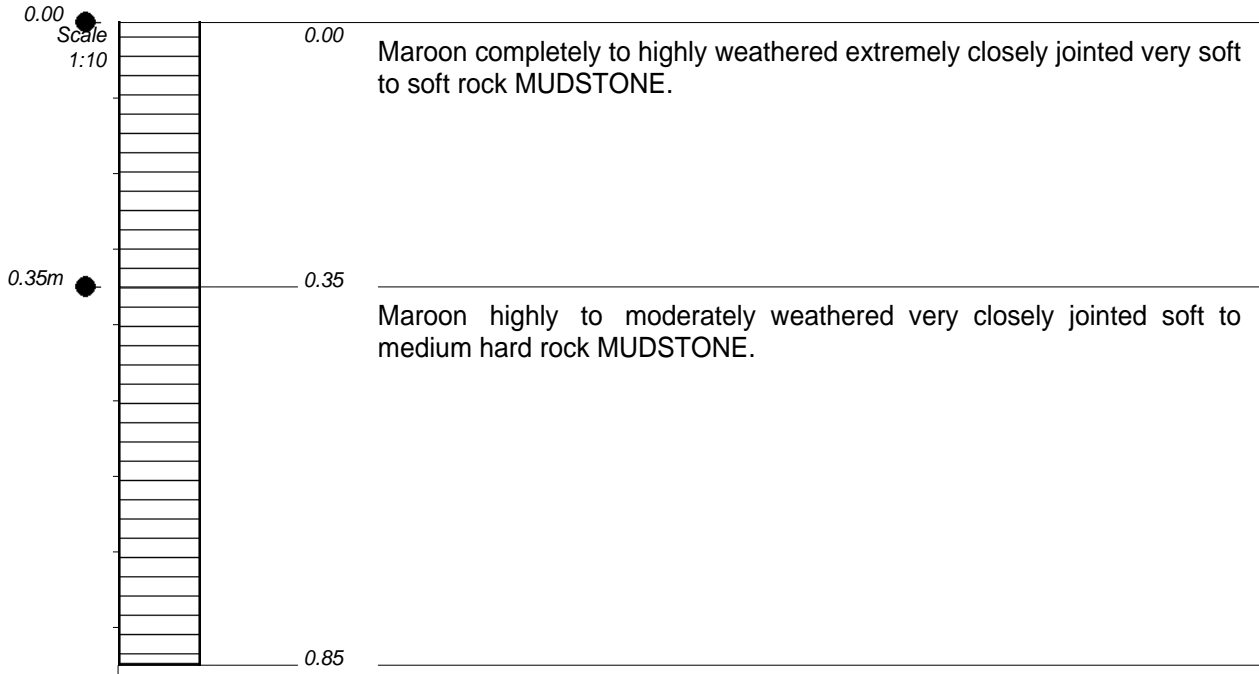
INCLINATION :
DIAM :
DATE :
DATE :

ELEVATION :
X-COORD : 32 04 49.7
Y-COORD : 27 13 16.3

TYPE SET BY : DM
SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
TEXT : ..ccessRoadTPProfilesB.txt

HOLE No: TP6A
Gwatyu Access Road



NOTES

- 1) End of hole @ 0.85m.
- 2) TLB refusal @ 0.85m.
- 3) No water.
- 4) Bulk sample @ 0.00 - 0.35m.

CONTRACTOR :
MACHINE : TLB
DRILLED BY :
PROFILED BY : DM

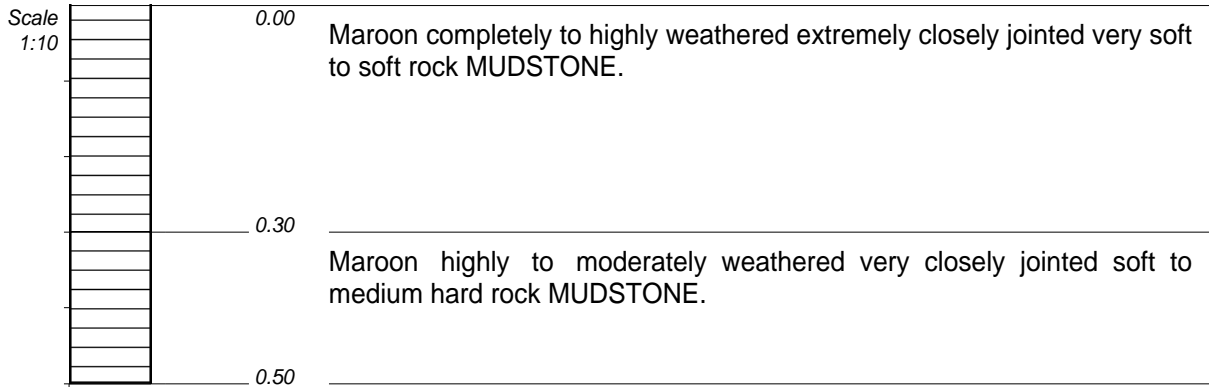
TYPE SET BY : DM
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE :

DATE : 12/10/2023 14:25
TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :
X-COORD : 32 04 49.1
Y-COORD : 22 13 16.2

HOLE No: TP6B
Gwatyu Access Road



NOTES

- 1) End of hole @ 0.50m.
- 2) TLB refusal @ 0.50m.
- 3) No water.
- 4) No sample.

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM

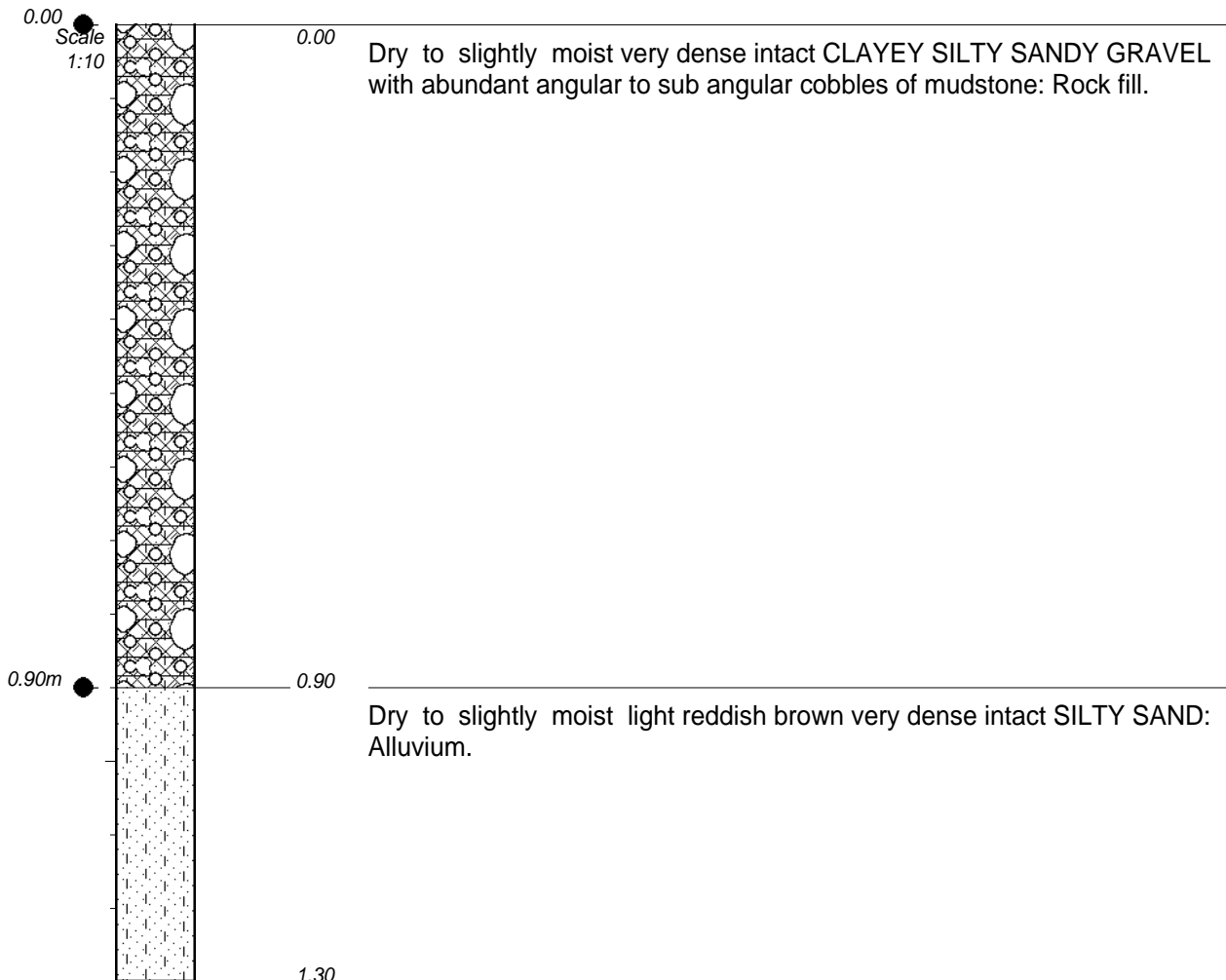
INCLINATION :
 DIAM :
 DATE :
 DATE :

ELEVATION :
 X-COORD : 32 04 48.4
 Y-COORD : 27 13 16.2

TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt

HOLE No: TP6C
Gwatyu Access Road



NOTES

- 1) End of hole @ 1.30m.
- 2) TLB stopped @ 1.30m.
- 3) No water.
- 4) Bulk sample @ 0.00 - 0.90m.

CONTRACTOR :
MACHINE : TLB
DRILLED BY :
PROFILED BY : DM

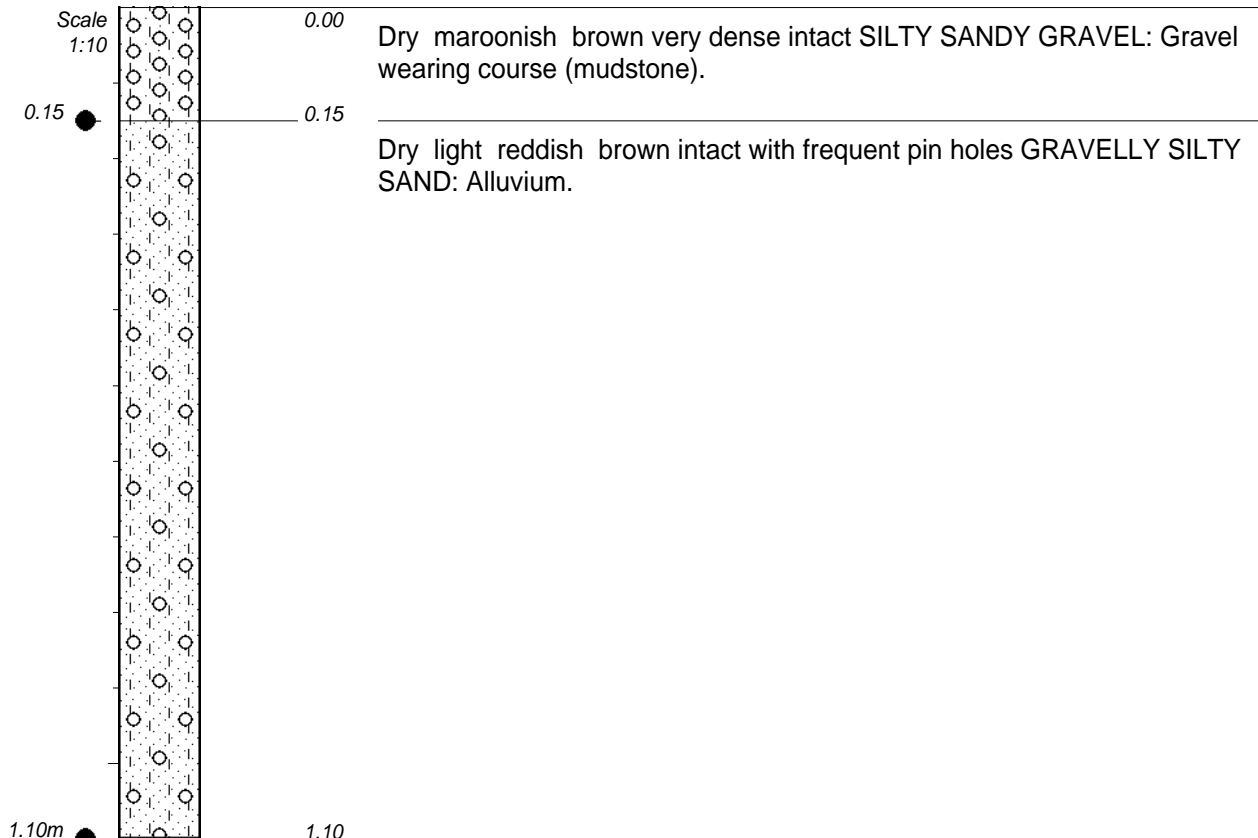
TYPE SET BY : DM
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE :

DATE : 12/10/2023 14:25
TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :
X-COORD : 32 04 19.1
Y-COORD : 27 13 06.3

HOLE No: TP7A
Gwatyu Access Road



NOTES

- 1) End of hole @ 1.10m.
- 2) TLB stopped @ 1.10m.
- 3) No water.
- 4) Sample @ 0.15 to 1.10m.

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM

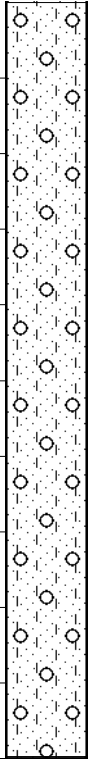
INCLINATION :
 DIAM :
 DATE :
 DATE :
 DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :
 X-COORD : 32 04 18.6
 Y-COORD : 27 13 06.2

HOLE No: TP7B
Gwatyu Access Road



Scale
1:10



0.00

Dry to slightly moist light reddish brown medium dense to dense intact with sporadic pinholes GRAVELLY SILTY SAND: Alluvium.

1.00

NOTES

- 1) Hole stopped @ 1.00m.
- 2) TLB stopped @ 1.00m.
- 3) No water.
- 4) No sample.

CONTRACTOR :
MACHINE : TLB
DRILLED BY :
PROFILED BY : DM

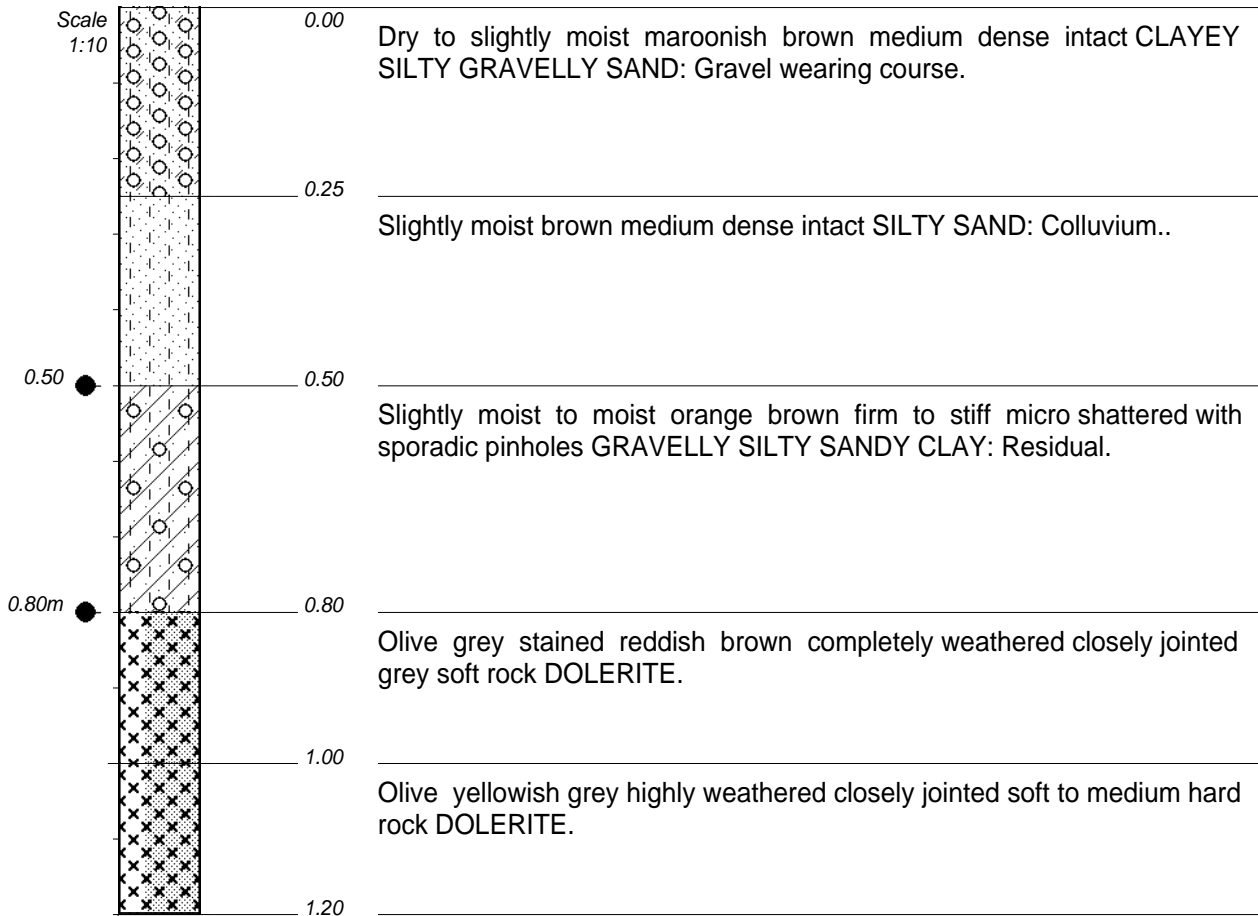
TYPE SET BY : DM
SETUP FILE : STANDARD.SET

INCLINATION :
DIAM :
DATE :
DATE :

DATE : 12/10/2023 14:25
TEXT : ..ccessRoadTPProfilesB.txt

ELEVATION :
X-COORD : 32 04 18.1
Y-COORD : 27 13 06.0

HOLE No: TP7C
Gwatyu Access Road



NOTES

- 1) End of hole @ 1.20m.
- 2) TLB stopped @ 1.20m.
- 3) No water.
- 4) Small sample @ 0.50 - 0.80m.

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM

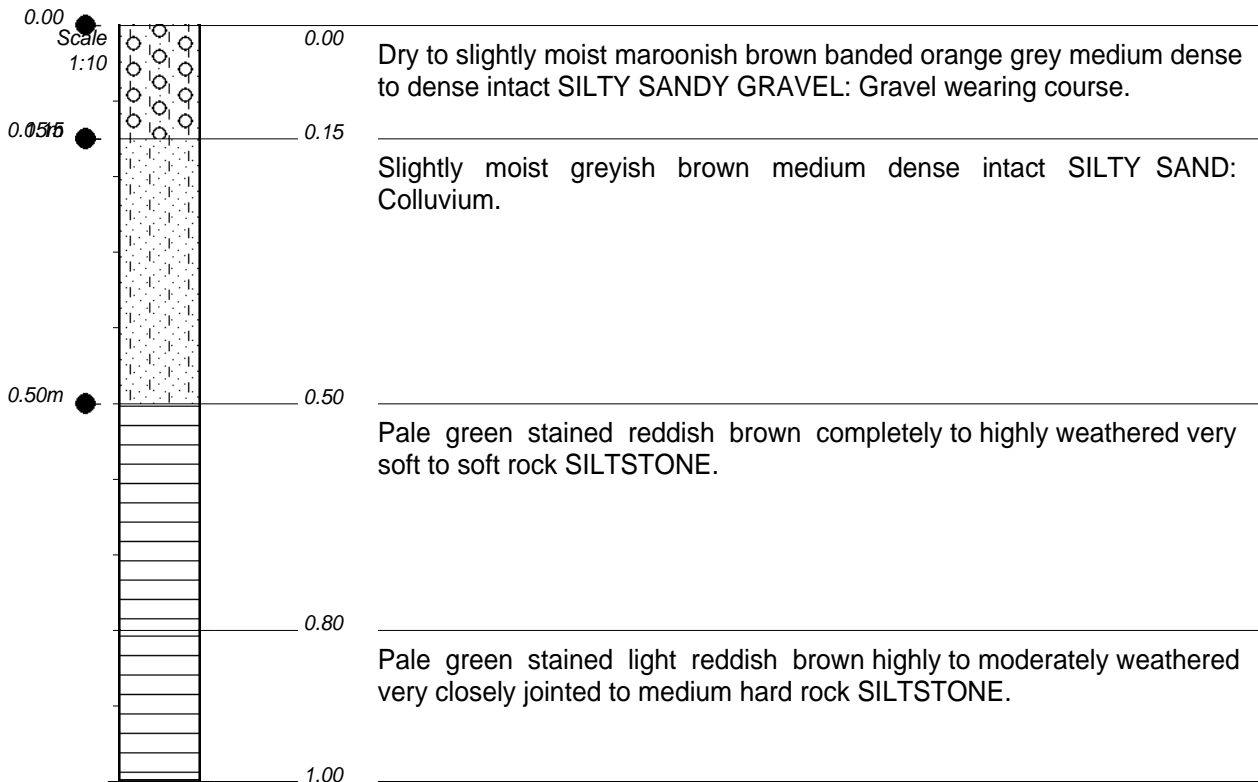
INCLINATION :
 DIAM :
 DATE :
 DATE :

ELEVATION :
 X-COORD : 32 03 42.7
 Y-COORD : 27 13 03.5

TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt

HOLE No: TP8A
Gwatyu Access Road



NOTES

- 1) End o hole @ 1.00m.
- 2) TLB stopped @ 1.00m
- 3) No water.
- 4) Bulk sample @ 0.00 to 0.15m.
- 5) Bulk sample @ 0.15 to 0.50m.

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM

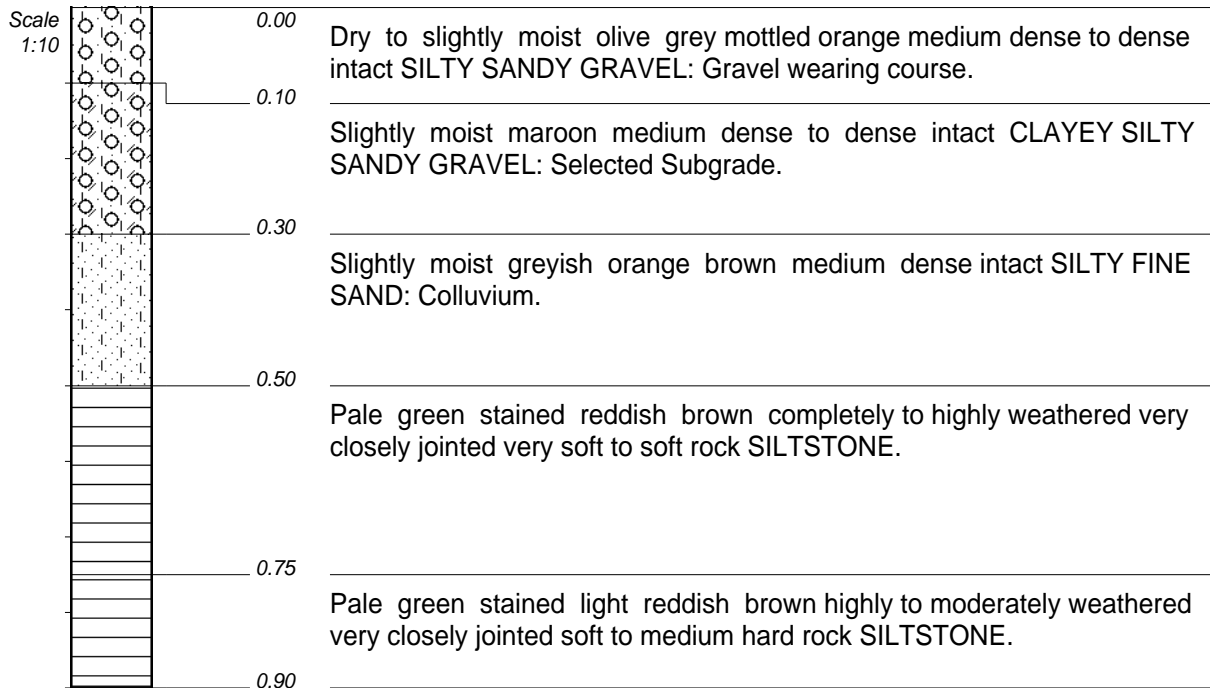
INCLINATION :
 DIAM :
 DATE :
 DATE :

ELEVATION :
 X-COORD : 32 03 42.1
 Y-COORD : 27 13 03.8

TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt

HOLE No: TP8B
Gwatyu Access Road



NOTES

- 1) End of hole @ 0.90m.
- 2) TLB stopped @ 0.90m.
- 3) No water.
- 4) No sample.

CONTRACTOR :
 MACHINE : TLB
 DRILLED BY :
 PROFILED BY : DM

INCLINATION :
 DIAM :
 DATE :
 DATE :

ELEVATION :
 X-COORD : 32 03 41.5
 Y-COORD : 27 13 03.9

TYPE SET BY : DM
 SETUP FILE : STANDARD.SET

DATE : 12/10/2023 14:25
 TEXT : ..ccessRoadTPProfilesB.txt

HOLE No: TP8C
Gwatyu Access Road

APPENDIX - B

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

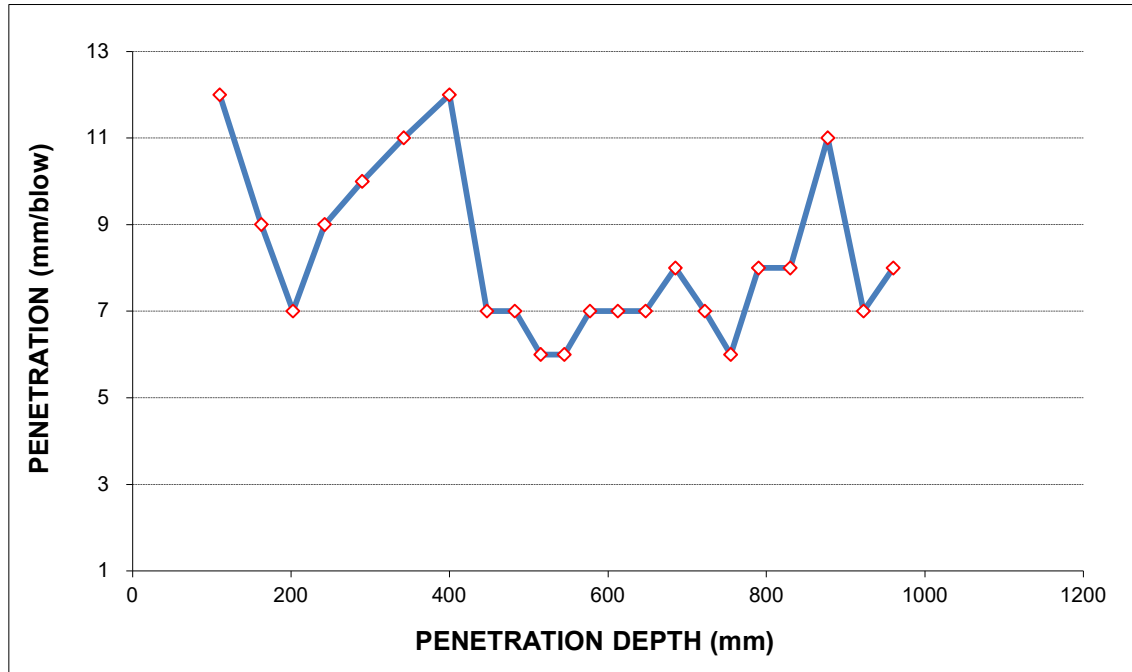


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: Location:



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : mm below NGL Readings :

Applied Factor : times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	60	30	5	110	12	25	18	427
2	60	105	82.5	5	162.5	9	33	26	578
3	105	140	122.5	5	202.5	7	43	36	751
4	140	185	162.5	5	242.5	9	33	26	578
5	185	235	210	5	290	10	30	23	518
6	235	290	262.5	5	342.5	11	27	20	468
7	290	350	320	5	400	12	25	18	427
8	350	385	367.5	5	447.5	7	43	36	751
9	385	420	402.5	5	482.5	7	43	36	751
10	420	450	435	5	515	6	50	44	900
11	450	480	465	5	545	6	50	44	900
12	480	515	497.5	5	577.5	7	43	36	751
13	515	550	532.5	5	612.5	7	43	36	751
14	550	585	567.5	5	647.5	7	43	36	751
15	585	625	605	5	685	8	38	31	654
16	625	660	642.5	5	722.5	7	43	36	751
17	660	690	675	5	755	6	50	44	900

18	690	730	710	5	790	8	38	31	654
19	730	770	750	5	830	8	38	31	654
20	770	825	797.5	5	877.5	11	27	20	468
21	825	860	842.5	5	922.5	7	43	36	751
22	860	900	880	5	960	8	38	31	654

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

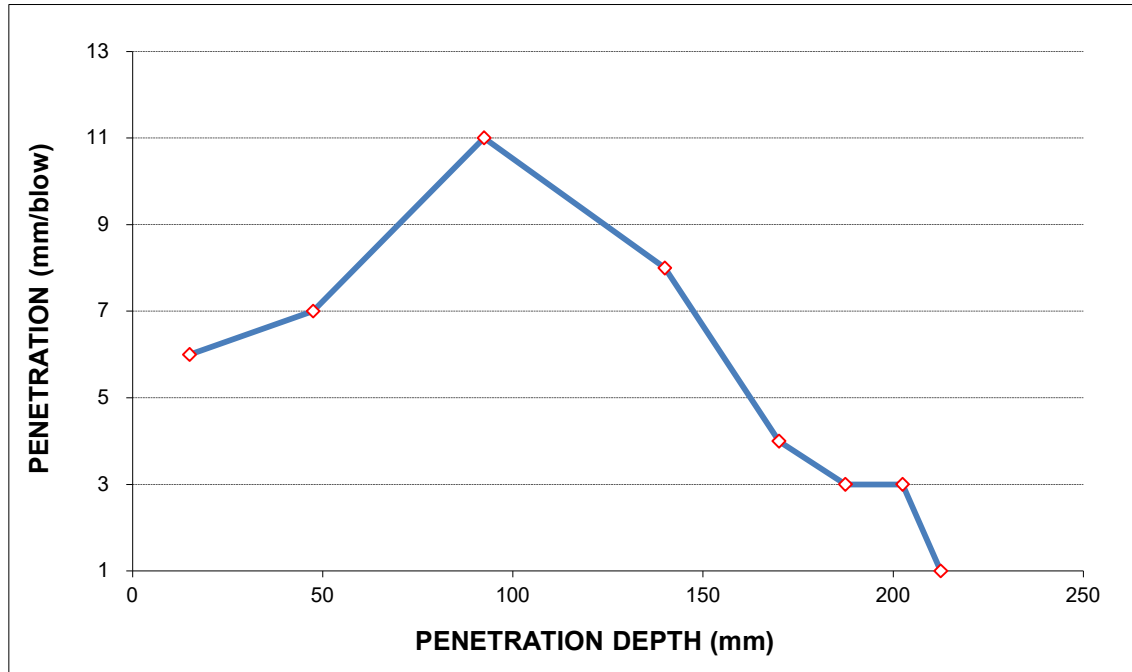


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: Location:



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : mm below NGL Readings :

Applied Factor : times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	30	15	5	15	6	50	44	900
2	30	65	47.5	5	47.5	7	43	36	751
3	65	120	92.5	5	92.5	11	27	20	468
4	120	160	140	5	140	8	38	31	654
5	160	180	170	5	170	4	50	76	900
6	180	195	187.5	5	187.5	3	50	110	900
7	195	210	202.5	5	202.5	3	50	110	900
8	210	215	212.5	5	212.5	1	50	110	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

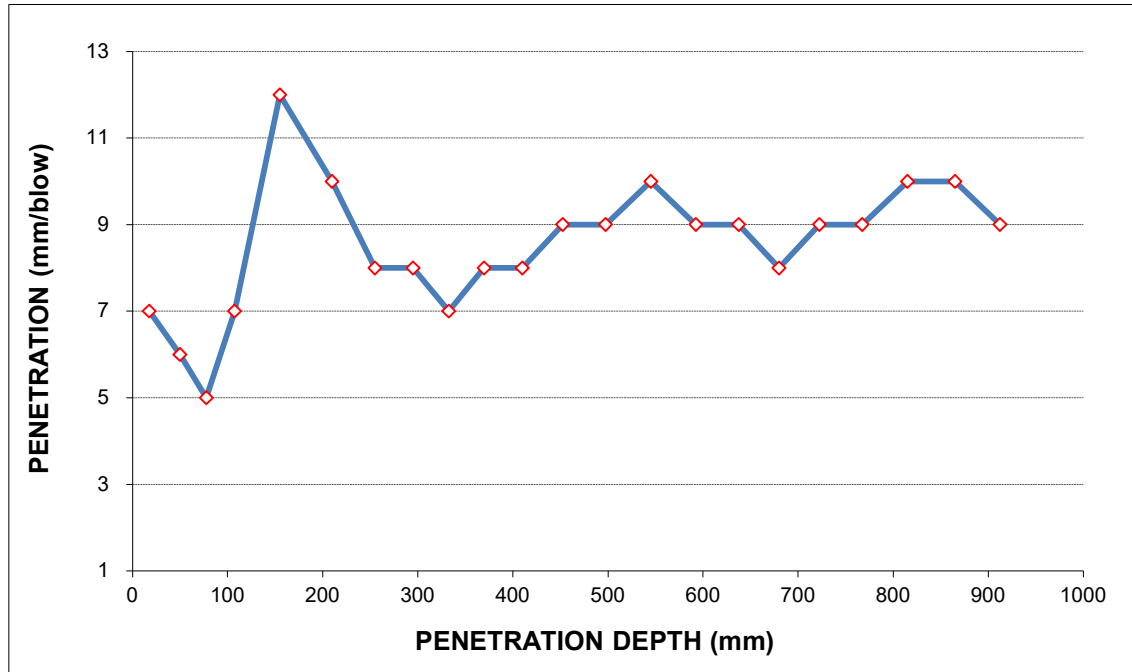


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: Location:



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : mm below NGL Readings :

Applied Factor : times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	35	17.5	5	17.5	7	43	36	751
2	35	65	50	5	50	6	50	44	900
3	65	90	77.5	5	77.5	5	50	56	900
4	90	125	107.5	5	107.5	7	43	36	751
5	125	185	155	5	155	12	25	18	427
6	185	235	210	5	210	10	30	23	518
7	235	275	255	5	255	8	38	31	654
8	275	315	295	5	295	8	38	31	654
9	315	350	332.5	5	332.5	7	43	36	751
10	350	390	370	5	370	8	38	31	654
11	390	430	410	5	410	8	38	31	654
12	430	475	452.5	5	452.5	9	33	26	578
13	475	520	497.5	5	497.5	9	33	26	578
14	520	570	545	5	545	10	30	23	518
15	570	615	592.5	5	592.5	9	33	26	578
16	615	660	637.5	5	637.5	9	33	26	578
17	660	700	680	5	680	8	38	31	654

18	700	745	722.5	5	722.5	9	33	26	578
19	745	790	767.5	5	767.5	9	33	26	578
20	790	840	815	5	815	10	30	23	518
21	840	890	865	5	865	10	30	23	518
22	890	935	912.5	5	912.5	9	33	26	578

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

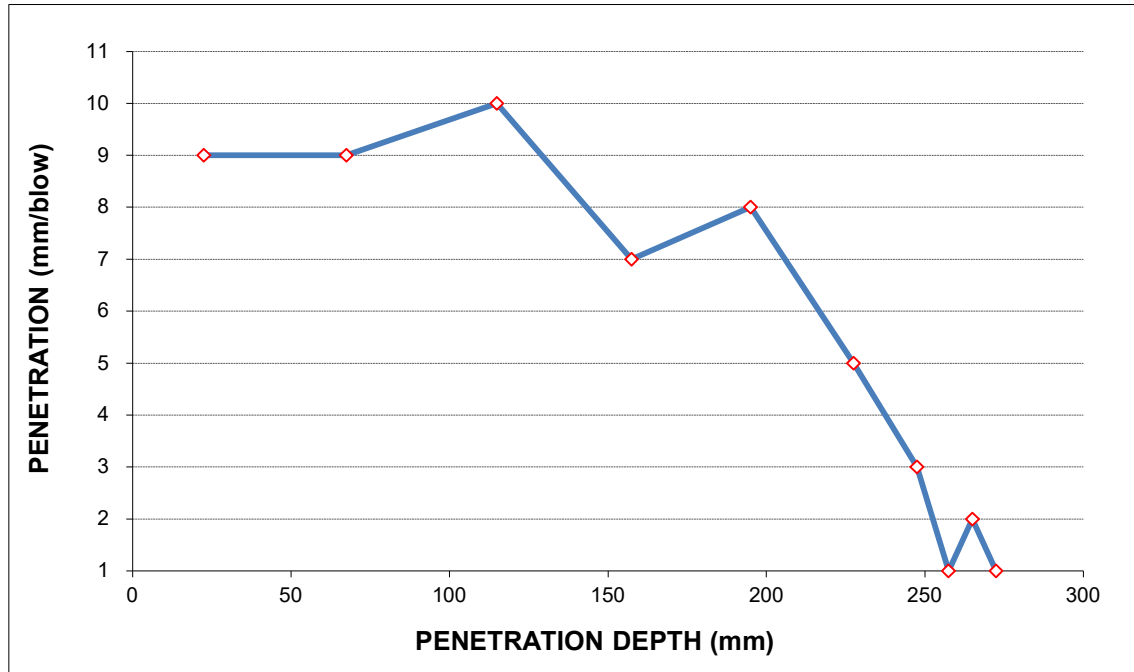


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: Location:



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : mm below NGL Readings :

Applied Factor : times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	45	22.5	5	22.5	9	33	26	578
2	45	90	67.5	5	67.5	9	33	26	578
3	90	140	115	5	115	10	30	23	518
4	140	175	157.5	5	157.5	7	43	36	751
5	175	215	195	5	195	8	38	31	654
6	215	240	227.5	5	227.5	5	50	56	900
7	240	255	247.5	5	247.5	3	50	110	900
8	255	260	257.5	5	257.5	1	50	110	900
9	260	270	265	5	265	2	50	110	900
10	270	275	272.5	5	272.5	1	50	110	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

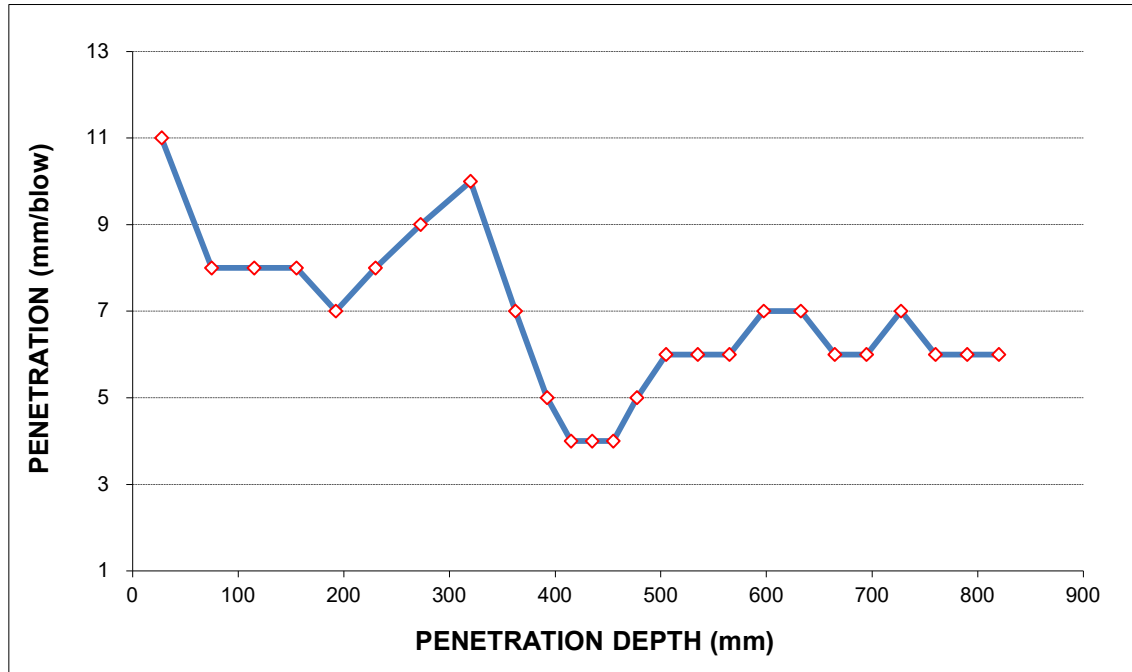


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **5** Location: **TP2B @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **25**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	55	27.5	5	27.5	11	27	20	468
2	55	95	75	5	75	8	38	31	654
3	95	135	115	5	115	8	38	31	654
4	135	175	155	5	155	8	38	31	654
5	175	210	192.5	5	192.5	7	43	36	751
6	210	250	230	5	230	8	38	31	654
7	250	295	272.5	5	272.5	9	33	26	578
8	295	345	320	5	320	10	30	23	518
9	345	380	362.5	5	362.5	7	43	36	751
10	380	405	392.5	5	392.5	5	50	56	900
11	405	425	415	5	415	4	50	76	900
12	425	445	435	5	435	4	50	76	900
13	445	465	455	5	455	4	50	76	900
14	465	490	477.5	5	477.5	5	50	56	900
15	490	520	505	5	505	6	50	44	900
16	520	550	535	5	535	6	50	44	900
17	550	580	565	5	565	6	50	44	900

18	580	615	597.5	5	597.5	7	43	36	751
19	615	650	632.5	5	632.5	7	43	36	751
20	650	680	665	5	665	6	50	44	900
21	680	710	695	5	695	6	50	44	900
22	710	745	727.5	5	727.5	7	43	36	751
23	745	775	760	5	760	6	50	44	900
24	775	805	790	5	790	6	50	44	900
25	805	835	820	5	820	6	50	44	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

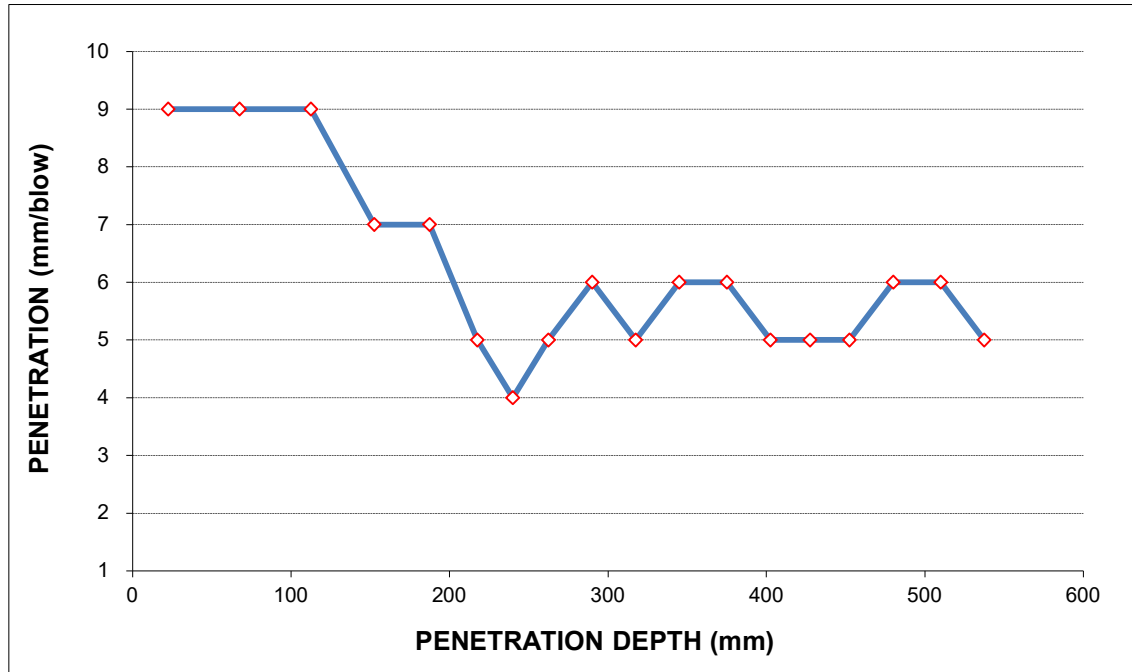


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **6** Location: **TP2C @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **18**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	45	22.5	5	22.5	9	33	26	578
2	45	90	67.5	5	67.5	9	33	26	578
3	90	135	112.5	5	112.5	9	33	26	578
4	135	170	152.5	5	152.5	7	43	36	751
5	170	205	187.5	5	187.5	7	43	36	751
6	205	230	217.5	5	217.5	5	50	56	900
7	230	250	240	5	240	4	50	76	900
8	250	275	262.5	5	262.5	5	50	56	900
9	275	305	290	5	290	6	50	44	900
10	305	330	317.5	5	317.5	5	50	56	900
11	330	360	345	5	345	6	50	44	900
12	360	390	375	5	375	6	50	44	900
13	390	415	402.5	5	402.5	5	50	56	900
14	415	440	427.5	5	427.5	5	50	56	900
15	440	465	452.5	5	452.5	5	50	56	900
16	465	495	480	5	480	6	50	44	900
17	495	525	510	5	510	6	50	44	900

18

525

550

537.5

5

537.5

5

50

56

900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

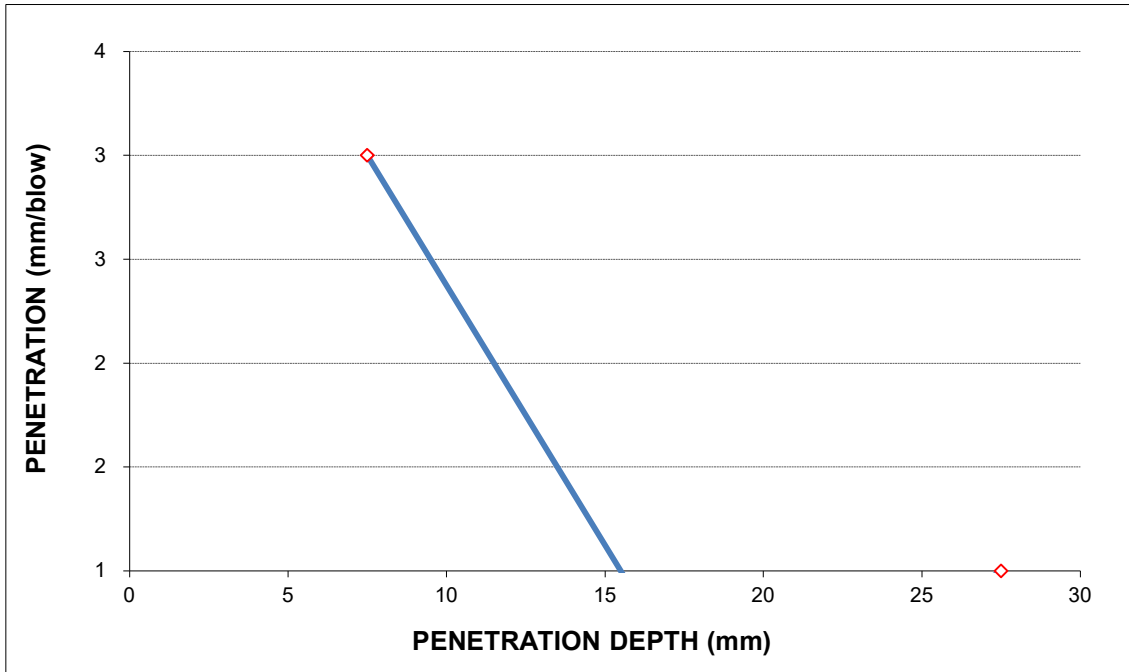


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: Location:



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : mm below NGL Readings :

Applied Factor : times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	15	7.5	5	7.5	3	50	110	900
2	15	20	17.5	10	17.5	1	50	110	900
3	20	25	22.5	10	22.5	1	50	110	900
4	25	30	27.5	5	27.5	1	50	110	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

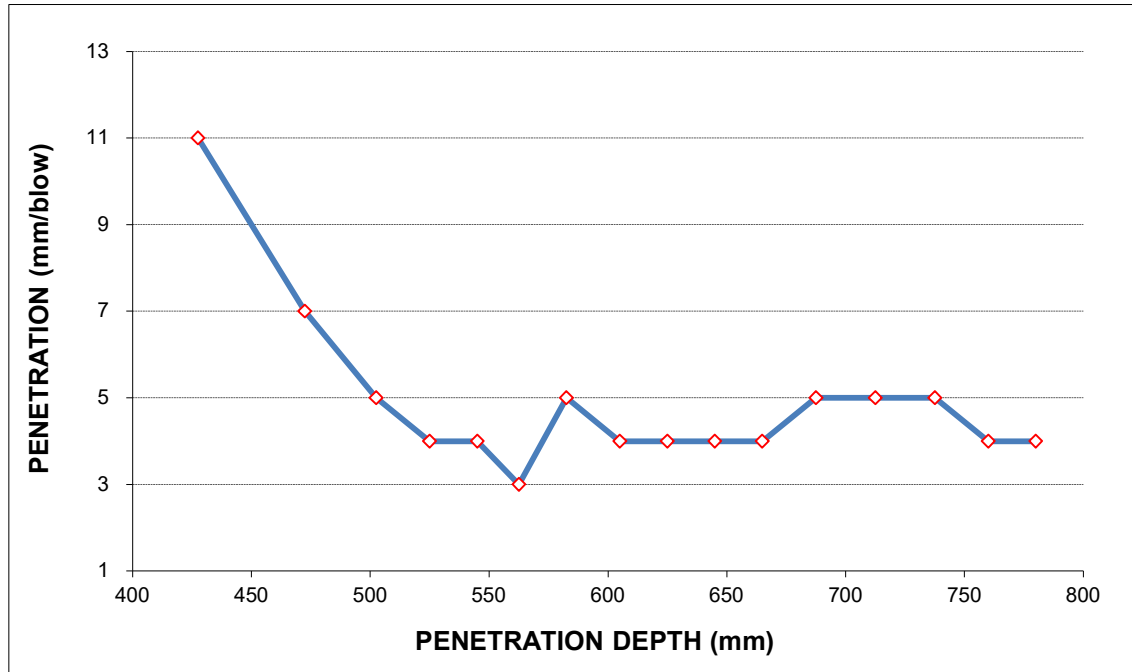


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **8** Location: **TP3A @ 0.40m below surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **400** mm below NGL Readings : **16**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	55	27.5	5	427.5	11	27	20	468
2	55	90	72.5	5	472.5	7	43	36	751
3	90	115	102.5	5	502.5	5	50	56	900
4	115	135	125	5	525	4	50	76	900
5	135	155	145	5	545	4	50	76	900
6	155	170	162.5	5	562.5	3	50	110	900
7	170	195	182.5	5	582.5	5	50	56	900
8	195	215	205	5	605	4	50	76	900
9	215	235	225	5	625	4	50	76	900
10	235	255	245	5	645	4	50	76	900
11	255	275	265	5	665	4	50	76	900
12	275	300	287.5	5	687.5	5	50	56	900
13	300	325	312.5	5	712.5	5	50	56	900
14	325	350	337.5	5	737.5	5	50	56	900
15	350	370	360	5	760	4	50	76	900
16	370	390	380	5	780	4	50	76	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

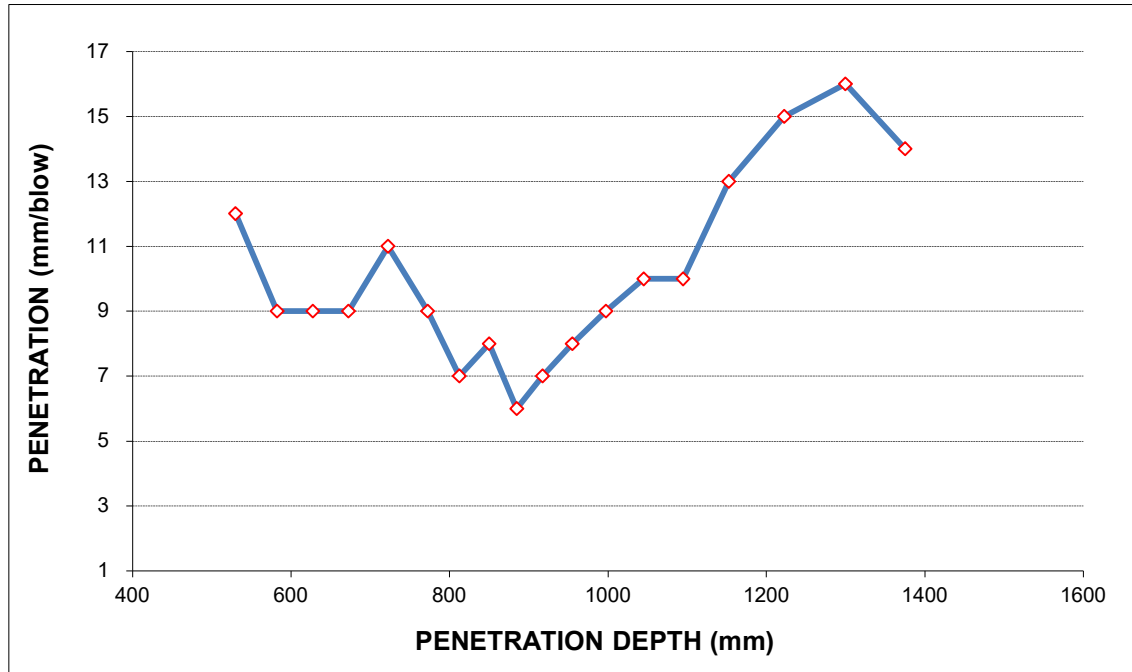


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: Location:



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : mm below NGL Readings :

Applied Factor : times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	60	30	5	530	12	25	18	427
2	60	105	82.5	5	582.5	9	33	26	578
3	105	150	127.5	5	627.5	9	33	26	578
4	150	195	172.5	5	672.5	9	33	26	578
5	195	250	222.5	5	722.5	11	27	20	468
6	250	295	272.5	5	772.5	9	33	26	578
7	295	330	312.5	5	812.5	7	43	36	751
8	330	370	350	5	850	8	38	31	654
9	370	400	385	5	885	6	50	44	900
10	400	435	417.5	5	917.5	7	43	36	751
11	435	475	455	5	955	8	38	31	654
12	475	520	497.5	5	997.5	9	33	26	578
13	520	570	545	5	1045	10	30	23	518
14	570	620	595	5	1095	10	30	23	518
15	620	685	652.5	5	1152.5	13	23	16	392
16	685	760	722.5	5	1222.5	15	20	13	336
17	760	840	800	5	1300	16	19	12	314

18

840

910

875

5

1375

14

21

15

362

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

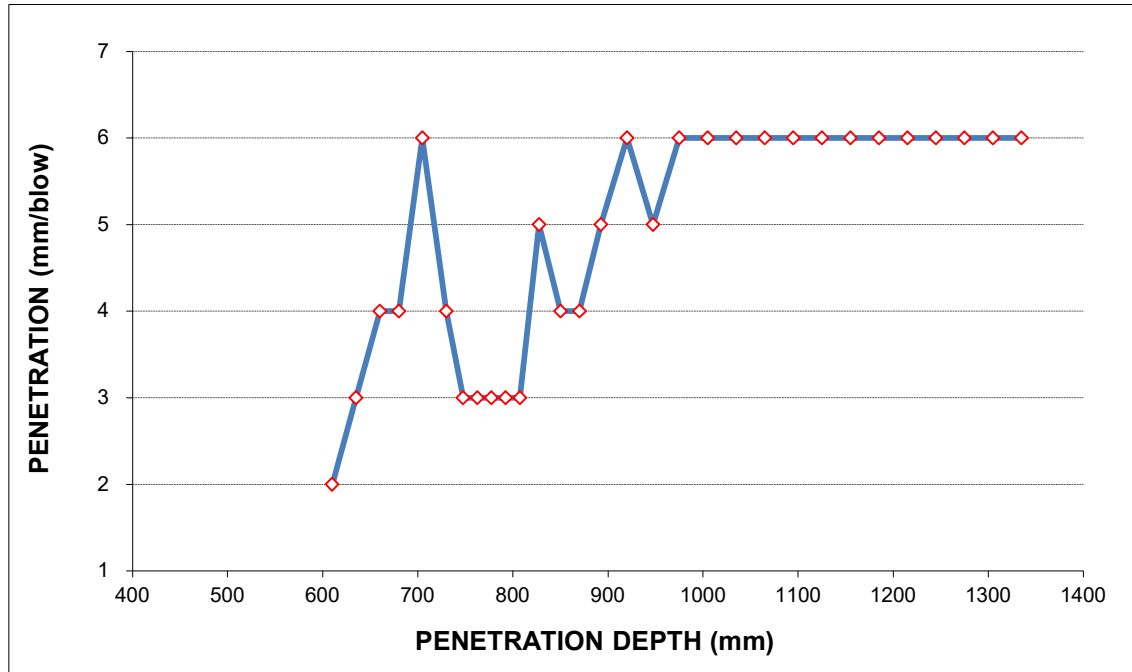


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **10** Location: **TP3C @ 0.60m below surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **600** mm below NGL Readings : **30**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	20	10	10	610	2	50	110	900
2	20	50	35	10	635	3	50	110	900
3	50	70	60	5	660	4	50	76	900
4	70	90	80	5	680	4	50	76	900
5	90	120	105	5	705	6	50	44	900
6	120	140	130	5	730	4	50	76	900
7	140	155	147.5	5	747.5	3	50	110	900
8	155	170	162.5	5	762.5	3	50	110	900
9	170	185	177.5	5	777.5	3	50	110	900
10	185	200	192.5	5	792.5	3	50	110	900
11	200	215	207.5	5	807.5	3	50	110	900
12	215	240	227.5	5	827.5	5	50	56	900
13	240	260	250	5	850	4	50	76	900
14	260	280	270	5	870	4	50	76	900
15	280	305	292.5	5	892.5	5	50	56	900
16	305	335	320	5	920	6	50	44	900
17	335	360	347.5	5	947.5	5	50	56	900

18	360	390	375	5	975	6	50	44	900
19	390	420	405	5	1005	6	50	44	900
20	420	450	435	5	1035	6	50	44	900
21	450	480	465	5	1065	6	50	44	900
22	480	510	495	5	1095	6	50	44	900
23	510	540	525	5	1125	6	50	44	900
24	540	570	555	5	1155	6	50	44	900
25	570	600	585	5	1185	6	50	44	900
26	600	630	615	5	1215	6	50	44	900
27	630	660	645	5	1245	6	50	44	900
28	660	690	675	5	1275	6	50	44	900
29	690	720	705	5	1305	6	50	44	900
30	720	750	735	5	1335	6	50	44	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

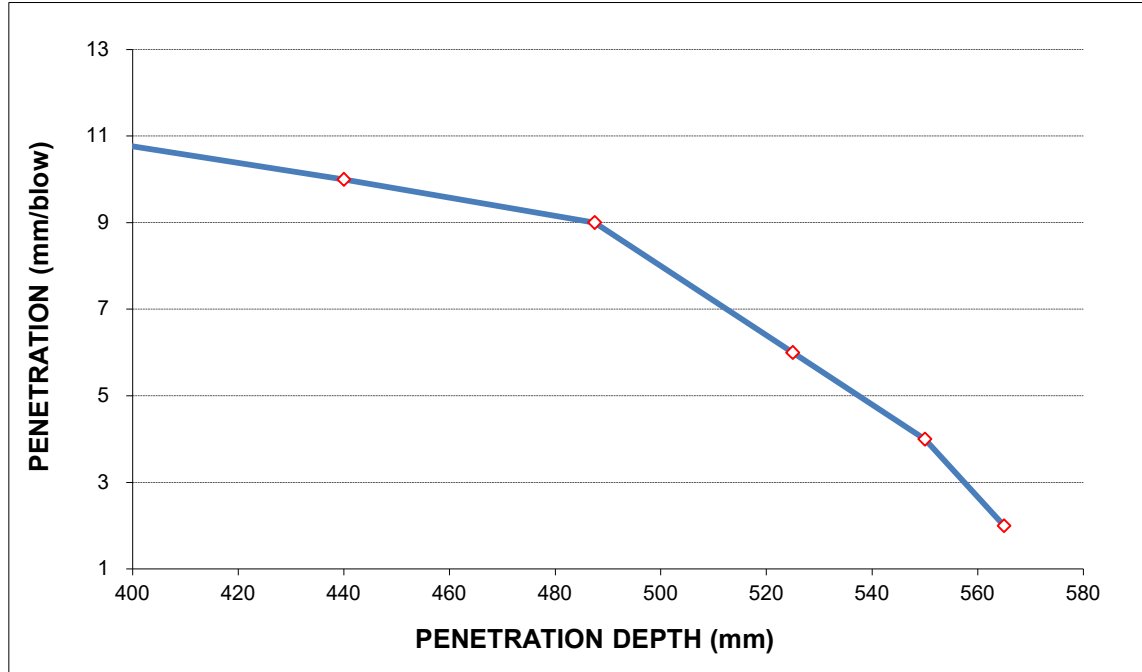


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **11** Location: **TP4A @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **13**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	60	30	10	30	6	50	44	900
2	60	100	80	5	80	8	38	31	654
3	100	150	125	5	125	10	30	23	518
4	150	210	180	5	180	12	25	18	427
5	210	260	235	5	235	10	30	23	518
6	260	300	280	5	280	8	38	31	654
7	300	360	330	5	330	12	25	18	427
8	360	415	387.5	5	387.5	11	27	20	468
9	415	465	440	5	440	10	30	23	518
10	465	510	487.5	5	487.5	9	33	26	578
11	510	540	525	5	525	6	50	44	900
12	540	560	550	5	550	4	50	76	900
13	560	570	565	5	565	2	50	110	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

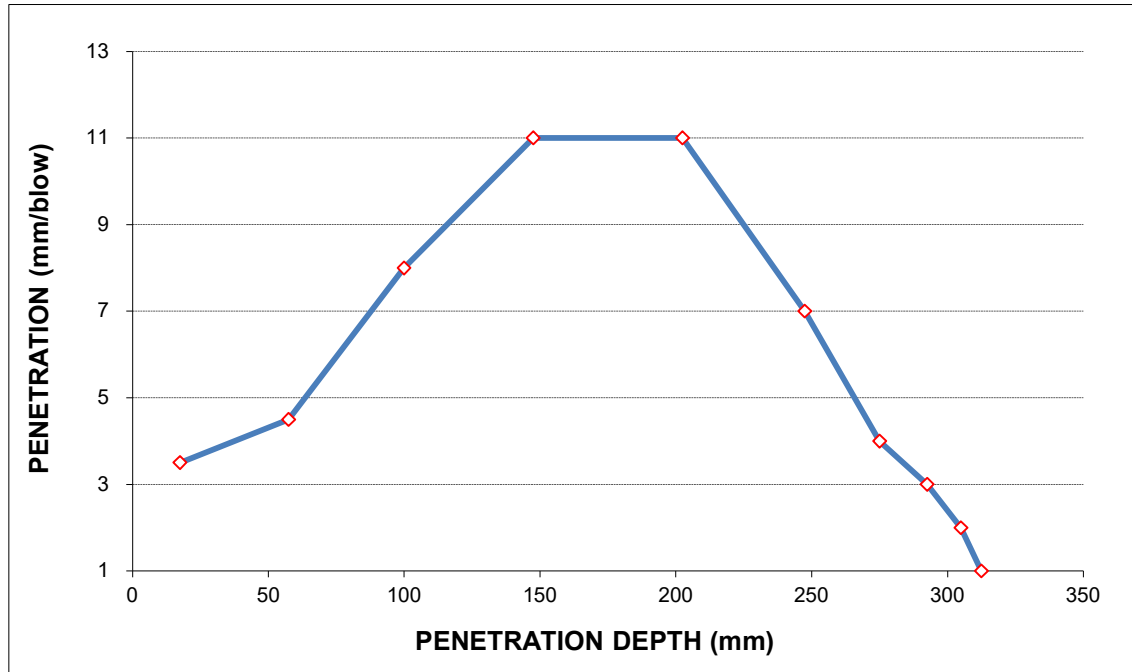


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **12** Location: **TP4B @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **10**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	35	17.5	10	17.5	4	50	90	900
2	35	80	57.5	10	57.5	5	50	65	900
3	80	120	100	5	100	8	38	31	654
4	120	175	147.5	5	147.5	11	27	20	468
5	175	230	202.5	5	202.5	11	27	20	468
6	230	265	247.5	5	247.5	7	43	36	751
7	265	285	275	5	275	4	50	76	900
8	285	300	292.5	5	292.5	3	50	110	900
9	300	310	305	5	305	2	50	110	900
10	310	315	312.5	5	312.5	1	50	110	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

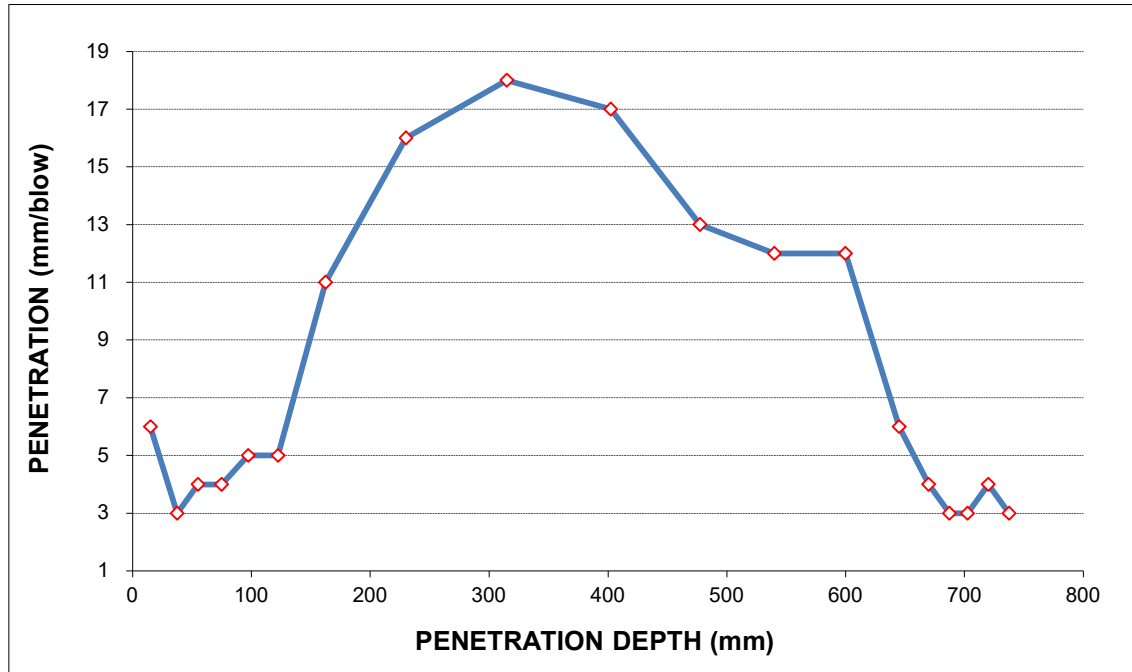


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **13** Location: **TP4C @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **19**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	30	15	5	15	6	50	44	900
2	30	45	37.5	5	37.5	3	50	110	900
3	45	65	55	5	55	4	50	76	900
4	65	85	75	5	75	4	50	76	900
5	85	110	97.5	5	97.5	5	50	56	900
6	110	135	122.5	5	122.5	5	50	56	900
7	135	190	162.5	5	162.5	11	27	20	468
8	190	270	230	5	230	16	19	12	314
9	270	360	315	5	315	18	17	11	276
10	360	445	402.5	5	402.5	17	18	11	294
11	445	510	477.5	5	477.5	13	23	16	392
12	510	570	540	5	540	12	25	18	427
13	570	630	600	5	600	12	25	18	427
14	630	660	645	5	645	6	50	44	900
15	660	680	670	5	670	4	50	76	900
16	680	695	687.5	5	687.5	3	50	110	900
17	695	710	702.5	5	702.5	3	50	110	900

18	710	730	720	5	720	4	50	76	900
19	730	745	737.5	5	737.5	3	50	110	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

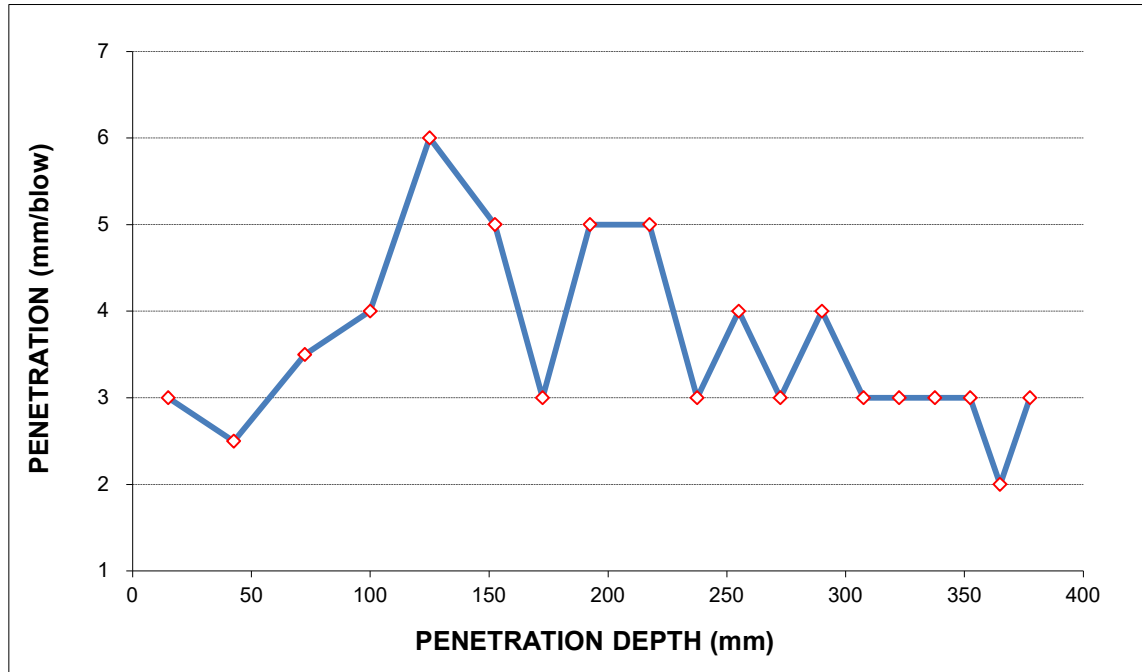


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **14** Location: **TP5A @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **22**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	30	15	10	15	3	50	110	900
2	30	55	42.5	10	42.5	3	50	110	900
3	55	90	72.5	10	72.5	4	50	90	900
4	90	110	100	5	100	4	50	76	900
5	110	140	125	5	125	6	50	44	900
6	140	165	152.5	5	152.5	5	50	56	900
7	165	180	172.5	5	172.5	3	50	110	900
8	180	205	192.5	5	192.5	5	50	56	900
9	205	230	217.5	5	217.5	5	50	56	900
10	230	245	237.5	5	237.5	3	50	110	900
11	245	265	255	5	255	4	50	76	900
12	265	280	272.5	5	272.5	3	50	110	900
13	280	300	290	5	290	4	50	76	900
14	300	315	307.5	5	307.5	3	50	110	900
15	315	330	322.5	5	322.5	3	50	110	900
16	330	345	337.5	5	337.5	3	50	110	900
17	345	360	352.5	5	352.5	3	50	110	900

18	360	370	365	5	365	2	50	110	900
19	370	385	377.5	5	377.5	3	50	110	900
20	385	400	392.5	5	392.5	3	50	110	900
21	400	410	405	5	405	2	50	110	900
22	410	420	415	5	415	2	50	110	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

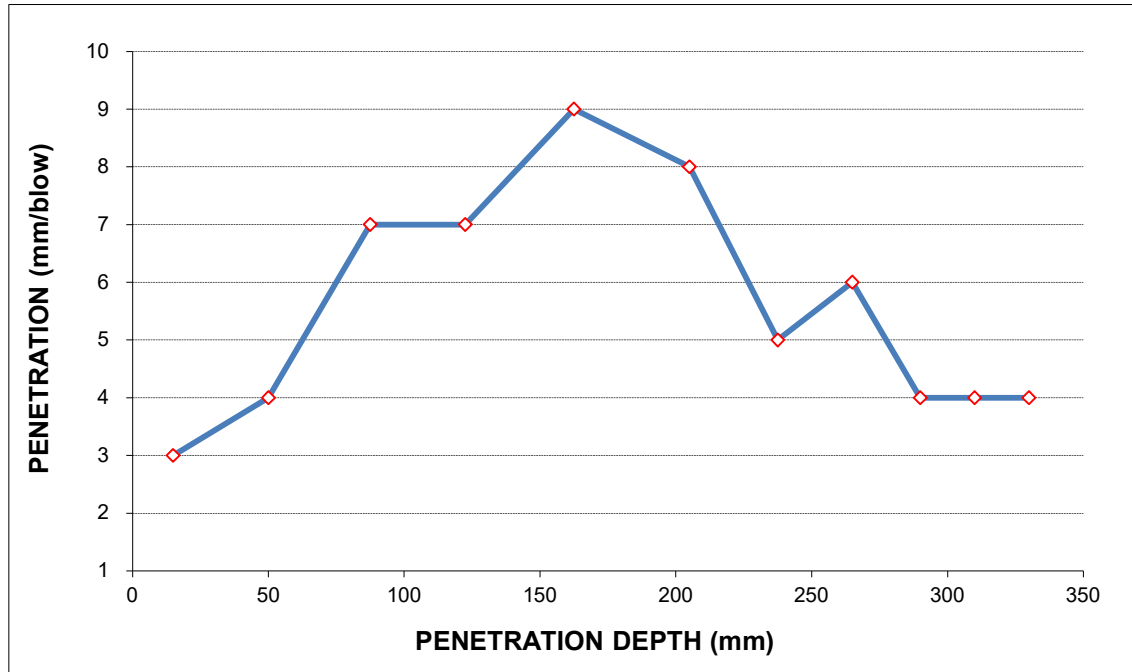


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **15** Location: **TP5B @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **11**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	30	15	10	15	3	50	110	900
2	30	70	50	10	50	4	50	76	900
3	70	105	87.5	5	87.5	7	43	36	751
4	105	140	122.5	5	122.5	7	43	36	751
5	140	185	162.5	5	162.5	9	33	26	578
6	185	225	205	5	205	8	38	31	654
7	225	250	237.5	5	237.5	5	50	56	900
8	250	280	265	5	265	6	50	44	900
9	280	300	290	5	290	4	50	76	900
10	300	320	310	5	310	4	50	76	900
11	320	340	330	5	330	4	50	76	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

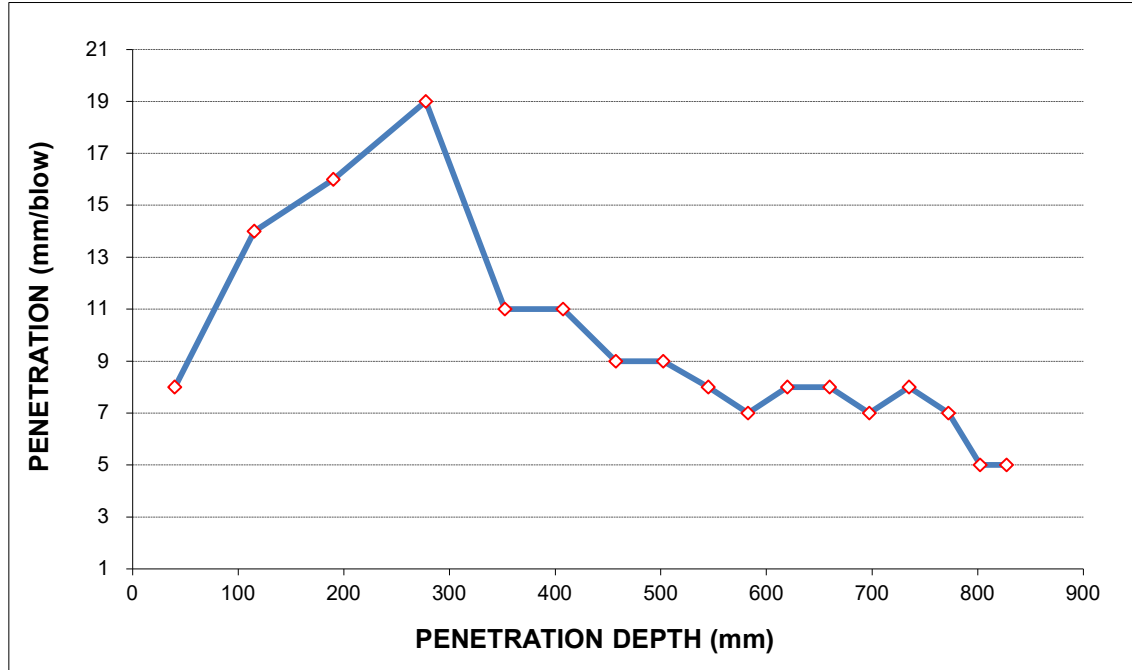


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **16** Location: **TP5C @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **17**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	80	40	10	40	8	38	31	654
2	80	150	115	5	115	14	21	15	362
3	150	230	190	5	190	16	19	12	314
4	230	325	277.5	5	277.5	19	16	10	260
5	325	380	352.5	5	352.5	11	27	20	468
6	380	435	407.5	5	407.5	11	27	20	468
7	435	480	457.5	5	457.5	9	33	26	578
8	480	525	502.5	5	502.5	9	33	26	578
9	525	565	545	5	545	8	38	31	654
10	565	600	582.5	5	582.5	7	43	36	751
11	600	640	620	5	620	8	38	31	654
12	640	680	660	5	660	8	38	31	654
13	680	715	697.5	5	697.5	7	43	36	751
14	715	755	735	5	735	8	38	31	654
15	755	790	772.5	5	772.5	7	43	36	751
16	790	815	802.5	5	802.5	5	50	56	900
17	815	840	827.5	5	827.5	5	50	56	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

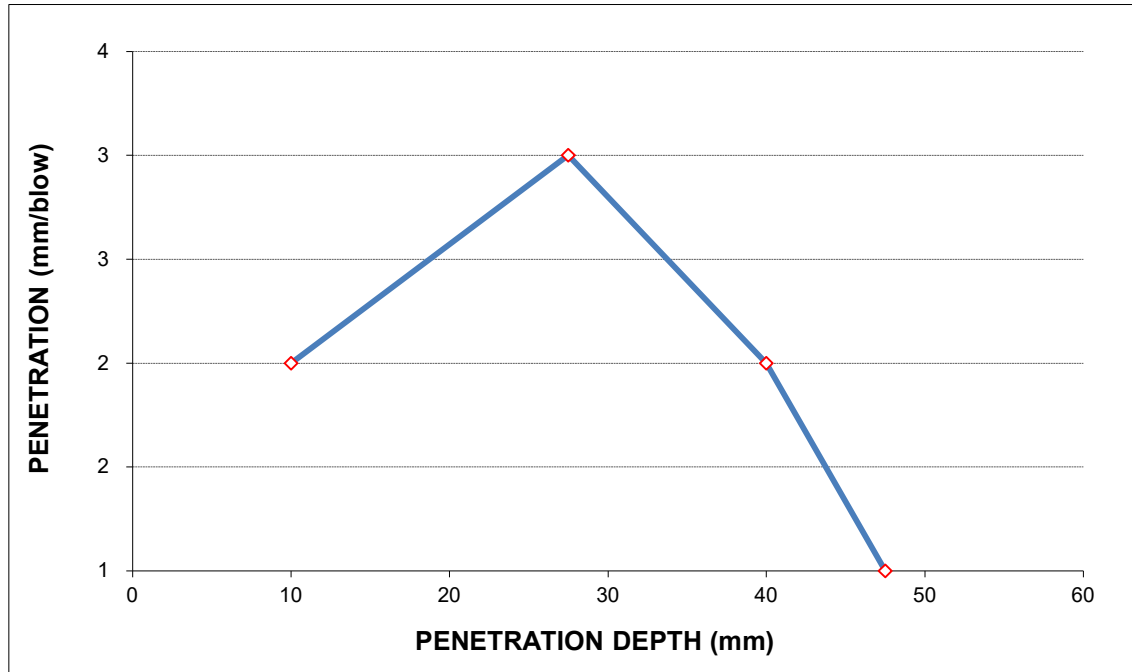


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **17** Location: **TP6A @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 - 100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **5**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	20	10	10	10	2	50	110	900
2	20	35	27.5	5	27.5	3	50	110	900
3	35	45	40	5	40	2	50	110	900
4	45	50	47.5	5	47.5	1	50	110	900
5	50	50	50	5	50	0	50		

DYNAMIC CONE PENETROMETER TEST

Job Name: Gwatyu Road

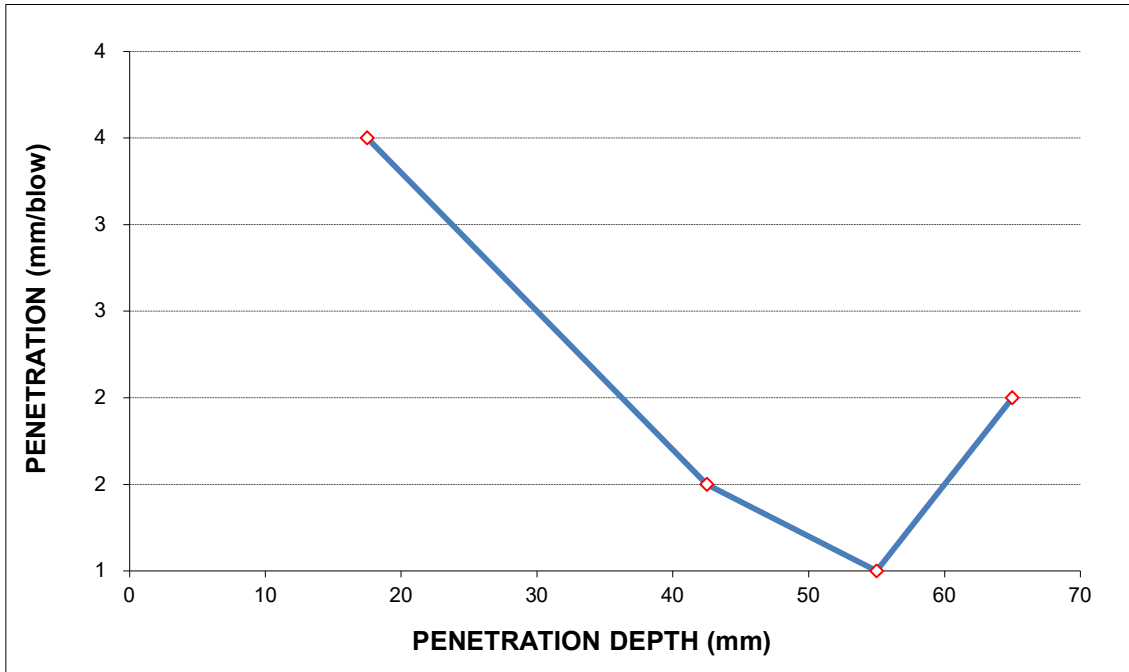


File No:

Job No: 23-734

Date of Test: August 2023

DCP No: Location:



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : mm below NGL Readings :

Applied Factor : times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	35	17.5	10	17.5	4	50	90	900
2	35	50	42.5	10	42.5	2	50	110	900
3	50	60	55	10	55	1	50	110	900
4	60	70	65	5	65	2	50	110	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

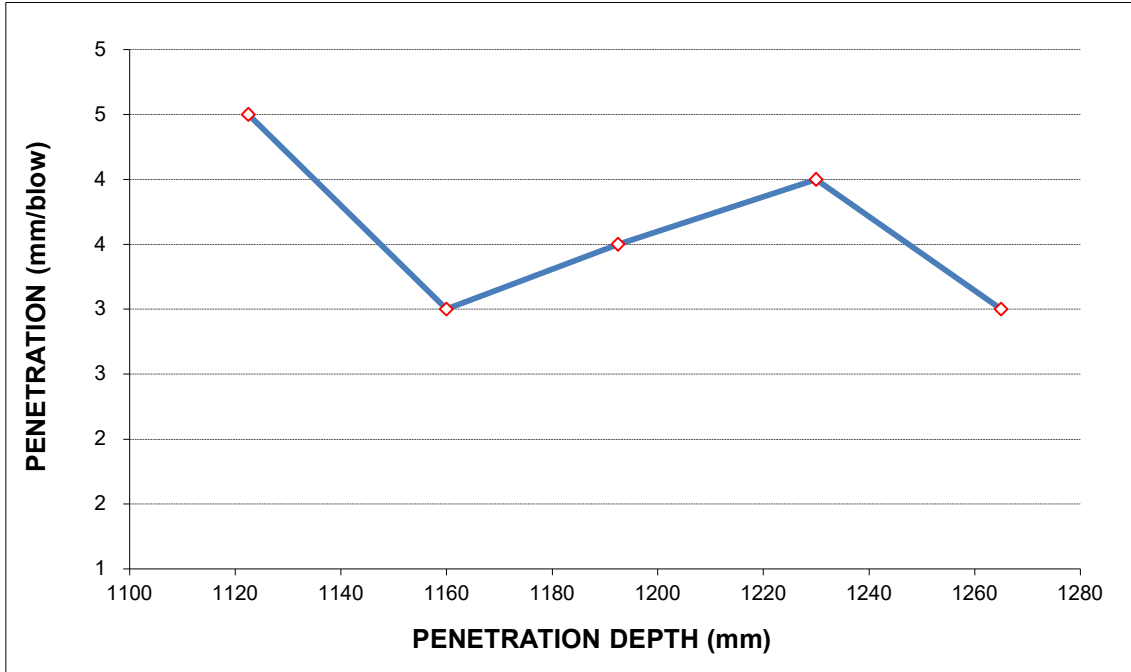


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **19** Location: **TP7B @ 1.10m below surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **1100** mm below NGL Readings : **5**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	45	22.5	10	1122.5	5	50	65	900
2	45	75	60	10	1160	3	50	110	900
3	75	110	92.5	10	1192.5	4	50	90	900
4	110	150	130	10	1230	4	50	76	900
5	150	180	165	10	1265	3	50	110	900

DYNAMIC CONE PENETROMETER TEST

Job Name Gwatyu Road

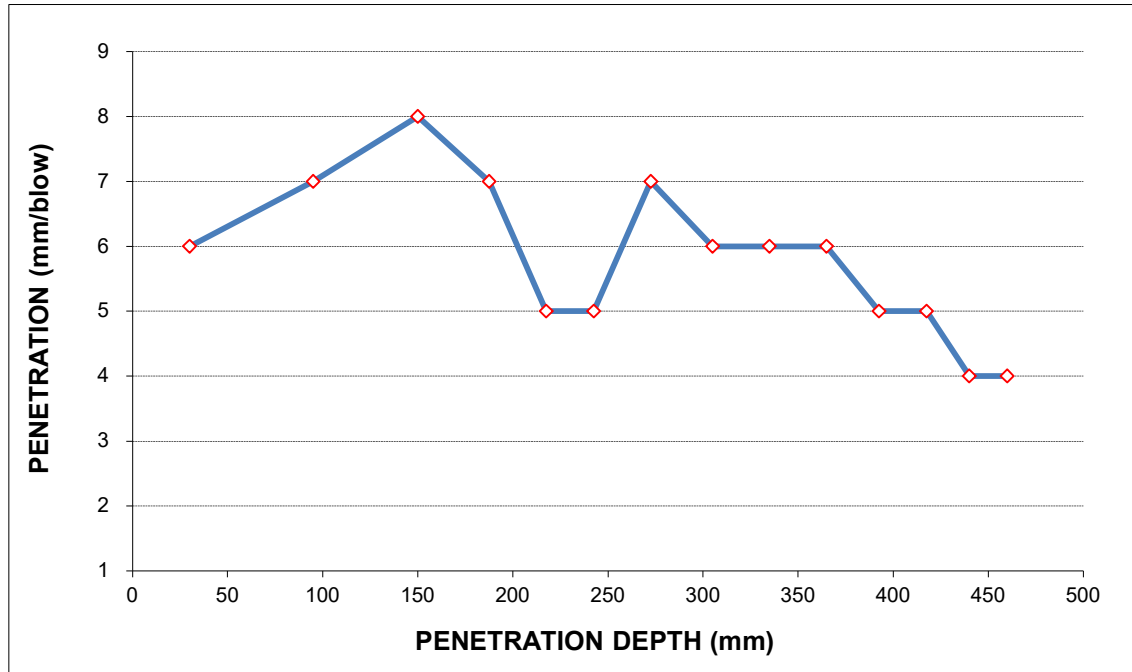


File No:

Job No: 23-734

Date of Test: August 2023

DCP No: Location:



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : mm below NGL Readings :

Applied Factor : times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	60	30	10	30	6	50	44	900
2	60	130	95	10	95	7	43	36	751
3	130	170	150	5	150	8	38	31	654
4	170	205	187.5	5	187.5	7	43	36	751
5	205	230	217.5	5	217.5	5	50	56	900
6	230	255	242.5	5	242.5	5	50	56	900
7	255	290	272.5	5	272.5	7	43	36	751
8	290	320	305	5	305	6	50	44	900
9	320	350	335	5	335	6	50	44	900
10	350	380	365	5	365	6	50	44	900
11	380	405	392.5	5	392.5	5	50	56	900
12	405	430	417.5	5	417.5	5	50	56	900
13	430	450	440	5	440	4	50	76	900
14	450	470	460	5	460	4	50	76	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

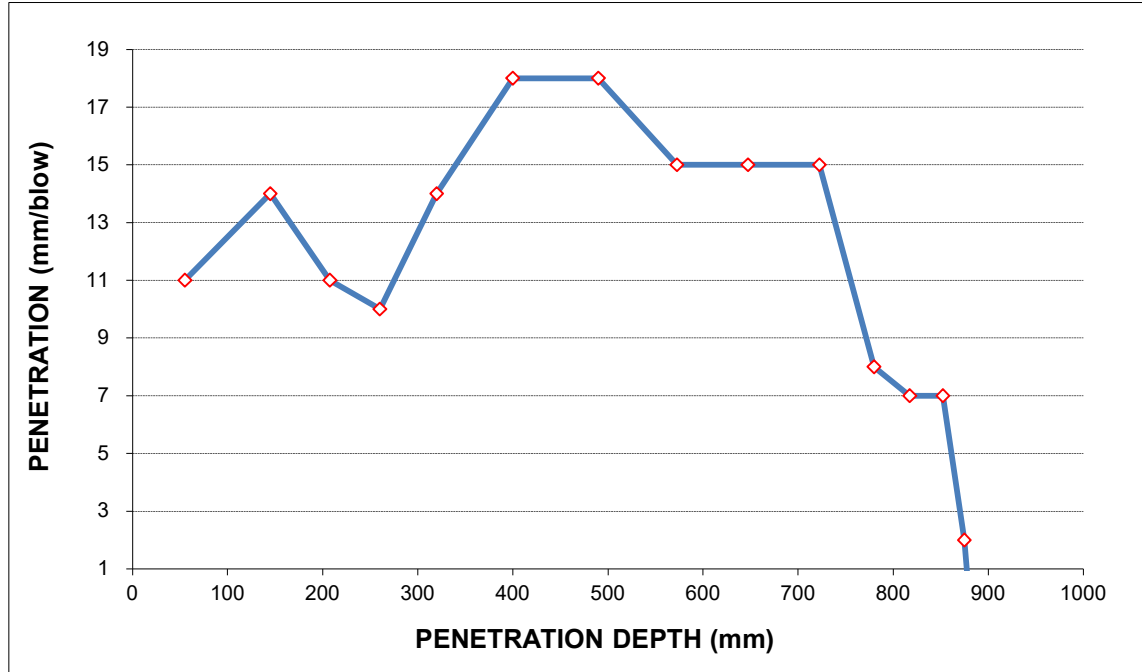


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **21** Location: **TP8A @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **15**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	110	55	10	55	11	27	20	468
2	110	180	145	5	145	14	21	15	362
3	180	235	207.5	5	207.5	11	27	20	468
4	235	285	260	5	260	10	30	23	518
5	285	355	320	5	320	14	21	15	362
6	355	445	400	5	400	18	17	11	276
7	445	535	490	5	490	18	17	11	276
8	535	610	572.5	5	572.5	15	20	13	336
9	610	685	647.5	5	647.5	15	20	13	336
10	685	760	722.5	5	722.5	15	20	13	336
11	760	800	780	5	780	8	38	31	654
12	800	835	817.5	5	817.5	7	43	36	751
13	835	870	852.5	5	852.5	7	43	36	751
14	870	880	875	5	875	2	50	110	900
15	880	880	880	5	880	0	50		

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

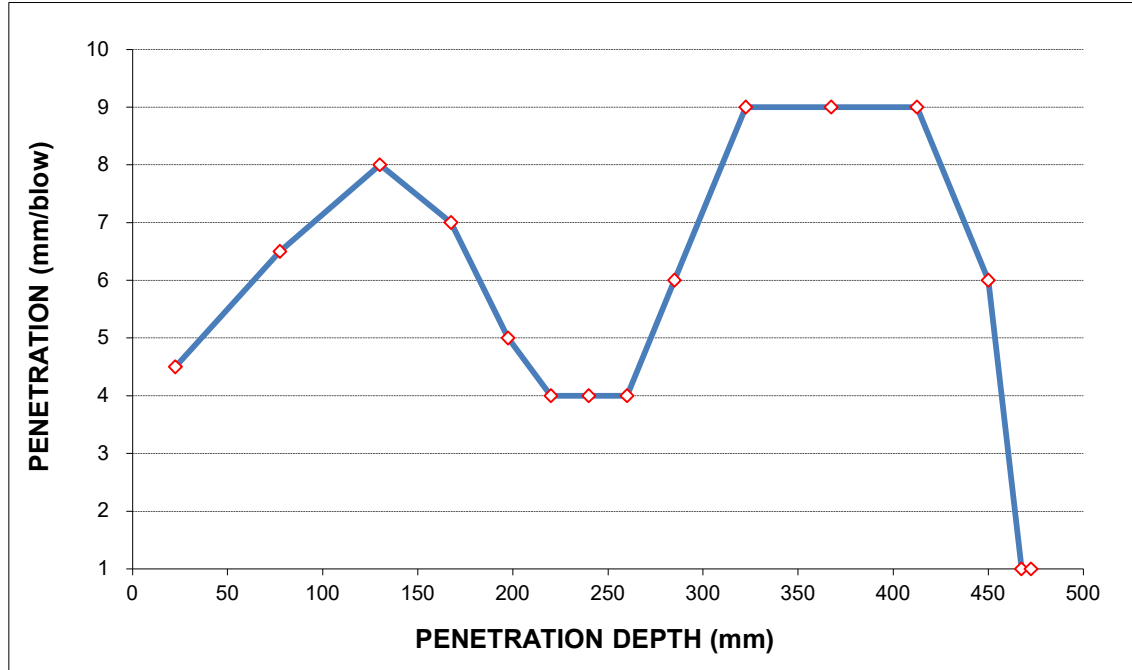


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **22** Location: **TP8B @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".

Depth of hole in which DCP was taken : **0** mm below NGL Readings : **15**

Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	45	22.5	10	22.5	5	50	65	900
2	45	110	77.5	10	77.5	7	46	40	810
3	110	150	130	5	130	8	38	31	654
4	150	185	167.5	5	167.5	7	43	36	751
5	185	210	197.5	5	197.5	5	50	56	900
6	210	230	220	5	220	4	50	76	900
7	230	250	240	5	240	4	50	76	900
8	250	270	260	5	260	4	50	76	900
9	270	300	285	5	285	6	50	44	900
10	300	345	322.5	5	322.5	9	33	26	578
11	345	390	367.5	5	367.5	9	33	26	578
12	390	435	412.5	5	412.5	9	33	26	578
13	435	465	450	5	450	6	50	44	900
14	465	470	467.5	5	467.5	1	50	110	900
15	470	475	472.5	5	472.5	1	50	110	900

DYNAMIC CONE PENETROMETER TEST

Job Name **Gwatyu Road**

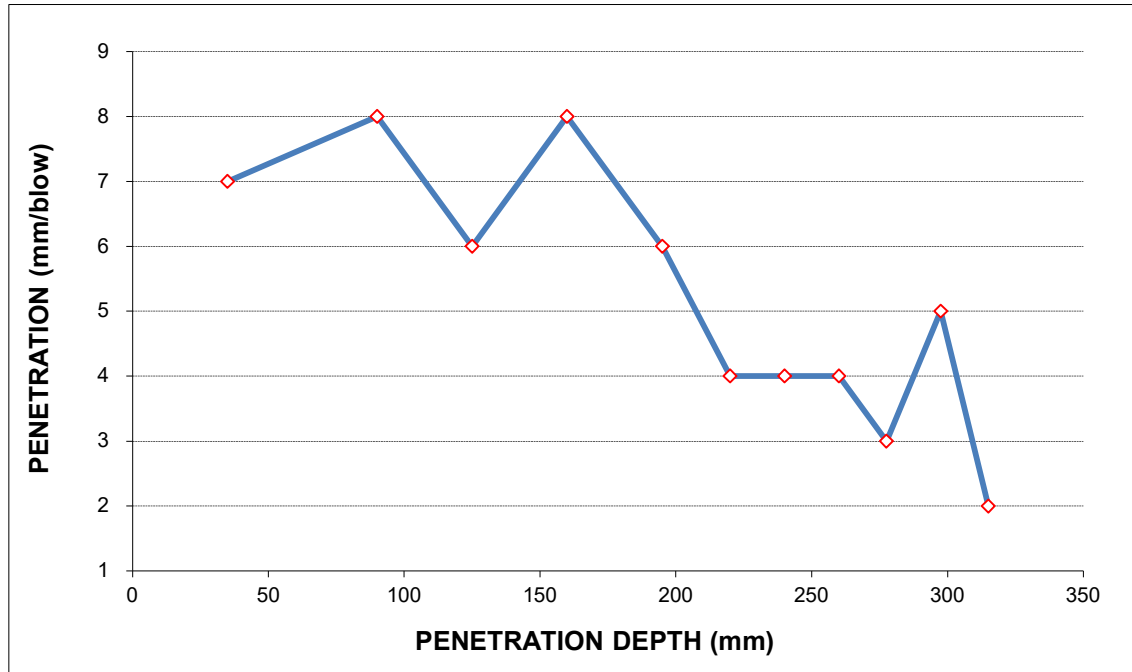


File No:

Job No: **23-734**

Date of Test: **August 2023**

DCP No: **23** Location: **TP8C @ surface**



Penetration Guide	
mm/blow	Consistency
< 5	Very Dense
5 - 10	Dense
10 - 30	Med Dense
30 - 75	Loose
75 -100	Very Loose

NOTE :
Stated consistencies do not apply to cohesive materials. Describe using "stiff or firm or soft".



Depth of hole in which DCP was taken : **0** mm below NGL Readings : **11**



Applied Factor : **1.5** times Terzaghi's value

Remarks :

Reading No.	Layer From	Layer To	Average Layer Depth	Field Reading Blows/layer	Level Below NGL mm	DCP No DN mm/blow	Equiv. N Value	Approx In-situ CBR	Approx EASBP kPa
1	0	70	35	10	35	7	43	36	751
2	70	110	90	5	90	8	38	31	654
3	110	140	125	5	125	6	50	44	900
4	140	180	160	5	160	8	38	31	654
5	180	210	195	5	195	6	50	44	900
6	210	230	220	5	220	4	50	76	900
7	230	250	240	5	240	4	50	76	900
8	250	270	260	5	260	4	50	76	900
9	270	285	277.5	5	277.5	3	50	110	900
10	285	310	297.5	5	297.5	5	50	56	900
11	310	320	315	5	315	2	50	110	900

APPENDIX - C

GEOTECHNICAL BORROWPIT ASSESSMENT				
Gwatyu Access Road Upgrade			NO: BP627	
Road:		Start:		Approx haulage km to site: Approximately 13km.
LHS/RHS:		Height: 2 to 5m		Slope: 30 -80° Date: 7/08/2023
Rating: Good			PHOTOGRAPH	
	PARAMETER	Max Rating	Actual	
1	Geology			
	<i>Mudstone</i>	30	20	
	<i>Dolerite</i>	30		
	<i>Sandstone/siltstone</i>	10		
2	Weathering			
	<i>Highly weathered</i>	20	15	
	<i>Completely weathered</i>	10		
	<i>> Medium weathered</i>	5	4	GEOLOGY
3	Excavatability			0,40 Light grey orange purple grey highly weathered very closely jointed soft rock SANDSTONE. 1,20 Light orange purple grey highly to moderately weathered closely jointed medium hard rock SANDSTONE. 3,50 Maroon highly to moderately weathered very closely jointed soft to medium hard rock MUDSTONE
	<i>Easy</i>	10	5	
	<i>Medium</i>	4		
	<i>Hard</i>	1		
4	Hardness			CURRENT EXTENT & RESERVES
	<i>Medium hard</i>	20	10	
	<i>Soft</i>	15	10	
	<i>>Medium hard</i>	10		Current Extent: approximately 1.2 Ha Reserves: >50 000m ³ . But would have to remove sandstone capping
	<i>Very soft</i>	2		
5	Jointing			
	<i>Very close to close</i>	10	7	PROSPECTS
	<i>≥ Medium jointed</i>	5		
6	Water			Good prospects with potentially high reserves and potential for expansion. Separate sandstone capping which may be stockpiled and tested for possible use as a selected subgrade.
	<i>Not present</i>	5	5	
	<i>Present</i>	1		 www.deltageotech.co.za
7	Access			
	<i>Good</i>	5	4	
	<i>Poor</i>	1		
	TOTAL		80	
Comments: Borrow material focussing on maroon highly to moderately weathered mudstone. The existing area has been exploited down to similar levels to the access road. Further exploitation below these levels would yield higher reserves particularly to the south and south western portions of the 'greenfields' part of the borrow pit. The sandstone capping/interbeds could be stockpiled and possibly utilized as selected subgrade quality material if required - control testing would be required in this regard.				
Co-ordinates: 31°59'26.66"S 27°11'29.81"E				

GEOTECHNICAL BORROWPIT ASSESSMENT				
Gwatyu Access Road Upgrade			NO: BP656	
Road:		Start:		Approx haulage km to site: Approximately 40km.
LHS/RHS:		Height: 4 to 10m		Slope: 15 to 25°
Rating: Good		PHOTOGRAPH		
	PARAMETER	Max Rating	Actual	
1	Geology			
	<i>Mudstone</i>	30		
	<i>Dolerite</i>	30	25	
	<i>Sandstone/siltstone</i>	10		
2	Weathering			
	<i>Highly weathered</i>	20	18	
	<i>Completely weathered</i>	10		
	<i>> Medium weathered</i>	5		
3	Excavatability			Olive grey highly weathered closely jointed soft to medium hard rock DOLERITE.
	<i>Easy</i>	10	6	
	<i>Medium</i>	4		
	<i>Hard</i>	1		
4	Hardness			
	<i>Medium hard</i>	20	10	
	<i>Soft</i>	15	10	
	<i>>Medium hard</i>	10		
				CURRENT EXTENT & RESERVES
	<i>Very soft</i>	2		Current Extent: 5000m ²
5	Jointing			Reserves: 180 x 50 x 5 = 45 000m ³
	<i>Very close to close</i>	10	6	
	<i>≥ Medium jointed</i>	5		
				PROSPECTS
6	Water			Great prospects with potentially high reserves and potential for expansion.
	<i>Not present</i>	5	4	
	<i>Present</i>	1		
7	Access			 www.deltageotech.co.za
	<i>Good</i>	5	3	
	<i>Poor</i>	1		
	TOTAL		82	
Comments: Borrow material is good quality sabunga of up to G7 COTO material, and possibly better (G6) underlying the surficial highly weathered horizons. However BP is fairly far from the site.				
Co-ordinates: 31°57'30.95"S 27° 3'45.21"E				

APPENDIX - D

MATERIALS TEST REPORT

Client : Delta Geotech (Pty) Ltd
Address : 17 Clearview Place
 : Beacon Bay
 : East London, 5241
Attention : Mr Matthew Jones
Facsimile : -
E-mail : matthew@deltageotech.co.za
Project : Gwatyu
Job Card : E1874

Client Reference : Gwatyu
Order No. : Gwatyu
Report Status : Complete
Date Received : 17.08.2023
Date Tested : 20.09.2023 - 20.09.2023
Date Reported : 29.09.2023

Page : 1 of 19

Sampling Procedure(s): SAMPLES DELIVERED TO THE LABORATORY
 SAMPLES DELIVERED TO THE LABORATORY

Herewith please find the test report(s) pertaining to the above project. All tests were conducted in accordance with prescribed test method(s). Information herein consists of the following:

Test(s) conducted / Item(s) measured	Test Method(s)
California Bearing Ratio	SANS 3001-GR40
Maximum Dry Density & Ptimum Moisture Content	SANS 3001- GR30
Sieve Analysis	SANS 3001- GR1
Atterberg Limits	SANS 3001 - GR10
Hydrometer Analysis	SANS 3001 - GR3

Any test results contained in this report and marked with * in the table above are "not SANAS accredited" and are not included in the schedule of accreditation for this laboratory.

Any information contained in this test report pertain only to the areas and/or samples tested. Documents may only be reproduced or published in their full context. Any information gained by the laboratory prior, during or after the test process will be treated as confidential and will not be reproduced or disclosed to any person or organisation, unless required to do so by law.

While every care is taken to ensure that all tests are carried out in accordance with recognised standards, neither Labco Southern Africa (Pty) Ltd nor its employees shall be liable in any way whatsoever for any error made in the execution or reporting of tests or any erroneous conclusions drawn therefrom or for any consequences thereof.

All interpretations, Interpolations, Opinions and/or Classifications contained in this report falls outside our scope of accreditation.

The following parameters, where applicable, were excluded from the classification procedure: Chemical modifications, Additional fines, Fractured Faces, Soluble Salts, pH, Conductivity, Coarse Sand Ratio, Durability (COLTO: G4-G9).

The following parameters, where applicable, were assumed: Rock types were assumed to be of an Arenaceous nature with Siliceous cementing material.

Unless otherwise requested or stated, all samples will be discarded after a period of 3 months.

Deviations in Test Methods:



Justin Tarr
 Technical Signatory.

**All results are authorized by technical signatories.

Client : Delta Geotech
 Project : Gwatyu Road
 Job Card No: E1874

 Date Received : 25.07.2023
 Date Reported : 02/10/2023
 Page No. : 2 of 1

CALIFORNIA BEARING RATIO (CBR) & ROAD INDICATOR REPORT

Laboratory No.	E1874/1	E1874/2
Field Number	-	-
Client Reference	TP 1 B	TP 1 C
Depth (m)	0.00 - 0.30	0.00 - 0.12
Position	TP 1 B	TP 1 C
Coordinates	X Y	
Description	GWC / Fill	GWC
Additional information	-	-
Calcrete/Crushed	N/A	N/A
Stabilizing Agent	N/A	N/A

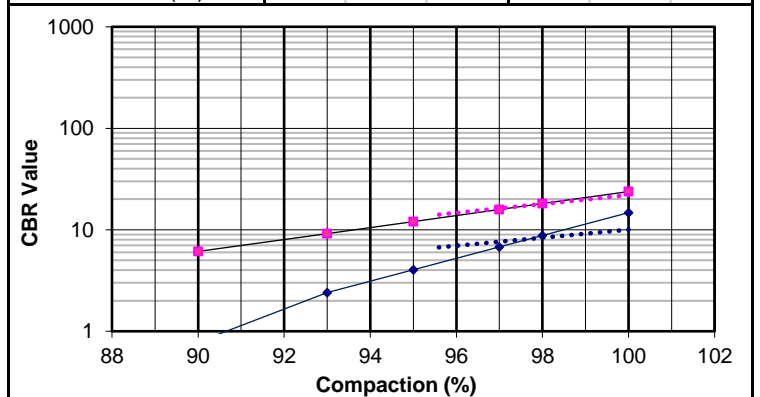
Laboratory No.	E1874/1	E1874/2
Maximum Dry Density & Optimum Moisture Content		
MDD	kg/m ³ 2034	2070
OMC	% 11.2	10.9

California Bearing Ratio

Compaction Data									
Moisture	%	11.0			10.8				
Dry Density	kg/m ³	2021	1928	1871	2068	1975	1855		
Compaction	%	100.0	95.4	92.6	100.0	95.5	89.7		
Penetration Data									
CBR at	2.50 mm	10	7	2	22	14	6		
	5.00 mm	13	7	3	24	16	6		
	7.50 mm	12	7	3	23	16	7		
Swell @ 96hrs (%)		1.2	1.5	1.8	1.1	1.3	1.4		
Final Moisture (%)		15.6	17.9	13.9	14.5	13.6	18.4		

Sieve Analysis (Wet preparation)

Percentage Passing	100 mm		100
	75 mm		86
	63 mm	100	86
	50 mm	98	85
	37.5 mm	95	85
	28 mm	94	84
	20 mm	92	84
	14 mm	85	79
	5 mm	67	61
	2 mm	67	61
	1 mm	53	38
	0.425 mm	24	18
	0.075 mm	1.55	1.83



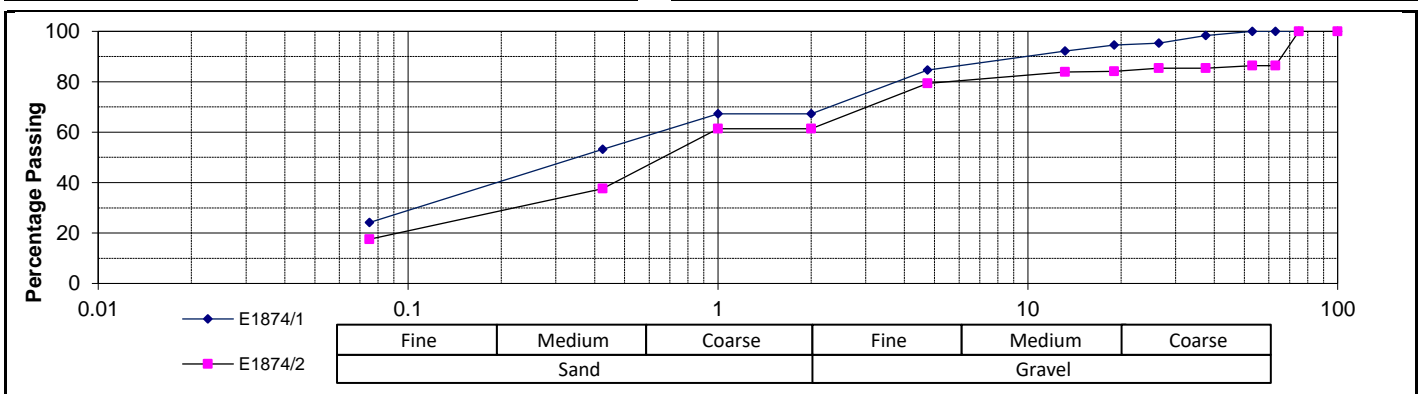
Interpolated CBR Data

CBR	Mod. AASHTO	@ 100%	15	24
		@ 98%	9	18
		@ 97%	7	16
		@ 95%	4	12
		@ 93%	2	9
		@ 90%	1	6
		@ SANS3001 Midpoint	8	18

Classifications

HRB (AASHTO)	A-2-6(0)	A-2-4(0)
COLTO*		G9
TRH14*		G10

Atterberg Limits	<0.425mm	<0.425mm
Liquid Limit (%)	27	28
Plasticity Index (%)	11	10
Linear Shrinkage (%)	5.5	5.0



*The Colto / TRH 14 Classifications are only based on the above results. Further testing may be required

Client : Delta Geotech
 Project : Gwatyu Road
 Job Card No: E1874

Date Received : 25.07.2023
 Date Reported : 02/10/2023
 Page No. : 3 of 1

CALIFORNIA BEARING RATIO (CBR) & ROAD INDICATOR REPORT

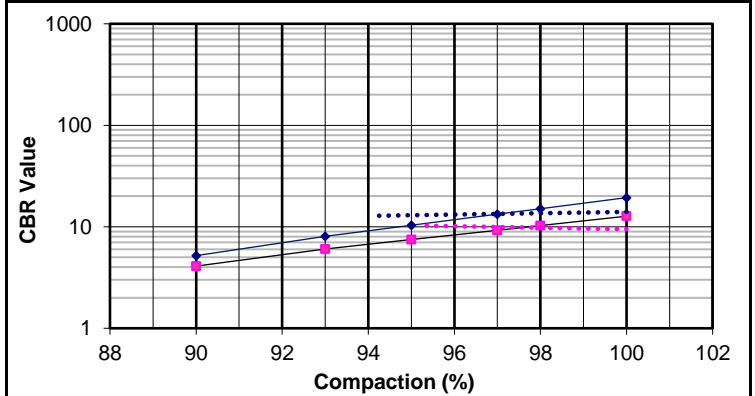
Laboratory No.	E1874/4	E1874/5
Field Number	-	-
Client Reference	TP 2 A	TP 2 A
Depth (m)	0.00 - 0.28	0.28 - 0.70
Position	TP 2 A	TP 2 A
Coordinates	X Y	
Description	GWC	Selected Subgrade
Additional information	-	-
Calcrete/Crushed	N/A	N/A
Stabilizing Agent	N/A	N/A

Laboratory No.	E1874/4	E1874/5
Maximum Dry Density & Optimum Moisture Content		
MDD	kg/m ³	2028
OMC	%	10.6
		2038
		11.5

California Bearing Ratio

Compaction Data							
Moisture	%	10.7			11.6		
Dry Density	kg/m ³	2029	1910	1841	2021	1924	1840
Compaction	%	100.0	94.1	90.7	100.0	95.2	91.0
Penetration Data							
CBR at	2.50 mm	14	13	6	9	10	5
	5.00 mm	15	14	6	11	12	5
	7.50 mm	14	14	6	12	11	5
Swell @ 96hrs (%)		1.0	1.4	1.7	1.0	1.1	1.4
Final Moisture (%)		15.4	17.6	16.6	15.4	16.6	16.4

Sieve Analysis (Wet preparation)			
Percentage Passing	100 mm		
	75 mm		
	63 mm		
	50 mm		
	37.5 mm		100
	28 mm		99
	20 mm		97
	14 mm	100	96
	5 mm	92	90
	2 mm	66	78
	1 mm	66	78
	0.425 mm	40	54
0.075 mm	18	27	
Grading Modulus	1.76	1.41	



Interpolated CBR Data

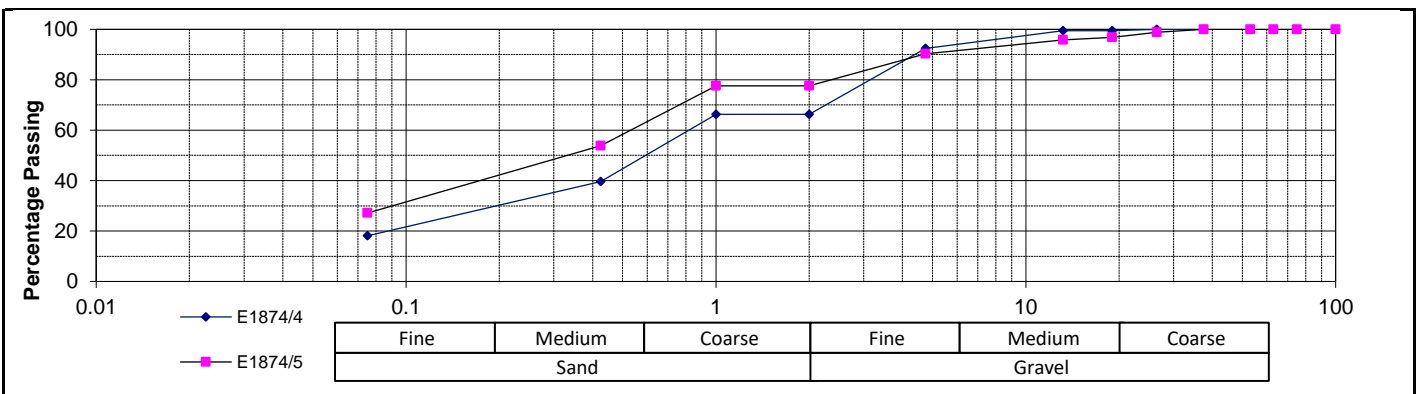
CBR	Mod. AASHTO	@ 100%	19	13
		@ 98%	15	10
		@ 97%	13	9
		@ 95%	10	7
		@ 93%	8	6
		@ 90%	5	4
		@ SANS3001 Midpoint	13	10

Classifications

HRB (AASHTO)	A-2-6(0)	A-2-6(0)
COLTO*	G9	Possible G9
TRH14*	G10	G10

Soil Mortar Analysis		
Coarse Sand	40	31
Coarse Fine Sand	8	11
Medium Fine Sand	12	11
Fine Fine Sand	13	13
Silt and Clay	27	35

Atterberg Limits		
	<0.425mm	<0.425mm
Liquid Limit (%)	30	26
Plasticity Index (%)	12	12
Linear Shrinkage (%)	5.5	5.5



*The Colto / TRH 14 Classifications are only based on the above results. Further testing may be required

Client : Delta Geotech	Date Received : 25.07.2023
Project : Gwatyu Road	Date Reported : 02/10/2023
Job Card No: E1874	Page No. : 4 of 1

CALIFORNIA BEARING RATIO (CBR) & ROAD INDICATOR REPORT

Laboratory No.	E1874/7 ◆	E1874/8 ■
Field Number	-	-
Client Reference	TP 3 A	TP 3 C
Depth (m)	0.00 - 0.20	0.12 - 0.55
Position	TP 3 A	TP 3 C
Coordinates	X Y	
Description	GWC	Colluvium
Additional information	-	-
Calcrete/Crushed	N/A	N/A
Stabilizing Agent	N/A	N/A

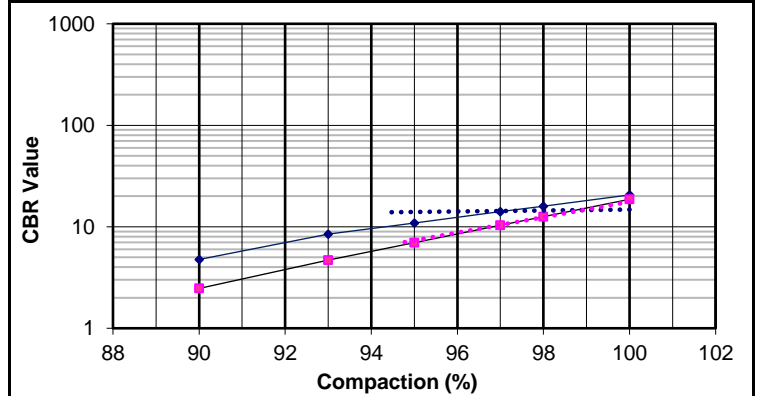
Laboratory No.	E1874/7 ◆	E1874/8 ■
Maximum Dry Density & Optimum Moisture Content		
MDD	kg/m ³	2001
OMC	%	9.6
		1991
		9.2

California Bearing Ratio

Compaction Data									
Moisture	%	9.6			8.2				
Dry Density	kg/m ³	1992	1878	1824	1976	1873	1826		
Compaction	%	100.0	94.3	91.6	100.0	94.8	92.4		
Penetration Data									
CBR at	2.50 mm	15	14	7	18	7	4		
	5.00 mm	17	15	7	19	7	4		
	7.50 mm	18	14	6	18	6	4		
Swell @ 96hrs (%)		0.4	0.7	1.0	0.5	0.9	1.3		
Final Moisture (%)		13.0	17.2	15.7	13.1	15.5	12.6		

Sieve Analysis (Wet preparation)

Percentage Passing	100 mm		
	75 mm		
	63 mm		
	50 mm		
	37.5 mm		
	28 mm		
	20 mm	100	100
	14 mm	99	98
	5 mm	94	89
	2 mm	89	80
	1 mm	89	80
	0.425 mm	83	74
0.075 mm	48	40	
Grading Modulus	0.80	1.06	



Interpolated CBR Data

CBR	Mod. AASHTO	@ 100%	21	19
		@ 98%	16	13
		@ 97%	14	10
		@ 95%	11	7
		@ 93%	8	5
		@ 90%	5	2
		@ SANS3001 Midpoint	14	11

Soil Mortar Analysis

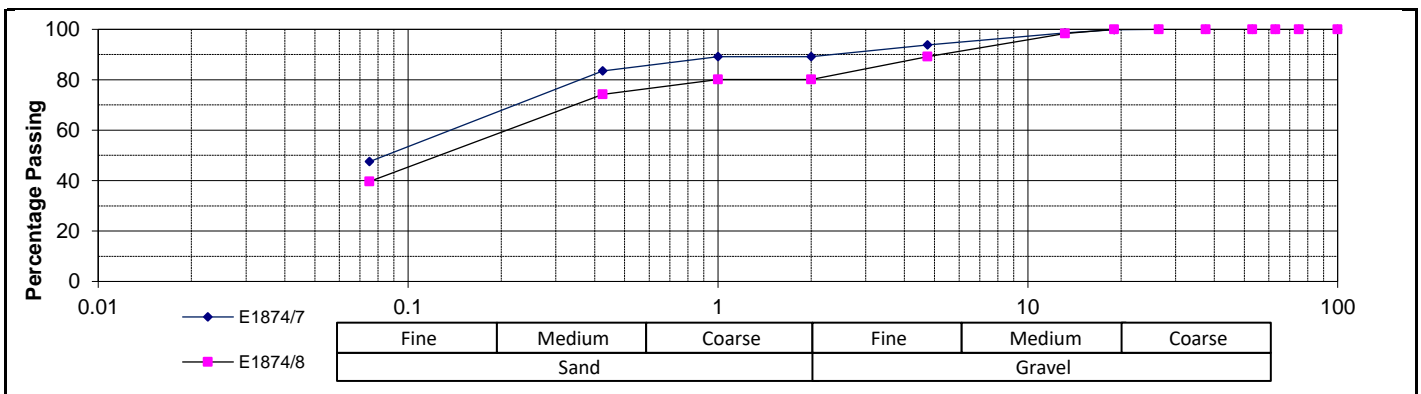
Coarse Sand	6	7
Coarse Fine Sand	5	4
Medium Fine Sand	14	15
Fine Fine Sand	22	24
Silt and Clay	53	49

Atterberg Limits <0.425mm <0.425mm

Liquid Limit (%)	21	22
Plasticity Index (%)	8	7
Linear Shrinkage (%)	4.5	3.5

Classifications

HRB (AASHTO)	A-4(1)	A-4(0)
COLTO*	G9	
TRH14*	G10	



*The Colto / TRH 14 Classifications are only based on the above results. Further testing may be required

Client : Delta Geotech
 Project : Gwatyu Road
 Job Card No: E1874

 Date Received : 25.07.2023
 Date Reported : 02/10/2023
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CALIFORNIA BEARING RATIO (CBR) & ROAD INDICATOR REPORT

Laboratory No.	E1874/9	E1874/10
Field Number	-	-
Client Reference	TP 4 A	TP 4 B
Depth (m)	0.11 - 0.75	0.02 - 0.30
Position	TP 4 A	TP 4 B
Coordinates	X Y	
Description	Colluvium	Fill / Selected Subgrade
Additional information	-	-
Calcrete/Crushed	N/A	N/A
Stabilizing Agent	N/A	N/A

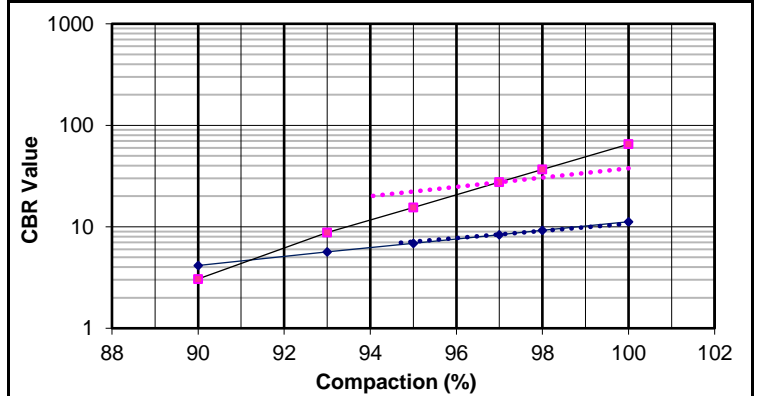
Laboratory No.	E1874/9	E1874/10
Maximum Dry Density & Optimum Moisture Content		
MDD	kg/m ³ 1885	2013
OMC	% 10.1	9.1

California Bearing Ratio

Compaction Data									
Moisture	%	10.3			9.1				
Dry Density	kg/m ³	1873	1771	1708	2021	1899	1840		
Compaction	%	100.0	94.6	91.2	100.0	94.0	91.0		
Penetration Data									
CBR at	2.50 mm	11	7	5	38	20	5		
	5.00 mm	11	7	4	42	26	5		
	7.50 mm	11	7	4	39	30	5		
Swell @ 96hrs (%)		0.5	0.9	1.3	0.2	0.3	0.6		
Final Moisture (%)		15.2	17.7	17.0	11.1	14.3	12.8		

Sieve Analysis (Wet preparation)

Percentage Passing	100 mm		
	75 mm		
	63 mm		
	50 mm		
	37.5 mm		
	28 mm		
	20 mm		
	14 mm	100	100
	5 mm	97	99
	2 mm	89	94
	1 mm	89	94
	0.425 mm	85	84
0.075 mm	51	44	
Grading Modulus	0.75	0.78	



Interpolated CBR Data

CBR	Mod. AASHTO	@ 100%	11	65
		@ 98%	9	37
		@ 97%	8	28
		@ 95%	7	16
		@ 93%	6	9
		@ 90%	4	3
		@ SANS3001 Midpoint	9	27

Soil Mortar Analysis

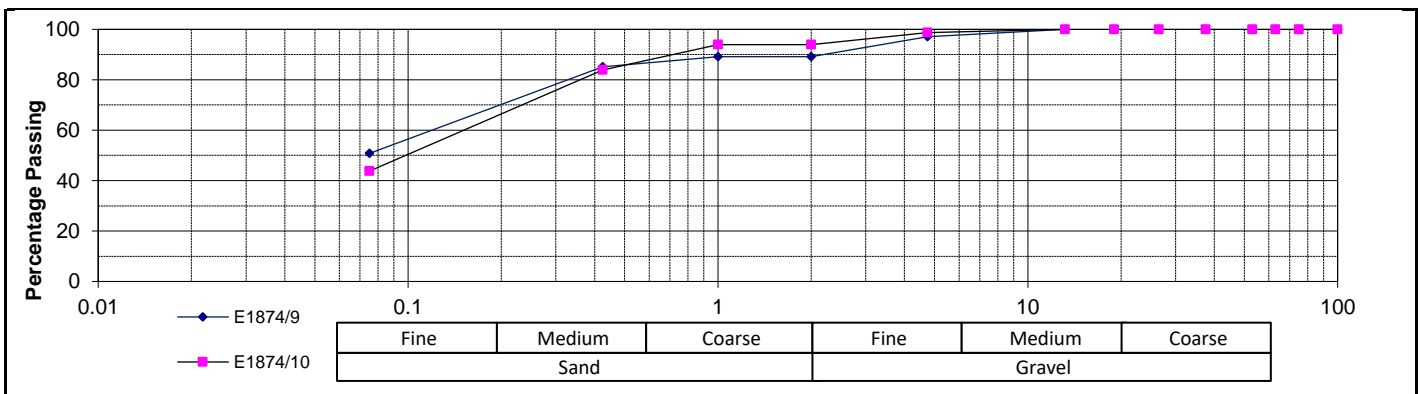
Coarse Sand	5	11
Coarse Fine Sand	2	3
Medium Fine Sand	12	13
Fine Fine Sand	25	27
Silt and Clay	57	47

Atterberg Limits <0.425mm <0.425mm

Liquid Limit (%)	19	17
Plasticity Index (%)	7	3
Linear Shrinkage (%)	3.5	1.5

Classifications

HRB (AASHTO)	A-4(1)	A-4(0)
COLTO*	Possible G9	G8/G9
TRH14*	G10	G10



*The Colto / TRH 14 Classifications are only based on the above results. Further testing may be required

Client : Delta Geotech
 Project : Gwatyu Road
 Job Card No: E1874

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CALIFORNIA BEARING RATIO (CBR) & ROAD INDICATOR REPORT

Laboratory No.	E1874/11 ◆	E1874/12 ■
Field Number	-	-
Client Reference	TP 5 A	TP 5 A
Depth (m)	0.30 - 0.75	0.75 - 1.10
Position	TP 5 A	TP 5 A
Coordinates	X Y	
Description	Colluvium	Pedogenic
Additional information	-	-
Calcrete/Crushed	N/A	N/A
Stabilizing Agent	N/A	N/A

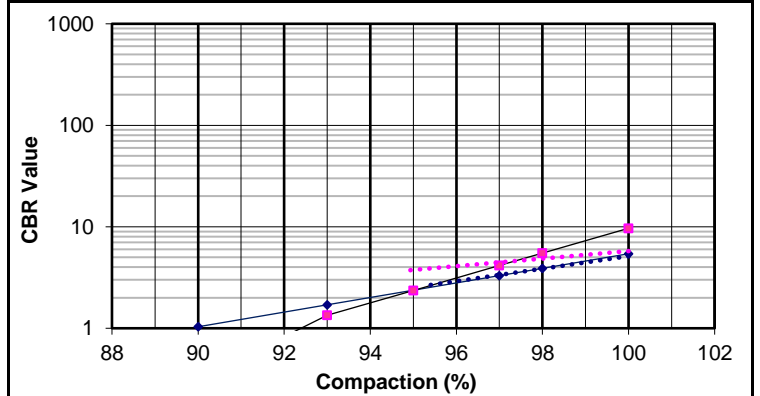
Laboratory No.	E1874/11 ◆	E1874/12 ■	
Maximum Dry Density & Optimum Moisture Content			
MDD	kg/m ³	1863	1874
OMC	%	10.3	12.2

California Bearing Ratio

Compaction Data							
Moisture	%	10.2			11.8		
Dry Density	kg/m ³	1900	1810	1720	1854	1756	1716
Compaction	%	100.0	95.3	90.5	100.0	94.7	92.6
Penetration Data							
CBR at	2.50 mm	5	3	1	6	4	1
	5.00 mm	6	2	1	5	3	1
	7.50 mm	6	2	1	5	3	1
Swell @ 96hrs (%)		1.4	1.9	2.4	1.5	2.2	2.8
Final Moisture (%)		16.0	14.7	16.1	16.8	19.4	16.3

Sieve Analysis (Wet preparation)

Percentage Passing	100 mm		
	75 mm		
	63 mm		
	50 mm		
	37.5 mm		
	28 mm		
	20 mm		
	14 mm	100	100
	5 mm	97	98
	2 mm	95	94
	1 mm	95	94
	0.425 mm	92	90
0.075 mm	62	50	
Grading Modulus	0.52	0.66	



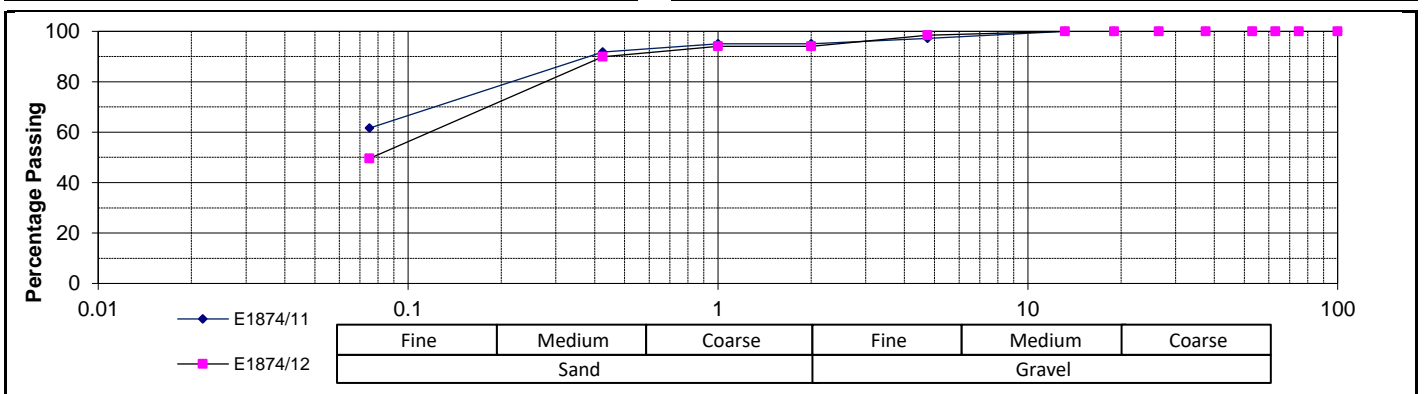
Interpolated CBR Data

CBR	Mod. AASHTO	@ 100%	5	10
		@ 98%	4	5
		@ 97%	3	4
		@ 95%	2	2
		@ 93%	2	1
		@ 90%	1	0
		@ SANS3001 Midpoint	4	5

Classifications

HRB (AASHTO)	A-4(3)	A-6(2)
COLTO*		
TRH14*		

Soil Mortar Analysis		
Coarse Sand	3	4
Coarse Fine Sand	6	2
Medium Fine Sand	13	13
Fine Sand	13	28
Silt and Clay	65	53
Atterberg Limits		
	<0.425mm	<0.425mm
Liquid Limit (%)	23	24
Plasticity Index (%)	10	12
Linear Shrinkage (%)	5.0	6.0



*The Colto / TRH 14 Classifications are only based on the above results. Further testing may be required

Client : Delta Geotech
 Project : Gwatyu Road
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CALIFORNIA BEARING RATIO (CBR) & ROAD INDICATOR REPORT

Laboratory No.	E1874/13	E1874/14
Field Number	-	-
Client Reference	TP 6 A	TP 6 B
Depth (m)	0.45 - 0.75	0.00 - 0.35
Position	TP 6 A	TP 6 B
Coordinates	X Y	
Description	Highly to mod Mudstone	Comp to Highly Mudstone
Additional information	-	-
Calcrete/Crushed	N/A	N/A
Stabilizing Agent	N/A	N/A

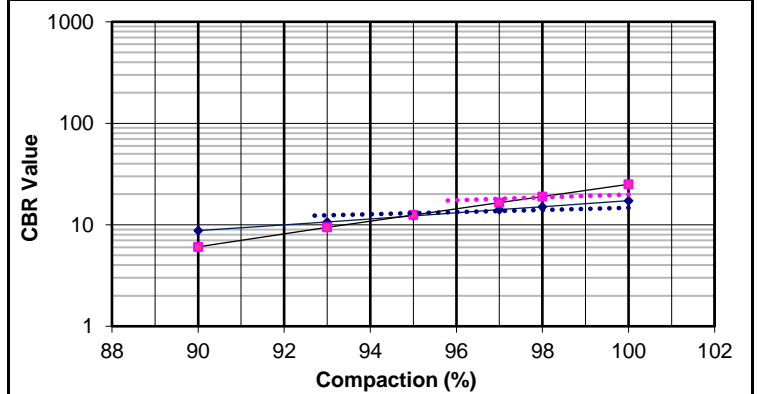
Laboratory No.	E1874/13	E1874/14	
Maximum Dry Density & Optimum Moisture Content			
MDD	kg/m ³	2178	2180
OMC	%	7.1	7.5

California Bearing Ratio

Compaction Data							
Moisture	%	7.2			7.5		
Dry Density	kg/m ³	2235	2071	2008	2196	2101	1988
Compaction	%	100.0	92.7	89.9	100.0	95.7	90.5
Penetration Data							
CBR at	2.50 mm	15	12	9	20	17	7
	5.00 mm	22	12	9	22	19	7
	7.50 mm	28	12	9	22	19	7
Swell @ 96hrs (%)		1.0	1.3	1.5	1.0	1.1	1.4
Final Moisture (%)		9.8	11.1	7.3	9.4	11.0	13.1

Sieve Analysis (Wet preparation)

Percentage Passing	100 mm		
	75 mm		
	63 mm		
	50 mm	100	100
	37.5 mm	97	99
	28 mm	90	99
	20 mm	86	97
	14 mm	84	97
	5 mm	57	75
	2 mm	28	49
	1 mm	28	49
	0.425 mm	15	28
0.075 mm	8	14	
Grading Modulus	2.50	2.09	



Interpolated CBR Data

CBR	Mod. AASHTO	@ 100%	17	25
		@ 98%	15	19
		@ 97%	14	16
		@ 95%	12	12
		@ 93%	11	9
		@ 90%	9	6
		@ SANS3001 Midpoint	13	19

Soil Mortar Analysis

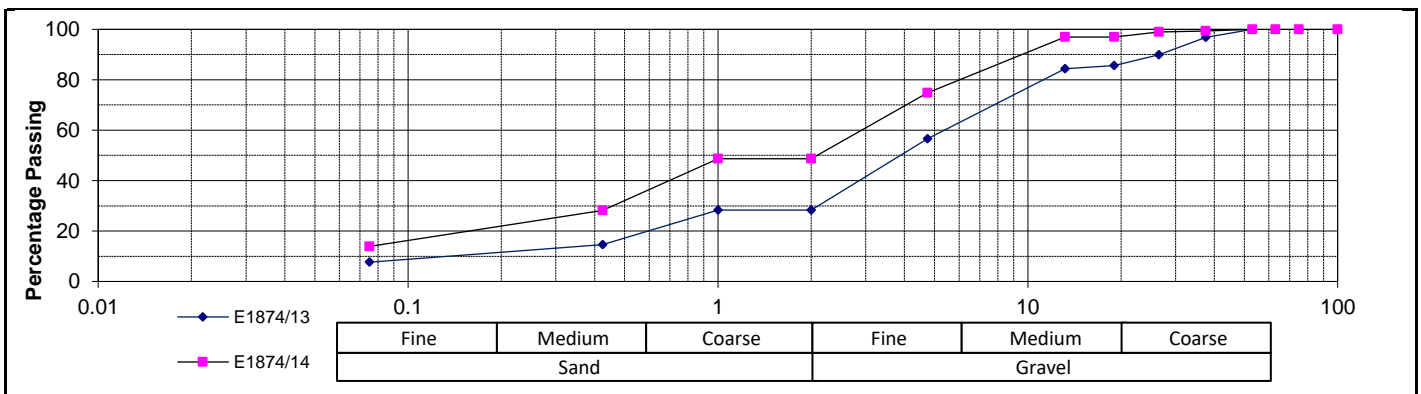
Coarse Sand	48	42
Coarse Fine Sand	7	6
Medium Fine Sand	8	8
Fine Fine Sand	9	16
Silt and Clay	27	29

Atterberg Limits <0.425mm <0.425mm

Liquid Limit (%)	23	22
Plasticity Index (%)	12	11
Linear Shrinkage (%)	6.0	5.5

Classifications

HRB (AASHTO)	A-2-6(0)	A-2-6(0)
COLTO*	G8	G8/G9
TRH14*	G9	G10



*The Colto / TRH 14 Classifications are only based on the above results. Further testing may be required

Client : Delta Geotech
 Project : Gwatyu Road
 Job Card No: E1874

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CALIFORNIA BEARING RATIO (CBR) & ROAD INDICATOR REPORT

Laboratory No.	E1874/15 ◆	E1874/16 ■
Field Number	-	-
Client Reference	TP 7 A	TP 7 B
Depth (m)	0.00 - 0.90	0.15 - 1.10
Position	TP 7 A	TP 7 B
Coordinates	X Y	
Description	Rockfill (Mudstone)	Alluvium
Additional information	-	-
Calcrete/Crushed	N/A	N/A
Stabilizing Agent	N/A	N/A

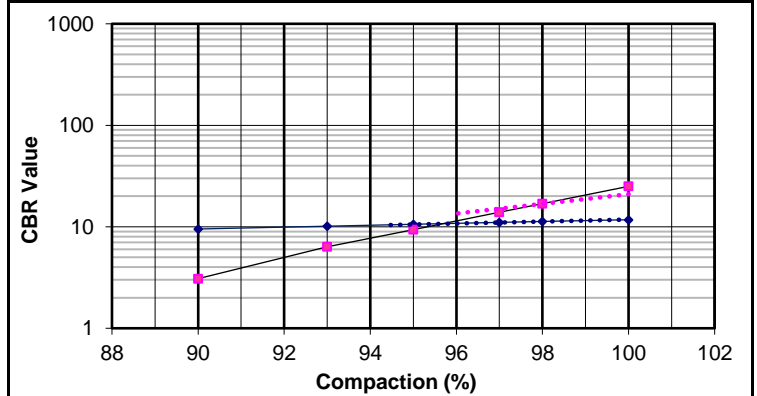
Laboratory No.	E1874/15 ◆	E1874/16 ■	
Maximum Dry Density & Optimum Moisture Content			
MDD	kg/m ³	2065	2078
OMC	%	9.8	8.1

California Bearing Ratio

Compaction Data							
Moisture	%	9.9			8.1		
Dry Density	kg/m ³	2088	1968	1899	2061	1976	1907
Compaction	%	100.0	94.3	90.9	100.0	95.9	92.5
Penetration Data							
CBR at	2.50 mm	12	10	10	21	13	6
	5.00 mm	11	9	10	26	15	7
	7.50 mm	10	8	9	27	15	7
Swell @ 96hrs (%)		1.4	2.3	3.3	0.2	0.6	0.9
Final Moisture (%)		12.3	15.5	14.1	11.6	13.1	14.3

Sieve Analysis (Wet preparation)

Percentage Passing	100 mm		
	75 mm		
	63 mm		
	50 mm	100	
	37.5 mm	98	
	28 mm	97	
	20 mm	94	100
	14 mm	91	99
	5 mm	72	94
	2 mm	57	86
	1 mm	57	86
	0.425 mm	44	69
	0.075 mm	21	26
Grading Modulus	1.77	1.19	



Interpolated CBR Data

CBR	Mod. AASHTO	@ 100%	12	25
		@ 98%	11	17
		@ 97%	11	14
		@ 95%	11	9
		@ 93%	10	6
		@ 90%	10	3
		@ SANS3001 Midpoint	11	17

Classifications

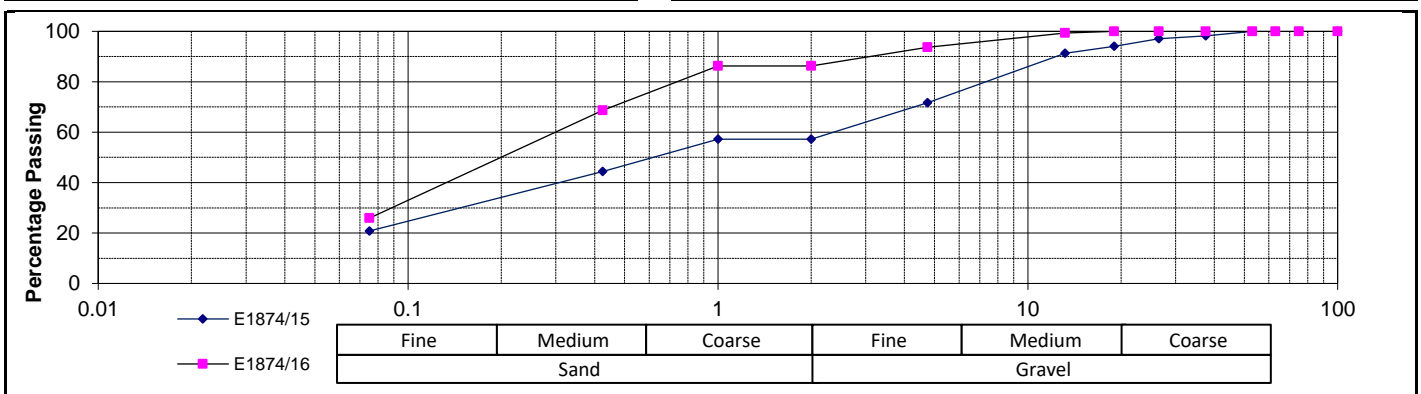
HRB (AASHTO)	A-2-7(1)	A-2-4(0)
COLTO*		Possible G9
TRH14*	G9	G10

Soil Mortar Analysis

Coarse Sand	22	20
Coarse Fine Sand	6	8
Medium Fine Sand	17	18
Fine Fine Sand	18	24
Silt and Clay	36	30

Atterberg Limits <0.425mm <0.425mm

Liquid Limit (%)	41	17
Plasticity Index (%)	22	3
Linear Shrinkage (%)	10.5	1.5



*The Colto / TRH 14 Classifications are only based on the above results. Further testing may be required

Client : Delta Geotech Date Received : 25.07.2023
 Project : Gwatyu Road Date Reported : 02/10/2023
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CALIFORNIA BEARING RATIO (CBR) & ROAD INDICATOR REPORT

Laboratory No.	E1874/18	E1874/19
Field Number	-	-
Client Reference	TP 8 B	TP 8 B
Depth (m)	0.00 - 0.15	0.15 - 0.50
Position	TP 8 B	TP 8 B
Coordinates	X Y	
Description	GWC	Colluvium
Additional information	-	-
Calcrete/Crushed	N/A	N/A
Stabilizing Agent	N/A	N/A

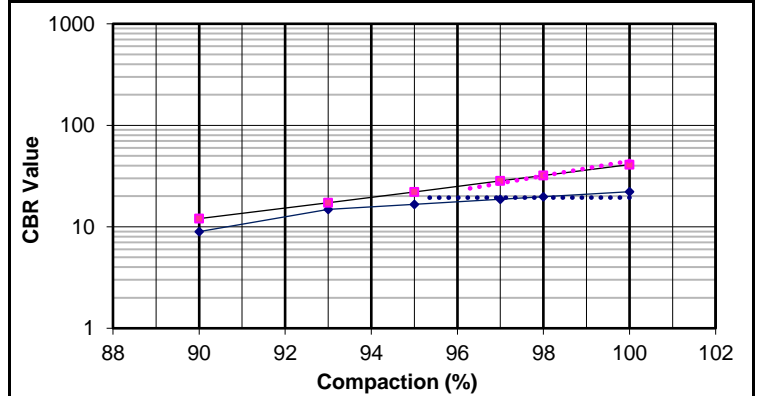
Laboratory No.	E1874/18	E1874/19
Maximum Dry Density & Optimum Moisture Content		
MDD	kg/m ³ 2169	2152
OMC	% 8.0	7.4

California Bearing Ratio

Compaction Data									
Moisture	%	7.9			7.5				
Dry Density	kg/m ³	2177	2074	2041	2171	2090	1968		
Compaction	%	100.0	95.3	93.8	100.0	96.3	90.7		
Penetration Data									
CBR at	2.50 mm	19	19	16	45	24	13		
	5.00 mm	27	25	15	57	26	13		
	7.50 mm	30	27	14	58	25	12		
Swell @ 96hrs (%)		0.8	1.0	1.3	0.9	1.1	1.4		
Final Moisture (%)		10.2	13.4	13.4	10.4	11.5	12.2		

Sieve Analysis (Wet preparation)

Percentage Passing	100 mm		
	75 mm		
	63 mm		
	50 mm	100	
	37.5 mm	97	100
	28 mm	94	98
	20 mm	91	95
	14 mm	87	92
	5 mm	76	80
	2 mm	59	63
	1 mm	59	63
	0.425 mm	31	43
	0.075 mm	12	17
Grading Modulus	1.99	1.77	



Interpolated CBR Data

CBR	Mod. AASHTO	@ 100%	22	41
		@ 98%	20	32
		@ 97%	19	28
		@ 95%	17	22
		@ 93%	15	17
		@ 90%	9	12
		@ SANS3001 Midpoint	19	33

Classifications

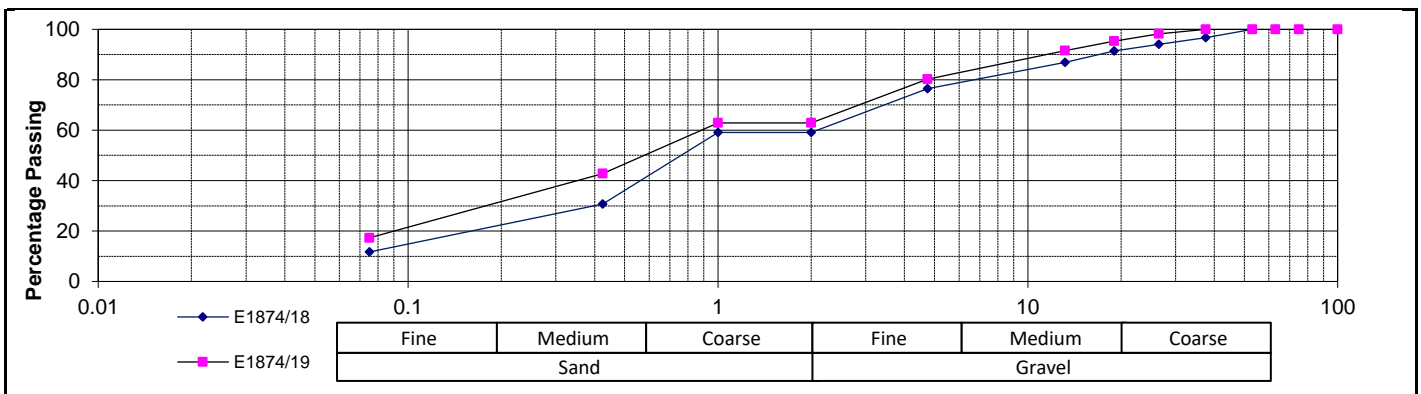
HRB (AASHTO)	A-2-4(0)	A-2-4(0)
COLTO*	G7	G7
TRH14*	G9	G7

Soil Mortar Analysis

Coarse Sand	48	32
Coarse Fine Sand	7	6
Medium Fine Sand	13	16
Fine Fine Sand	13	18
Silt and Clay	20	28

Atterberg Limits

	<0.425mm	<0.425mm
Liquid Limit (%)	20	21
Plasticity Index (%)	7	7
Linear Shrinkage (%)	3.5	3.5



*The Colto / TRH 14 Classifications are only based on the above results. Further testing may be required

Client : Delta Geotech Date Received : 25.07.2023
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CALIFORNIA BEARING RATIO (CBR) & ROAD INDICATOR REPORT

Laboratory No.	E1874/20	E1874/21
Field Number	-	-
Client Reference	TP BP 627	TP BP 656
Depth (m)	0.20 - 0.50	0.00 - 0.10
Position	TP BP 627	TP BP 656
Coordinates	X Y	
Description	Moderately Mudstone	Highly Dolerite
Additional information	-	-
Calcrete/Crushed	N/A	N/A
Stabilizing Agent	N/A	N/A

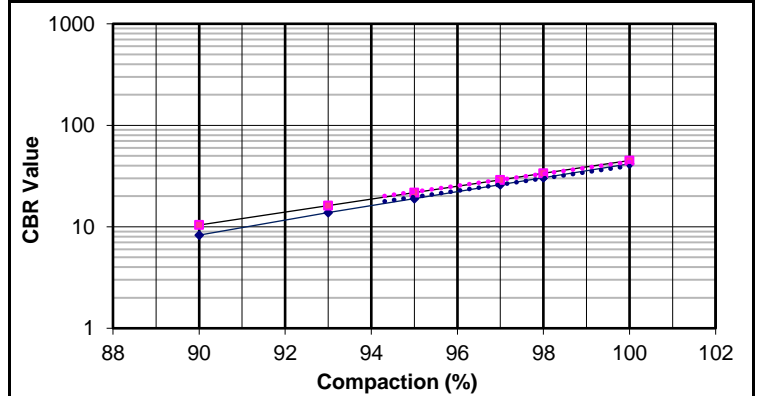
Laboratory No.	E1874/20	E1874/21	
Maximum Dry Density & Optimum Moisture Content			
MDD	kg/m ³	2161	2060
OMC	%	7.5	8.5

California Bearing Ratio

Compaction Data							
Moisture	%	7.6			19.1		
Dry Density	kg/m ³	2186	2059	2010	1883	1773	1710
Compaction	%	100.0	94.2	91.9	100.0	94.1	90.8
Penetration Data							
CBR at	2.50 mm	40	17	12	44	20	12
	5.00 mm	51	20	13	54	24	13
	7.50 mm	56	22	13	55	26	13
Swell @ 96hrs (%)		15.0	1.1	1.4	0.2	0.4	0.7
Final Moisture (%)		9.7	9.8	5.8	23.3	25.8	25.8

Sieve Analysis (Wet preparation)

Percentage Passing	100 mm		
	75 mm		
	63 mm	100	
	50 mm	83	
	37.5 mm	71	
	28 mm	63	
	20 mm	51	100
	14 mm	43	96
	5 mm	19	87
	2 mm	7	60
	1 mm	7	60
	0.425 mm	3	13
	0.075 mm	2	3
Grading Modulus	2.88	2.24	



Interpolated CBR Data

CBR	Mod. AASHTO	@ 100%	42	45
		@ 98%	30	34
		@ 97%	26	29
		@ 95%	19	22
		@ 93%	14	16
		@ 90%	8	10
		@ SANS3001 Midpoint	26	29

Classifications

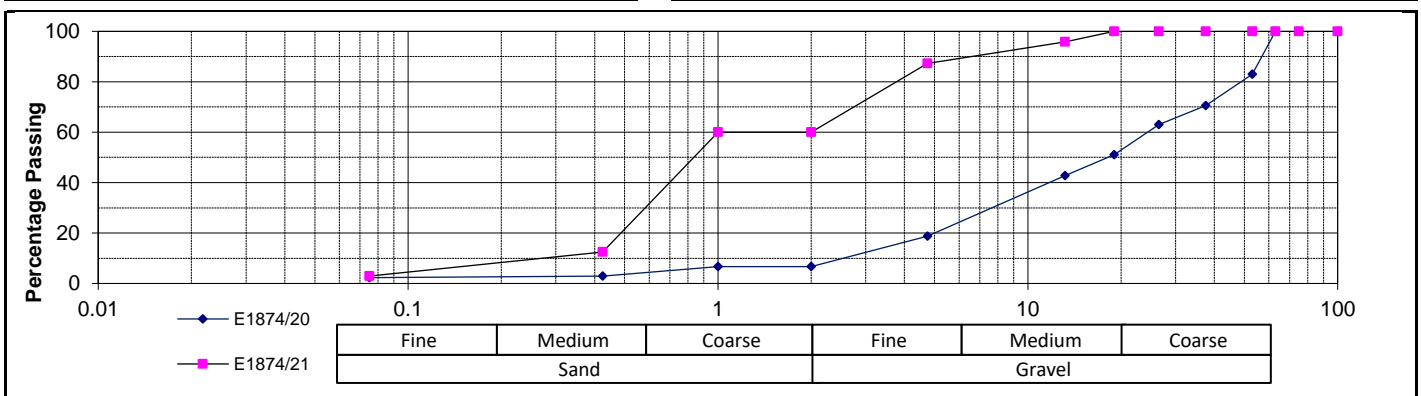
HRB (AASHTO)	A-2-6(0)	A-1-b(0)
COLTO*		G7
TRH14*		G7

Soil Mortar Analysis

Coarse Sand	55	79
Coarse Fine Sand	5	7
Medium Fine Sand	3	5
Fine Sand	3	4
Silt and Clay	35	5

Atterberg Limits

	<0.425mm	<0.425mm
Liquid Limit (%)	22	27
Plasticity Index (%)	11	3
Linear Shrinkage (%)	5.5	1.5



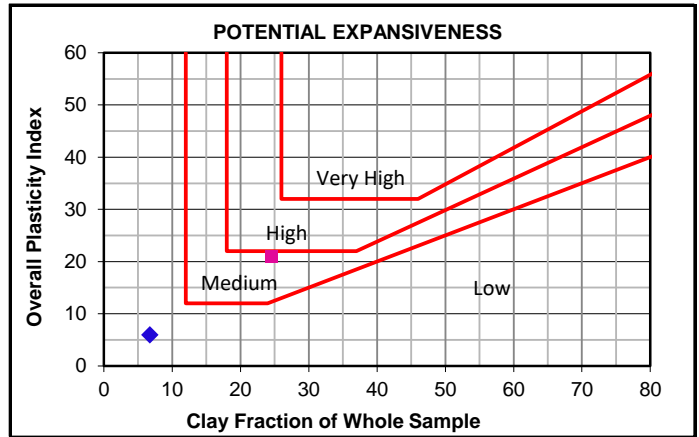
*The Colto / TRH 14 Classifications are only based on the above results. Further testing may be required

Client: Delta Geotech
Project: Gwatyu Road
Job Card No: E1874

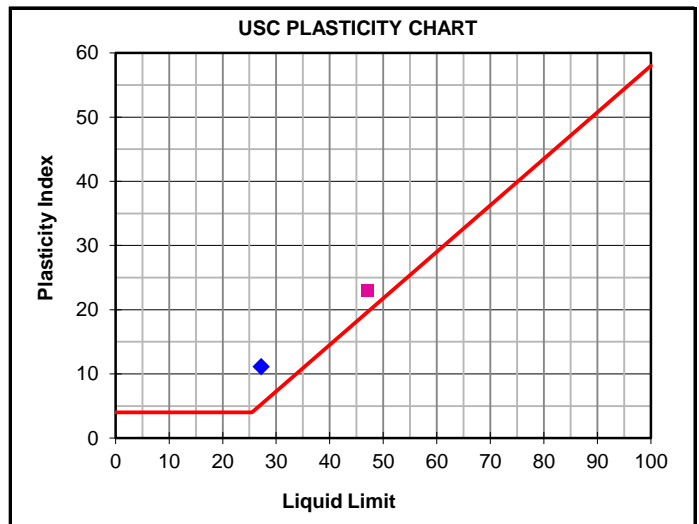
Date Received: 08.08.2023
Date Reported: 02/10/2023
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FOUNDATION INDICATOR

Laboratory Number	E1874/1	E1874/3
Field Number	-	-
Client Reference	TP 1 B	TP 1 C
Depth (m)	0.00 - 0.30	0.30 - 0.75
Position	TP 1 B	TP 1 C
Coordinates	X Y	
Visual Description	GWC/Fill	Alluvium
Classification Description	Clayey sand \ Silt-Clay Materials	Clay of low plasticity \ Silt-Clay Materials
Stabilizing Agent		



Moisture Content & Relative Density		
Moisture Content (%)	10.2	13.5
Relative Density (S.G.)		



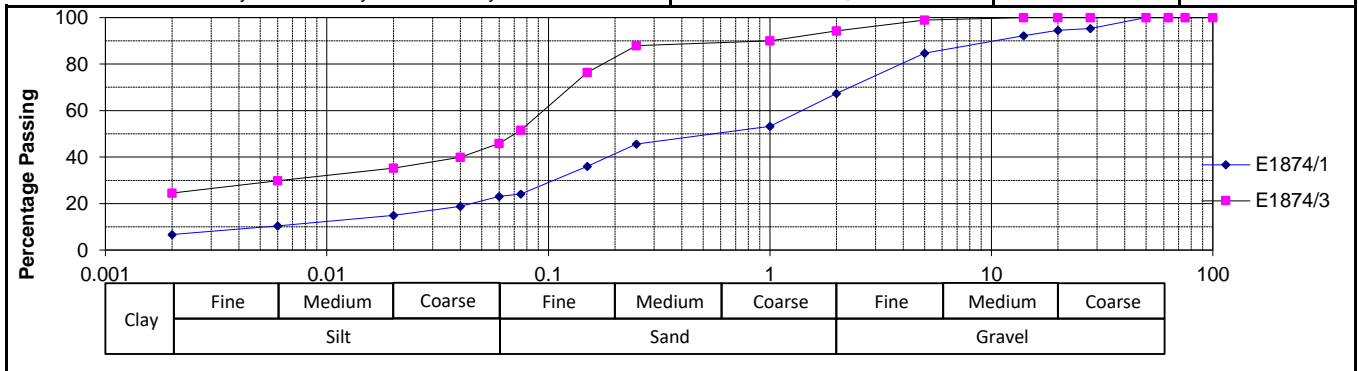
Sieve Analysis (Wet Prep)		
Percentage Passing		
100 mm		
75 mm		
63 mm		
50 mm	100	
37.5 mm	98	
28 mm	95	
20 mm	94	
14 mm	92	100
5 mm	85	99
2 mm	67	94
0.425 mm	53	90
0.250 mm	46	88
0.150 mm	36	76
0.075 mm	24	52
Grading Modulus	1.55	0.64

Laboratory Number	E1874/1	E1874/3	
Atterberg Limits			
Liquid Limit	%	27	47
Plasticity Index	%	11	23
Linear Shrinkage	%	5.5	12.0
Overall PI	%	6	21

Hydrometer Analysis			
		-2.00 mm	-2.00 mm
Percentage Passing			
0.060 mm	23	46	
0.040 mm	19	40	
0.020 mm	15	35	
0.006 mm	10	30	
0.002 mm	7	25	
Gravel	%	33	6
Sand	%	44	48
Silt	%	16	21
Clay	%	7	25

Classifications		
HRB (AASHTO)	A-2-6(0)	A-7-6(9)
Unified (ASTM D2487)	SC	CL
Weston Swell @ 1 kPa	0.1	5.8

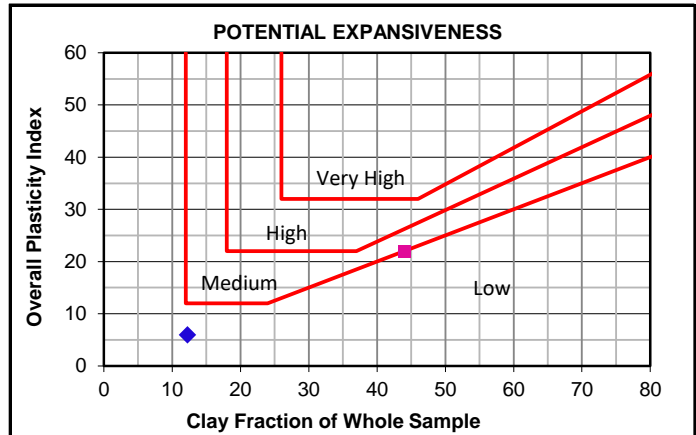
Note: An assumed S.G. may be used in Hydrometer Analysis calculations



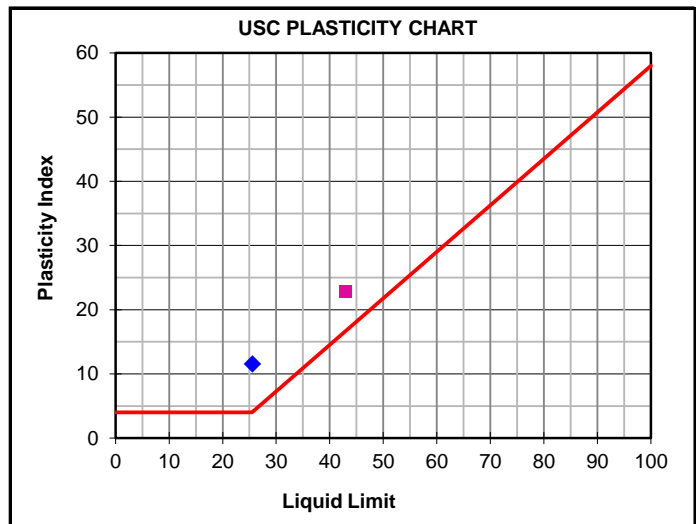
Client: Delta Geotech	Date Received: 08.08.2023
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Job Card No: E1874	Page No.: 12 of 1

FOUNDATION INDICATOR

Laboratory Number	E1874/5	E1874/6
Field Number	-	-
Client Reference	TP 2 A	TP 2 B
Depth (m)	0.28 - 0.70	0.09 - 1.00
Position	TP 2 A	TP 2 B
Coordinates	X Y	
Visual Description	Selected Subgrade	Colluvium
Classification Description	Clayey sand \ Silt-Clay Materials	Clay of low plasticity \ Silt-Clay Materials
Stabilizing Agent		



Moisture Content & Relative Density		
Moisture Content (%)	7.7	14.3
Relative Density (S.G.)		



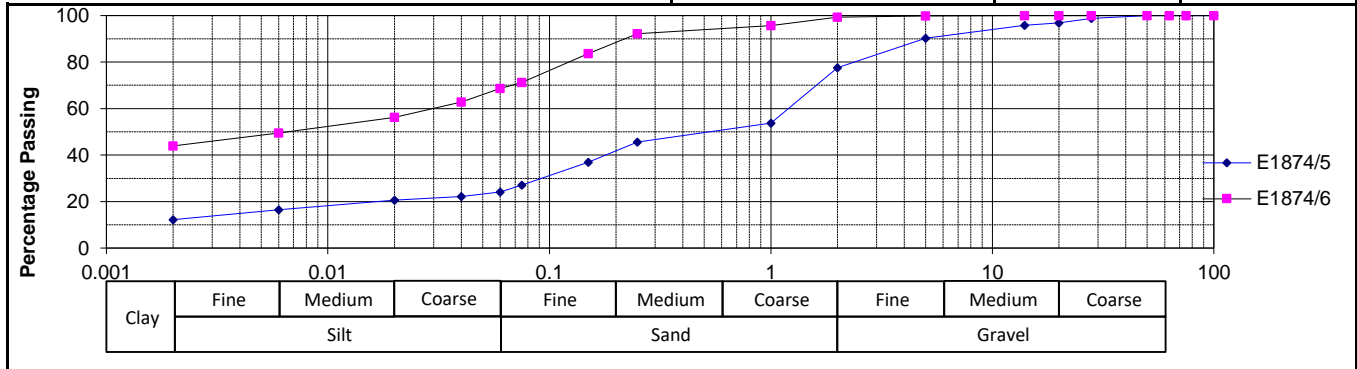
Sieve Analysis (Wet Prep)		
Percentage Passing		
100 mm		
75 mm		
63 mm		
50 mm		
37.5 mm	100	
28 mm	99	
20 mm	97	
14 mm	96	100
5 mm	90	100
2 mm	78	99
0.425 mm	54	96
0.250 mm	46	92
0.150 mm	37	84
0.075 mm	27	71
Grading Modulus	1.41	0.34

Laboratory Number	E1874/5	E1874/6	
Atterberg Limits			
Liquid Limit	%	26	43
Plasticity Index	%	12	23
Linear Shrinkage	%	5.5	12.0
Overall PI	%	6	22

Hydrometer Analysis			
		-2.00 mm	-2.00 mm
Percentage Passing			
0.060 mm	24	69	
0.040 mm	22	63	
0.020 mm	21	56	
0.006 mm	16	49	
0.002 mm	12	44	
Gravel	%	22	1
Sand	%	53	31
Silt	%	12	25
Clay	%	12	44

Classifications		
HRB (AASHTO)	A-2-6(0)	A-7-6(15)
Unified (ASTM D2487)	SC	CL
Weston Swell @ 1 kPa	0.2	4.5

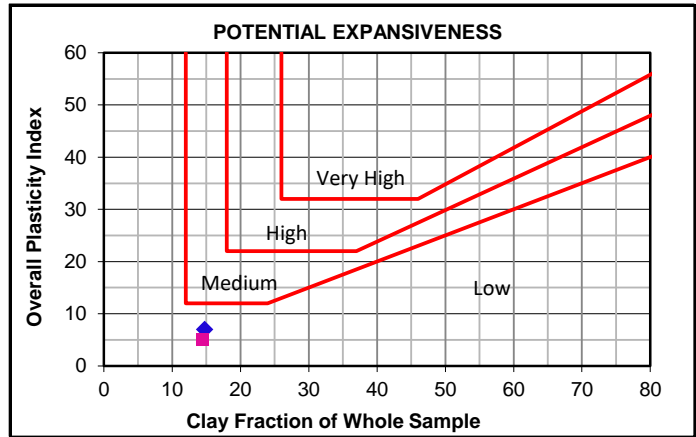
Note: An assumed S.G. may be used in Hydrometer Analysis calculations



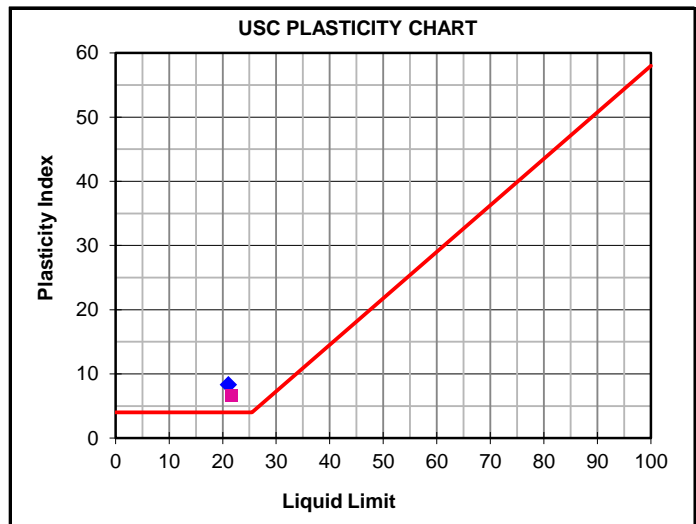
Client: Delta Geotech	Date Received: 08.08.2023
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FOUNDATION INDICATOR

Laboratory Number	E1874/7 ◆	E1874/8 ■
Field Number	-	-
Client Reference	TP 3 A	TP 3 C
Depth (m)	0.00 - 0.20	0.12 - 0.55
Position	TP 3 A	TP 3 C
Coordinates	X Y	
Visual Description	GWC	Colluvium
Classification Description	Clayey sand \ Silt-Clay Materials	Clayey gravel \ silty sand \ Silt-Clay Materials
Stabilizing Agent		



Moisture Content & Relative Density		
Moisture Content (%)	6.7	9.5
Relative Density (S.G.)		



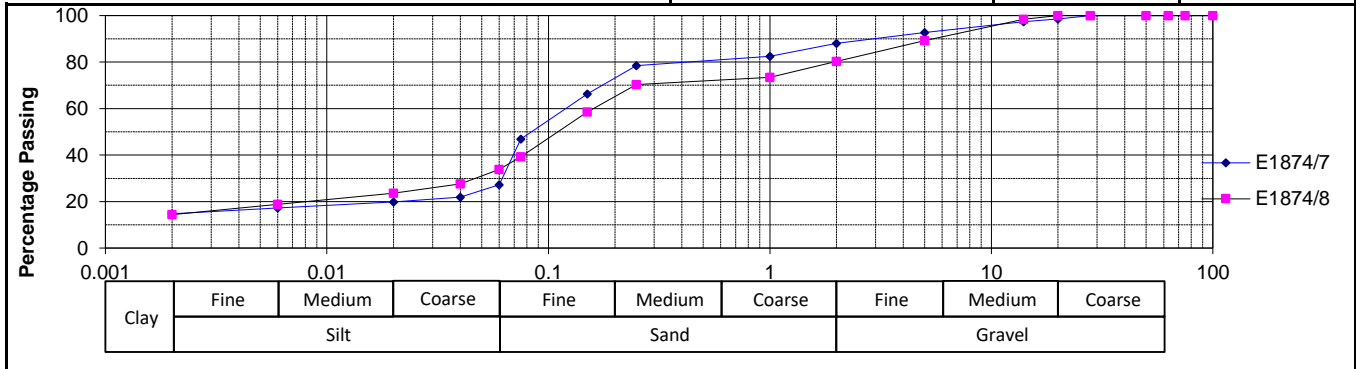
Sieve Analysis (Wet Prep)		
Percentage Passing		
100 mm		
75 mm		
63 mm		
50 mm		
37.5 mm		
28 mm	100	100
20 mm	99	100
14 mm	97	98
5 mm	93	89
2 mm	88	80
0.425 mm	83	73
0.250 mm	78	70
0.150 mm	66	59
0.075 mm	47	39
Grading Modulus	0.83	1.07

Laboratory Number	E1874/7 ◆	E1874/8 ■	
Atterberg Limits			
Liquid Limit	%	21	22
Plasticity Index	%	8	7
Linear Shrinkage	%	4.5	3.5
Overall PI	%	7	5

Hydrometer Analysis			
	-2.00 mm	-2.00 mm	
Percentage Passing			
0.060 mm	27	34	
0.040 mm	22	28	
0.020 mm	20	24	
0.006 mm	17	19	
0.002 mm	15	14	
Gravel	%	12	20
Sand	%	61	46
Silt	%	12	19
Clay	%	15	14

Classifications		
HRB (AASHTO)	A-4(1)	A-4(0)
Unified (ASTM D2487)	SC	SC-SM
Weston Swell @ 1 kPa	0.7	0.2

Note: An assumed S.G. may be used in Hydrometer Analysis calculations

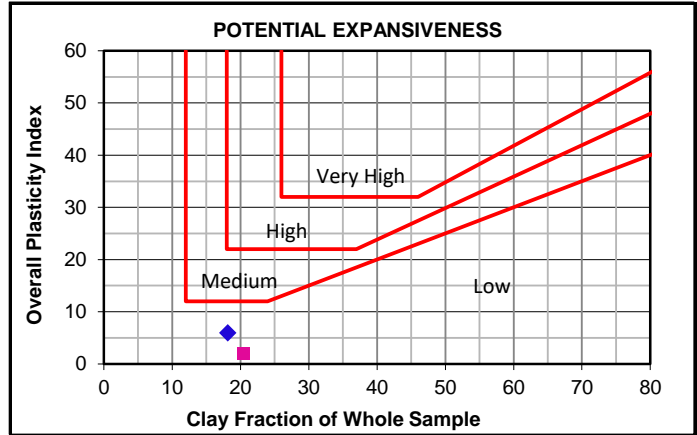


Client: Delta Geotech
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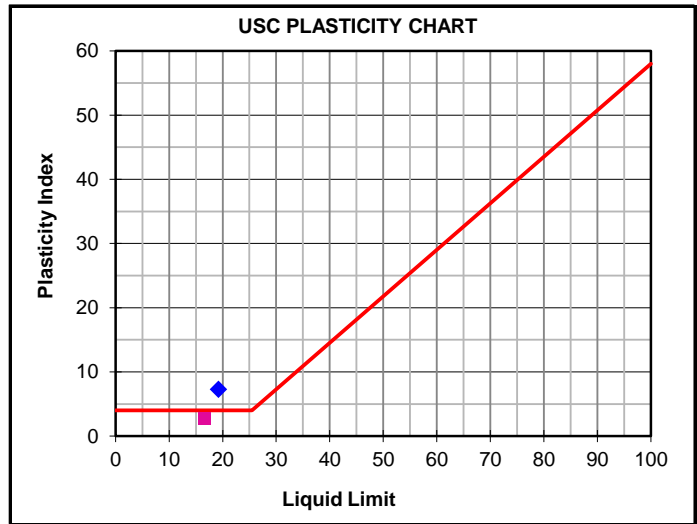
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FOUNDATION INDICATOR

Laboratory Number	E1874/9	E1874/10
Field Number	-	-
Client Reference	TP 4 A	TP 4 B
Depth (m)	0.11 - 0.75	.02 - 0.30
Position	TP 4 A	TP 4 B
Coordinates	X Y	
Visual Description	Colluvium	Fill/Selected Subgrade
Classification Description	Clayey sand \ Silt-Clay Materials	Silty sand \ Silt-Clay Materials
Stabilizing Agent		



Moisture Content & Relative Density		
Moisture Content (%)	10.6	8.5
Relative Density (S.G.)		



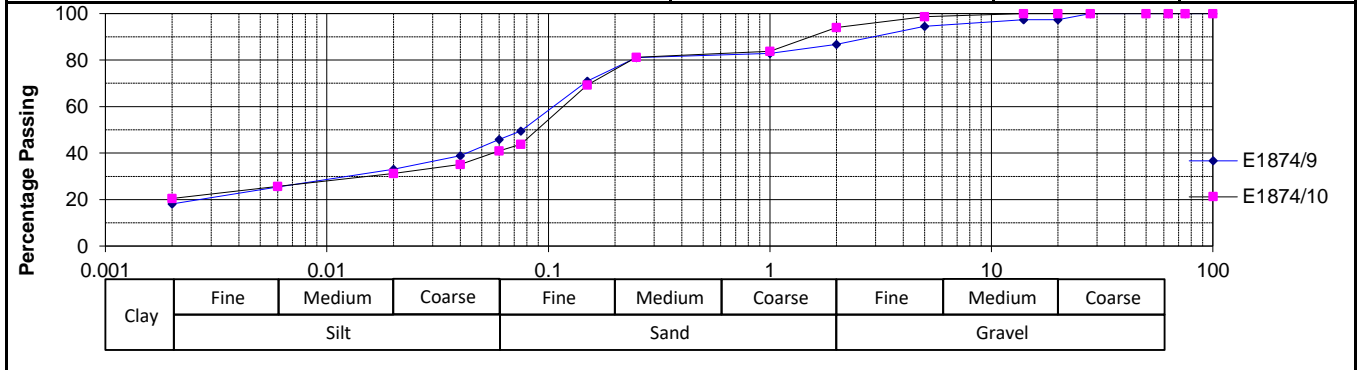
Sieve Analysis (Wet Prep)			
Percentage Passing	100 mm		
	75 mm		
	63 mm		
	50 mm		
	37.5 mm		
	28 mm	100	
	20 mm	97	
	14 mm	97	100
	5 mm	95	99
	2 mm	87	94
	0.425 mm	83	84
0.250 mm	81	81	
0.150 mm	71	69	
0.075 mm	49	44	
Grading Modulus	0.81	0.78	

Laboratory Number	E1874/9	E1874/10
Atterberg Limits		
Liquid Limit	% 19	17
Plasticity Index	% 7	3
Linear Shrinkage	% 3.5	1.5
Overall PI	% 6	2

Hydrometer Analysis			
Percentage Passing	0.060 mm	46	41
	0.040 mm	39	35
	0.020 mm	33	31
	0.006 mm	25	26
	0.002 mm	18	20
Gravel	% 13	6	
Sand	% 41	53	
Silt	% 28	20	
Clay	% 18	20	

Classifications		
HRB (AASHTO)	A-4(0)	A-4(0)
Unified (ASTM D2487)	SC	SM
Weston Swell @ 1 kPa	0.2	0.2

Note: An assumed S.G. may be used in Hydrometer Analysis calculations

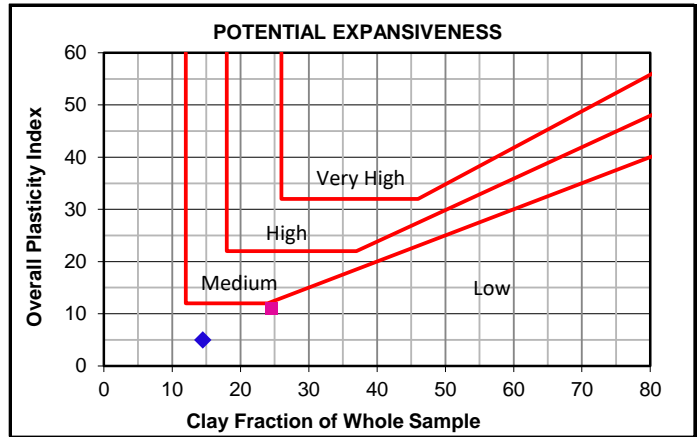


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 Project: Gwatyu Road
 Job Card No: E1874

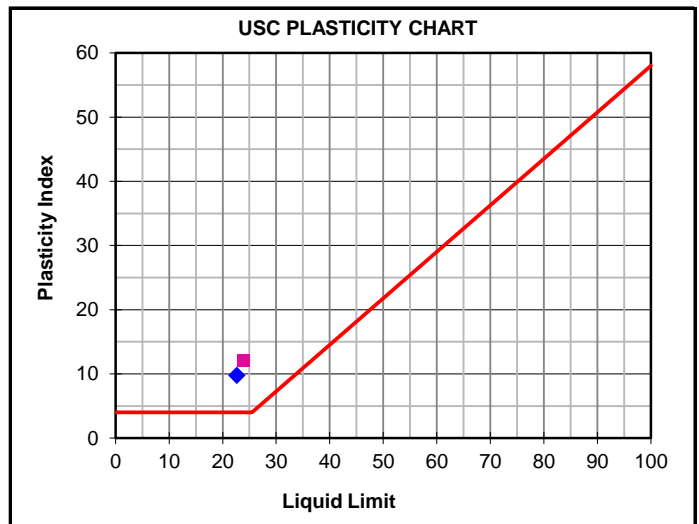
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FOUNDATION INDICATOR

Laboratory Number	E1874/11	E1874/12
Field Number	-	-
Client Reference	TP 5 A	TP 5 A
Depth (m)	0.30 - 0.75	0.75 - 1.10
Position	TP 5 A	TP 5 A
Coordinates	X Y	
Visual Description	Colluvium	Pedogenic
Classification Description	Clayey sand \ Silt-Clay Materials	Clayey sand \ Silt-Clay Materials
Stabilizing Agent		



Moisture Content & Relative Density		
Moisture Content (%)	13.5	13.1
Relative Density (S.G.)		



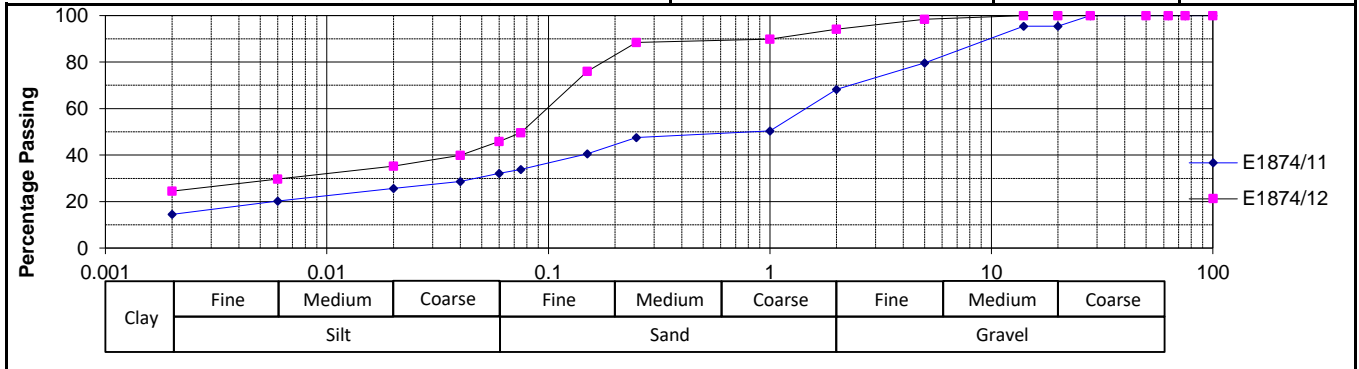
Sieve Analysis (Wet Prep)		
Percentage Passing		
100 mm		
75 mm		
63 mm		
50 mm		
37.5 mm		
28 mm	100	
20 mm	95	
14 mm	95	100
5 mm	80	98
2 mm	68	94
0.425 mm	50	90
0.250 mm	47	88
0.150 mm	41	76
0.075 mm	34	50
Grading Modulus	1.47	0.66

Laboratory Number	E1874/11	E1874/12
Atterberg Limits		
Liquid Limit	% 23	24
Plasticity Index	% 10	12
Linear Shrinkage	% 5.0	6.0
Overall PI	% 5	11

Hydrometer Analysis			
		-2.00 mm	-2.00 mm
Percentage Passing			
0.060 mm	32	46	
0.040 mm	29	40	
0.020 mm	26	35	
0.006 mm	20	30	
0.002 mm	14	24	
Gravel	% 32	6	
Sand	% 36	48	
Silt	% 18	21	
Clay	% 14	24	

Classifications		
HRB (AASHTO)	A-2-4(0)	A-6(2)
Unified (ASTM D2487)	SC	SC
Weston Swell @ 1 kPa	0.0	0.4

Note: An assumed S.G. may be used in Hydrometer Analysis calculations

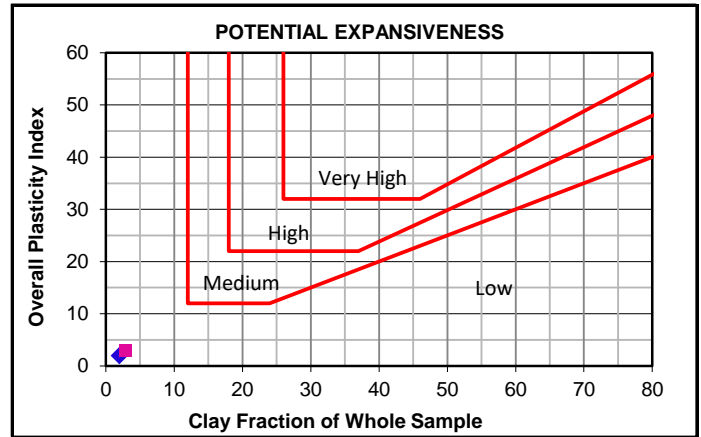


Client: Delta Geotech
Project: Gwatyu Road
Job Card No: E1874

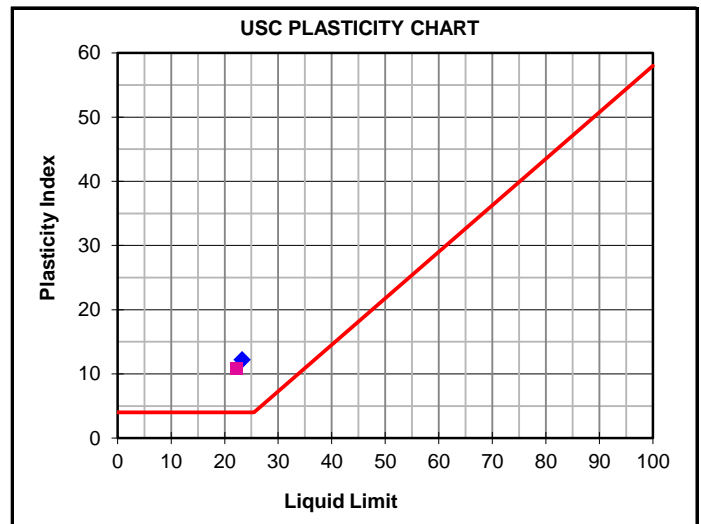
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FOUNDATION INDICATOR

Laboratory Number	E1874/13	E1874/14
Field Number	-	-
Client Reference	TP 6 A	TP 6 B
Depth (m)	0.45 - 0.75	0.00 - 0.35
Position	TP 6 A	TP 6 B
Coordinates	X Y	
Visual Description	Highly to Mod Mudstone	Comp to High Mudstone
Classification Description	Poorly graded sand \ clayey sand \ Silt-Clay Materials	Clayey sand \ Silt-Clay Materials
Stabilizing Agent		



Moisture Content & Relative Density		
Moisture Content (%)	7.2	8.4
Relative Density (S.G.)		



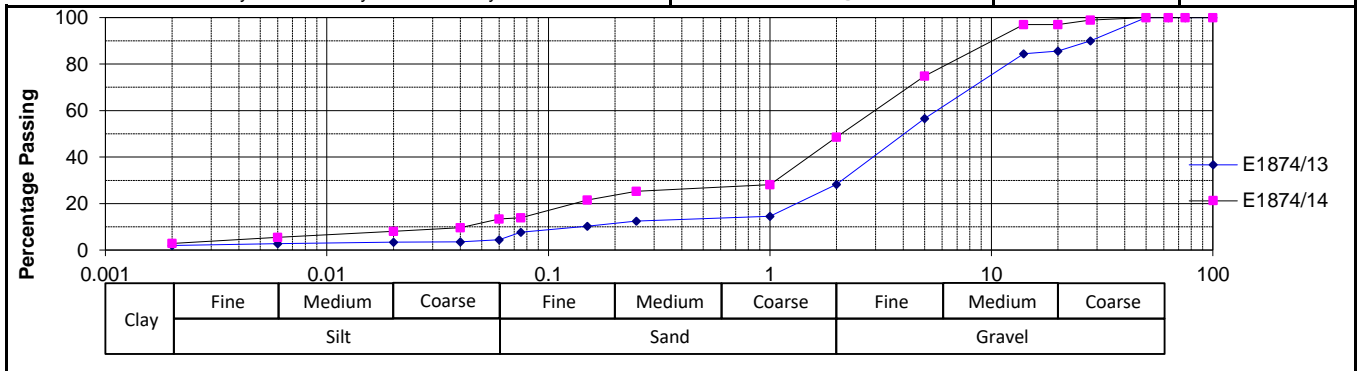
Sieve Analysis (Wet Prep)		
Percentage Passing		
100 mm		
75 mm		
63 mm		
50 mm	100	100
37.5 mm	97	99
28 mm	90	99
20 mm	86	97
14 mm	84	97
5 mm	57	75
2 mm	28	49
0.425 mm	15	28
0.250 mm	13	25
0.150 mm	10	22
0.075 mm	8	14
Grading Modulus	2.50	2.09

Laboratory Number	E1874/13	E1874/14
Atterberg Limits		
Liquid Limit	% 23	22
Plasticity Index	% 12	11
Linear Shrinkage	% 6.0	5.5
Overall PI	% 2	3

Hydrometer Analysis			
		-2.00 mm	-2.00 mm
Percentage Passing			
0.060 mm	4	13	
0.040 mm	4	10	
0.020 mm	3	8	
0.006 mm	3	6	
0.002 mm	2	3	
Gravel	% 72	51	
Sand	% 24	35	
Silt	% 2	11	
Clay	% 2	3	

Classifications		
HRB (AASHTO)	A-2-6(0)	A-2-6(0)
Unified (ASTM D2487)	SP-SC	SC
Weston Swell @ 1 kPa	0.0	0.0

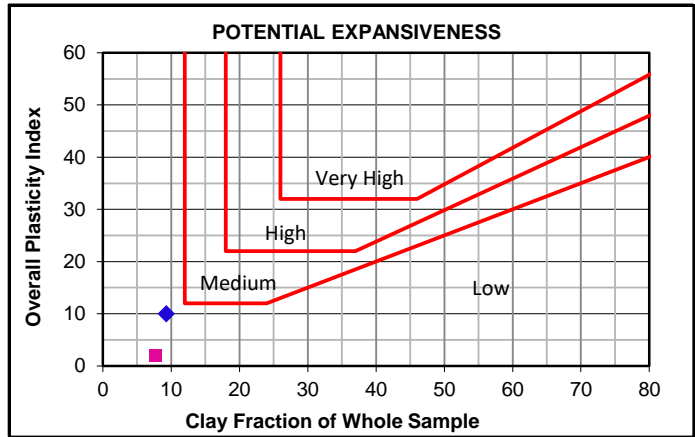
Note: An assumed S.G. may be used in Hydrometer Analysis calculations



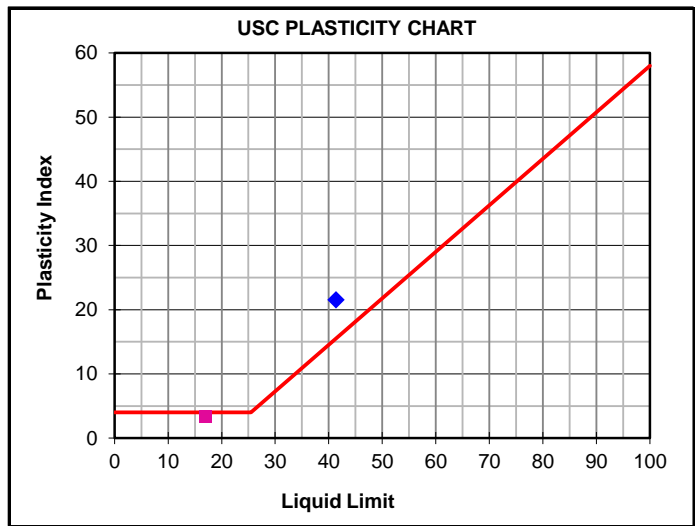
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FOUNDATION INDICATOR

Laboratory Number	E1874/15 ◆	E1874/16 ■
Field Number	-	-
Client Reference	TP 7 A	TP 7 B
Depth (m)	0.00 - 0.90	0.15 - 1.10
Position	TP 7 A	TP 7 B
Coordinates	X Y	
Visual Description	Rockfill (Mudstone)	Alluvium
Classification Description	Clayey sand \ Silt-Clay Materials	Silty sand \ Silt-Clay Materials
Stabilizing Agent		



Moisture Content & Relative Density		
Moisture Content (%)	13.8	7.5
Relative Density (S.G.)		

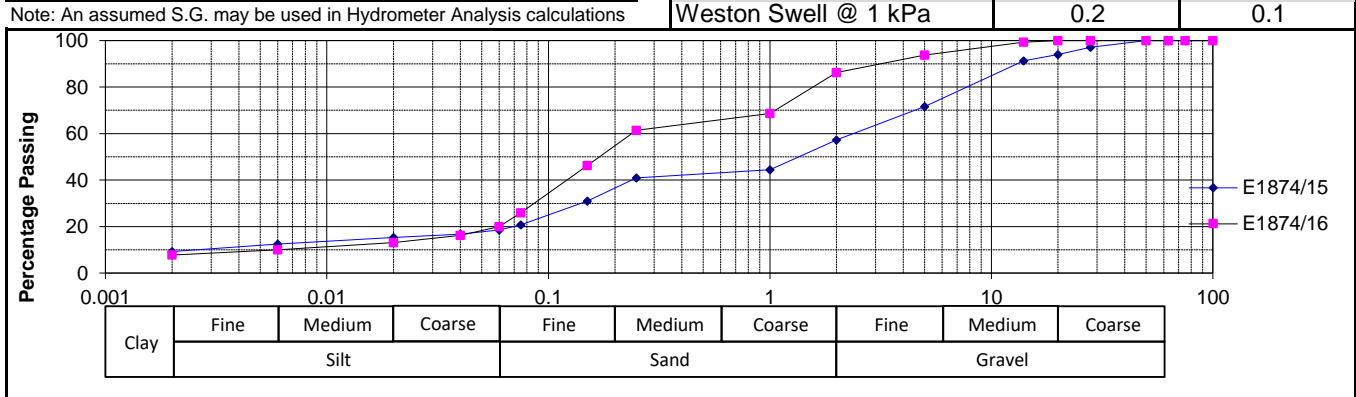


Sieve Analysis (Wet Prep)			
Percentage Passing	100 mm		
	75 mm		
	63 mm		
	50 mm	100	
	37.5 mm	98	
	28 mm	97	
	20 mm	94	100
	14 mm	91	99
	5 mm	72	94
	2 mm	57	86
	0.425 mm	44	69
0.250 mm	41	61	
0.150 mm	31	46	
0.075 mm	21	26	
Grading Modulus	1.77	1.19	

Laboratory Number	E1874/15 ◆	E1874/16 ■	
Atterberg Limits			
Liquid Limit	%	41	17
Plasticity Index	%	22	3
Linear Shrinkage	%	10.5	1.5
Overall PI	%	10	2

Hydrometer Analysis		-2.00 mm	-2.00 mm
Percentage Passing	0.060 mm	19	20
	0.040 mm	17	16
	0.020 mm	15	13
	0.006 mm	12	10
	0.002 mm	9	8
Gravel	%	43	14
Sand	%	39	66
Silt	%	9	12
Clay	%	9	8

Classifications		
HRB (AASHTO)	A-2-7(1)	A-2-4(0)
Unified (ASTM D2487)	SC	SM
Weston Swell @ 1 kPa	0.2	0.1



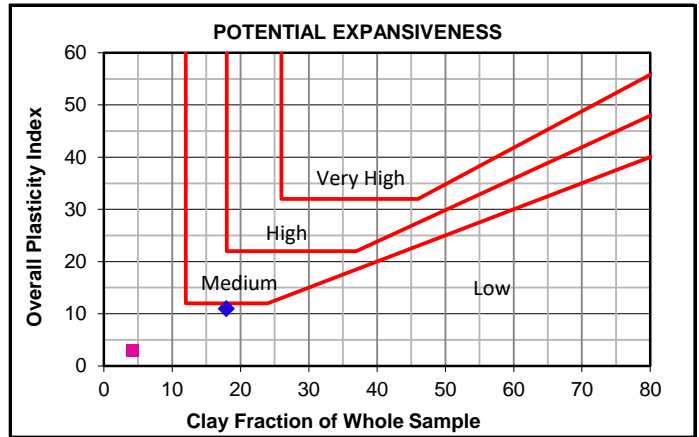
Note: An assumed S.G. may be used in Hydrometer Analysis calculations

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Project: Gwatyu Road
Job Card No: E1874

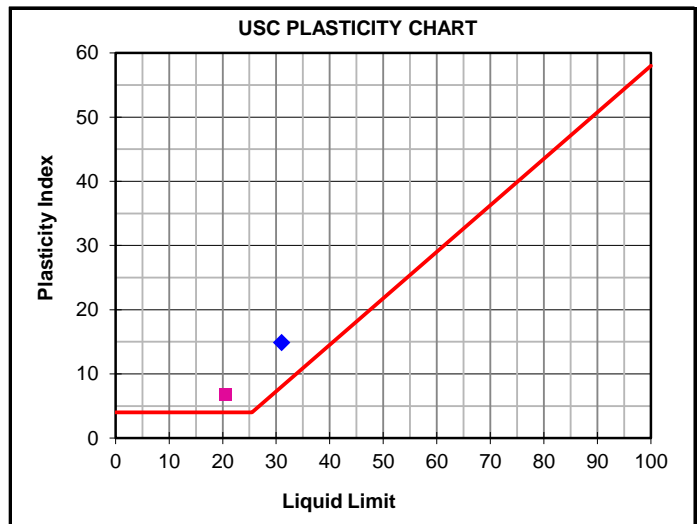
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FOUNDATION INDICATOR

Laboratory Number	E1874/17	E1874/19
Field Number	-	-
Client Reference	TP 8 A	TP 8 B
Depth (m)	0.50 - 0.80	0.150 - 0.50
Position	TP 8 A	TP 8 B
Coordinates	X Y	
Visual Description	Residual	Colluvium
Classification Description	Clayey sand \ Silt-Clay Materials	Clayey gravel \ silty sand \ Silt-Clay Materials
Stabilizing Agent		



Moisture Content & Relative Density		
Moisture Content (%)	11.0	6.9
Relative Density (S.G.)		



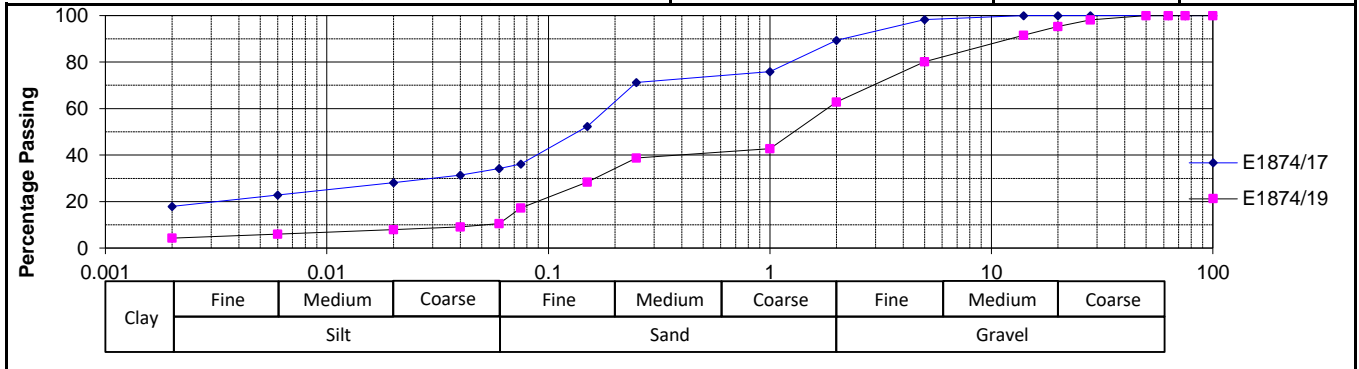
Sieve Analysis (Wet Prep)		
Percentage Passing		
100 mm		100
75 mm		98
63 mm		95
50 mm		92
37.5 mm	100	80
28 mm	98	63
20 mm	95	43
14 mm	100	39
5 mm	98	28
2 mm	89	17
0.425 mm	76	
0.250 mm	71	
0.150 mm	52	
0.075 mm	36	
Grading Modulus	0.99	1.77

Laboratory Number	E1874/17	E1874/19
Atterberg Limits		
Liquid Limit	% 31	21
Plasticity Index	% 15	7
Linear Shrinkage	% 7.5	3.5
Overall PI	% 11	3

Hydrometer Analysis			
		-2.00 mm	-2.00 mm
Percentage Passing			
0.060 mm	34	11	
0.040 mm	31	9	
0.020 mm	28	8	
0.006 mm	23	6	
0.002 mm	18	4	
Gravel	% 11	37	
Sand	% 55	52	
Silt	% 16	6	
Clay	% 18	4	

Classifications		
HRB (AASHTO)	A-6(1)	A-2-4(0)
Unified (ASTM D2487)	SC	SC-SM
Weston Swell @ 1 kPa	0.8	0.0

Note: An assumed S.G. may be used in Hydrometer Analysis calculations

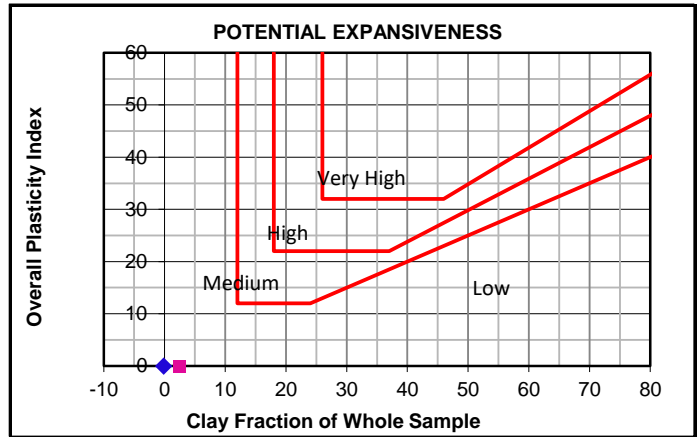


Client: Delta Geotech
 Project: Gwatyu Road
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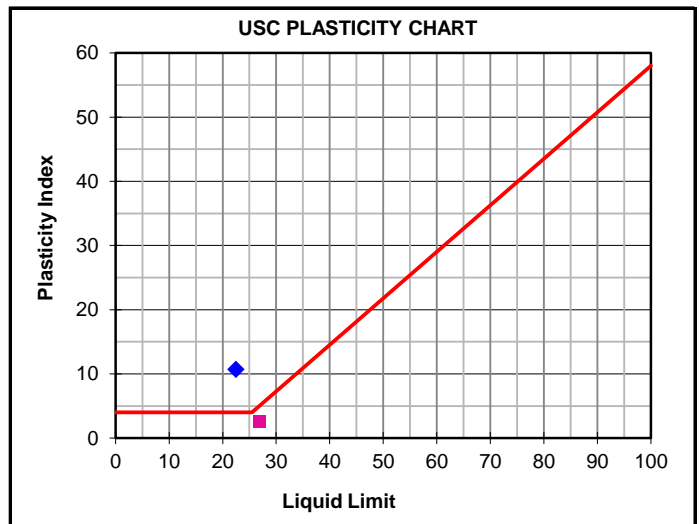
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FOUNDATION INDICATOR

Laboratory Number	E1874/20 ◆	E1874/21 ■
Field Number	-	-
Client Reference	TP BP 627	TP BP 656
Depth (m)	0.20 - 0.50	0.00 - 0.10
Position	TP BP 627	TP BP 656
Coordinates	X Y	
Visual Description	Moderately Mudstone	Highly Dolerite
Classification Description	Poorly graded gravel \ Silt-Clay Materials	Poorly graded sand \ Silt-Clay Materials
Stabilizing Agent		



Moisture Content & Relative Density		
Moisture Content (%)	8.6	6.2
Relative Density (S.G.)		



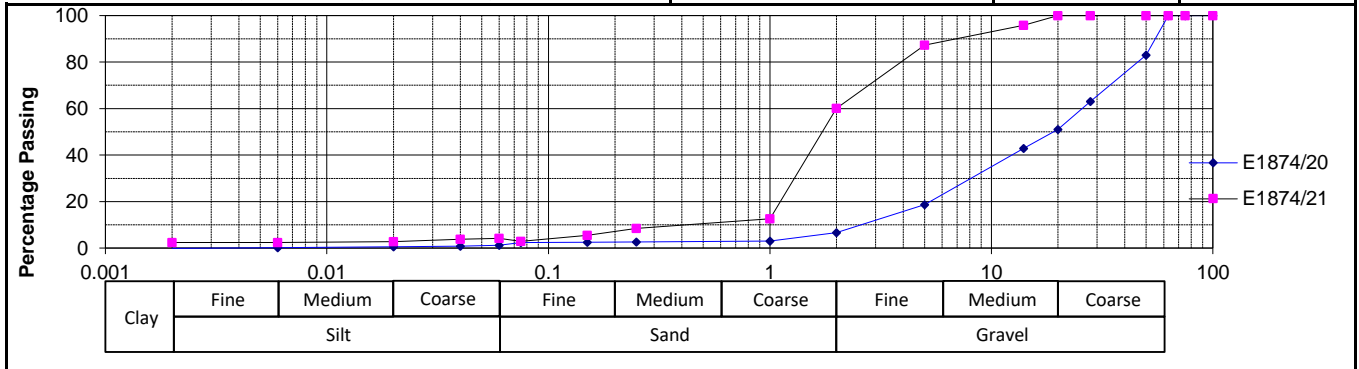
Sieve Analysis (Wet Prep)			
Percentage Passing	100 mm		
	75 mm		
	63 mm	100	
	50 mm	83	
	37.5 mm	71	
	28 mm	63	
	20 mm	51	100
	14 mm	43	96
	5 mm	19	87
	2 mm	7	60
	0.425 mm	3	13
	0.250 mm	3	8
0.150 mm	2	5	
0.075 mm	2	3	
Grading Modulus	2.88	2.24	

Laboratory Number	E1874/20 ◆	E1874/21 ■	
Atterberg Limits			
Liquid Limit	%	22	27
Plasticity Index	%	11	3
Linear Shrinkage	%	5.5	1.5
Overall PI	%	0	0

Hydrometer Analysis			
		-2.00 mm	-2.00 mm
Percentage Passing	0.060 mm	1	4
	0.040 mm	1	4
	0.020 mm	1	3
	0.006 mm	0	2
	0.002 mm	0	2
Gravel	%	93	40
Sand	%	5	56
Silt	%	1	2
Clay	%	0	2

Classifications		
HRB (AASHTO)	A-2-6(0)	A-1-b(0)
Unified (ASTM D2487)	GP	SP
Weston Swell @ 1 kPa	0.0	0.0

Note: An assumed S.G. may be used in Hydrometer Analysis calculations



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TRANSPORT INFRASTRUCTURE

No. 1 Creamery Road, Kings Park , Queenstown, Eastern Cape - Private Bag 7185 – Queenstown – 5320 – Republic of South Africa – Tel: 045 807 6787– Fax: 045 838 1525 Enquiries: B. Mbebe Email: Bonao.Mbebe@ectransport.gov.za

BVI CONSULTING ENGINEERS
65a Grey Street Corner Douglas Street
Komani
5320

11 September 2023

ATT: Mr. R Miles

RE: REQUEST TO EXECUTE REGRAVELLING PROJECT ON MR00706 (R351) GWATYU FARM

This serves to acknowledge and respond to your request dated 11 September 2023. Thank you for the work that you will be executing on a Provincial Proclaimed Road.

This letter serves to grant you permission to execute work on MR00706 (R351) which is situated between Queenstown and Carthcart, under Enoch Mjijima Local Municipal Area.

Approval to work on the road is granted with the following conditions that BVI Consulting Engineers and the Department of Transport complies with the following:

- All Wayleave application documents are submitted to Department of Transport for review and approval on the approved departmental template.
- The Department of Transport grants BVI and its appointed Contractor to utilize the licensed borrow pits, on condition that Plans are included in the wayleave application documents. Department of Transport requests that the road be constructed as per the DOT Standard Procedures Manual, and under the Department's Supervision.
- The road is a Class 4 road.

Looking forward to a good working relationship with BVI Consulting Engineers and the Department of Transport.

Yours in Service Delivery

Ms. B. Mbebe

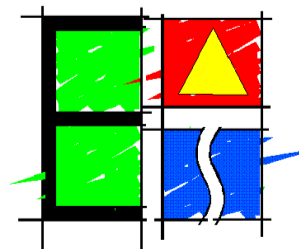
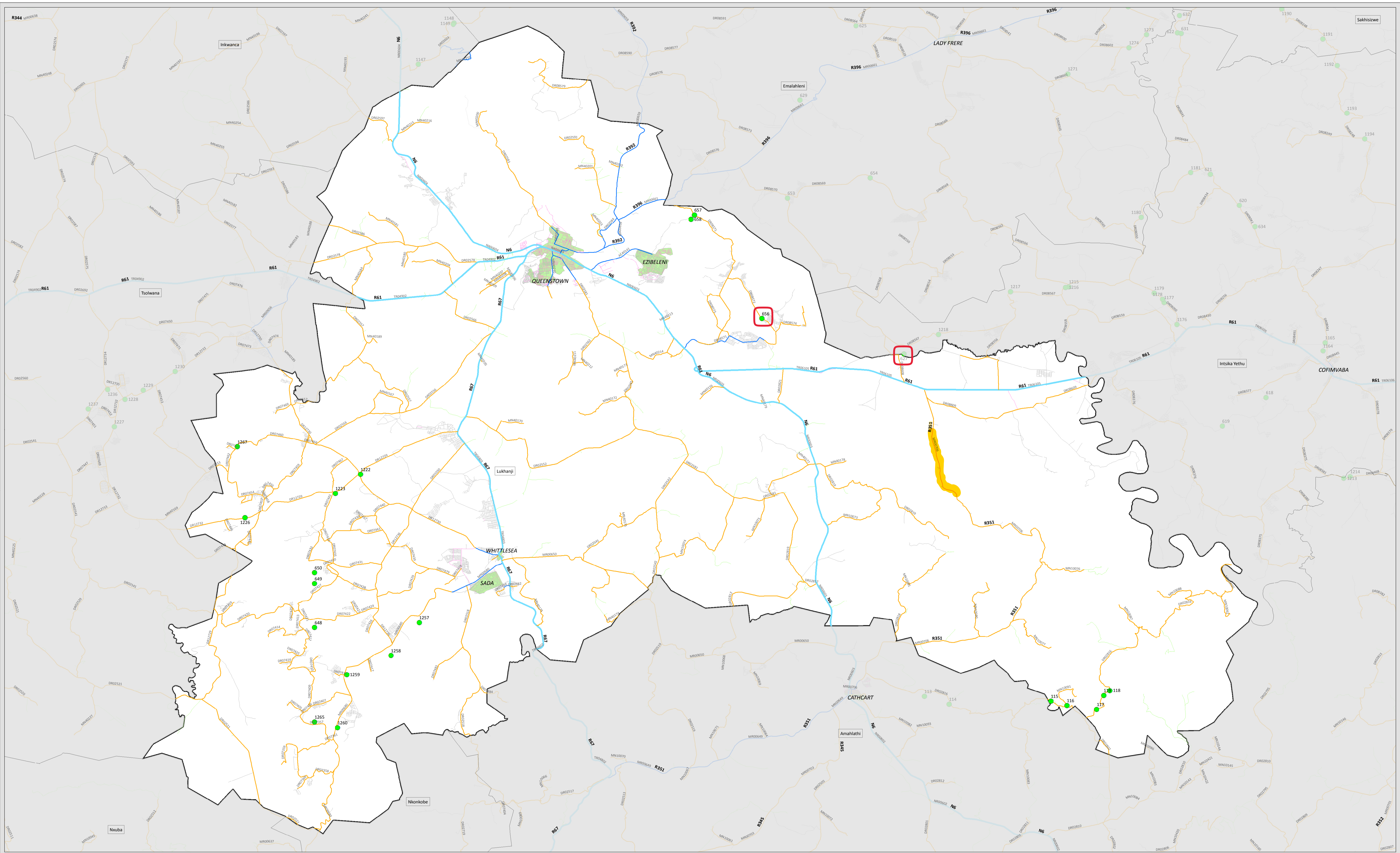
District Roads Engineer – Chris Hani

11/09/2023
Date



An efficient, safe, sustainable, affordable and accessible transport system

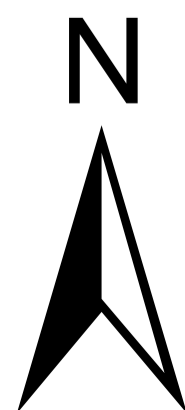




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Province of the
EASTERN CAPE
ROADS & PUBLIC WORKS



LEGEND

- Licensed Borrowpits
- National Roads
- Provincial Surfaced Roads
- Provincial Unsurfaced Roads
- Municipal Surfaced Roads
- Municipal Unsurfaced Roads
- Private Roads
- Major Towns



Scale : Use Scalebar

Prepared by : SS

Checked by : JV

Project Title:

Chris Hani District Municipality

Drawing Title:

Licensed Borrowpits in
Lukhanji Local Municipality

Drawing No:

Figure 01

Drawing Date:

November 2015

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Drawings