COEGA DEVELOPMENT CORPORATION (PTY) LTD

CONTRACT No. CDC/444/26

FOR

DEVELOP AND CONSTRUCT PROJECT FOR NTSHELE CLINIC REPLACEMENT OF EXISTING FACILITY AT KING SABATA DALINDYEBO MUNICIPALITY IN MTHATHA

PROJECT DOCUMENT

BOOK 2 of 2: SCOPE OF WORKS

CLOSING DATE: 20 OCTOBER 2026

PREPARED FOR:

COEGA DEVELOPMENT CORPORATION (PTY) LTD
Mthatha Office
Ground Floor
76 Blakeway
Mthatha
5100

NAME OF BIDDER:_____

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BOOK 2

PART C3: SCOPE OF WORKS

C3.1 DESCRIPTION OF THE WORKS

"CDC/444/26 – DEVELOP AND CONSTRUCT PROJECT FOR NTSHELE CLINIC REPLACEMENT OF EXISTING FACILITY AT KING SABATA DALINDYEBO MUNICIPALITY IN MTHATHA' involves the creation of a turnkey solution for a primary care clinic located. The scheme will involve the planning and construction, and commissioning of a medical facility by the appointed Service Provider. The scheme is envisaged to take 24 months or less to complete following a sequenced programme of activities.

The replacement facility will be constructed as a single project. The delivery mechanism follows a Develop & Construct methodology. The project deliverables are aligned with Framework for Infrastructure Delivery and Procurement Management (FIDPM) will therefore consist of:

(a) FIDPM Stage 2 Review– Concept; Successful bidder is required to develop conceptual designs, for each of the various disciplines, on the Client approved Site Development Plan and associated General Layout drawings to achieve approval. This deliverable is complete upon approval of the Concept Report;
(b) FIDPM Stage 3 – Design Development: Successful bidder is required to prepare the requisite drawings, reports and specifications to the determined standard required to achieve approval. This deliverable is complete upon approval of the Design Report; The designs will be developed based on the approved concept report
(c) FIDPM Stage 4 – Detailed Design: Successful bidder is required to prepare the requisite detailed drawings, reports and material and equipment specifications to the determined standard required to achieve approval. This deliverable is complete upon approval of the detailed design drawings;
(d) FIPDM Stage 5 – Works: Successful bidder is required to construct the facility as per the approved scope of works. This deliverable is complete when Completion is achieved;
(e) FIDPM Stage 6 – Hand Over: Successful bidder is required to facilitate the formal commissioning of the facility, training of staff, obtaining of Certificate of Occupancy and hand over of the building. This deliverable is complete when Occupation is achieved;
(f) FIDPM Stage 7 – Close Out: Successful bidder is required to provide a close out report that fully documents the implementation of the project. This deliverable is complete upon approval of the Close Out Report

The **detailed construction scope of works** for is as follows:

(a) Bulk earthworks (cut and fill) to construct roads, parking areas, retaining walls and platforms.
(b) Installation of anti-climb security fencing, and associated gates along the facility boundary;
(c) Bulk services reticulation, relocation (as required) and installation of water, sanitation, waste, electrical & ICT;
(d) Construction of a new 8-hour primary healthcare facility including accommodation, using brick & mortar for:
    (i) Clinical Services, e.g., consulting rooms, counselling, vitals, sputum booths, dispensary;
    (ii) Administration and Staff Areas e.g. main and sub-waiting areas, reception, records, ablutions, and staff rest rooms;
    (iii) Public Areas e.g. Community meeting rooms, waiting areas and walkways
(e) Construction of General Support services facilities e.g. Utilities Building, Waste Management, Guard House and on-site Laundry Room;

(f) Site security, Guard House and facility-controlled access;
(g) Removal of existing prefabricated structures (existing clinic) and relocated elsewhere
(h) Staff Accommodation Homes;
(i) Mechanical and Electrical installations to all buildings;
(j) Signage (Internal and External wayfinding, Statutory);
(k) Landscaping;
(l) Health Technology, which includes furniture, fitting and medical equipment provision of services for medical equipment supplied by ECDoH;
(m) Commissioning of the facility and training of ECDoH staff.

Further to the above, the non-infrastructural components socio-economic deliverables that also form part of the project scope and shall be achieved, namely:

(a) Experiential learning opportunities for built environment graduates in the form of internships;
(b) Employment opportunities for the members of the local community; and
(c) Participation opportunities for local SMME subcontractors in the form of construction work packages

1. SITE ACCESS / ACCESS CONTROL

The proposed PHC and the proposed staff housing confines will attract separate site entrances of which the main contractor will establish and ensure access control thereof. The main contractor will be required to demarcate and hoard off the work. Hoarding plans must be developed by the Service Provider indicating proposed construction site access points. (Hoarding measured in BOQ), the contractor shall ensure that the public is safe and cannot gain entry into the site. The main contractor is required to provide and secure a separate exclusive site own access, for the entire construction works. The site access shall be the contractor's responsibility. For main contractor, selected-, domestic-, SMME subcontractors, suppliers, visitors, etc. The Contractor shall provide and maintain an all-weather temporary graded surface from the site access (gate) for construction area and access to construction site offices. (Not a measured item).

2. ENABLING WORKS

Enabling works for the project will include the provision of temporary accommodation and associated service relocations to facilitate access to areas of the site required for the demolition of existing structures. The location and layout of all temporary facilities shall be agreed with the Client prior to implementation. No works on the main clinic facilities will commence until the temporary structures are in place and all affected services have been successfully relocated, ensuring the continued and uninterrupted operation of the clinic throughout the construction period.

3. CONTRACTOR'S ESTABLISHMENT, OFFICES, ETC

The Contractor’s establishment, offices, stores. etc. will be in the identified area. The “site camp” shall be structured in a manner that takes cognizance of the access needs for the selected-, domestic, SMME subcontractors, suppliers, etc. that are to exist under the auspices of the main contractor. The Contractor

shall ensure access control measures for the entire construction site. The contractor shall ensure that all site camp structures adhere to required regulations i.e.: Safety, Health and Environment (SHE), Standard building regulations for habitable spaces and any other statutory building bylaws. NO accommodation for any construction related persons is to be erected on the clinic/project site. The Contractor must make his/her own arrangements with external venues for an "accommodation village" for their own teams as well as all the subcontractors.

4. SERVICES

The Contractor to provide their own electricity, water, telefax services and IT services: to be priced under relevant clauses in Preliminary section of Bills of Quantities.

Water:

The bidders must take into account the water requirements and provide accordingly. There are existing communal taps which have limited water. Area is reliant on rainwater harvesting and nearby river. Contractor to supply own water.

Sewer:

No existing sewer infrastructure. The facility is currently using septic tanks. Contractor is required to manage the disposal of wastewater generated by the Contractor's staff in an environmentally acceptable manner

5. COMMISSIONING/TESTING OF SERVICES:

The Contractor will provide all required temporary plant, to perform required tests (electricity, water, sewer, gas and any other specialist installation) at Date of Completion for the entire facility

The main contractor shall be responsible to commission the whole services system at completion for the entire building.

6. SERVICE ROAD:

The main contractors should assess the scope of this work and program it accordingly. All roads being used must be maintained and reinstated upon completion.

7. EXISTING SECURITY FENCE:

There are minimal existing fences on site and this has to be carefully taken into account to ensure that the site is safe and secure from public entry, Safety, Health and Environment (SHE) plan must provide a methodology that will be approved by the CHSA.

8. MATERIAL STORAGE / SECURITY:

The contractor shall identify and provide a marked-up site plan indicating area/s of material storage for all contractors. Security of the site is of utmost importance and is the responsibility of the contractor.

9. EXISTING FUNCTIONS ON SITE:

Prospective bidders shall comply with required noise- air- pollution & dust control as prescribed in the Safety, Health and Environment (SHE) specification. The construction functions are to be carried out within the site boundaries and not affect the community in utilising the unoccupied areas of the site for their recreational activities and functions. The prospective bidders must take note of the existing prefabricated facilities the project site. The ECDoH shall continue to render clinic services from these facilities throughout the duration of the construction project. The Contractor's activities may not interfere with clinical services, and where this is unavoidable prior notice should be given to the Clinic Manager and planned proactively.

10. PHASING OF THE WORKS

The Contractor is required to make allowances for the time required for Client approval of the Planning deliverables. A period of 15 days from the date of submission of the final report must be included in the project programme. The Contractor shall not have access to the entire site at once, and as such the works must be phased to accommodate the continuous provision of clinic services, throughout the construction duration. The Contractor must also make a time allowance for the relocation of clinic services from the existing prefabricated structures to the new clinic building, once it is ready for Beneficial Occupation. A period of 14 days for the relocation of clinic services must be included in the project programme.

11. LABOUR PROCUREMENT

All such additional local labour shall be employed from the Project Job Seekers' Database, established by the Implementing Agent and the contractor shall plan lead time to accommodate labourer inductions and training on life skills before any construction work is commenced.

12. AREAS OF START OF CONSTRUCTION & PRESCRIBED CONTRACT DURATIONS

The BOQ is measured and comprises of the following areas.

(a) Enabling Works/Decanting Works
(b) Main Clinic
(c) Staff Accommodation
(d) Support services
(e) External services

Tracing and relocating existing underground services shall be classified as "enabling works" which should be completed. Known existing services have been shown on the existing topographical, geohydrological, geotechnical surveys drawings but there is no guarantee that the exact positions are correct and must be verified by the contractor on site. There is Eskom infrastructure adjacent to the site. It is to be noted that the contractor shall proceed with enabling works and subsequent civil works with utmost care and understanding to not disrupt the specific Eskom infrastructure.

13. TOTAL CONSTRUCTION PERIOD

24 Calendar months (including statutory holidays and annual builder's holidays) for completion of total scope of works FIDPM Stages 2 to 7.

14. COMMISSIONING AND OPERATIONALIZING

The HT component of the Commissioning of the Primary Healthcare Facility has a number of key elements which must be considered in the Contractor's program, for the completion of the facility and the achievement of both Completion.

These include:

(a) The timeous procurement of equipment
(b) The timeous delivery of equipment
(c) The quality and acceptance of equipment
(d) The possible on-site storage of the equipment

It is envisaged that HT will be required in the period leading up to the date of Completion. The Contractor must at time of tender, provide for a period of 7 calendar days between the achievement of Completion on one Section and the start of work on the next Section. This provides for the Commissioning Team to occupy the newly completed Section and vacate the next Section, before work can be recommenced.

15. EXTERNAL WORKS

(a) Site clearance
(b) Demolitions (as required)
(c) Strip topsoil (Stockpile)
(d) Bulk earthworks for platforms – Cut to stockpile to fill / cart away
(e) Interlocking pavers for main road, parking areas, etc. and related layer works.
(f) Reinforced Concrete paving for helipad
(g) Clay brick paving for sidewalks, walkways, etc.
(h) Precast kerbing
(i) Concrete paving and aprons
(j) External stainless-steel handrails and balustrades
(k) Retaining walls – Reinforced Concrete and Gabions
(l) Carports, etc.
(m) Stormwater reticulation, consisting of concrete stormwater pipes, Catchpits, manholes, etc
(n) Sewer reticulation, consisting of PVC sewer pipes, manholes, etc.
(o) Water reticulation consisting of PVC water pipes etc.
(p) Entrance wall and signage
(q) High security fencing and sliding gates
(r) Temporary fencing (hoarding)

16. SPECIALIST SUBCONTRACTORS

The following specialist electrical and mechanical installations shall be procured / appointed as selected subcontracts:

(a) Electrical installation
(b) Bedhead Trunking and ancillary services
(c) Fire and evacuation installation
(d) Security installation
(e) Structured cabling installation
(f) ICT infrastructure installation
(g) HVAC ducting installation
(h) Mobile Medical Gases installation
(i) Kitchen equipment
(j) Laundry equipment
(k) Autoclave installation

Health Technology equipment will be procured by Contractor

17. SEQUENCE OF THE WORKS

The tenderer will be expected to scrutinize the planned development to execute his own proposed programme for the works and subsequently the sequence of the works that will be submitted to the Project Manager. The work is detailed in Project Methodology.

18. BUILDINGS/SITE OCCUPIED

The remaining portion of the site is occupied and is used as a clinic, the contractor must ensure that the building site is hoarded according to demarcated boundaries and to ensure that the public is safe and does not have access to the site.

19. DECANTING AND MODE OF PROCEDURE

The contractor will need to decant portions of the existing clinic in a phased approach (to be determined in the planning stages). The decanting procedure shall be incorporated into the methodology and will be indicated on the drawings. Sections of the site will be hoarded in a manner that satisfies Safety, Health and Environment (SHE) requirements and as per the project methodology.

20. CONCLUSION

This methodology document is to be read in conjunction with the entire tender Document, specifications, and annexes that form this package.

PART C4: SITE INFORMATION

C4.1 SITE LOCATION

Ntshele Clinic is in Ward 33 of the King Sabata Dalindyebo Local Municipality, which is found in the rural O.R. Tambo District (ORTD) of the Eastern Cape, where it is well known that services are in short supply. It is situated on a portion of un-surveyed state land. Adjacent to the existing clinic is an additional vacant land parcel which was donated to the ECDoH for the purposes of a clinic by the community, which extends onto portions of erven 883 and 912 Zimbane, Ntshele Administrative Area, and is approximately 15.1km south of Mthatha. The property has no surrounding facilities in a 5-km straight line radius as required by the SDM-17: Optimum Distribution Model. It is 7,5 kilometers from its next referral primary healthcare facility i.e Mbekweni CHC and 13,6 kilometers from Mthatha Regional Hospital.

***Figure 1**:Ntshele Clinic location at Ntshele, ward 33 of the King Sabata Dalindyebo,Local Municipality*



C4.2 CLINICAL BRIEF

Province of the
EASTERN CAPE
DEPARTMENT OF HEALTH

COEGA

NTSHELE CLINIC

CLINICAL BRIEF

FOR THE CONSTRUCTION OF NTSHELE CLINIC IN NTSHELE VILLAGE,

OR TAMBO DISTRICT, EASTERN CAPE

(Replacement of an Existing Clinic)

Revision 2 April 2025

Prepared by Allegro Trading (Pty) Ltd

PROPOSED NEW NTSHELE CLINIC IN NTSHELE VILLAGE (REPLACEMENT OF EXISTING CLINIC)

Co-ordinates: *31° 40' 18.372''S 28° 43' 23.933'' E*

Type of facility: *Primary Health Care Clinic*

Service hours: *8-4pm Weekdays*

Sub District: *King Sabata Dalindyebo Local Municipality*

District: *OR Tambo District*

Province: *Eastern Cape Province*

APPROVAL

PROJECT NAME : CONSTRUCTION OF NTSHELE CLINIC IN NTSHELE VILLAGE IN KING SABATA DALINDYEBO LOCAL MUNICIPALITY, OR TAMBO DISTRICT, EASTERN CAPE

DOCUMENT TITLE : CLINICAL BRIEF

CLINIC NAME : NTSHELE CLINIC, NTSHELE VILLAGE

The purpose of this form is to ensure that documents are approved prior to issue.

The Health Facilities and Infrastructure Management Planning Directorate of the Eastern Cape Department of Health hereby submit the clinical brief for NTSHELE CLINIC your approval and signature.

SIGNATORIES

EASTERN CAPE DEPARTMENT OF HEALTH			
Name	**Designation**	**Signature**	**Date**
Mrs. Ntshanga	District Manager: OR Tambo		
Mrs. S. Gede	Chief Director: District Health Services & NHI		
Ms. N. Magugu	Acting Chief Director: Infrastructure		
Ms. Chaga	Chief Director: HR		
Mrs. M. Nokwe	DDG: District Health Management Services		
Mr. G.G. Mhlanga	Acting Chief Financial Officer		
Dr. R. Wagner	Head of Department		

Acronyms

ABT	Alternative Building Technology
AIDS	Advanced Immune Deficiency Syndrome
ART	Anti-retroviral Treatment
AYFS	Adolescent and Youth Friendly Services
CCMDD	Central Chronic Medicines Dispensing and Distribution
CHC	Community Health Centre
COVID	Coronavirus Disease
DDG	Deputy Director General
DHIS	District Health Information System
DPW	Department of Public Works
DR-TB	Drug resistant TB
ECDOH	Eastern Cape Department of Health
EMS	Emergency Medical Services
GDP	Gross Domestic Product
GPS	Global Positioning System
HIV	Human Immune-deficiency Virus
HR	Human Resources
IAMP	Infrastructure Asset Management Plan
ICSM	Integrated Ideal Clinic Services Management Manual
ICT	Information and Communication Technology
IDMS	Infrastructure Delivery Management System
IDP	Integrated Development Plan
IMCI	Integrated Management of Childhood Illnesses
IPMP	Infrastructure Programme Management Plan
IPS	Interrupted Power Supply
IUSS	Infrastructure Systems Support Unit
KSDM	King Sabata Dalindyebo Municipality
LM	Local Municipality
MCWH	Maternal, Child and Women's health
MIG	Municipal Infrastructure Grant
MOU	Midwife Obstetric Unit
MRH	Mthatha Regional Hospital
NDOH	National Department of Health
NGO	Non-Governmental Organisation
NHI	National Health Insurance
NPO	Non-Profit Organisation
ORTD	Oliver Reginald Tambo District
PABX	Private Automatic Branch Exchange
PFMA	Public Finance Management Act

PHC	Primary Health Care
PMIS	Project Management Information System
PN	Professional Nurse
PSP	Professional Service Provider
PTV	Patient Transport Vehicle
SANRAL	South African National Roads Agency SOC Ltd
SANS	South African National Standards
SAPS	South African Police Service
SCM	Supply Chain Management
SIPDM	Standard for Infrastructure Procurement and Delivery Management
SOA	Schedule of Accommodation
SRH	Sexual and Reproductive Health
STATSSA	Statistics South Africa
STD	Sexually Transmitted Diseases
TB	Tuberculosis
UPS	Uninterrupted Power Supply
UR	Urinal
UTT	Universal Test and Treat
VIP	Ventilation Improved Pit
WBPHCOT	Ward-based Primary Healthcare Outreach Teams
WC	Water Closet
WHB	Wash Hand Basin

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EXECUTIVE SUMMARY

The Ntshele Clinic Project is significant in that it would provide a suitable permanent structure for rendering Primary Health Care services to the rural community of Ntshele Village near Mthatha. Located in King Sabata Dalindyebo Local Municipality, the largest of five Municipalities in the OR Tambo District in the Eastern Cape and consist of both more urban settlements in the form of Mthatha and Mqanduli as well a as vast spread if rural land and villages.

The new proposed facility is intended to be a Primary Health Care Clinic operating 5 days a week, Monday to Friday, between the hours of 08H00 – 16H00. The next referral facilities for the clinic will remain Mbekweni CHC, approximately 7,5km away, and Mthatha Regional Hospital which is 13,6km from the clinic. Ntsele clinic refers all emergency cases straight to MRH emergency unit whilst children under the age of 12 years are referred directly to Mthatha Academic Hospital. All other cases, including normal deliveries, are referred to Mbekweni CHC for further care. Mbekweni CHC renders 24 hour care for emergencies and maternity cases referred from Ntshele Clinic. Complicated maternity cases and deliveries are referred directly to MRH from Ntshele Clinic.

The current catchment population for the clinic is 11 274 according to DHIS (2024/25) and when taking into consideration the population growth rate of KSD between the 2011 and 2022 census periods the population projection for the catchment area for the clinic is likely to increase to approximately 16 122 over the next 30 years towards 2052. The headcount of the facility has decreased since pre-COVID periods with the total headcount of 24 995 recorded in 2019/20 decreasing to an average of 19 586 per annum over the next four years between 2020/21 and 2023/24.

The existing clinic buildings consists of a community-built masonry structure and a separate prefabricated building structure. Both of these structures do not meet current health infrastructure standards and require significant maintenance. The Eastern Cape Department of Health through its Infrastructure Development Programme has identified the Ntshele Clinic as one of the facilities earmarked for the establishment of a new purpose built PHC clinic building. In so doing the ECDOH has embarked on a planning process to establish a permanent clinic building compliant with all required infrastructure and health standards on a portion of land adjacent to and incorporating the existing site.

The design solution for the proposed new facility needs to take into consideration that the new structure has to be placed and constructed so as not to interfere with the functions of the existing facility which will continue to render services on a portion of the same site. The design solutions should take cognisance of the rural nature of the area as well as limited municipal services in the area. The rural nature of the facility further necessitates the provision of staff accommodation as part of the development in accordance with the current ECDOH Staff Accommodation Policy.

1. Background

The Ntshele Clinic is located in Ntshele Village which is a rural, low density small residential settlement in the OR Tambo District. The clinic building was originally established as a community initiative when the masonry structure was built in 1988. Subsequently there was the addition of a prefabricated building constructed by the ECDOH in 2013. These two buildings are positioned on different levels on the site and linked to each other by means of a moderately sloping covered walkway. Rendering services in these separate buildings in a fragmented manner is not ideal and the required functional spaces are limited with some services, such as counselling, sometimes having to be rendered in external open spaces, according to the operational manager of the clinic.

The condition of both these buildings are poor and do not meet the infrastructure requirements for PHC in terms of both the Ideal Clinic Infrastructure Requirements and that of the IUSS guide. There is no staff accommodation available on site and all staff are currently responsible for their own accommodation.

The ECDOH has undertaken to establish a new purpose built clinic building which complies with current infrastructure standards partially the requirements of the IUSS Primary health Care and Ideal Clinic Programme requirements. To this end a portion of state land adjacent to the existing clinic erf has been identified, surveyed and fenced for this purpose.

2. Methodology of the study

This report is based on data obtained from secondary and primary sources. Site visits were conducted to the existing Ntshele Clinic to collect data, inspect the facilities and discuss issues with the clinic and district staff as well as the clinic committee.

Key sources of information referred to include:

- PHC package of service
- The Ideal Clinic Manual Version 19
- District Health Information System (DHIS)
- IUSS health facility guides for Primary Health Care Facilities
- OR Tambo District Health Plan (2024/2025-2026/2027)

- ECDOH Annual Performance Plan (2023/24)
- OR Tambo District Municipality IDP (2024/25)
- King Sabata Dalindyebo Local Municipality IDP (2024/25 Review)
- Stats SA Census2022

3. Location

The Ntshele Clinic is located in Ntshele Village approximately 12km from Mthatha and within walking distance from the N2 national road in the King Sabata Dalindyebo Local Municipality, OR Tambo District. Ntshele village is a rural, low density small residential area. The closet referring facility to the clinic is Mbekweni CHC which is in Viedgesville 10 km southeast of Ntshele along the N2.

Location	
District	OR Tambo District
Sub District	King Sabata Dalindyebo Local Municipality
Nearest Town	Viedgesville
GPS Co-ordinates	31° 40' 18.372''S 28° 43' 23.933'' E

Table 1: Ntshele Clinic Location



Figure 1: Ntshele Clinic Google Maps Aerial View

The clinic is situated on a Portion of State Land, which has recently been surveyed in preparation for the new clinic project, together with a portion of land adjacent to the existing clinic which i.e. earmarked for the development. This extends into portions of erven 883 and 912 Zimbane Allotment, Umtata Administrative District, approximately 15.1km south of Mthatha. The site is bordered by gravel access roads on all sides.

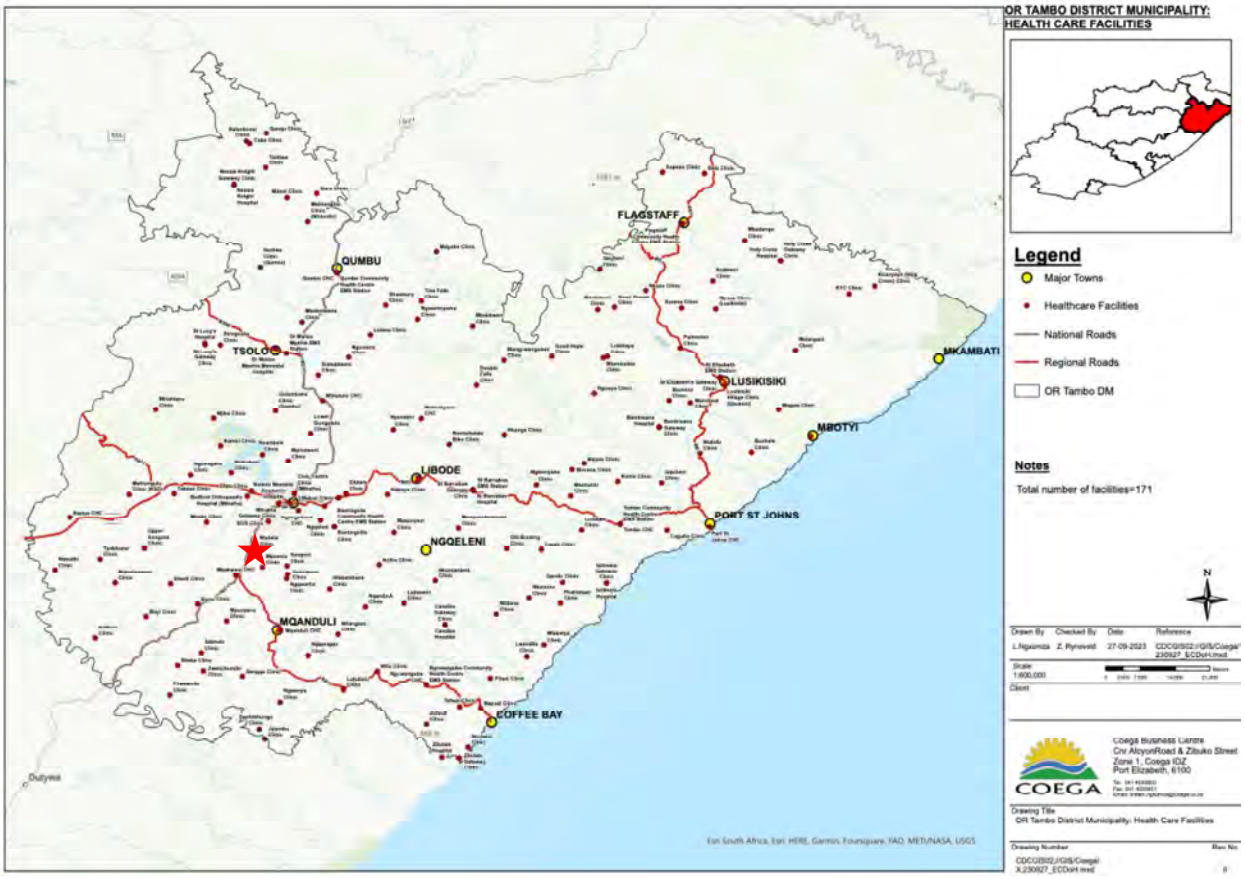


Figure 2: Ntshele Clinic Location (marked as ★)

4. Demographics

4.1 Population

The Eastern Cape Province has been overtaken by the Western Cape as the third largest province in terms of population size in the 2022 Census with 7,2 million people. This represents a 9,24% increase from the 2011 census of 6,m million people.

The OR Tambo District is the most populous district in the Eastern Cape Province and with a total population of 1 501 702 accounts for 20,8% of the population of the province (StatsSA 2022). The King Sabata Dalindyebo (KSD) Municipality is the largest municipality in the district and includes the city of Mthatha which is a sprawling urban settlement. KSD has a total population of 476 558 which represents 31,7% of the total population of the OR Tambo district based on StatSA (Census 2022). This displays a population increase of 5,83% from the previous 2011 census data (StatsSA 2022).

The age gender group population pyramid below shows that 60% accounts for working age population and young children are at 35% of the population. The male female ratio of 46,9% vs 53,1% is in line with the male female ration of the province at 47,4% and 52,6%.

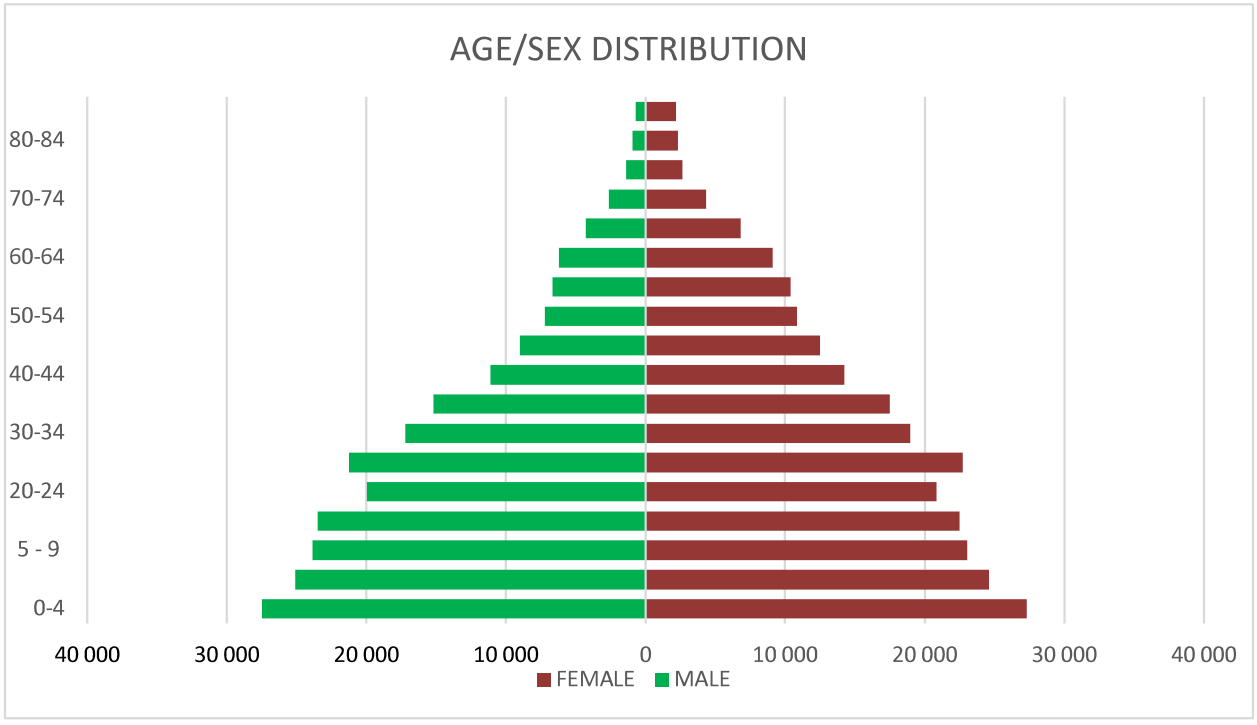


Figure 3: KSD Local Municipality Population – Age/Sex Distribution

4.1.1 Catchment Population

The optimum size of the service catchment area for PCH facilities is 5 km and the straight-line radius around the clinic extracts the number of facilities and enumeration areas listed below. However, since there are no adjacent health care facilities within the 5 km catchment area; the area has been extended to a 10 km radius in order to get a sense of the surrounding health care services and additional nearby health facilities in the area.

Facility Name	Distance(km)	Nature of connecting Road	Classification	Level of Care	
Maxwele Clinic	7km	Rural gravel	Rural	PHC	**Adjacent Facilities**
Sangoni Clinic	13 km	Rural gravel	Rural	PHC	
Qokolweni Clinic	15km	Rural gravel	Rural	PHC	
Ngqwarha Clinic	17km	Rural gravel	Rural	PHC	
Mbekweni CHC	7,5km	National Road N2/Part rural gravel	Rural	PHC – CHC 24hrs	**Adjacent Higher Level Facilities**
Mthatha Regional Hospital	13,6km	National Road N2/Part rural gravel	Urban	Regional Hospital	
Mthatha Academic Hospital	13,6km	National Road N2/Part rural gravel	Urban	Academic Hospital	

Table 2: Adjacent Health Facilities

The table above reflects one other PHC facility namely Mbekweni CHC. Mbekweni CHC is the next referral facility for Ntshele clinic. One facility is within a 10km radius from Ntshele, namely Maxwele clinic. There are three additional PHC clinics in the 10-20km radius from the facility.

The catchment population for the Ntshele clinic, which includes Ward 33 in the KSD LM, is reflected on the DHIS 2024/25 as 11 274. Population data from The STATS SA census 2022 is available up to local municipality level, however the ward level population information has not been released yet. The population for Ward 33 in the 2011 census is reflected as 12 995 with a sex ratio of 89,3. The population growth in the KSD LM reflects a 5,51% increase from 2011 to 2022 and when this rate is applied to the catchment population of Ward 33 it brings the current population to 13 711. It should however be noted that the urban city of Mthatha forming part of KSD could be a large contributor to the population growth and that the rural areas generally do not reflect similar growth rates as urban areas. However, for the purpose of population projections for the planning of this facility this growth rate has been used to project the future catchment population for the clinic. When applying an annual population growth rate of 0.55% to project the future catchment population for the clinic to 2052, it estimates a population increase up to 16 122 over the next 30-year period based on the current population growth rate in the KSD LM.

4.1.2 Household Income

Poverty, unemployment and poor education are some of the social determinates of health characterising the Eastern Cape Province. The KSD Municipality is characterised by a large rural population however the Municipality is highly dependent on the tertiary sector. This tertiary sector is largely represented by

Community Services rather than skilled and advanced professions such as banking and finance as is the case with globally competitive economies. The table below reflect the number of households by income category and it can be seen that the majority of the population – above 70% are in group 1 & 2 of low income earners.

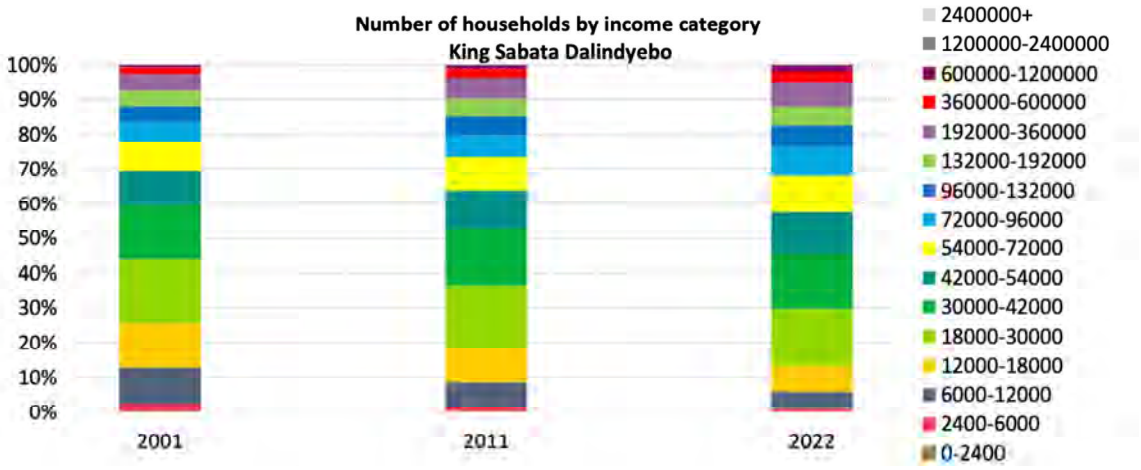


Table 3: Household Income (Source StatsSA 2022)

4.2 Eastern Cape Province - Health Profile

Life expectancy at birth of Eastern Cape males will increase to 59.8 years and for females to 66.0 years in 2026. Life expectancy is expected to increase with decreasing infant and child mortality which is positively influenced by measures such as an increase in immunisation rates, and the increasing uptake of ART.

The impact of COVID-19 on conception and subsequently the expected births post-2020 is anticipated to decline given the escalation in economic uncertainty in South Arica. Fertility rates in the Eastern Cape declined between 2001 and 2021 from an average of 3.14 children per woman to 2.91 children. There has been a decline in the fertility rate in the last decade and with interventions implemented a further drop of 0.05% is expected over the next six years. Because of the decreasing fertility rate of the area there is expected to be a concurrent decline in demand for maternal health and neonatal services, maternity services, post-natal and paediatric services.

The assessment of development challenges experienced by persons with disabilities and life circumstances faced by persons living with disabilities being assesses in the Census, provide useful information for health facility planning as persons with disabilities often experience inadequate access to education, transport, health and other basic services. Although the disability prevalence in the province have decreased from 9,5% in 2011 to 8,5% in 2022 the Eastern Cape is still amongst the four provinces with the highest disability prevalence in the country.

According to the World Heart Federation, cardiovascular disease is the most common non- communicable disease globally, responsible for nearly 18,6 million deaths, of which more than three quarters occur in low- and middle-income countries. In the Eastern Cape diabetes, cardiovascular diseases and hypertension remain the leading causes of death behind TB.

Reversals and stagnation in life expectancy in South Africa due to the HIV pandemic was a result of mid-life and infant mortality crisis. The HIV/AIDS pandemic is a two-decade long public health issue that has greatly affected the demography of South Africa. Life expectancy at birth declined between 2002 and 2006, largely due to the impact of the HIV and AIDS epidemic experienced, however expansion of health programmes to prevent mother-to-child transmission as well as access to antiretroviral treatment has partly led to the increase in life expectancy since 2007. The HIV pandemic remains one of the leading causes of morbidity and mortality in the Eastern Cape Province. HIV prevalence amongst pregnant women attending antenatal services in the last decade has shown a gradual increase over the years from 28,1% in 2009 to 36,5% in 2019. The causes of death that are common for all nine provinces were diabetes mellitus, HIV disease, tuberculosis, cerebrovascular diseases, hypertensive diseases and other forms of heart disease. In the Eastern Cape, early causes of death are attributed to natural causes, however death due to natural causes declined with an increase among the population categories of less than 12 months old up to 25 years age groups. The age groups 15-19 and 20-24 years are mostly being affected by non-natural causes of death at 43,1% and 47,9% respectively. Tuberculosis and Diabetes remains the first two leading causes of death in the province at 8,3% and 5,4% respectively, whist deaths caused as a result of HIV Aids infections follows at 5,2%. The leading causes of non-natural deaths in the province are accidental injuries at 60,9%, assaults at 22,7% and transportation accidents at 11,2%.

4.3 OR Tambo District - Health Profile (ORT District Health Plan 2024/25)

The OR Tambo District's leading cause of death at 9,1% of total deaths is HIV, followed by TB at 5,5%. Cardiovascular diseases account for 3,3% of deaths. The impact of HIV and AIDS is being felt strongly as depicted in the high maternal and child morbidity and mortality due to HIV & AIDS. The District is implementing the Universal Test and Treat (UTT) strategy whereby HIV counselling and testing have been rolled out even to communities to increase the number of people tested and identified living with the virus so that they can be initiated on treatment. HIV positivity yield has since declined as more clients are tested for HIV from 6% in 2018/19 to 3% in 2022/23.

The immunisation coverage has shown a decline despite availability of vaccines. Immunisation coverage remains below the national target of 90% as it was 79% in 2019/20, and declined to 72,2% in 2020/21, picked up to 76,6 in 2021/22 then dropped to 74,5% in 2022/23 with Nyandeni Sub district being the most challenged Sub-District. The District continues to facilitate development and monitoring implementation of strategies for creating awareness and to increase the coverage by engaging in mop-up campaigns and ensuring availability of transport and vaccines in hard to reach areas.

The maternal mortality in facility rate in the OR Tambo district is higher than that for the Eastern Cape Province at 173,7/100k compared to 124,5/100k in the Province. The maternal mortality in facility rate for the Ngquza Hill area is substantially lower than both that of the province and the district at 49,6/100k. KSD is leading in maternal mortalities in the district which could be to a degree attributed to complicated cases being referred from the nearby hospitals, some outside the district boundaries, to the Central hospital. Low couple year protection is noted in all 5 Local municipalities led by Nyandeni, and this is the main contributing factor to increased teenage pregnancy hence Nyandeni is the highest. For the past 3 years there has been a steady decline in severe acute malnutrition case fatality, however for 2021/2022 the cases has risen in all sub-districts apart from Ngquza Hill.

In the past financial year none of the 5 sub-districts achieved the target TB treatment success rates. DS-TB treatment start rate is at 94,8%. Of concern is the initial lost to follow-up (whereby clients get lost after diagnosis, before they are actually started on TB treatment), which has a negative contribution to escalating TB infection including DR-TB. TB Successes rate has dropped from 95.5% in 2017 to 72.1% in 2021.The latter is affected by rate of attrition to TB treatment. There is slight decrease of lost to follow up from17.6% in 2017 to 11.3% in 2021, this also include the clients with no outcomes in the reporting period.

4.4 Municipal Infrastructure and Services

The King Sabata Dalindyebo Local Municipality is one of five municipalities in the in the of OR Tambo District. It is the largest local municipality in terms of population and also houses the seat of district and KSD local municipal offices in the City of Mthatha with both political and administrative arms of the municipalities being based here. The municipality has both an urban and a rural character, including a prominent national urban settlement and regional economic hub, as well as dispersed village-type rural settlements. The municipality covers an area of 3 027km^2 and currently has 37 wards. The municipal service are rendered to a decreasing number of households compared to the census 2011, however the average household size have

marginally increased from 4,2 to 4,3 between the 2011 and 2022 census periods. Formal dwellings account for 84,6% of dwelling types in the municipality while traditional and informal dwellings make up the remaining 15,5%. An overview of the household infrastructure in the municipality is summarised in the table below.

Indicator	2022	2011
Formal dwellings	84,60%	60,20%
Access to piped water in the dwelling	42,40%	19,10%
Flush toilets connected to sewerage	47,60%	27,30%
Electricity for Lighting	95,10%	73,30%
Weekly Refuse Disposal Service	43,30%	24,70%

Table 4: Household Infrastructure – Summation (KSD IDP/StatsSA Census 2022)

1) Water

The O.R. Tambo District Municipality is the Water Service Authority responsible for the provision of water and all related functions to the whole municipal area. In the 2022 census data, King Sabata Dalindyebo Local Municipality had a total number of 48 575 (42,4%) households with access to piped water inside the dwelling and a further 28 680 (25%) households recorded access to piped (tap) water in the yard. The number of households without any access to piped water is 31 113 (27,2%) whilst 5,5% of households have access to communal taps.

Water infrastructure exist in the area around the clinic and currently facility is serviced by a municipal water connection on the site. The staff however reported that the water supply is not always consistent and water is stored in a number of tanks (Jojo tanks and a concrete water tank) on site to mitigate this.

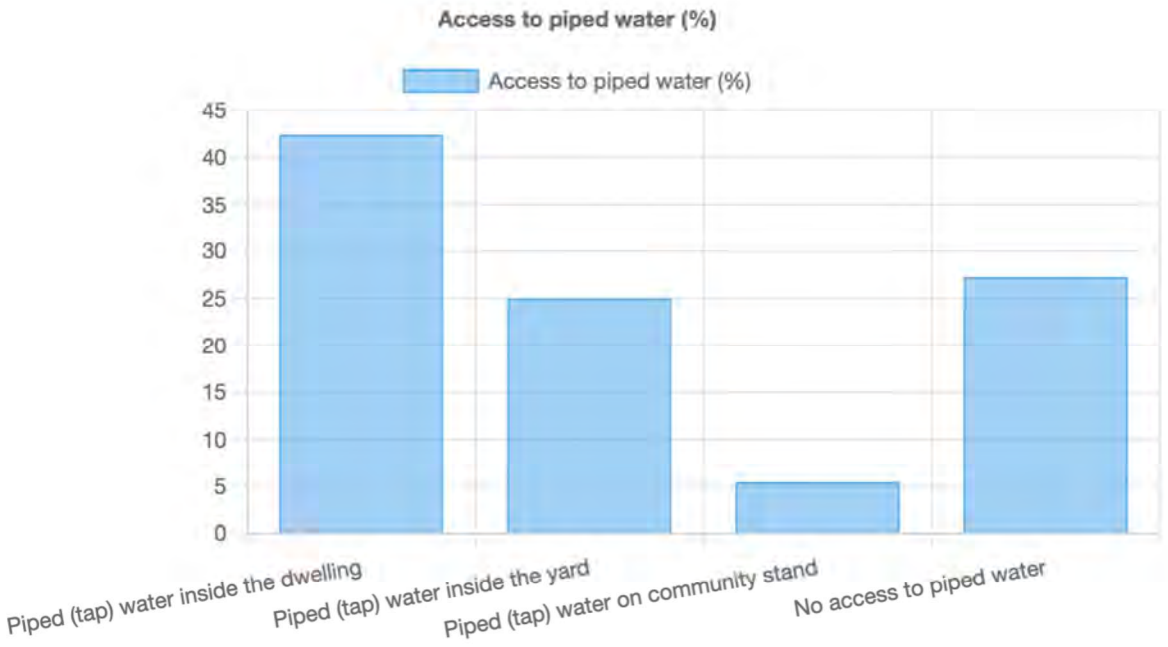


Figure 4: KSD Municipality Access to piped water (Census 2022 StatsSA)

2) Sanitation

The O.R. Tambo District Municipality is responsible for the provision of sanitation services in the whole Municipal area. Residents of the KSD Municipality predominantly use pit latrines with ventilation pipe systems (41,8%) and flush toilets (47,6%) respectively accounting for a total of 89,4% of the households. In most instances even where flush toilets are available these are connected to septic tanks with only 16.9% of flush toilets being connected to a public sewer system according to the KSD IDP.

The current sanitation provisions on the site consist of an external ablution building with flush toilets for the use of both patients and staff. In the prefabricated building one flush toilet is provided which is largely used for storage, however is also used for patients with physical disabilities when required. There is no public sewer system in the village; a septic tank is provided on site to which all ablutions on site are connected. With the establishment of the new clinic facility the capacity of this tank will have to be evaluated in terms of the additional requirements and augmented accordingly. The operational manager reported that the septic tank is emptied by the municipality on request from the clinic when required.

3) Road Infrastructure

The rural road network of the municipality is very widespread and grossly dilapidated. Some gravel roads have been built in order to meet the infrastructure requirements of the rural population and promoting local economic development and social infrastructure. A lot of these roads become severely eroded due to historical lack of maintenance, climate change and minimum design standards. This has resulted in increased sediment loads and contributes to the deterioration of water and biological resources.

Although KSD is seen as a tourism hub in the eastern cape the roads leading to the Wild Coast have been a major impediment and remains challenging in providing to safe access to the beautiful destinations along the coastline. Construction and maintenance of roads is the mandate of KSD infrastructure department, Department of Roads & Transport, South African National Roads Agency Limited (SANRAL) and the District Municipality. The road repair, rehabilitation and reconstruction programme does not include any new roads in the area at this stage and focus is maintaining current road infrastructure in the area until such time that further funds become available.

Ntshele clinic is at an advantage that it is situated close to the N2 which is in a good condition – this facilitates the ease of referral of patients to the next levels of care to facilities accessible via the N2. The road network in the catchment area of the clinic in the Village of Ntshele consists of gravel roads which are difficult to navigate especially during the rain.

4) Electricity and Power Supply

KSDM has 95.1% of households serviced with electricity for lighting and 62.7% of households have access to electricity for cooking. Within KSDM most of the households have an in-house prepaid meter as a form of access to electricity. There are no alternative sources of electricity such as generator, solar home system and battery use as the use of gas, paraffin and wood account for most other sources of cooking and lighting in households.

The existing clinic has an electrical connection, and electricity is available on site to service any further developments. There is an existing overhead electrical cable traversing the length of the adjacent site identified for the development which will have to be relocated as part of the project.

5) Waste Removal (Domestic & Medical Waste)

The Municipality provides solid waste removal services, however there are some areas which is not covered by this service. As is evident in the graph below most households make use of their own refuse dumps to dispose of waste (45.9%). The municipality removes waste once a week from a total of 49 621(43,3%) households however this service is largely available in the urban areas in the municipality and not in the rural village of Ntshele where the clinic is situated.

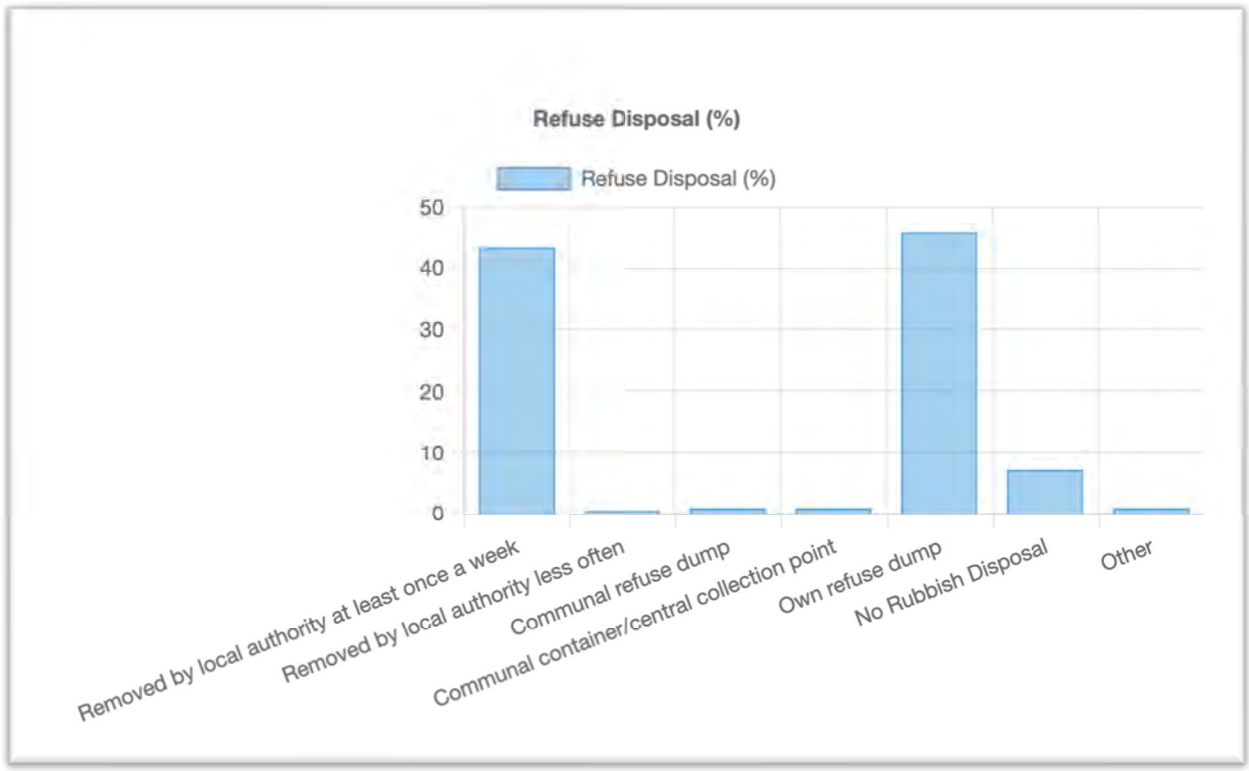


Figure 5: KSD Municipality – Refuse Removal

The current practice at the clinic is to burn domestic wate in a pit on site. There is a provincial medical waste contract in place and medical waste is collected and stored on site in suitable medical waste containers supplied by the service provider and gets removed from site once a month.

5. Health Referral Pathway

Ntshele clinic is located approximately 7,5km away from Mbekweni CHC which is the next referral facility. These two facilities both refer patients to Mthatha Regional Hospital (MRH) located 13,5km away from the clinic further along the N2 for higher levels of care. Ntsele clinic refers all emergency cases straight to MRH emergency unit whilst children under the age of 12 years are referred directly to Mthatha Academic Hospital. All other cases, including normal deliveries, are referred to Mbekweni CHC for further care. Mbekweni CHC renders 24 hour care for emergencies and maternity cases. Complicated maternity cases and deliveries are referred directly to MRH from Ntshele clinic.

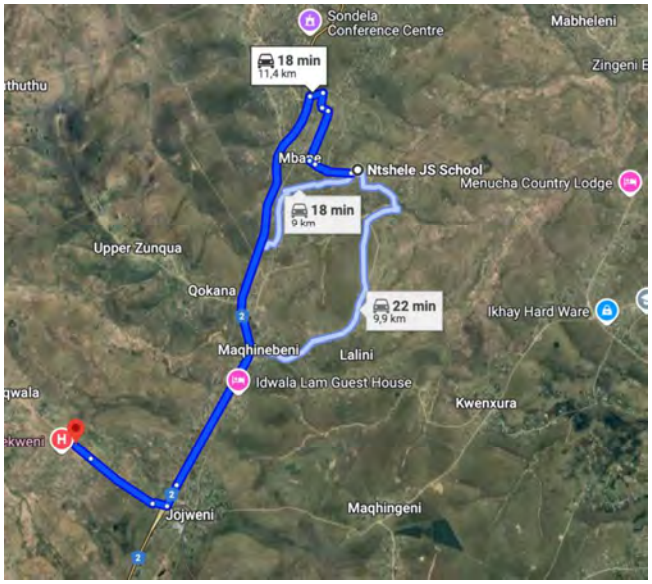


Figure 6: Travel Distance to Mbekweni CHC



Figure 7: Travel Distance to Mthatha Regional Hospital

Due to its location close to a national route (N2) Ntshele clinic is relatively easily accessible for ambulances and PTV's transporting patients to the next levels of care. The distances to the next referral facilities is also not excessive which is an advantage of the location of the current clinic site.

6. Package of Service & Required Infrastructure

6.2 Primary Health Care Service Requirements

The Integrated Clinical Services Management Model (ICSM) requires the provision of clinical services at primary health care facilities in 4 streams of care as follow:

- Acute Episodic Care/Minor Ailments
- Chronic Services
- Preventative/Promotive Care (MC&SRH) Mother, Child & Sexual Reproductive Health, including (AYFS) Adolescent and Youth Friendly Services
- Health Support Services

Ntshele Clinic as a primary health care clinic is required to render services in the clinical streams detailed above. The facility is operating from 08h00 to 16h30 from Mondays to Fridays and is currently rendering the following services which the new proposed facility is expected to continue to render:

- HIV Counselling and Testing
- Integrated Management of Childhood Illnesses (IMCI)
- Antenatal Care Services
- Minor ailments
- Chronic illness maintenance
- Reproductive Health Services
- Youth Friendly Services

6.2 Proposed Health Facility

The replacement facility will continue to render the primary health care service package for clinics and services rendered here will include the following:

- Women's Reproductive Health – normal deliveries will take place at Mbekweni CHC with this facility equipped to manage deliveries in case of emergency only in the emergency room in the proposed facility. More complicated maternity and delivery cases will be referred directly from Ntshele Clinic MRH for care.
- Integrated Management of Childhood Illness
- Diseases Prevented By Immunisation
- Adolescent And Youth Health
- Management Of Communicable Disease
- Sexually Transmitted Diseases (STD's)

- HIV/Aids Management
- Tuberculosis
- Trauma And Emergency – including minor acute illnesses and trauma whilst referring more complicated cases to Mbekweni CHC which has a 24-hour emergency unit
- Chronic Diseases: Diabetes & Hypertension
- Rehabilitation Services - rehabilitation services on outreach bases – will make use of consulting rooms or multi-purpose room for this
- Dispensing of pharmaceuticals and CCMDD

The design layout of the facility should be based on the 'Ideal Clinic' principles and be centered around the four "streams" of patient care of which the focus areas include:

- Acute services which must have easy access for both patient & emergency services and accommodate new and emergency cases inclusive of:
    - New cases before diagnosis e.g. coughing before diagnosis of TB;
    - Minor procedures and wound care;
- Chronic conditions which include those conditions that continue or persist and will require management over an extended period of time (repeat visits):
    - non-communicable diseases;
    - mental health services;
    - HIV ;
    - Tuberculosis and other communicable diseases.
- Preventive/ Promotive Health care including Women and child health (pre- and post-natal) and family planning;
- Health Support Services

6.3 Facility Performance Indicators

For the purposes of Infrastructure planning the Primary Health Care Utilisation Rate and the headcount at the facility were considered. It is evident that the PHC utilisation rate and headcount has decreased significantly from pre-pandemic figures.

	Ntshele Clinic	
1	Category of Facility	Primary Healthcare Clinic
2	Hours of Operation	08H00-16H30
3	PHC Utilisation Rate – Current (2023/24)	1,7
4	PHC Utilisation Rate - Pre-COVID (2019/20)	2,1
5	PHC Headcount - Current (2023/24)	19 145
6	PHC Headcount – Pre-COVID (2019/20)	24 995

Table 5: Facility Utilisation and Throughput – 2019/20 & 2023/24

6.3.1 PHC Utilisation Rate

The PHC Utilisation rate pre-pandemic of 2,1 visits per person per year to the facility has further decreased to an average of 1,73 over the next four years post pandemic which is well below the national target of 3,5. This decrease in utilisation of the service is significant and could signify barriers to access to the service related to the rural nature of the facility, physical condition of roads and transportation issues as well as other factors generally associated with the socio-economic status of the community. The recorded catchment population from the DHIS in 2024/25 reflects 11 274 which when multiplied by the current PHC utilisation rate of 1,7 is in line with the 2023/24 recorded headcount of 19 145.

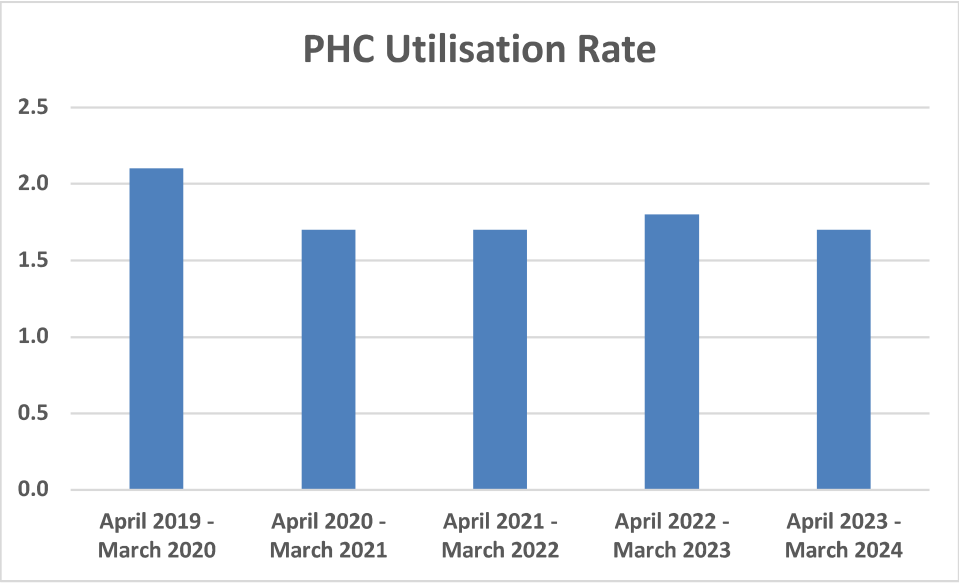


Figure 8: Ntshele Clinic PHC Utilisation rate April 2019 – March 24

6.3.2 PHC Headcount

The PHC headcount for Ntshele Clinic displays a reduction from 24 995 pre-pandemic in 2019/20 to an average of 19 585 post-pandemic in 2023/24. This is also in line with a significant reduction in the PHC utilisation rate as can be seen above.

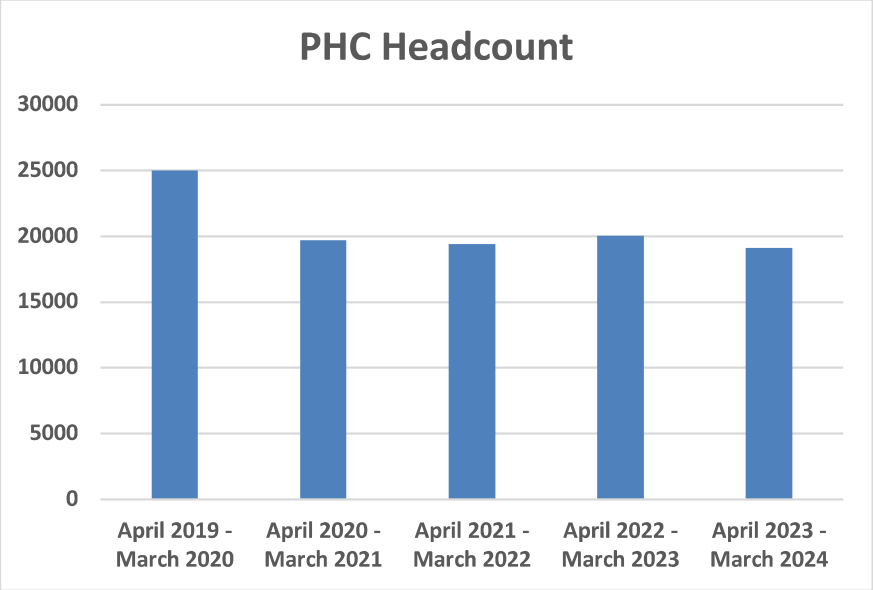


Figure 9: ***Ntshele Clinic PHC Headcount April 2019 – March 2024***

Taking into consideration the required need to improve access to PHC and striving towards a rate closer to the national target of 3,5 the headcount would concurrently increase to pre-pandemic utilisation rates and beyond.

6.2 Infrastructure Requirements

6.2.1 Project Scope

The project scope includes the following developments, the specific requirements of which is further detailed in the schedule of accommodation provided in this document.

i. This new Ideal Clinic has an estimated size of 730m², including circulation and excluding staff accommodation, on a combination of the existing site and a new adjacent site to the clinic which will be consolidated.

ii. This clinic will be composed of

a. Guard house at an estimated floor area of 18 m²

b. Clinical building of 6 x Consulting rooms, 3 x Counselling rooms & the respective clinical support spaces, at an estimated total floor area of 712m²

c. Housing component of 4 x 2bedroom units at an estimated total floor area 440 m².

Ntshele Clinic displayed an average annual headcount over the past 5 years of 20 667 which translates to a small clinic in terms of the *PHC facilities –version: September 2015*. In an attempt to shorten the construction period of the facility the ECDOH has opted Alternative Building Technology (ABT) construction method.

The scope of work will include:

- Construction of the main clinic with,
  - 6 consulting rooms
  - 3 Consulting rooms on each stream will alternatively be used as Counselling rooms
  - 3 Vital Signs rooms
  - Pharmacy
  - CCMDD
  - Emergency Room
- Waste Management stores
- Security Guard House
- Provision of 2 new ABT structures for staff accommodation consisting of 4 x 2 -bedroom houses configured as:
  - Bedrooms to each have an en-suite bathroom;
  - Shared kitchen/lounge area;
  - Scullery for washing machine and access to drying yard.

iii. Appropriate External Works, including fencing, paved access road, parking, pedestrian walkways, ramps, civil works, storm water control and landscaping.

iv. Appropriate bulk services improvements such as: electrical (including appropriate backup for medicine store, emergency lighting and data capture office), ICT, water (including backup bulk tank and stand), sewer & storm water.

The new clinic building development is to include the following infrastructure provisions stated in table 6 below:

Public Spaces	**Clinical Spaces**	**Support Spaces**
Entrance	Consulting Rooms	Storage –Linen, equipment, medicine, consumables
Reception	Counselling Rooms	Security gatehouse
Help Desk	Preparation/Vitals Rooms	Sluice
Waiting & Sub-wating Areas	Treatment Room	Clean Utility
Ablutions	Emergency Room	Dirty utility
Community meeting /multipurpose Room	Specimen collection Area	Waste Area (external)
Children's play area	Sputum Collection booth	Garden Store (external)
Administration Spaces	**Staff Spaces**	Staff accommodation
Operational Manager's office	Staff Room & locker area	Vegetable garden
Record store	Staff ablutions	

Table 6: Clinic Space Requirements

The ECDOH and the CDC, who is appointed as the implementing agent for the development, has embarked on a process, together with the local community and clinic committee, to identify and secure the piece of land adjacent to the existing clinic for the development of the new proposed clinic. The site analyses report below details the progress with regards to assessing the suitability of the site as well as securing the land. The site has subsequently been surveyed and fenced off and is in the process of being registered.

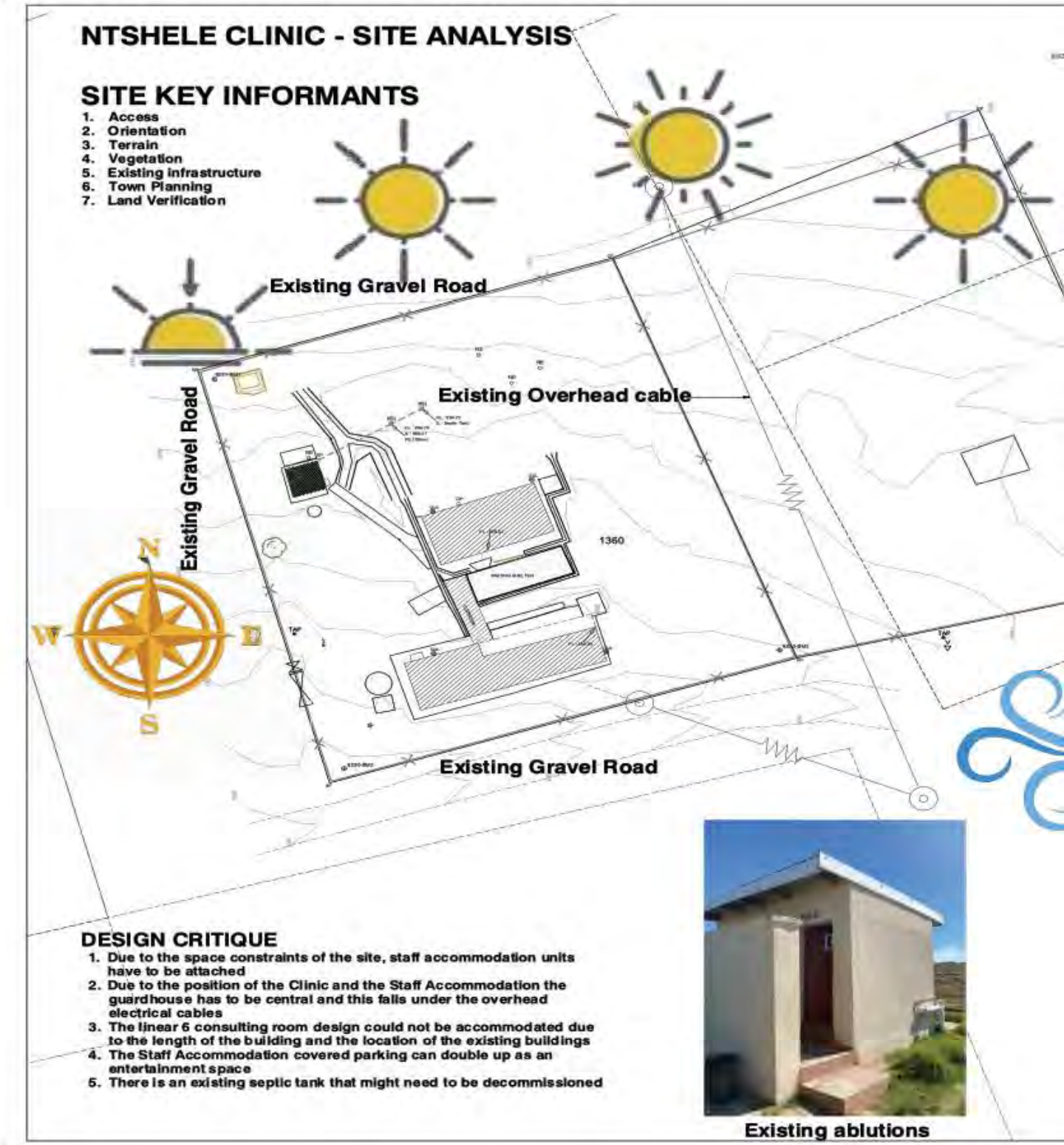


Figure 10: Proposed site – adjacent to existing clinic site

The proposed new clinic building will be constructed largely on the new site, but will be encroaching onto a vacant portion of the current clinic site, but outside the footprint of the existing buildings. The existing site is earmarked for the construction of staff accommodation which will take place after the clinic building has been completed and occupied. The existing buildings on site will then be demolished to make way for the construction of the staff accommodation. The ECDOH could consider to relocate the existing prefabricated structure for use at another health facility depending on the physical condition of the building at the time of decommissioning.

6.2.2 Specific Building Infrastructure Requirements

1) Adjacency requirements and routes

In order to create an optimally efficient building it is essential to plan for correct adjacencies of the different functional spaces and zones. The diagram below illustrates the required relationships between functional zones that will facilitate optimal design.

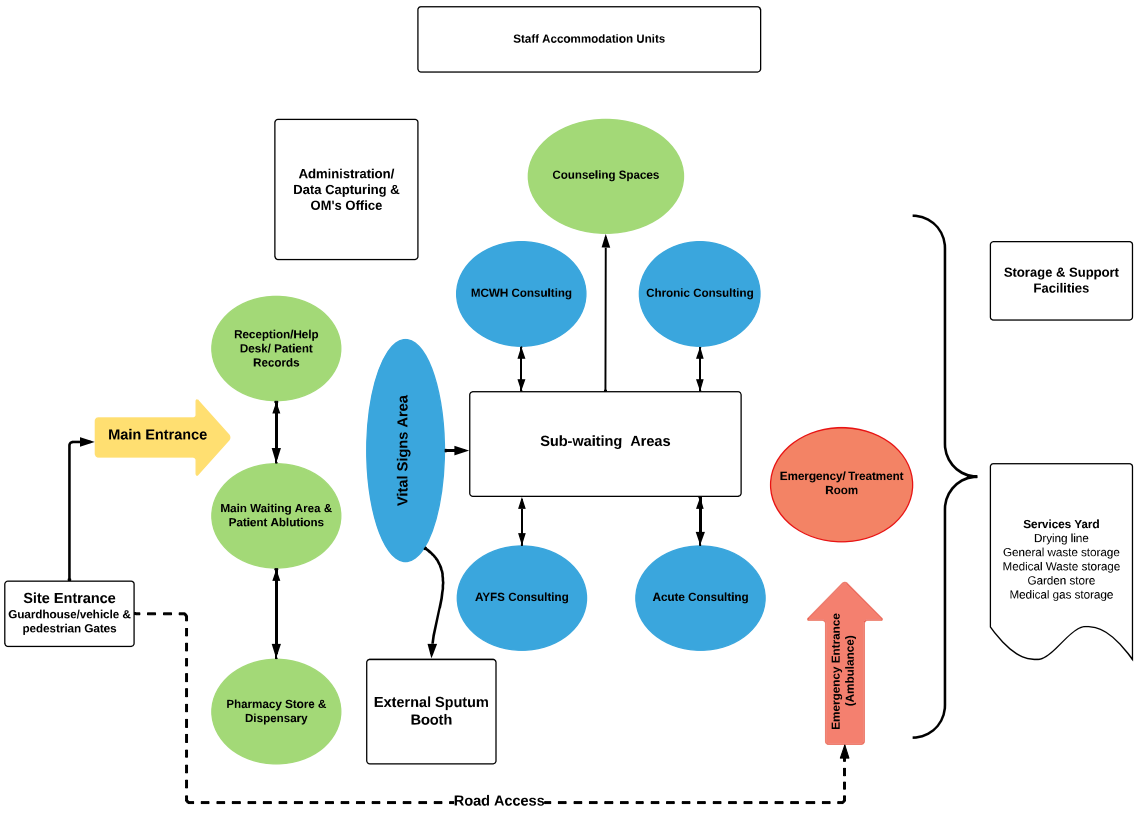


Figure 11: Ntshele Clinic – Flow Diagram

2) Key design principles include:

- A single main entrance to the building overseen by a main reception and help desk and leading into the main central waiting area;
- An ambulance drop off dedicated to emergency or the collection of patients to be transported by ambulance to alternative facilities;
- The emergency room should be in a separate patient area with close access to the ambulance drop off;
- A centrally placed waiting area, serving the core accommodation with ablutions off the main waiting area;
- A central records store off the main reception area, which is off the main central waiting area;
- Consulting and Counselling suites to be adjacent to the sub waiting areas.

3) Access

All public access to the site must only be via the main entrance gate. A vehicular access gate and a separate pedestrian access gate should be provided. Both gates must be lockable in order to secure the site. All vehicles will pass through the main entrance to the site. Ambulances will proceed along a dedicated route to drop patients at the emergency entrance. Access to the clinic building must be through one main entrance and not the fire escapes. A dedicated pedestrian footpath out of the way of the vehicle access road should be provided for walking patients from the gate to the front entrance door of the facility. This access should be wheelchair friendly as well.

4) Flow

Patients, staff and the public will all be required to enter the clinic site through the guardhouse building. As the PHC facilities are weapon free environments, all patients and staff will be required to surrender their weapons for safe keeping at this point. Once past the guardhouse, patients, visitors, staff and the general public will access the clinic via a short walkway from the security building.

The internal plan of the facility must allow ease of movement to and from the entrance, reception and waiting, treatment and consulting areas that enables efficient use of staffing and

space complimenting the operational requirements of the facility. Patient flow should be one directional as far as possible throughout their journey through the clinic.

I. *Flow of New Patients*

- If the patient requires emergency treatment, the patient will be taken immediately upon arrival to the emergency room for appropriate treatment while the file is arranged;
- All new patients will proceed, upon arrival, to the reception desk where they will give their details to a data capturer, who will enter the patients details and issue a new file for the patient:
- The patient will be directed to wait in the sub waiting area for minor ailments patients;
- The patient will be called to have routine observations taken in the acute vitals area;
- The patient will then return to the sub waiting area before being called to the minor ailments consulting room;
- In the minor ailments consulting room the patient will be treated, given medication and instructions on how to take the medication, then will be referred back to reception to make an appointment for a follow up attendance if required;
- The patient will then leave the facility via the main entrance.

II. *Repeat Attendance – Patient Flow*

- All patients with an appointment will proceed, upon arrival, to the reception desk where their file will be retrieved from records;
- The patient will be directed to wait in the sub waiting area for chronic patients;
- The patient will be called to have routine observations taken in the chronic vitals area;
- The patient will then return to the sub waiting area before being called to the chronic consulting room;
- In the chronic consulting room the patient will be treated and be referred back to reception to make an appointment for a follow up attendance if required;,
- The patient will then leave the facility via the main entrance.

III. General flow

Apart from the client/patient journey through the clinic, there are other routes that must be accommodated and planned for:

- staff routes;
- routes for the collection and removal of waste;
- routes for the delivery and distribution of supplies;
- routes for emergency evacuation;
- routes for ambulance drop off or collection
- design and layout of circulation spaces.

6.2.3 SPACE REQUIREMENTS

The space requirements for the facility have been based on the following:

- Service Hours
- Headcount per annum
- The 4 streams of care

The current headcount of the facility falls within the Type II facility requirements (small) based on the tables below:

Type	Size	Service hours per day	Maximum headcount per annum	Maximum headcount per month	Maximum headcount per day	No of standard consulting rooms required	No of standard counselling rooms required	No of Emergency(E) /Treatment-procedure (T)/specialised rooms required
I.	Very small	8hrs-**5**days	*6 000 - 20 000	1 650	85	4	1	1 E
II.	Small	8hrs-5 days	20 001 – 40 000	3 350	170	6	2	1E
III.	Medium	8hrs-5 days	40 001 - 60 000	5 000	250	9	3	1E
IV.	Large	12 hrs -6 days	60 001 - 100 000	8 350	350	12	3	1E +1T

V.	CHC	24 hours -7 days	120 000+	10 000+	350+	12+	4	1E+1T+ 1 Rehab/MOU/ Mental Health

Table 7: Proposed minimum standard configuration of PHC facilities

Type	Size	Service hours per day	Maximum headcount per annum (April 23-Mar 24)	Maximum headcount per month (Jan 23)	Maximum headcount per day (Jan 23)	No of standard consulting rooms required	No of standard counselling rooms required	No of Emergency(E) /Treatment-procedure (T)/specialised rooms required
II.	Small	8hrs-**5** days	19 145	3 350	170	6	2	1E

Table 8: Ntshele Clinic Consulting Rooms Required based on Headcount

6.2.4 Schedule of Accommodation

Item No	Room Description	Clinic Proposal			
		SMALL: 20 001 - 40 000			
		No	Area m²	Total m²	
1	**ENTRANCE**				
1.1	**Guardhouse**	1	18	18	Guardroom, search room with gun safe, kitchenette, toilet with lobby - increase screening area where fixed metal detectors to be deployed
1.2	**Adjacent Pedestrian Screening**	1	0	0	With entry and exit corridors - 4.4 m wide along length of guardhouse
1.3	**Outside Covered Waiting Area**	1	36	36	Outside waiting for clinic and multi-purpose meeting room ideally should be combined into one large covered space if layout allows. Provide fixed seating.

Item No	Room Description	Clinic Proposal			
		SMALL: 20 001 - 40 000			
		No	Area m²	Total m²	
1.4	**Multipurpose Meeting Room**	1	36	36	External access afterhours with kitchenette -for staff, Community, team & clinic committee meetings, Should be in close proximity to AYFS (Adolescent Youth Friendly Services)
1.5	**External Disabled Ablution**	2	4	8	Adjoining meeting entrance lobby with 2 toilets (M & F) and 1 disabled toilet and baby changing station
2	**MAIN CENTRAL AREA**				
2.1	**Help Desk**	1	6	6	Open service point in main waiting area - prominent location.
2.2	**Admission counter/Reception**	1	9	9	3 Booths
2.3	**Records Room**	1	12	12	leading directly off reception - fire proof door
2.4	**Main Waiting Area**	1	50	50	Must be well ventilated, preferably natural ventilation, for infection control purposes. If possible have a high ceiling and windows at high level which can be left open to serve the purpose of cross ventilation.
2.5	**CCMDD Collection Kiosk**	1	12	12	for storage and issuing of pre-dispensed meds - hatch from waiting area, safety gate -situate nearest to help desk/entrance. Could be positioned and linked to the pharmacy.
2.6	**Play Area**	1	9	9	Provide a roofed area in a secure yard - if space permits
2.7	**Toilet with WHB - male**	2	2	4	SANS 10400 requirement-with a ventilated lobby-vs/s -1 WC + 2 urinal + 2WHB;M/L-2WC+2 UR+3 WHB
2.8	**Toilet with WHB - female**	2	2	4	SANS 10400 requirement-with a ventilated lobby-vs/s -2 WC +2WHB;M/L-4WC+3 WHB
2.9	**Disabled friendly Toilet**	1	4	4	to include baby change counter
2.10	**Mother's Room**	1	6	6	for breast feeding mothers. Area must be well ventilated and separate from baby change area.

Item No	Room Description	Clinic Proposal			
		SMALL: 20 001 - 40 000			
		No	Area m²	Total m²	
2.11	Dispensary/Pharmacy	1	16	16	area as per IUSS pharmacy guidelines - to have external loading/delivery access yard. Provide shelving for packing and storage of medication and a central table for preparation of medication.
2.12	Sub-waiting Pharmacy	1	12	12	Can be covered external or overflow main waiting
3	**ACUTE CARE (Emergencies & Minor Ailments)**				
3.1	**Emergency Room/Treatment/Birthing Room**	1	25	25	situated close to Minor Ailments and Chronic Areas easily accessible from both these area.
3.2	**Sub-wait acute**	1	8	8	Make provision for covered external waiting for spill out space
3.3	**Vitals Room**	1	8	8	Standard- Shared between 2 consulting spaces with access to ablution for point sample collection.
3.4	**Consulting Room**	2	16	32	
3.5	**Counselling Room**	1	16	16	Counselling rooms could be used as additional consulting facilities when required and needs to be minimum of 16 m2
3.6	**Sputum collection Booth**	1	2	2	Well-ventilated roofed area with visual privacy (May share one central booth between Acute and Chronic Streams)
4	**CHRONIC CARE**				
4.1	**Sub-waiting**	1	8	8	Make provision for covered external waiting for spill out space
4.2	**Preparation/Vitals Room(shared between 2 adjacent consulting rooms)**	1	8	8	Standard- Shared between 2 consulting spaces with access to ablution for point sample collection.
4.3	**Sputum collection Booth**	1	2	2	Well-ventilated roofed area with visual privacy (May share one central booth between Acute and Chronic Streams)
4.4	**Consulting Room**	2	16	32	Must be 15m^2 minimum.

Item No	Room Description	Clinic Proposal			
		SMALL: 20 001 - 40 000			
		No	Area m²	Total m²	
4.5	**Counselling Room**	1	16	16	Counselling rooms could be used as additional consulting facilities when required and needs to be minimum of 16m^2
6	**PROMOTIVE & PREVENTATIVE HEALTH (Maternal, Child Health, SRH)**				
6.1	**Sub-waiting**	1	8	8	Make provision for covered external waiting for spill out space
6.2	**Preparation/Vitals Room(shared between 2 adjacent consulting rooms)**	1	8	8	Standard- Shared between 2 consulting spaces with access to ablution for point sample collection.
6.3	**Child Health Consulting weigh in area**	1	16	16	immunisation /growth and development monitoring
6.4	**Reproductive Health Consulting/SRH**	1	16	16	Ante/Post Natal
6.5	**Counselling Room**	1	16	16	
6.6	**Ablution (optional)**	1	4	4	Ablution with baby change and ventilated lobby (if main ablutions too far)
7	**SHARED SUPPORT ROOMS**				
7.1	**Admin/Management Office**	1	12	12	
7.2	**Community Outreach Office**	1	14	14	
7.3	**PABX/Server Room**	1	6	6	
7.4	**Dirty Utility/Sluice**	1	8	8	Day clinics don't use sluice - existing sluice can be converted to dirty utility.
7.5	**Cleaners Room & Store**	1	6	6	
7.6	**Store - Medicine**	0	12	0	Provided in the Pharmacy/Dispensary
7.7	**Store - Surgical/Sterile Supplies**	1	8	8	
7.8	**Store - Stationary**	1	6	6	Can be a cupboard or incorporated into general store
7.9	**Store - Linen (built-in linen cupboard)**	1	2	2	

Item No	Room Description	Clinic Proposal			
		SMALL: 20 001 - 40 000			
		No	Area m²	Total m²	
7.10	**Store - General**	1	10	10	Provide suitable shelves – do not provide cupboards
7.11	**Staff Room**	1	16	16	Staff lockers can be in staff room instead of ablutions. Provide kitchenette and points for fridge and microwave.
7.12	**Staff Toilet with lockers**	1	8	8	Staff lockers can be in staff room instead of ablutions.
8	**EXTERNAL**				
8.1	**Laundry**	1	6	6	To be secure
8.2	**General Waste**	1	3	3	
8.3	**Medical Waste**	1	3	3	Provide according to IUSS standard. Must have biohazard sign
8.4	**Garden Store**	1	3	3	
8.5	**Yard (General)**	1	15	15	Enclosed with drying lines
8.6	**Gas Store**	1	3	3	
8.7	**Stand by generator**	1	8	8	Other means of backup power supply & renewable energy may be explored
8.8	**Ground Staff Ablutions**	1	4	4	
	SUB-TOTAL			**608**	
	CIRCULATION SPACE 20%			122	(Assumption)
	CLINIC BUILDING			**730**	
	HEALTH PROFESSIONAL ACCOMMODATION (2 BEDROOM UNITS)	4	110	**440**	In line with Accommodation Policy of the province
	TOTAL INCLUDING HEALTH PROFESSIONAL ACCOMMODATION			**1 170m²**	

Table 9: Schedule of Accommodation – Ntshele Clinic

6.2.5 Staff Accommodation Requirements

Due to the rural nature of the location of the facility, it is imperative that suitable staff accommodation be provided and allocated for use in terms of the ECDOH Housing Policy prescripts. For a clinic of this size, based on the staffing requirements, it is recommended that a 4 x 2 bedroom accommodation units be provided in the following configuration:

- Bedrooms to each have an en-suite bathroom;
- Shared kitchen/lounge area;
- Scullery for washing machine and access to drying yard.

6.2.6 Room Requirements

SPACE	REQUIREMENTS
	EXTERNAL AREA
Guardhouse	A security building (guardhouse) is required in front of the clinic, at the site entrance and must have a clear vision of incoming and outgoing persons and vehicles. Windows to observe the movement of pedestrians, vehicles and ambulances should be provided. External windows to be protected from breakage by violent persons. Toilet facilities for security personnel. Kitchenette for use by security personnel
Parking	Adequate public parking must be provided in front of the clinic in close proximity but offset from the main entrance and so arranged as to ensure public access only to the front of the clinic. Dedicated staff parking bays should be provided. A dedicated marked ambulance bay should be provided providing direct access to the emergency room.
External Waiting Area	An external covered waiting area outside the main clinic building is required. This area should be sheltered from the weather. Access to a toilet is required. This area is for patients that arrive at the clinic before the clinic opens and/or for clients that need to wait to be transported from the facility where security personnel will be able to provide patients with access to the premises and the external waiting area prior to the clinic opening for the day. The seating, floor and wall covering must be robust and easy to clean.
MAIN CENTRAL AREA	**INTERNAL AREA**
Entrance to the Building	Ideally, only one public entrance to the building should be provided, as this avoids confusion and aids security. Secondary operational entrances are required for ambulance drop off and collection as well as stock delivery and collection of waste. Entrances to the building must be clearly signposted above the entrance

SPACE	REQUIREMENTS
	indicating the name of the facility. The entrance to the building must be clearly identifiable and should be universally accessible. The entrance must be well lit. It must be covered and provide protection from the weather.
Main Waiting Area	Clients attending the facility will be required to sit and wait to be registered or to wait for the appropriate time to proceed for further assistance. It is desirable for clients to be able to receive health related information while waiting. This may be done utilizing CCTV, poster displays or talks. A large, shared waiting area is to be provided to serve the different clinical streams. The Main waiting to preferable be located against two external walls with windows allowing with large opening sessions allowing sufficient cross ventilation when opened. Windows with opening sections at high level should also be considered as this will allow rising hot air generated in the waiting area to escape at high level. Waiting areas must provide for maximum airflow and good natural ventilation in the interest of infection control. The layout should be flexible enough to accommodate patient flow at peak times, and to allow for children's play areas. Space must provide for patients with escorts, mothers with children in prams and for patients in wheelchairs. Seating must be robust, easy to clean and difficult to carry away. Care must be taken to provide seating that does not fold up to prevent injury to small children. Seating should not be fixed to the floor as there may be a need to move the seating to create an open space. Directions to the toilets as well as to the clinical areas must be clear. Sufficient pinning and other display boards must be provided as well as fittings for CCTV with a large screen for educational purposes.
Play area	There should be a play area for children adjacent to the waiting area preferably also leading to an external play area that is safe and secure.
Public Ablutions	Patients are at clinics for 2-8 hours and will require ablution facilities at least once. The public toilets should be grouped together for ease of cleaning and general supervision. They should be easily located and well-marked(signposted), close to the main waiting area. Male and female ablutions must be separate. The number of public toilets will depend on the number of predicted users according to norms. The area should be well ventilated with pipes and drainage in a position that will optimize maintenance and repair. There must be at least one universally accessible toilet and one safe baby change area. All fixtures and fittings must be robust and hard wearing. Nonslip floor coverings are recommended.
Help Desk	The help desk should be positioned to be clearly visible form the door as patients enter the facility. Is should be clearly indicated with appropriate signage and would be the main reference point for patients to make enquiries as they enter the facility.

SPACE	REQUIREMENTS
General Reception/records counter	On arrival, patients will pass through the clinic security into a general waiting/reception area, where they report to the general reception desk. Their folders will be drawn or a new patient record will be opened. The clerk will retrieve the patient file from the shelves in the record store. The clerk will then make sure that the date of the visit is recorded. Data will be entered into a computer programme for statistical purposes. The reception counter should be clearly visible to those entering the facility. From the reception desk and main waiting area the client will advance to the correct clinical unit for further attention. Serving hatches should be provided at standing height for clients with one at wheelchair height. Clients will provide personal information at these hatches so a measure of privacy is required. There should be a safety glass partition between the client and the staff designed in such a way to ensure good hearing between client and staff. The gap at the lower end of the partition should be large enough for files and other documents to be passed through. The patient files will be stored in the records store behind the reception counter. The clerk should be able to sit at the serving hatch and should have sufficient work surface to accommodate patient files. Computer access is essential and a printer could be shared. Each workspace to have an under-counter cupboard with a draw above. There must be an area for a photo copy, fax machine and an open plan work space for the data capturer should be provided off to one side of the room away from the serving counter.
Records Room	The records store is where the patient files are stored on shelving in numerical order behind the reception clerk. Files are retrieved and issued to clients for record purposes. At the end of the visit, files are returned to the store and are sorted and filed. The process for retrieving the file may take some time during which the client will sit and wait in the main waiting area unless the clinic implements the practice of drawing patient files the day before scheduled patients visits – this practice is recommended. Provision must be made for data cabling, computers and switch cabinets close to the records room. The record store should be located behind the reception desk. The area is restricted to the public as it is a secure area and needs to have a secure access door. Because of the security aspects, the IT switch equipment should be located in the same area. Attention should be given to the lighting of the area between shelving as the clerks are required to retrieve files by reading the registration number. The filing racks must be robust using the best and most appropriate shelving product. Attention must be given to ergonomics, and work surface heights in particular. Files need to be placed onto the shelf so that it is easy to read the file number without taking the file off the shelf. There must be adjustable book ends to prevent files from falling off shelves or collapsing.
CCMDD	The CCMDD room is to be accessed by patients without them entering the main waiting/reception area. At this facility dedicated storage shelved/

SPACE	REQUIREMENTS
	cabinets in the pharmacy store should be provided for CCMDD. A dedicated dispensing hatch issuing medication into the external waiting area should be provided. This hatch should be able to be sufficiently secured when not in use and after hours in order to keep medication safe. This room must be well secured with a concrete ceiling and steel gates to the door and the hatch. Room temperature must be maintained at 21 degrees therefore an AC unit must be installed.
ACUTE CARE	
Emergency/Treatment Room	For this size facility the treatment and emergency functions will share the same space. In addition to the emergency room functions and requirements listed below this venue will also be used for treatment procedures such as giving injections, changing dressings etc. <u>Emergency Room Requirements</u> The clinic will provide 8-hour emergency services only. Patients requiring advanced trauma management will be stabilised before transfer or transport to another facility for appropriate care (district, regional or tertiary hospital) depending on the severity of the patient's condition. Escorts will not be allowed in the emergency area unless accompanying children or incapacitated adults. The Emergency Room is for basic resuscitation and management of emergencies or for preparing patients for urgent referral of serious trauma. Access must be directly off the emergency entrance lobby, easily accessible for patients in need of immediate care. Patients may need to be transported by ambulance from the emergency room and it should therefore have easy access to the ambulance bay. • Double doors and a ramp are required for easy transfer into an ambulance. • The room is considered to be a clinically clean area for the treatment of un-booked acutely ill or injured clients requiring immediate attention; • Treatment may be given while the client is lying on a trolley or sitting in a comfortable chair. Treatment may include the administration of medication, fluids, and/or oxygen. • Acutely ill or injured clients may be brought directly to the emergency room upon presentation at the facility. They may arrive by motorised transport, in a wheel chair or on foot and assisted. • Clients that have been assessed by a clinical member of staff may also require immediate medical treatment whilst waiting for transfer to another facility. An examination couch will be required in a central position in the room for ease of treatment from any side. • Clients with a breathing problem will receive treatment while sitting in a chair. • There must be sufficient space in the room to accommodate all medical equipment such as emergency trolleys and oxygen cylinders.

SPACE	REQUIREMENTS
	• This room must have a clinical wash hand basin, soap and towel dispensers. • There should be sufficient space for work surfaces, built in cupboards for surgical stock items, space for an emergency trolley close to electrical plugs for recharging back up batteries, oxygen cylinders and other mobile equipment. • Good lighting is essential for clinical assessments including focused lighting for treatment • Space for the clinical staff to write up notes; **Services** • X-Ray viewing box/station ; • Lighting should be a high standard focused examination light with a power output of 30000 lux to illuminate a field of at least 150mm and be of robust construction; • Provide an uninterruptable power supply (UPS) to an agreed number of electrical outlets; • IPS and UPS sockets should be colour-coded to differentiate them from one another; • Additional switched and shuttered sockets, connected to ring circuits, may be provided at the bedhead for portable non-medical equipment; • Portable gas and vacuum supply; • Nurse call; • Emergency alarm (for emergency assistance from staff members) • Clinical wash hand basin **General requirements per bay** • Allow for space to ensure 360 degree access to all parts of the patient for uninterrupted procedures. • Bed screens for privacy with a curtain at least 1.5m from edge of the foot of the bed. Curtains should be 3 separate drop with stops and overlap to allow access as well as to maintain privacy. • Provide mobile work stations. These are to be a clear 600-wide clear working space, be post formed, formica with an easily cleanable surface. • Waste bins and sharps containers.
Sub Waiting Areas (Generic space)	Sub-waiting areas must be well placed at or close to service points. The sub-waiting areas are used by clients that are attending specific services and some may require privacy or confidentiality associated with discrete services, for example mothers attending the Women and Child Health unit may need to breast feed. The sub-waiting area should not block passages but, ideally be recessed so that people can pass each other comfortably especially as people may be in wheelchairs or use walking aids or have young children with them. Maximum natural light and cross ventilation to minimise cross infection needs

SPACE	REQUIREMENTS
	to be accommodated in the design the sub-waiting areas. Although, depending on the design and position of consulting rooms for the various streams, sub-waiting areas can be shared spaces it is recommended that dedicated spaces be provided for MCWH and infectious disease patients. Shared sub-waiting space chairs could be provided in banks and colour coded to differentiate between seating for the various clinical streams.
Preparation/Vitals Room (Generic space)	All patients entering the facility will require their vital signs to be taken prior to consultation. In the Vitals area the nurse will monitor and record the patient's vital signs and measurements including weight, height, blood pressure, pulse, blood glucose and haemoglobin count. These results are entered into the patient record. The design and location of the vitals (preparation) area should be such that it is between the waiting area and consulting rooms. Patients will wait in the relevant waiting or sub waiting area where they will be called to the vitals area adjacent. Once attended to, the patient will return to the sub waiting area and wait to be seen by the clinical member of staff in the consulting or counselling room. A measure of privacy is required for sensitive conversation. Good lighting is essential for accurate readings and ventilation essential for infection prevention and control. All surfaces must be durable and washable. At no time must air flow from the patient to the nurse. Windows, fans and air-conditioning must be designed to avoid the nurse being cross infected by the patient. There must be two chairs (one for nurse and one for patient) and work surface space for staff to enter results into the client file and storage space for instruments, stationery and specimen tubes and jars. There must be either wall or floor space for refuse bins and sharps containers. A clinical wash hand basin must be provided which can be shared between two vitals areas. Shelving or pigeon holes for forms that may be required. Built in cupboards are required for the storage of specimen containers, reagents for testing and other stock items. An electronic scale and a ruler for measuring height must be placed in a position close to an electricity outlet and that will not obstruct movement of clients or staff. The Vital sighs area needs have a direct link to the specimen collection toilet and test area affording patients privacy during the collection and testing of urine.
Specimen collection Toilet & Testing Station (Generic space)	The client may be requested to pass a urine specimen for testing. They will be directed to the specimen collection toilet to produce and collect their sample. The patient will then bring the sample in a disposable or non-disposable container to the nurse who will test the urine
Consulting Room (Generic space)	The consulting room is used for interview, consultation and examination depending on their requirement. The consulting room is used by a clinical health practitioner, a registered specialist nurse, a registered nurse or a

SPACE	REQUIREMENTS
	doctor for consultation and the physical examination of a client alone or with family or significant other. A client will have proceeded from the vitals (preparation) room to the sub-waiting area to wait to be seen by a relevant clinical person. The client will enter the consulting room and sit on a chair to give a short medical history. A second chair should be provided if the patient is accompanied by a caregiver. The clinician will evaluate the results of the vital signs taken in the preparation room, will read previous notes taken should these be in the file and will evaluate the treatment regime that the client is on. The clinician may then need to examine the client. The client may need to undress and lie on the examination couch for a physical examination. After physical examination the client will dress and sit in the chair to hear the result of the findings and will then be directed to another unit for further tests or treatment or the client will receive a prescription from the clinician and will be directed to the pharmacy where the prescription will be handed in and the client will wait for the medication and then leave the facility. Consulting rooms will be located between the vital signs room and the sub-waiting areas. The consulting room in is the most utilized workspace for patient care and must provide suitable space for the clinician or professional nurse to talk to the patient (sometimes with a family member, caregiver and/or a translator), to take notes, and to undertake a general examination (sitting in a chair or supine on the examination couch). There must be good lighting and appropriate space around the examination couch for the clinician or professional to properly examine any patient for any condition. Patients will need to be examined from left or right side of couch (orthopaedics) and lithotomy examinations at the foot of the couch with a good light (obstetrics and gynaecology). The examination couch can be moved away from a wall for these examinations. Diagnosis and initial clinical treatment of outpatients is undertaken from the consulting room. There must be space for an examination couch placed in such a way that the client is approached from the right-hand side. There must be bed screen railings and curtains around the couch to afford the client a measure of privacy. At the top end of the couch there must be space for a movable bed side cupboard for instruments and surgical stock items. At the top end of the couch there will be wall mounted examination instruments that need electrical plug connection. A wall mounted, flexible examination light is required to facilitate the examination of the client from top to bottom as required. A surgical hand wash basin is required with soap and paper towel dispensers. A desk with a computer work station is s required at the other end of the room. There should be built in cupboards for the storage of surgical stocks and stationary. Pigeon holes mounted above the desk is helpful for the storage of A4 forms. At the desk there must be space for at least two clients sitting, for consultation.

SPACE	REQUIREMENTS
	At no time must air flow from the patient to the clinician/PN. Windows, fans and air-conditioning must be designed to avoid the clinician/PN being cross infected by the patient.
Counseling Room (Generic space)	The consulting and counselling rooms should be the same size and layout so that it is possible for them to be used interchangeably as service needs change.
Sputum Collection Booth (Generic space)	**An outside sputum booth that can be directly accessed from the prep room is recommended for the collection of sputum specimens from clients that present with an acute complaint that includes a cough for a**
CHRONIC CARE	
Sub Wait Acute (Generic space)	**Described under Acute Care**
Consulting Room (Generic space)	Described under Acute Care
Counseling Room (Generic space)	Described under Acute Care (Shared Space)
PROMOTIVE AND PREVENTATIVE HEALTH	
Location	As this unit is primarily focused on pregnant women and small children it needs to be located such that patients are not required to mingle with those attending Chronic and Acute units. The unit should be contained within a defined area. Access to an outdoor sheltered play area is preferable. A single sub waiting area which will serve both women and children.
Sub Wait	Suitable for mothers and children, including for wheelchairs and prams. Women's health and Child Health will share the same sub waiting area. The sub-wait will be used by women or parents bringing their babies for growth assessments, vaccinations. Clients attending the reproductive health service may also be required to wait for attention. The sub-waiting area should be on adjacent to the vitals area and in view of the relevant consulting room. It should have sufficient room for the estimated number of clients expected to attend the service with children and babies in prams and carry cots. Space should also be planned for parking baby prams and carry cots so that these items do not block the passage through the unit. A safe outside play area directly off the sub wait could be considered for the entertainment of toddlers and older children. Sturdy, safe seating suitable for the accommodation of mothers with babies; Pinning boards for notices and health promotion material; and, Child friendly furniture is recommended.
Child Health Vitals (weigh in) Area	In the children's vitals area or screening area the baby growth assessments are done and recorded in a 'road to health' record. All paediatric clients attending the facility will first be assessed in the vitals area. The baby will be undressed examined, measured and weighed on an electronic scale. These activities require a work top with baby scale, length meter and countertop infant mattress to be installed. Bigger children will be

SPACE	REQUIREMENTS
	weighed on an electronic standing scale. The babies may be vaccinated in this area or in the consulting room depending on the space available. All assessments and vaccinations will be noted in the child's road to health record card. All surfaces must be child safe and washable. The area should have a comfortable temperature as babies need to be undressed.
Women's Health /Consulting **Child Health Consulting**	Child Health entails the weighing, routine examination and growth assessment of babies and children as well as the provision of routine vaccinations and general health care promotion. Women's health care will be provided in this area. This includes: • Family planning visits and sexually reproductive health(SRH); • Ante-natal visits; • Post-natal care and breast feeding assistance;
Counselling	Described under Acute Care (Shared Space)
SHARED SUPPORT ROOMS	
Managers Office	The operational manager office should be centralised to ensure good governance. The office should be equipped as a standard clinical administration office and be fitted with a desk, chair and two visitor's chairs. A medical wash hand basin with elbow action taps should also be provided here.
Community Outreach Office	Office space for 10 x outreach staff should be provided. The outreach staff are not always based here as they conduct community visits hence this space should double up as a staff and community meeting space.
Sluice/Dirty Utility	As this facility the sluice/dirty utility could be a shared space. This room should be provided near the near exit into the service yard. Provide a standard sluice room with bedpan washer, urinal racks, storage cupboards and a worktop. This space will also be used for storage of refuse and used and soiled linen. Provides adequate space for the placement of bins to separate refuse for paper, medical waste and general waste. The washing machine will also be located in the room and adequate space and services provision should be made.
Store – General **Store – Clean Linen (built-in cupboard)** **Store – Surgical**	Provide storerooms (General, Surgical stores and Clean Linen). These stores must be ventilated and fitted with shelves for correct storage of goods. Please do not compromise on the space requirements provided in the Schedule of Accommodation (SOA). • Fixed storage cupboards within rooms are not recommended. • working stocks of sterile supplies and consumables, when and where required, should be held on supply trolleys in patient contact spaces. Supplies trolleys should be restocked in clean utility rooms;
Staff Rest	The area should provide a kitchenette, washbasin, lock-up cupboards, fridge and Hydro boil. Staff toilets and locker space with lockers to be provided for staff for handbags, wallets and mobile phones.
Staff Toilet	A separate male and female staff toilet with whb to be provided with

SPACE	REQUIREMENTS
	separate lobbies to each.
Cleaners Room	Provide a space for the cleaning equipment, cleaning materials and floor cleaning machine to be kept. The space should be fitted with lockable built-in cupboards, s/s wash hand basin and a slop hopper and s/s sink.
EXTERNAL	
Laundry Area	A small area able to accommodate a domestic washing machine or a small entry level industrial machine should be provided.
General waste	General waste and medical waste will be placed in separate and clearly marked containers and sent to the dirty utility room in the clinic; Waste storage areas must be covered and secure from monkeys, stray cats, birds and vermin.
Medical Waste	A secured, vermin proof store for medical waste is required with access for collection vehicles.
Yard	An enclosed yard area with a laundry line must be provided. This area will have a concrete floor, tap and space to wash equipment.
Gardeners Store	A secure store is required for maintenance equipment e.g. ladders, horse pipe etc. There should be shelves and hooks mounted on the walls.
Gas Store	Provide an outside, secure space to store gas bottles.
Parking	Provide parking for: • Ambulances • Staff • Public
Engineering Plant rooms	Allow for a main LT board, standby generator and JoJo tanks for water

7. Staffing Requirements

The Eastern Cape Department of Health (ECDOH) has developed Draft Organograms for all levels of health facilities in 2023. These draft organograms take into consideration the activity levels at various health facilities. For instance, to determine the size of the various clinics, the draft organogram considers the annual headcount. The approved organogram of (ECDOH) 2008 does not take these activity levels into account, hence for the purpose of this exercise the draft organogram is used as a reference. Based on the latest available annual headcount of April 2023 – March 2024 of 19 145 at Ntshele clinic, and the 2023 Draft ECDOH Organogram for PHC, the facility is deemed as a large clinic in terms of required staffing needs with an annual headcount of up to 35 014 – the draft organogram is attached hereto.

Staff Categories	*Current Staff Numbers*	*Approved Organogram 2008*	*Draft Organogram 2023*	*Gap Current vs 2023 Draft*
Operational Managers	1	1	1	0
Professional Nurse (Speciality)	0	2	3	3
Professional Nurses (General)	4	2	4	0
Enrolled Nursing Assistants/Staff Nurse	2	7	6	4
Pharmacy Assistant	1	1	2	1
Administration Clerk	1	1	3	2
General Assistant/ Property Caretaker	0	2	2	2
Cleaner	0	0	3	3

Table 10: Staffing Comparison: Current vs 2008 Organogram vs Draft Organogram 2023

In addition to the above staff employed at the facility, there are also 6 community health workers employed at the facility currently

8. Implementation Strategy

The strategic approach for the planning, delivery and management of this project is guided by the concept of the Infrastructure Delivery Management System (IDMS), the chosen government wide system for infrastructure delivery. In order to establish a common approach to infrastructure delivery across all organs of state, the National Treasury adopted the Standard for Infrastructure Procurement and Delivery Management (SIPDM). To give effect to the SIPDM the following guidelines were issued:

- Treasury Instructions Notes No. 4 of 2015/16 in terms of Public Finance Management Act (PFMA); and
- Circular 77 for Model Supply Chain Management (SCM) policy for infrastructure procurement and delivery management.

The Framework prescribes minimum requirements for the implementation of the IDMS through the Infrastructure Delivery Management processes consisting of portfolio, programme, projects, operations and maintenance of infrastructure; and Infrastructure Procurement Gates.

STAGE 1 - INITIATION

This Initiation report for the project defines project objectives, needs, acceptance criteria, organization's priorities and aspirations, procurement strategies, which sets out the basis for the development of the Concept Report.

Planning for the Proposed Projects under the Infrastructure programme focuses primarily on the Packaging" of projects, i.e., the identification of a "package" or scope to be implemented in one single contract.

The identification of a "package" or scope in one single contract is informed and guided by Need & priorities as determined by the U-Amp (User Asset Management Plan), IAMP (Infrastructure Asset Management Plan) and Strategic priorities of the Department as depicted in the IPMP (Infrastructure Programme Management Plan) and B5 project list. The Ntshele Clinic forms part of the list of identified facilities strategically prioritised for construction.

STAGE 2 - CONCEPT

The Concept Stage represents an opportunity for the development of different design concepts to satisfy the project requirements, as developed during Stage 1. It also presents, through the testing of alternative approaches, an opportunity to select a conceptual approach. The ultimate objective of this stage is to determine whether the project is viable to proceed, with respect to available budget, technical solutions, time frame and other information that may be required.

The Concept Report should as a minimum, provide the following information:

a) Document the initial design criteria, cost plan, design options and the selection of the preferred design option, or the methods and procedures required to maintain the condition of infrastructure for the project.
b) Establish the detailed brief, scope, scale, form and cost plan for the project, including, where necessary, the obtaining of site studies and construction and specialist advice.
c) Provide an indicative schedule for documentation and construction or maintenance services, associated with the project.
d) Include a site development plan, or other suitable schematic layouts of the works.
e) Describe the statutory permissions, funding approvals and utility approvals required to proceed with the works associated with the project.
f) Include a baseline risk assessment for the project, and a health and safety plan, which is a requirement of the Construction Regulations, issued in terms of the Occupational Health and Safety Act.
g) Contain a risk report linked to the need for further surveys, tests, other investigations and consents and approvals, if any, during subsequent stages and identified health, safety and environmental risk.

STAGE 3 - DESIGN DEVELOPMENT

The Design Development Report shall as necessary:

a) Develop in detail the approved concept to finalize the design and definition criteria.
b) Establish the detailed form, character, function and costings.
c) Define all components in terms of overall size, typical detail, performance and outline specification.
d) Describe how infrastructure or elements or components thereof are to function, how they are to be safely constructed, how they are to be maintained and how they are to be commissioned.
e) Confirm that the project scope can be completed within the budget or propose a revision to the budget.

STAGE 4 - DESIGN DOCUMENTATION

Design documentation provides the:

a) Production information that details, performance definition, specification, sizing and positioning of all systems and components that would enable construction.

b) Manufacture, fabrication and construction information for specific components of the work informed by the production information.

STAGE 5 - WORKS

The following is required for completion of the Works Stage:

a) Completion of the works is certified in accordance with the provisions of the contract; or
b) The goods and associated services are certified as being delivered in accordance with the provisions of the contract.

STAGE 6 – HANDOVER

The following activities shall be undertaken during the handover stage:

a) Finalize and assemble record information which accurately reflects the infrastructure that is acquired, rehabilitated, refurbished or maintained.
b) Hand over the works and record information to the user organization and if necessary, train end user staff in the operation of the works.

STAGE 7 - CLOSE OUT

The Close-Out Stage commences when the end user accepts liability for the works. It is complete when:

a) Record information is archived.
b) Defects certificates and certificates of final completion are issued in terms of the stipulated contractual obligations.

8.1 Statutory Permissions

For compliance with legislation e.g., heritage, flood line determination, National Building Regulations, environmental, occupational health and safety etc. and any constraints relating thereto an occupation certificate is to be obtained by the implementing agent from the relevant Municipal Building Control Office.

8.2 Procurement Strategy

The type of Infrastructure Improvements expected by the CLIENT lends this project to be delivered in accordance with a “design by employer” or “design & built” procurement strategy and a decision to proceed will depend on the evaluation and acceptance of the End of Stage 2 Deliverable, the Concept Report submitted by the Implementer.

8.3 Organisational Structure: Roles & Responsibilities

The Organizational structure outlines the management and coordinating structures for the implementation of this project including roles and responsibilities. These are guided by the Service Delivery Agreement between the Client and Implementing Agent and in terms of the IDMS FIDPM Project Life cycle End of Stage deliverables, the roles and responsibilities are as follows for this project:

8.3.1 The Client Is Responsible For

1) Initiation of the project - End of Stage 1 Deliverable, the Initiation report /Strategic Brief.
2) Receiving and approving the End of Stages 2 - 7 Deliverables from the IA.
3) Issuing instructions to the IA to proceed with every next stage of the Project.
4) Facilitate, conduct, administer and attend meetings to provide Value Engineering guidance and exercise oversight through all the cycles of the Project.
5) Attend monitoring meetings arranged by the IA to receive progress update on the Project.
6) Update the NDOH PMIS Database (National Department of Health Project Management Information System).

8.3.2 The Implementing Agent Is Responsible For

1) Receiving the End of Stage 1 Deliverable: The Initiation report /Strategic Brief from the CLIENT.
2) Submit to the CLIENT for approval, the End of Stages 2 - 7 Deliverables.
3) Receive from the CLIENT approval for the End of Stages 2 - 7 Deliverables.
4) Receive instructions from the CLIENT to proceed with every next stage of the Project.
5) Receive Value Engineering guidance from the CLIENT by attending meetings arranged by the Client and allow oversight through all the cycles of the Project.
6) Facilitate, conduct, and administer Monitoring meetings to provide progress updates to the CLIENT on the Project.

9. CONCLUSION/RECOMMENDATIONS

It is recommended that the new Ntshele clinic be built in accordance to the foregoing data captured in this document, and the Ideal Clinic standards and as per “IUSS Health Facilities Guides – Primary Healthcare Facilities” and National Department of Health “Primary healthcare package of service” March 2015, revised draft. ECDOH is to kickstart the process and budgeting for a full staff establishment, organisational structure and clinic operations in order to be fully operational by the time the construction of the facility has been completed.

10. REFERENCES

1) National Department of Health. 2018. Gazette No. 41419 21. Norms *and Standards Regulations applicable to different categories of Health Establishments.* Pretoria: Government Printing Works.
2) Office of Health Standards Compliance Domain 7:
3) Ideal Clinic Standards (refer to Ideal Clinic Manual - Version 19 (July 2020).
4) ICSM - Integrated Ideal Clinic Services Management Manual)
5) Circular 77 for Model Supply Chain Management (SCM) policy for infrastructure procurement and delivery management.
6) NDOH Template: Business Plan/Clinical Brief for Clinics or CHC's
7) StatsSA Census 2022 - https://census.statssa.gov.za/#/province/2/2
8) StatsSA Census 2022 Provinces at a Glance
9) StatsSA Statistical Release P0100 – Income and Expenditure of Household (2023/2023)
10) District Health Plan – OR Tambo District – 2024-25
11) Integrated development Plan OR Tambo District 2024-25
12) King Sabata Dalindyebo Local Municipality IDP (2024/25 Review)
13) King Sabata Dalindyebo Local Municipality – Annual Report (2020-21)
14) ECDOH Annual Performance Plan 2023/24
15) District Health Information System (DHIS) ECDOH Data Set

Large

Head Count 35 014

ORGANISATIONAL ESTABLISHMENT FOR 8 HOUR CLINIC

PURPOSE: TO PROVIDE IMPLEMENTATION OF PRIMARY HEALTH CARE CLINIC SERVICES

FUNCTIONS

1. Render Primary Health Care services
2. Render pharmaceutical services
3. Render administrative support services

1 Operational Manager PHC (Specialty)

SECTION: Primary Health Care SERVICES

PURPOSE: TO RENDER PRIMARY HEALTH CARE SERVICES

FUNCTIONS:

1. Provide preventive, promotive, curative and rehabilitative care to communities.
2. Provide PHC outreach services i.r.o households

3 Professional Nurse (Specialty) Grade 1-3
4 Professional Nurse (General) Grade 1-3
6 Staff Nurse Grade 1-3

SUB-SECTION: PHARMACEUTICAL SERVICES

PURPOSE: TO RENDER PHARMACEUTICAL SERVICES

FUNCTIONS:-

1. Provide dispensing and counseling service for patients

2 Pharmacist Assistant (Post basic)

SUB-SECTION:ADMINISTRATIVE

PURPOSE: TO RENDER ADMINI

FUNCTIONS

1. Provide registration data capt
2. Provide tele-communication
3. Provide administrative & data
4.. Do inventory control
5. Perform cleaning services

3 Administration Clerk L5
2 General Assistant L2
3 Cleaner L2

C4.3 GEOTECHNICAL INFORMATION

254 Walmer Boulevard
South End
Gqeberha (Port Elizabeth)
6001
P O Box 21842
Gqeberha, 6000
South Africa
T: +27 (0) 41 509 4800
E: gqeberha@srk.co.za
www.srk.co.za

09 October 2025
609782/LR1

Coega Development Corporation (Pty) Ltd

Attention: Miss Sinethemba Dlepu

Dear Sinethemba

Ntshele Clinic Geotechnical Investigation

1. Introduction

SRK Consulting (South Africa) (Pty) Ltd ('SRK') were appointed by the Coega Development Corporation (Pty) Ltd ('the Client') for geotechnical services for the proposed Good Hope, Ntshele and Mpozolo Clinics (Reference CDC-SCU-LET-743-24 dated 29 July 2024).

The Client requested that SRK Consulting (South Africa) (Pty) Ltd ('SRK') submit a revised cost proposal to conduct a geotechnical investigation for the proposed *Ntshele Clinic only*. The geotechnical investigations for the Good Hope and Mpozolo Clinics will be conducted at a later stage.

2. Scope of Work

Excavate four test pits (TPs) using a tractor-loaded backhoe (TLB), to a target depth of 3.0 m or shallower refusal, evenly spread across the site to assess the excavatability of the subsurface soil and/or bedrock horizons, and construction material quality.

Complete Dynamic Cone Penetrometer (DCP) tests adjacent to the test pit positions to a planned depth of 3.0 m or shallower refusal.

Record a detailed description of the exposed ground profile in the test pits.

Submit representative disturbed soil samples to SRK-approved soil testing laboratories to determine the following classification and characterisation properties:

- Particle size distribution.
- Clay content.
- Atterberg Limits
- Maximum dry density at optimum moisture content and saturated CBR
- Basson Index (aggressiveness to concrete and corrosiveness to steel)

Partners R Armstrong, P Aucamp, JS Bartels, CM Bauman, LI Boshoff, N Brien, PL Burmeister, T Claassen, LSE Coetser, CD Dalgliesh, IT Doku, M du Toit, BM Engelsman, R Gardiner, M Hinsch, SG Jones, W Jordaan, WC Joughin, DA Kilian, F Lake, JA Lake, LM Linzer, ML Maber, NG Macfarlane, I Mahomed, JI Mainama, HAC Meintjes, DH Mossop, RD O'Brien, VS Reddy, LC Shand, PJ Shepherd, T Shepherd, MJ Sim, LH Spies, JS Stiff, M van Huyssteen, AT van Zyl, ML Wertz

Directors R Armstrong, JI Mainama, TJ McGurk, VS Reddy, T Shepherd, JS Stiff, AT van Zyl

Associate Partners HJ Booysen, BF Cock, JR Dutchman, K King, AR Labrum, A Owens, N Rump, B Sahadeo, CF Steyn, C Tuitz, JF van Graan

Consultants JM Brown, *PrSci Nat*, JR Dixon, *PrEng*, GC Howell, *PrEng, PhD*, WC Joughin, *PrEng, MSc*, PR Labrum, *PrEng*, LM Linzer, *PrSci Nat, PhD*, SA Lorentz, *Agric. Eng, PhD*, RRW McNeill, *PrTech Eng*, HAC Meintjes, *PrEng, MSc*, PN Rosewarne, *PrSci Nat, MSc*, VM Simposya, *PrSci Nat*, TR Stacey, *PrEng, DSc*, DJ Venter, *PrTech Eng*, A Wood, *PrSci Nat, PhD*

SRK Consulting (South Africa) (Pty) Ltd Reg No 1995.012890.07

African Offices:

Cape Town	+ 27 (0) 21 659 3060
Durban	+ 27 (0) 31 279 1200
East London	+ 27 (0) 43 748 6292
Johannesburg	+ 27 (0) 11 441 1111
Pietermaritzburg	+ 27 (0) 33 347 5069
Gqeberha (Port Elizabeth)	+ 27 (0) 41 509 4800
Pretoria	+ 27 (0) 12 361 9821
Accra	+ 23 (3) 24 485 0928
Lubumbashi	+ 243 (0) 81 999 9775

Group Offices:
Africa
Asia
Australia
Europe
North America
South America
CESA

Compile an interpretive geotechnical report covering the following:

- Geological desktop study and stratigraphic overview.
- An assessment of groundwater and bedrock conditions (if present).
- A summary of the engineering properties of the soil derived from laboratory tests and classification of the materials.
- An assessment of the excavatability of the soil according to SANS 1200 specifications.
- Identification of potential problematic soil conditions on the site.
- Depth of refusal and nature of materials on site.
- The presence of groundwater/seepage.
- The anticipated use of the materials encountered on site.
- Foundation recommendations and allowable bearing capacity assessment.

3. Site Location and Description

The site is located within Ntshele, approximately 11.20 km southwest of Mthatha, Eastern Cape. The location is shown in Figure 3-1.



Figure 3-1: Site location

The site is divided by a fence, aligned north northwest and south southeast. The western half of the site includes two clinic buildings connected by an undercover walkway/seating area with an ablution block and buried septic tank located to the north of these structures. The space between structures and the eastern half of the site are grass covered, Figure 3-2. The topography slopes to the northwest at an approximate gradient of 1v 18h or 6°, which classifies as moderately sloping.



Figure 3-2: Site conditions, looking north

4. Nature of the Investigation

The TP refusal depths are summarised in Table 4-1 with the layout of the positions shown in Figure 4-1. The samples submitted for laboratory testing are summarised in Table 4-2.

Table 4-1: TP excavation details

TP ID	Excavated Depth (m)	Refusal		General comments
		Yes/No	Description	
TP01	1.30	Yes	On soft rock to medium hard rock sandstone	No groundwater intersected & excavation sidewalls were stable
TP02	1.40	Yes	On soft rock to medium hard rock sandstone	No groundwater intersected & excavation sidewalls were stable
TP03	0.75	Yes	On soft rock to medium hard rock sandstone	No groundwater intersected & excavation sidewalls were stable
TP04	0.85	Yes	On soft rock to medium hard rock sandstone	No groundwater intersected & excavation sidewalls were stable

Table 4-2: Sample submission

TP ID	Depth (m)	Sample ID	Sample Type	Test Requested
TP01	0.60 - 0.95m	TP01A	Disturbed (large)	FI, MDD, CBR
TP02	0.20 - 0.50m	TP02A	Disturbed (small)	FI, BI
TP02	0.40 - 1.10m	TP02B	Disturbed (large & small)	FI, MDD, CBR
TP03	0.30 – 0.75m	TP03A	Disturbed (large)	FI, MDD, CBR
TP03	0.30 - 0.75m	TP03B	Disturbed (small)	BI
TP04	0.25 – 0.50m	TP04A	Disturbed (large)	FI, MDD, CBR

Notes:
FI – Foundation Indicator
MDD – Maximum Dry Density at Optimum Moisture Content
CBR – California Bearing Ratio (saturated)
BI – Basson Index



Figure 4-1: TP layout

5. Results and Discussion

5.1. Excavatability

The TPs were excavated using a TLB.

The excavatability of the TPs has been assessed according to the categories outlined in South African National Standard (SANS) 1200 D for restricted excavations, included below as Table 5-1.

The TLB was unable to achieve the planned 3.0 m excavation depth at all the TPs due to the presence of *soft rock* to *medium hard rock* sandstone.

The soil horizons are classified as Soft excavation, the bedrock transitioning from Intermediate to Hard Rock excavation.

Weighted percentages of SANS 1200 D excavation categories have been estimated for a 1 m (representing a foundation) and 3 m excavation (representing a deep underground utility) across the site (Table 5-2).

Table 5-1: SANS 1200 D excavation classification

Classification	Description
Restricted excavations	
Soft	Material which can be efficiently removed by a back-acting excavator of fly wheel power >0.10 kW for each mm of tined bucket width
Intermediate	Material which can be removed by a back-acting excavator of fly wheel power >0.10 kW for each mm of tined bucket width or with the use of pneumatic tools before removal by a machine capable of removing soft material
Hard rock	Material that cannot be removed without blasting or wedging and splitting
Non-restricted excavations	
Soft	Material which can be efficiently removed or loaded, without prior ripping, by any of the following plant:
	a bulldozer or a track-type front end loader having an approximate mass of 22 tonne and fly wheel power of 145 kW
	a tractor-scraper unit having an approximate mass of 28 tonne and fly wheel power of 245 kW pushed during loading by a bulldozer equivalent to that described above
Intermediate	Material which can be efficiently ripped by a bulldozer having an approximate mass of 35 tonne and a fly wheel power of 220 kW
Hard rock	Material that cannot be efficiently ripped by a bulldozer having an approximate mass of 35 tonne and a fly wheel power of 220 kW
Boulder Class A	Material containing more than 40% by volume of boulders of size between 0.03 m^3 and 20 m^3 in a matrix of soft material or smaller boulders
Boulder Class B	Material containing 40% or less by volume of boulders of size between 0.03 m^3 and 20 m^3 in a matrix of soft material or smaller boulders

Table 5-2: Weighted percentage of SANS 1200 D excavation categories for various depths

Planned excavation depth (m)	SANS 1200 D		
	Soft	Intermediate	Hard Rock
1	75%	15%	10%
3	25%	11%	64%

5.2. Subsurface water

Groundwater was not intersected in the TPs, furthermore, no calcretisation or ferruginisation was observed, which is usually indicative of perched water table conditions.

5.3. Ground profile

5.3.1. Regional geology

The published geological map[1] of the area indicates that the site is underlain at depth by the Triassic-aged Katberg Formation, Tarkastad Subgroup, Beaufort Group of the Karoo Supergroup which conformably overlies the Adelaide Subgroup, Figure 5-1. The intrusive Jurassic-aged Karoo Dolerite Suite is prevalent in the region and occurs as an interconnected network of saucer-shaped sheets, dykes and sills. The Adelaide Subgroup rocks and intrusive dolerite were not intersected in the TPs.

The Katberg Formation is sandstone-rich, fine- to medium-grained and light brownish grey or greenish grey. and display crossbedding. The main sedimentary structures are horizontal lamination, trough cross-bedding and planar crossbedding.

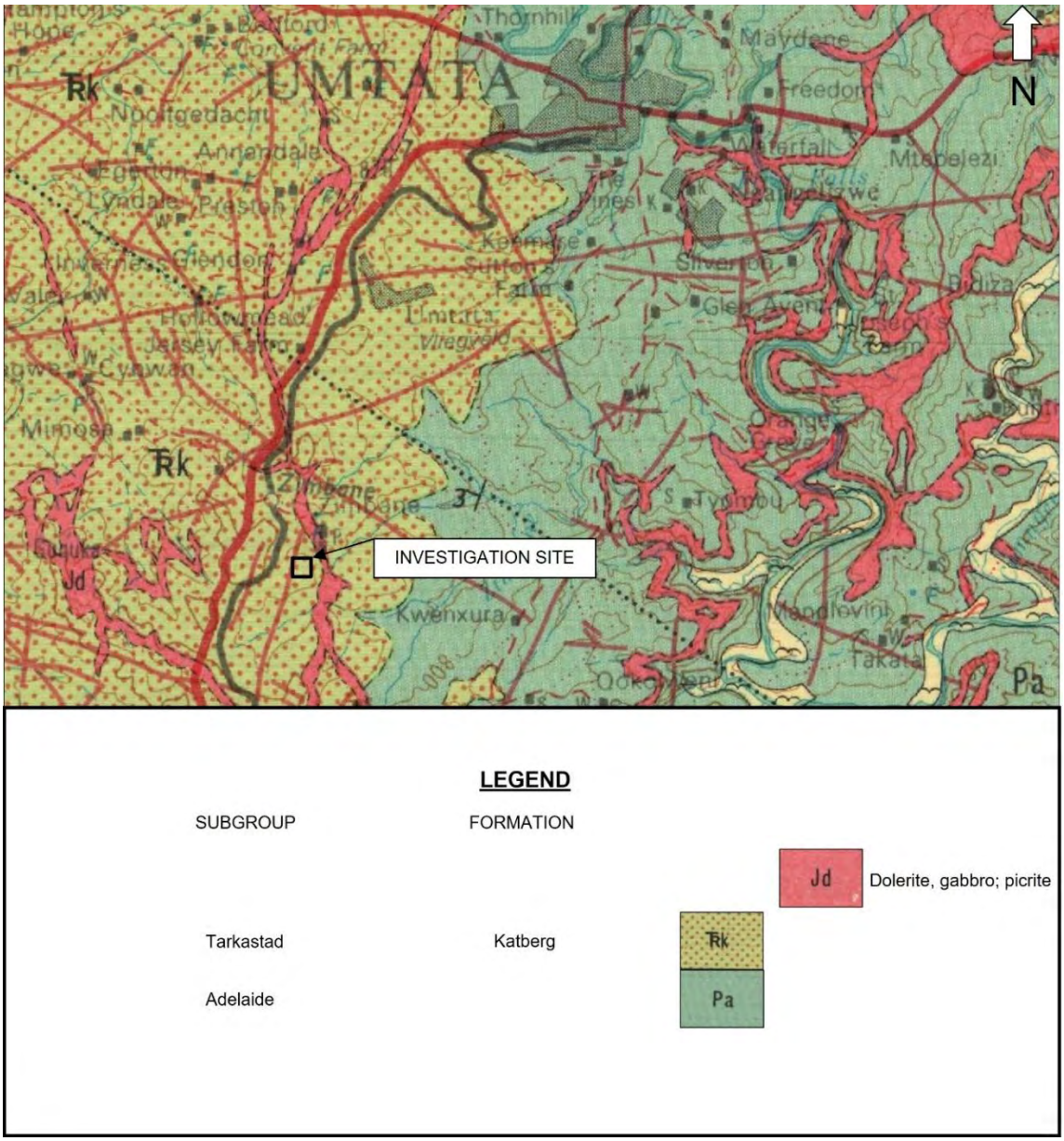


Figure 5-1: Geological Map

[1] Geological Survey, 1979, 1: 250 000 Geological Series, 3128 Umtata

5.3.2. Site

The detailed ground profile exposed in the TPs is summarised in Table 5-3. A typical ground profile is shown in Figure 5-2 with images showing excavated stockpiles of selected soil/rock layers included in Figure 5-3. The penetration rate of the DCP, used to derive the soil consistency/relative density of the soil layers, is shown in Figure 5-4.

In summary, the site is underlain by a sequence of soil horizons with improving, although variable, soil consistency/relative density overlying an assumed undulating bedrock contact, between 0.50 m and 1.10 m below surface. Soil consistency descriptions are provided in Table 5-4. The presence of gravel, cobbles and bedrock in the profile prevented DCP penetration to the target depth of 3.00 m.

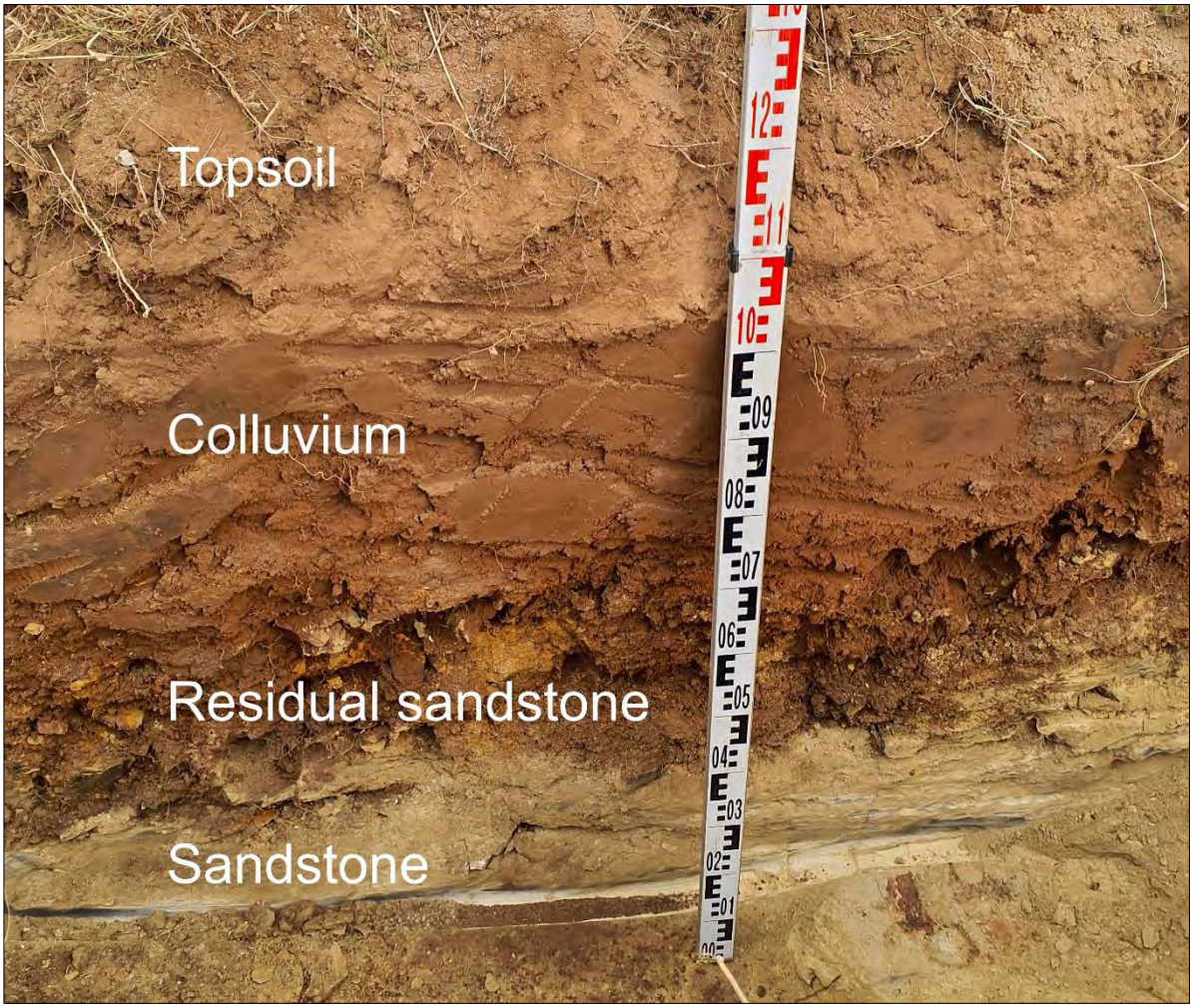


Figure 5-2: Cropped image of the sidewall exposed in TP01 showing the main soil horizons

Table 5-3: Ground profile

Layer ID	Description	Soil/rock type	Origin	*Soil consistency/estimated rock hardness*	Notes	Excavated depth to underside of layer or end of TP (m)			
						TP01	TP02	TP03	TP04
1	Dry to slightly moist, light to dark brown, pinholed, with abundant fine roots, fine-grained	silty SAND	Topsoil	*Loose to medium dense*	-	0.30	0.25	0.30	0.25
2	Moist, reddish to greyish brown, pinholed, with trace to moderate roots, fine-grained	silty SAND	Colluvium	*Medium dense*	-	0.60	0.50	-	-
3	Slightly moist to moist, reddish brown and yellowish brown patches, with moderate to abundant angular, gravel and cobble sized fragments of very soft to soft rock sandstone and trace fine roots, in fine-grained	clayey gravelly SAND	Residual Sandstone	*Medium dense to dense*	DCP refusal at TP02	0.95	1.10	0.55	-
4	Dry to slightly moist, yellowish brown patches, angular, gravel and cobble sized fragments of very soft to soft rock sandstone, in a fine-grained sandy clayey matrix	sandy clayey GRAVEL	Residual Sandstone	*Dense*	DCP refusal at TP04	-	-	-	0.50
5	Yellowish grey stained reddish brown, highly to moderately weathered, fine to medium grained, near horizontally bedded/laminated, fractured	SANDSTONE	Katberg Formation	*Very soft rock* to *soft rock,* becoming *medium hard rock* at refusal	DCP refusal at TP01	1.30+	1.40+	0.75+	0.85+

Notes: A DCP test was not conducted at TP03 due to the presence of gravel and cobbles



Figure 5-3: Typical images of the excavated stockpiles of Layer 2 (left), Layer 3 (left centre), Layer 4 (right centre) and layer 5 (right)

Table 5-4: DCP soil consistency descriptions for granular and cohesive soils (Look, 2007)

Material	Blows/100mm	Description
Sand	0-1	Very loose
	1-3	Loose
	3-8	Medium dense
	8-15	Dense
	>15	Very dense

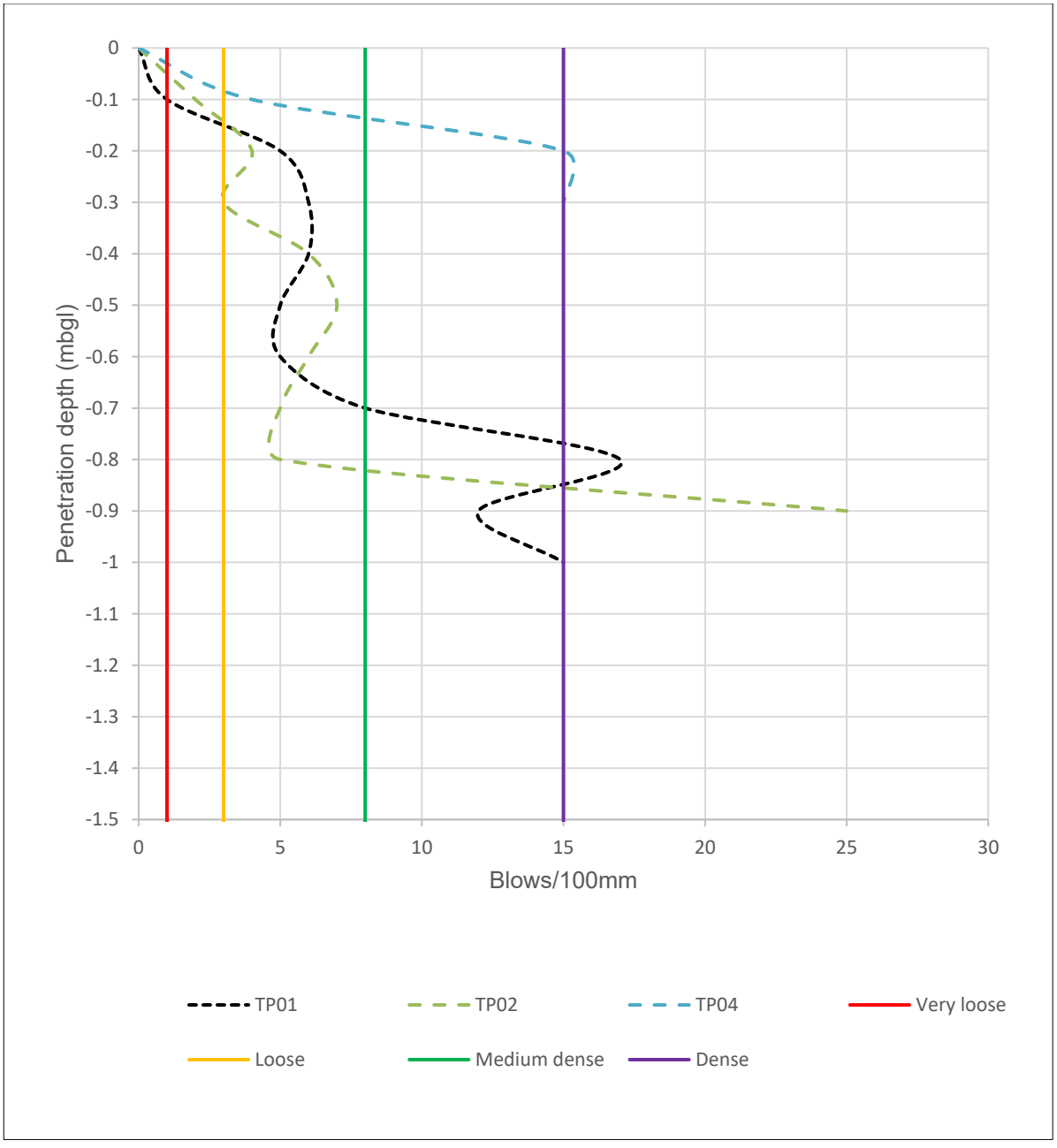


Figure 5-4: DCP penetration rate

5.4. Particle size distribution, plasticity and Unified Soil Classification System (USCS)

Five disturbed samples were collected and were submitted for foundation indicator testing i.e. particle size distribution, Atterberg Limits and clay content (hydrometer). The complete set of laboratory results is presented in Appendix C.

The particle size distribution curves with corresponding Unified Soil Classification System ('USCS') classifications are included in Figure 5-5. The Atterberg Limits indicate that the overall plasticity for all samples is Low.

The colluvium sample (TP02A) is classified as silty sand with moderate clay (SM). Sample TP03A (residual sandstone & sandstone mixture) is also classified as SM but with abundant gravel.

The remaining samples (TP01A, TP02B and TP04A), residual sandstone with or without excavated sandstone rock, range from silty gravel with sand (GM) to borderline poorly-graded sandy gravel with trace fines content (GP).

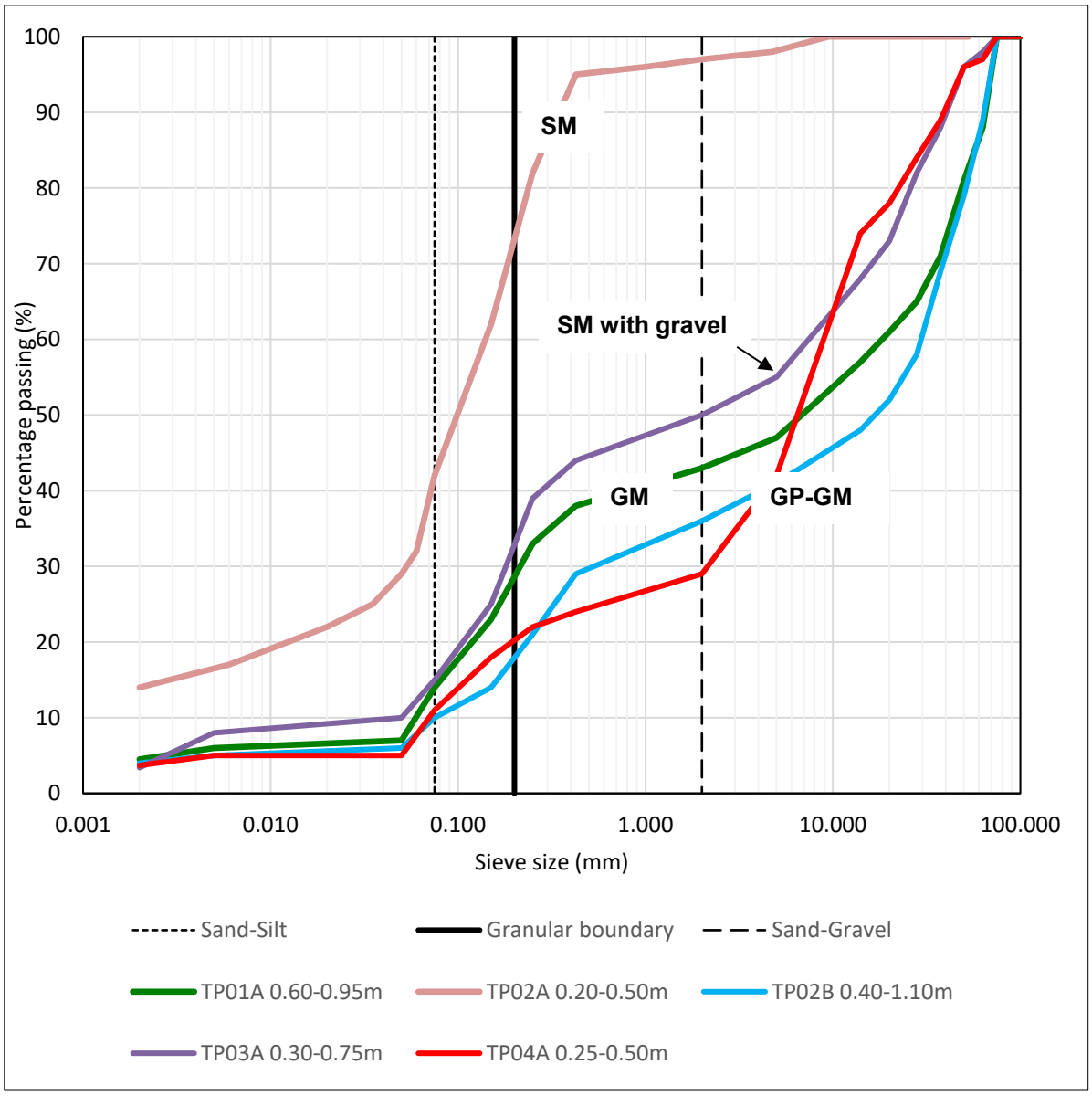


Figure 5-5: Particle size distribution curves

5.5. Basson index

The results from disturbed soil samples collected to determine the aggressivity towards buried concrete and corrosiveness towards buried steel are summarised in Table 5-5. Note that the results were derived using a 2:1 soil/water paste saturated in distilled water due to the absence of subsurface ground water.

The colluvium, residual sandstone and sandstone horizons are corrosive towards steel and very highly aggressive towards buried concrete.

Table 5-5: Basson index test results

Sample ID	From (m)	To (m)	Origin	Corrosivity Ratio	Corrosiveness	Aggressiveness Index	Overall Aggressiveness
TP02A	0.20	0.50	Colluvium	0.8	Corrosive	2275	Very high
TP03B	0.30	0.75	Mixed – Residual & Sandstone	0.7	Corrosive	2016	Very high

5.6. On site construction material

Four bulk disturbed samples were collected, two from residual sandstone and two from a mix of soil and rock and submitted for testing to determine the maximum dry density, optimum moisture content and saturated strength. The results are summarised in Table 5-6.

The SM material from TP03 is classified as G6 whilst the remaining GP-GM material is classified G7.

Table 5-6: MDD & CBR results

Sample ID	From (m)	To (m)	Origin	Grading Modulus	MDD (kg/m3)	OMC (%)	CBR 100%	CBR 98%	CBR 95%	CBR 93%	CBR 90%	MAASHTO Swell %	COTO (DS) 2020
TP01A	0.60	0.95	Residual Sandstone	2.05	2015	8.8	38	31	19	17	12	0.27	G7
TP02B	0.40	1.10	Mixed – Colluvium, Residual & Sandstone	2.24	2067	10.5	36	23	19	17	10	0.60	G7
TP03A	0.30	0.75	Mixed – Residual and Sandstone	1.91	2202	8.4	58	45	40	32	24	0.28	G6
TP04A	0.25	0.50	Residual Sandstone	2.36	2154	10.1	50	37	23	17	11	0.20	G7

5.7. Potentially problematic soils

The SAIEG recognises the following as problematic soils within South Africa:

- Soft clay;
- Dispersive soil;
- Collapsible soil;
- Pedogenic horizons; and
- Expansive clay.

5.7.1. Dispersive soil

Determining the dispersivity of the soil horizons was excluded from the schedule of tests as it is not applicable for an investigation of this type. However, the topsoil and colluvium (identified at TP01 & TP02) can be considered erodible, likely more by water than wind, due to the high fines content.

5.7.2. Collapsible soil

The topsoil and colluvium sand horizons are described as trace pinholed with larger voids due the presence of roots and root voids but are, however, not considered collapsible but rather compressible.

No other occurrences of problematic soils were noted during TP excavation and profiling.

6. Founding Conditions

The nature of the buildings is unknown save for the likelihood that they will be single storey. As a result, a strip foundation has been considered.

The allowable bearing capacity assessment is based on the geotechnical parameters, foundation geometry, founding level and expected in situ conditions outlined in Table 6-1. The DCP penetration rate indicates that the compressibility of the underlying soil horizons is low thus settlement is estimated to be low.

The proposed 0.6 m founding level exposes the residual sandstone horizon underlying the colluvium within the northern half of the site while the sandstone bedrock is exposed in the southern half. As a result, two scenarios were considered i.e. foundations cast within either the residual sandstone or sandstone bedrock. Design the foundations to accommodate an estimated allowable bearing not exceeding 180 kPa. *The estimated total settlement (total equals differential until proven otherwise) has been limited to ≤5 mm.*

Table 6-1: Assumed effective shear strength properties, foundation dimensions, founding level and ground water level

Description	Unit	Value	Notes
Friction angle			
GP-GM & SM	°	34	Horst Marker table
Triassic sandstone		35	Assumed (Look, 2007[2])
Cohesion	kPa	0	Assigned
Bulk density	kg/m^3	~1700 ~2200	Assumed - DCP results residual sandstone Assumed (Look, 2007)
Stiffness			
Medium dense sandy grave/gravelly sand	MPa	15	SRK E modulus table (conservative)
Very soft rock sandstone		75	
Founding level/overburden thickness			
Foundation	m	0.6	Recommended
Ground water level below foundation	m	0	Directly below the foundation
Foundation width			
Strip	m	0.6	Assumed
Foundation length			
Strip	m	6.0	Assumed

[2] Look, B. (2007). *Handbook of Geotechnical Investigation and Design Tables* (First ed.). London: Taylor & Francis Group.

7. Conclusions and Recommendations

7.1. Ground profile

The ground profile is characterised by a layer of topsoil (~0.25 m thick) overlying a colluvium soil horizon to a depth of ~0.55 m only at TP01 and TP02. The topsoil and colluvium unconformably overlie a residual soil horizon, derived from the in-situ weathering of the underlying sandstone bedrock to depths between 0.50m and 1.10m across the site. The sandstone bedrock transitions rapidly from *very soft rock* to at least *medium hard rock* quality upon which the excavations refused.

7.2. Subsurface water

It is unlikely that the ground water table will prove problematic. The evidence in the ground profile indicates downward filtration of surface stormwater. The deeper, permanent water table was not intersected in the excavations. However, in the event of heavy rainfall, water may temporarily perch on the soil/bedrock contact where localised depressions, not manifested in the natural ground level due to the soil cover, may be present.

7.3. Excavatability

The site is classified as soft excavation to an average depth of ~0.75 m (soil and *very soft rock* horizons – not problematic for foundation excavations), intermediate excavation to ~1.10 and hard rock excavation from ~1.10 m to 3.0 m (bedrock – problematic for deep utilities if required).

It is recommended that a TLB of at least the same size be used during construction. However, a larger 22t track-mounted excavator could reduce excavation time. A rock bucket and breaker should be available on site if the final design requires any deep excavation into the bedrock.

7.4. Slope instability

No unstable, natural slopes were observed on site.

Short term stability can be expected for vertical sidewalls. The topsoil and colluvium horizons, described as *loose* to *medium dense* have the potential of sloughing into an excavation. Stability should be monitored during construction.

7.5. Construction material

The COTO classification ranges from G6 to G7 for the residual sandstone, and mixed residual sandstone and excavated sandstone (~0.60 to ~1.40m depth in the vicinity of TP01 & TP02, and ~0.30 to 0.85m in the vicinity of TP03 and TP04). This material is suitable for use as selected material to subbase only, depending on final design requirements. G5 material and better will need to be imported from a commercial source.

7.6. Potentially problematic soils

Samples were not collected to determine dispersivity as this is not considered relevant to an investigation of this nature. However, the topsoil and colluvium exhibit a high fines content which suggests the potential for erosion by water. Measures must be taken to protect these horizons during construction, such as silt fencing and the use of plastic sheets. The site should be re-vegetated as soon as possible after construction.

The topsoil and colluvium were described as trace pinholed but are considered compressible rather than collapsible.

No occurrences of the other problematic soils were noted on site.

7.7. Founding conditions

Competent founding material is located below the colluvium in the northern half of the site, within the residual sandstone, between the average depths of 0.55 m and 1.0 m. In the southern half, sandstone bedrock is the recommended founding Horizon intersected below the residual sandstone from ~0.50 m. A 0.6 m foundation depth is recommended. This indicates that the structures will likely be founded within the residual soil horizon in the northern area of the site transitioning to sandstone bedrock southwards.

A strip foundation has been assessed though the footprint of certain structures (e.g. small, 5.0 m x 10.0 m) may result in a raft foundation being more feasible.

It is recommended to cast the foundations of an individual building within the same horizon to limit differential settlement as far as is practically possible i.e. if the residual sandstone horizon is intersected in certain sections of the foundation excavations and the sandstone in others, it is recommended to excavate the foundations deeper.

Compact the base of the trenches using a wacker compactor to create a level surface before casting either a blinding layer and/or placing the footings where the residual soil horizon is exposed. The particle size distribution, MDD, OMC and saturated CBR results indicate that problems with regards to compaction during construction, e.g. moisture sensitivity, are not expected. Sections where sandstone bedrock is exposed, merely remove the loose material.

All foundations must be reinforced to accommodate any potential differential settlement which may arise from variations in the ground profile.

It is recommended that all foundations be designed using a maximum allowable ground bearing capacity of 180 kPa.

All foundations must be inspected by a geotechnical professional prior to casting of the foundations.

Yours faithfully,

SRK Consulting (South Africa) (Pty) Ltd

Prepared by



Lyzander Parfitt Pr Sci Nat

Senior Engineering Geologist

Reviewed by



Brent Cock Pr Sci Nat

Principal Engineering Geologist

Approved by



John Brown Pr Sci Nat

Corporate Consultant

Disclaimer

The opinions expressed in this Report have been based on the information supplied to SRK Consulting (South Africa) (Pty) Ltd (SRK). SRK has exercised all due care in reviewing the supplied information. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this report apply to the site conditions and features as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report, about which SRK had no prior knowledge nor had the opportunity to evaluate.

Appendices

Appendix A: Detailed ground profiles

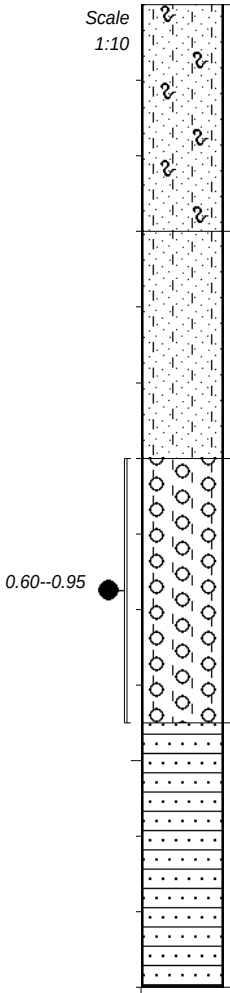
srk consulting

Coega Development Corporation
Ntshele Clinic
Geotechnical Investigation

HOLE No: TP01
Sheet 1 of 1

JOB NUMBER: 609782

Scale 1:10



0.00

Dry to slightly moist, reddish brown, loose to medium dense, trace pinholed, moderately silty, fine SAND with abundant fine roots. Topsoil.

0.30

Moist, dark reddish brown, medium dense, trace pinholed, slightly silty, fine SAND with trace fine roots. Colluvium.

0.60

Moist, reddish brown with orange patches, medium dense to dense, matrix-supported, silty, fine to medium sand, fine to coarse, angular GRAVEL of sandstone with trace cobbles. Residual Sandstone.

0.95

Light yellowish grey stained reddish brown, highly to moderately weathered, very thinly bedded, jointed, very soft rock to soft rock, SANDSTONE. KATBERG FORMATION.

1.30

NOTES

1) Refusal at 1.30 m.
2) No water seepage.
3) Disturbed sample taken at 0.60--0.95 m.

CONTRACTOR : Plus Plant
MACHINE : TLB
DRILLED BY :
PROFILED BY : PARL

TYPE SET BY : PARL
SETUP FILE : STANDARD.SET

INCLINATION : VERTICAL
DIAM :
DATE :
DATE : 28 August 2025

DATE : 09/10/2025 11:49
TEXT : ..linicTestpitProfiles.txt

ELEVATION : WGS 84
X-COORD : 28˚43'24.53"
Y-COORD : 31˚40'17.29"S

HOLE No: TP01

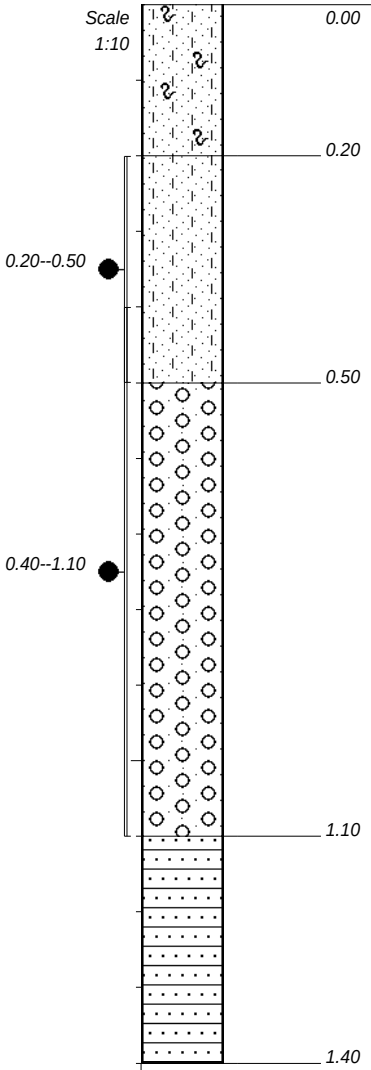
srk consulting

Coega Development Corporation
Ntshele Clinic
Geotechnical Investigation

HOLE No: TP02
Sheet 1 of 1

JOB NUMBER: 609782

Scale 1:10



0.00

Dry to slightly moist, light greyish brown, loose to medium dense, trace pinholed, moderately silty, fine SAND with abundant fine roots. Topsoil.

0.20

Moist, dark greyish brown, loose to medium dense, trace pinholed, silty, fine SAND with moderate clay and trace to moderate fine roots. Colluvium.

0.50

Moist to very moist, yellowish brown with orange patches, medium dense to dense, matrix-supported, fine to coarse sandy, fine to coarse, angular GRAVEL of sandstone with trace silt and cobbles. Residual Sandstone.

1.10

Light yellowish grey stained reddish brown, highly to moderately weathered, bedded, jointed, very soft rock to soft rock, SANDSTONE. KATBERG FORMATION.

1.40

NOTES

1) Refusal at 1.30 m.
2) No water seepage.
3) Disturbed small sample taken at 0.20--0.50 m.
4) Disturbed bulk sample taken at 0.40--1.10 m.

CONTRACTOR : Plus Plant
MACHINE : TLB
DRILLED BY :
PROFILED BY : PARL

TYPE SET BY : PARL
SETUP FILE : STANDARD.SET

INCLINATION : VERTICAL
DIAM :
DATE :
DATE : 28 August 2025

DATE : 09/10/2025 11:49
TEXT : ..linicTestpitProfiles.txt

ELEVATION : WGS 84
X-COORD : 28°43'25.77"E
Y-COORD : 31°40'16.46"S

HOLE No: TP02

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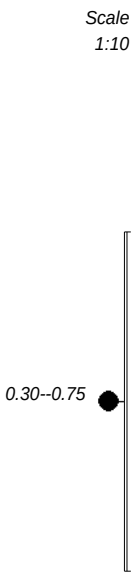
Coega Development Corporation
Ntshele Clinic
Geotechnical Investigation

HOLE No: TP03
Sheet 1 of 1

JOB NUMBER: 609782

Scale 1:10



0.30--0.75

0.00

Dry to slightly moist, greyish brown, loose to medium dense, trace pinholed, moderately silty, fine SAND with abundant fine roots. Topsoil.

0.30

Slightly moist, reddish brown with orange patches, medium dense to dense, structureless, fine to coarse, angular gravelly, fine to coarse SAND with trace cobbles. Residual Sandstone.

0.55

Light yellowish grey stained reddish brown, highly to moderately weathered, bedded, jointed, very soft rock to soft rock, SANDSTONE with trace rounded gravel inclusions. KATBERG FORMATION.

0.75

NOTES

1) Refusal at 0.75 m.

2) No water seepage.

3) Disturbed bulk sample taken at 0.30--0.75 m.

CONTRACTOR : Plus Plant
MACHINE : TLB
DRILLED BY :
PROFILED BY : PARL

TYPE SET BY : PARL
SETUP FILE : STANDARD.SET

INCLINATION : VERTICAL
DIAM :
DATE :
DATE : 28 August 2025

DATE : 09/10/2025 11:49
TEXT : ..linicTestpitProfiles.txt

ELEVATION : WGS 84
X-COORD : 28°43'26.56"E
Y-COORD : 31°40'17.95"S

HOLE No: TP03

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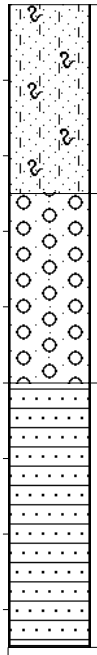
Coega Development Corporation
Ntshele Clinic
Geotechnical Investigation

HOLE No: TP04
Sheet 1 of 1

JOB NUMBER: 609782

Scale 1:10



0.25--0.50

0.00

Slightly moist, greyish brown, medium dense, trace pinholed, moderately silty, fine SAND with abundant fine roots. Topsoil.

0.25

Dry to slightly moist, dark yellowish brown with orange patches, dense, matrix-supported, fine to coarse sandy, fine to coarse, angular GRAVEL of sandstone with trace silt and cobbles. Residual Sandstone.

0.50

Light yellowish grey stained reddish brown, highly to moderately weathered, intensely laminated, jointed, very soft rock to soft rock, SANDSTONE with trace fine roots along joints. KATBERG FORMATION

0.85

NOTES

1) Refusal at 0.85 m.

2) No water seepage.

3) Disturbed bulk sample taken at 0.25--0.50 m.

CONTRACTOR : Plus Plant
MACHINE : TLB
DRILLED BY :
PROFILED BY : PARL

TYPE SET BY : PARL
SETUP FILE : STANDARD.SET

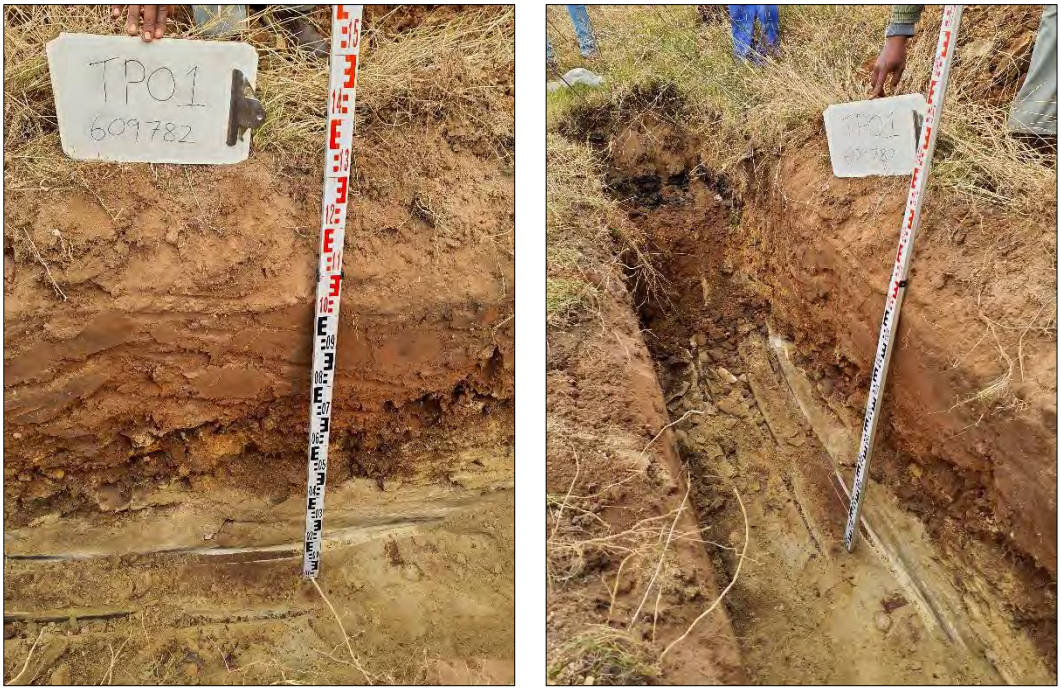
INCLINATION : VERTICAL
DIAM :
DATE :
DATE : 28 August 2025

DATE : 09/10/2025 11:49
TEXT : ..linicTestpitProfiles.txt

ELEVATION : WGS 84
X-COORD : 28˚43'24.89"E
Y-COORD : 31˚40'18.16"S

HOLE No: TP04

Appendix B: Photographs



TP01 excavation

srk consulting	**NTSHELE CLINIC GEOTECHNICAL INVESTIGATION**	Project No. 609782



TP02 Excavation

srk consulting	**NTSHELE CLINIC GEOTECHNICAL INVESTIGATION**	Project No. 609782



TP03 excavation

srk consulting	**NTSHELE CLINIC GEOTECHNICAL INVESTIGATION**	Project No. 609782



TP04 excavation

srk consulting	**NTSHELE CLINIC GEOTECHNICAL INVESTIGATION**	Project No. 609782

Appendix C: Laboratory results

ROADLAB

Roadlab Mthatha
03 Zanemali Road, Vulindlela Heights
5099
Tel: 073 270 2713/082 609 6118 Fax: -
Email: briant@roadlab.co.za/claire@roadlab.co.za
Web: www.roadlab.co.za

Job Request No.: RMTSRK001 - MTR01584 - 2025
Client Ref.No.: N/S
Date Reported : 04/09/2025

SRK Consulting (SA) (Pty) Ltd
254 Walmer Boulevard
South End
Gqeberha (PE)

Project : Ntshele Clinic

Attention : Lyzander Parfitt

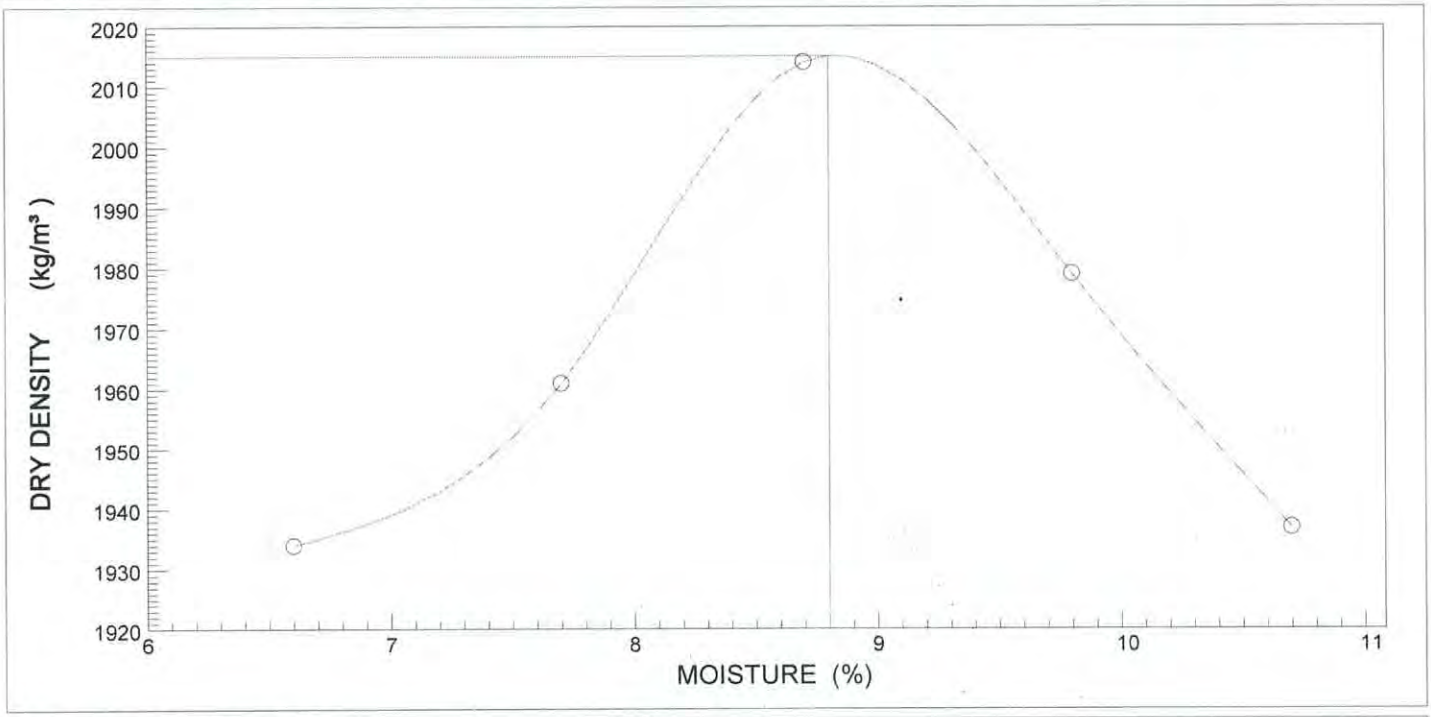
Determination maximum dry density and optimum moisture content

SANS 3001 - GR30/ GR31/ GR20

SAMPLE NO.	Sample No: 0638
CONTAINER FOR SAMPLING	Sampling Plastic Bag
SIZE / APPROX. MASS OF SAMPLE	40kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.60 - 0.95
MATERIAL DESCRIPTION	Dark Brown Gravelly Sand
HOLE NO./ km / CHAINAGE	TP01A
ROAD NO.	Ntshele Clinic
DATE RECEIVED	28/08/2025
DATE SAMPLED	28/08/2025
CLIENT MARKING	Sample No: 0638
COLOUR AND TYPE	Dark Brown Gravelly Sand

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	1934	1961	2014	1979	1937			
MOISTURE (%)	6.6	7.7	8.7	9.8	10.7			

MAXIMUM DRY DENSITY (kg/m³) : 2015	OPTIMUM MOISTURE CONTENT (%) : 8.8



Deviation from Test Method : N/A
Remarks and Notes : N/A

Opinions and interpretations are not included in our schedule of accreditation.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM)
The test results reported relate to the samples tested.
Further use of the above information is not the responsibility or liability of Roadlab
Document may only be reproduced of published in their full context.
Report compiled by : Claire

Mr Brian Taleli
Manager

Prog.ver 10.7 (2019/11/07)

ROADLAB MTHATHA (PTY) TLD
CIVIL MATERIALS LABORATORY
REGISTRATION: 2024/024827/07

3 ZANEMALI ROAD, VULINDLELA HEIGHTS
073 270 2713
BRIANT@ROADLAB.CO.ZA

RMTSRK001 - MTR1584 - 2025 Client Ref Date Reported : 09/09/2025

SRK Consulting South Africa (Pty) Ltd
254 Walmer Boulervard
South End
Gqeberha (PE)

Attention: Lyzander Parfitt

Dear Sir

Test Report: 609782 Ntshele Clinic

Please find the attached test results for the sample/s as submitted to and tested by Roadlab (Pty)Ltd
The unambiguous description of the sample/s as received are as follows :

SAMPLE INFORMATION & PROPERTIES					
SAMPLE No.		Sample No: 0638			
CONTAINER USED FOR SAMPLING		Plastic Bags			
SIZE / WEIGHT OF SAMPLE		+-80kg's			
MOISTURE CONDITION OF SAMPLE ON ARRIVAL		Slightly Moist			
HOLE No. / Km. / CHAINAGE		TP01A			
ROAD NO OR NAME		609782 Ntshele Clinic			
LAYER TESTED / SAMPLED FROM		0.60 - 0.95			
DATE SAMPLED		28/08/2025			
DATE RECEIVED		28/08/2025			
CLIENTS MARKING		Residual			
DESCRIPTION OF SAMPLE (COLOUR & TYPE)		Dark Brown Gravelly Sand			
GRADING ANALYSIS - % PASSING SIEVES (SANS 3001-GR1:2010;SANS 3001-GR2:2010)					
SIEVE ANALYSIS (SANS GR1:2010)	100.0	100			
	75.0	100			
	63.0	88			
	50.0	81			
	37.5	71			
	28.0	65			
	20.0	61			
	14.0	57			
	5.0	47			
	2.00	43			
	0.425	38			
	0.075	14			
SANS 3001 - PR5					
Soil Mortar		43			
Coarse Sand		10.7			
Fine Sand		57			
Coarse Fine Sand		12			
Medium Fine Sand		23			
Fine Fine Sand		22			
Silt & Clay		32			
Coarse Sand Ratio		0.11			
ATTERBERG LIMITS ANALYSIS (SANS 3001-GR10:2010;SANS 3001-GR11:2010)					
ATTERBERG LIMITS (SANSGR10;GR11)	LL%				
	P.I.	NP			
	LS%				
GM		2.05			
CLASSIFI - CATION	H.R.B.*	A-1-b(0)			
	COLTO*	G7			
	T.R.H. 14*	G8			
CALIFORNIA BEARING RATIO (SANS 3001-GR30:2010;SANS 3001-GR40:2010)					
MOD AASHTO (SANS GR30)	OMC%	8.8			
	MDD(KG/M^3)	2015			
C.B.R.	COMP MC	8.8			
	% SWELL	0.27			
C.B.R. (SANS GR40)	100%	38			
	98%	31			
	97%	23			
	95%	19			
	93%	17			
	90%	12			
MOD ITS : DRY (kPa) (GR54)		N/S			
PROCTOR ITS : DRY (kPa)		N/S			
STABILISED WITH	IN LAB	N/S			
	ON SITE	Neat			
TEST TYPE		MOD/CBR/IND			
SAMPLED BY		Client			
DELIVERED BY		Client			
SAMPLING METHOD		**Not Specified**			
ENVIRONMENTAL CONDITION WHEN SAMPLED		Not Specified			
REMARKS & NOTES		None			

Kind Regards

Mr. B. Taleli
Manager

Remarks :
*Opinions & Interpretations are not included in our schedule of Accreditation
SANAS Accredited Laboratory No. T 0296
The samples were subjected to analysis according to SANS 3001
The results reported relate only to the sample tested
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Compiled By : Claire Ngqovu

ROADLAB MTHATHA (PTY) TLD
CIVIL MATERIALS LABORATORY
REGISTRATION: 2024/024827/07

3 ZANEMALI ROAD, VULINDLELA HEIGHTS
073 270 2713
BRIANT@ROADLAB.CO.ZA

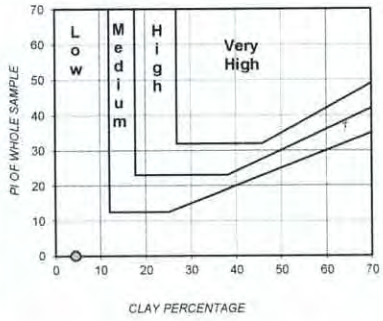
OUR REF : MTR01584
CLIENT : SRK Consulting (SA) (Pty) Ltd
PROJECT : Ntshele Clinic

DATE RECEIVED : 28/08/2025
POSITION : TP01A
LAYER : 0.60 - 0.95
SAMPLE No. : 638
SAMPLE DESCRIPTION : Dark Brown Sandy Gravel

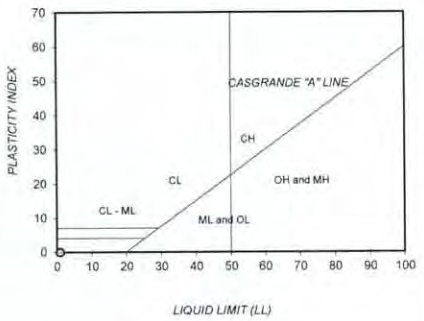
FOUNDATION INDICATOR - (SANS 3001-GR1, SANS 3001-GR10) & (ASTM Method D422)

Weighted PI		-
Sieve analysis Cumulative percentage passing (mm)	100.0	100
	75.0	100
	63.0	88
	50.0	81
	37.5	71
	28.0	65
	20.0	61
	14.0	57
	5.00	47
	2.000	43
	0.425	38
	0.250	33
	0.150	23
	0.075	14
	50 µm	7
	5 µm	6
	2 µm	4.5
Soil Mortar Analysis % < 2.00mm	2.000 - 0.425	11
	0.425 - 0.250	12
	0.250 - 0.150	23
	0.150 - 0.075	22
	< 0.075	32
Effective size		0.061
Uniformity Coefficient		303.8
Curvature Coefficient		0.0
Oversize Index		29.3
Shrinkage Product		0
Grading Coefficient		10.6
Grading modulus		2.05
Atter-berg Limits	Liquid Limit	-
	Plasticity Index	NP
	Linear Shrinkage	-
	PI < 0.075	-
Unified Soil Classification		GM
U.S. Highway Classification		A-1-b (0)

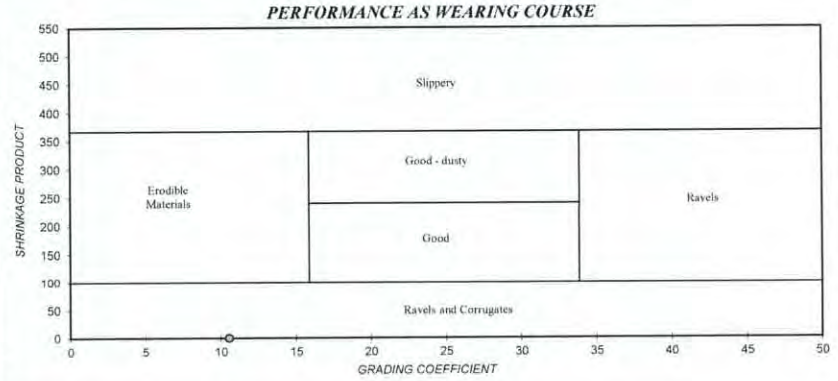
POTENTIAL EXPANSIVENES



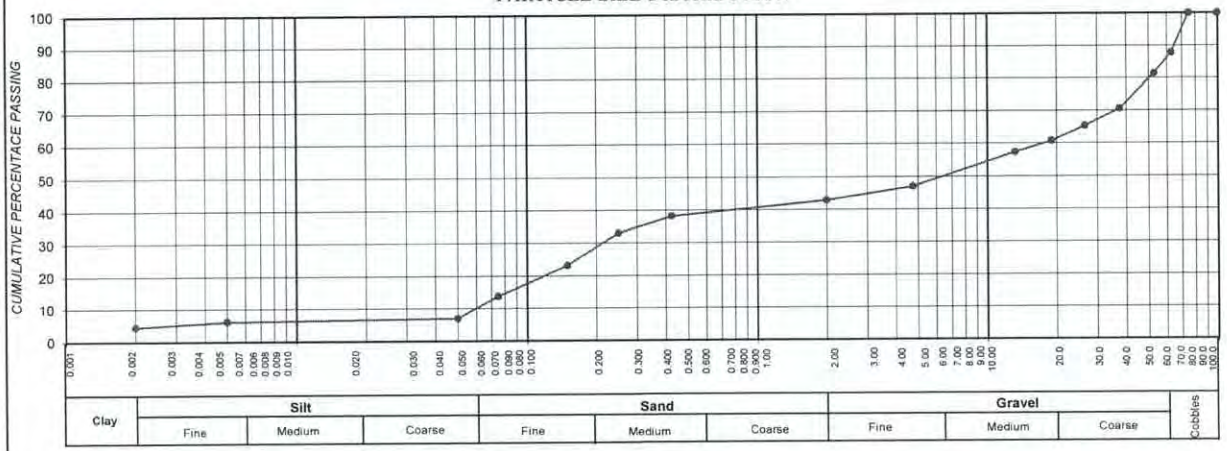
PLASTICITY CHART



PERFORMANCE AS WEARING COURSE



PARTICLE SIZE DISTRIBUTION



CLAY (%) (0.001-0.002)	SILT (%) (0.002-0.060)	SAND (%) (0.060-2.00)	GRAVEL (%) (2.00-60.0)
4.5	3.9	34.4	57.2

Note: * - indicates tests that are not accredited

RLG.s.028.01

Specialised Testing Laboratory (Pty) Ltd
Asphalt | Aggregate | Bitumen | Geotechnical
Quality | Excellence | On Time

Unit 1, 13 Bloubokkie Street, Koedoespoort 0186
Roelof | 072 674 6343 | roelof@stlab.co.za
Gerrie | 082 309 4448 | gerrie@stlab.co.za
www.stlab.co.za

Client Name: SRK Consulting
Project Name: 609782: Ntshele Clinic
Job Number: SRK-251
Date: 2025-09-26
Method: SANS 3001 GR1, GR3, GR10 GR12 & BS 1377 (where applicable)

FOUNDATION INDICATOR

Sheet Reference: R-STL-011 Rev02

Grading & Hydrometer Analysis (Particle Size (mm) & % Passing)				**Atterberg Limits & Classification**			
Sample	TP02A - Sand - Collivium			Sample	TP02B - Sand - Collivium		
Depth (m)	0.2 - 0.5			Depth (m)	0.2 - 0.5		
Lab No	SRK-251-4965			Lab No	SRK-251-4965		
53.0	**100**			Liquid Limit (%)	**18**		
37.5	**100**			Plastic Limit (%)	**15**		
26.5	**100**			Plasticity Index (%)	**3**		
19.0	**100**			Linear Shrinkage (%)	**1.5**		
13.2	**100**			PI of whole sample	**3**		
9.5	**100**						
6.7	**99**			% Gravel	**3**		
4.75	**98**			% Sand	**65**		
2.00	**97**			% Silt	**18**		
1.00	**96**			% Clay	**14**		
0.425	**95**			Activity	**0.2**		
0.250	**82**						
0.150	**62**			% Soil Mortar	**97**		
0.075	**42**						
0.060	**32**			Grading Modulus	**0.66**		
0.050	**29**			Moisture Content (%)	**N / T**		
0.035	**25**			Relative Density (SG)*	**2.65**		
0.020	**22**						
0.006	**17**			Unified (ASTM D2487)	**SM**		
0.002	**14**			AASHTO (M145-91)	**A - 4**		

Remarks: *: Assumed
N / T: Not Tested

Although everything possible is done to ensure testing is performed accurately, neither Specialised Testing Laboratory (Pty) Ltd nor any of its directors, managers, employees or contractors can be held liable for any damages whatsoever arising from any error made in performing any tests, nor from any conclusions drawn therefrom. Test results are to be published in full. Samples will be kept for 1 month after the submission of test results due to limited storage space, unless other arrangements are in place.
Confidentiality statement: Unless the release of information is required by law or covered by confidentiality agreements all information obtained or created during the performance of laboratory activities will be kept confidential.

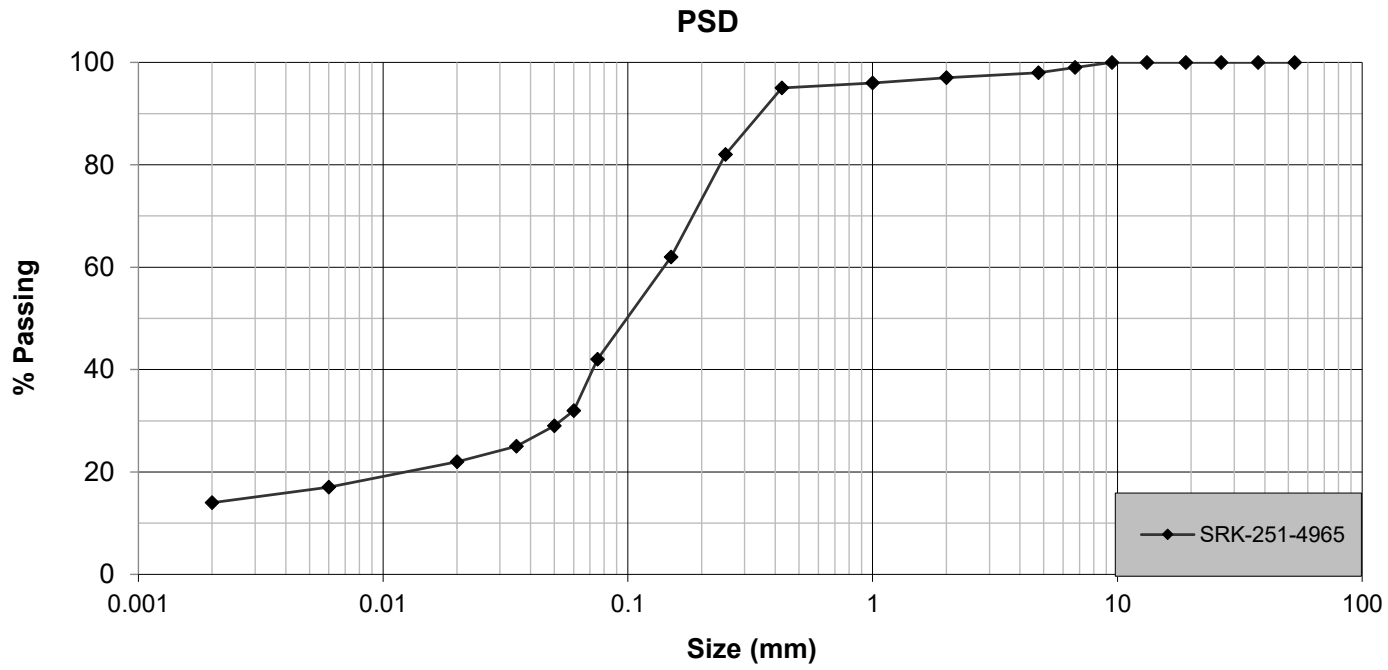
Specialised Testing Laboratory (Pty) Ltd
Asphalt | Aggregate | Bitumen | Geotechnical
Quality | Excellence | On Time

Unit 1, 13 Bloubokkie Street, Koedoespoort 0186
Roelof | 072 674 6343 | roelof@stlab.co.za
Gerrie | 082 309 4448 | gerrie@stlab.co.za
www.stlab.co.za

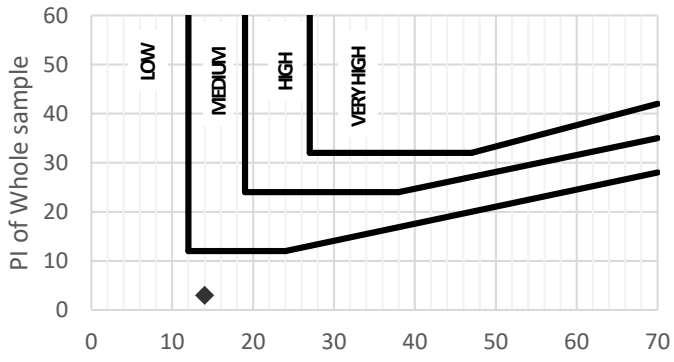
Client Name: SRK Consulting
Project Name: 609782: Ntshele Clinic
Job Number: SRK-251
Date: 2025-09-26
Method: SANS 3001 GR1, GR3, GR10 GR12 & BS 1377 (where applicable)

FOUNDATION INDICATOR

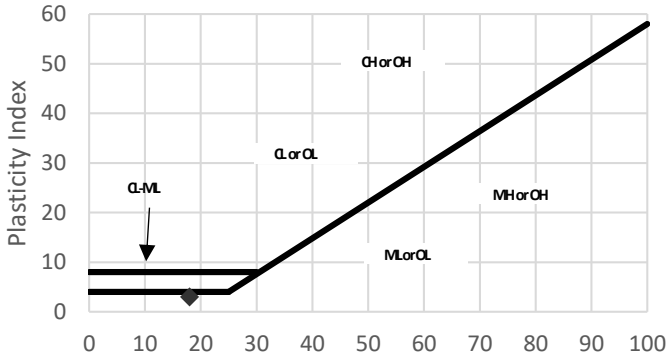
Sheet Reference: R-STL-011 Rev02



Potential Expansiveness



Casagrande Plasticity Chart



Although everything possible is done to ensure testing is performed accurately, neither Specialised Testing Laboratory (Pty) Ltd nor any of its directors, managers, employees or contractors can be held liable for any damages whatsoever arising from any error made in performing any tests, nor from any conclusions drawn therefrom. Test results are to be published in full. Samples will be kept for 1 month after the submission of test results due to limited storage space, unless other arrangements are in place.
Confidentiality statement: Unless the release of information is required by law or covered by confidentiality agreements all information obtained or created during the performance of laboratory activities will be kept confidential.

ROADLAB

Roadlab Mthatha
03 Zanemali Road, Vulindlela Heights
5099
Tel: 073 270 2713/082 609 6118 Fax: -
Email: briant@roadlab.co.za/claire@roadlab.co.za
Web: www.roadlab.co.za

Job Request No.: RMTSRK001 - MTR01584 - 2025
Client Ref.No.: N/S
Date Reported : 04/09/2025

SRK Consulting (SA) (Pty) Ltd
254 Walmer Boulevard
South End
Gqeberha (PE)

Project : Ntshele Clinic

Attention : Lyzander Parfitt

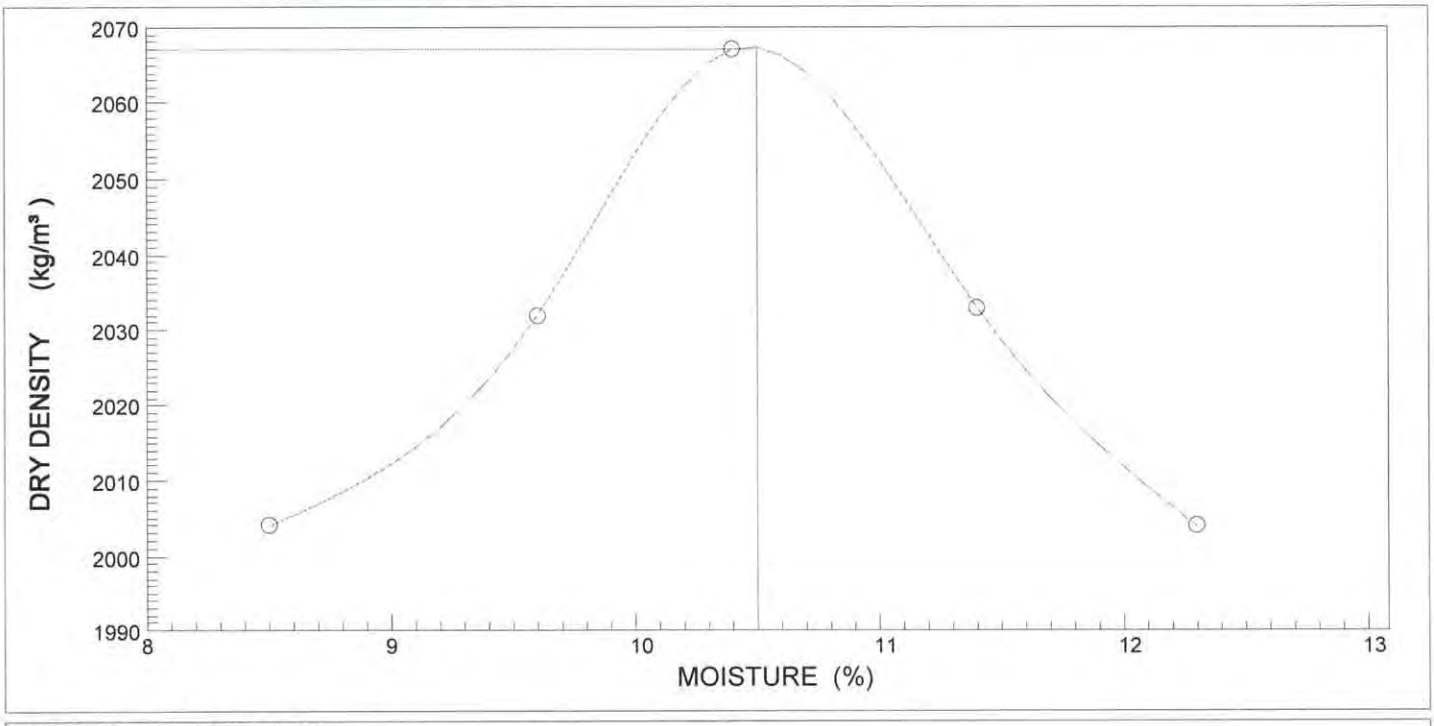
Determination maximum dry density and optimum moisture content

SANS 3001 - GR30/ GR31/ GR20

SAMPLE NO.	Sample No: 0639
CONTAINER FOR SAMPLING	• Sampling Plastic Bag
SIZE / APPROX. MASS OF SAMPLE	40kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.40 - 1.10
MATERIAL DESCRIPTION	Yellowish White Gravelly Sand
HOLE NO./ km / CHAINAGE	TP02B
ROAD NO.	Ntshele Clinic
DATE RECEIVED	28/08/2025
DATE SAMPLED	28/08/2025
CLIENT MARKING	Sample No: 0639
COLOUR AND TYPE	

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2004	2032	2067	2033	2004			
MOISTURE (%)	8.5	9.6	10.4	11.4	12.3			

MAXIMUM DRY DENSITY (kg/m³) : 2067	OPTIMUM MOISTURE CONTENT (%) : 10.5



Deviation from Test Method : N/A
Remarks and Notes : N/A

Opinions and interpretations are not included in our schedule of accreditation.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM)
The test results reported relate to the samples tested.
Further use of the above information is not the responsibility or liability of Roadlab
Document may only be reproduced of published in their full context.
Report compiled by : Claire

Mr Brian Taeli
Manager

Prog.ver 10.7 (2019/11/07)

ROADLAB MTHATHA (PTY) TLD
CIVIL MATERIALS LABORATORY
REGISTRATION: 2024/024827/07

3 ZANEMALI ROAD, VULINDLELA HEIGHTS
073 270 2713
BRIANT@ROADLAB.CO.ZA

RMTSRK001 - MTR1584 - 2025 Client Ref Date Reported : 09/09/2025

SRK Consulting South Africa (Pty) Ltd
254 Walmer Boulervard
South End
Gqeberha (PE)

Attention: Lyzander Parfitt

Dear Sir

Test Report: 609782 Ntshele Clinic

Please find the attached test results for the sample/s as submitted to and tested by Roadlab (Pty)Ltd
The unambiguous description of the sample/s as received are as follows :

SAMPLE INFORMATION & PROPERTIES					
SAMPLE No.		Sample No: 0639			
CONTAINER USED FOR SAMPLING		Plastic Bags			
SIZE / WEIGHT OF SAMPLE		+-80kg's			
MOISTURE CONDITION OF SAMPLE ON ARRIVAL		Slightly Moist			
HOLE No. / Km. / CHAINAGE		TP02B			
ROAD NO OR NAME		609782 Ntshele Clinic			
LAYER TESTED / SAMPLED FROM		0.40 - 1.10			
DATE SAMPLED		28/08/2025			
DATE RECEIVED		28/08/2025			
CLIENTS MARKING		Mixed			
DESCRIPTION OF SAMPLE (COLOUR & TYPE)		Yellowish, White Gravelly Sand Material			
GRADING ANALYSIS - % PASSING SIEVES (SANS 3001-GR1:2010;SANS 3001-GR2:2010)					
SIEVE ANALYSIS (SANS GR1:2010)	100.0	100			
	75.0	100			
	63.0	89			
	50.0	79			
	37.5	69			
	28.0	58			
	20.0	52			
	14.0	48			
	5.0	41			
	2.00	36			
	0.425	29			
	0.075	10			
SANS 3001 - PR5					
Soil Mortar		36			
Coarse Sand		19.1			
Fine Sand		52			
Coarse Fine Sand		21			
Medium Fine Sand		20			
Fine Fine Sand		11			
Silt & Clay		28			
Coarse Sand Ratio		0.19			
ATTERBERG LIMITS ANALYSIS (SANS 3001-GR10:2010;SANS 3001-GR11:2010)					
ATTERBERG LIMITS (SANSGR10;GR11)	LL%	32			
	P.I.	8			
	LS%	4			
GM		2.24			
CLASSIFI - CATION	H.R.B.*	A-2-4(0)			
	COLTO*	G7			
	T.R.H. 14*	G8			
CALIFORNIA BEARING RATIO (SANS 3001-GR30:2010;SANS 3001-GR40:2010)					
MOD AASHTO (SANS GR30)	OMC%	10.5			
	MDD(KG/M^3)	2067			
C.B.R.	COMP MC	10.5			
	% SWELL	0.60			
C.B.R. (SANS GR40)	100%	36			
	98%	23			
	97%	29			
	95%	19			
	93%	17			
	90%	10			
MOD ITS : DRY (kPa) (GR54)		N/S			
PROCTOR ITS : DRY (kPa)		N/S			
STABILISED WITH	IN LAB	N/S			
	ON SITE	Neat			
TEST TYPE		MOD/CBR/IND			
SAMPLED BY		Client			
DELIVERED BY		Client			
SAMPLING METHOD		**Not Specified**			
ENVIRONMENTAL CONDITION WHEN SAMPLED		Not Specified			
REMARKS & NOTES		None			

Kind Regards

Mark Tolo
Manager

Remarks :
*Opinions & Interpretations are not included in our schedule of Accreditation
SANAS Accredited Laboratory No. T 0296
The samples were subjected to analysis according to SANS 3001
The results reported relate only to the sample tested
Further use of the above information is not the responsibility or liability of Roadlab
Documents may only be reproduced or published in their full context
Compiled By : Claire Ngqovu

SUPPORTING THE EASTERN CAPE CONSTRUCTION INDUSTRY WITH RELIABLE, TRUSTED LABORATORY RESULTS.

ROADLAB MTHATHA (PTY) TLD
CIVIL MATERIALS LABORATORY
REGISTRATION: 2024/024827/07

3 ZANEMALI ROAD, VULINDLELA HEIGHTS
073 270 2713
BRIANT@ROADLAB.CO.ZA

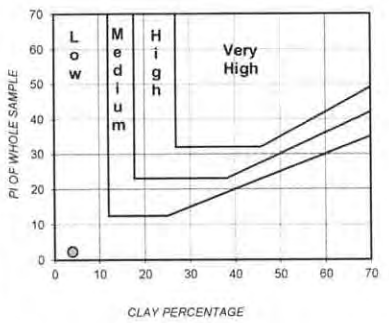
OUR REF : MTR01584
CLIENT : SRK Consulting (SA) (Pty) Ltd
PROJECT : Ntshele Clinic

DATE RECEIVED : 28/08/2025
POSITION : TP02B
LAYER : 0.40 - 1.10
SAMPLE No. : 639
SAMPLE DESCRIPTION : Yellowish White Sandy Gravel

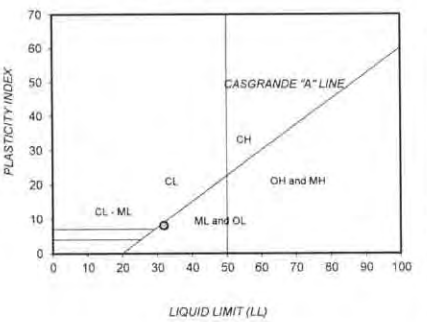
FOUNDATION INDICATOR - (SANS 3001-GR1, SANS 3001-GR10) & (ASTM Method D422)

Weighted PI		**2.3**
Sieve analysis Cumulative percentage passing (mm)	100.0	100
	75.0	100
	63.0	89
	50.0	79
	37.5	69
	28.0	58
	20.0	52
	14.0	48
	5.00	41
	2.000	36
	0.425	29
	0.250	21
	0.150	14
	0.075	10
	50 µm	6
	5 µm	5
	2 µm	4.0
Soil Mortar Analysis % < 2.00mm	2.000 - 0.425	19
	0.425 - 0.250	21
	0.250 - 0.150	20
	0.150 - 0.075	11
	< 0.075	28
Effective size		0.074
Uniformity Coefficient		404.5
Curvature Coefficient		0.2
Oversize Index		31.1
Shrinkage Product		116.6
Grading Coefficient		8.9
Grading modulus		2.25
Atter-berg Limits	Liquid Limit	32
	Plasticity Index	8
	Linear Shrinkage	4.0
	PI < 0.075	-
Unified Soil Classification		GM
U.S. Highway Classification		A-2-4 (0)

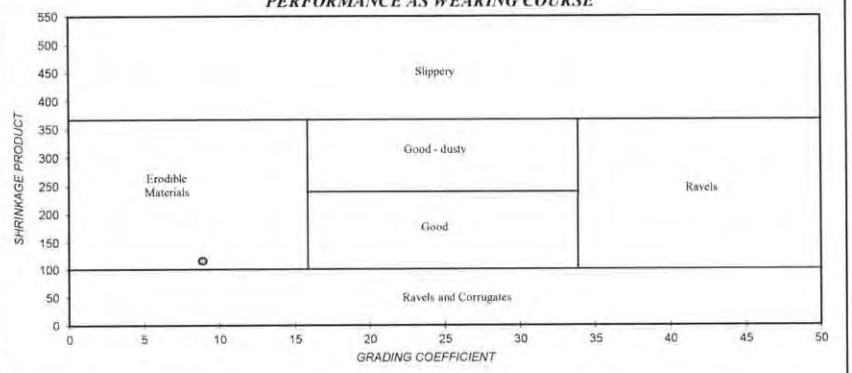
POTENTIAL EXPANSIVENES



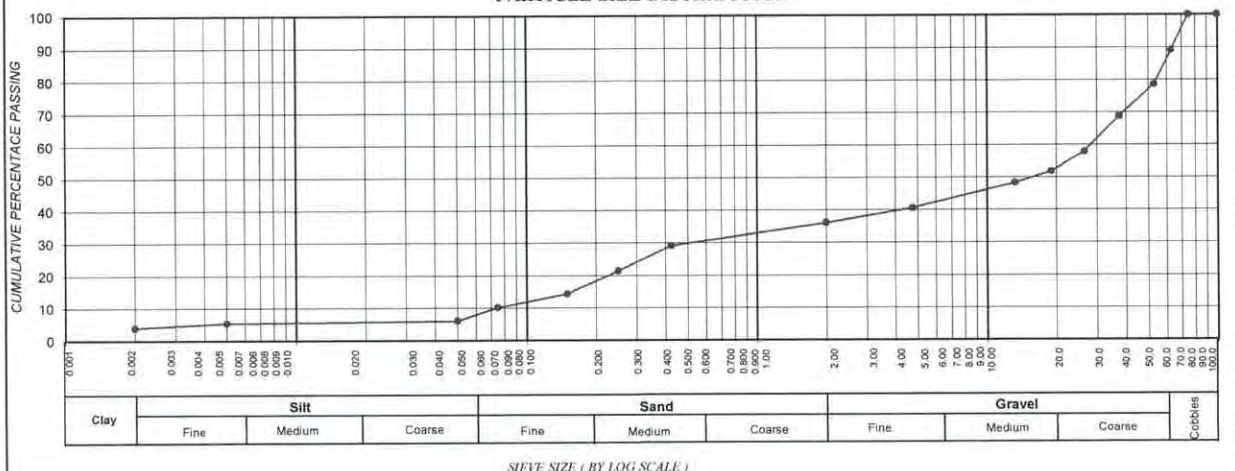
PLASTICITY CHART



PERFORMANCE AS WEARING COURSE



PARTICLE SIZE DISTRIBUTION



SIEVE SIZE (BY LOG SCALE)

CLAY (%) (0.001-0.002)	SILT (%) (0.002-0.060)	SAND (%) (0.060-2.00)	GRAVEL (%) (2.00-60.0)
4.0	3.1	29.0	63.9

Note: * - indicates tests that are not accredited

ROADLAB

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03 Zanemali Road, Vulindlela Heights
5099
Tel: 073 270 2713/082 609 6118 Fax: -
Email: briant@roadlab.co.za/claire@roadlab.co.za
Web: www.roadlab.co.za

Job Request No.: RMTSRK001 - MTR01584 - 2025
Client Ref.No.: N/S
Date Reported : 04/09/2025

SRK Consulting (SA) (Pty) Ltd
254 Walmer Boulevard
South End
Gqeberha (PE)

Project : Ntshele Clinic

Attention : Lyzander Parfitt

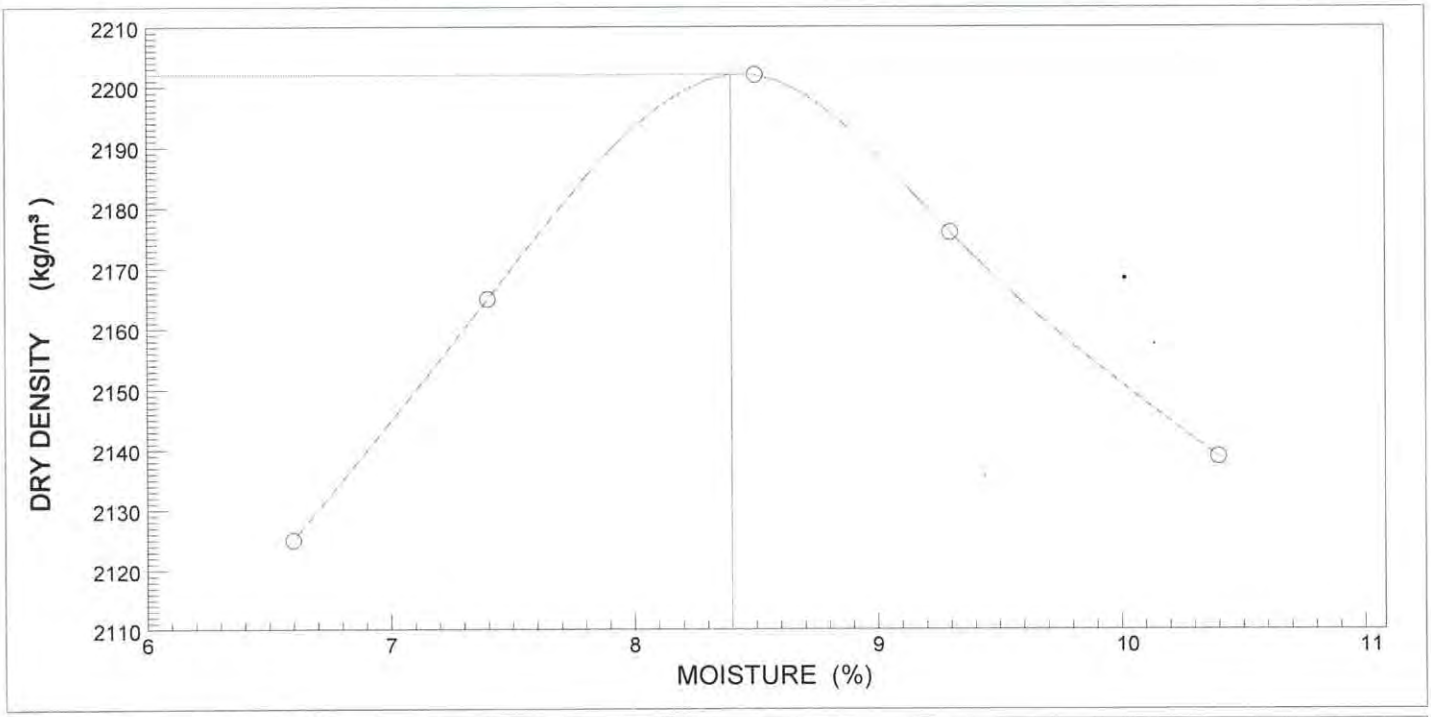
Determination maximum dry density and optimum moisture content

SANS 3001 - GR30/ GR31/ GR20

SAMPLE NO.	Sample No: 0640
CONTAINER FOR SAMPLING	Sampling Plastic Bag
SIZE / APPROX. MASS OF SAMPLE	40kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.30 - 0.75
MATERIAL DESCRIPTION	Brown White Sand Gravelly
HOLE NO./ km / CHAINAGE	TP03A
ROAD NO.	Ntshele Clinic
DATE RECEIVED	28/08/2025
DATE SAMPLED	28/08/2025
CLIENT MARKING	Sample No: 0640 (Mixed)
COLOUR AND TYPE	Brown White Sand Gravelly

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2125	2165	2202	2176	2139			
MOISTURE (%)	6.6	7.4	8.5	9.3	10.4			

MAXIMUM DRY DENSITY (kg/m³) : 2202	OPTIMUM MOISTURE CONTENT (%) : 8.4



Deviation from Test Method : N/A
Remarks and Notes : N/A

Opinions and interpretations are not included in our schedule of accreditation.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM)
The test results reported relate to the samples tested.
Further use of the above information is not the responsibility or liability of Roadlab
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Report compiled by : Claire

Mr Brian Taleli
Manager

Prog.ver 10.7 (2019/11/07)

ROADLAB MTHATHA (PTY) TLD
CIVIL MATERIALS LABORATORY
REGISTRATION: 2024/024827/07

3 ZANEMALI ROAD, VULINDLELA HEIGHTS
073 270 2713
BRIANT@ROADLAB.CO.ZA

RMTSRK001 - MTR1584 - 2025 Client Ref Date Reported : 09/09/2025

SRK Consulting South Africa (Pty) Ltd
254 Walmer Boulervard
South End
Gqeberha (PE)

Attention: Lyzander Parfitt

Dear Sir

Test Report: 609782 Ntshele Clinic

Please find the attached test results for the sample/s as submitted to and tested by Roadlab (Pty)Ltd
The unambiguous description of the sample/s as received are as follows :

SAMPLE INFORMATION & PROPERTIES					
SAMPLE No.		Sample No: 0640			
CONTAINER USED FOR SAMPLING		Plastic Bags			
SIZE / WEIGHT OF SAMPLE		+-80kg's			
MOISTURE CONDITION OF SAMPLE ON ARRIVAL		Slightly Moist			
HOLE No. / Km. / CHAINAGE		TP03A			
ROAD NO OR NAME		609782 Ntshele Clinic			
LAYER TESTED / SAMPLED FROM		0.30 - 0.75			
DATE SAMPLED		28/08/2025			
DATE RECEIVED		28/08/2025			
CLIENTS MARKING		Mixed			
DESCRIPTION OF SAMPLE (COLOUR & TYPE)		Brown, White Sand and Gravel Material			
GRADING ANALYSIS - % PASSING SIEVES (SANS 3001-GR1:2010;SANS 3001-GR2:2010)					
SIEVE ANALYSIS (SANS GR1:2010)	100.0	100			
	75.0	100			
	63.0	98			
	50.0	96			
	37.5	88			
	28.0	82			
	20.0	73			
	14.0	68			
	5.0	55			
	2.00	50			
	0.425	44			
	0.075	15			
SANS 3001 - PR5					
Soil Mortar		50			
Coarse Sand		12.2			
Fine Sand		58			
Coarse Fine Sand		10			
Medium Fine Sand		27			
Fine Fine Sand		21			
Silt & Clay		30			
Coarse Sand Ratio		0.12			
ATTERBERG LIMITS ANALYSIS (SANS 3001-GR10:2010;SANS 3001-GR11:2010)					
ATTERBERG LIMITS (SANSGR10;GR11)	LL%				
	P.I.	NP			
	LS%				
GM		1.91			
CLASSIFI - CATION	H.R.B.*	A-1-b(0)			
	COLTO*	G6			
	T.R.H. 14*	G8			
CALIFORNIA BEARING RATIO (SANS 3001-GR30:2010;SANS 3001-GR40:2010)					
MOD AASHTO (SANS GR30)	OMC%	8.4			
	MDD(KG/M^3)	2202			
C.B.R.	COMP MC	8.4			
	% SWELL	0.28			
C.B.R. (SANS GR40)	100%	58			
	98%	45			
	97%	48			
	95%	40			
	93%	32			
	90%	24			
MOD ITS : DRY (kPa) (GR54)		N/S			
PROCTOR ITS : DRY (kPa)		N/S			
STABILISED WITH	IN LAB	N/S			
	ON SITE	Neat			
TEST TYPE		MOD/CBR/IND			
SAMPLED BY		Client			
DELIVERED BY		Client			
SAMPLING METHOD		**Not Specified**			
ENVIRONMENTAL CONDITION WHEN SAMPLED		Not Specified			
REMARKS & NOTES		None			

Kind Regards

Mr. B. Ciqu
Manager

Remarks :
*Opinions & Interpretations are not included in our schedule of Accreditation
SANAS Accredited Laboratory No. T 0296
The samples were subjected to analysis according to SANS 3001
The results reported relate only to the sample tested
Further use of the above information is not the responsibility or liability of Roadlab
Documents may only be reproduced or published in their full context
Compiled By : Claire Ngqovu

SUPPORTING THE EASTERN CAPE CONSTRUCTION INDUSTRY WITH RELIABLE, TRUSTED LABORATORY RESULTS.

ROADLAB MTHATHA (PTY) TLD
CIVIL MATERIALS LABORATORY
REGISTRATION: 2024/024827/07

3 ZANEMALI ROAD, VULINDLELA HEIGHTS
073 270 2713
BRIANT@ROADLAB.CO.ZA

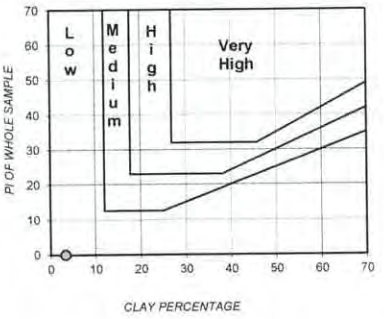
OUR REF : MTR01584
CLIENT : SRK Consulting (SA) (Pty) Ltd
PROJECT : Ntshele Clinic

DATE RECEIVED : 28/08/2025
POSITION : TP03A
LAYER : 0.30 - 0.75
SAMPLE No. : 640
SAMPLE DESCRIPTION : Brown White Sandy Gravel

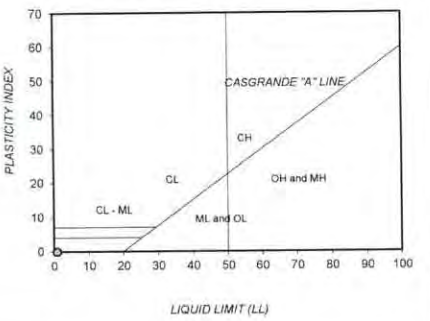
FOUNDATION INDICATOR - (SANS 3001-GR1, SANS 3001-GR10) & (ASTM Method D422)

Weighted PI		-
Sieve analysis Cumulative percentage passing (mm)	100.0	100
	75.0	100
	63.0	98
	50.0	96
	37.5	88
	28.0	82
	20.0	73
	14.0	68
	5.00	55
	2.000	50
	0.425	44
	0.250	39
	0.150	25
	0.075	15
	50 µm	10
	5 µm	8
	2 µm	3.4
Soil Mortar Analysis % < 2.00mm	2.000 - 0.425	12
	0.425 - 0.250	10
	0.250 - 0.150	27
	0.150 - 0.075	21
	< 0.075	30
Effective size		0.051
Uniformity Coefficient		158.9
Curvature Coefficient		0.1
Oversize Index		11.7
Shrinkage Product		0
Grading Coefficient		17.9
Grading modulus		1.91
Atter-berg Limits	Liquid Limit	-
	Plasticity Index	NP
	Linear Shrinkage	-
	PI < 0.075	-
Unified Soil Classification		SM
U.S. Highway Classification		A-1-b (0)

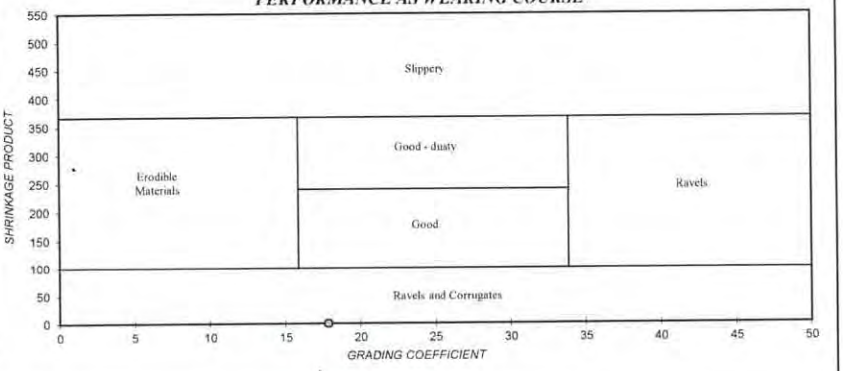
POTENTIAL EXPANSIVENES



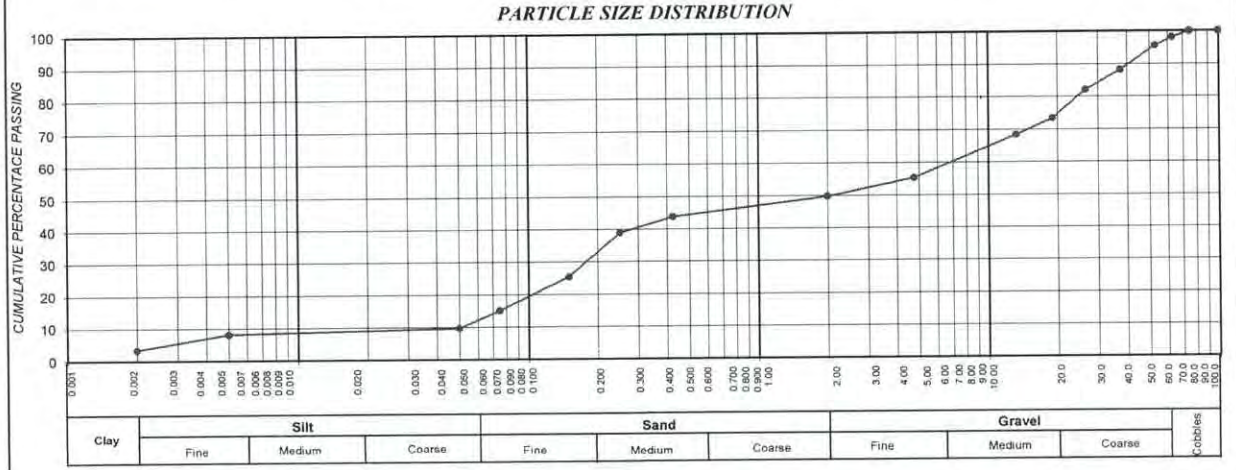
PLASTICITY CHART



PERFORMANCE AS WEARING COURSE



PARTICLE SIZE DISTRIBUTION



SIEVE SIZE (BY LOG SCALE)

CLAY (%) (0.001-0.002)	SILT (%) (0.002-0.060)	SAND (%) (0.060-2.00)	GRAVEL (%) (2.00-60.0)
3.4	7.5	38.9	50.1

Note: * - indicates tests that are not accredited

Briant Tarr

ROADLAB

Roadlab Mthatha
03 Zanemali Road, Vulindlela Heights
5099
Tel: 073 270 2713/082 609 6118 Fax: -
Email: briant@roadlab.co.za/claire@roadlab.co.za
Web: www.roadlab.co.za

Job Request No.: RMTSRK001 - MTR01584 - 2025 | Client Ref.No.: N/S | Date Reported : 04/09/2025

SRK Consulting (SA) (Pty) Ltd
254 Walmer Boulevard
South End
Gqeberha (PE)

Project : Ntshele Clinic

Attention : Lyzander Parfitt

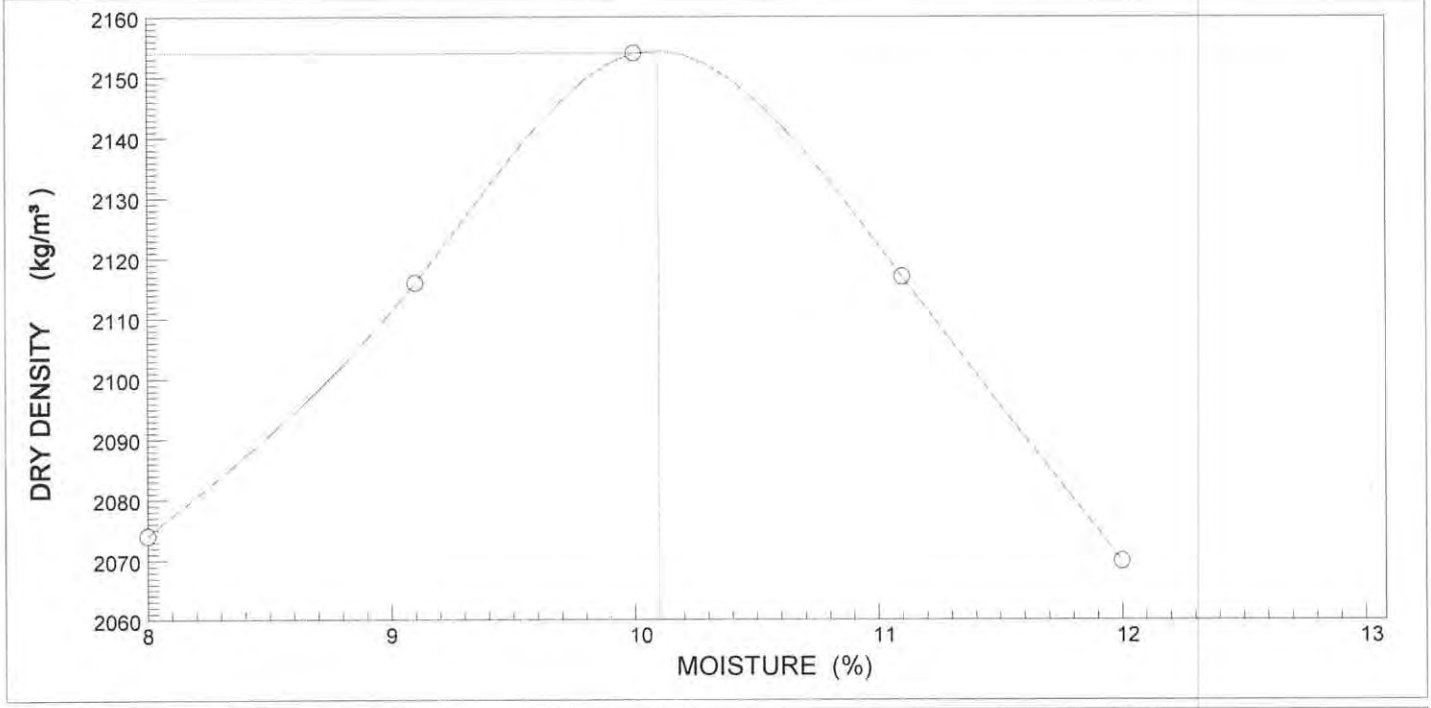
Determination maximum dry density and optimum moisture content

SANS 3001 - GR30/ GR31/ GR20

SAMPLE NO.	Sample No: 0641
CONTAINER FOR SAMPLING	Sampling Plastic Bag
SIZE / APPROX. MASS OF SAMPLE	40kg
MOISTURE CONDITION OF SAMPLE	Moist
LAYER TESTED / SAMPLED FROM	0.25 - 0.50
MATERIAL DESCRIPTION	Dark Brown, Yellowish Gravel
HOLE NO./ km / CHAINAGE	TP04A
ROAD NO.	Ntshele Clinic
DATE RECEIVED	28/08/2025
DATE SAMPLED	28/08/2025
CLIENT MARKING	Sample No: 0640 (Residual)
COLOUR AND TYPE	Dark Brown, Yellowish Gravel

POINT NO.	1	2	3	4	5			
DRY DENSITY (kg/m³)	2074	2116	2154	2117	2070			
MOISTURE (%)	8.0	9.1	10.0	11.1	12.0			

MAXIMUM DRY DENSITY (kg/m³) : 2154	OPTIMUM MOISTURE CONTENT (%) : 10.1



Deviation from Test Method : N/A
Remarks and Notes : N/A

Opinions and interpretations are not included in our schedule of accreditation.
The samples were subjected to analysis according to (SANS)(TMH5)(DOT)(ASTM)
The test results reported relate to the samples tested.
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Report compiled by : Claire

Mr Brian Taleli
Manager

Prog.ver 10.7 (2019/11/07)

ROADLAB MTHATHA (PTY) TLD
CIVIL MATERIALS LABORATORY
REGISTRATION: 2024/024827/07

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RMTSRK001 - MTR1584 - 2025 Client Ref Date Reported : 09/09/2025

SRK Consulting South Africa (Pty) Ltd
254 Walmer Boulervard
South End
Gqeberha (PE)

Attention: Lyzander Parfitt

Dear Sir

Test Report: 609782 Ntshele Clinic

Please find the attached test results for the sample/s as submitted to and tested by Roadlab (Pty)Ltd
The unambiguous description of the sample/s as received are as follows :

SAMPLE INFORMATION & PROPERTIES					
SAMPLE No.		Sample No: 0641			
CONTAINER USED FOR SAMPLING		Plastic Bags			
SIZE / WEIGHT OF SAMPLE		+-80kg's			
MOISTURE CONDITION OF SAMPLE ON ARRIVAL		Slightly Moist			
HOLE No. / Km. / CHAINAGE		TP04A			
ROAD NO OR NAME		609782 Ntshele Clinic			
LAYER TESTED / SAMPLED FROM		0.25 - 0.50			
DATE SAMPLED		28/08/2025			
DATE RECEIVED		28/08/2025			
CLIENTS MARKING		Residual			
DESCRIPTION OF SAMPLE (COLOUR & TYPE)		Dark Brown, Yellowish Gravelly Sand			
GRADING ANALYSIS - % PASSING SIEVES (SANS 3001-GR1:2010;SANS 3001-GR2:2010)					
SIEVE ANALYSIS (SANS GR1:2010)	100.0	100			
	75.0	100			
	63.0	97			
	50.0	96			
	37.5	89			
	28.0	84			
	20.0	78			
	14.0	74			
	5.0	42			
	2.00	29			
	0.425	24			
	0.075	11			
SANS 3001 - PR5					
Soil Mortar		29			
Coarse Sand		18.4			
Fine Sand		42			
Coarse Fine Sand		7			
Medium Fine Sand		12			
Fine Fine Sand		23			
Silt & Clay		39			
Coarse Sand Ratio		0.18			
ATTERBERG LIMITS ANALYSIS (SANS 3001-GR10:2010;SANS 3001-GR11:2010)					
ATTERBERG LIMITS (SANSGR10;GR11)	LL%	30			
	P.I.	11			
	LS%	5			
GM		2.36			
CLASSIFI - CATION	H.R.B.*	A-2-6(0)			
	COLTO*	G7			
	T.R.H. 14*	G8			
CALIFORNIA BEARING RATIO (SANS 3001-GR30:2010;SANS 3001-GR40:2010)					
MOD AASHTO (SANS GR30)	OMC%	10.1			
	MDD(KG/M^3)	2154			
C.B.R.	COMP MC	10.1			
	% SWELL	0.20			
C.B.R. (SANS GR40)	100%	50			
	98%	37			
	97%	31			
	95%	23			
	93%	17			
	90%	11			
MOD ITS : DRY (kPa) (GR54)		N/S			
PROCTOR ITS : DRY (kPa)		N/S			
STABILISED WITH	IN LAB	N/S			
	ON SITE	Neat			
TEST TYPE		MOD/CBR/IND			
SAMPLED BY		Client			
DELIVERED BY		Client			
SAMPLING METHOD		**Not Specified**			
ENVIRONMENTAL CONDITION WHEN SAMPLED		Not Specified			
REMARKS & NOTES		None			

Kind Regards

Mr. B. Titeli
Manager

Remarks :
*Opinions & Interpretations are not included in our schedule of Accreditation
SANAS Accredited Laboratory No. T 0296
The samples were subjected to analysis according to SANS 3001
The results reported relate only to the sample tested
Further use of the above information is not the responsibility of Roadlab
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Compiled By : Claire Ngqovu

ROADLAB MTHATHA (PTY) TLD
CIVIL MATERIALS LABORATORY
REGISTRATION: 2024/024827/07

3 ZANEMALI ROAD, VULINDLELA HEIGHTS
073 270 2713
BRIANT@ROADLAB.CO.ZA

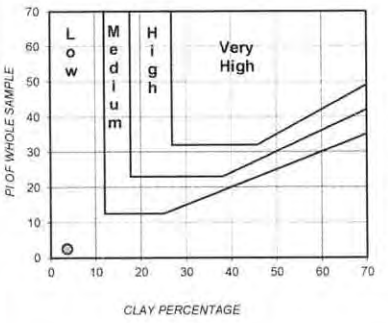
OUR REF : MTR01584
CLIENT : SRK Consulting (SA) (Pty) Ltd
PROJECT : Ntshele Clinic

DATE RECEIVED : 28/08/2025
POSITION : TP04A
LAYER : 0.25 - 0.50
SAMPLE No. : 641
SAMPLE DESCRIPTION : Dark Brown, Yellowish Sandy Gravel

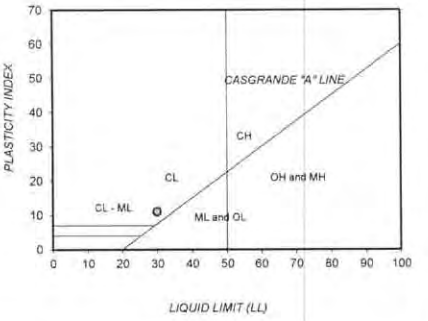
FOUNDATION INDICATOR - (SANS 3001-GR1, SANS 3001-GR10) & (ASTM Method D422)

Weighted PI		**2.6**
Sieve analysis Cumulative percentage passing (mm)	100.0	100
	75.0	100
	63.0	97
	50.0	96
	37.5	89
	28.0	84
	20.0	78
	14.0	74
	5.00	42
	2.000	29
	0.425	24
	0.250	22
	0.150	18
	0.075	11
	50 µm	5
	5 µm	5
	2 µm	3.7
Soil Mortar Analysis % < 2.00mm	2.000 - 0.425	18
	0.425 - 0.250	7
	0.250 - 0.150	12
	0.150 - 0.075	23
	< 0.075	39
Effective size		0.069
Uniformity Coefficient		144.4
Curvature Coefficient		7.0
Oversize Index		10.5
Shrinkage Product		118.8
Grading Coefficient		23.5
Grading modulus		2.36
Atter-berg Limits	Liquid Limit	30
	Plasticity Index	11
	Linear Shrinkage	5.0
	PI < 0.075	-
Unified Soil Classification		GC
U.S. Highway Classification		A-2-6 (0)

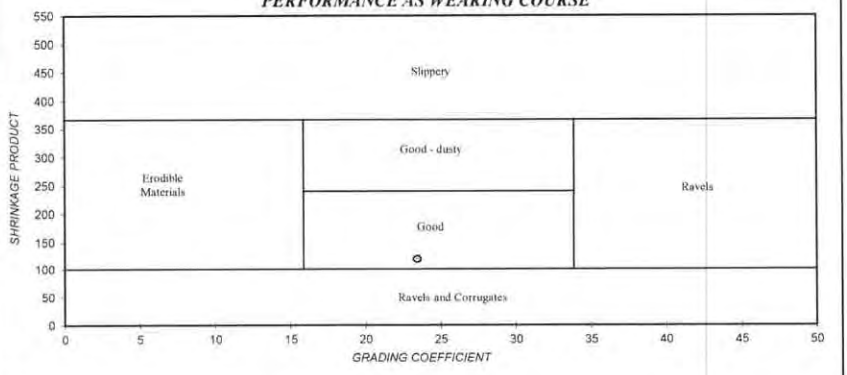
POTENTIAL EXPANSIVENES



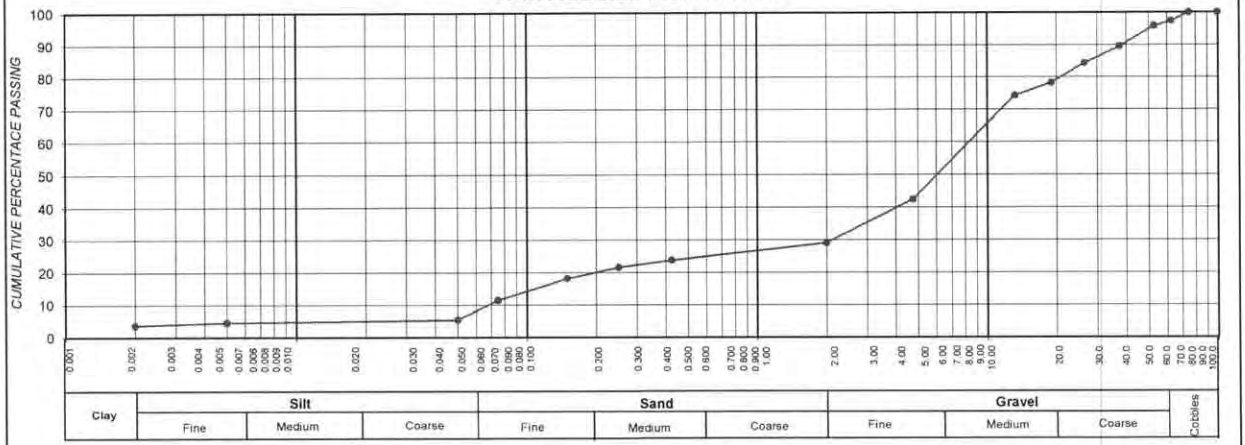
PLASTICITY CHART



PERFORMANCE AS WEARING COURSE



PARTICLE SIZE DISTRIBUTION



SIEVE SIZE (BY LOG SCALE)

CLAY (%) (0.001-0.002)	SILT (%) (0.002-0.060)	SAND (%) (0.060-2.00)	GRAVEL (%) (2.00-60.0)
3.7	3.1	22.3	70.9

Note: * - indicates tests that are not accredited

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23B De Havilland Crescent
Persequor Techno Park,
Meiring Naudé Road, Pretoria
P.O. Box 283, 0020

Telephone: +2712 – 349 – 1066
Facsimile: +2712 – 349 – 2064
Email: accounts@waterlab.co.za

T0391

CERTIFICATE OF ANALYSES

Basson Index

Date received:	**2025-09-08**			**Date completed:**	**2025-09-26**
Project number:	**151**	**Report number:**	**147710**	**Order number:**	
				Client ref:	**609782 Ntshele Clinic**

Client name:	**SRK Consulting**	**Contact person:**	**Lyzander Parfitt**
Address:	**254 Walmer Boulevard, South End, Gqeberha, 6001**	**Email:**	**lparfitt@srk.co.za**
Telephone:	**041 509 4800**	**Cell:**	**072 067 0582**

Analyses in mg/ℓ (Unless specified otherwise)	Method Identification	Sample Identification	
		TP02A 0.20-0.50m Sand	TP03B 0.30-0.75m Sand & Gravel
Sample Number		**25-20568**	**25-20569**
Leachate used	**WLAB075**	**Distilled Water**	**Distilled Water**
Mass Used (g)	**---**	**500**	**500**
Volume Used (mℓ)	**---**	**1000**	**1000**
pH Value at 25°C	WLAB001	7.1	7.1
pHs Value at 20°C (calc)	WLAB053b	9.7	9.4
Electrical Conductivity in mS/m at 25°C	WLAB002	5.0	2.3
Total Dissolved Solids (calc)	WLAB068	34	15
Total Alkalinity as $CaCO_3$	WLAB007	16	16
Total Hardness as $CaCO_3$ (calc)	WLAB051b	18	36
Calcium Hardness as $CaCO_3$ (calc)	WLAB051a	10	20
Calcium as Ca	WLAB015	4	8
Magnesium as Mg	WLAB015	2	4
Free & Saline Ammonia	WLAB046	<0.1	<0.1
Ammonium as NH_4 (calc)	WLAB068	<0.3	<0.3
Sulphate as SO_4	WLAB046	5	5
Chloride as Cl	WLAB046	5	4
Langelier Index at 20°C (calc)	WLAB053c	-2.6	-2.3
Ryznar Index at 20°C (calc)	WLAB053d	12.4	11.7
Corrosivity Ratio (calc)	WLAB054	0.8	0.7
Leaching Index [LCSI] (calc)*	**---**	2275	2016
Spalling Index [SCSI] (calc)*	**---**	1	1
Aggressiveness Index [N_c] (calc)*	**---**	2276	2017
Corrosivity Indices#	**---**	Corrosive	Corrosive
Basson Index#	**---**	Aggressive	Aggressive

***TDS Calculated EC X 6.7**

2:1 Distilled Water : Soil Extract

 # See tables below

Please note:

- **The blank is subtracted from all leach results, except pH and Electrical Conductivity.**
- *** = Not SANAS Accredited**
- **Tests marked "Not SANAS Accredited" in this report are not included in the SANAS Schedule of Accreditation for this Laboratory.**
- **[o] = Analyses performed by an Outsourced Laboratory**
- **Results marked "Outsourced Test" in this report are not included in the SANAS Schedule of Accreditation for this Laboratory**

Important notes (see table for corrections):

1. The above aggressiveness index is only applicable for conditions of laminar flow at a mean annual temperature of 20°C.
2. For stagnant/turbulent conditions the aggressiveness index must be corrected.
3. For wet/dry cycling conditions (for example in tidal zones) the aggressiveness index must be corrected.
4. For mean annual temperatures lower/higher than 20°C the aggressiveness index must be corrected.

Guidelines for assessing overall aggressiveness (N_c):

N_c	Aggressiveness
Not greater than 300	**None to mild**
400-700	**Mild to moderate**
800-1000	**High**
= or > 1 100	**Very high**

# Aggressiveness Towards *Concrete and Fibre Cement Pipes*			
Index	**Aggressive**	**Neutral**	**Non- Aggressive**
a) Stability pH (pHs)	**>pH**	**= pH**	**<pH**
b) Langelier Index	**Neg. Value**	**Zero**	**Pos. Value**
c) Ryznar Index	**>7.5**	**6 - 7**	**<6**

# Corrosiveness Towards metals		
Corrosivity		>0.2

To correct for:	Multiply	By: (see Notes 2 to 5 below)
Turbulence	LCSI	1.75
Stagnance	LCSI	0.5
Temperature	LCSI, SCSI, N7 Where N7=0.2 x Cl in mg/l	(1+ [0.05 x (T-20)])
Wet-dry cycles	SCSI	0.23×10^{-6} x TDS x DTF x CPA Where: DTF = Dry Time Fraction CPA = wet-dry cycles per annum

Note 1: Only if the concrete contains embedded steel.

Note 2: To preserve the correct logical relationships when dealing with the negative sub indices (ie LCSI or SCSI having minus values) they should be multiplied by the reciprocal of the relevant factor indicated in this column

Note 3: If more than one correction is required, multiply by the product of the individual correction factors

Note 4: Use subscript c to indicate that the index has been corrected, eg for turbulent conditions $LCSI_c$ = LCSI x 1.75

Note 5: Round off corrected indices to the nearest 100.

S. Laubscher
Technical Signatory

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C4.4 GEOHYDROLOGICAL INFORMATION

Geohydrological Services to Ntshele and Mpozolo Clinics

Report Prepared for

Coega Development Corporation

COEGA

right PLACE right TIME right CHOICE

Report Number 609437/a



Report Prepared by

srk consulting

October 2024

Geohydrological Services to Ntshele and Mpozolo Clinics

Coega Development Corporation

SRK Consulting (South Africa) (Pty) Ltd
Suite No. 2
2 Sinclair Avenue
Bonnie Doon
East London 5241
South Africa

Tel: +27 (0) 43 748 6292
E-mail: Eastlondon@srk.co.za
Website: www.srk.co.za

SRK Project Number 6094374/a

October 2024

Compiled by:

Eunice Goossens (Pr. Sci. Nat.)
Principal Hydrogeologist

Email: egoossens@srk.co.za

Reviewed by:

Rob Gardiner (Pr. Sci. Nat., Reg. EAP (EAPASA))
Partner

Author:

Eunice Goossens

Executive Summary

SRK Consulting (SA) (Pty) Ltd (hereafter SRK) was appointed on 5 September 2024 by Coega Development Corporation (hereafter the Client) to supply geohydrological services for the Ntshele (south of Mthatha) and Mpozolo (east of Dutywa) clinics located in the Eastern Cape Province. The project included a hydrocensus, geophysical investigation (drill site selection), and reporting.

Summary of principal objectives

The project goal was to determine the groundwater potential at Ntshele and Mpozolo Clinic Sites.

Outline of work programme

The principal stages of the project were planned and executed as follows:

- Appointment – 5 September 2024;
- Briefing meeting – 1 October 2024;
- Site meetings – 8 and 9 October at Mpozolo and Ntshele clinics respectively;
- Hydrocensus and Geophysical Investigation – 7 to 9 October 2024; and
- Reporting – week of 16 October 2024.

Results

- Mpozolo Clinic is located on a catchment boundary with expected low groundwater recharge;
- Two existing boreholes are located within 1-km from Ntshele Clinic, both were however found to be vandalised and no longer in use. Borehole EC/T20/0237 was reportedly yield tested in 2012 and recommended at 0.56 L/s for a 10-hr pumping period.
- Ntshele Clinic is underlain by the Katberg Formation, consisting mostly of sandstone with an expected higher groundwater potential than the Adelaide Subgroup underlying the Mpozolo Clinic, consisting mostly of mudstones and having an expected lower groundwater potential.
- Both sites are intruded by dolerite sills and dykes, whereby these contact zones with the above mentioned sedimentary rocks form preferred groundwater flow paths with expected higher groundwater potential zones.
- The groundwater potential for both clinics are moderate and a chance of 30 – 40% for drilling a borehole yielding > 2 L/s are reported.
- Two geophysical traverses were undertaken at Ntshele Clinic and three at Mpozolo Clinic.
- Three position for the drilling of boreholes were selected per clinic.

Recommendations

- The drilling of two boreholes should be allowed for with the yield testing of one successful borehole per clinic.
- The estimated costs (excluding VAT) will be in the order of R 488 000, inclusive of the drilling, yield- and water quality testing, supervision by a hydrogeologist on both activities and reporting on the results found.

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Disclaimer

Opinions presented in this report apply to the site conditions and features as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report, about which SRK had no prior knowledge nor had the opportunity to evaluate.

List of Abbreviations

DWS	-	Department of Water and Sanitation
EC	-	Electrical Conductivity
L/s	-	litres per second
m amsl	-	metres above mean sea level
m bgl	-	metres below ground level
mg/L	-	milligrams per litre
NGA	-	National Groundwater Archive

1 Introduction and Scope of Report

SRK Consulting (SA) (Pty) Ltd (hereafter SRK) was appointed on 5 September 2024 by Coega Development Corporation (hereafter the Client) to supply geohydrological services for the Ntshele (south of Mthatha) and Mpozolo (east of Dutywa) clinics located in King Sabata Dalindyebo and Mbashe Local Municipalities respectively of the OR Tambo and Amathole District Municipalities. The project included a hydrocensus, geophysical investigation (drill site selection) and reporting.

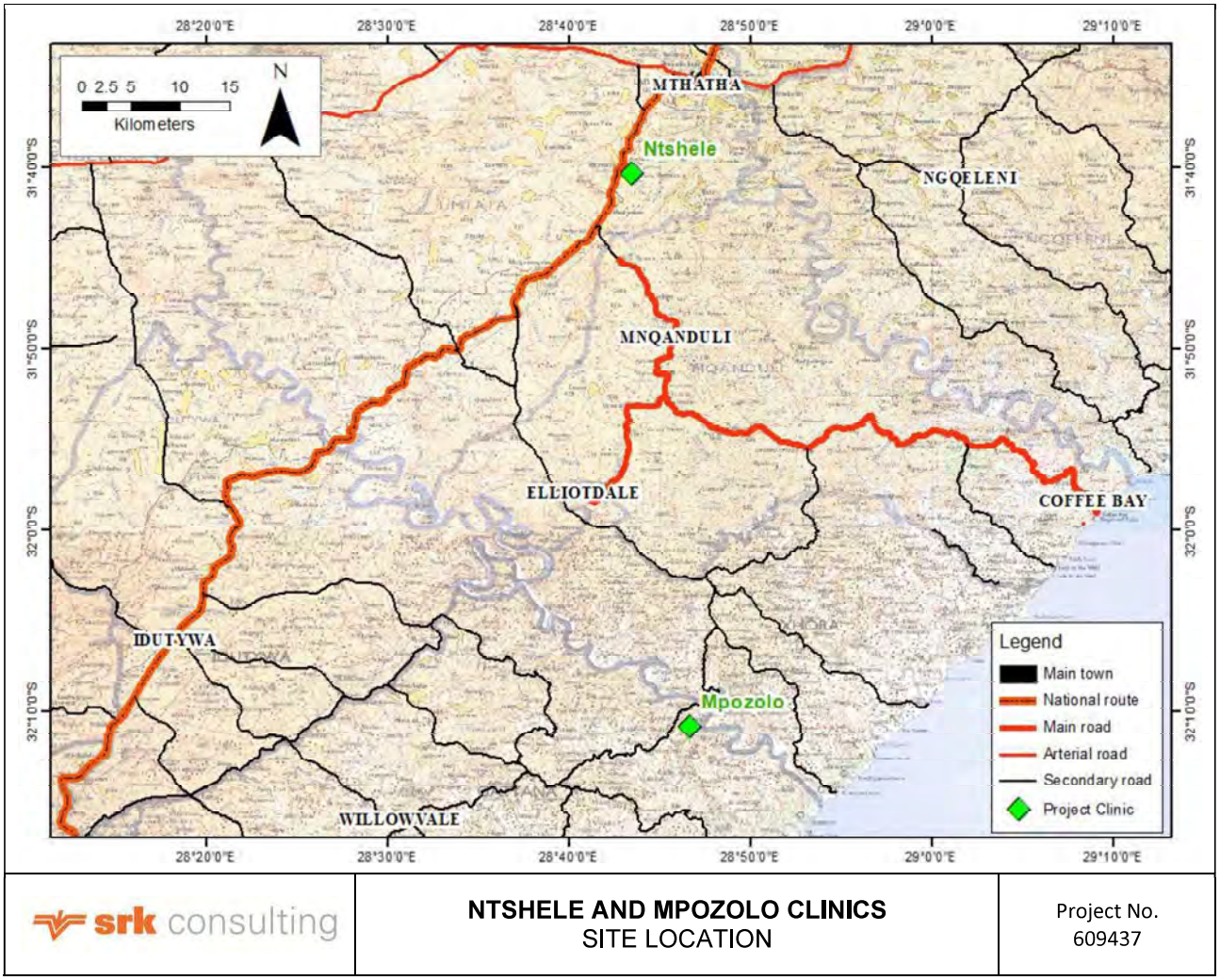


Figure 1-1: Site locations

2 Background and Brief

The Client was appointed by the Eastern Cape of Department of Health (ECDOH). The two clinics are intended to be developed for the construction of a Primary Healthcare Centre, with associated bulk services, roadworks, and residential accommodation for medical practitioners.

The geohydrological study is to assist the Client and ECDOH understanding the available groundwater resources within the two clinic sites.

The Client requested the following services:

- Groundwater feasibility study;
- Exploration of groundwater potential;
- Geological reconnaissance and verification of potential drilling targets;

- Groundwater supply cost assessment;
- Risk assessment on the potential impact of the abstraction of groundwater on the natural environment;
- Hydrocensus, verifying of existing boreholes;

No actual drilling and testing of boreholes were undertaken.

3 Project Objectives and Work Program

The project goal was to determine the groundwater potential at Ntshele and Mpozolo Clinic Sites. The principal stages of the project were planned and executed as follows:

- Appointment – 5 September 2024;
- Briefing meeting – 1 October 2024;
- Site meetings – 8 and 9 October at Mpozolo and Ntshele clinics respectively;
- Hydrocensus and Geophysical Investigation – 7 to 9 October 2024; and
- Reporting – week of 16 October 2024.

3.1 Reporting Standard

The Department of Water and Sanitation (DWS) published the latest "*Standard Operating Procedures for Groundwater Resource Development for Community Water Supply Projects*", Version 4.0, 15 June 2023 (SOP). A presentation was given by the DWS to the groundwater fraternity, and it was explained that this document is applicable to all groundwater source development, inclusive of town or businesses water supply from boreholes.

This Report has been prepared to the latest SOP of DWS as well as to the *"Minimum Standards and Guidelines for Groundwater Resource Development for the Community Water Supply and Sanitation Programme"*, of the DWS, and is aimed for internal distribution (the Client) and is not aimed for distribution to the public domain.

3.2 Project team

Eunice Goossens, a principal hydrogeologist, managed the project and Rob Gardiner, partner at the Gqeberha office, did the peer review. Mfundo Mari conducted the fieldwork components.

4 Project Results

4.1 Desk Study

4.1.1 Topography – Ntshele Clinic

Ntshele Clinic is located at *c.* 890 m amsl (meters above mean sea level). The topography dips eastwards with two rivers originating within 1 km from the site, flowing east, joining the Mbane and Zimbane Rivers respectively. The N2 highway is west of the clinic and located at the highest area and is *c.* 940 m amsl. The area is covered by the T20D catchment (drainage regions[1]) and is mapped on 3128DA 1 : 50 000 topo-cadastral map. Refer to Figure 4-1.

[1] The drainage regions are as depicted by Department of Water and Sanitation (Refer to the 1: 2 000 000; "Water Management areas of the Republic of South Africa" Map, 2000; Map Author Directorate Catchment Management, DWAF, GIS and Cartographic: Helena Fourie)

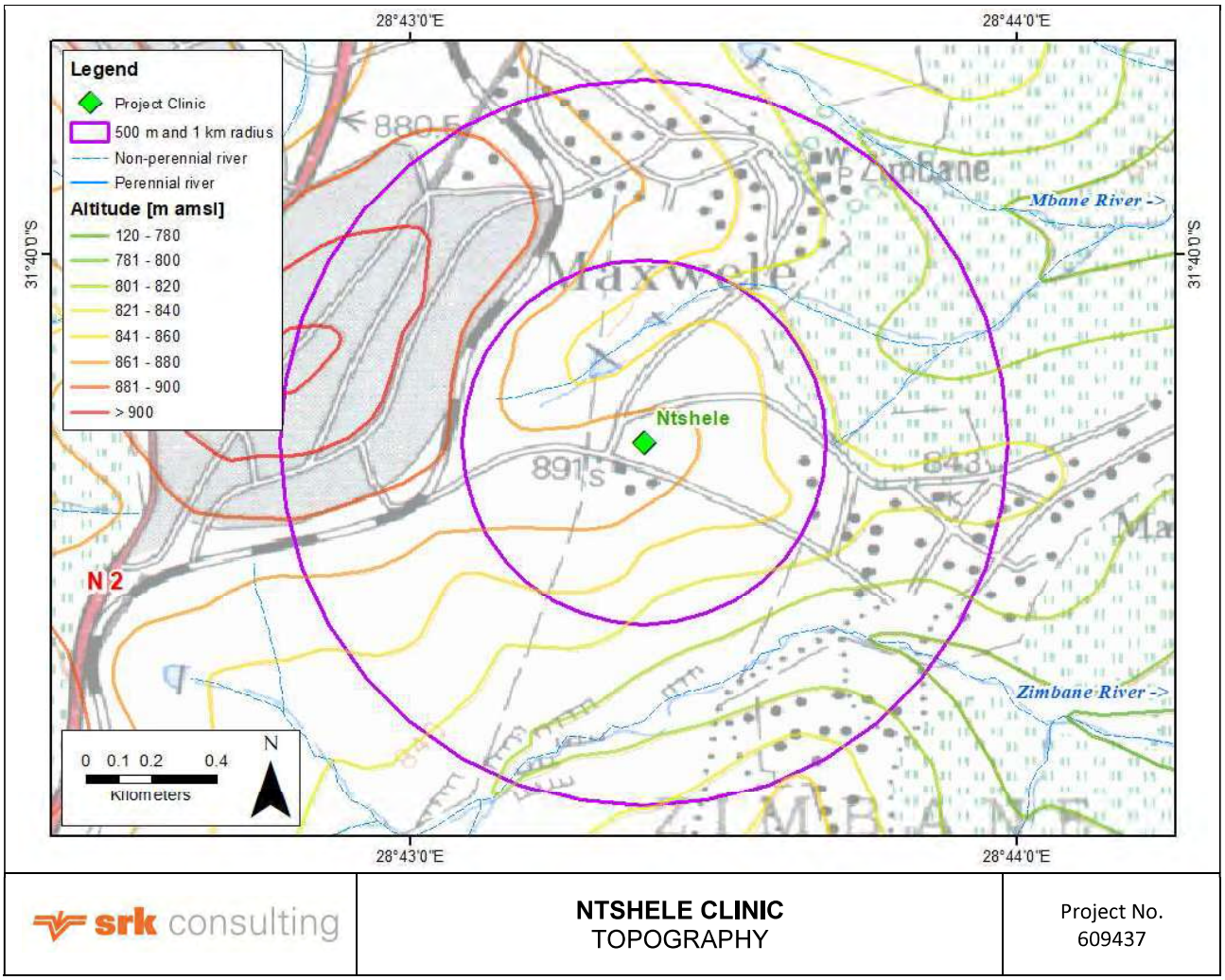


Figure 4-1: Ntshele Clinic - Topography

4.1.2 Topography – Mpozolo Clinic

Mpozolo Clinic is located at *c.* 370 m amsl (meters above mean sea level). The clinic is located on a catchment / drainage regions boundary (topography high area) with the western parts falling into T90B and the eastern parts in T13E. Streams originate around the clinic area, flowing in a 360° radius. The Mbashe River is located east of the clinic and the topography drop steep towards the river at *c.* 20 m amsl. The area is mapped on 3228BB 1 : 50 000 topo-cadastral map. Refer to Figure 4-1.

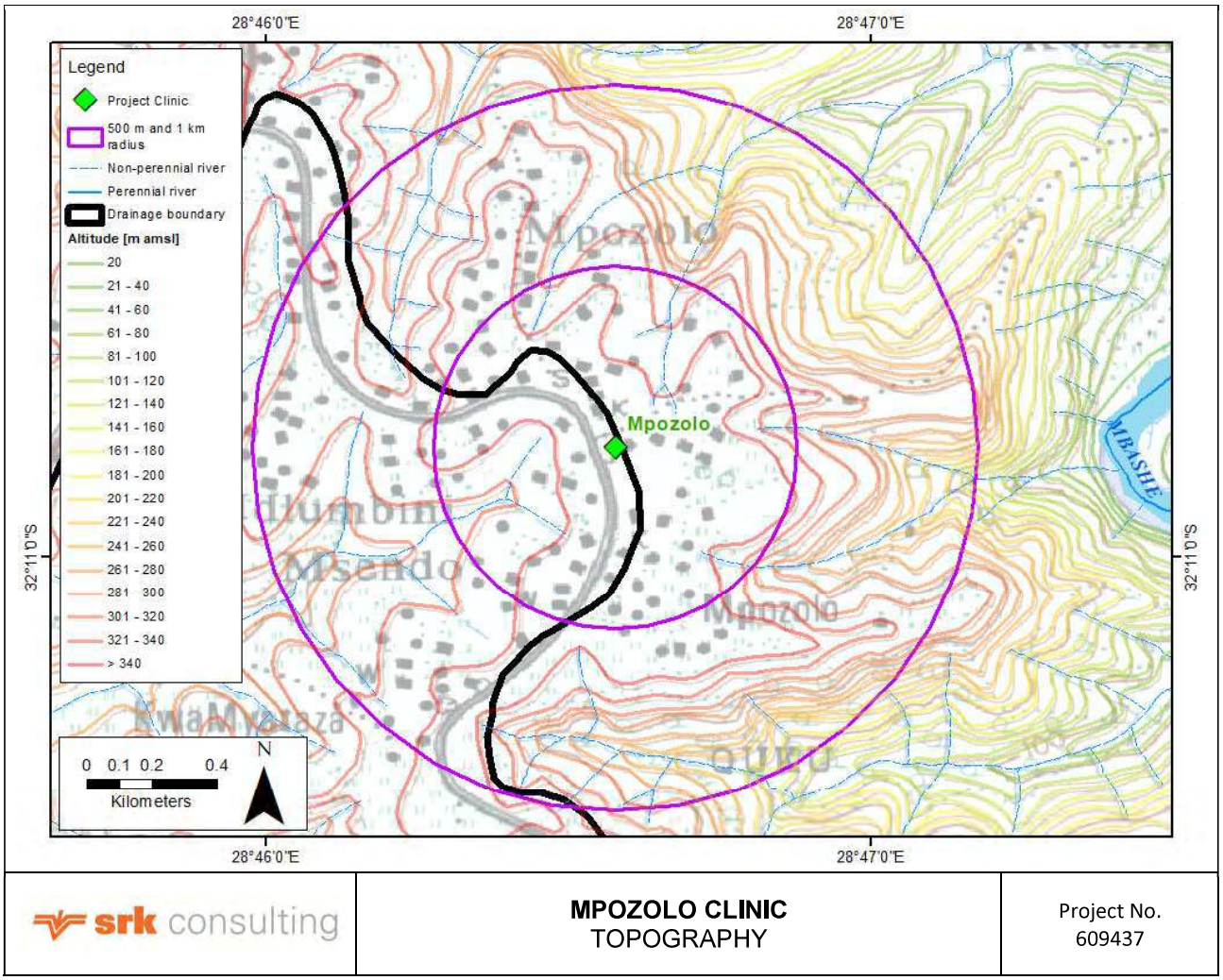


Figure 4-2: Mpozolo Clinic - Topography

4.1.3 Existing Borehole Datasets

The National Groundwater Archive (NGA) dataset of the Department of Water and Sanitation (DWS) was queried for boreholes and springs within the clinic areas. This dataset includes the Groundwater Resource Information Project (GRIP) results done by DWS in 2008. A search radius of 1 km from each clinic was applied and three boreholes were found around Ntshele Clinic and no boreholes at Mpozolo Clinic. The following can be summarised on the three boreholes found around Ntshele Clinic:

- Borehole 3128DA00116 was reportedly drilled in 1988 but had a very low yield of 0.001 L/s and the groundwater level was measured as 14.54 m bgl.
- Borehole EC/T20/0237 was reportedly drilled in 2007 and yield tested in 2012. The borehole was recommended at 0.56 L/s for a 10-hr pumping period. The groundwater level was measured at 11.25 m bgl.
- Borehole EC/T20/0238 was reportedly drilled in 2006 and yield tested in 2012. The borehole was recommended at 1.67 L/s for a 14-hr pumping period. The groundwater level was measured at 6.23 m bgl.

Figure 4-3 present the three NGA boreholes on a map.

Table 4-1: NGA Dataset at Ntshele

Identifier	Other number	Latitude	Longitude	Date Drilled	Depth [m bgl]	Ground-water level [m bgl]	Comment
3128DA00116	T34008	-31.66582	28.7302	05/10/1988	81	14.54	The borehole had a reported water strike at 50 m and the yield was very low, 0.001 L/s
EC/T20/0237	EC-T20-021	-31.66762	28.72541	19/07/2007	75	11.25	The borehole was tested in 2012 and was recommended at 0.56 L/s for a 10-hour pumping period
EC/T20/0237		-31.66142	28.7251	2006		6.23	The borehole was tested in 2012 and was recommended at 1.67 L/s for a 14-hour pumping period

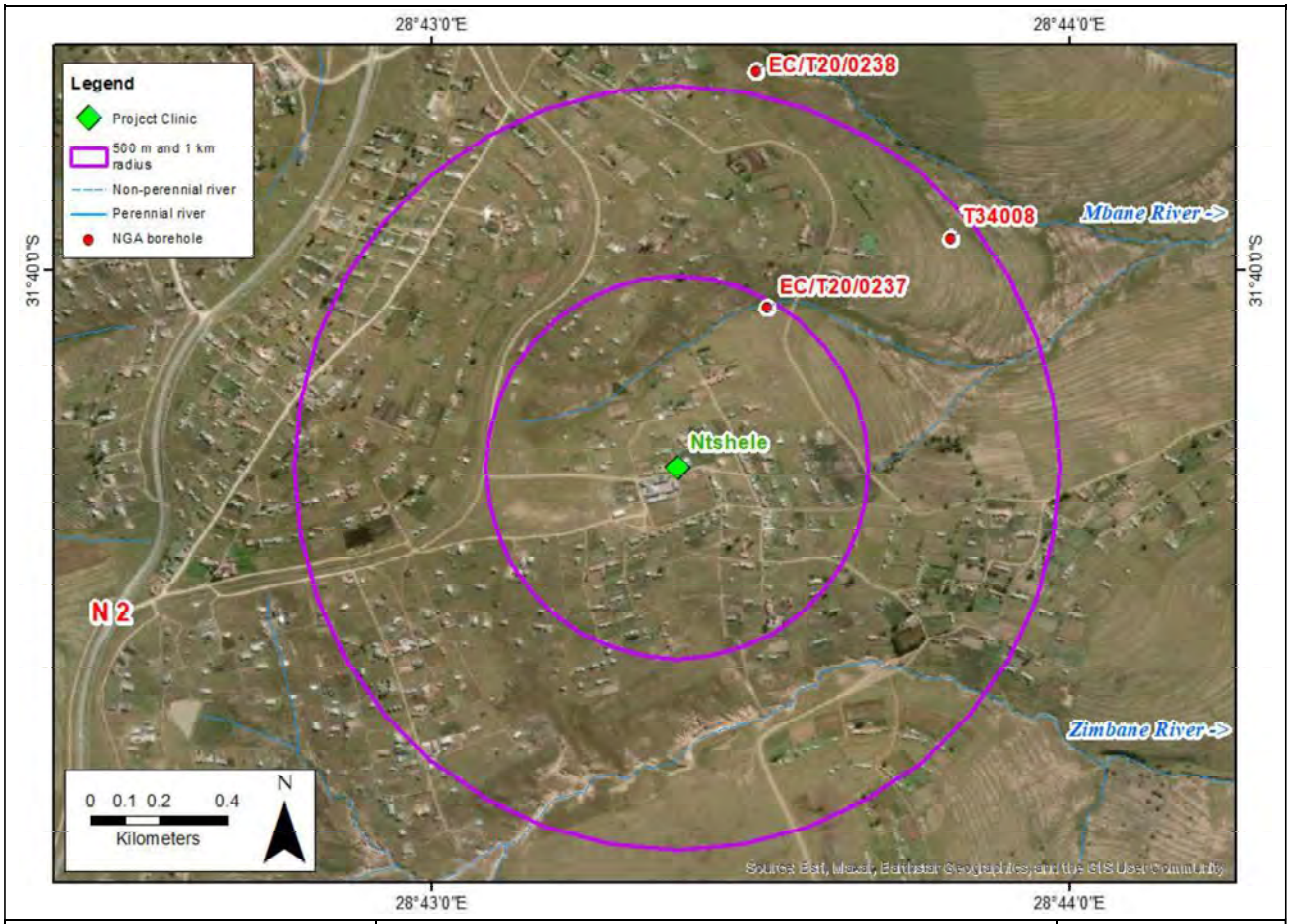


Figure 4-3: Ntshele Clinic – NGA Boreholes Map

4.1.4 Geology– Ntshele Clinic

As per the Explanation booklet for Sheet 3128 1: 250 000, Umtata, Geological Survey, the Site is underlain by the Katberg Formation, intruded by dolerite dykes and sheets.

The Katberg Formation forms part of the Tarkastad Subgroup and Beaufort Group and consist of sandstone and mudrock. The sandstones are lenticular, with large scale trough crossbedding, horizontal lamination and flow lineations on bedding planes being common features. Thin clay-pellet and conglomerates often occur at the base of sandstone lithosomes. The pinkish to yellowish colour

of the rather uniformly fine-grained sandstones contrasts with the greenish- or bluish-grey colour of the same rock type in the underlying Adelaide Subgroup. The interbedded mudstones are reddish or greenish grey.

The sedimentary rocks were intruded by numerous dykes, sills and inclined sheets of dolerite during the Jurassic period. Dykes are normally not more than 10 m wide and extend for a few kilometres.

Refer to Figure 4-4 for a map showing the regional geology of the area and the proposed target zones.

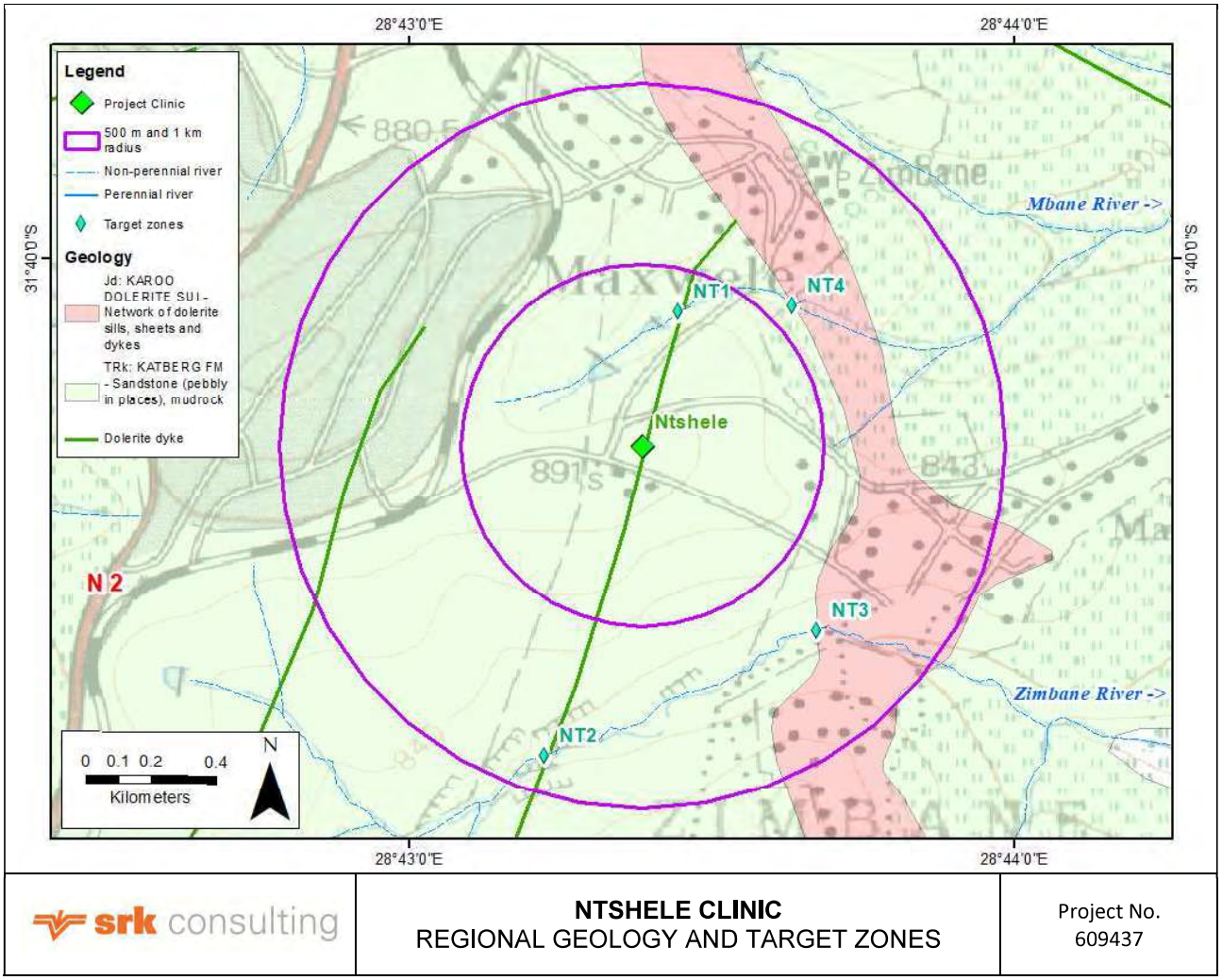


Figure 4-4: Ntshele Clinic - Regional Geology and Target zones

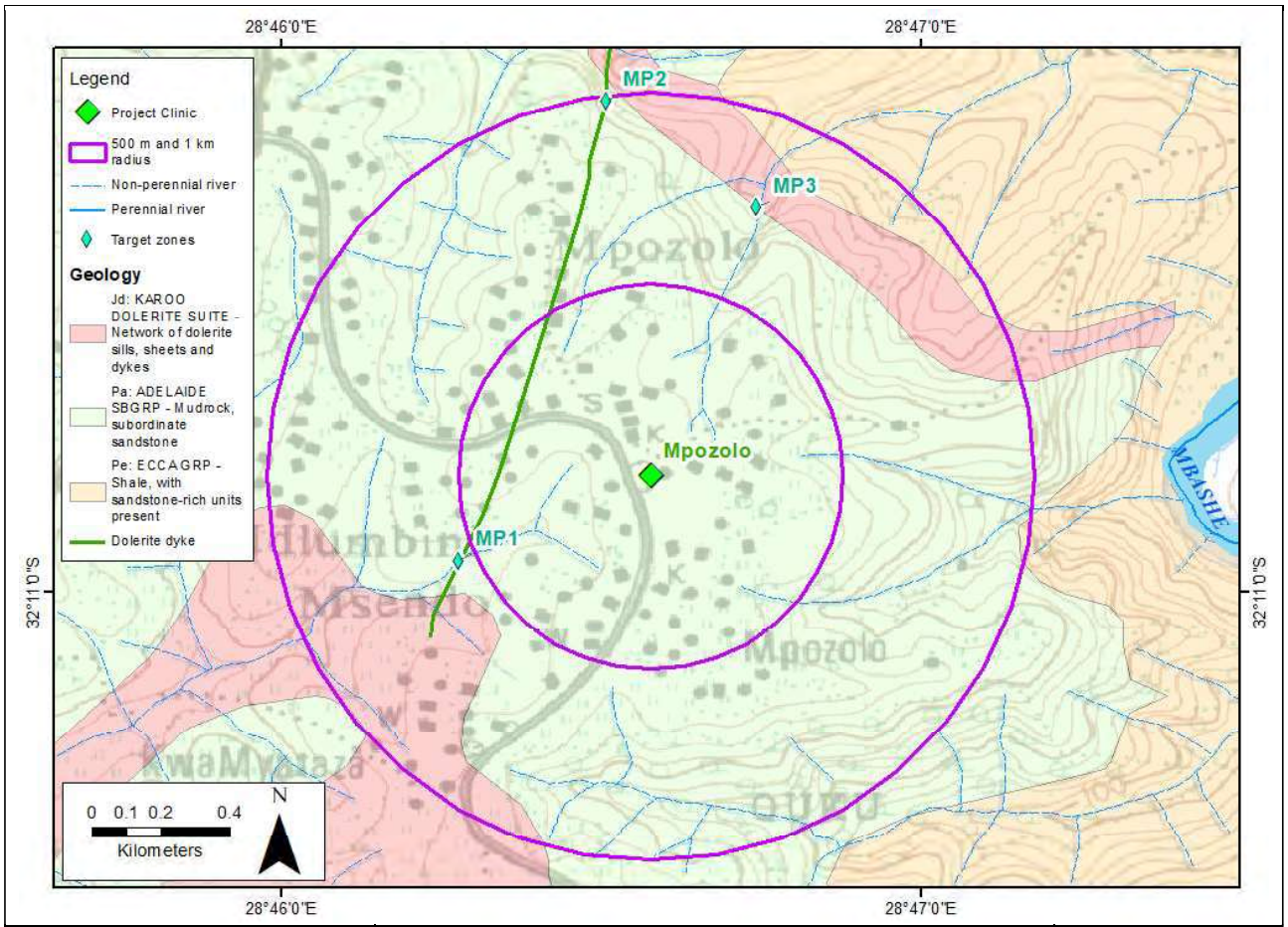
4.1.5 Geology – Mpozolo Clinic

As per the Explanation booklet for Sheet 3228 1: 250 000, Kei Mouth, Geological Survey, the Site is underlain by the Adelaide Subgroup, intruded by dolerite dykes and sheets.

The Adelaide Subgroup consist of alternating units a few meters to a few tens of meters thick of grey, fine-grained ultra-lithofeldspathic sandstone (+/- 20%) and greenish-grey, bluish-grey or greyish-red mudstone (+/- 80%).

The sedimentary rocks were intruded by numerous dykes, sills and inclined sheets of dolerite during the Jurassic period. Dykes are normally not more than 10 m wide and extend for a few kilometres.

Refer to Figure 4-4 for a map showing the regional geology of the area and the proposed target zones.



srk consulting	**MPOZOLO CLINIC** REGIONAL GEOLOGY AND TARGET ZONES	Project No. 609437

Figure 4-5: Mpozolo Clinic - Regional Geology and Target Zones

4.1.6 Target Zones Selection

The main drilling target areas will include the dolerite dyke and sill contact zones with the sedimentary rocks. Expected high groundwater potential zones (dolerite dyke and sill contact zones) were verified using satellite imagery. Based on the previously completed projects by SRK within the area and similar geology, the regional dolerite dykes and sill contact zones were found to deliver higher yielding boreholes along rivers where high groundwater recharge is expected. These dykes and contact zones form preferred flow paths with expected high groundwater potential. The criteria for the target selections therefore included geological targets such as dolerite dykes and dolerite sill contact zones with the sedimentary rocks.

Groundwater recharge to these geological targets is crucial, as the structure could be dry if not fed with water from a catchment area. Therefore, topographically high lying geological targets will most likely be dry and low-lying areas along well-developed drainage patterns would have an expected higher groundwater recharge.

The last criteria included in the target selection is accessibility. Dense vegetation as well as steep topography limits access to certain geological targets. These areas will still need to be verified on site for accessibility purposes.

A total of seven drill target zones were identified. Refer to Table 4-2 for a list of the target zones central coordinates. The target zones are presented on maps shown as Figure 4-4 and Figure 4-5.

NOTE: These coordinates are not drilling positions, merely the centre point of areas for further geophysical investigation.

Table 4-2: Target Zones

Clinic	No	Latitude	Longitude	Comment
Ntshele	NT1	-31.66810	28.72404	Dolerite dyke - 420 m from the Clinic
Ntshele	NT2	-31.68036	28.72036	Dolerite sill - 600 m from the Clinic
Ntshele	NT3	-31.67693	28.72786	Dolerite dyke - 980 m from the Clinic
Ntshele	NT4	-31.66794	28.72720	Dolerite sill - 730 m from the Clinic
Mpozolo	MP1	-32.18252	28.77128	Dolerite dyke and sill - two geophysical traverses proposed - 540 m from the Clinic
Mpozolo	MP3	-32.17330	28.77904	Dolerite dyke - access seem from the Satellite image to be limited - 800 m from the Clinic
Mpozolo	MP2	-32.17054	28.77513	Dolerite dyke and sill - 1 km from the Clinic

4.1.7 General Hydrogeology

The following key information sources were consulted:

- Vegter, J.R., Seymour A., 1995. Groundwater Resources of the Republic of South Africa – Two Map sheets and explanatory brochure. DWAF.
- Parsons, R., Conrad, J., WRC Report No KV 116/98, "Explanatory Notes for the Aquifer Classification Map of South Africa".
- Groundwater Resource Assessment Phase 2 (GRA 2), DWS, 2003.
- Department of Water Affairs and Forestry. Hydrogeological Map Series of the Republic of South Africa. Completed in 2002.

The Site area has a moderate groundwater potential of 30 – 40% reported by Vegter and Seymore (1995). These percentages indicate the probability of drilling a successful borehole (airlift yield > 2 L/s). In the Hydrogeological Map Series, an expected borehole yield of 0.5 – 2.0 L/s was reported within an intergranular and fractured aquifer.

DWS initiated a project in 2003, referred to as the Groundwater Resource Assessment Phase 2 (GRA 2). The main aim of the project was the quantification of the groundwater resources of South Africa on a national scale. The project included the quantification of recharge, storage and sustainable yield of the aquifer systems throughout South Africa. The expected average groundwater exploitation potential (AGEP) for the Site is 10 000 to 15 000 m^3/km^2/annum (0.3 to 0.5 L/s).

According to the GRA2 the expected Electrical Conductivity will be below 70 mS/m at Mphozolo Clinic, indicating acceptable water quality but the expected Electrical Conductivity will be from 70 to 300 mS/m at Ntshele Clinic, indicating a moderate water quality.

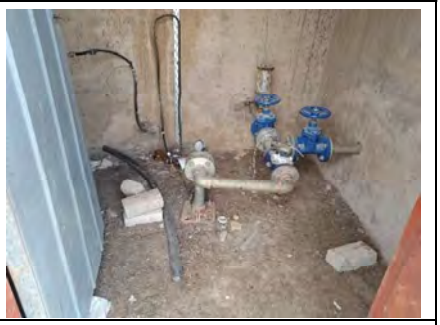
Based on the Aquifer Classification Map, the aquifer is classified as a minor aquifer region, therefore being a moderately-yielding aquifer of variable water quality.

4.2 Site Investigations

4.2.1 Hydrocensus

The hydrocensus was undertaken in the week of 7 October 2024. The existing boreholes were photographed and current statuses captured. Boreholes EC/T20/0237 and EC/T20/0238 were found at Ntshele Clinic, but T34008 is believed to be destroyed and could not be found. Both these boreholes are in brick pumphouses, but the equipment was not in working condition. No boreholes were found at Mpozolo Clinic. Refer to Table 4-3 for a summary of the borehole details and photographs.

Table 4-3: Hydrocensus results

Site Type	Allocated number	Latitude	Longitude	Equipment	COMMENTS	PHOTO
Clinic	Mpozolo Clinic Contact person: M. Mhlahlo, Community member, 076 764 0344	-32.1801	28.77623		There is currently no structure on the proposed new site. No boreholes were found in the village. The village was reported to get water from the neighbouring village (borehole / dam).	
Clinic	Ntshele Clinic Contact person: Sicelo Tuswa, Sub-headman, 078 695 3041	-31.6716	28.72351			
Borehole	EC-T20-237	-31.6677	28.72551	Submersible pump (not working)	The pump house was found open and vandalised. The pump was not working.	
Borehole	EC-T20-238	-31.6614	28.72512	None	Borehole house is not locked, and the pump is vandalised. The groundwater level could be measured as 18 m bgl, but the borehole depth could not be measured.	

4.2.2 Geophysical Investigation

The targets selected during the desk study were verified on site for accessibility. No geophysical traverses could be undertaken at target zones NT2 and NT3 at Ntsele Clinic. The area at NT2 were found to be allocated to private owners and could not be accessed and the topography at NT3 was very steep and can not be accessed by a vehicle. Traverses NT-004 and NT-005 were undertaken in the vicinity of the existing borehole EC/T20/0237 that is not in a working condition, and the pump was found to be vandalised.

Traverses number MP-001 and MP-002 at Mpozolo Clinic are located on the territory of a different chief from that on which the clinic is located, and Mr Zeka from CDC indicated that liaison will be undertaken by the CDC before commencing of drilling new boreholes.

The EM-34 and Magnetometer were applied to the five areas that were accessible and five geophysical traverses completed. Readings were taken at 5 m and 10 m intervals and every 10 m position marked by creating a soil mound using a spade.

Refer to Table 4-4 for the geophysical traverses start and end coordinates as well as the results in the comment column. Refer to Appendix A for the geophysical graphs and Figure 4-6 and Figure 4-7 shows the geophysical traverse positions.

Table 4-4: Geophysical traverses start and end coordinates

Traverse No.	Target	Direction	Station	Latitude	Longitude	Priority	Drilling Position
Mpozolo Clinic							
MP-001	Dyke	S-N	0	-32.18298	28.77179		
			130	-32.18212	28.77103		
MP-002	Sill	W-E	0	-32.18208	28.7725	1	130
			180	-32.18320	28.77122	2	100
MP-003	Sill	W-E	0	-32.16963	28.77288	3	80
			110	-32.16901	28.77379	4	35
Ntshele Clinic							
NT-004	Dyke	SWW-NEE	0	-31.66881	28.7233	1	130
			200	-31.66732	28.72458		
NT-005	Dolerite Sill	NW-SE	0	-31.66772	28.72554	2	140
			200	-31.66798	28.72765	3	100

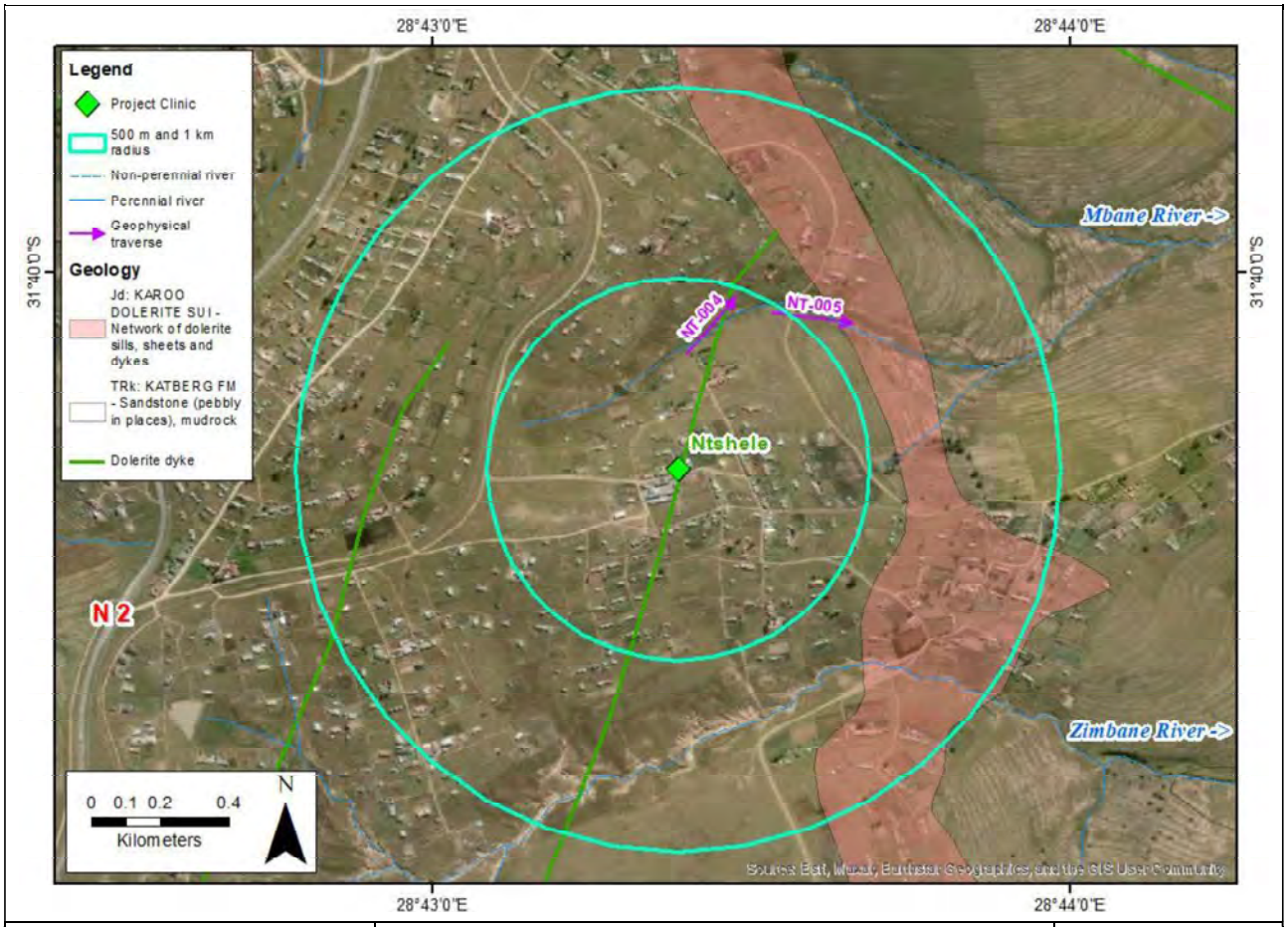
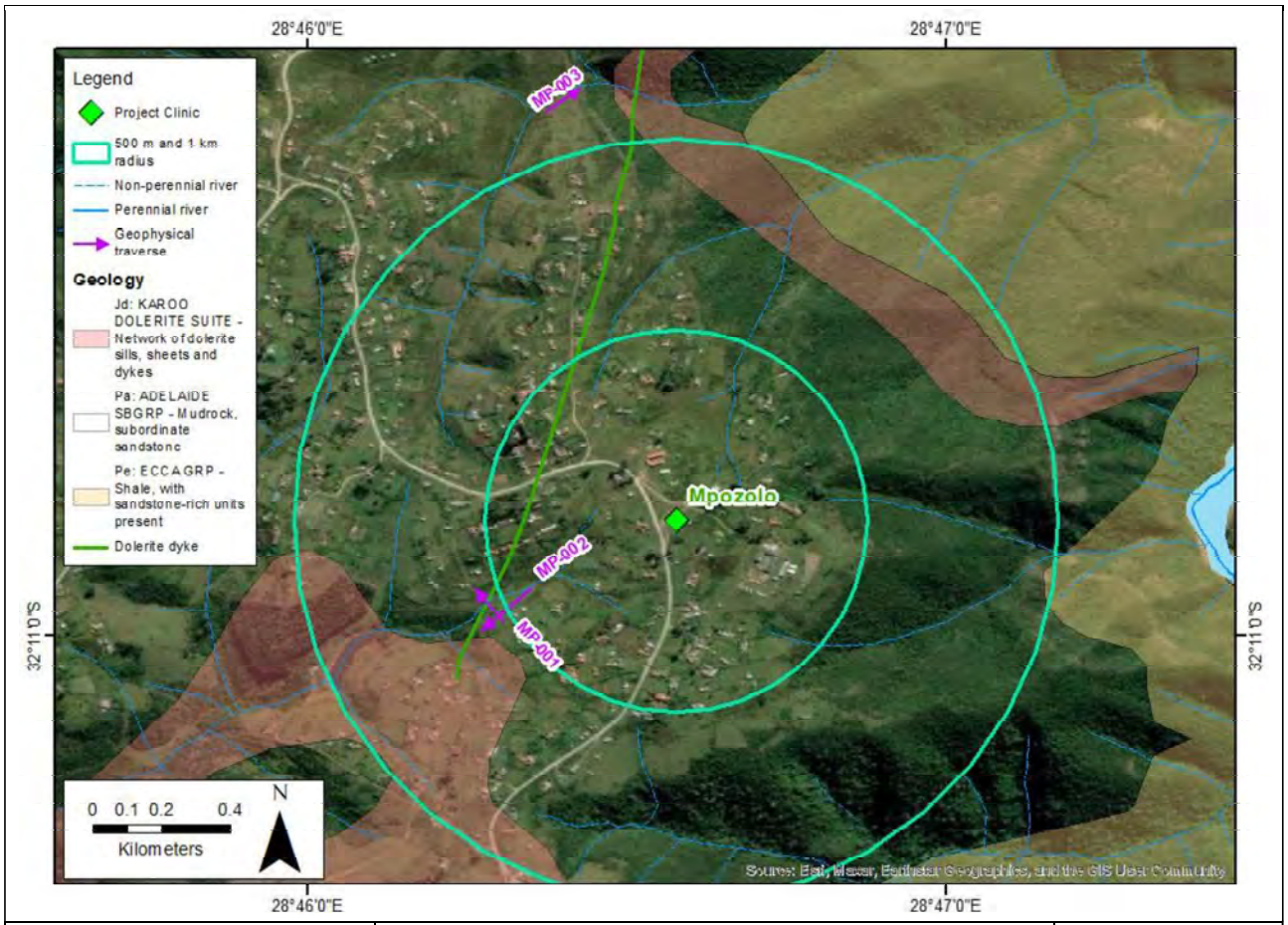


Figure 4-6: Ntshele Clinic – Geophysical Traverses



srk consulting	**MPOZOLO CLINIC** GEOPHYSICAL TRAVERSES	Project No. 609437

Figure 4-7: Mpozolo Clinic - Geophysical Traverses

4.3 Groundwater Impact Assessment

No impacts on other groundwater users are expected, due to the absence of other groundwater users in the vicinity of the target drilling sites.

No impact of the abstraction of groundwater from a borehole and its activities on the natural environment are expected. It is however required that boreholes must be drilled and successful boreholes, yield tested according to the DWS and SANS standards. Proper drilling methods, i.e. installation of sanitary seals, concrete collars, etc. will ensure that the aquifer is not contaminated by inflow from surface, and the analyses of the pump test by a professional hydrogeologist will ensure that the groundwater is not over abstracted and the aquifers damaged.

Management of the boreholes are crucial to the sustainability of the sources and should include monitoring of groundwater levels and yields. The DWS published the latest "Standard Operating Procedures (SOP) for Groundwater Resource Development for Community Water Supply Projects", Version 4.0, 15 June 2023. DWS have made it widely known to hydrogeologist that this document is applicable to all groundwater source development, inclusive of town or businesses water supply from boreholes.

Typical management measures that can mitigate groundwater impacts are outlined below:

- Installation of a monitoring device during installation of a production pump;
- The installation must include a piezometer tube that is large enough to accommodate the monitoring probes and should be a standard item of the down-hole equipment;

- The monitoring system must monitor the number of hours and yield the borehole is pumped and reported in relation to the management recommendation done by the hydrogeologist.
- The groundwater level must be monitored daily and reconcile with the dynamic groundwater levels calculated from the pump test data.
- A daily report must be produced that reflects the operational status of the borehole over the last 24 hours.
- A monthly report must reflect the borehole reaction to the pumping cycles of the month.
- An annual report must be electronically submitted and be made available on request as part of an information database.
- These monitoring reports must be electronically submitted and available on request as part of an information database.

In accordance with General Notice (GN) 509 of 2016, a regulated area of a watercourse for Section 21(c) and 21(i) of the NWA, 1998 is defined as:

- the outer edge of the 1 in 100-year flood line and/or delineated riparian habitat, whichever is the greatest distance, measured from the middle of the watercourse of a river, spring, natural channel, lake or dam;
- in the absence of a determined 1 in 100-year flood line or riparian area the area within 100 m from the edge of a watercourse where the edge of the watercourse is the first identifiable annual bank fill flood bench; or
- a 500 m radius from the delineated boundary (extent) of any wetland or pan.

The National Freshwater Ecosystem Priority Areas (NFEPA) wetlands were plotted and compared to the proposed drilling positions. Except for MP-003, geophysical traverses MP-002, NT-004 and NT-005 were all found to be within 500 m from a mapped wetland zone. The proposed drilling positions are all located next to non-perennial streams as well, but no crossings will be required with infrastructure from the source to the clinic. It will however be applicable to apply for a license when authorising the water source with the DWS.

Table 4-5: Drilling position coordinates and distances form wetlands

Traverse No.	Priority	Drilling Position	Drilling coordinates		Distance from NFEPA wetland [m]
			Latitude	Longitude	
Mpozolo Clinic					
MP-002	1	130	-32.182900	28.771500	290
	2	100	-32.182706	28.771729	315
MP-003	3	80	-32.169178	28.773544	> 500
	4	35	-32.169428	28.773176	>500
Ntshele Clinic					
NT-004	1	130	-31.667865	28.724112	100
NT-005	2	140	-31.667900	28.727000	350
	3	100	-31.667848	28.726579	300

4.4 Cost estimation for the establishment of groundwater sources

The required water demand of the clinics will predict the number of boreholes to be drilled. It is recommended that the drilling of two boreholes at each clinic be allowed for with the construction of one borehole for abstraction purposes per clinic.

It is recommended to allow for the following:

- Drilling:
    - Two boreholes to depths of 120 m each per clinic;
    - Drilling diameter of 165 mm should be undertaken;
    - The exact depth of the casing will be determined during the drilling of the borehole. The geological log will indicate the depth that unstable formation was encountered, and the depth the casing should be installed to;
    - For budgeting purposes, 30 m of 165 mm inner diameter steel casing was allowed for to be installed in one of the boreholes per clinic;
    - The successful borehole should be reamed to a diameter of 215 mm, to the depth of the casing to be installed;
    - A sanitary seal shall be installed in the successful boreholes;
    - A concrete collar shall be installed at the successful boreholes;
    - Dry boreholes will be backfilled and concrete plug installed at surface to ensure no surface water can access the boreholes;
    - Borehole numbers shall be obtained from the DWS, as per the catchment numbers and allocated to each borehole; and
    - The casing shall be closed at the top to secure the borehole from vandalism.
- Yield and water quality testing:
    - Yield testing of one successful borehole per clinic;
    - Test pump installation at 90 m;
    - Step test – four steps of one hour each with increasing yields and four hours recovery;
    - Constant discharge rate test – 24 hours of pumping at a constant yield with 24 hours of recovery;
    - Collection of a water sample will be undertaken towards the end of the constant discharge rate test and submitted for analytical purposes to be classed for human consumption;
    - The water quality results shall be classed according to the SANS241:2015 guidelines and determined if it is safe for human consumption.
- Drilling-, yield testing control and reporting by a professional hydrogeologist:
    - Drilling control should be undertaken and the success of the targeted formation identified;
    - Construction of the borehole shall be determined, based on the geological formation encountered in the successful borehole;
    - Yield testing control will be undertaken and the step yields and constant discharge rate yields determined by the hydrogeologist;

- Analyses of the yield test results will be undertaken and recommended abstraction rates calculated for long term use of the boreholes and the water quality results analysed for human consumption;
- Reporting on the above results to be undertaken by the hydrogeologist.

The estimated costs will be as follows:

Item	Description	Unit	Qty	Rate	Total
1	Drilling of two boreholes at Ntshele Clinic, one constructed for abstraction purposes	Sum	**1**	R 160 000.00	R 160 000.00
2	Drilling of two boreholes at Mpozolo Clinic, one constructed for abstraction purposes	Sum	**1**	R 160 000.00	R 160 000.00
3	Yield testing of one borehole at Ntshele Clinic	Sum	**1**	R 31 500.00	R 31 500.00
4	Yield testing of one borehole at Mpozolo Clinic	Sum	**1**	R 31 500.00	R 31 500.00
5	Hydrogeological supervision, analyses and reporting	Sum	**1**	R 105 000.00	R 105 000.00
				Total (Excluding VAT)	**R 488 000.00**

5 Conclusions and Recommendations

From the above activities completed the following can be concluded and recommended:

- Mpozolo Clinic is located on a catchment boundary with expected low groundwater recharge;
- Two existing boreholes are located within 1-km from Ntshele Clinic, both were however found to be vandalised and no longer in use. Borehole EC/T20/0237 was reportedly yield tested in 2012 and recommended at 0.56 L/s for a 10-hr pumping period.
- Ntshele Clinic is underlain by the Katberg Formation, consisting mostly of sandstone with an expected higher groundwater potential than the Adelaide Subgroup underlying the Mpozolo Clinic, consisting mostly of mudstones and having an expected lower groundwater potential.
- Both sites are intruded by dolerite sills and dykes, whereby these contact zones with the above mentioned sedimentary rocks form preferred groundwater flow paths with expected higher groundwater potential zones.
- The groundwater potential for both clinics are moderate and a chance of 30 – 40% for drilling a borehole yielding > 2 L/s are reported.
- Two geophysical traverses were undertaken at Ntshele Clinic and three at Mpozolo Clinic.
- Three position for the drilling of boreholes were selected per clinic.
- The drilling of two boreholes should be allowed for with the yield testing of one successful borehole per clinic.
- The estimated costs (excluding VAT) will be in the order of R 488 000, inclusive of the drilling, yield- and water quality testing, supervision by a hydrogeologist on both activities and reporting on the results found.

Prepared by



Eunice Goossens (Pr. Sci. Nat.)

Principal Hydrogeologist

Project Manager

Reviewed by



Rob Gardiner, Pr Sci Nat, Reg. EAP (EAPASA)

Partner

Project Partner

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

7 References

Department of Water Affairs and Forestry. (April 1997). *Minimum Standards and Guidelines for Groundwater Resource Development for the Community Water Supply and Sanitation Programme.* Chief Directorate: Community Water Supply and Sanitation and Directorate: Geohydrology.

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Geological Survey. (1979). *The Geology of the Kei Mouth Area, Explanation Sheet 3228.*

J.R. Vegter, A. S. (1995). *Groundwater Resources of the Republic of South Africa - Two Map sheets and explanatory brochure.* Department of Water Affairs and Forestry.

Karpeta B.Sc. (ARSM), W. P., & Johnson, P. M. (1979). *The Geology of the Umtata Area, Explanation of Sheet 3128.*

South African National Standard. (2015). *Drinking Water, SANS241:2015.*

Appendices

Appendix A: Geophysical Graphs

Magnetic method

Magnetic surveys indicate anomalies (changes) in the earth's magnetic field due to rock types having different magnetic susceptibilities. Magnetic bearing formation such as intrusive dykes, faults, lithological contacts and weathered/fractured bedrock will most likely have an impact on the earth's magnetic field.



These geological structures are primary targets in the selection of drilling sites for groundwater exploration.

A Geotron model G5 Proton-precession magnetometer was utilized in the survey. This instrument measures the total field component of the earth's magnetic field. A default station interval of 5 m was adapted in order to delineate the geological structures.

Geonics EM34 (Electromagnetic Instrument)

In this method, the ground is subjected to an artificially produced magnetic field and the response, which is a combination of the artificial field and the field produced by the geological body affected by it, is measured. The apparent conductivity of the underlying geology is measured in mS/m. This property is proportional to the amount of weathering and/or fracturing encountered in the underlying geology.



The EM-34 consists of a large transmitter and receiver coil connected by a reference cable. The EM34-3 uses 2 inter-coil separations (20 or 40 m) to measure conductivity at variable depths of exploration down to 60 meters.

Investigation depths of the EM34 at variant coil spacing

Coil Spacing (m)	Investigation Depth (m)	
	Vertical Coils	Horizontal Coils
20	15	30
40	30	60

Project Name: CdcGW2Clinics
Project Number: 609437
Traverse Number: MP-001

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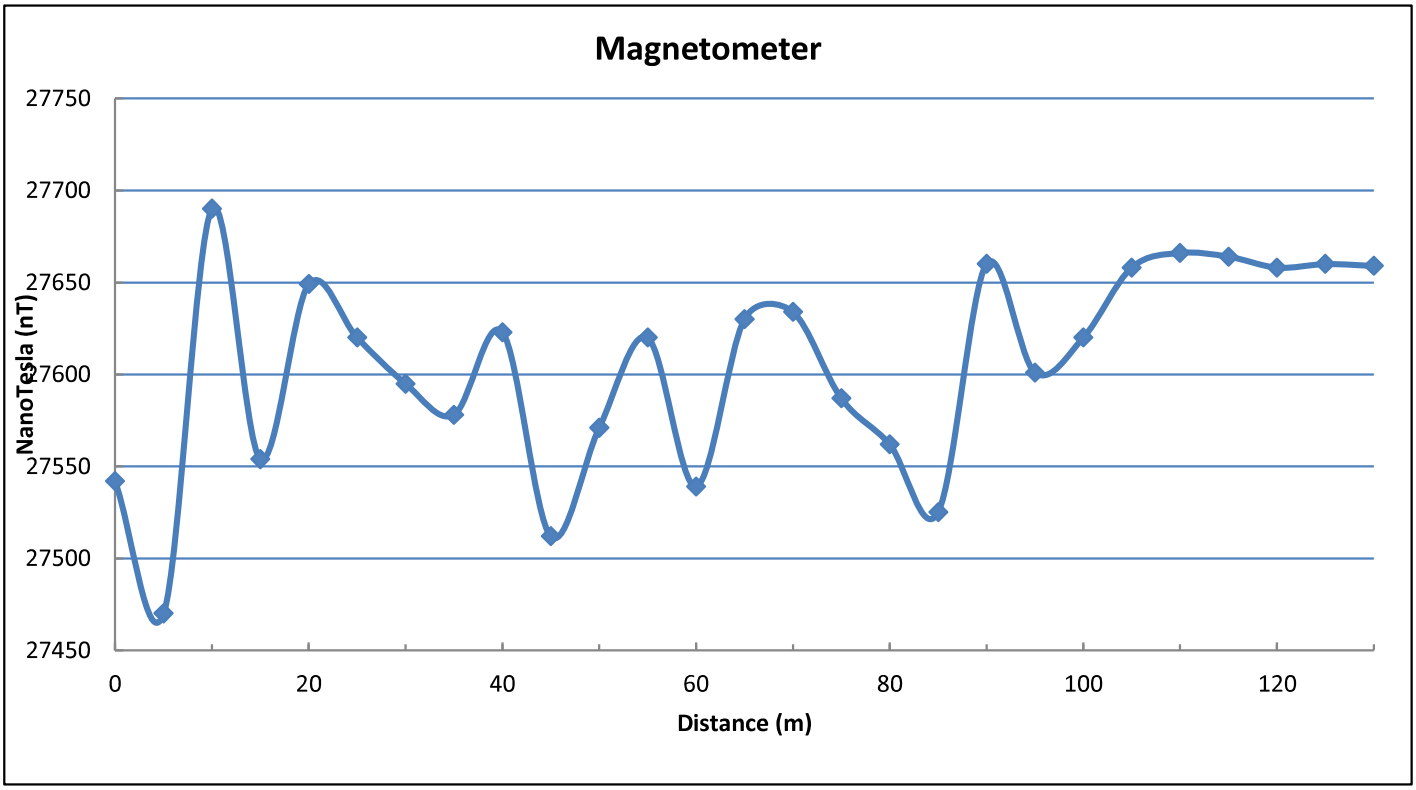
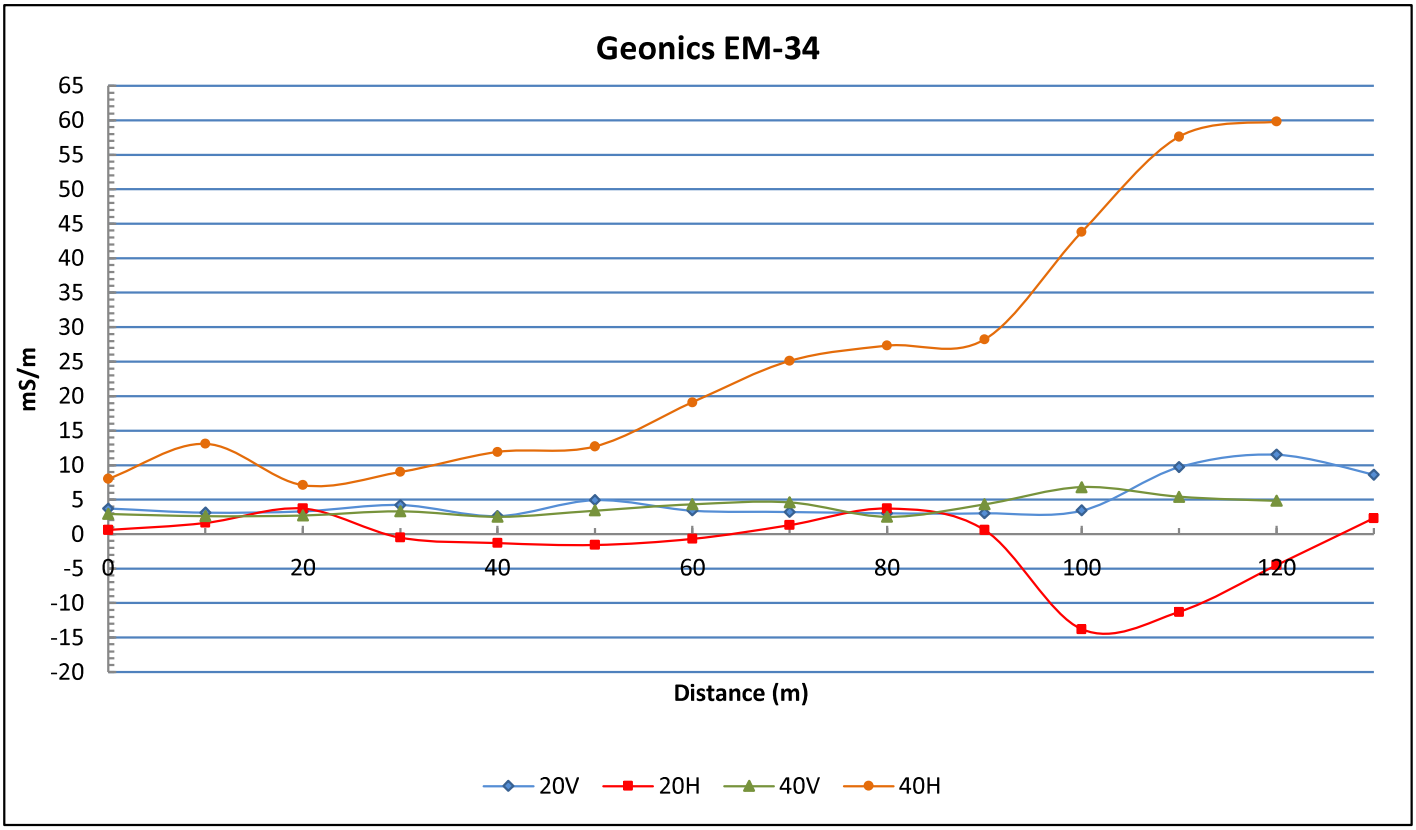


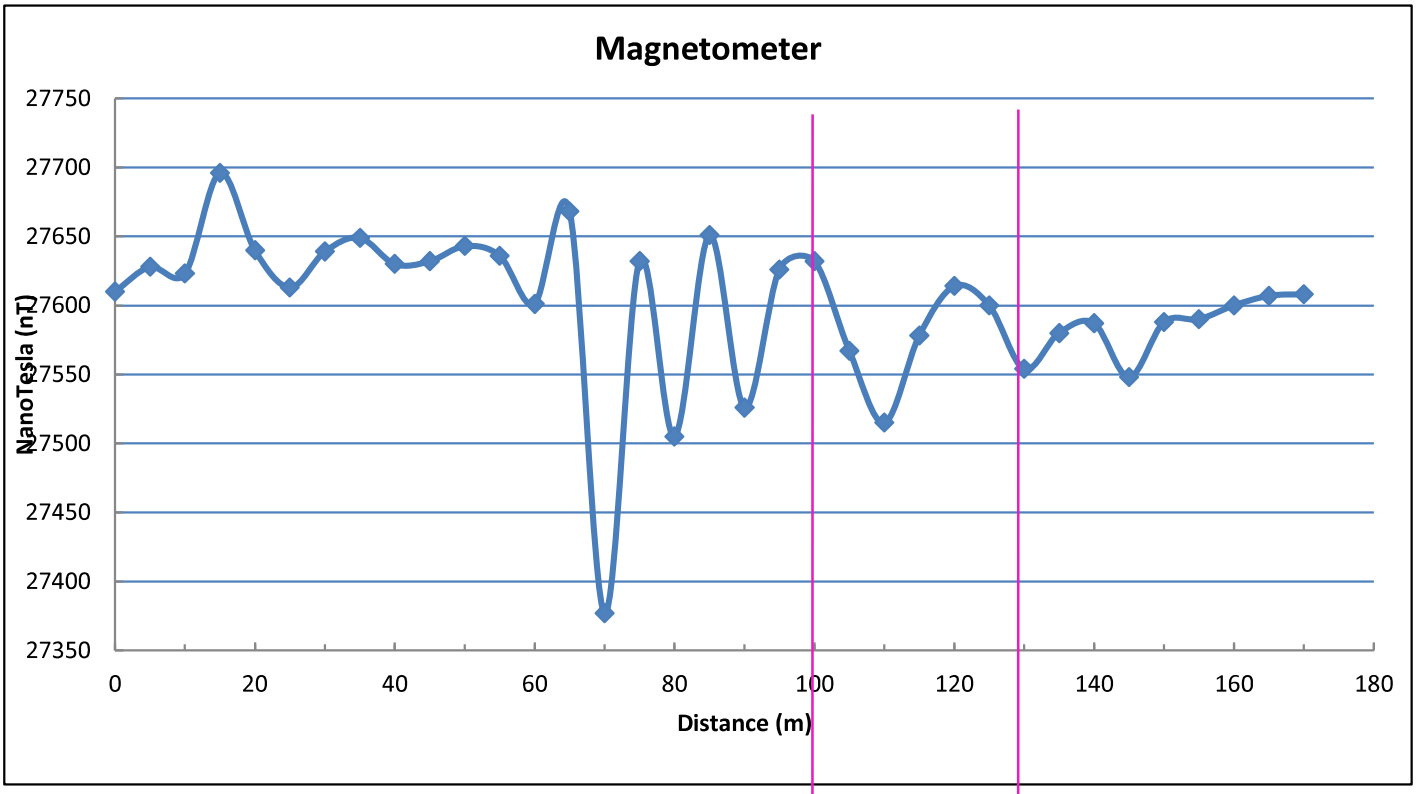


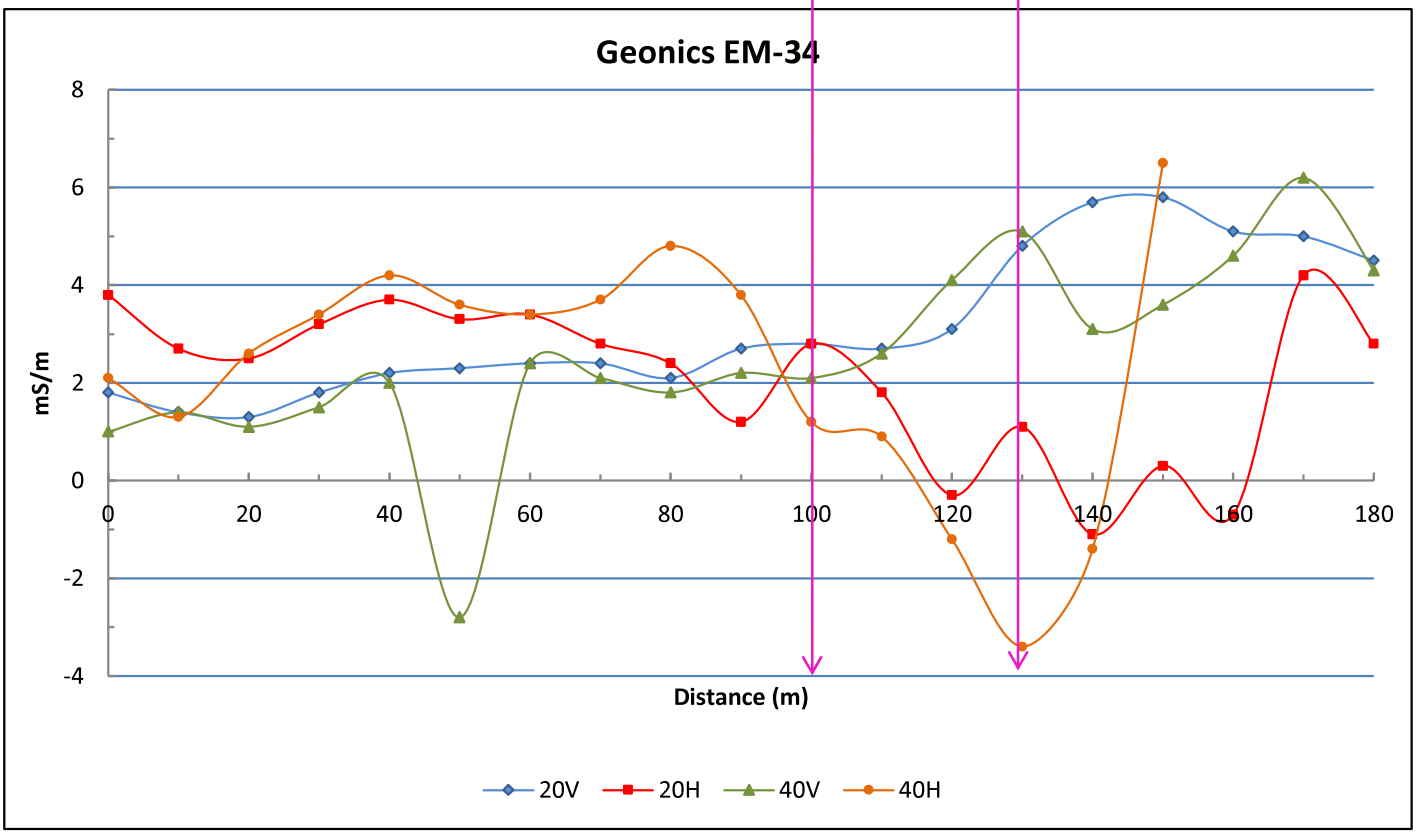
Co-ordinates				Traverse Direction	Target	Drilling Positions		
Start Lat	Start Long	End Lat	End Long			1	2	3
-32.18298	28.77179	-32.18212	28.77103	S-N	Dyke			

Comment: 20m - 40m cable powerline influence, 130m - 20m from fence

Project Name: CdcGW2Clinics
Project Number: 609437
Traverse Number: MP-002

srk consulting





Co-ordinates				Traverse Direction	Target	Drilling Positions		
Start Lat	Start Long	End Lat	End Long			1	2	3
-32.18208	28.7725	-32.1832	28.77122	W-E	Dolerite sill	130	100	

Comment: 150-160m - Powerline

Project Name: CdcGW2Clinics
Project Number: 609437
Traverse Number: MP-003

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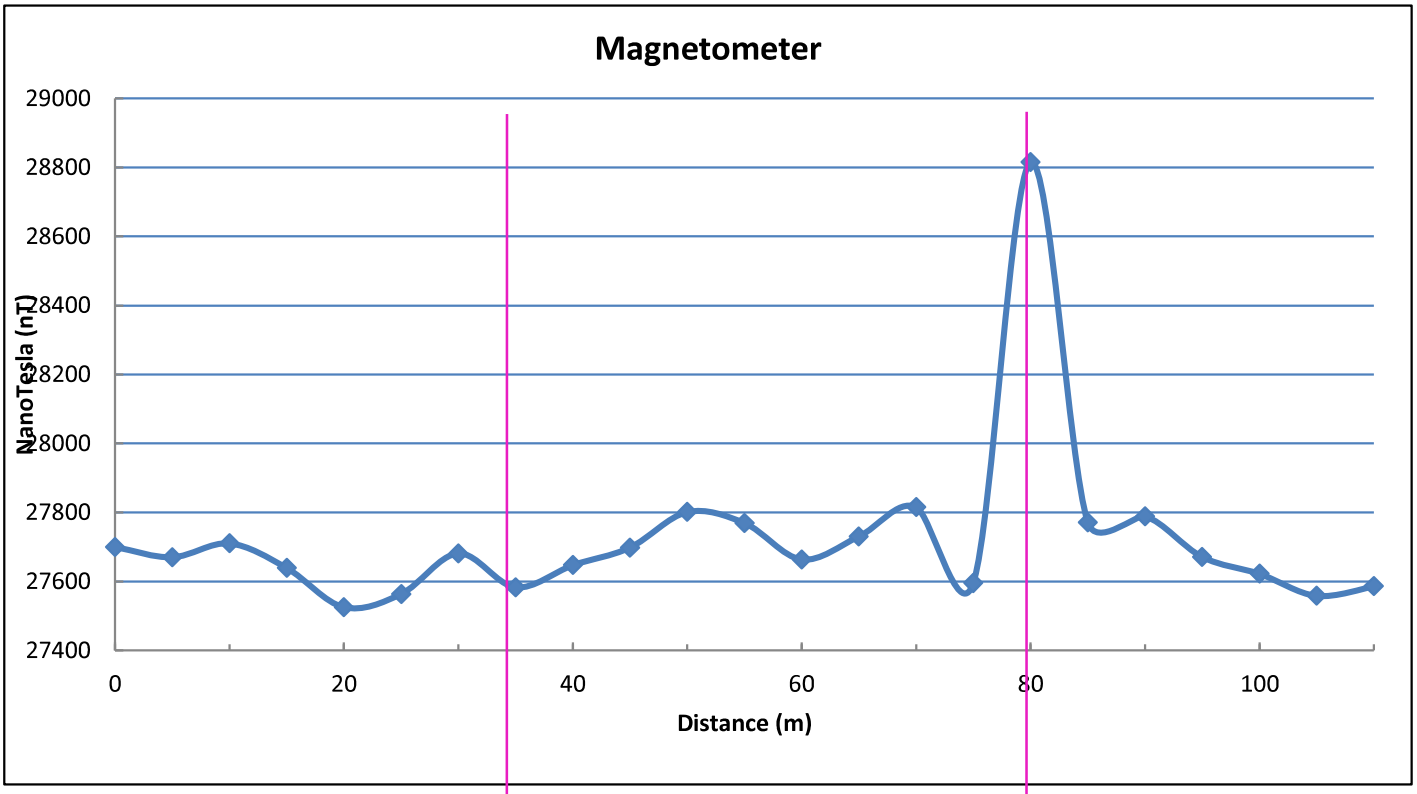
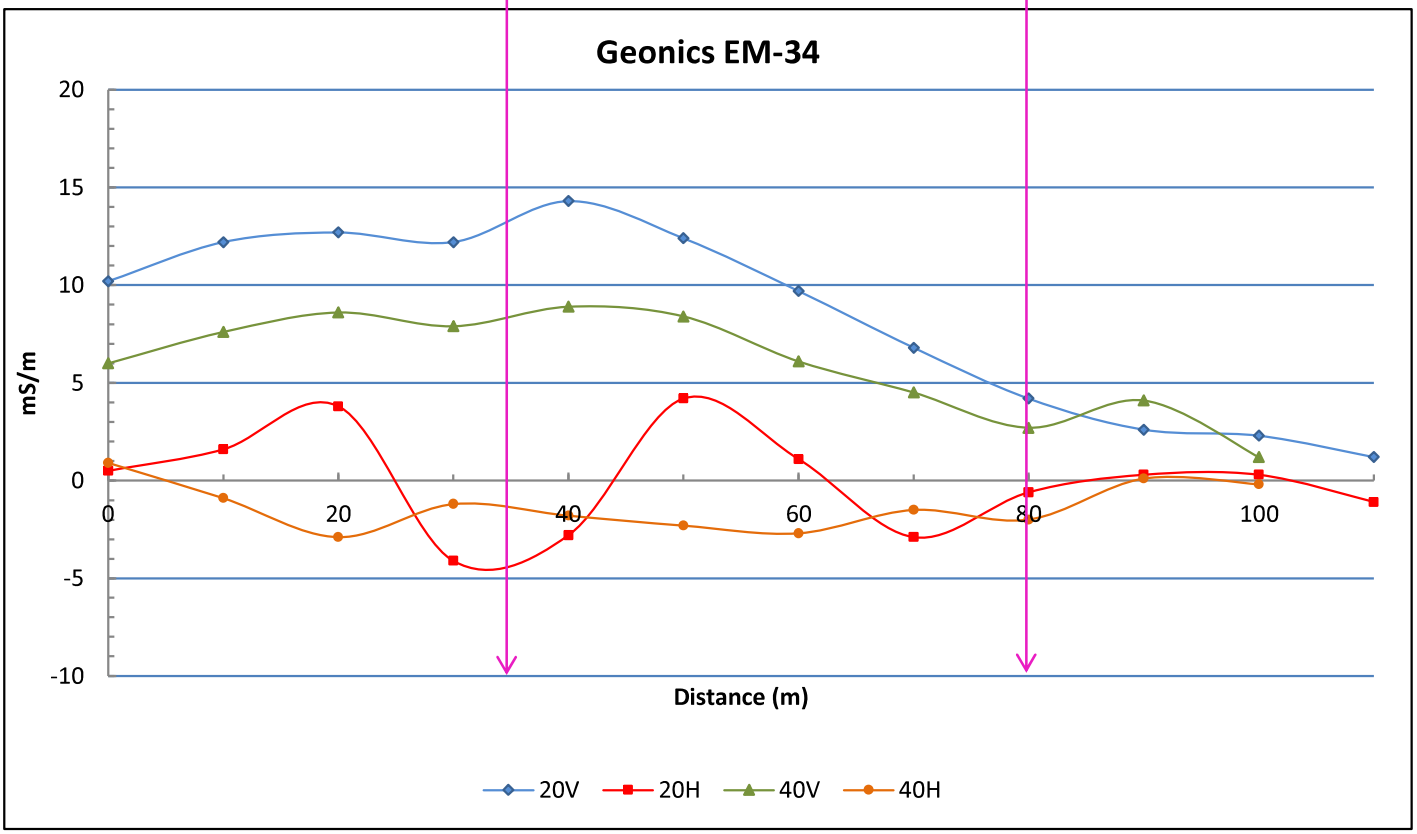


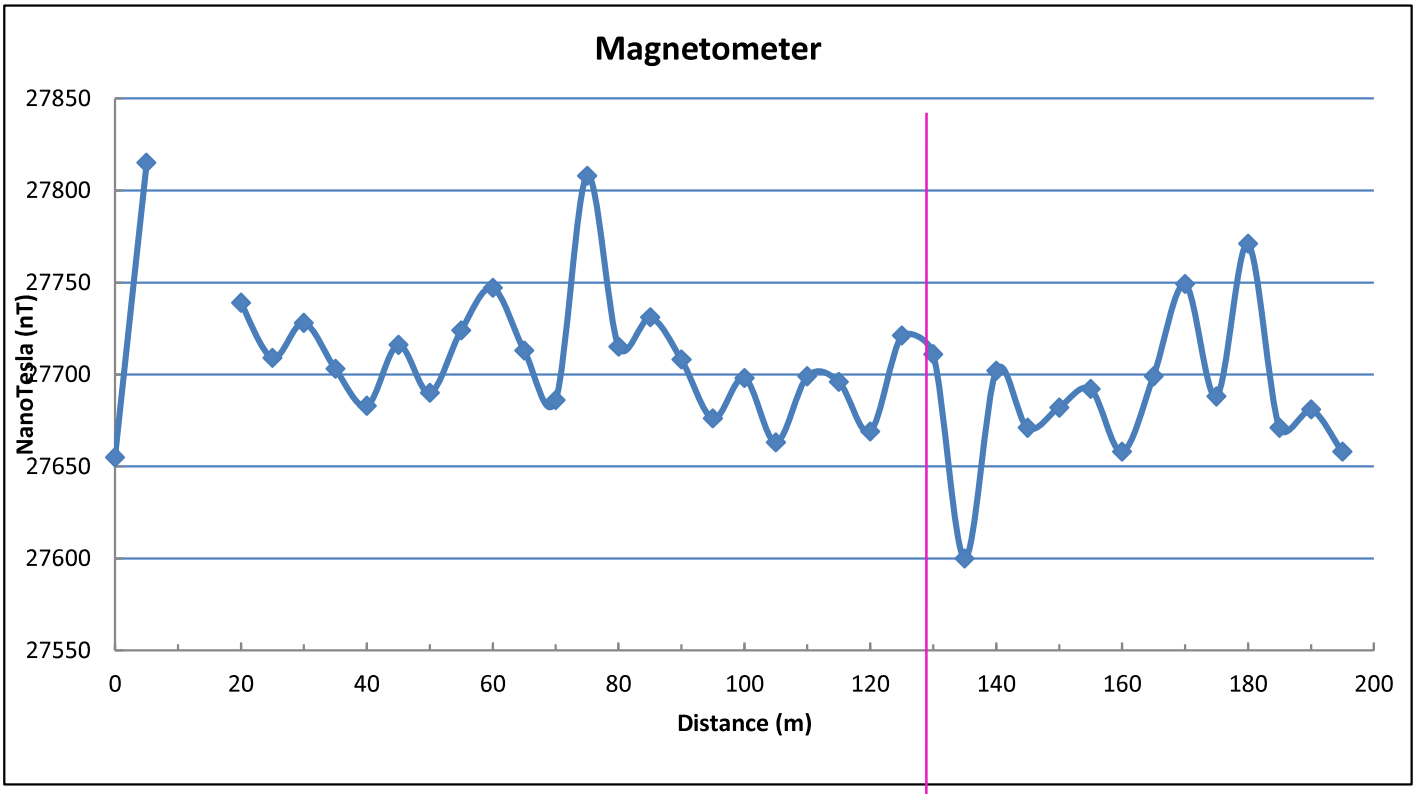


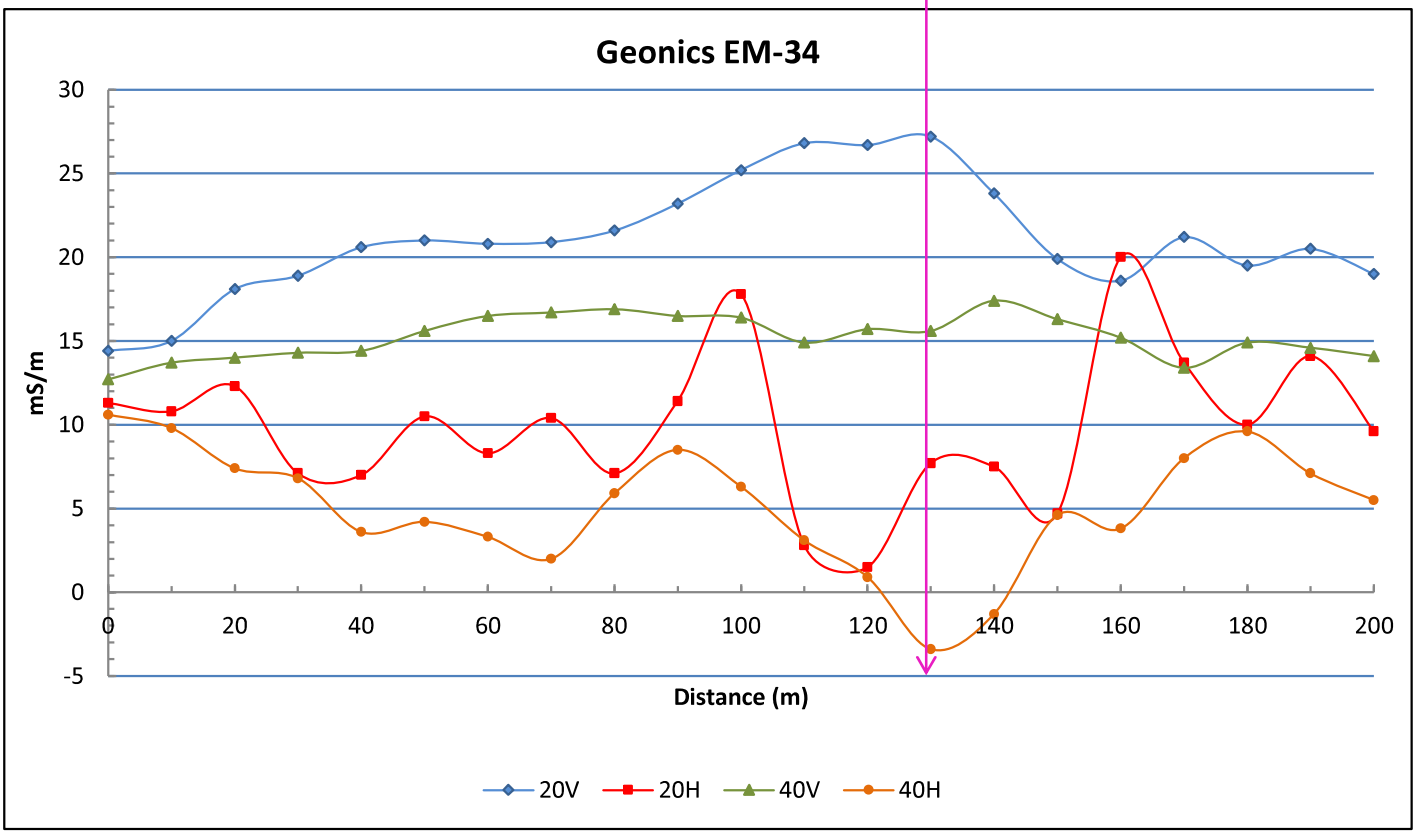
Co-ordinates				Traverse Direction	Target	Drilling Positions		
Start Lat	Start Long	End Lat	End Long			1	2	3
-32.16963	28.77288	-32.16901	28.77379	W-E	Sill	80	35	

Comment:

Project Name: CdcGW2Clinics
Project Number: 609437
Traverse Number: NT-004

srk consulting



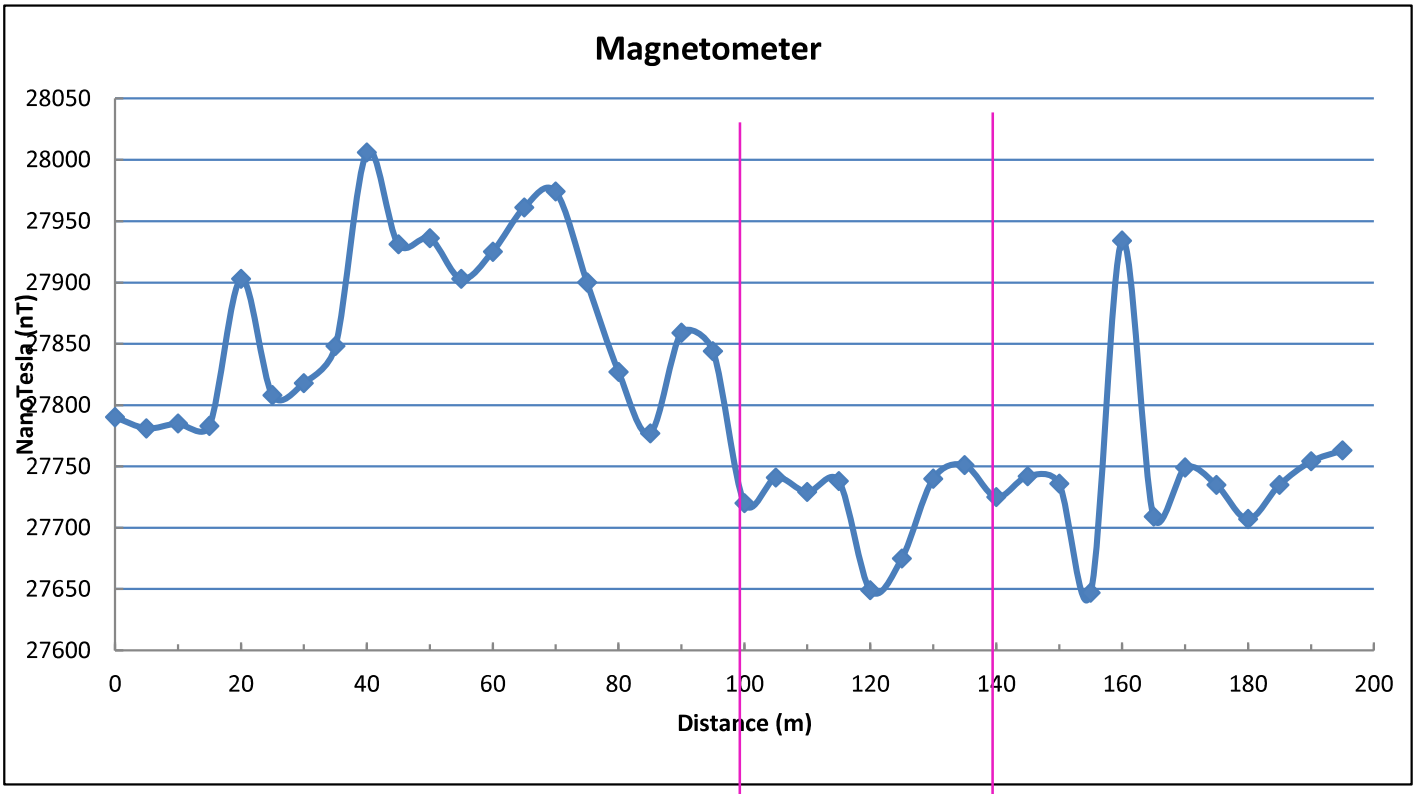


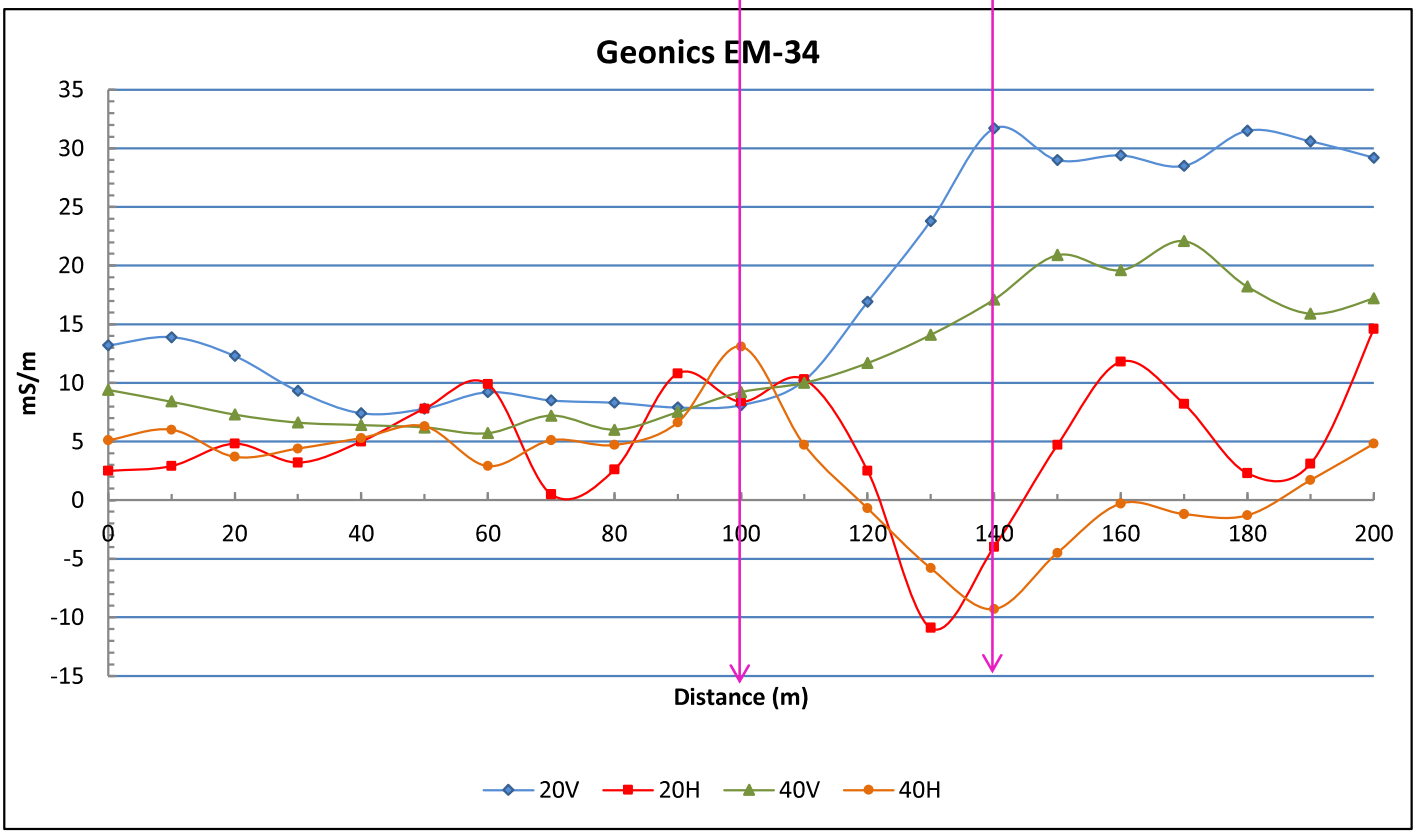
Co-ordinates				Traverse Direction	Target	Drilling Positions		
Start Lat	Start Long	End Lat	End Long			1	2	3
-31.66881	28.7233	-31.66732	28.72458	SWW-NEE	Dyke	130		

Comment: 0m - Under powerline, 90-105m - Under powerline, 100m - Stream.

Project Name: CdcGW2Clinics
Project Number: 609437
Traverse Number: NT-005

srk consulting





Co-ordinates				Traverse Direction	Target	Drilling Positions		
Start Lat	Start Long	End Lat	End Long			1	2	3
-31.66772	28.72554	-31.66798	28.72765	NW-SE	Dolerite Sill	140	100	

Comment: 0m - 10m from borehole, 45-50m - Road

C4.5 TOPOGRAPHICAL SURVEY

Our Ref: 9424 Ntshele Clinic Survey Report
28 September 2024

SURVEY REPORT
TACHY SURVEY AND BEACON RELOCATION OF NTSHELE CLINIC IN NTSHELE VILLAGE IN MUTATA

Purpose of the survey

The purpose of this survey was to undertake a tachy survey and relocate or replace the boundary beacons of Ntshele Clinic in Ntshele Village in Mutata.

The survey was done in September 2024

Control System

This survey was linked onto found benchmark 8230-BM1 previously established by NPM Geomatics in Y, X and height. Checks were made onto found benchmarks 8230-BM2 and 8230-BM3 Closures were within Class A limits.

Accuracy of Survey

The survey has been carried out by SAGC registered persons under the supervision of the undersigned SAGC registered professional land surveyor. The accuracy is confirmed to meet the required accuracies expected in terms of the Land Survey Act, No 8 of 1997

Survey Methods

The survey was carried out using survey grade GPS.

Establishment of New Control

Three benchmarks found on site were adopted.

Erf beacons

Beacons of the existing site (Erf 1360) were located and missing ones were replaced in accordance with the Land Survey Act, No 8/1997. A search was made for the beacons of Ntshele Clinic Beacons AF, BF, CF, DP, EP, and FP were found and adopted.

An additional area was pointed out, which has been marked and shown on the plan. This area encroaches over existing land rights which will need to be further investigated to confirm ownership and determine a way forward for the acquasition of the land for proposed development.

Cadastral Data

Apart from the beacons and boundaries certified on the beacon certificate and survey drawings, the cadastral overlay shown on the plan has been sourced from a public domain spatial database. This data has not be verified by us for accuracy or correctness. If accurate cadastral information is required, you should contact either ourselves or another professional land surveyor for further advice.

Assistance

I was assisted by SAGC registered survey technician Mutsa Musekiwa.

Yours faithfully

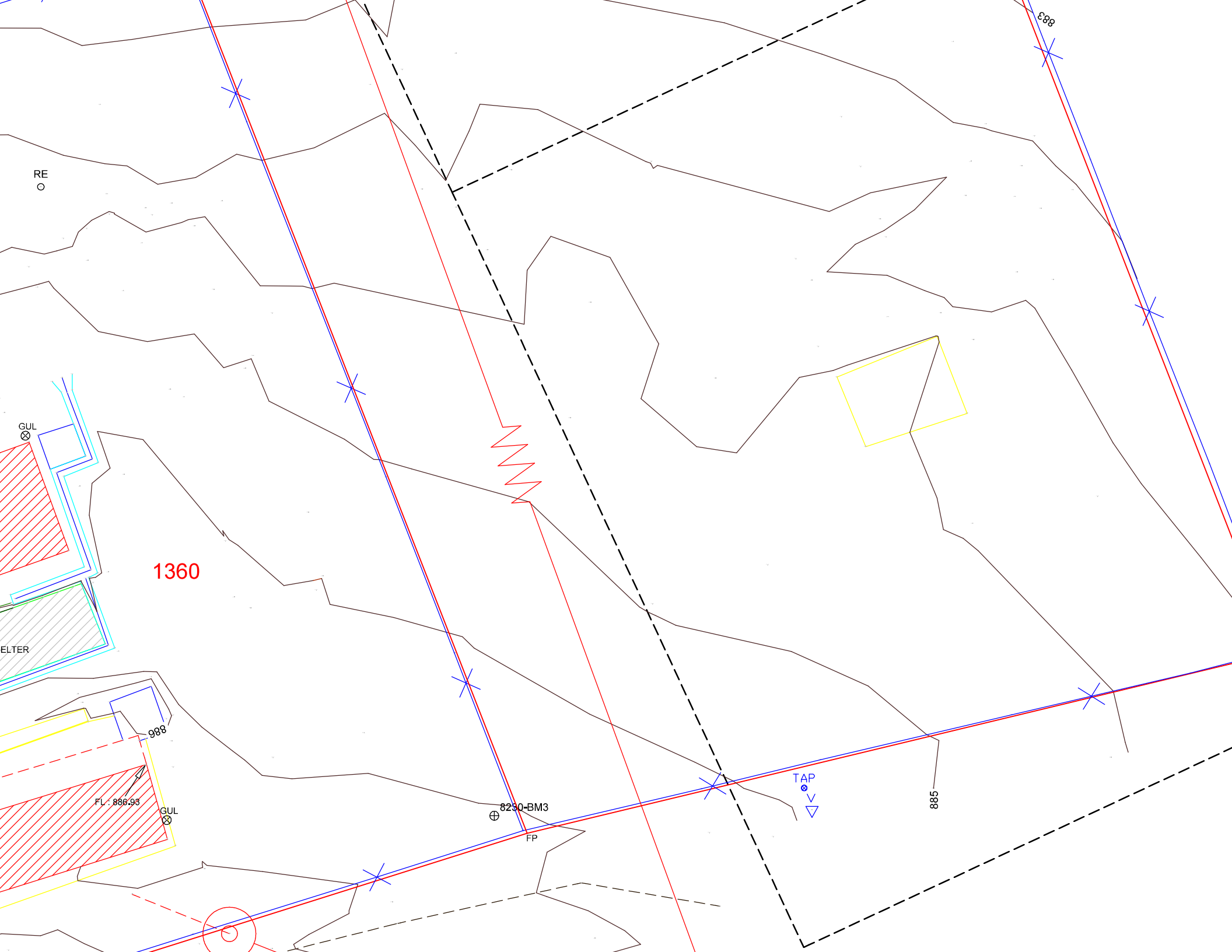
NPM GEOMATICS



COLIN DAVIES

Pr.L (SA)

Please note that NPM is a Level 2 BBBEE contributor. A copy of our certificate is available on our website or by clicking here


RE
GUL
1360
ELTER
988
FL : 886.93
GUL
8230-BM3
FP
TAP
885
883

CONTROL LIST				
Project name:	Tachy Survey and Beacon Relocation of Ntshele			
Job No:	9424			
Datum:	Existing benchmarks 8230- BM1			
WG System:	29			
Decimal precision	2.0	2.0	2.0	
Benchmarks				
Name	**Y**	**X**	**Height**	**Description**
8230-BM1	26268.210	3505454.830	884.210	12mm Round Iron Peg in Concrete
8230-BM2	26254.300	3505504.040	887.600	12mm Round Iron Peg in Concrete
8230-BM3	26207.610	3505489.090	886.020	12mm Round Iron Peg in Concrete

C4.6 EIA LETTER

Nolupho Jezile
062 382 0914
Nolupho.Jezile@dedea.gov.za
Ref: **Ntshele clinic**

Province of the
EASTERN CAPE
ECONOMIC DEVELOPMENT, ENVIRONMENTAL AFFAIRS & TOURISM

THE MANAGER
COEGA DEVELOPMENT CORPORATION
GQEBERHA
6100

Per electronic transmission
Email: sisa.xabanisa@coega.co.za

Dear Mr Sisa Xabanisa,

RE: THE PROPOSED CONSTRUCTION AND UPGRADE OF NTSHELE CLINIC AT ZIMBANE ADMIN AREA, FARM/ERF NO. 883 IN MTHATHA UNDER KING SABATA DALINDYEBO LOCAL MUNICIPALITY, EASTERN CAPE.

The subject bears a reference. This Department hereby confirms the receipt of your enquiry letter in respect of this proposed activity. In the above regard, a site inspection was undertaken by the Officials of this Department (DEDEAT) on the 19th of March 2025. The outcome of the site inspection together with an analysis of the information as provided by your office reveal:

- The proposed development is for a healthcare facility – Ntshele clinic, within Rural Areas.
- The footprint of the site to be developed is approximately 5184m^2.
- The vegetation is mainly grass.
- There is no watercourse identified on site.

In the light of the above, the proposed activity is not listed as per the current amended NEMA EIA Regulations of 2014. Therefore, there is **NO** environmental authorization required for an undertaking of the project. However, you are hereby advised to take note of the **'Duty of Care principles'** as provided **under section 28 of the National Environmental Management Act, 1998 (Act No. 107 of 1998)**, as amended. Furthermore, the contractors or sub-contractors should be informed about these principles when undertaking the activity.

This letter must not be construed as exempting you from complying with any other legislative/statutory requirement that may be applicable for undertaking of this activity.

This Department reserves the right to revise or withdraw this letter as provided by our Office. It may further request additional information from you based on the availability of new information.

Should there be any queries concerning this matter, contact this Office.

YOURS SINCERELY,
QONDILE PALISO

CONTROL ENVIRONMENTAL OFFICER **DATE: 22 APRIL 2025**
EC DEDEAT, OR TAMBO REGION

PART C5: ANNEXURES

C5.1 TENDER DRAWINGS



SITE DEVELOPMENT PLAN

GENERAL NOTES:

- NO CONSTRUCTION WORK SHALL COMMENCE ON SITE PRIOR TO APPROVAL OF ARCHITECTURAL PLANS FROM THE LOCAL MUNICIPALITY
- ALL WORK TO COMPLY WITH SANS 10400
- ALL LEVELS AND DIMENSIONS TO BE CHECKED ON SITE PRIOR TO COMMENCEMENT OF ANY WORK
- ALL DISCREPANCIES TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE AUTHOR
- ALL PLUMBING BY REGISTERED CONTRACTOR
- ALL ELECTRICAL BY REGISTERED CONTRACTOR
- IF ON EXCAVATION IT IS FOUND TO CONTAIN EXPANSIVE CLAY, EXCESSIVE GROUND WATER OR OTHER POOR SOIL CONDITIONS, THEN ALL FOUNDATIONS ARE TO BE BUILT TO PROFESSIONAL ENGINEERS DETAILS AND UNDER HIS SUPERVISION
- FACE-BRICK PLINTH OR 1,000m WIDE CONCRETE APRON TO BE PROVIDED AROUND BUILDING
- NO VEGETATION TO BE AFFECTED ON SITE
- BOUNDARY BEACONS TO BE EXPOSED AND DEMARKATED
- GLASS THICKNESS TO COMPLY WITH NN2
- SAFETY GLAZING IN ACCORDANCE WITH NN3 REQUIRED
- ONLY FIGURED DIMENSIONS TO BE USED ON ALL DRAWINGS

No.	BY	DATE	REVISION

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CLIENT'S SIGNATURE

VHB ASSOCIATES
ARCHITECTURE & PROJECT MANAGEMENT
HEAD OFFICE: KWA-ZULU NATAL
SUITE 1, BISSET HOUSE
48 BISSET STREET
PORT SHEPSTONE, 4240
TEL : 039 032 0003
MOBILE : 082 554 3427
BRANCH: EASTERN CAPE
SEAVIEW CENTRE
R61 MAIN ROAD
BIZANA, 4800
TEL: 039 251 0476
FAX: 086 577 7713
P. O. BOX 455, PORT SHEPSTONE, 4240
e-mail: vhb@vhbassociates.co.za

PROJECT:
PROPOSED NEW CLINIC & STAFF ACCOMMODATION
FOR: NTSHELE CLINIC

CADASTRAL DESCRIPTION:
NTSHELE VILLAGE
MTHATHA

DRAWING:
SKETCH PLAN 01

DESIGNED	V. BRIDGLALL	DATE	06 NOVEMBER 2024
DRAWN	J. DUKI	SCALE	AS SHOWN
CHECKED	V. BRIDGLALL		SIZE A1
JOB No.	CDC 24 / 03	SHEET No.	SK 01
			REV. A

C5.2 PROJECT OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS



SPECIFICATION:

OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION FOR THE REPLACEMENT OF EXISTING FACILITY NTSHELE CLINIC AT NTSHELE VILLAGE, MTHATHA IN THE EASTERN CAPE PROVINCE

Specification №

CDC-SBU-SPC-206-26

Classification: Public

17 August 2026

DOCUMENT INFORMATION SHEET

Title of Document	:	*Project Health and Safety Specification*
Type of Document	:	*Project Occupational Health and Safety Specification for the Replacement of Existing Facility at Ntshele Clinic*
Document Number	:	*CDC-SBU-SPC-206-26*
Prepared by	:	*Siseko Gwavu*
Typed by	:	*Siseko Gwavu*
Business Unit	:	*Sustainability Business Unit (SBU) – DoH Programme*
Prepared for	:	*Bidders*
Date of Issue	:	*17 August 2026*

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DOCUMENT CONTROL SHEET

The purpose of this form is to ensure that documents are reviewed and approved prior to issue. The form is to be bound into the front of all documents released by the Coega.

PROJECT NAME	:	***REPLACEMENT OF EXISTING FACILITY AT NTSHELE CLINIC***
DOCUMENT TITLE	:	***PROJECT HEALTH & SAFETY SPECIFICATION***
DOCUMENT No.	:	***CDC-SBU-SPC-206-26***

SIGNING OF THE ORIGINAL DOCUMENT

We, the undersigned, accept this document as a stable work product to be placed under formal change control as described by the Procedure for Control of Documented Information.

ORIGINAL	**Prepared by**	**Reviewed by**	**Approved by**
Date: **17 August 2026**	Name: **Siseko Gwavu**	Name: **Siyabulela Mabi**	Name: **Simphiwe Silwana**
	Signature: Digitally signed by: **Siseko Gwavu** SHE Programme Manager 7c54b886-e79c-49c9-b0fa-92ffb296ce62 IP Address: 10.0.99.131 Date: 2026/08/17 1:39:17 PM	Signature: Siyabulela Mabi | d0872682-5106-4ae5-8c5e-6fa0eebc7652 | 2026/08/17 2:18:00 P	Signature: Digitally Signed by: **Simphiwe Silwana** Sustainability Manager: Safety- Health-Environment & Social Impact d94c9186-b4f3-4805-8512-de16421e38bc IP Address: 10.0.57.4 Date: 2026/08/18 9:02:59 AM

Distribution:	***Coega Development Corporation***

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REVISION CHART

REVISION	**Name:**	**Name:**	**Name:**
Date:	Signature:	Signature:	Signature:

Document Title	***Project Health and Safety Specification***	
Document Control Number	Revision	Issue Date

Revision Number	*Alteration*	*Date*
1		
2		

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1 INTRODUCTION AND BACKGROUND

1.1 BACKGROUND TO THE OCCUPATIONAL H&S SPECIFICATION

Historically, the Building or Construction Industry has had poor health and safety record. Due to the complex and potentially dangerous operations being undertaken, there is a high risk of incidents and injuries. In many instances poor adherence to the Occupational Health and Safety Act and Regulations, (OHS Act), Act (85 of 1993) has resulted in severe consequences for Health and Safety performance. The Coega Development Corporation (CDC) is determined that the highest health and safety standards are implemented and full commitment from all parties to achieving best practices recognised internationally.

To achieve this goal the CDC has prepared and published a Project-Specific Occupational Health and Safety Specification for the ***Replacement of Existing Facility at Ntshele Clinic at Ntshele Village, Mthatha in the Eastern Cape Province***. The OHSS sets out guidelines and minimum levels of awareness and guidance for health and safety requirements for the specific project. Management, supervision, and contractual responsibility for adhering to these requirements rests with Client/Consultants and Contractor/s. All employees are encouraged to be pro-active in compliance. The CDC is committed in ensuring the highest health and safety norms and standards for all work undertaken during planning, production, and closeout stages.

1.2 PURPOSE OF THE OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

The purpose of the OHSS is to assist the Consultants/Contractors in achieving compliance with the OHS Act and Regulations and all relevant Legislations revolving the Contractor's scope of works and to reduce potential injuries in the workplace environment. The OHSS is a performance measurement to ensure all stakeholders such as the Client, Consultants, Contractors achieve an acceptable level of OHS performance.

Therefore, the Consultants/Contractors are at all times required to and will remain responsible to address all requirements of the OHS Act and Regulations and all relevant Legislations, norms and standards in the project health and safety plan and implementation thereof. The OHSS is a performance specification to ensure that the CDC and any bodies that enter into formal agreements with the CDC such as Consultants, Contractors achieve an acceptable level of OHS performance.

No advice of any document required by the OHSS for an example hazard identification and risk assessment, health and safety plan or any other form of communication from the CDC shall be interpreted as an acceptance by the CDC of any obligation that absolves the Consultants/Contractors from achieving the required level of performance and compliance with legal requirements. Further, there is no acceptance of liability by the CDC which may result from the Consultants/Contractors failing to comply with the OHSS unless the CDC has issued an instruction to any requirement, i.e. the Consultants/Contractors remain responsible for achieving the required performance levels.

1.3 IMPLEMENTATION OF THE OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION (OHSS)

This OHSS forms an integral part of the Contract, and Consultants/Contractors are required to make it an integral part of their Contracts with Consultants/Contractors and Suppliers. It will be disseminated by the CDC responsible person for the duration of the intended construction works.

The Consultants/Contractors shall sign a CDC acknowledgement at the end of the document that he /she has familiarised him / herself with the content of the OHSS and he / she shall comply with all his / her obligations in respect thereof. The successful Consultants/Contractors will be required to compile a project Health & Safety and Environmental File based on the requirements of the OHS Act and Regulations and relevant Legislations, which will need to be approved by the appointed CDC SHE Project Manager prior commencement with construction work.

2 OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

2.1 SCOPE OF WORKS

The intended scope of works is entailed in the RFP document, mainly focusing on the intended ***Replacement of Existing Facility at Ntshele Clinic***. The works order entails construction of earthworks, building, infrastructure services and top structures. The scope will include the following activities but not limited to –

Site Area

- Site Establishment inclusive of separating construction area with the other operational surrounding activities
- Loading and Offloading
- Control of access to public and staff on site
- Security
- Access to services and protection thereof
- Decanting

Excavation Works

- Protection of species i.e. flora, fauna and heritage resources
- Site clearance
- Digging of trenches
- Backfilling of trenches

Building Works

- Demolition/dismantling of some existing structures
- Brick and plastering work
- Glazing
- Joinery
- Working on heights
- Electrical installation
- Mechanical installation
- Article/substances Installations
- Handling of Asbestos Roof Sheeting and products (where applicable).

Plants/Equipment

- Use of concrete mixer
- Use of plant equipment
- Use of hand and explosive tools
- Use of lifting equipment and tools
- Use of scaffolding/suspended platforms
- Use of construction vehicles (Inclusive of bakkies)

Environment

- Management and handling of different waste categories
- Use of construction water and portable water
- Working during inclement weather
- Handling of excessive materials or substances
- All health hazards that can be present during any of the above activities and should include individual dusts, gases, fumes, vapours, noise, extreme temperatures, illumination, windspeed, vibration and ergonomic hazards.
- Landscaping and rehabilitation of disturbed areas

SITE LAYOUT AND LOCATION

Ntshele Clinic is in Ward 33 of the King Sabata Dalindyebo Local Municipality, which is found in the rural O.R. Tambo District (ORTD) of the Eastern Cape, where it is well known that services are in short supply. It is situated on a Portion of unsurveyed state land, parallel to the existing clinic is an additional vacant land which was donated to the clinic by the community, which extends onto portions of erven 883 and 912 Zimbane, Ntshele Administrative Area, approximately 15.1km south of Mthatha. The property has no surrounding facilities in a 5-km straight line radius as required by the SDM-17: Optimum Distribution Model. It is 7,5 kilometers from it's next referral clinic (Mbekweni CHC) and 13,6 kilometers from Mthatha Regional Hospital.



Figure 1: Ntshele Clinic location at KSD Municipality, Mthatha

King Sabata Dalindyebo Local Municipality is one of the five local municipalities which falls under the jurisdiction of O.R. Tambo District Municipality. It's surface area is 3027 km2 and the current catchment population for the clinic is 11 274 according to DHIS (2024/25). Ntshele clinic refers all emergency cases straight to Mthatha Regional Hospital emergency unit whilst children under the age of 12 years are referred directly to Mthatha Academic Hospital. All other cases, including normal deliveries, are referred to Mbekweni CHC for further care. Mbekweni CHC renders 24 hour care for emergencies and maternity cases referred from Ntshele Clinic. Complicated maternity cases and deliveries are referred directly to MRH from Ntshele Clinic.

The common challenges experienced include:

(a) Access to bulk water supply,
(b) Road maintenance,
(c) Access roads to the facilities; and
(d) High rate of unemployment of beneficiary communities.

2.2 INTERPRETATION

The OHSS contains clauses that are generally applicable to construction works and impose pro-active controls associated with activities that impact on human health and safety as it relates to plant and machinery. Compliance to the requirements of the OHS Act is in addition to the requirements of the OHSS and is part of the Consultants or Contractors responsibility. The CDC will monitor that the Consultants/Contractors comply with the requirements of the OHS Act and will not prescribe to the Consultants/Contractors how such compliance is achieved.

2.3 DEFINITIONS

For the OHSS the definitions, acronyms given hereunder shall apply:

2.3.1 Construction Work (as defined in the Construction Regulations 2014)
means any work in connection with –

a) The construction, erection, alteration, renovation, repair, demolition or dismantling of or an addition to a building or any similar structure; or

b) The construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer, or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work.

2.3.2 Hazard Identification and Risk Assessment and Risk Control -
Means a documented plan, which identifies hazards, assesses the risks and detailing.

2.3.3 Site-
Means the area in the possession of the Design and Build Contractor (DBC) for the intended construction works. Where there is no demarcated boundary it will include all adjacent areas, which are reasonably required for the activities for the DBC and approved for such use by the Engineer.

2.3.4 The OHS Act
Means, unless the context indicates otherwise, the Occupational Health and Safety Act and Regulations, Act (85 of 1993) promulgated there under.

2.3.5 CDC
Coega Development Corporation (Pty) Ltd.

2.3.6 DoH
Department of Health

2.3.7 Hazard
Means a source of or exposure to danger (source which may cause injury or damage to persons, or property)

2.3.8 Risk
Means a source of or the probability or likelihood that a hazard can result in injury or damage.

2.3.9 DBC's Responsible Person (Construction Manager) -definition from the Act
Means a competent person responsible for the management of the physical construction processes and the coordination, administration, and management of resources on a construction site.

2.3.10 Employer's Personnel

As defined in the relevant contract Documents.

2.3.11 OHSS

Occupational Health and Safety Specification

2.3.12 SHE

Safety, Health and Environment

2.3.13 DoEL

Department of Employment and Labour

2.3.14 DBC

Design and Build Contractor refers as Principal Contractor

2.3.15 IA

Implementing Agent

2.4 GENERAL HEALTH AND SAFETY PROVISIONS

2.4.1 Application of Construction Work Permit / Notification of Intention to Commence Construction Work

The IA or DBC shall apply for the construction work permit (CWP) to the Provincial Director of the DoEL in the form of Annexure 1 of CR 2014 as regulated by the CR 3 within 30 days before the construction work commences. Application shall be submitted to the **Provincial Office** where the project will be implemented. A copy of the signed and completed application form is to be included in the SHE File with proof of submission and construction work permit certificate issued by the DoEL.

For the purposes of the construction work permit process the appointed Construction Health and Safety Agent in consultation with the Client/ Implementing Agent shall prepare permit SHE File with required documentation but not limited to the construction work guidelines and submit to the Client/Implementing Agent for approval before submitting to the DoEL. Once the CWP has been granted, a copy of certificate will be issued to the Principal Contractor, and such certificate shall always be kept on site.

The DBC shall ensure that the **permit number** is conspicuously displayed at the site entrance. NB: No construction work may commence without a **valid construction work permit** issued by DoEL and shall not be transferrable to other sites.
The Chief Inspector of DoEL granted a temporary exemption on the 26th July 2018, contemplated in (b) in terms of section 40 of the OHSA Act. read as follows **–**

a client who intends to have construction work carried out, must at least 30 days before that work is to be carried out apply to the Provincial Director in writing for a construction work permit to perform construction work if the intended construction work starts from the 07th August 2018 and will –

1. exceeds 365 days and will involve more than 3600 person days of construction works,
2. the tender value limit is grade 7, 8, or 9 of the Construction Industry Development Board (CIDB) grading.

2.4.2 Assignment of DBC's Construction Manager and, Construction Health and Safety Officer (CM/CHSO) to Manage and Supervise Health and Safety on site.

The DBC shall submit supervisory appointments as well as any relevant appointments in writing (as stipulated by the OHS Act), prior to commencement of work. The DBC shall submit CV's of the CM/CHSO for approval by the CDC prior the commencement of work on site. Proof of competency is to be included with all appointments, in the form of C.V. and Certificates.

The DBC shall appoint a competent **Full-Time Construction Health and Safety Officer/Manager (CHSO/M) registered with SACPCMP** who has the necessary of years of practical experience in the type of construction work associated with the construction project and shall be responsible for overseeing overall compliance of H&S matters on site. The successful Bidder (Principal Contractor/s) will be required to provide valid proof of registration of the Construction Health and Safety Officer (CHSO) or Construction Health and Safety Manager (CHSM) with SACPCMP upon award and must have necessary competencies and resources to execute his or her duties. No candidate registration will be accepted. The CHSO/M must have proven record of **five (05)** years of experience or more.

2.4.3 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COID Act)

The DBC shall submit a valid letter of good standing registered with the Compensation Fund or approved licensed Insurer. A copy shall be included in the Project SHE File, which will also include the following:

- Occupational Health and Safety Policy
- Environmental Policy
- Substance Abuse Policy
- HIV Policy
- Disciplinary Code
- Other relevant policies

2.4.4 Health and Safety Organogram

The DBC shall submit a Project Site Specific Organogram in the SHE File, outlining the Health and Safety Site Team with their designation as required and related to the relevant responsible appointments by the OHS Act.

2.4.5 Risk Assessments

2.4.5.1 Baseline Risk Assessment

The DBC shall submit a baseline risk assessment, which shall form part of the health and safety plan and file. The Risk Methodology applied should follow the hierarchy of controls mitigation and must form part of the Risk Assessment and be included in the SHE File. Should the DBC commence work without approval of the risk assessment or should the risk assessment not reflect the activities being undertaken, the CDC may instruct the work to be immediately stopped. Thereafter, the DBC will have no claim against the CDC in such a case for lost time or costs, irrespective of whether it can be demonstrated that the work was being safely undertaken.

The risk assessment should include the following:

(a) the identification of the risks and hazards to the health and safety to which persons may be exposed.
(b) the analysis and evaluation of the hazards identified.
(c) a documented plan and safe working procedures to mitigate, reduce or control the risks identified; and
(d) The monitoring and review plan of the risks and hazards.
(e) The relevant personal protective equipment or clothing.

The DBC shall ensure that all persons entering the site are informed of all hazards on site; record of this is to be kept on the SHE File. The risk assessment should take into consideration of the project scope of works, with the key processes as specified on **clause 2.1** above. Preventative measures must first address the elimination of the hazard or risk. Should PPE be required to reduce risk the equipment or clothing must be used and be SABS approved.

2.4.5.2 Issue Based Risk Assessment

As circumstances and needs arise, separate risk assessment studies will need to be conducted. These will be associated with a system for the management of change. An additional risk assessment will need to be conducted and submitted to the CDC for verification when for example:

(a) A new machine is introduced onto site;
(b) A system for work is changed or operations altered;
(c) After an accident or a 'near miss' has occurred
(d) New knowledge comes to light and information is received which may influence the level of risk to employees on site.

2.4.5.3 Continuous Risk Assessment

This is the most important form of risk assessment which should take place continually, as an integral part of day-to-day management. This should be conducted by frontline Supervisors on site and it is essential that formal training be provided to enable this process to be efficient. The DBC shall be responsible for making sure that all employees under his / her control are conversant with the content of the Risk Assessment and what appropriate measures have been put in place to either eliminate or reduce the identified risks. The DBC shall outline to employees what role they are expected to play in the Risk Assessment and control measure process. Records are to be kept of this communication.

2.4.6 Health and Safety Representative(s)

The DBC shall ensure that at least one (1) or more of Health and Safety Representative(s) are / is elected and trained to carry out his / her functions pending on the number of employees per site. The appointment(s) must be in writing. The Health and Safety Representative(s) shall carry out regular inspection, keep records and report to the Supervisor(s) and CHSO/M to take appropriate action.

The DBC is required to elect and appoint a health and safety representative regardless of the number of employees on site. Such representative shall always be on site and report to the CHSO/M and Construction Management Representative.

2.4.7 Health and Safety Committee

Ensure that the DBC complies with the requirements of Section 19 of the Act. The DBC shall ensure that SHE Committee is established, and health and safety committee meetings are scheduled monthly pending on the number of employees per site or contract. All invited individuals shall be compelled to attend such meetings. The DBC shall ensure that health and safety committee meetings' minutes are kept on record. Meetings must be organised and chaired by the DBC's Responsible Person i.e. nominated Safety Coordinator.

2.4.8 Health and Safety Training

The DBC shall at project start-up ensure that identified people have attended the training on project risk profile, the DBC must ensure copies of the certificates are kept on the SHE File.

2.4.8.1 Induction

The DBC shall always conduct Project Site Specific Inductions to all employees and visitors on site. Proof of inductions in a form of attendance registers must be kept in the SHE File.

2.4.8.2 Awareness

The DBC shall conduct on site, periodic toolbox talks, preferably weekly or before any hazardous work takes place. The talks shall cover the relevant activity and an attendance register must be kept and signed by all attendees. A record of who attended and the content of the topic will be kept on the site SHE File as evidence of training.

2.4.8.3 Competency

The DBC shall keep records of all competent persons in the SHE File and identify the training to be conducted, based on the Hazard Identification & Risk Assessment (HIRA) and keep certificates of training for reference.

2.4.8.4 General Record Keeping

The DBC shall keep and maintain SHE records to demonstrate compliance with the OHSS and the OHS Act. The DBC shall ensure that all records of incidents, spot fines, training etc. are kept on site. All documents shall be available for inspection by the CDC, or the Authorities' Inspectors.

2.4.8.5 General Inspection, Monitoring and Reporting

A schedule of inspections must be determined and its frequency to be included in the H&S plan, including responsible person. Inspection records and registers must be kept on the SHE File.

2.4.8.6 Internal Audits

The DBC shall conduct SHE audits of the project Health and Safety Management System, including the Contractor records, to ensure compliance with the OHS Act and OHSS. Records of audits must be kept, and non-conformance reported, investigated and corrective action must be taken to prevent re-occurrence.

2.4.8.7 External Audits

The Appointed Construction Health and Safety Agent (CHSA) or CDC SHE PM or External Service Provider, shall conduct monthly inspections/audits on site. All documentation held by the DBC shall be available for auditing. The DBC shall provide any additional information required. The DBC is required to participate fully in the Audit. Records of audits must be kept, and non-conformance reported, investigated and corrective action must be taken to prevent re-occurrences.

2.4.8.8 Emergency Procedures

The DBC shall develop and submit a detailed Emergency Procedure and be kept in the SHE File. The procedure shall detail the response plan including the following key personnel:

- List of key personnel,
- Details of emergency services,
- Actions or steps to be taken in the event of the emergency; and

- Information on hazardous material / situation, including each material's / hazardous potential impact or risk on the environment or human and measures to be taken in the event of an accident.

Emergency procedure(s) shall include, but not be limited to, fire, spills, accidents to employees, use of hazardous substances, damage of vital resources such as water and electricity etc. NB: a separate risk assessment and safe work procedure for the identification, location, exposure, and protection of existing services is required for submission, review and approval by the CDC SHE Project Manager via appointed CHSA with the relevant members of the Technical Team. A contact list of all service providers (Fire department, Ambulance, Police, Medical and Clinic, etc) must be maintained and available to site personnel.

2.4.8.9First Aid Box and First Aid Equipment

The DBC shall ensure that it appoints a trained at least one **Level 3 First Aider(s)** regardless of number of labourers on site. The appointed First Aider(s) are to be deemed competent or sent for accredited first aid training **before** starting on site. Valid certificates are to be kept on site. The Principal Contractors shall provide an onsite first aid box(es), adequately always stocked, and ensure that the first aid box is accessible and fully controlled by a qualified First Aider. The DBC shall ensure that there is always a qualified First Aider within its establishment to attend on first aid injuries should incident occur on site.

2.4.8.10 Accident / Incident Recording, Reporting and Investigation

The DBC shall appoint a competent person in writing to manage and conduct incident investigation should it occurs on site, investigate, record and report all incidents as per the OHS Act requirement. The DBC shall advise the CM, CHSA and CDC SHE PM and any relevant party immediately, followed up with a written preliminary investigation report, of any medical treatment cases, lost time, disabling incident or fatality within **24 hrs** of occurrence. In case of fatal incident, the PC is required not to temper with the scene until all relevant external stakeholders or interested parties are onsite and give permission to do so. Full Incident Investigation Report is to be submitted to the CDC SHE PM via CHSA within **7 working days**, unless requested otherwise.

2.4.8.11 Unanticipated Hazards (inclusive of adverse weather such as extreme rain, heat and cold).

The DBC shall immediately notify CM, CHSA and CDC SHE PM of any hazardous or potentially hazardous situations arising during the performance of activities. It will be upon the responsibility of the Contractor to stop any activities which may impose immediate danger to the employees due to exposure to the adverse weather conditions.

2.4.8.12Personal Protective Equipment (PPE)

A PPE needs analysis is to be conducted in accordance with the HIRA. PPE is to be issued **free of charge**. The DBC is to indicate procedure for the lost or stolen and worn out or damaged PPE. The following PPE shall be used on site as minimum required for everyone on site:

- Steel-Toe Safety Shoes/Boots
- Work suite
- Gloves
- Ear plugs
- Goggles
- Masks
- Hi-Viz Vest in cases where visibility is impaired.
- Corrective PPE shall be risk dependent.

2.4.8.13Occupational Health and Safety Signage

The DBC shall ascertain and provide adequate on-site Warning, Prohibition, Mandatory and General Signage. The DBC shall be responsible to maintain the quality and replacement of signage.

2.4.8.14Permits

The DBC shall implement a Permit to Work System. The permit system shall be granted by the Engineer or CHSA via CDC SHE PM prior commencement of activity. Listed below shall cover the following works but not limited to:

- Protection of identified species
- Use of explosives

- Lock out system
- Confined space
- Excavation works
- Public Holidays or Weekend works
- Water use
- Waste disposals

2.4.8.15 Contractors

The DBC shall implement a Contractor Management System to ensure compliance to the OHS Act and OHSS. The Contractor Management System procedures are to be stipulated in the H&S Plan.

2.5 OCCUPATIONAL SAFETY

2.5.1 Storage of Materials/Equipment

The DBC shall store material or equipment at agreed identified site by the CM, CHSA and CDC SHE PM, any other areas will be prohibited. All materials shall be neatly stored in a designated laydown area within the confines of the DBC's allocated construction area.

2.5.2 Site Access, Speed Restrictions and Protection

The DBC shall ensure that the exact opening shall be discussed and agreed upon with the Client's representatives. The DBC shall ensure that all persons in their employ and all those that are visiting the site are aware and comply with the site speed restriction(s). The speed limit is set to not exceed **20km/h** when entering the grounds/construction site.

2.5.3 Noise Induced Hearing Loss

Where noise is identified as a hazard, the requirements of the NIHL regulations must be complied with and means of compliance is to be stipulated in the H&S Plan. Proper planning and finding means of reducing noise levels concerning these activities is highly encouraged.

2.5.4 Hazardous Chemical Agents (HCA)

In addition to the requirements of the Regulations for Hazardous Chemical Agents (RHCA), the DBC must provide proof in the H&S Plan that:

- Safety Data Sheets (SDS's) of the relevant materials/hazardous chemical agents are available prior to use by the Principal Contractor. Mention should be made how the DBC is going to act according to special/unique requirements made in the relevant SDS's. All SDS's shall always be available for inspection by all relevant parties.
- Risk assessments are to be done when new HCA are introduced on site.
- How the relevant HCA's are being/going to be controlled by referring to:
  - Limiting the amount of HCA
  - Limiting the number of employees
  - Limiting the period of exposure
  - Substituting the HCA
  - Using engineering controls
  - Using appropriate written work procedures
  - The correct PPE is being used.
  - HCA are stored and transported in terms of regulations for hazardous chemical agents, 2021 and in according to SABS 072 and 0228.
  - Training with regards to these regulations is conducted.

The H&S plan should refer to the disposal of hazardous waste on classified sites and the location thereof (where applicable). The First Aider must be made aware of the SDS and how to treat HCA incidents appropriately.

2.5.5 Asbestos work (where applicable)

The Principal Contractor/Contractor shall comply with the provisions of Asbestos Abatement Regulations, 2020 (amendments No. R.2092 dated 20 May 2022) should they have to work with asbestos related materials. No other than accredited Contractor to perform this activity.

2.6 PLANT AND MACHINERY

2.6.1 Construction Plant

Construction Plant encompasses all types of plants including but not limiting to machines and road vehicles with or without lifting equipment. It is envisaged that such plant will be used on this project, however, should the need arise, the DBC shall ensure that all such plant complies with the requirements of the OHS Act. The DBC shall inspect and keep records of inspections of the tools and equipment used on site. Only authorised persons are to use machinery under proper supervision. Appropriate PPE and clothing and as specified by the HIRA, shall be provided, and always maintained in good condition.

2.6.2 Pressure Equipment or Gas Bottles Including Operations

Should such equipment be used, the DBC shall comply with Pressure Equipment Regulations, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing;
- Providing and maintain appropriate signage in areas where Pressure equipment are used;
- Inspect equipment regularly and keep records of inspections;
- Providing appropriate firefighting equipment (Fire Extinguishers).

2.6.3 Fire Extinguishers and Fire Fighting Equipment

The DBC shall provide adequate serviced firefighting equipment on site fully serviced. The DBC shall keep spares where applicable in replacement of expired firefighting equipment.

2.6.4 Hired Plant and Machinery

The DBC shall ensure that any hired plant and machinery brought to site is safe for use. The necessary requirements as stipulated by the OHS Act as well as those that are stipulated by this OHSS, shall apply. The DBC shall ensure that **Operators** hired with machinery have proof of competency to operate the type of machinery, proof of medical certificate of fitness and undergo a health and safety induction, appropriate toolbox talks and be issued with the necessary PPE. All documentations must be kept in the SHE File.

2.6.5 Scaffolding / Elevated positions including roof work

The DBC shall ensure that a detailed fall protection plan and HIRA has been undertaken and submitted for approval by the CM before commencement of such activity on site. The DBC shall appoint competent and train scaffolding inspectors and erectors to ensure all scaffolding is erected according to SANS 10085. Scaffolding shall be inspected and certified safe prior commencement of work on it by the competent person.

2.6.6 Form and Support Work for Structures

Should the work require this type of work, the DBC shall ensure that formwork and support work structures are examined and checked for suitability by a competent Person, Structural Engineer, before use, during and after placement. Records of such examinations are to be kept on the SHE File.

2.6.7 Lifting Machine and Tackle

The DBC shall ensure that lifting machinery and tackle is inspected before use and/or **daily.** The DBC shall have lifting machinery and tackle inspector who will inspect the equipment daily or before use, considering that:

- All lifting machinery and tackle have a safe working load clearly indicated;
- Records of inspections and load testing certificates are kept on site.
- There is proper supervision in terms of guiding the loads which includes a trained banks man to direct and check lifting tackle if it is safe for use.

2.6.8 Ladders and Ladder work

The DBC shall ensure that all ladders are numbered and inspected regularly keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

2.6.9 General Machinery

The DBC shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.

2.6.10 Portable Electrical Tools / Explosive Power Tools

The DBC shall ensure that use and storage of all explosive powered tools and portable electrical tools are in compliance with relevant legislation or standards. The DBC shall consider that:

- A competent person undertakes routine inspections;
- Only authorised persons use the tools;
- There are safe working procedures applied;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.

2.6.11 High Voltage Electrical Equipment and any electrical works

The DBC shall ensure that, where the work is under, on or near high-voltage electrical equipment that a SWP (safe working procedure) is drafted and approved by a competent person and the CHSA and that approval document to be kept in the SHE File. Such SWP shall include relevant risk management procedures (e.g. Lock-out Procedure). The DBC shall communicate with the relevant representatives prior to commencement to any electrical works.

2.6.12 Public Health and Safety

Having been aware that the project is taking place in an combined area the DBC shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of the dangers likely to arise from onsite activities and the precautions to be observed to avoid or minimise those dangers. This should further be able to prevent any other incident that may expose risks to persons. Appropriate health and safety signage shall be always posted.

The DBC have a duty in terms of the OHS Act to do all that is reasonably practicable to prevent members of the public and others being affected by the construction processes to be aware and put preventative measures in place. The visitors to site shall go through a visitor's health and safety induction detailing hazards and risks they may be exposed to and what measures are in place to control these hazards and risks. A proof of such induction must be kept on the safety file for audit purposes.

2.6.13 Night Work

The DBC shall not undertake any night work without prior arrangement and a written permit from Employer's personnel or Engineer, CHSA or CDC. The DBC shall ensure that adequate lighting and ventilation are provided for all night work and failure to do so shall result in work being stopped. "**NB: risk assessment to be revised should night works be approved".**

2.6.14 Facilities for Safekeeping and Eating Area (Mess Room) for workers

The DBC shall provide facilities for safekeeping. The structure should be suitable for use and adverse for all weather conditions.

2.6.15 Transport of Workers

The DBC shall refer and comply with the requirements set in the National Road Transport Regulations, 2000. The DBC shall, and not be limited to:

- Not transporting persons together with goods or tools unless there is an appropriate area or section to store them.
- Not transport persons in a non-enclosed (top) vehicle, e.g. truck, there must be a proper canopy (properly covering the back and top) with suitable sitting area. Workers shall not be permitted to stand or sit at the edge of the transporting vehicle.
- Not transporting workers on the back of open bakkies.
- Provision of a serviced portable fire extinguisher in vehicles at all times.

2.7 OCCUPATIONAL HEALTH

Exposure of workers to occupational health hazards and risks are very common in any work environment, especially in construction. Occupational health hazards and risks exposure is a major problem, and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks. The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing.;
- Ingestion through swallowing maybe through food intake;
- Absorption through the skin.

2.7.1 Medical Service (Pre/Periodic/Exit)

The DBC shall ensure that **all employees** are in position of valid medical examination certificates and certified fit for duty. The medical examinations must be conducted in the form of Annexure 3 by an Occupational Health Practitioner as stipulated by Construction Regulations 2014 and fitness certificates must be kept in the SHE File.

2.7.2 HIV/Aids Programme

CDC commits itself to providing guidance and leadership in the implementation of HIV and AIDS, TB and Sexually Transmitted Infections (STI) programmes by all stakeholder organisations. It is a requirement that Principal Contractors shall provide HIV/Aids awareness training and roll out an HIV/Aids Programme for all employees by the appointed HIV/AIDS and STI Coordinator.

The HIV/Aids Awareness Programme Requirements:

- Male condom dispensers, sufficient male condom available and is it placed in high trafficked areas.
- All types of HIV/Aids related posters displayed in a high trafficked area and in a good condition.
- HIV/Aids Awareness workshops/tool box talk
- HIV/Aids Prevention Measures
- HIV/Aids Care and Support
- Free voluntary HIV testing

No DBC shall require an employee, or an applicant for employment, to undertake an HIV test in order to ascertain that employee's HIV status. As provided for in the Employment Equity Act, employers may approach the Labour Court to obtain authorisation for testing. All Personnel must be encouraged to undertake voluntary testing. Voluntary Testing and Counselling (VCT) must be encouraged by all Principal Contractors.

2.8 PANDEMIC/ENDEMIC DISEASES E.G. COVID-19

Construction sites operating during the Pandemic/Endemic diseases need to ensure they are protecting their workforce and minimising the risk of spread of infections. This includes an establishment if all employees are fit for works with no symptoms, it considering how personnel travel to and from site and a range of other applicable matters to manage the spread of the virus on site. This project specific construction health and safety specification is intending to introduce consistent control measures on the construction site that will be in line with the Government's recommendations and ensure employers and individuals make every effort to comply by adhering to the implementation good hygiene practises and constantly monitoring and reviewing the required control measure for the project. DBC should take lead to ensure the requirements are implemented. However, it will be very critical that the PC shall make provisional sums for such situation to avoid delays to the project.

2.9 PENALTIES

Should, at any time, the works, or part of the works, be stopped due to unsafe acts and conditions or non-compliance with the PCs OHS Plan; neither the PC nor any other DBC or Contractor shall have a claim for extension of time or any other compensation. In cases of any **repetitive** non-**conformances**, the non-conforming party shall be penalised.

All penalties shall be communicated to the DBC and the relevant Project Team Members should they be issued. The DBC will be expected to confirm receipt of such penalty/ies. The total fine amount as per penalties issued shall be tabled in the site meeting for noting purposes. All issued penalties shall be deducted from the Certified Certificates submitted by the DBC.

The following constitute examples of the types of non-conformances that will attract penalties:

Minor: **Fine: R50/count**	**Medium:** **Fine: R500/count and a non-conformance**	**Severe** **Fine: R5000/count, a non-conformance and/or activity stoppage**
Non-use of basic PPE supplied	PPE not supplied	DBC working without OHS Plan approval
Non completion of registers for plant and equipment on site	Principal Contractors did not sign the records	Workers transported in contravention of the OHS Plan or legal requirements
Lack of OHS signage at work areas	Working without training or the appropriate OHS Method Statements / SWP / HIRA	Non provision of signage
Tools and equipment identified in poor condition during inspections	Non-conformances identified during the previous inspection and not addressed within the agreed time frame	Allow people to work with no proof of medical fitness certificate
	No Medical Certificates of Fitness for relevant workers	Threat to the OHS of persons
	Poor Housekeeping	Failure to maintain housekeeping

		DBC working without Endemic/Pandemic diseases HS Plan approval

2.10 CLOSE - OUT REQUIREMENTS

Upon completion of the project, the DBC shall submit a well-documented consolidated SHE File (to be in electronic form) to the appointed CDC SHE PM, confirming the SHE history of the project. The closeout SHE File is expected within **21 days** of practical completion.

The following **summary** of information is required in the file, but not limited to:

- Completed SHE File
- Letter of good standing
- Appointments/agreements
- Notification/Permit certificates
- SHE inspection/audit reports
- Records of training
- Registers, certificates, and manuals
- Records of incidents/accident
- WCA Claims
- Total Man-hours and DIFR
- Environmental landscaping and rehabilitation reports
- Copies of Medical Certificates of all employees that worked on the project.
- SHE Non conformances (current/outstanding)
- Copies of all Hazardous Waste Disposal Certificates

Handover of the consolidated SHE File can only commence once all personnel has been demobilized and nil man-hours are recorded on site. All Contractors accountable to the DBC are expected to complete and submit their close-out SHE Files upon completion of their work to the appointed CHSA for approval prior to leaving the construction site. The CDC SHE PM will evaluate the SHE performance of the DBC i.e. compliance, performance, quality and refer in a cover letter which will be added to the DBC consolidated file.

Design and Build Contractor

Acknowledgement:

I, _____ representing _____

DBC have satisfied myself with the content of the Occupational Health and Safety Specification (OHSS) and shall ensure that the personnel and other people visiting site comply with all relevant obligations in respect thereof.

_____ _____

Signature of DBC Date

C5.3 BASELINE RISK ASSESSMENT

BASELINE RISK ASSESSMENT:

BASELINE RISK ASSESSMENT FOR THE REPLACEMENT OF EXISTING FACILITY NTSHELE CLINIC AT NTSHELE VILLAGE, MTHATHA IN THE EASTERN CAPE PROVINCE

Risk Assessment №

CDC-SBU-BRA-119-26

Classification: Public

***17* August 2025**

DOCUMENT INFORMATION SHEET

Title of Document	:	*Project Baseline Risk Assessment*
Type of Document	:	*Baseline Risk Assessment for the Replacement of Existing Facility at Ntshele Clinic*
Document Number	:	*CDC-SBU-SPC-119-26*
Prepared by	:	*Siseko Gwavu*
Typed by	:	*Siseko Gwavu*
Business Unit	:	*Sustainability Business Unit – DoH Programme*
Prepared for	:	*Bidders*
Date of Issue	:	*17 August 2026*

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DOCUMENT CONTROL SHEET

The purpose of this form is to ensure that documents are reviewed and approved prior to issue. The form is to be bound into the front of all documents released by the Coega.

PROJECT NAME	:	***REPLACEMENT OF EXISTING FACILITY AT NTSHELE CLINIC***
DOCUMENT TITLE	:	***BASELINE RISK ASSESSMENT***
DOCUMENT No.	:	***CDC-SBU-BRA-119-26***

SIGNING OF THE ORIGINAL DOCUMENT

We, the undersigned, accept this document as a stable work product to be placed under formal change control as described by the Procedure for Control of Documented Information.

ORIGINAL	**Prepared by**	**Reviewed by**	**Approved by**
Date: **17 August 2026**	Name: **Siseko Gwavu**	Name: **Siyabulela Mabi**	Name: **Simphiwe Silwana**
	Signature: Digitally Signed by: **Siseko Gwavu** IHE Programme Manager 7c54b8f6-e79c-49c9-b0fa-92ffb296ce62 IP Address: 10.0.99.131 Date: 2026/08/17 1:39:17 PM	Signature: Siyabulela Mabi | d0872682-5106-4ae5-8c5e-6fa0aebc7652 | 2026/08/17 2:18:00 P	Signature: Digitally Signed by: **Simphiwe Silwana** Sustainability Manager: Safety- Health-Environment & Social Impact d94c9186-b4f5-4805-8512-de16421e38bc IP Address: 10.0.57.4 Date: 2026/08/18 9:02:59 AM

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REVISION CHART

REVISION	**Name:**	**Name:**	**Name:**
Date:	Signature:	Signature:	Signature:

Document Title	***Baseline Risk Assessment***

Document Control Number	Revision	Issue Date

Revision Number	*Alteration*	*Date*
1		
2		

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CLIENT: EASTERN CAPE DEPARTMENT OF HEALTH

PROJECT: REPLACEMENT OF EXISTING FACILITY AT NTSHELE CLINIC

IMPLEMENTING AGENT (IA): COEGA DEVELOPMENT CORPORATION

CLIENT CONSTRUCTION HEALTH AND SAFETY BASELINE RISK ASSESSMENT

The intended scope of works is entailed in the RFP document, mainly focusing on the intended Replacement of Existing Facility at Ntshele Clinic at Ntshele Village, Mthatha in the Eastern Cape Province. The scope of works will include the following activities but not limited to –

SITE AREA

- Site Establishment inclusive of separating construction area with the other operational surrounding activities
- Loading and Offloading
- Control of access to public and staff on site
- Security
- Access to services and protection thereof
- Decanting

EXCAVATION WORKS

- Protection of species i.e. flora, fauna and heritage resources (where applicable)
- Site clearance
- Digging of trenches
- Backfilling of trenches

BUILDING WORKS

- Demolition of some existing structures
- Brick and plastering work
- Glazing
- Joinery
- Working on heights
- Electrical installation
- Mechanical installation

- Handling of Asbestos Roof Sheeting and products (where applicable).

PLANTS/EQUIPMENT

- Use of batching plant
- Use of concrete mixer
- Use of plant equipment
- Use of hand and explosive tools
- Use of lifting equipment
- Use of tools
- Use of scaffolding/suspended platforms
- Use of construction vehicles (Inclusive of bakkies)

ENVIRONMENT

- Management and handling of different waste categories
- Use of construction water and portable water
- Working in confined space and during inclement weather
- Handling of excessive materials or substances
- All health hazards that can be present during any of the above activities and should include individual dusts, gases, fumes, vapours, noise, extreme temperatures, illumination, windspeed, vibration and ergonomic hazards.
- Landscaping and rehabilitation of disturbed areas

SITE LAYOUT AND LOCATION

Ntshele Clinic is in Ward 33 of the King Sabata Dalindyebo Local Municipality, which is found in the rural O.R. Tambo District (ORTD) of the Eastern Cape, where it is well known that services are in short supply. It is situated on a Portion of unsurveyed state land, parallel to the existing clinic is an additional vacant land which was donated to the clinic by the community, which extends onto portions of erven 883 and 912 Zimbane, Ntshele Administrative Area, approximately 15.1km south of Mthatha. The property has no surrounding facilities in a 5-km straight line radius as required by the SDM-17: Optimum Distribution Model. It is 7,5 kilometers from it's next referral clinic (Mbekweni CHC) and 13,6 kilometers from Mthatha Regional Hospital.



Figure 1: Ntshele Clinic location at KSD Municipality, Mthatha

King Sabata Dalindyebo Local Municipality is one of the five local municipalities which falls under the jurisdiction of O.R. Tambo District Municipality. It's surface area is 3027 km2 and the current catchment population for the clinic is 11 274 according to DHIS (2024/25). Ntshele clinic refers all emergency cases straight to Mthatha Regional Hospital emergency unit whilst children under the age of 12 years are referred directly to Mthatha Academic Hospital. All other cases, including normal deliveries, are referred to Mbekweni CHC for further care. Mbekweni CHC renders 24 hour care for emergencies and maternity cases referred from Ntshele Clinic. Complicated maternity cases and deliveries are referred directly to MRH from Ntshele Clinic.

The common challenges experienced include:

(a) Access to bulk water supply,
(b) Road maintenance,
(c) Access roads to the facilities; and
(d) High rate of unemployment of beneficiary communities.

The risk profile is identifying the key areas of risk exposure that the Implementing Agent is highlighting to be considered by the respective Design and Build Contractor as part of the design, construction, operations of the activities: The items on the risk profile are linked on legal framework for compliance to such activities and have been identified in the controls and SHE specifications but not limited to -

- Constructing in a green or brown field areas
- Consideration of the environmental assessments and authorization to be prioritize
- Protection of species to be implemented e.g., flora, fauna etc
- Inclement weather conditions
- Exposure to moving equipment and interaction with the surroundings
- Earth works and excavations
- Exposure to hot sources
- Dust, noise, vibration exposure
- Manual handling & related ergonomic stressors
- Working at heights, structural frame erections and roof sheeting
- Lifting and lowering operations
- Grinding and cutting operations
- Electrical and mechanical installation
- Handling and storage of chemicals
- Ventilation limitations
- Illumination limitations

- Heat and Fire exposure
- Stacking, storage and racking exposure
- Waste exposure and handling
- Safe walks and driveways onsite
- Commissioning risk exposures

The risks identified in this assessment relates to the IA's duties, the Design and Build Contractor appointed on this project will be required to develop a detailed baseline risk assessment on the risk exposures anticipated to be experienced on site and relevant to the project scope of works

No	Processes	Potential Hazards	Risk
1.	Lack of SHE planning and implementation	Not prioritizing SHE requirements at the appropriate stage of the project by internal and external teams	Negative impact on the client, possible cost implication for the identification of changes as required from an SHE compliance requirement. Project delays and legal liability
2.		Late of CHSP representatives for the project	Legal liability because of the risk not being adequately identified, managed and controlled during project stages
3.		No pre-construction SHE management approvals conducted	Legal non-conformances and project delays resulting in cost implication
4.	Known/unknown services for water, electricity and sewer	Electrocution, sewer/water leaks	Disruptions to the project, shock, burns, death,
5.	Lack of geotechnical soil information knowledge	Excavations collapse and incorrect design rational used	Injuries, fatal, structural faults and property damages
6.	Poor management of social -economic risks	Exposure to unrest, crime on site	Injuries, damage and theft
7.	Access and transport on and to site	Unsafe transportation, lack of adequate traffic control and road worthiness of vehicles.	Motor vehicle accidents and fatalities. Personal injuries of non-construction workers due to easy unauthorized access.
8.	Site camp erection & dismantling	Rigging – off loading- placement of containers and machinery	Falling objects - Sliding objects Cuts and lacerations – crush injuries
9.	Off-loading equipment, machinery, materials	Manual rigging and crane operations- rigging- movement of equipment	Falling and moving objects or machinery Ergonomic strain, crush, death
10.	Stacking & Storage	Moving storage or stacks (pipes, bricks)- picking off stacks	Falling objects or machinery- crush injuries
11.	Site Clearing	Moving machinery, dust, and noise nuisance, snakes etc	Accidents, dust inhalation and NIHL, bites

No	Processes	Potential Hazards	Risk
12.	Protected flora and fauna	Illegal hunting of species or removal of red listed, as per the environmental legislations	Environmental non-conformance
13.	Grubbing and aggregate placement	Mobile plant and truck movement dust	Crush accidents- dust inhalation
14.	Layer earth works	Transportation, traffic control	Motor vehicle accident and fatalities
15.		Use of compaction plant	Crush injuries- noise - vibration
16.	Dust exposure	Construction activities generating dust	Respiratory irritation- silica induced illness, poor visibility on site
17.	Noise exposure	Construction activities generating noise	Noise induces hearing loss
18.	Whole Body and hand vibration	Mobile plant operations, using vibrating electrical or mechanical equipment	Whole body Vibration back and muscular strain
19.	Exposure to radioactive source	Exposure and use to radioactive source	Acute radiation
20.	Excavation works.	Working inside unsafe excavations, no barricading to prevent employees from falling into excavation, signage displayed – lack of warning indicator	Falling into excavation, deaths, serious injuries. Excavation collapse
21.	Pipe laying and road works	Unsafe lifting and lowering into excavations, mobile plant operations, dust, open excavations	Falling loads, falling into excavations, dust inhalation
22.	Waste management	Waste accumulation, risk of fire, pollution, unauthorizing dumping within the districts	Construction rubble polluting the environment, illegal dumping
23.	Plant repair and maintenance of plant and machinery	Mechanical risks: mobile parts, gravity energy, hydraulic or coil energy, nip points	Severe to injuries types

No	Processes	Potential Hazards	Risk
24.	Exposure to elements and environment	Sun, wind, temperature, emissions	Skin cancer, heat exhaustion, lung cancer etc
25.	Temporary Flammable Stores	Inadequate temporary flammable store,	Fire risk resulting in property damage and injury to people
26.	Hauling of vegetation and soil material	Unauthorized clearing of vegetations and soil material, illegal dumping without approval by the Agent or CDC.	Pollution into the environment, illegal dumping
27.	Mobile plant operations	Mobile plant and truck movement	Accidents/Incidents
28.	Concrete works	Handling cement, concrete, heavy objects	Skin, eye chemical insult, ergonomic strain
29.	General construction work, brick laying, carpentry etc	Hand tools- small portable electrical tools- manual handling- sharp articles –electricity	Hand-, eye injuries, crush injuries, noise exposure, dust exposure – ergonomic strain –electrical shock -fire
30.	Temporary work operations.	Collapse, incorrect temporary works erections Wind affecting the temporary work structures	Serious injuries- multiple persons- fatality
31.	Construction in operation	Hazardous activities and construction vehicle exposures, open trenches	Injuries to members of the public or community and users
32.	Structural steel erection	Ergonomic hazards Collapse Wind risk during erection affecting the material handling & temporary work structures Fall risks, drop risks	Strains Serious injuries- multiple persons- death
33.	Installation of Roofing, Ceiling	Ergonomic hazards Collapse of structure Wind risk affecting the material handling of roof- and cladding sheets	Strains Serious injuries- multiple persons- death

No	Processes	Potential Hazards	Risk
		Fall risks, drop risks	
34.	Public Health and Safety, constructing an operational area	Construction to be separated from the members of the public, construction material falling from heights, obstructing path and walkways, unsafe site conditions	Scratches, fractures, skin, eye, respiratory impact, falls,
35.	Working at heights, placement of windows and air vents	Ergonomic hazards Collapse Wind risk affecting material handling of roof- and cladding sheets	Strains Serious injuries- multiple persons- fatality
36.	Electrical work.	Unsafe electrical exposure	Electrocution, Fatality, damage to property due to fire
37.	Mechanical works	Unsafe mechanical exposure	Entanglement, serious injuries
38.	Use of ladder	Collapsing –fall -drop	Severe injury- fatality
39.	Use of chemical substances	Cement-dust, diesel, Paint	HCS-specific illness
40.	Demolition work. If required due to inadequate building quality	Exposure to unknown hazardous sources, structural collapse	Severe injury and fatality
41.	Community unrest	Unforeseen unrest from community members	Property damage, project delays
42.	Road usage and cleaning	Unsafe constructive vehicle operations,	Injuries to pedestrians and members of the public.
43.	Laydown areas	Delivery of construction material and equipment to site, incorrect storage of equipment's and material	Obstruction for operations and damage to existing infrastructure
44.	Painting	Usage of paint and painting at heights	Fume inhalation, falling from heights

Design and Build Contractor

Acknowledgement:

I, _____ representing _____

Design and Build Contractor have satisfied myself with the content of the Baseline Risk Assessment (BRA) and shall ensure that the personnel and other people visiting site comply with all relevant obligations in respect thereof.

_____ _____

Signature of Design and Build Contractor Date

C5.4 PROJECT ENVIRONMENTAL SPECIFICATIONS

SPECIFICATION:

PROJECT ENVIRONMENTAL SPECIFICATION FOR THE REPLACEMENT OF EXISTING FACILITY NTSHELE CLINIC AT NTSHELE VILLAGE, MTHATHA IN THE EASTERN CAPE PROVINCE

Specification №

CDC-SBU-SPC-207-26

Classification: Public

17 August 2026

DOCUMENT INFORMATION SHEET

Title of Document	:	*Project Environmental Specification*
Type of Document	:	*Project Environmental Specification for the Replacement of Existing Facility at Ntshele Clinic*
Document Number	:	*CDC-SBU-SPC-207-26*
Prepared by	:	*Siseko Gwavu*
Typed by	:	*Siseko Gwavu*
Business Unit	:	*Sustainability Business Unit – DoH Programme*
Prepared for	:	*Bidders*
Date of Issue	:	*17 August 2026*

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DOCUMENT CONTROL SHEET

The purpose of this form is to ensure that documents are reviewed and approved prior to issue. The form is to be bound into the front of all documents released by the Coega.

PROJECT NAME	:	***REPLACEMENT OF EXISTING FACILITY AT NTSHELE CLINIC***
DOCUMENT TITLE	:	***PROJECT ENVIRONMENTAL SPECIFICATION***
DOCUMENT No.	:	***CDC-SBU-SPC-207-26***

SIGNING OF THE ORIGINAL DOCUMENT

We, the undersigned, accept this document as a stable work product to be placed under formal change control as described by the Procedure for Control of Documented Information.

ORIGINAL	**Prepared by**	**Reviewed by**	**Approved by**
Date: **17 August 2026**	Name: **Siseko Gwavu**	Name: **Siyabulela Mabi**	Name: **Simphiwe Silwana**
	Signature: Digitally Signed by: **Siseko Gwavu** *SHE Programme Manager* 7c54b8f6-e7fc-45c9-b0fa-92ffb296ce62 IP Address: 10.0.99.131 Date: 2026/08/17 1:39:17 PM	Signature: Siyabulela Mabi | d0872682-5106-4ae5-8c5e-6fa0aebc7652 | 2026/08/17 2:18:00 P	Signature: Digitally Signed by: **Simphiwe Silwana** *Sustainability Manager: Safety- Health-Environment & Social Impact* d04c9186-b4f3-4805-8512-de16421e38bc IP Address: 10.0.57.4 Date: 2026/08/18 9:02:59 AM

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REVISION CHART

REVISION	**Name:**	**Name:**	**Name:**
Date:	Signature:	Signature:	Signature:

Document Title	***Project Environmental Specification***	
Document Control Number	Revision	Issue Date

Revision Number	*Alteration*	*Date*
1		
2		

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1. SCOPE

This Project Environmental Specification (PES) covers the requirements for controlling the impact on the environment of construction activities. The PES is applicable to all construction work activities intended to be performed across the various Provinces. The PES should be read with the project specific scope of work prescribed in the Tender documents.

2. INTERPRETATION

2.1 Supporting Specifications

Where the PES is required for a project, the following supporting specifications shall, where applicable, form part of the Contract Documents where necessary:

(a) EMPr
(b) JBCC, GCC or Fidic Equivalent Specification
(c) EA/RoD

2.2 Application

This PES contains clauses that are generally applicable to the undertaking of built or engineering works as it is necessary to impose pro-active controls on the extent to which the construction activities impact on the environment. Interpretations and variations are set out in this Project Environmental Specification. In the event of any difference or discrepancy between the provisions of this Project Environmental Specification and the provisions of the Project Specifications then the provisions of the Project Specification shall prevail.

2.3 Definitions

For the purposes of this PES, the definitions and abbreviations given in the applicable specifications listed in 2.1 and the following definitions and abbreviations shall apply:

2.3.1 CDC:
Means Coega Development Corporation (Pty) Ltd.

2.3.2 Cement laden water:
Means water containing cement or concrete arising from the Contractor's activities.

2.3.3 Contaminated water:

Means water contaminated by the Contractor's activities such as with hazardous substances, hydrocarbons, paints, solvents and runoff from plant, workshop or personnel wash areas but excludes water containing cement/ concrete or silt.

2.3.4 Environment:

Means the surroundings within which human beings exist and these comprise of:

(i) The land, water and atmosphere of the earth;

(ii) Micro-organisms, plant and animal life;

(iii) Any part or combination of (i) and (ii) and the interrelationships among and between them; and

(iv) The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

2.3.5 His:

Means his or her, as applicable.

2.3.6 Method Statement:

Is a written submission by the Contractor to the Engineer in response to the Specifications or to a request by the Engineer, setting out the plant (construction equipment), materials, labour and method the Contractor proposes using to carry out an activity, identified by the relevant specification or the Engineer when requesting the Method Statement. The Method Statement shall be in such detail that the Engineer is able to assess whether the Contractor's proposal is in accordance with the Specifications and/or will produce results in accordance with the Specifications. The Method Statement shall cover applicable details with regard to:

- Construction procedures;
- Materials and equipment to be used;
- Getting the equipment to and from Site;
- How the equipment/ materials will be moved while on Site;
- How and where materials will be stored;
- The containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur;
- Timing and location of activities;
- Compliance/ non-compliance with the Specifications; and
- Any other information deemed necessary by the Engineer.

2.3.7 Potentially hazardous substance:

Is a substance, which, in the reasonable opinion of the Engineer, can have a deleterious effect on the environment. Hazardous Chemical Substances are defined in the Regulations for Hazardous Chemical Substances published in terms of the Occupational Health and Safety Act.

2.3.8 Reasonable:

Means, unless the context indicates otherwise, reasonable in the opinion of the Engineer, after he has consulted with CDC Sustainability Business Unit.

2.3.9 Silt laden water

Means water containing sand and silt arising from the Contractor's activities and/or as a result of natural run-off.

2.3.10 Site:

This is the area in the possession of the Contractor for the construction of the Works. Where the area is not demarcated, it will include all adjacent areas, which are reasonably required for the activities for the Contractor and approved for such use by the Engineer.

2.3.11 Solid waste:

Means all solid waste, including construction debris, chemical waste, excess cement/ concrete, wrapping materials, timber, tins, cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

2.3.12 Contractor

Means Design and Build Contractor

3 MATERIALS

3.1 Materials handling, use and storage

The Contractor shall ensure that any delivery drivers are informed of all procedures and restrictions (including "no go" areas) required to comply with the Specifications. The Contractor shall ensure that these delivery drivers are supervised during off loading, by someone with an adequate understanding of the requirements of the Specifications. Materials shall be appropriately secured to ensure safe passage between destinations. Loads including, but not limited to sand, stone chip, fine vegetation, refuse, paper and cement, shall have appropriate cover to prevent them spilling from the vehicle during transit. The Contractor shall be responsible for any clean-up resulting from the failure by his employees or suppliers to properly secure transported materials.

All manufactured and/ or imported material shall be stored within the Contractor's camp, and, if so required by the Project Specification, out of the rain. All lay down areas outside of the construction camp shall be subject to the Engineer's approval. Imported gravel, fill, soil and sand materials shall be free of weeds, alien invasive seed matter, plant material, litter and contaminants and shall be obtained from sources approved by the Engineer. A Method Statement detailing the source and methods to ensure compliance with this specification shall be submitted to the Engineer.

3.2 Stockpiling

Any stockpiling of gravel, cut, fills or any other material including spoil shall be in areas approved by the Engineer within the defined working area. The Contractor shall ensure that the material does not blow or wash away. If the stockpiled material is in danger of being washed or blown away, the Contractor shall spray it with material that is not detrimental to the environment or cover it with a suitable material, such as hessian or plastic. Stockpiles of topsoil shall not be covered with plastic. No stockpiling of any material shall be allowed within the 100m of any residential areas or 20m of any “no go” area. Stockpiles will not be stacked higher than 2 meters.

3.3 Solid waste management

No on-site burning, burying or dumping of any waste materials, litter or refuse shall occur. The Contractor shall provide vermin and weatherproof bins with lids of sufficient number and capacity to store the solid waste produced daily.

The lids shall be always kept firmly on the bins. Bins shall not be allowed to become overfull and shall be emptied at least once a day. A designated area shall be established, enclosed with signage always provided. The waste from bins may be temporarily stored on Site in a central waste area that is weatherproof and scavenger-proof, and which the Engineer has approved. Recyclable waste shall be disposed of into separate skips/bins and removed off-site for recycling. All solid waste shall be disposed off site at an **approved landfill Site**. The Contractor shall supply the Engineer with the appropriate disposal certificates and kept in the Environmental File.

The Contractor must facilitate the re-use of cleared trees and bush (e.g. by allowing controlled wood cutting and removal of wood). Cleared vegetation may only be burnt when no other form of re-use (e.g. **chipping or composting**) is practical or economical. Burning of cleared vegetation may only take place in a safe area (e.g. borrow pit) after permission has been obtained from all the relevant authorities and the Fire Department has been informed. The Contractor must ensure that cleared trees and wood are removed from the Site within **45 days** of Site clearance. The Contractor shall submit a solid waste management Method Statement to the Engineer. The contractor shall provide Certificates of safe disposal for all waste removed site.

3.4 Water use

All sources of water for construction purposes must be approved by the Engineer in writing before any such sources can be used to obtain water. Water collection must be kept in the form of registers and record all water cotted per day.

3.5 Hazardous substances

The transportation and handling of hazardous substances must comply with the provisions of the Hazardous Chemical Substances Act (Act No. 85 of 1993) and associated regulations as well as SABS 0228 and SABS 0229. The Contractor shall also comply with all other applicable regional and local legislation and regulations regarding the transport, use and disposal of hazardous substances. Hazardous chemical substances (as defined in the Regulations for Hazardous Chemical Substances) used during construction shall be stored in secondary containers. The relevant Safety Data Sheets (SDS) shall be available on Site. Procedures detailed in the SDSs shall be followed in the event of an emergency.

The Contractor shall be responsible for the training and education of all personnel on Site who will be handling hazardous materials about their proper use, handling and disposal. If potentially hazardous substances are to be stored or used on Site, the Contractor shall submit a Method Statement to the Engineer detailing the substances / materials to be used, together with the transport, storage, handling and disposal procedures for the substances.

3.6 Contaminated water

Potential pollutants of any kind and in any form shall be kept, stored, and used in such a manner that any escape can be contained and that the water table is not endangered. Water containing such pollutants as chemicals, washing detergents, sewerage, fuels, paints and solvents and hydrocarbons shall be contained and discharged into an impermeable storage facility for removal from the site or for recycling. This particularly applies to runoff from fuel depots/workshops/truck washing areas. The Contractor may direct contaminated water into a sewerage main, provided that authorisation has been obtained from the local authority and that the Engineer has provided written permission for this action.

Wash down areas shall be placed and constructed in such a manner so as to ensure that the surrounding areas are not polluted. The Contractor shall notify the Engineer immediately of any pollution incidents on Site. The Contractor shall submit a Method Statement to the Engineer detailing how the contaminated water will be managed on Site.

3.7 Cement and Bulk Mixing Plant

The proposed location of bulk mixing plant (including the location of cement stores and sand and aggregate stockpiles) shall be indicated on the Site layout plan and approved by the Engineer. All wastewater generated from the operation and cleaning of concrete mixing equipment and other sources of concrete shall be passed through a concrete wastewater settlement system as depicted in the appropriate drawing. The water from this system shall not be allowed to flow into any “no go” area or water course but must permeate through the ground before it reaches any such water course. The accumulated sludge in the settlement system must be regularly cleaned out and appropriately disposed of as solid waste.

The Contractor shall ensure that minimal water is used for washing of concrete mixing equipment. Used cement bags shall be disposed of in weatherproof bins on site to prevent the generation of wind-blown cement dust and the bags from blowing away.

During construction, the contractor must ensure that concrete is mixed on mortar boards, all visible remains of concrete are removed and disposed of as waste and that all surplus aggregate is removed. A Method Statement detailing all actions to be taken to comply with the cement and mixing requirements shall be submitted to the Engineer.

4 PLANT

4.1 Fuel – Petrol, Diesel, Oil Etc

4.1.1 Fuel Storage

Fuel can be stored on site. The location of the fuel storage area will be approved by the Engineer and will be situated at least 100m away from any major drainage systems, residential areas or "no go" areas. All necessary approvals with respect to fuel storage and dispensing shall be obtained from the appropriate authorities. Symbolic safety signs depicting "No Smoking", "No Naked Lights" and "Danger" conforming to the requirement of SABS 1186 shall be prominently displayed in and around the fuel storage area. There shall be adequate fire-fighting equipment at the fuel storage area. The Contractor shall ensure that all liquid fuels and oils are stored in tanks with lids, which are kept firmly always shut and under lock and key. The capacity of the tank shall be clearly displayed, and the product contained within the tank clearly identified using the emergency information system detailed in SABS 0232 part 1. Fuel storage tanks shall have a capacity not exceeding **9000 litres** and shall be kept on site only for as long as fuel is needed for construction activities, on completion of which they shall be removed.

Tanks on site shall not be linked or joined via any pipe work but shall remain as separate entities. The tanks shall be situated on a smooth impermeable base with a bund. The volume inside the bund shall be 110% of the total capacity of the largest storage tank. The base may be constructed of concrete, or of plastic sheeting with impermeable joints with a layer of sand over to prevent perishing. The impermeable lining shall extend to the crest of the bund. The floor of the bund shall be sloped to enable any spilled fuel and/or fuel-contaminated water to be removed. Appropriate material, approved by the Engineer that absorbs/ breaks-down or encapsulates minor hydrocarbon spillage and which is effective in water shall be installed in the sump.

The tanks and bunded areas shall be covered by a roofed structure, as detailed in the appropriate drawing, to prevent the bunded area from filling up with rainwater. This structure shall be constructed in such a way, and to the approval of the Engineer, to ensure that it is not dislodged by wind.

If any water does collect in the bunded area it shall be removed within a day of this occurring and taken off Site to a disposal site approved by the Engineer, and the material that absorbs/ breaks-down or encapsulates minor hydrocarbon spillage shall be replenished.

Only empty and externally clean tanks may be stored on the bare ground. Empty and externally dirty tanks shall be sealed and stored on an area where the ground has been protected. Adequate precautions shall be provided to prevent spillage during the filling of any tank and during the dispensing of the contents. The dispensing mechanism for the fuel storage tanks shall be stored in a waterproof container when not in use. A Method Statement shall be submitted to the Engineer detailing the design, location and construction of the fuel storage area as well as for the filling and dispensing from storage tanks and for the type of absorbing/ breaking-down or encapsulating material to be used.

4.1.2 Refuelling

Where reasonably practical, plant shall be refuelled at a designated re-fuelling area/depot or at a workshop as applicable. If this is not reasonably practical, then the surface under the refuelling area shall be protected and appropriately bunded against pollution to the reasonable satisfaction of the Engineer prior to any refuelling activities.

If fuel is dispensed from **200 litre** drums, the proper dispensing equipment shall be used, and the drum shall not be tipped to dispense fuel. The Contractor shall ensure that the appropriate fire-fighting equipment is present during refuelling operations. The Contractor shall ensure that there is always a supply of absorbent material readily available to absorb/breakdown or where possible, be designed to encapsulate minor hydrocarbon spillages. The quantities of such materials shall be able to handle a minimum of **200 ℓ** of hydrocarbon liquid spill. Prior to any refuelling or maintenance activities, the Engineer must approve this material.

4.1.3 Used oil and hydrocarbon contaminated materials

Used oil shall be stored at a central location on Site prior to removal off Site for disposal at an approved disposal or recycling site. Old oil filters and oil, petrol and diesel-soaked material shall be treated as hazardous waste. The Contractor shall remove all oil, petrol, and diesel-soaked sand immediately and shall dispose of it as hazardous waste or treat it on site with material that breaks-down or encapsulates such spillages as approved by the Engineer.

4.2 Ablution Facilities

Washing, whether of the person or of personal effects, and acts of excretion and urination are strictly prohibited other than at the facilities provided. The Contractor shall provide the necessary ablution facilities for all his personnel prior to the commencement of work and shall ensure that his personnel make use of the facilities. Toilet facilities shall be supplied by the Contractor for the workers at a ratio of at least **1 toilet per 15 workers** in areas approved by the Engineer. Every 1-man urinal will be taken as supplying the equivalent of 5 men in addition to the 15 men per toilet on site. No toilets will be erected within 100m of any residential areas, within 20m of the edge of the Site, within 50m of any "no go" areas or any major drainage systems. Toilets shall be situated within 200m of any area where work is taking place in numbers sufficient to meet the ratio depicted above for the workers in the area. Mobile toilets (e.g. trailer mounted) should be considered for Sites, where workers may be expected to cover large distances every day.

The facilities shall be maintained in a hygienic state, good state of repair and serviced regularly. Toilet paper, soap, sanitizer, form of towels shall be provided. Temporary/ portable toilets shall be secured to the ground to prevent them toppling due to wind or any other cause, to the satisfaction of the Engineer. Discharge into the environment and burial of waste is strictly prohibited. The Contractor shall ensure that no spillage occurs when the toilets are cleaned or emptied and that the contents are removed from the Site. Toilets shall be emptied before the Contractors' holidays or any other temporary site closure.

4.3 Eating Areas

The Contractor shall designate eating area/s, subject to the approval of the Engineer. The facilities shall be maintained in a hygienic state, good state of repair and serviced regularly. No cooking is allowed outside of the Contractor's camp area on Site. At mealtimes all workers must eat in designated eating areas. More than one area may be required for large Sites and to accommodate issues of Social Distancing. These areas shall have shade for the workers. The eating areas may be in existing structures or in temporary/ transportable structures that shall be well constructed using wood or metal for the frame and screened on the top and sides with shade cloth/ canvas or other material to the satisfaction of the Engineer. These areas shall be well demarcated and in locations approved by the Engineer and shall not be within 100m of any "no go" areas or any major drainage systems, on or adjacent to the Site. There must be Sanitizer Stations at each eating areas and sufficient bins shall be present in these areas. All disposable food packaging must be disposed of in the bins after every meal. The feeding or leaving of food for animals is strictly prohibited.

4.4 Site Structures

All site establishment components (as well as equipment) shall be positioned to limit visual intrusion on neighbours and the size of the land area disturbed. The type and colour of roofing and cladding materials to the Contractor's temporary structures shall be selected to reduce reflection. The Contractor shall supply and maintain adequate and suitable sheds for the storage of materials. Sheds for the storage of materials that may deteriorate or corrode if exposed to the weather shall be weatherproof, adequately ventilated and provided with raised floors.

4.5 Lights

The Contractor shall ensure that any lighting installed on the Site for his activities does not interfere with road traffic or cause a reasonably avoidable disturbance to the surrounding community or other users of the area.

4.6 Workshop, equipment maintenance and storage

Where practicable, all maintenance of equipment and vehicles **on site** shall be performed in a workshop. If it is necessary to do maintenance outside of the workshop area, the Contractor shall obtain the approval of the Engineer prior to commencing such activities. No maintenance, including emergency maintenance, of plant can take place within 50m of any “no go” area or drainage system.

The Contractor shall ensure that in his workshop and other plant maintenance facilities, including those areas where, after obtaining the Engineer's approval, the Contractor carries out emergency plant maintenance, there is no contamination of the soil or vegetation. The workshop shall have a smooth impermeable (concrete or thick plastic covered with sand) floor. The floor shall be bunded and sloped towards an oil trap or sump to contain any spillages. When servicing equipment, drip trays shall be used to collect the waste oil and other lubricants. **Drip trays** shall also be provided in construction areas for stationary plant (such as compressors) and for "parked" plant (such as scrapers, loaders, vehicles) always.

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. The washing of equipment shall be restricted to urgent or preventative maintenance requirements only. All washing shall be undertaken in the workshop or maintenance areas, and these areas must be equipped with a suitable impermeable floor and sump/oil trap.

The use of detergents for washing shall be restricted to low phosphate and nitrate containing and low sudsing-type detergents. A Method Statement must be submitted to the Engineer detailing the design of the bunding of the workshop and how run-off from the workshop will be managed as well as how drip trays used under plant will be managed.

4.7 Noise

The Contractor shall take precautions to minimise noise generated on Site (e.g. Install and maintain silencers on machinery). The Contractor shall comply with the Noise Induced Hearing Loss Regulations published under the Occupational Health and Safety Act. Appropriate directional and intensity settings are to be maintained on all hooters and sirens. No amplified music shall be allowed on Site. The use of radios, tape recorders, compact disc players, television sets etc shall not be permitted unless the volume is kept sufficiently low as to avoid any intrusion on members of the public within range. The Contractor shall not use sound amplification equipment on Site unless in emergency situations.

4.8 Dust Control

The Contractor shall be responsible for the continued control of dust arising from his operations. The Contractor shall inform the Engineer 48 hours in advance of anticipated 'unavoidable' dust generating activities. The Contractor shall take all reasonable measures to minimize the generation of dust because of construction activities to the satisfaction of the Engineer.

Appropriate dust suppression measures include spraying or dampening with water, using a commercial dust binder, rotovating straw bales, planting of open cleared space and the scheduling of dust-generating activities.

If the conditions are such that the Contractor cannot satisfactorily dampen the dust, then the Engineer may halt operations until such time as the conditions are more suitable for lower dust generating construction.

Damping of all gravel haul and access roads with water must be ongoing and special attention must be given to roads close to residential areas. Should dust still be a problem on any specific road, the allowable speed will be reduced to **20km/h.** If dust is still a problem the road should be treated with a commercial dust binder, as required, to form a cohesive layer that will control the dust on the road. Areas that are to have the topsoil stripped for construction purposes must be limited and only stripped when work is about to take place.

Other activities and situations that may result in a dust nuisance include site clearance and other earth moving operations, open cleared space, stockpiles of topsoil or sand and activities associated with concrete batching plants. A Method Statement detailing how dust will be managed for different operations on the site must be submitted to the Engineer for his approval before any work that could result in dust being generated is undertaken.

5 CONSTRUCTION

5.1 Method Statements

The following Method Statements, as well as any required by the Project Specification, shall be provided by the Contractor and submitted with the Environmental File for reviewing and approval upon to the awarding of a Contract and prior commencement of construction work.

5.1.1 Solid waste management (Clause 3.3)

Expected solid waste types, quantities, methods and frequency of collection and disposal as well as location of disposal sites.

5.1.2 Contaminated water (Clause 3.6)

Methods of minimising, controlling, collecting and disposing of contaminated water.

5.1.3 Contractors Environmental Officer (EO) (Clause 5.2)

The name and letter of appointment of the Contractors SHE Officer must be given to the Engineer and the terms of reference for the work to be undertaken by the SHE Officer must be detailed including time on site, CV, roles and responsibility, interaction with the Contractor and environmental offices, etc. ***"NB" these key personnel may be required pending of the environmental sensitivity of the project and specified condition of the record of decision***

5.1.4 Site division (Clause 5.4)

The location, layout and method of establishment of the construction camp (including all buildings, offices, lay down yards, vehicle wash areas, fuel storage areas, bulk mixing plant and other infrastructure required for the running of the project)

5.1.5 Emergency procedures (Clause 5.10)

Emergency procedures for fire and accidental leaks and spillages of hazardous substances (including fuel and oil). Include details of risk reduction measures to be implemented including firefighting equipment, fire prevention procedures and spill kits (materials and compounds used to reduce the extent of spills and to breakdown or encapsulate hydrocarbons). Other Method Statements that will be required during construction are to be provided by the Contractor a minimum of 20 days prior to commencement of the works or activities to which they apply (no work can commence on site before these Method Statements have been approved):

5.1.6 Importing of material (Clause 3.1)

Detail the source of any gravel, soil, aggregate or sand imported onto site and precautions taken to ensure no vegetative contamination.

5.1.7 Hazardous substances (Clause 3.5)

Details of any hazardous substances / materials to be used, together with the transport, storage, handling and disposal procedures for the substances.

5.1.8 Cement and bulk mixing plant (Clause 3.7)

Location, layout and preparation of cement/ concrete mixing areas including the methods employed for the mixing of concrete and particularly the containment of runoff water from such areas and the method of transportation of concrete.

5.1.9 Fuel storage and use (Clause 4.1)

The design, location and construction of the fuel storage area as well as for the filling and dispensing from storage tanks.

5.1.10 Workshop and drip trays (Clause 4.6)

Location, layout, design and pollution control for Workshop as well as management of drip trays under plant.

5.1.11 Dust (Clause 4.8)

Details on the methods for managing dust on the site.

5.1.12 Environmental awareness training (Clause 5.3)

Number, dates, trainer and logistics for the initial awareness courses for the Contractor's employees and for the management Staff.

5.1.13 Access Routes (Clause 5.7)

Details, including a drawing, showing where and how the access points and routes will be located and managed. Any additional Method Statements as required by the Engineer, or the Project Specification must be provided by the Contractor. The Contractor shall not commence the activity until the Method Statement has been approved in writing and shall, except in the case of emergency activities, allow a period of 20 working days for approval of the Method Statement.

The Engineer may require changes to a Method Statement if the proposal does not comply with the specification or if, in the reasonable opinion of the Engineer, the proposal may result in, or carries a greater than reasonable risk of, damage to the environment more than that permitted by the Specifications or any legislation. Approved Method Statements shall be readily available on the Site and shall be communicated to all relevant personnel and subcontractors. The Contractor shall carry out the Works in accordance with the approved Method Statement. Approval of the Method Statement shall not absolve the Contractor from any of his obligations or responsibilities in terms of the Contract. No claim for delay or additional cost incurred by the Contractor shall be entertained due to inadequacy of a Method Statement.

5.1.14 Contractor's SHE Officer (Clause 5.2)

The name and appointment letter of the Contractor's SHE Officer must be given to the Engineer and the work to be undertaken by this personnel must be detailed including time allocated to these roles and their responsibility and interaction with the Contractors SHE Officer. ***"NB" This personnel will be appointed in terms of clause 2.4.2 of Occupational health and safety specification should the project does not require appointment of Environmental Officer, or no record of decision is issued.***

5.1.15 Fire Officer/Marshall (Clause 5.9*)*

The name and appointment letter of the Fire Officer/Marshall must be given to the Engineer.

5.1.16 Housekeeping

The Contractor is to draft a method statement on how to handle the housekeeping on site and specify frequent intervals

5.2 Contractor's SHE Officer

The Contractor shall appoint a Contractor's SHE Officer who shall be responsible for undertaking a daily site inspection to monitor compliance with this Specification and the relevant Project Specification. The Contractor shall submit the name of the Contractor's SHE Officer as well as a Method Statement detailing his CV, roles and responsibilities to the Engineer for his approval before work can commence on site.

The Contractor will also assign reliable staff, who will assist and report to the Contractor's SHE Officer, to the following positions:

- Litter Assistant to ensure that the site is cleaned every day and that dustbins are not overflowing, and litter does not blow off the site into the surrounding areas.

- Hydrocarbon and Contaminated Water Assistant to ensure that any hydrocarbon spills or leaks are dealt with immediately, vehicles are not leaking hydrocarbons on site, there is no pollution of any water course/ drainage system on or adjacent to site due to any construction activities, all stationary plant has bunds around them that are kept in good working order, the fuel storage and refuelling area is free of spills and leaks of hydrocarbons and any other issues to do with hydrocarbon housekeeping on site. He will also ensure that no contaminated water is escaping onto the site and that the toilets are kept in a clean and good working condition.

- Demarcation and Dust Assistant to ensure that all fencing and demarcation is in place when it is required and that such fencing or demarcation is in good order daily. This person will also be responsible to ensure that excessive dust is not generated from the construction area and will ensure that the roads are watered, and other areas dampened where necessary and any other actions taken to limit dust generation from site.

These assignments will be made within 7 days before commencing of work on site and will be given to the Engineer in writing.

5.3 Environmental awareness training

Environmental awareness training courses shall be run for all personnel on site. Two types of course shall be run, one for the Contractor's and Subcontractor's management and one for all site staff and labourers. Courses shall be run in the morning during normal working hours at a suitable venue provided by the Contractor. All attendees shall remain for the duration of the course and sign an attendance register on completion that clearly indicates participant's names, a copy of which shall be handed to the Engineer.

The size of each session shall be limited to **30** people. The Contractor shall allow for sufficient sessions to train all personnel. Subsequent sessions shall be run for any new personnel coming onto site. A Method Statement with respect to the organisation of these courses shall be submitted. Notwithstanding the specific provisions of this clause it is incumbent upon the Contractor to convey the sentiments of the PES or EMPr to all personnel and Subcontractors involved with the Works.

5.3.1 Training course for management and foremen

The environmental awareness training course for management shall include all management staff and foremen. The course, which will be presented by the Engineer's SHE Coordinator, will be of approximately one-hour duration. The initial course shall be undertaken not less than 7 days prior to commencement of work on site. Subsequent courses shall be held as and when required.

5.3.2 Training course for site staff and labour

The environmental awareness training course for site staff and labour shall be presented by the Contractor's SHE Officer or EO from material provided by the Engineer unless otherwise required by the Project Environmental Specification. The course will be approximately one-hour long. The course shall be run not more than 7 days after commencement of work on site with sufficient sessions to accommodate all available personnel. Subsequent courses shall be held as and when required.

5.4 Site division

The Contractor shall restrict all his activities, materials, equipment and personnel to within the area specified. A Method Statement detailing the location, layout and method of establishment of the construction camp (including all buildings, offices, lay down yards, vehicle wash areas, fuel storage areas, bulk mixing plant and other infrastructure required for the running of the project) shall be submitted to the Engineer. No accommodation for any staff is permitted on the Site.

5.5 Site demarcation

As required by the PES, the Contractor shall erect and maintain permanent and / or temporary fences of the type and in the locations directed by the Engineer. Such fences shall, if so specified, be erected before undertaking designated activities.

5.6 "No go" areas

If so required by the PES, certain areas within or next to the Site shall be "no go" areas. The Contractor shall ensure that, insofar as he has the authority, no person, machinery, equipment or materials enter the “no go" areas at any time.

5.7 Access routes/ haul roads

On the Site and, if so required by the PES, within such distance of the Site as may be stated, the Contractor shall control the movement of all vehicles and plant including that of his suppliers so that they remain on designated routes, are distributed so as not to cause an undue concentration of traffic and that all relevant laws are complied with. In addition, such vehicles and plant shall be so routed and operated as to minimise disruption to regular users of the routes not on the Site.

On gravel or earth roads on Site and within 500m of the Site, the vehicles of the Contractor and his suppliers shall not exceed a speed of 45 km/hr or as directed by the Engineer. The Contractor shall supply the Engineer with a Method Statement detailing the location and management of all access points and roads.

5.8 Construction personnel information posters

The Contractor shall erect and maintain information posters for the information of his employees depicting actions to be taken to ensure compliance with the PES. Construction personnel information posters shall be laminated and erected in all eating areas, workshops and site offices.

The Contractor shall ensure that the construction personnel information posters are not damaged in any way, and shall replace them if any part becomes illegible. Examples of these posters will be supplied to the Contractor by the Engineer in electronic format.

5.9 Fire control

The Contractor shall take all the necessary precautions to ensure that fires are not started as a result of his activities on Site. No open fires shall be permitted on the Site, with the exception of burning of cleared vegetation after approval by the Engineer and relevant authorities. Any fires that occur shall be reported to the Engineer immediately. Smoking shall not be permitted in those areas where there is a fire hazard. Such areas shall include the workshop and fuel storage areas and any areas where the vegetation or other material is such as to support the rapid spreading of an initial flame.

The Contractor shall appoint a Fire Marshall who shall be responsible for ensuring immediate and appropriate actions in the event of a fire and shall ensure that employees are aware of the procedures to be followed. The Contractor shall forward the name of the Fire Marshall to the Engineer for his approval within 7 days of being on site. The Contractor shall ensure that there is basic fire-fighting equipment available on Site at all times. This shall include at least rubber beaters when working in urban open spaces and natural areas, and at least one fire extinguisher of the appropriate type when welding or other “hot” activities are undertaken. The Contractor shall be liable for any expenses incurred by any organisations called to assist with fighting fires that were started as a result of his activities or personnel, and for any cost relating to the rehabilitation of burnt areas, or consequential damages.

5.10 Emergency procedures

Emergency procedures, including the names and contact details of responsible personnel and emergency services shall be made available to all staff and shall be clearly displayed at relevant locations at the Site. The Contractor shall advise the Engineer of any emergencies on Site, together with a record of action taken, within 24 hours of the emergency occurring. Telephone numbers of emergency services shall also be posted conspicuously in the Contractor’s office near the telephone. The Contractor shall submit a Method Statement covering the procedures for the following emergencies:

5.10.1 Fire:

The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it. The Contractor shall ensure that his employees are aware of the procedures to be followed in the event of a fire.

5.10.2 Accidental leaks and spillages:

The Contractor shall ensure that his employees are aware of the procedures to be followed for dealing with spills and leaks, which shall include notifying the Engineer and the relevant authorities. The Contractor shall ensure that all the necessary materials and equipment for dealing with spills and leaks are always available on Site. Treatment and remediation of the spill areas shall be undertaken to the reasonable satisfaction of the Engineer.

In the event of a hydrocarbon spill, the source of the spillage shall be isolated, and the spillage contained. The area shall be cordoned off and secured. The Contractor shall ensure that there is always a supply of absorbent material readily available to absorb/ breakdown or where possible, be designed to encapsulate minor hydrocarbon spillages. The quantities of such materials shall be able to handle a minimum of 200 ℓ of hydrocarbon liquid spill. Any spills must be cleared, and the contaminated soil/sludge disposed of in an appropriate manner, approved by the Engineer, or at a licensed hazardous waste disposal site.

5.11 Community relations

If so, required by the Project Specification, the Contractor shall erect and maintain information boards in the positions, quantities, designs and dimensions specified. Such boards shall include contact details for complaints by members of the public in accordance with details provided by the Engineer. The Contractor shall keep a "Complaints Register" on Site. The Register shall contain all contact details of the person who made the complaint, and information regarding the complaint itself and note the date and time that the complaint was resolved. The Engineer shall be responsible for responding to queries and/or complaints and may request assistance from the Contractor's Management Staff.

5.12 Protection of natural features

The Contractor shall not deface, paint, damage or mark any natural features (e.g. rock formations) situated in or around the Site for survey or other purposes unless agreed beforehand with the Engineer. Any features affected by the Contractor in contravention of this clause shall be restored / rehabilitated to the satisfaction of the Engineer.

The Contractor shall not permit his employees to make use of any natural water sources (e.g. springs, streams, and open water bodies) for the purposes of swimming, personal washing and the washing of machinery or clothes.

5.13 Protection of species

5.13.1 Flora

Except to the extent necessary for the carrying out of this Works, flora shall not be removed, damaged or disturbed nor shall any vegetation be planted. The search and rescue of rare, endemic or endangered species prior to Site clearance must be carried out in accordance with the PES by the competent service provider. Where the site has dance vegetation the Contractor must at the same time perform bush clearing with the presents of flora search and rescue service provider, depending on the provisions made for this activity and approval by the appointed Engineer. The removal and stockpiling of topsoil must also be carried out in accordance with the PES.

5.13 2 Fauna

Except to the extent necessary for the carrying out of this Works, fauna shall not be removed, injured or disturbed nor shall be killed. Trapping, poisoning and/or shooting of fauna is strictly forbidden. No domestic pets or livestock are permitted on Site. The search and rescue of fauna, endemic or endangered species prior to Site clearance must be carried out in accordance by the competent Service Provider. Where the site has dance vegetation the Contractor must at the same time perform bush clearing with the presents of fauna search and rescue Service Provider, depending on the provisions made for this activity and approval by the appointed Engineer. Trapping or capturing and removal of fauna from site will only be performed by the approved competent Service Provider.

5.14 Stormwater management

Natural run-off must be diverted to stormwater drains where these are available. The Contractor shall take appropriate measures to prevent sand, silt and silt-laden waters from entering stormwater drains, or any surface water course. The Contractor shall take reasonable measures to control the erosive effects of stormwater runoff particularly where excavation and construction activities form temporary channels. Suitable energy breaking devices, cut-off drains, diversions and retention ponds shall be employed to ensure that storm water runoff from the Site is dissipated and does not exceed the capacity of the surrounding stormwater system and excessive suspended solids are settled before they enter the stormwater system or any surface water course. If required in the Project

Specification, the Contractor shall submit a Method Statement to the Engineer detailing how stormwater will be managed on Site.

5.15 Erosion and sedimentation control

The Contractor shall take all reasonable measures to limit erosion and sedimentation due to construction activities and shall, in addition, comply with such detailed measures as may be required by the PES. Where erosion and/or sedimentation, whether on or off the Site, occurs despite the Contractor complying with the foregoing, rectification shall be carried out in accordance with details specified by the Engineer. Where erosion and/or sedimentation occurs due to the fault of the Contractor, rehabilitation shall be carried out to the reasonable requirements of the Engineer and at the expense of the Contractor.

5.16 Aesthetics

The Contractor shall take reasonable measures to ensure that construction activities do not have an unreasonable impact on the aesthetics of the area.

5.17 Recreation

If so, required by the PES, the Contractor shall take measures to reduce disruption to recreational users of the area abutting the Site.

5.18 Temporary site closure

If the Site is closed for a period exceeding 5 days, the Contractor's SHE Officer or EO in consultation with the Engineer shall carry out the following checklist procedure and ensure that the following conditions pertain and report on compliance with this clause:

5.18.1 Fuels / flammables / hazardous materials stores

- Fuel stores are as low in volume as practicable.
- There are no leaks.
- The outlet is secure and locked.
- The bund is empty.
- Fire extinguishers are serviced and accessible.
- The area is secure from accidental damage through vehicle collision and the like.
- Emergency and contact numbers are available and displayed.
- There is adequate ventilation in enclosed spaces.
- There are no stores or containers within the 1:50 year flood line.

5.18.2 Safety

- Site safety checks have been carried out in accordance with the Occupational Health and Safety Act (No. 85 of 1993) prior to site closure.
- An inspection schedule and log for use by security or contracts staff is developed.
- All trenches and manholes are secured.
- Applicable notice boards are in place and secured.
- Emergency and Management contact details are prominently displayed.
- Security personnel have been briefed and have the facilities to contact or be contacted by relevant management and emergency personnel.
- Night hazards such as reflectors, lighting, traffic signage etc have been checked.
- Fire hazards identified and the local authority notified of any potential threats e.g. large brush stockpiles, fuels etc.
- Pipe stockpiles are wedged / secured.
- Scaffolds are secure.
- Structures vulnerable to high winds secure.

5.18.3 Erosion

- Wind and dust mitigation measures such as straw, brush packs, irrigation etc are in place.
- Excavated and filled slopes and stockpiles are at a stable angle and capable of accommodating normal expected water flows.
- Re-vegetated areas have a watering schedule and the supply to such areas is secured.
- There are sufficient detention ponds or channels in place.

5.18.4 Water contamination and pollution

- Hazardous fuel stores are secure.
- Cement and materials stores are secure.
- Toilets are empty and secured.
- Refuse bins are empty and secured.
- Bunding is clean and treated with appropriate material that will absorb/ breakdown and where possible be designed to encapsulate minor hydrocarbon spillage.
- Drip trays are empty & secure.

5.19 Protection of archaeological and palaeontological sites

If any possible palaeontological/archaeological material is found during excavation work, including shell middens, Stone Age tools, fossil bones and other artefacts, graves and wrecked vessels, the Contractor shall stop work immediately and inform the Engineer. The Engineer will inform the South African Heritage Resources Agency (SAHRA) and arrange for a palaeontologist/archaeologist to conduct inspection and studies, and if necessary, excavate, the material, subject to acquiring the requisite permits from SAHRA at the following address:

111 Harrington St,
Zonnebloem,
Cape Town,
8001
Postal Address: PO Box 4637
Email: info@sahra.org.za
Telephone: 0214624502

6 TOLERANCES

Refer to Contract document.

7 TESTING

Void

8 MEASUREMENT AND PAYMENT

8.1 Basic Principles

Except as noted below and in the PES as Scheduled Items, no separate measurement and payment will be made to cover the costs of complying with the provisions of this Specification and such costs shall be deemed to be covered by the rates tendered for the items in the Schedule of Quantities completed by the Contractor when submitting his Tender.

8.2 Scheduled Items

8.2.1 Protection of stock piles from blowing or washing away:

The spraying or covering of stockpiles, including the supply of the spray or cover material, as required, shall be measured as a lump sum.

8.2.2 Storage of fuel and oils:

The supply, construction, installation, transport, upkeep and removal of all facilities required for storage and management of fuel and oils will be measured as a lump sum.

8.2.3 Cement laden water management:

The supply, construction, installation, transport, upkeep and removal of all facilities required for the management of wastewater from concrete operations will be measured as a lump sum.

8.2.4 Contaminated water management:

The supply, construction, installation, transport, upkeep and removal of all facilities required for managing contaminated water will be measured as a lump sum.

8.2.5 Storm water management:

The supply, construction, installation, transport, upkeep and removal of all facilities required for managing storm water run-off from the site will be measured as a lump sum.

8.2.6 Bunding and management of run-off from workshop areas and supply of drip trays for stationary and “parked” plant:

The supply, construction, installation, transport, upkeep and removal of all facilities required for bunding and managing the run-off from workshop areas as well as all drip trays required will be measured as a lump sum.

8.2.7 Dust management:

The supply, application, transport, upkeep and removal of all materials required to ensure that dust is adequately controlled will be measured as a lump sum.

8.2.8 Fire Control:

The supply, transport, upkeep and removal of all material required for fire control will be measured as a lump sum.

8.2.9 Provision of venue and staff attendance at the environmental awareness training course:

The provision of a venue and staff attendance at the environmental training course will be measured as a lump sum. The sum shall cover all costs incurred by the Contractor in providing the venue and facilities as detailed in the Specifications and in ensuring the attendance of all relevant employees and sub-contractors and their employees, at the training.

8.2.10 Eating areas:

The supply, construction, installation, transport, upkeep and removal at the end of the construction of all eating areas structures shall be measured as a sum.

8.2.11 Ablutions:

The supply, maintenance, regular emptying and removal of toilets shall be measured as a sum.

8.2.12 Site demarcation:

The supply, installation and removal at the end of the construction of all temporary fences shall be measured by length for each type of fence scheduled.

8.2.13 Construction personnel information posters:

The supply, installation and removal at the end of the construction of all construction information posters shall be measured by number of posters for each type of poster scheduled.

8.2.14 Solid waste (including hazardous waste) management

The supply of bins and skips as well as transport of waste to appropriate waste disposal facilities shall be measured as a sum.

8.2.15 Spill kits

The supply, use and replenishment of spill kits, to be used at fuel storage areas and refuelling areas shall be measured as a sum.

8.2.16 Method Statements: Additional Work:

No separate measurement and payment will be made for the provision of Method Statements but, where the Engineer requires a change beyond the requirements of the Specification on the basis of his opinion that the proposal may result in, or carries a greater

than warranted risk of damage to the environment, then any additional work required, provided it could not reasonably have been foreseen by an experienced Contractor, shall be valued in accordance with the Contract document.

8.2.17 Work "required by the Project Specification":

Where a clause in this Specification includes a requirement as "required by the Project Specification", measurement and payment for compliance with that requirement shall be in accordance with the relevant measurement and payment clause related to the Project Specification.

Design and Build Contractor

Acknowledgement:

I, _____ representing _____
Design and Build Contractor (DBC) have satisfied myself with the content of the Project Environmental Specification (PES) and shall ensure that the personnel and other people visiting site comply with all relevant obligations in respect thereof.

_____ _____

Signature of DBC Date

C5.5 ANNEXURE E: SOCIO-ECONOMIC DELIVERABLES – CONSTRUCTION LABOUR MANAGEMENT

C3.6 SOCIO-ECONOMIC DELIVERABLES - (CONSTRUCTION LABOUR)

The Coega Development Corporation (CDC), referred to hereinafter as the Implementing Agent, has placed several contractual obligations on contractors in fulfilling the objectives for the socio-economic deliverables on the project.

It is the desire of the Implementing Agent and the Client that Employment Relations practices, procedures and processes that are implemented within the project are uniform and of the highest possible standard. The objective of this approach is to promote an environment that is healthy, safe, efficient, productive, harmonious, is free of disruption and localises opportunities for communities in close proximity to the project. Such an environment will assist Contractors in implementing their projects successfully. All contractors, subcontractors (including SMMEs) and site service providers within the project have a role and responsibility in achieving this objective, and accordingly, the Main Contractor is wholly responsible in ensuring the provision, implementation and achievement of the required socio-economic deliverables.

To this end, certain mechanisms and structures have been put in place to ensure all role players in the project are aware of the socio-economic and labour requirements and obligations that are contractually binding on them, and that these are properly implemented and complied with.

A key component of the socio-economic requirements and obligations is the proper and timely completion of Standard Labour Documentation and the provision of opportunities to local community members. The formats of the Standard Labour Documentation and the support services will be made available in the contract commencement meeting.

The documentation included in specifications outlined below will provide detail to the prospective contractor to ensure a comprehensive understanding of the socio-economic specifications and labour management protocols in effect and allows for the prospective Contractor to tender accordingly.

C3.6.1 Specification Data

The Specification Data provided herein shall have precedence in the interpretation of any ambiguity or inconsistency between it and any other applicable contract instrument addressing the same or similar deliverable.

The Main Contractor shall ensure full achievement of the following deliverables through the period of this construction contract:

Deliverable L1: Employment of local resources - provide employment opportunities to targeted labour;
L1.1: Labour Risk Assessment
L1.2: Employment
L1.3: Recruitment
L1.4: Wages
L1.5: Employment Contracts
L1.6: Labour mobilisation and demobilisation

Deliverable L2: Inductions;

Deliverable L3: Employment of Site Employment Relations Practitioners;

Deliverable L4: Employment of Community Liaison Officer;

Deliverable L5: Training and Development Interventions for contractors to achieve full compliance to the Construction Industry Development Board (cidb) Contract Skills Development Goal (CSDG):

L5.1: Structured workplace learning opportunities that result in the attainment of a part or a full occupational qualification.
L5.2: Structured workplace learning opportunities for apprentices and/or other artisan learners towards the attainment of a trade qualification in the Built environment.
L5.3: Work integrated learning opportunities for University of Technology or Comprehensive University Students completing their National Diplomas.
L5.4: Structured workplace learning for Built environment professional candidates towards professional registration by a statutory council.

Deliverable L6: Provide Health & Safety Awareness Training

L6.1: General Health & Safety Awareness Training

L6.2: HIV/AIDS Prevention Awareness Training

Deliverable L7: Provide Work Readiness and Life Skills Training for designated persons

Deliverable L8: Provide Work Opportunities to Post Graduate Interns

Deliverable L9: Provide Technical Training

Deliverable L10: Accommodation for non-local construction personnel

Deliverable L11: Community Participation / Engagement

Deliverable L12: On-site communication structures

Deliverable L13: Main Contractor ensuring full compliance

ANNEXURE C

COEGA DEVELOPMENT CORPORATION (PTY) LTD

CONSTRUCTION OF NTSHELE CLINIC IN NTSHELE,KING SABATHA DALINDYEBO LM, EASTERN CAPE

CONTRACT NO. CDC/444/26

Deliverable L.1: Employment of local resources - Provide employment opportunities to targeted labour

L1.1 LABOUR RISK ASSESSMENT:

Prior to construction commencement, the Main Contractor is required to conduct a labour risk assessment to highlight the most significant labour risks associated with the project (at least 10 higher risks) and provide the mitigation to deal with each of these identified risks.

The template for undertaking the risk assessment will be provided by the Implementing Agent at contract award.

The risk assessment report is to be submitted by the Main Contractor to the Principal Agent for the Implementing Agent's review and endorsement, within 21 calendar days of contract award.

L1.2 EMPLOYMENT:

The Contractor shall ensure labour and community harmony relating to the project.

The minimum number of construction personnel to be employed on the project is **70**. This number includes all approved seconded personnel. The minimum duration for individual employment recognition purposes shall be twenty two (22) continuous days employment period on site and shall exclude the same person being employed again by the same employer.

It is therefore a contractual obligation that the minimum number of construction personnel must be employed / deployed on the Project and that at least 66% of the minimum number of Jobs obligation is met at the mid-point (i.e. 50%) of the construction contract duration.

It is the obligation of the Main Contractor to ensure that this minimum employment contractual obligation is achieved across its project as a whole, all Subcontractors / SMMEs inclusive.

Efforts to provide employment to youth, women and people with disabilities will be a key focus in setting of minimum employment targets.

The Contractor shall, at the time of bidding for the contract, complete and return the Job Forecast schedule (Refer Annexure CDC 1) setting out the anticipated numbers per job titles of labour to be utilised for the duration of the works, including the numbers of additional local labour to be employed and seconded labour, per job title. This submission must be inclusive of the labour forecast for subcontractors and on-site service providers.

Furthermore, the Contractor is required to provide the anticipated numbers of additional labour required per job title, to be utilised for the duration of the construction project. This submission, in the form of the Additional Labour Histogram (Refer Annexure CDC 2) must be inclusive of the total projected additional labour requirements of all subcontractors and on-site service providers.

The Main Contractor is required to provide the Project Labour Desk with a monthly update of the Additional Labour Histogram in the same format as provided by the Implementing Agent, or at earlier intervals should the anticipated additional labour requirement differ. All additional labour histograms should include the additional labour forecast of all subcontractors and on-site service providers.

L1.3 RECRUITMENT:

The Contractors' deliverable is the minimum of 70% labour employed / deployed on the project must be residents of Target Areas 1 & 2 as specified below. Priority employment / deployment must be provided to residents from Target Area 1.

All such additional local labour shall be employed from the Project Job Seekers' Database, established by the Implementing Agent and managed through the Project Labour Desk by Coega Human Capital Solutions, on behalf of the Implementing Agent.

The Main Contractor is required to submit a timely labour requisition to the Project Labour Desk, in the form presented by the Project Labour Desk, for the recruitment of all additional labour requirements, including that of all subcontractors (SMMEs inclusive) and on-site service providers.

The labour requisition must be submitted to the Project Labour Desk at least ten (10) days prior to the planned contractor selection date. Should the Additional Labour Histogram have been accurate and timely, then the Project Labour Desk should be successful in reducing the recruitment timelines, thereby advancing the contractor selection date.

ANNEXURE C

COEGA DEVELOPMENT CORPORATION (PTY) LTD

CONSTRUCTION OF NTSHELE CLINIC IN NTSHELE,KING SABATHA DALINDYEBO LM, EASTERN CAPE

CONTRACT NO. CDC/444/26

To avoid instances of skills misrepresentation by additional local labour recruited through the Project Labour Desk, every contractor recruiting labour must conduct a competency assessment prior to and/or immediately after selection and report any alleged skills misrepresentation / candidate deficiency to the Project Labour Desk as early as possible, preferably within one (1) working day.

The Contractors are permitted to deploy a maximum of 30% non-local seconded labour (i.e. labour who usually residing outside Target Areas 1 & 2) on the Project.

A pre-placement approval process, administered by the Project Labour Desk on behalf of the Implementing Agent, shall be in effect for all seconded labour.

In the event that the required skills are not available in the Project Job Seekers' Database, the Contractor must acquire such written confirmation from the Project Labour Desk in each instance, prior to identifying new seconded labour for approval to be deployed on the Project.

In such instances where insufficient skills are available in the Project Job Seekers' Database, it shall be the Contractor's obligation to source such personnel.

Target Areas:

- Target Area 1 shall be the geographic area which falls within the jurisdiction of the **King Sabatha Dalindyebo Local Municipality;**
- Target Area 2 shall be the geographic area excluding Target Area 1, which falls under the jurisdiction of the **OR Tambo District Municipality;**
- Target Area 3 shall be the geographic area excluding Target Area 2, which falls within the Eastern Cape.

Preference shall be granted to competent local labour residing in Target Area 1 above labour residing in Target Area 2 and similarly preference shall be granted to competent local labour residing in Target Area 2 above labour residing in Target Area 3.

Employment Targets:
The employment of youth (i.e. less than 35 years of age), women and people living with disabilities are targeted for recruitment through the Project Labour Desk, at the minimum level of:

- Youth at 50%;
- Women at 10%;
- People living with disabilities at 2%

The Main Contractor is required to ensure that all the minimum employment targets stated herein above (i.e. local, youth, women and disabilities employment) are achieved across the construction works as a whole (i.e. the main contractor, all subcontractors (including all SMMEs) and all on-site service providers), through the entire course of construction, and not just during the final phase.

L1.4 WAGES:

The Contractor shall, at the time of bidding for the contract, complete and return the Job & Wage schedule (Refer Annexure CDC 3) to indicate the minimum wage rates to be applied across the different grades/levels on the project as a whole, inclusive of all on site subcontractors' labour and on-site service providers' labour. The intention is to promote the application of standard wage rates per job function, across the project. Wages paid must be competitive enough to ensure not only labour attraction and retention, but also to promote labour productivity and harmony on site.

The rate of pay for General Worker (Task Grade 1) should not be less than the market related rate paid in the area, yet may not be less than the prevailing general National Minimum Wage (i.e. not the expanded public works programme rate). The National Minimum Wage rate for the year 2026 is **R 30,23** per hour and is subject to a yearly increase which is anticipated to take effect early in 2027 therefore the contractor shall tender accordingly.

The timing and quantum of the wage increases shall be in accordance with the prevailing arrangement in the Industry, yet may not be less than the latest available year-on-year Headline Consumer Price Index (CPI) as issued by Statistics South Africa at the time of the wage rate increase.

Such annual wage rate increases must be effected at the same time throughout the construction project (i.e. all sub-contractors / SMMEs inclusive) and at intervals of no more than 12 months.

Accordingly, no pro-rata wage increase arrangements are permitted. As an example, should a construction worker commence employment a month before the annual wage increase is effected, that construction worker would also receive the full annual wage increase the following month.

Wages shall be paid in arrears into each employee's own bank account. The Main Contractor shall elect whether such wage payments are effected at monthly or fortnightly intervals, where after uniformity of application shall be effected by the Main Contractor across the project as a whole, including all subcontractors / SMMEs and on-site service providers.

The wage payment detail, including all deductions made, must be provided in acceptable pay-slip format on or immediately before the scheduled payday. No cash payments may be made for safety reasons, and as such a condition of employment for labour shall be the possession of an active personal bank account.

The Main Contractor is required to introduce measures to effectively mitigate the risk of delayed / partial / non-payment of wages and statutory deductions by on-site subcontractors / SMMEs and on-site service providers.

Such measures could include the proactive introduction of a Central Wage Bureau Service and the temporary cessation (i.e. stopping) of the Subcontractors / SMMEs and Service Providers' works in instances where non-payment of due wages on the scheduled payday are confirmed.

L1.5 EMPLOYMENT CONTRACTS:

All additional hourly-paid construction personnel on site must each sign an employment contract before commencing employment on site.

The standard form of the limited duration employment contract will be provided by the Implementing Agent, in consultation with the Contractor, as the standard limited duration employment contract for use on the project.

L1.6 LABOUR MOBILISATION & DEMOBILISATION:

All Contractors must make adequate provision for mobilising (i.e. adequate time to enable recruitment / secondment approval in terms of L1.3, pre-employment medical assessments, inductions etc.) and demobilising (i.e. consultation, exit medical assessments etc.) of all personnel employed on the Project.

L2. INDUCTIONS:

All project personnel on site must attend a Project and a Site Induction presentation on a fully paid time basis, before commencing work on site. The Project Induction will be provided by the Project Labour Desk service provider.
The Site Induction shall be provided by the Contractor and shall include the Project overview, performance expectations and key labour management aspects including the general health, safety and environmental practices to be employed on the Project.

The Site Induction shall be provided for all construction personnel by the Contractor, prior to each individual commencing employment on site.

All Contractors and Service Providers employing personnel on the construction site must ensure that all appropriate life skills and in particular Health, Safety & Environmental awareness training specific to their construction activities is conducted prior to individual's work commencement, and during the course of employment on site.

Attendance registers of all personnel attending Site Induction and any subsequent awareness training must be retained on site for the duration of the construction project.

Deliverable L3: Employ SITE Employment Relations PRACTITIONERS

L3.1 SITE EMPLOYMENT PRACTITIONER APPOINTMENT:

For the Main Contractor:
A full time, site-based, competent and suitably qualified Employment Relations (ER) Practitioner with the minimum of 3 (three) years construction site Employment Relations / Industrial Relations management experience must be employed by the Contractor as an employee, for the full duration of construction. On-site administrative support must be provided to the Site Employment Relations Practitioner.

This appointment must receive the prior approval of the Implementing Agent as per the ER-002 approval request form as provided by the Implementing Agent.

The Site Employment Relations Practitioner must have sufficient proven competency to positively impact HR management knowledge and experience to the Employment Relations Interns, in a mentor capacity.

For Sub-contractors and Service providers employing more than 50 persons on site:
A full time, site-based competent, suitably qualified and experienced Site Employment Relations Practitioner must be employed by the Sub-contractor / Service Provider employing in excess of 50 persons on site, for the full duration of the construction period when employing in excess of 50 persons on site; This appointment must receive the prior written approval of the Main Contractor;

For Sub-contractors and Service providers employing less than 50 persons on site:
A full time, site-based competent Supervisor with labour management experience and responsibility must be employed by the Sub-contractor / Service Provider on site, for the full duration of the construction period whilst employing less than 50 persons on site.

This appointment as the nominated person responsible for Employment Relations co-ordination of the sub-contractor's / service provider's on-site work team must receive the prior written approval of the Main Contractor.

The timing and quantum of the annual salary increases for the Site Employment Relations Practitioner, which must be effected at intervals of no more than 12 months, shall be in accordance with the arrangement within the employer company, yet may not be less than the latest available year-on-year Headline Consumer Price Index (CPI) as issued by Statistics South Africa at the time of the salary increase.

The Contractor must tender accordingly and also ensure this provision is included in the pre-tender documentation of all on-site subcontractors and all on-site service providers.

Deliverable L4: Employment of the Community Liaison Officer

L4.1 COMMUNITY LIAISON OFFICER APPOINTMENT:

Immediately prior to site establishment, the Main Contractor must employ the services of a Community Liaison Officer (CLO) on a full-time basis for the full duration of the construction contract, through a recruitment process facilitated by the Implementing Agent.

The shortlisting of appropriate CLO candidates should require guidance of the Project Support Committee, yet the Contractor shall make the final selection decision after receiving the prior written CLO appointment approval of the Implementing Agent.

The CLO shall receive a basic rate of pay not less than R9 450.00 (Eight thousand Rand) per month. All statutory contributions such as UIF, Skills Development Levy, Workmen's Compensation etc. are excluded from this amount. A provision of 27% is made to cover these items. In addition, a year-end 13th cheque must be provided for.

Annual increases in basic rates of pay shall be provided on the anniversary of the employment with the Contractor and shall align to the provisions for increments as provided in L1.4 above.

The Main Contractor shall provide the necessary tools of the trade for the CLO to operate effectively. This will include a standard cell phone, office space and all reasonable furniture and equipment, including controlled access to an internet connected computer, scanner and printer.

If, in the event that the Contractor terminates the CLO's contract of employment (limited to proven misconduct / poor performance which would normally result in fair termination), the Main Contractor is required to urgently employ a suitably competent and experienced CLO, within a four-week period, on a full-time basis for the remaining duration of the Project.

Deliverable L5: Provide Training and Development interventions to achieve full compliance to the cidb Contract Skills Development Goal (CSDG)

The contractor shall achieve the CSDG (per Government Gazette Vo.661 of 3 July 2020; No. 43495) by providing opportunities to learners requiring structured workplace learning, in order for the contractor to comply to the requirements of the cidb B.U.I.L.D. programme, by using CSDG Method 1 (mandatory) and CSDG Method 4 and any one or a combination of CSDG Method 2 or CSDG Method 3.

The main contractor shall submit to the Implementing Agent, within 30 days of the contract coming into effect, or the issuing of an order, a contract compliance baseline training plan taking into account the skills mix and type of workers to be engaged.

The main contractor shall also submit to the Implementing Agent, monthly CSDG compliance training reports, as well as a final CSDG compliance training report within 15 days of reaching practical completion.

L5.1 The main contractor shall ensure the provision of structured workplace learning opportunities that result in the attainment of a part or a full occupational qualification. (CSDG Method 1)

L5.2. The main contractor may opt to provide structured workplace learning opportunities for apprentices and/or other artisan learners towards the attainment of a trade qualification in the Built environment, with at least 60% of the Artisan Learners being holders of public TVET college qualifications. (CSDG Method 2)

L5.3. The main contractor may opt to provide work integrated learning opportunities for University of Technology or Comprehensive University students completing their National Diplomas. (CSDG Method 3)

L5.4. The main contractor shall ensure the provision of structured workplace learning for built environment profession candidates towards professional registration by a statutory council. (CSDG Method 4)

The selection and placement of appropriate trainees/ learners/ candidates shall be in line with the Target Areas identified above. The initial search shall be made from the Project Job Seekers' Database managed by the Implementing Agent.

L5.4.1 CANDIDATE PROFESSIONALS

Within one (1) month of contract award, the Main Contractor shall employ one (1) Candidate Professionals for twenty (24) months duration. In total, the Main Contractor shall employ and provide meaningful experiential working opportunities on site to the minimum of one Candidate Professionals for twenty (24) months each.

For Candidate Professionals, the objective is to assist this candidate professional in obtaining their professional registration with the appropriate professional body during the course of the 24 months' experiential opportunity.

The Candidate Professional will be paid a monthly stipend of R15 000.00 (Fifteen thousand Rand) per month by the Main Contractor. All statutory contributions such as UIF, Skills Development Levy, Workmen's Compensation etc. are excluded from this amount. A provision of 27% is made to cover these items.

Annual increases in basic rates of pay shall be provided on the anniversary of the employment with the Contractor and shall align to the provisions for increments as provided in L1.4 above.

The stipend costs and other associated costs including professional registration, the provision of the necessary tools of the trade to learn and operate effectively. This will include office space and all reasonable furniture and equipment, including controlled access to an internet connected computer and shall be for the Main Contractor's account. The Main Contractor must tender accordingly and should be clearly stipulated in the tender submission.

If, in the event of the termination of a Candidate Professional for whatsoever reason, the Main Contractor is required to urgently employ a replacement Candidate Professional in the same discipline, within a four-week period, with the exception of no replacement required should a Candidate Professional resign / abscond within the last two months prior to Practical Completion.

Deliverable L6: provide HEALTH & SAFETY AWARENESS TRAINING

L6.1 GENERAL HEALTH & SAFETY AWARENESS TRAINING

The Main Contractor is to provide general health & safety awareness training to the entire workforce on site from commencement of construction, in accordance with the Occupational Health and Safety management protocols as prescribed by the Implementing Agent and the Construction Regulations pertaining to occupational health and safety.

L6.3 HIV/AIDS PREVENTION AWARENESS TRAINING

The Main Contractor is to provide HIV/AIDS prevention awareness training to the entire workforce on site from commencement of construction, in accordance with the Occupational Health and Safety management protocols as prescribed by the Implementing Agent and in accordance with general practice in the construction industry.

Deliverable L7: provide specific work readiness and life skills training for designated persons.

L7.1 WORK READINESS AND LIFE SKILLS TRAINING:

The Main contractor must ensure Work Readiness and Life Skills Training to benefit non-seconded local labour.

This training should preferably be conducted prior to labour commencing work on site.

The following modules shall be covered as part of the work readiness and life skills training:

- First Aid Level 1 – 5 people to be trained.
- Time Management & Productivity - 30 people to be trained (1 day course).
- Personal Finance & Budgeting - 30 people to be trained (1 day course);

All training costs such as tuition, venue and trainee refreshments must be provided for. The Main Contractor shall pay for all costs associated with this training delivery.

The Main Contractor shall interact with the Implementing Agent's nominated labour management representative to agree upon a practical program, prior to concluding the written training programme proposal. The written proposal shall include detail of the proposed training provider's proven competency to ensure quality training outcomes.

Approval to commence with the Work Readiness and Life Skills training programmes shall be based on the submission of a written proposal made by the Main Contractor, for the approval decision of the Principal Agent and CDC Project Manager.

Within one (1) month of contract award, the Main Contractor shall appoint the service provider for the provision of Work Readiness and Life Skills training.

The Main contractor shall submit a detailed written report at the end of each calendar month to the Implementing Agent's nominated labour management representative on all Work Readiness and Life Skills training conducted during the past month. The report must be accompanied by corresponding attendance registers in the format prescribed by the Implementing Agent.

Deliverable L8: Provide work opportunities to post graduate interns

L8.1 BUILT ENVIRONMENT INTERNSHIPS

Within 1 month of contract award, the Main Contractor shall employ 4 Built Environment Interns for 18 months duration. In total, the Main Contractor shall employ and provide meaningful experiential working opportunities on site to the minimum of 4 Built Environment Interns for 18 months each, for the construction period (i.e. 4 Interns in total).

The selection and placement of these appropriate candidates shall be in line with the Target Areas identified above. The initial search of appropriate candidates shall be made from the Project Job Seekers' Database managed by the Implementing Agent.

The Candidates must be from one of the construction disciplines as detailed immediately below, and preferably not be more than one candidate from each discipline, per enrolment:

- Building Management;
- Civil / Structural Engineer;
- Quantity Surveyor;
- Health & Safety Officer or

The designated persons will each be paid a monthly stipend of R7 350.00 (Seven Thousand Three Hundred and Fifty Rand) per month by the Main Contractor. All statutory contributions such as UIF, Skills Development Levy, Workmen's Compensation etc. are excluded from this amount. A provision of 27% is made to cover these items.

Annual increases in basic rates of pay shall be provided on the anniversary of the employment with the Contractor and shall align to the provisions for increments as provided in L1.4 above.

The stipend costs and other associated costs including the provision of the necessary tools of the trade to learn and operate effectively. This will include office space and all reasonable furniture and equipment, including controlled access to an internet connected computer, scanner and printer shall be for the Main Contractor's account. The Main Contractor must tender accordingly and should be clearly stipulated in the tender submission.

If, in the event of the termination of an Intern for whatsoever reason, the Main Contractor is required to urgently employ a replacement Intern in the same discipline, within a four-week period, with the exception of no replacement required should an Intern resign / abscond within the last two months prior to Practical Completion.

L8.2 PROVISION IN-SERVICE TRAINING TO TVET COLLEGE LEARNERS

The managing contractor shall allow for an in-service training intervention to leaners based in the nearby TVET colleges in order to fulfil their academic requirements, the number & trades shall be determined by the amount of work and the scope of the contract.

ANNEXURE C

COEGA DEVELOPMENT CORPORATION (PTY) LTD

CONSTRUCTION OF NTSHELE CLINIC IN NTSHELE,KING SABATHA DALINDYEBO LM, EASTERN CAPE

CONTRACT NO. CDC/444/26

Deliverable L9: Provide SEMI-SKILLED TRAINING AND experiential work opportunities towards trade competencies for designated persons

L9.1 TECHNICAL TRAINING:

The Main Contractor must include in the tender a provision for accredited Technical Training to benefit non-seconded local labour.

The following SETA accredited courses are targeted:

COURSE	DURATION (days)	CANDIDATES
(a) Painting	30	6
(b) Plumbing	30	6
(c) Personal Protective Clothing		12
(f) Learner Stipends: Technical Training Days R90 x 60 x 30 days		
(g) Venue (the contractor shall conduct the training on a rent free facility)		
(h) Provision of the Personal Protective Clothing of the learners		
TOTAL	R 280 000.00	

A learner stipend of R90.00 per person per learning day must be paid to all trainees, should the trainee not be receiving a wage.

Within one (1) month of contract award, the Main Contractor shall appoint the training service provider(s) for the provision of technical training on the project.

The Contractors shall employ on site, every learner who participated in this training, after the individual's successful completion of such training.

The employment duration shall be for the balance of construction duration for that trade. The employment must be aligned to their practical experiential requirement to enhance their competency in the trained area.

The Main Contractor shall pay for all this technical training, inclusive of training provider fees and learner stipends, as detailed above.

The Main Contractor shall interact with the Implementing Agent's nominated labour management representative to agree upon a practical program, prior to commencement, inclusive of candidate recruitment, in order to deliver the Technical Training deliverable.

Approval to commence with the Technical training programme shall be based on the submission of a written proposal made by the Main Contractor, for the approval decision of the Principal Agent and CDC Project Manager. The written proposal shall include detail of the proposed training provider, together with evidence of their capacity to ensure accredited quality training.

The Main Contractor shall submit a detailed written report at the end of each calendar month, on all Technical training conducted during the past month, to the Implementing Agent's nominated labour management representative. The report must be accompanied by corresponding attendance registers in the format prescribed by the Implementing Agent.

Deliverable L10: ACCOMMODATION FOR NON-LOCAL CONSTRUCTION PERSONNEL

The Main Contractor shall mitigate the negative impact on the local community by the approved non-local seconded personnel, by providing an appropriate accommodation solution to the Implementing Agent, prior to construction commencement. The Implementing Agent shall determine the appropriateness of the accommodation solution provided by the Main Contractor.

Deliverable L11: Community participation / ENGAGEMENT

The Main Contractor shall actively participate in all community engagement activities through the established Project Support Committee (PSC).

Deliverable L12: On-Site communication structures

The Main Contractor shall be responsible for facilitating all on-site communication with role-players. A Labour Consultative Forum (LCF) will be established on site at which labour and work-place related issues will be addressed. The LCF will be attended by the Main Contractor senior site manager and the Site ER Practitioners, all on-site sub-contractors' representatives and on-site service providers' representatives and elected representatives from the labour on site.

The LCF will be established within one (1) month of construction commencement and will meet monthly thereafter.

The Main Contractor shall tender accordingly.

Deliverable L13: MAIN CONTRACTOR ENSURING FULL COMPLIANCE

Main Contractor must ensure the achievement of all socio-economic deliverables and full compliance to the established labour management protocols on the whole project (inclusive of all subcontractors), for the full duration of the project;

The Implementing Agent shall deploy a part-time Employment Relations Compliance Auditor to monitor and audit adherence to the construction labour management protocols, including better construction labour management practices, compliance to prevailing labour legislation and the socio-economic specifications prescribed herein above.

The Labour Management Compliance Audit template shall be made available to the Main Contractor, prior to site establishment, by the Implementing Agent's nominated labour management representative.

The compliance audits will confirm the extent to which all contractors comply with the established construction labour management protocols and better labour management practices, as well as the extent of achievement of the socio-economic deliverables.

Every contractor is required to achieve full compliance to the established labour management protocols (i.e. a demerit score of zero using the audit template) within one (1) month (defined as twenty (20) working days) of the non-compliance/s being highlighted.

ANNEXURE C

COEGA DEVELOPMENT CORPORATION (PTY) LTD

CONSTRUCTION OF NTSHELE CLINIC IN NTSHELE,KING SABATHA DALINDYEBO LM, EASTERN CAPE

CONTRACT NO. CDC/444/26

In the event of the Main Contractor or any sub-contractor (SMME's inclusive) or service provider not complying with the socio-economic specifications after the one (1) month period stated herein above, or failing to maintain the required socio-economic specification / labour management protocol thereafter, then a punitive penalty of R1 000 [One Thousand Rand (excl. VAT)] per day, per not compliant item will be paid by the Main Contractor, for each working day that each non-compliance item prevails, as determined solely by the Implementing Agent.

Such payment shall be in the form of a deduction of the full penalty incurred during the preceding month, off payments due to the Main Contractor, and shall be credited to the project contingency fund.

Cost provisions for Socio-Economic Specification for the Construction of the Ntshele Clinic (CDC/444/26)		Calculations based on: duration @ 24 months and employment @70 personnel			
L1. Employment of Local Resources		**Cost**	**Units**	**Provisional sum**	
L1.1. Main contractor to conduct a detailed labour risk assessment		R 0	0	R 0	
			Sub-total	**R 0**	
L2. Inductions		**Cost**	**Units**	**Provisional sum**	
L2.1. All project personnel attend Induction presentations on a fully paid time basis		R 0	0	R 0	
			Sub-total	**R 0**	
L3. Site Employment Relations Practitioner:	**Months**	**Cost per month**	**Candidates**	**Provisional sum**	
L3.1. Employment Relations Practitioner remuneration	24	R 19 050	1	R 457 200	
L3.2. 13th cheque	2	R 19 050	1	R 38 100	
l3.3. All associated other costs, including tools of the trade, safety equipment etc.	24				
			Sub-total	**R 495 300**	
L4. Community Liaison Officer:	**Months**	**Cost per month**	**Units**	**Provisional sum**	
L4.1. CLO remuneration	24	R 12 002	1	R 288 036	
L4.2. 13th cheque	2	R 12 002	1	R 24 004	
L4.3. All associated other costs, including tools of the trade, safety equipment etc.					
			Sub-total	**R 312 040**	
L5. Training and Development interventions to achieve full compliance to the cidb Contract Skills Development Goal (CSDG):					
The contractor shall achieve the CSDG *(per Government Gazette Vo.661 of 3 July 2020; No. 43495)* by providing opportunities to learners requiring structured workplace learning, in order for the contractor to comply to the requirements of the cidb B.U.I.L.D. programme, by using CSDG Method 1 (mandatory) and CSDG Method 4 or any one or a combination of CSDG Method 2 or CSDG Method 3.					
The total provision for qualifying expenditure on the Contractor Skills Development Goal (CSDG) must comply with the minimum legislated percentage of contract amount, which e.g. on a General Building Contract = 0.50% of the contract amount. This provision may be discounted off CSDG Method 1 by the qualifying expenditures in the provision of SETA accredited Technical Training per L9. below.					
L5.1. Structured workplace learning opportunities that result in the attainment of a part or a full occupational qualification (CSDG Method 1)	**Months**	**Cost per unit**	**Units**	**Provisional sum**	
L5.1.1. All associated training costs, including tools of the trade, consumables, safety equipment etc.				R 0	
L5.1.2. Wages for employed learners				R 0	
L5.1.3. Unemployed learner stipend (to cover daily transport and meal)				R 0	**L9 Covers this method.**
			Sub-total	**R 0**	
L5.2. Structured workplace learning opportunities for apprentices and/or other artisan learners towards the attainment of a trade qualification in the Built environment. (CSDG Method 2) *(At least 60% of the Artisan Learners being holders of public TVET college qualifications).*	**Months**	**Cost per unit**	**Units**	**Provisional sum**	
L5.2.1. All associated training costs, including tools, consumables, safety equipment etc.				R 0	
L5.2.2. Apprentice / Learner wages				R 0	
			Sub-total	**R 0**	
L5.3. Work integrated learning opportunities for University of Technology or Comprehensive University students completing their National Diplomas. (CSDG Method 3)	**Months**	**Cost per unit**	**Units**	**Provisional sum**	
L5.3.1. All associated costs, including tools, consumables, safety equipment etc.				R 0	**L8 Covers this Method.**
L5.3.2. Learner wages				R 0	
			Sub-total	**R 0**	
L5.4. Structured workplace learning for built environment profession candidates towards professional registration by a statutory council. (CSDG Method 4)	**Months**	**Cost per month**	**Units**	**Provisional sum**	
L5.4.1. Candidate Professionals stipend cost (1 candidates) @ 24 months.	24	R 13 000	1	R 312 000	
L5.4.2. All associated other costs, including tools of the trade, safety equipment and consumables				R 0	
			Sub-total	**R 312 000**	
			Sub-total	**R 0**	
L7. Work Readiness & Life Skills training	**Training Duration (days)**	**Estimated cost /course / day**	**Candidates**	**Provisional sum**	
L7.1 First Aiders	2	R 1 150	5	R 11 500	
				R 0	
				R 0	
			Sub-total	**R 11 500**	
L8. Provide Work Opportunities to Post Graduate Interns	**Months**	**Cost per month**	**Units**	**Provisional sum**	
L8.1. Built Environment Internships stipend cost (1 intakes of 4 candidates = 4 candidates)	24	R 9 335	4	R 896 112	
L8.3. All associated other costs, including tools of the trade, safety equipment and consumables	12		#REF!	#REF!	
			Sub-total	**R 896 112**	
L9. Technical Training	**Training Duration (days)**	**Estimated cost /course / day**	**Candidates**	**Provisional sum**	
L9.1. Bicklaying & Plastering	30	R 600	6	R 108 000	
L9.2. Painting & Decorating	30	R 600	6	R 108 000	
L9.3. Unemployed Learner Stipend: Technical Training [excludes L9.1.]	60	R 90	12	R 64 800	
L9.4. Provision for adequate safety equipment for all technical training				R 0	
			Sub-total	**R 280 800**	
L10. Accommodation for non-local personnel		**Cost**	**Units**	**Provisional sum**	
L10.1 Accommodation for non-local construction personnel		R 0	0	R 0	
			Sub-total	**R 0**	
L11. Community Participation / Engagement	**Months**	**Cost per month**	**Units**	**Provisional sum**	
L11.1 Project Support Committee (PSP) meeting costs (i.e. venue, refreshments)	24	R 1 500	1	R 36 000	
L11.2 PSP community members' stipend (monthly meeting participation)	24	R 300	10	R 72 000	
			Sub-total	**R 108 000**	
L12. On-site Communication Structures	**Months**	**Cost per month**	**Units**	**Provisional sum**	
L12.1 Establishing and ensuring the proper functioning of the Labour Consultative Forum (LCF)					
			Sub-total	**R 0**	
L13. Main Contractor Ensuring Full Compliance	**Months**	**Cost per month**	**Units**	**Provisional sum**	
L13.1 Ensuring achievement of all socio-economic deliverables and full compliance to the labour management protocols on the whole project, inclusive of all subcontractors	0	R 0	0	R 0	
			Sub-total		
			TOTAL COST TO CONTRACTOR	**2 415 752**	**Note: Amount will increase when values inputted to yellow shaded cells**
			TOTAL COST TO CONTRACTOR EXCLUDING ERP COSTS (COVERED IN P&Gs)	**1 920 452**	

ANNEXURE "CDC 1"

CONSTRUCTION OF A PRIMARY HEALCARE FACILITY FOR NTSHELE CLINIC (CDC/444/26)

CONSTRUCTION JOBS FORECAST SCHEDULE

(i.e. the anticipated number of workers per Job Title across the entire project for the full construction period, inclusive of all on-site sub-contractors and all on-site service-providers)

Occupational Group	Job Title	Total Labour (Seconded and Local)
General Worker	General Worker	
Artisan Aid	Artisan Aid	
Construction Hand Grade IV	Structures Construction Hand	
	Premix Paving Checker	
	Steel Bending Machine Operator	
	Civil Construction Bricklayer Grade II	
Operator Grade V	Boom Scraper Operator	
	Pedestrian Roller Operator	
	Piling Auger Machine Operator	
Checker	Checker	
Chainman	Chainman	
Other(s)		
Construction Hand Grade III	Shutter hand Grade III	
	Concrete Hand Grade II	
Operator Grade IV	Track Rig Operator (general)	
	Bore Pile Operator	
	Continuous Flight Auger Operator	
	Drilling Supervisor	
Site Support	Junior Clerk	
Other(s)		

Occupational Group	Job Title	Total Labour (Seconded and Local)
Construction Hand Grade II	Shutter hand Grade II	
	Reinforcing Hand Grade II	
	Concrete Hand Grade I	
	Fence Erector	
	Guard Rail Erector	
Operator Grade III	Concrete Mixer Operator	
	Batch Plant Operator	
	Concrete Dumper Operator	
	Concrete Pump Operator	
	Tower Crane Operator	
	General Premix Roller Operator	
	Milling Machine Operator	
	Paver Operator	
	Excavator Operator	
	Front End Loader Operator	
	TLB Operator	
	Dozer Operator	
	Grader Operator (general)	
	Gunite Nozzle person	
Driver Grade II	Motorcycle Driver	
	Tractor Driver	
	Light Motor Vehicle Driver	
	Driver Operator	
	Heavy Duty Driver (rigid)	
	Extra Heavy Duty Driver (rigid)	
Site Support	Material Tester	
Building Skills	Semi-skilled	
	Light Motor vehicle driver	
	Hoist Operator	
	Driver (Code 9)	
Other(s)		

Occupational Group	Job Title	Total Labour (Seconded and Local)
Construction Hand Grade 1	Shutter hand Grade I	
	Reinforcing Hand Grade I	
	Pipe layer Grade I	
	Kerb layer Grade I	
	Civil Construction Bricklayer Grade I	
Operator Grade II	Mobile Crane Operator	
	Screed Operator	
	Scraper Operator	
Driver Grade I	Heavy Duty Driver (articulated)	
	Extra Heavy Duty Driver (articulated)	
Site Support	Assistant surveyor	
Building skills	Journeyman's assistant	
	Heavy Duty driver (Code 10)	
	Crane Operator	
	Machine Minder and Sawyer	
	Mechanical Handling Equipment Driver	
Electrical Construction	Electrical Construction Operator	
Other(s)		
Building Skills	Artisan/Journeyman	
Electrical Construction	Electrical Tester for single phase	
	Artisan Unlicensed	
Operator Grade I	Grader Operator (final level)	
Building Skills	Artisan journeyman with N2	
Electrical Construction	Installation Electrician	
	Supervisor Grade II; Plant Serviceman	
Other(s)		
Electrical Construction	Master Installation Electrician	
	Supervisor Grade I	
Other(s)		
Artisan	Diesel Mechanic, Fitter & Turner, Auto Electrician, Boilermaker, Welder	
	Other(s):	
	TOTAL LABOUR:	
Refer: Socio-Economic specification L1.2 (Note the contractual minimum employment number)		

Coega Human Capital Solutions

FORM # LMS - 01

COEGA DEVELOPMENT CORPORATION

CONTRACTOR'S ADDITIONAL MANPOWER REQUIREMENTS HISTOGRAM ~ (MAIN CONTRACTORS AND THEIR SUB-CONTRACTORS)

Contract Name : _____ Contractor : _____

Contract No. : _____ Contact Person : _____

Anticipated Starting Date : _____ Contact Person's Office Telephone No. : _____

Anticipated Completion Date : _____ Contact Person's Cellular Telephone No : _____

Client:_____ Area: _____

Project:_____

Please indicate applicable revision:

☐ Rev 00 : Tender submission

☐ Rev 01 : Kick-Off Meeting

☐ Rev 02 : Quarterly, or upon anticipated change in requirements

Job Title	Task Grades (Civil/Building) or Job Categories (Mechanical/Structural/Electrical/Instrumentation)	1st Requirement		2nd Requirement		3rd Requirement		4th Requirement		5th Requirement		Total Required
		Month Required (date)	Manpower Required (no.)	Month Required (date)	Manpower Required (no.)	Month Required (date)	Manpower Required (no.)	Month Required (date)	Manpower Required (no.)	Month Required (date)	Manpower Required (no.)	

Notes :

1. This histogram must only reflect the additional labour requirement that must be recruited from the Project Labour Pool.
2. These projections are used for recruitment planning purposes and should therefore be a best estimate to assist in the recruitment planning process.
3. Each main contractor must complete and submit their own schedules and must also submit their sub-contractors' schedules.
4. Each sub-contractor must make their submission/s on separate histograms/s via the Main Contractor
5. Month Required - means the month in which the people will be required by the Contractor.
6. Manpower Required - means the number of people required on each occasion. This figure is not cumulative.

Signed By : ..... (contractor's representative)

Date : ____ / ____ / 202__

ANNEXURE "CDC 3"

NTSHELE CLINIC NEW PRIMARY HEALTHCARE PROJECT
(CONSTRUCTION OF A NEW PRIMARY HEALTH CARE PROJECT)

BUILDING INUDUSTRY JOB & WAGE SCHEDULE

Task Grade	Job Title	Minimum basic wage rate (per hour)
Construction Worker Grade E	General Worker	
Construction Worker Grade D	Semi-skilled Construction Worker Hoist Operator	
	Driver (code 8) Driver (code 9)	
Construction Worker Grade C	Artisan / Journeyman's Assistant Driver (code 10) Crane Operator Machine Minder and Sawyer Mechanical Handling Equipment Driver	
Construction Worker Grade B	Artisan / Journeyman	
Construction Worker Grade A	Artisan / Journeyman with minimum N2	

Whilst this schedule provides for minimum wage rates, the contractor should effect standard wage rates per job function wherever possible, across the entire project, sub-contractors inclusive.

The above wage rates to be increased annually, the timing and quantum shall be in accordance with the prevailing arrangement in the industry, yet may not be less than the latest available year-on-year CPI (inflation rate).

(Refer Socio-Economic specification L1.4)

C5.6 ANNEXURE F: SMME SPECIFICATION

COEGA
DEVELOPMENT CORPORATION

SMME SPECIFICATION

SMME UNIT

04 June 2026

DOCUMENT INFORMATION SHEET

Title of Document	:	SMME SPECIFICATION
Type of Document	:	SPECIFICATION FOR THE EMPLOYMENT OF SMME SUB-CONTRACTORS
Document Number	:	SES 003 -2026
Prepared by	:	SMME UNIT TECHNICAL TEAM
Typed by	:	Bernice Brefo
Business Unit	:	SMME UNIT
Prepared for	:	CDC SEZ AND EXTERNAL PROGRAMMES
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DOCUMENT CONTROL SHEET

The purpose of this form is to ensure that documents are reviewed and approved prior to issue. The form is to be bound into the front of all documents released by the CDC.

PROJECT NAME	:	*COEGA INDUSTRIAL DEVELOPMENT SEZ AND EXTERNAL PROGRAMMES*
DOCUMENT TITLE	:	*SPECIFICATION FOR THE EMPLOYMENT OF SMME SUB-CONTRACTORS*
DOCUMENT No.	:	*SES 003 - 2026*

SIGNING OF THE ORIGINAL DOCUMENT

We, the undersigned, accept this document as a stable work product to be placed under formal change control as described by the Change Control Procedure document.

ORIGINAL	Prepared by	Reviewed by	Approved by
Date: 2013	**Name:** Thandile Jack	**Name:** Christo Beukes	**Name:** Sicelo Kubashe
	Signature:	**Signature:**	**Signature:**

Revision	**Prepared by**	**Reviewed by**	**Approved by**
Date: July 2013	**Name:** Lamla Fihla	**Name:** Ziyanda Kaleni	**Name**: Sicelo Kubashe
	Signature:	**Signature:**	**Signature:**
Date: March 2014	**Name:** Lamla Fihla	**Name:** Moroke Nteene	**Name**: Andile Ntloko
	Signature:	**Signature:**	**Signature:**
Date: March 2015	**Name:** Lamla Fihla	**Name:** Christo Beukes	**Name**: Andile Ntloko
	Signature:	**Signature:**	**Signature:**

REVISION	Name: Bernice Brefo (Team Leader)	Name: Ziyanda Kaleni	Name: Unathi Maholwana
Date: **04 June 2026**	Signature: Digitally Signed by: **Bernice Brefo** *SMME Technical Manager* **24a9f806-9356-4e37-b645-46dd37e3484b** IP Address: 10.0.30.60 Date: 2026/06/04 9:59:43 AM 2026-06-04 09:59:43	Signature:  Ziyanda Kaleni-Mnyande | a9a75d81-a080-47b0-8d4f-a3009c68a966 | 2026/06/04 11: 2026-06-04 11:16:21	Signature: Digitally Signed by: **Unathi Maholwana** *Programme Manager* **6950ceae-5b0b-46d1-80fc-26d0b7a22f33** IP Address: 10.0.99.131 Date: 2026/06/04 11:48:09 AM 2026-06-04 11:48:09

Distribution:	***CDC***

SMME SPECIFICATION

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ACRONYMS

CDC	=	Coega Development Corporation (Pty) Ltd
CIDB	=	Construction Industry Development Board
EM	=	Executive Manager (CDC)
EMEs	=	Exempted Micro Entreprises
FIDIC	=	Fédération Internationale Des Ingénieurs-Conseils
GCC	=	General Conditions of Contract
IP	=	Implementing Agent
JBCC	=	Joint Building Contracts Committee Building Agreement
MT	=	Management Team
NEC	=	New Engineering Contract
PA	=	Principal Agent
PrDir	=	Programme Director (CDC)
PrMn	=	Programme Manager (CDC)
PM	=	Project Manager (CDC)
QSEs	=	Qualifying Small Enterprises
SARS	=	South African Receiver of Revenue
SCM	=	SMME Construction Mentor
SES	=	Specification for Employment of SMME sub-contractors
SMEs	=	Small and Medium Enterprises
SMME	=	Small, Medium and Micro Enterprise
SOT	=	SMME Operation Template

D1 INTRODUCTION

This document contains the specification that governs the procurement of SMMEs as Sub-Contractors on CDC projects. It is one of the methods that are implemented to enhance the development of SMMEs by CDC. This document is binding to the Principal Contractor and is designed for the execution of CDC projects.

D2 APPLICABLE DOCUMENTATION

This Specification is to be read together with following applicable documents:

(a) Any applicable form of contract used between the Principal Contractor and CDC (JBCC, NEC, GCC and FIDIC)
(b) Tender Document for the appointment of the Principal Contractor;
(c) Preferential Procurement Policy Framework Act (PPPFA);
(d) CDC's SMME Policy;
(e) CDC's Procurement Policy & Procedure; and
(f) CIDB's Code of Conduct for all parties engaged in construction procurement.
(g) The CIDB NCDP framework Practice Note 29: Allocating Sustainable Work Opportunities to Contractor Development Programmes
(h) CIDB Regulations
(i) CIDB Inform Practice Note 32 (Application of potential emerging status)

D3 APPLICABLE FORMS

These forms are applicable for implementation of this Specification:

Procurement/ Phase 1

(a) **SMME 003** SMME Packages Schedule
(b) **SMME 004** SMME Request Form

Monthly Reporting/Phase 2

(c) **SMME 005** SMME Manager Monthly Report – SMME SED

Close Out/Phase 3

(d) **SMME 006** SMME Certificate of Experience

D4. THE SCOPE

This specification governs the procurement of SMME subcontractors on all CDC Projects.

D5. THE DEFINITIONS AND INTERPRETATIONS

For the purposes of this of the Specification, the definitions given in the relevant form of contract used either between the Principal Contractor and the CDC or the Principal Contractor and SMME, other project specifications, together with the following additional definitions shall apply:

“Agreement”: Shall have the meaning assigned thereto in the relevant form of contract;

“Contract Value": A monetary value that initially is equal to the contract sum that is subject to adjustment;

“Direct Contractor”: A party appointed directly by the employer to do specialist work on site prior to practical completion;

“Domestic Subcontractor”: are specialists and other subcontractors executing work or supplying and fixing any goods and who are selected by the contractor;

“Nominated Subcontractor”: are specialist and other subcontractors executing work or supplying and fixing any goods who may be nominated by the Principal Consultant

"Management Team (MT)": A team that is set up for the contract by the CDC Project Manager, consisting of the Principal Contractor, the Project Quantity Surveyor, the Engineer/Principal Agent, a delegated person from the CDC SMME Unit (PM/PrM, Procurement Representative and Technical Manager) and CDC Project Manager. The function of the MT will be to consult regarding the management of the subcontracts involving SMMEs. The MT will also evaluate the Principal Contractor’s performance regarding the goals set for SMME involvements. The CDC Project Manager and the CDC SMME UNIT representative are to decide on the party to chair and lead the MT. Proper minutes of these meetings will be taken by the Principal Agent;

“Selected Subcontractor": are specialists and other subcontractors executing work or supplying and fixing any goods who may be selected by the contractor in consultation with the Principal Consultant;

“**SMME Unit”:** Supporting structure provided by the CDC to monitor the procurement and work of SMMEs and provide limited mentoring (business management) services directly to SMME’s;

SMME Construction Mentor: Person/support priced for in the project budget by the Principal Contractor, administered through the Principal Contractor to guide, assist and mentor all eligible potential SMMEs tendering and awarded a contract as SMME Subcontractors as per section D of this Specification;

Small, Medium and Micro Enterprises: A business concern operating in any business sector and which complies with the qualitative and quantitative criteria outlined in the Schedule contained in the National Small Business Act (Act No. 102 of 1996), providing a Commercially Useful Function as provided in the CDC Procurement Procedures policy;

"**Specification**" means this document containing the CDC's specifications for the utilisation of SMMEs on all CDC projects;

Sub-contractor: A contractor who is subcontracted with the Principal Contractor to provide works as part of the total services required by the CDC for that Contract;

SMME Work Allocation: Specified work identified for execution by SMMEs. The identifiers are CDC, Principal Contractor and the PSP;

Training: The process of providing an SMME Contractor with theoretical and practical work allocation specific education as agreed to by the Principal Agent and Contractor;

Guidance: The process of advising an SMME Contractor, in writing regarding the appropriate execution of work bundles in part or whole;

Monitor: To check, correct and oversee the orderly and appropriate execution of the works, as well as the overall assessment of all aspects of the SMME development programme

D6. EMPLOYMENT OF SMMEs

D6.1 SMME Targets

Thirty Six Percent (36%) of the tender value (excluding socio-economic value, escalation, contingency, EPWP allowance (if applicable), and **Value-Added Tax (VAT))** must be executed by SMMEs. Ten percent (10%) of the committed percentage will be earmarked for designated groups i.e. Women-owned businesses, Youth-owned businesses, Rural/township-based businesses, Military veteran-owned businesses (requisite Military Number confirmed by the Department of Military Veterans), and people living with disabilities(a letter of confirmation from a medical professional is required). It becomes compulsory for the Principal Contractor to achieve this target once committed. The Principal Contractor's performance against this target will be monitored

monthly through the submission of the mandatory SMME Manager's Monthly Report through monthly form submission (SMME 005).

D6.2 Definition of SMME

A **SMME** is defined as follows:

(a) A targeted enterprise;

(b) A business concern operating in any business sector and which complies with the qualitative and quantitative criteria outlined in the Schedule contained in the National Small Business Act (Act No. 102 of 1996);

(c) An entity which must have an active registration status with the **CIDB**, targeted CIDB Grade designations 1 to 6;

(d) An entity which must be at least 51% black-owned and managed**, and**

(e) A local entity. Depending on where the site of the CDC project is located, then locality will be judged on a sliding scale, with the **immediate local municipality preferred, followed by the district municipality and then the Province in which the project is located.** .

D6.3 Targeted SMME Participation

The Principal Contractor's SMME participation goal is to be achieved by employing entities in the following categories:

(a) Built Environment Works; and

(b) Specialist service providers (e.g. Mechanical, HVAC, Structural Steel, Electrical etc.).

For Built Environment Works, the below mentioned goals are to be achieved:

Description	**Thirty Five Percent SMME Participation target Split**	**Targeted Enterprise**
Built Environment Works	36%	EME's - Must be at least 51% black-owned and managed. 10% of the 36% will be set aside for designated groups (Women-owned businesses, Youth-owned businesses, Rural/township-based businesses, Military veteran-owned businesses (requisite Military Number confirmed by the Department of Military Veterans), and people living with disabilities (a letter of confirmation from a medical professional is required).
TOTAL	**36.00 %**	

D6.4 Contracting Process

After the Award of the Contract, the Principal Contractor will have to start the process as stipulated in this Specification for the involvement of SMMEs to achieve its tendered SMME Participation Goal. This contracting process for subcontracting SMMEs must be completed in accordance with the detailed construction programme of the Principal Contractor for the various works as to ensure momentum of the contract works at all times. The Principal Contractor shall take due cognisance to also programme this SMME contracting process in its detailed construction programme.

(a) The Principal Contractor must undertake the following tasks in approximately the order given below:

(i) Complete and submit the schedule of work(s) to be performed by SMME(s) using form **SMME 003A and B** (attached under Appendix A) which is to be directly submitted to the SMME Unit by the SMME Construction Mentor when the Principal Contractor submits the detailed construction programme as per the letter of appointment or award.
(ii) Start and complete the tender or quotation process in consultation with the MT.
(iii) Submit to the SMME Unit the subcontract agreement for review before signing with the SMME.
(iv) Sign a subcontract agreement for each work activity with the successful SMMEs;
(v) Mentor and monitor the SMME Subcontractors and their work output and quality;
(vi) Issue a Certificate of Experience to each Subcontractor;
(vii) Go through the tender and appointment phase for replacement SMMEs in the event of termination of an SMME Subcontractor due to failure by them to perform.

(b) Before the SMME tender phase, the Principal Contractor in consultation with the SMME Unit, shall be responsible for identifying:

(i) the scope and extent of the works to be included in any particular SMME subcontract
(ii) the total number of subcontracts to be used;
(iii) the time at which subcontracts will be used; and
(iv) the duration of the subcontract;

(c) in such a manner as will facilitate the achievement of all objectives and principles pertaining to SMMEs use and development as are stated in or as may reasonably be inferred from the conditions of this Specification, due cognisance being taken of:

(i) the training and assistance to be provided to the SMMEs in terms of this Specification;
(ii) the period allowed in the Appendix to Tender for completion of the contract works in accordance the approved detailed programme of works

(iii) all constraints and conditions contained in this Specifications, as may impact upon the subcontract.

D7 IDENTIFICATION OF SMME's TO PARTICIPATE AS SMME SUBCONTRACTORS

As an on-going process, the CDC has established a database for all interested businesses to register their interest to work in CDC projects using form available from the CDC's SMME Unit offices or the CDC's website. The CDC then encourages all interested businesses to be assessed and graded according to their sector/industry, specialisation and capabilities through the CIDB. The SMME Unit can assist SMMEs during this process. SMMEs that are in the grading process are graded and captured in CDC's special database called the SMME Supply Pool which supplies the SMMEs to service providers that are looking to employ SMMEs in CDC projects. SMMEs will also be encouraged to keep updating their data (grades and contact details) on this database using form which is available on request from the SMME Unit offices.

The Principal Contractor shall employ SMME subcontractors to the extent specified in the tender Goal Declaration under functionality, or as negotiated with the CDC upon award. The participation level is determined relative to the value of the Accepted Contract Amount, or as adjusted, excluding Contingencies, Contract Price Adjustment Provisions, socio-economic deliverables and Value Added Tax.

D7.1 The Principal Contractor must request a list of SMMEs from the SMME Unit Office using form **SMME 003 and 004** attached as **Appendix B**.

D7.2 Within two working days, the SMME Unit will forward the list of SMMEs with their contact person, numbers, and CIDB grades. The Principal Contractor will only invite SMMEs on the list. Any problems encountered during invitation should be reported back to the SMME Unit or the MT before the Site Inspection Meeting (sometimes referred to as the Mandatory meeting).

D8. IDENTIFICATION OF WORK TO BE PERFORMED BY SMME's

D8.1 Tender Stage

The tenderers must, during the tendering stage identify works in accordance with the functionality criteria that can be performed by SMMEs in order to achieve the SMME Participation Goal.

D8.2 Construction Stage

During Construction phase, the Principal Contractor or CDC may identify additional work to be performed by SMMEs above those committed to under functionality. This additional work will also follow the same specification in terms of scheduling and procuring SMMEs for such work.

The Principal Contractor will note that all work measured in the Bills of Quantities is the Principal Contractor's sole responsibility.

The SMMEs will be responsible for procuring all required materials, labour, equipment and any other incidentals to undertake the works subcontracted to them unless otherwise specified by the CDC before tender or approved by the MT during construction.

The Principal Contractor will mentor, supervise and manage the SMME work at all times to ensure compliance with the specifications and drawings. The Principal Contractor shall provide support for SMME contract administration and shall ensure that SMME monthly reports are reviewed, collated and verified by the Principal Contractor before onward submission to the CDC SMME Unit.

D9. TENDER PROCESS FOR SMME's

The tendered SMME Packages Schedule must be registered in form **SMME 003** where after the Principal Contractor will start with procurement of SMMEs to partake in the tendering or quotation process.

SMMEs sourced through a competitive process in conjunction with the SMME Unit and the MT shall not be considered as Nominated Subcontractors unless specifically directed by the CDC.

The following process must be followed by the Principal Contractor unless agreed otherwise with the MT:

D9.1 Tender invitation

A minimum of 6 (six) SMMEs are to be invited for each subcontract to be performed by SMMEs. The Principal Contractor will request the SMME list from SMME Unit using SMME 003 and 004 forms.

The CDC database of registered enterprises is to be used to solicit tenders. Any other SMME(s) that are not registered (or have applied to be registered) on this database will not be eligible for work.

D9.2 Compilation and issue of tender documents

The Principal Contractor shall compile the tender documents (Brief Description, TGP Spec (CRS Number, Original Tax Clearance Certificate, BBBEE Certificate), Contract Wage Schedule –of the Principal Contractor, Contract data, Bill of Quantities, Specification and drawings) in such a manner that it will facilitate the achievement of all objectives and principles pertaining to SMMEs use and development as stated in or as may reasonably be inferred from the conditions of this Specification.

All tender documentation shall be issued by the Principal Contractor with all copies of tender documents compiled for the various SMME work packages. The tender or quotation document will be issued to invited SMMEs at NO EXTRA COST and the Principal Contractor is to make due allowance for this cost in its tender price.

D9.3 Facilitate a Mandatory Briefing Session

The Principal Contractor shall facilitate a briefing session for the invited SMMEs. The Principal Contractor will also make sure that all relevant parties' representative of the Principal Agent or Engineer, SMME Unit, CDC Project Manager and Principal Contractor's Occupational Health and Safety Project Manager are present and given an opportunity to present specific aspects of the CDC requirements pertaining to their sections.

D9.4 Assistance to the SMMEs

(a) The Principal Contractor shall be responsible for ensuring that prospective SMME tenderers fully comprehend the:

(i) Implications of the liabilities and responsibilities inherent in the particular basic level of subcontract applicable;
(ii) Implications of the tendered rates;
(iii) Scope and extent of the portion of the works included in the subcontract;
(iv) Proper procedures for the submission of the tenders;
(v) Procedures and basis on which tenders will be adjudicated and the subcontracts awarded.

(b) The Principal Contractor shall, in addition to the requirements of the relevant sub clause of the applicable form of contract, teach, guide, assist and mentor all eligible SMMEs wishing to submit tenders, in the proper completion and submission of their particular tenders, provided always that such assistance, guidance and mentoring by the Principal Contractor shall:

(i) be given at a level and to the extent which is commensurate with the particular basic level of subcontract applicable, due cognisance being taken of the capability which could reasonably be expected of potential SMMEs eligible to submit tenders for the particular level of subcontract applicable;

(ii) be given in a manner which is neither prescriptive, dictatorial, nor coercive towards the party wishing to submit the tender;

(iii) be given in a manner which does not unfairly prejudice or favour any particular eligible party wishing to submit a tender,

All with the view to enabling all interested SMMEs to submit valid, balanced, rational tenders.

D9.5 Adjudication

(a) The Principal Contractor shall receive all tenders at the construction site location identified by it with all sealed tender submissions to be placed in a proper tender box to be provided by the Principal Contractor for this purpose. A submission register is to be maintained by the Principal Contractor for all tenders received.

(b) All tenders received shall be evaluated by the Principal Contractor and MT for final approval. The draft tender evaluation must be sent to the MT members 2 working days prior to the MT meeting for comments and perusal in order to finalize the evaluation before the meeting. The format of the tender valuation must be acceptable to the MT and be agreed upon at the first MT meeting.

(c) The SMME Unit shall have the right to interview any tenderer for the purpose of:

(i) clarifying any aspect of the tender;
(ii) verifying the eligibility of the tenderer;
(iii) conduct a rate breakdown exercise to clarifying rates and prices

(d) The Principal Contractor shall provide all reasonable opportunity to such tenderers who have been interviewed, to correct obvious and patent errors, provided always that this can be achieved without altering the total tendered sum.

(e) After the award, the CDC reserves the right to review the transparency of the Principal Contractor's SMME subcontracting and award process.

D9.6 Award of Tenders

The Principal Contractor shall explain his evaluation process of adjudication to the MT for endorsement. All enquiries about the process thereafter will be referred to the SMME Unit Offices.

The Principal Contractor will appoint the work to the successful SMME tenderer where after a subcontract agreement will be signed between the Principal Contractor and the successful SMME tenderer.

It is assumed that the Principal Contractor has allowed adequate time in the construction programme for training of SMMEs and included such training costs for the non-accredited training deemed to be either included in the tendered rates or mark-up provision allowed for the various SMME work packages. the non-accredited training to be provided by a responsible, competent and qualified person/s of the Principal Contractor to each of the awarded SMMEs within five (5) days after award and ten (10) days before the commencement of the works package shall include but not limited to:

- (a) Compilation and maintenance of the Occupational Health, Safety and Environmental File and compliance with Construction Regulations by a CHS Officer (CHSO) registered with the South African Council for the Project Management Professions – 2 days,
  (b) Setting up and Maintaining Cash Flow, Construction Programme and Method Statement – 2 Days ,
  (c) Setting up and Maintaining Quality Management Plan and Risk Register – 1 Day,
  (d) Basic Conditions of Contract of the relevant contract and setting up short term contracts for labour as per the main contract – 2 Days,
  (e) Balancing of Bill of Quantities, Financial Control and Management – 2 Days,
  (f) Site Administration – Principal Contractor shall provide for each SMME a daily site diary, A4 triplicate book for recording site instructions and a measurement book, train to complete and update – 1 Day;
  (g) Technical Training - Interpretation of Technical Drawings, Setting Out and General -2 Days;
  (h) Weekly Report Writing – 1 Day;
  (i) Methods of Measuring Resource Productivity – 1 Day,
  (j) Measurement of Work Done, Interim Payment Certificate and Compilation – 1Day, and
  (k) Dispute Avoidance and Resolution Procedures – 1 Day.

The CDC Training Compliance Officer will be notified five (5) days prior the commencement of the non- accredited training. Proof of such training is to be recorded on SMME 009 and forwarded to the CDC SMME Unit for capturing & filing.

D10. TERMS AND CONDITIONS OF SUBCONTRACT AGREEMENTS

D10.1 Contractual Obligations

In accordance with the provisions of relevant clause of the form of contract being used and subject always to the further provisions of this Specification, the terms and conditions of each subcontract agreement shall be as mutually agreed in writing between the Principal Contractor and the SMME. Each subcontract agreement, which is entered into by the Principal Contractor in accordance with

the requirements of this Specification, shall contain terms and conditions, which assign the responsibilities and liabilities of the two parties to the subcontract.

The terms and conditions of the subcontract agreement shall further be such as to specifically ensure that the provisions of this Specification pertaining to:

(a) the allowable sources from which workers may be drawn in terms of the contract;
(b) the terms and conditions relating to the recruitment, employment and remuneration of workers engaged on the contract works; and
(c) any training to be provided to the temporary workforce;

shall apply as is in respect of all workers engaged and employed by any SMME.

D10.2 Compilation

The Principal Contractor shall be responsible for the compilation of each subcontract agreement and ensuring that the terms and conditions are consistent with all requirements therefore as are specified in or reasonably to be inferred from the provisions of this Contract. All costs associated with the tender process including the conclusion of the agreement are for the Principal Contractor's account.

In addition, each subcontract agreement shall be subject to the approval of the SMME Unit, which approval shall be obtained by the Principal Contractor prior to entering into the subcontract.
The Principal Contractor may not enter into any subcontract that contains terms more onerous or disproportionate to the risks inherent in the main contract for the Principal Contractor. The Principal Contractor is required to use a standard form of subcontract and follow recommended practice contained in the CIDB Best Practice Guideline #D1 March 2004 Edition 1 of CIDB Document 1012, or as later amended, where not in conflict with this Specification.

D11. CONTRACTOR'S OBLIGATIONS TO SUBCONTRACTED SMMEs

The Principal Contractor shall on a fulltime basis closely mentor, manage and supervise all SMMEs and shall manage, guide and assist each SMME in all aspects of management, execution and completion of its subcontract. The Principal Contractor shall provide additional developmental support initiatives to Potential Emerging (PE) status SMME sub-contractors that are recommended for appointment. Such development support shall be determined by conducting a needs analysis and approved by the SMME Unit. The support by the Principal Contractor shall include, but not limited to:- Mentorship, Training, Financial management support, Management support in the improvement of performance and quality of work, and all other construction management services required. This shall typically include the on-site productivity planning and management of:

(a) **Materials Management:** This includes, assisting the SMME Sub-contractors in planning their material's requirements per stage, ordering the correct materials, preventing over usage (wastage) and under usage of required materials and ensuring that the Material's suppliers invoice the correct materials and ensuring the effective integration with the Materials supplier;

(b) **Cost Management:** This includes, assisting the SMME Sub-contractors in invoicing correctly to the Principal Contractor, ensuring that the correct amount for the materials is reflected on the invoice and ensuring that all labour is invoiced and paid accordingly;

(c) **Contract Management:** This includes hands-on practical effective construction contract management and administration to SMMEs to take them through step by step analysis of the entire project life cycle and contract administration tasks and equip them with the skills they need to determine risks associated with each stage of the life cycle. Use practical advice that will show them how to avoid problems and how to approach dispute resolution for optimum results;

(d) **Health & Safety Management:** This includes training the SMME Sub-contractor in compiling the Occupational Health and Safety File, ensuring that the SMME Sub-contractors are compliant, in the form of PPE, Safety registers, updating of files and general site safety. The Principal Contractor will mentor and assist SMMEs on the induction of labour;

(e) **Quality Management:** This includes, creating templates for quality management, to be approved by the Engineer/Principal Agent, and ensuring that the SMME Sub-contractors build to the required quality standards as per specifications;

(f) **Communication Management:** This includes, attending all site meetings and the effective contract management between the Principal Contractor, CDC Project Manager/SMME Unit, Principal Agent, construction labour, materials supplier and the community; all site instructions to SMMEs should be written in the site instruction book. All SMMEs are to communicate through the SMME Construction Mentor on-site to the Main Contractor, failing which communication can be through the CDC SMME Unit and

(g) **Handover Documentation Facilitation**: This includes, ensuring that all the necessary handover documentation is in place prior to the handing over of houses to the beneficiaries. These may include but not limited to NHBRC requirements, Department's requirement etc.

The extent and level of such management, guidance and assistance, to be provided by the Principal Contractor shall be commensurate with the basic level of subcontract applicable and shall be directed at enabling the SMMEs to achieve the successful execution and completion of his subcontract. Payment for such on-going assistance is deemed included in the rate tendered for the administrative cost of SMMEs and or mark-up provision allowed for the various SMME work packages.

Such support and mentorship shall form part of the monthly reporting by the Principal Contractor to the SMME Unit and MT Meeting.

D11.1 Guide, Assist and Mentor SMMEs

(a) 1. SMME Construction Mentor for the SMME Subcontractors

The CV of the SMME Construction Mentor is to be submitted at tender stage together with those of proposed key personnel. The Principal Contractor shall, guide, assist and mentor all eligible potential SMMEs wishing to submit tenders, in the proper completion and submission of their particular tenders, including calculation and guidance on rates. The CV of the SMME Construction Mentor is to be reviewed and approved by the CDC SMME Unit.

The Principal Contractor will conduct a compulsory tendering training workshop, provide a venue, study material and allow a period of two (2) days (16 hours) for the training of the prospective SMMEs by a Senior Quantity Surveyor and/or Senior Estimator with ten (10) or more years' experience on Pricing Built Environment Tenders/Bids. Training will comprise but not limited of the following: Mandatory and Compliance requirements, Pricing in relation to the Contract Package Specification, Resource requirements, Completion of Tender Document, Wage Schedule and Occupational Health and Safety Requirements. All costs for providing these services are also deemed included into the tender price.

The Principal Contractor shall employ an SMME Construction Mentor, on a full-time basis, who must attend at site for the duration of the contract. The minimum requirements for this appointment are as follows:

(a) An accredited National (Higher) Diploma and/or B-Tech/BSc qualification in the Built Environment field of study with a minimum of five (5) or more years' relevant post-graduate construction practical experience and experience in managing subcontractors;

(b) have a minimum of five (5) or more years in the built environment and experience in the areas identified under D11 CONTRACTOR'S OBLIGATIONS TO SUBCONTRACTED SMMEs;

(c) shall be registered with a professional body in the built environment as a professional and/or as a candidate;
(d) the ability to transfer skills and assess an SMME's capabilities;
(e) competence in construction contract administration and dispute resolution;
(f) competence in commercial aspects of construction contracting; and
(g) Competence in construction project management activities.

2. The Principal Contractor is to provide for the SMME Construction Mentor with the following:

(a) Adequate office space fully equipped for him/her to conduct the management of SMMEs on the contract (office desk, chairs, whiteboard, cabinet for filing, etc.) a landline telephone and must be able to accommodate the CDC SMME Representative/s for the duration of the contract. The office must meet the following minimum standards external dimensions 6058 x 2438 x 2850 mm, elevated panels, two number plugs, 80 mm thermal insulation of walls, have air condition unit, PVC Windows 1800 x 1135 with roller shutter, PVC floor covering with increased resistance to abrasion +120 mm on the wall, steel door and standard raster lamp 4 x 18W;

(b) all stationary as required and a laptop (Intel Core i3, 4 GB RAM, 250 GB hard drive, Wireless, Bluetooth (Built in, not dongle), DVD-RW drive, 15.4" display, USB Keyboard and Mouse, Carry bag, Additional charger, 3 year warranty, SABS Approved and the Principal Contractor is responsible to ensure that all power plugs are 3 prong connections) with all the required software for him/her to conduct his/her duties and internet connectivity to send and receive emails;

(c) A digital camera of a 22.3 megapixel resolution coming from a full frame CMOS sensor. It also incorporates the DIGIC 5+ image process. The camera should have a 61-point AF module and a wide ISO range from 100 to 25,600, which is further expandable to 102,400. Must be able to add the time, date and geo-tagging to the photo metadata;

(d) a copy of the contract document and a set of drawings (updated with the latest revision/s as and when issued) for the contract and a printer and/or photocopying machine (Standard functions - Copy, Email, Fax, Print, Scan; Print speed- up to 29 ppm; Connectivity- 10/100BaseT Ethernet, High-Speed USB 2.0, Wi-Fi b/g/n; Duty cycle - Up to 30,000 images/month; Maximum print resolution- 600 x 600 dpi (up to 4800 x 600 enhanced image quality); and

(e) the soft and/or printed copy of the updated/latest revision of the detailed construction programme for the contract and complete plan of procuring SMMEs on the following forms SMME 003 and 004.

The SMME Construction Mentor will manage the SMMEs and report monthly on progress of each SMME to the MT using SMME 005 form. Such SMME Construction Mentor must be adequately experienced with SMME work(s) and the development thereof and will be subject to the approval of the CDC. The SMME Construction Mentor will render full-time on site assistance to and mentor the SMMEs and such assistance, guidance and mentoring by the Principal Contractor's SMME Construction Mentor shall:

(i) be given at a level and to the extent which is commensurate with the particular basic level of subcontract applicable, due cognizance being taken of the capability which could reasonably be expected of potential SMMEs eligible to execute works for the particular level of subcontract applicable;

(ii) be given in a manner which does not unfairly prejudice or favour any particular eligible party working on the same site;

(iii) Identify the gaps in capacity of SMMEs and propose the required training and/or relevant intervention;

(iv) where a training gap has been identified the SMME Construction Mentor together with the SMME Unit will arrange for the SMME to attend the required training and ensure that it does not delay the progress on site;

(v) complete all the required SMME and Log Book Forms for each SMME Monthly;

(vi) Adjudicate the SMME tenders and prepare the adjudication report;

(vii) Present the Adjudication report to the MT;

(viii) Assist the SMMEs in preparing Implementation plans for their packages and the required documentation to implement the package / project;

(ix) Assist the SMMEs in measurements and preparation of payment certificates together with the Principal Contractors Quantity Surveyor on site;

(x) Monitor the performance of emerging enterprises and update the logbook;

(xi) Prepare the final payment certificates and certificate of experience for the SMMEs on completion of the awarded package;continuous monitoring of the quality of work of the SMME and providing support where required, taking measurements and samples on site to make sure that the SMME work and the materials meet the specifications and quality standards;

(xii) negotiate and/or arrange for purchase of materials and payment terms on behalf of the SMMEs, no contra charges are to be applied and the SMME is to be invoiced for materials purchased and must have created value for money; and

(xiii) maintain the program of the subcontract, ensure continuous monitoring and implementation of necessary interventions.

(xiv) SMME mentor to advise each SMME of key personnel required on their work, how many labourers are required, what plant is required and at what stage. SMME mentor with the Site Manager set daily production targets for all SMMEs on site, to ensure that they complete their work on time and they are making profit. SMME mentor to invite each SMME Technical personnel with a director and do a daily costing calculation for them to see if the make money or not.

(xv) Notify each SMME that is not reaching their daily production plan, request recovery plan or assist and advise them to create recovery plan. Also elaborate very early in the project the repercussions of them defaulting i.e., penalties or them losing their profits for prolonging their work.

(xvi) The principal contractor and Project Manager through SMME mentor or SMME Manager must share any Variation Order occurred in the project and share that work with appointed SMME; s through SMME management processes to ensure fairness and transparency in the project.

The SMME Construction Mentor will guide, assist and mentor the SMME Subcontractors throughout the Contract using SMME 005 to report on performance of the SMME on monthly basis. On completion, the SMME Construction Mentor will issue a Certificate of Completion within seven days after the final completion (form **SMME 006)**.

(b) Quality of work and performance of the SMME Subcontractor

The SMME Subcontractor shall have 14 days from the date of receipt of the letter of warning by the Principal Contractor to address and rectify the issues raised by the Principal Contractor, with the exception of points (d) and (e) of clause D11.3, for which the rectification time shall be 24 hours. Failure to do so will be sufficient grounds for the Principal Contractor to terminate the Contract provided the MT is satisfied that the Principal Contractor has made every effort to correct the performance by the SMME Subcontractor. The MT will establish a 'change control procedure' for the process of making changes to subcontracts and the work thereof as the contract proceeds.

(c) Training

The SMME Contractors registered in the CDC Database will be assessed in order to identify areas that require intervention and develop a growth plan for the SMME Contractor. Any deficiencies or specific skills that can be addressed during construction stage, the Principal Contractor shall provide such training or skills transfer. The provisional sum will be allowed for under the relevant item in the bill of quantities. It is deemed that the Principal Contractor has allowed for all training requirements to accommodate SMMEs included in the mark-up provision.

The schedule of training requirements for the SMME contractor shall be forwarded to Principal Contractor, using form SMME008 and the Principal Contractor will be required to provide a method statement schedule to address the identified deficiencies. The accredited training provided by the service provider to the SMMEs will include but not limited to:- Project Management, Occupational Health and Safety – Construction Regulations , Resource Productivity, Business Administration, Financial Management, etc. The provisional sum amount will fund the accredited training and training will be done in conjunction with the training and development manager at the CDC SMME Unit.

(d) Reporting

SMME Reporting forms shall form part of the monthly interim payment certificates of the Principal Contractor and failure to submit the required forms and monthly mentorship report will result in the payment certificate being rejected by the CDC.

Form code	Description	Reporting
SMME 003A	SMME Package schedule - Provisional Amount	35% to be completed once off beginning of contract
SMME 003B	SMME Package schedule - PMT identified	35% to be completed once off beginning of contract
SMME 004	SMME Request form	Request for SMME Names for Packages
SMME 006	Certificate of experience	Completion of Project
SMME 009	Declaration form	Monthly

D11.2 Dispute Avoidance and Resolution Procedures

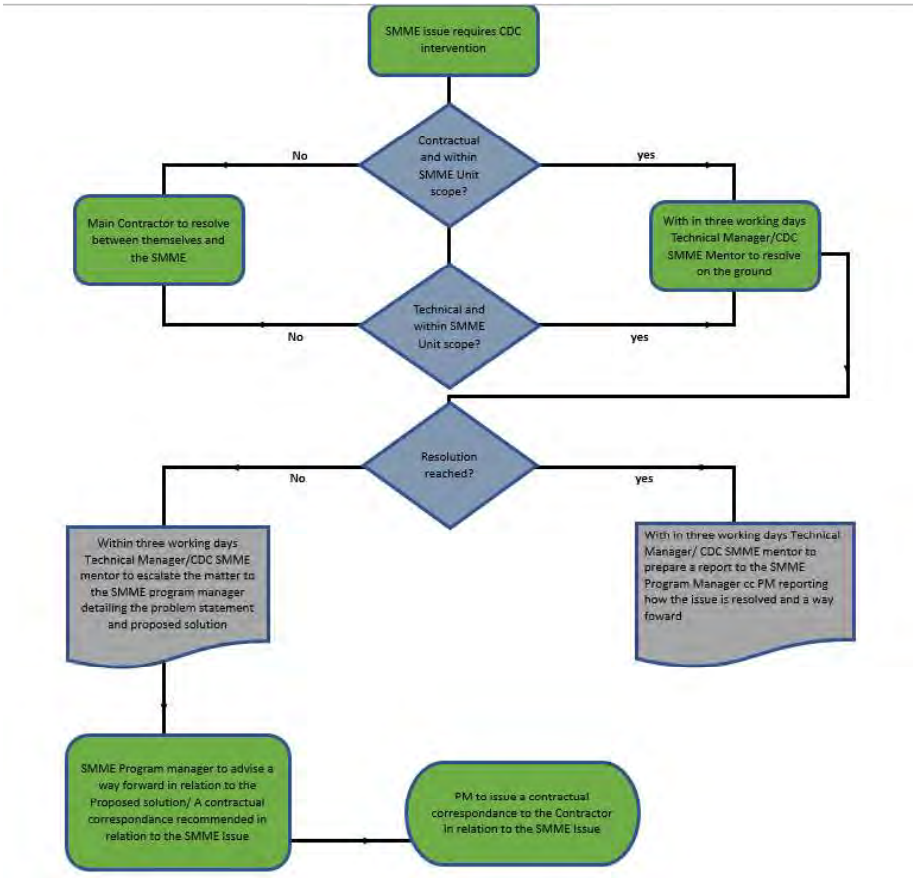
The Principal Contractor shall at all times:

(a) apply the terms and conditions of the subcontract fairly and justly, taking due cognisance of the level of sophistication and experience of the particular SMME concerned, as well as the level of subcontract applicable;

(b) closely manage and supervise all SMMEs and wherever feasible, shall give reasonable warning to SMMEs when any contravention of the terms of the subcontract has occurred or appears likely to occur. The Principal Contractor shall, whenever feasible, give the SMMEs reasonable opportunity to make good any such contravention or to avoid such contravention and shall render all reasonable assistance to the SMME in this regard.

When taking any disciplinary actions or imposing any penalties as are provided for in the subcontract, the Principal Contractor shall explain fully to the SMMEs that such actions are provided for in the subcontract. If any dispute should arise between the Principal Contractor and a SMME such dispute shall be resolved in accordance with the provisions of the subcontract.

Below is a process flow with respect to dispute resolution where an SMME issue is encountered within the contract:



D11.3 Quality of Work and Performance of the SMME

If the SMME, in the opinion of the Principal Contractor, fails to comply with the criteria as listed below, the Engineer/Principal Agent shall issue a written warning to the Principal Contractor, stating all the areas of non-compliance. A copy of the letter of warning shall be forwarded to the Client. These criteria are as follows:

(a) Acceptable standard of works as set out in the specifications in the subcontract tender document
(b) Progress in accordance with the time constraints in the SMME's tender document
(c) Punctual and full payment of the workforce and suppliers
(d) Site safety
(e) Environmental impacts.

The Subcontractor shall have 14 days from the date of receipt of the letter of warning by the Principal Contractor to satisfactorily address the issues raised by the Contractor, with the exception of point (d), for which the response time shall be 24 hours. Failure to do so will be sufficient grounds for the Principal Contractor to terminate the contract provided the SMME Unit is satisfied that the Principal Contractor has made every effort to correct the performance by the SMME.

D11.4 Payment to SMMEs

The following payment conditions shall form part of the Sub Contract Agreement entered into between the Principal Contractor and SMME:

(a) The Principal Contractor shall draw up a schedule with dates of measuring/certifying works, submitting invoices and payment dates. This schedule is to be issued to the CDC Project Manager, SMME Unit, SMME Mentor and awarded SMME's;

(b) The main contractor will pay all SMME subcontractors appointed directly once certified by the Project Quantity Surveyor.

(c) The Principal Contractor must instruct the SMME subcontractors to submit their payment certification or claim monthly in line with the requirements of the contract between the CDC and the Principal Contractor to ensure that their claims are processed and paid by the main contractor timeously.

D12. PRINCIPAL CONTRACTOR'S DUTIES UPON COMPLETION OF EACH SMME PACKAGE

The Principal Contractor shall, on completion of each and every subcontract completed in accordance with the provisions of this Specification, issue free of charge to the SMME within 7 days of the completion of the subcontract, a Certificate of Experience on a single A4 page stating:

(a) Contract data:

(i) Contract title;
(ii) Contractor's full name and address;
(iii) Principal agent's name and address;

(b) Subcontract data:

(i) SMME name and address;
(ii) Scope or extent of the subcontract works;
(iii) Value of the subcontract works;
(iv) Applicable level of the subcontract;
(v) Duration of the subcontract;
(vi) Date of completion of the subcontract; and
(vii) Description of the training undergone by the SMME;

(c) Certifying the SMMEs completion of the subcontract.

SMME 006 form provides the format, layout and appearance of certificates to be issued but the Principal Contractor may suggest revision to MT for approval which shall be respectable and presentable in accordance with the general standards of normal business practice. All certificates issued shall be co-signed by the Principal Agent/Consulting Engineer and a senior representative of the Principal Contractor, who has been duly authorised thereto.

D13. CONTRACTOR'S LIABILITY

D13.1 No provision or requirement set out in this Specification shall be deemed to relieve the Principal Contractor of any liability or obligation under the contract between the CDC and the Principal Contractor, and the Principal Contractor shall be fully liable for the acts, defaults and neglects of any SMMEs, his agents or employees, as fully as if they were the acts, defaults and neglects of the Principal Contractor, his agents or employees.

D14. PERFORMANCE GUARANTEE

D14.1 No provision or requirement set out in this specification shall be deemed to relieve the Principal Contractor of any liability or obligation under the contract, and in accordance with the provisions of the relevant clause of the applicable form of contract, the Principal Contractor shall be fully liable for the acts, defaults and neglects of any SMMEs, his agents or employees, as fully as if they were the acts, defaults and neglects of the Principal Contractor, his agents or employees.

Any failure or neglect by the Principal Contractor to comply with the provision of the specifications, or any omission or neglect by the Principal Contractor in adhering to or applying the principles as are described and inherent in the specifications, shall be deemed to constitute a warrant for the Principal Agent/ Consulting Engineer to act in terms of relevant clause of the applicable form of contract.

SMMEs will be required to produce a Performance guarantee in line with the value of the subcontract work as follows:

0 to R2, 000,000 - 0%;

R2, 000,001 to R4, 000,000 - shall be 2.5%;

R4, 000,001 and higher - shall be 5%;

Where such guarantees are provided by SMME subcontractors the return of same will be related to the time when the work carried out by the SMME subcontractor is complete to the satisfaction of the Principal Contractor and the Principal Agent/ Consulting Engineer.

D15. RETENTION

D15.1 Fifty Percent Retention on SMME subcontractors excluding VAT, will be released half on practical completion and balance on final completion as follows:

Special Condition: Retention on subcontractors, whose subcontract value is less than R 1 000 000.00 (One Million Rand), will be released 3 months after the subcontract work carried out by the subcontractor is complete to the satisfaction of the Principal Contractor.

D16. MEASUREMENT AND PAYMENT

The price tendered will be deemed to include all incidentals by the Principal Contractor to comply with the conditions of this specification. No other claims will be entertained should SMMEs negatively affect the contract works in any way, and the Principal Contractor shall be deemed to have included such effects in the handling cost percentage for the different SMME work packages above.

D17. SUBCONTRACTING BY SUBCONTRATORS

The Principal Contractor is not to permit SMME subcontractors to further subcontract on any other conditions than those applying in the project specification to subcontractors or SMME subcontractors.

D18 JOINT VENTURING & CONSORTIUM

The SMME sub-contractors are not permitted to enter into Joint Ventures or form a consortium with other SMME(s) sub-contractors.

D19 REPEAT APPOINTMENTS

The SMME shall be afforded a maximum of two active packages on **ONE** particular CIDB Grade and shall not be considered for any further works until they've provided proof to the SMME Unit of upgrading with CIDB.

This will only apply to SMMEs that have successfully completed their packages within the specified time, achieved the desired quality and adhered to all contractual obligations.

The CDC SMME Unit has the right through the MT to query any or all of the recommendations of the Principal Contractor. Once the MT is satisfied with the recommendations of the Principal Contractor, it reserves the right approve or reject the repeat appointment.

This is to ensure the spread of work, mitigation of risk and realisation of the developmental objectives.

Acknowledgement of SMME Specification	Principal Contractor Representative	CDC Project Manager	Principal Agent
Date:	**Name:**	**Name:**	**Name:**
	Signature:	**Signature:**	**Signature:**

C5.7 ANNEXURE G: PSP SCOPE OF WORKS

RT C3: SCOPE OF SERVICES AND GUIDELINE FEE SPLIT FOR PROFESSIONAL SERVICE PROVIDERS

		SCOPE OF SERVICES	SPECIFIC DELIVERABLES
Stage 2	Concept Design (Preliminary Designs) – **Review and/or refine**	a) Attend all Client Progress Meetings and other ad-hoc meetings; b) Attend all Planning and Design meetings; c) Assess and advise on user requirements; d) Ensure compliance with latest norms and standards applicable to health infrastructure projects such as the latest Primary Health Care Policies, IUSS Guidelines, and international best practices; e) Develop WBS, WBS Dictionary and Baseline Plan; f) Development concept designs that reflect contemporary layout of this health care facility to ensure operational efficiencies, improved work flows and logistics between various sections of the facility; g) Prepare decommissioning and commissioning plans (sequencing) for the health care facilities; h) Identify SMME packages in consultation with the CDC SMME Unit; i) Agree with the CDC and the ECDoH on the format and procedures for cost control and reporting; j) Manage and monitor the preparation of project costing with specific reference to site matters that may affect the project costs; k) Prepare preliminary layout/sketch plans; l) Prepare preliminary cost estimates and project programme; m) Prepare and submit the Site Development Plans to local authorities where necessary; Conduct Value Engineering workshops, including all key stakeholders, and produce a Value Engineering Report. n) Preparation of feasibility report which presents sufficient information to determine whether the project should be implemented o) Preparation of design options report p) Preparation of a concept report which establishes the detailed brief, scope, scale form & control budget and sets out the integrated concept for one or more packages., q) Discharge of all environmental and local authority conditions.	a) Preliminary layout/sketch plans; b) Concept Designs (Including elevations, sections and 3D sketches); c) Stage 2 Site Development Plans; d) Value Engineering Report; e) Progress Reports; and f) Completion of FIPDM gate 2 – Concept report g) Stage 2 Programme h) Stage 2 Cost plan i) Stage 2 Risk log completed on PMIS j) Stage 2 Lessons log completed on PMIS <u>Method of Assessment and Payment:</u> 100% of stage fee upon completion and approval Concept report
Stage 3	Design Development	a) Conduct monthly project progress design review meetings with the consultants, hospital management, CDC and ECDoH; b) Manage the performance of the consultant team, with specific reference to deliverables, and fee payable;	a) Design development drawings; b) Stage 3 Site Development Plans; c) Working Drawings; d) Outline Specifications;

		SCOPE OF SERVICES	SPECIFIC DELIVERABLES
		c) Actively pursue the optimisation of the designs and implementation strategies; d) Develop in sufficient detail, the accepted concept to finalise the design e) Establish the detailed form, character, function and costings f) Define all components in terms of overall size, typical detail, performance and outline specification g) Describe how elements are to function and safely constructed, maintained and commissioned h) Confirmation that the package can be completed within the control budget i) Establish and co-ordinate the formal and informal communication structure, processes and procedures for the design development of the project; j) Prepare, co-ordinate and agree on a detailed Design and Documentation for the project; k) Produce design development drawings, technical details and outline specifications; l) Prepare detail specifications for new medical and non-medical equipment for procurement purposes; m) Prepare comprehensive room data sheets as informed by the Clinical and Technical Brief; n) Prepare equipment list and Bill of Quantities for all medical and non-medical equipment; o) Manage, co-ordinate and integrate the design in a sequence to suit the project design and documentation with consultants; p) Prepare detailed cost estimates for all work packages; q) Prepare detailed Design Report; r) Facilitate and manage the end-user participation, by establishing the working group committee to participate in meetings during the design of the project; s) Manage and monitor the timeous submission by the design team of all plans and documentation to obtain the necessary statutory approvals; t) Conduct Value Engineering exercise with CDC on detail designs for approval; u) Identify and set aside SMME work packages in the BOQ; v) Facilitate any input from the design consultants required by Health and Safety consultant; w) Establish responsibilities and monitor the information flow (to and from) to all stakeholders x) Manage the preparation of cost estimates by the Quantity Surveyor, budgets and cost reports for all packages and phases y) Cost control to achieve cost effective designs; z) Facilitate and monitor the timeous technical co-ordination of the design by the design team with quality assurance system aa) Manage and monitor the planning and documentation of commissioning of the facility, including change management planning; and facilitate approvals	e) Stage 3 Cost Estimates; f) Stage 3 Baseline Programme; g) Room Data Sheets and Equipment Lists h) Stage 3 Risk log completed on PMIS i) Stage 3 Lessons log completed on PMIS j) Completion of FIPDM gate 3 – Design Development report <u>Method of Assessment and Payment</u>: a) Proportional to the volume and approval of design documentation to be completed during the stage 100% of stage fee upon client approval of FIPDM gate 3 – design development report
Stage 4	Detailed Design	a) Provide advice on all appropriate insurances; b) Compilation and approval of Tender Documentation including Working Drawings and	a) Working Drawings; b) Elemental BOQ including

		SCOPE OF SERVICES	SPECIFIC DELIVERABLES
		Elemental Bill of Quantities; c) Documentation for pricing purposes to be produced for each work package d) Assess samples and products for compliance and design intent; e) Production of copies of the required number of Tender Documents for distribution to prospective tenderers; f) Attend Briefing Meeting; g) Assist with responses to technical and design related questions during tender stage; h) Attend tender closure meeting; and i) Assist with tender evaluation, arithmetical error checking of submitted bids and compilation of detailed Tender Evaluation Report to Project Manager; j) Production information, which provides the detailing, performance definition, specification, sizing and positioning of all systems, and components whereby the contractor is able to build directly from the information provided. k) Completed manufacture, fabrication and construction information produced by or on behalf of the constructor, which enables the construction to take place.	SMME component c) Tender Documentation; d) Tender Evaluation Report; and e) Progress Reports. f) Stage 4 Programme g) Stage 4 Cost plan h) Stage 4 Risk log completed on PMIS k) Stage 4 Lessons log j) Completion of FIPDM – Design Documentation <u>Method of Assessment and Payment</u> l) 100% of the overall stage fee upon the completion and client approval of FIPDM stage 4 – Design Documentation.
Stage 5	Works (Include both construction and commissioning)	a) Assist with appointment of contractor including signing of the construction contract; i. Ensure that all contractual obligations from the contractor are met e.g. guarantees, insurances, programmes, etc. are in place; ii. Manage the performance of the contractor with specific reference to deliverables, cost structures, interest and penalties; iii. Actively pursue the optimisation of the designs and implementation strategies; iv. Facilitate the hand-over of site to the contractor; v. Establish and co-ordinate the formal and informal communication structure and procedures during the construction period; vi. Monitor, review and approve the preparation of the contract programme; vii. Monitor the compliance by the contractors of the requirements of the Health and Safety Consultant; viii. Monitor the auditing of the contractors Health and Safety Plan and on site auditing by the Health and Safety Agent; ix. Monitor the compliance by the contractors of the requirements of the Socio - Economic Deliverables; x. Report on EPWP, SMME and Job creation achievements to ECDoH; xi. Agree and manage the document schedule to ensure timeous delivery of required information to the contractor; xii. Establish procedure for monitoring, controlling and agreeing all scope and cost variations. Formal approvals to be obtained from CDC and NDoH prior to instruction to proceed with any scope changes; xiii. Agree and monitor all quality assurance procedures and implementation thereof by	• Work Plans for construction; • Site Handover Certificate and Contracts; • Payment Certificates; • Monthly Progress Reports; • Monthly Cost Report; and • Mini BOQ and Drawings for SMME packages. • Practical Completion Certificate • Stage 5 Programme • Stage 5 Cost plan • Stage 5 Risk log completed on PMIS i) Stage 5 Lessons log <u>Method of Assessment and Payment</u> • At the stage fee percentage, less previously earned, applied to the approved contractor's interim payment certificate to the total contract value (Excl VAT, advanced payment, any interest charges, and Incl penalties) as evidenced on the Payment Certificate

		SCOPE OF SERVICES	SPECIFIC DELIVERABLES
		the consultant and the contractor; xiv. Monitor, review, approve and certify monthly progress payments of all Service Providers; xv. Receive, review and adjudicate any contractual claims; xvi. Monitor the preparation of monthly cost reports by the Quantity Surveyor; b) Submit all necessary cash flows to the CDC and NDoH; c) Prepare monthly project reports (reporting on project progress and financial management) including any other submission to the CDC and NDoH; d) Co-ordinate and monitor the defects/snag lists to enable the issue of the Certificate of Practical Completion; e) Monitor the execution of the defects items to achieve works completion and the issue of a Works Completion Certificate; f) Monitor the execution of the defects items during the defect period to achieve final completion and the issue of a Final Completion Certificate; g) Monitor and report on critical path of contractors programme and recommend changes where necessary; h) Monitor and report on labor resources of contractor to achieve targets; and i) Full time presence on site of Clerk of Works to monitor workmanship and quality of construction works performed by the contractor.	• 100% of remainder of stage fee payable upon the issuance of the practical completion certificate. • 100% of the overall stage fee upon the completion and client approval of FIPDM stage 5 – Practical completion report
Stage 5	Hand Over	a) Finalize and assemble record information which accurately reflects the as built information. b) Handover works to the end user c) Commissioning and performance testing of all equipment & products d) Arrange operations & maintenance manuals and warrantees from suppliers e) Train end users on all operational equipment and b) Issue health and safety file	• Works completion certificate • Occupational Certificate • Health and Safety File • As built information • Stage 6 Risk log completed on PMIS • Stage 6 Lessons log on PMIS • 100% of the overall stage fee upon the completion and client approval of FIPDM stage 6 – Handover / record information report
Stage 5	Close Out	a) Record of information archived b) Project closed on the web based PMIS system c) Prepare and present final accounts f) Prepare and present project close out report	• Close out report • Final account • Final certificate <u>Method of Assessment and Payment</u> 100% at the completion on completion and • client approval of FIPDM stage 7 – Close out report

Stages	FIDPM Description	Architect	QS	Civil Engineer	Structural Engineer	Electrical Engineer	Mechanical Engineer	Professional OHS
1	Initiation	0%	0%	0%	0%	0%	0%	0%
2	Concept	10%	5%	10%	10%	10%	10%	0%
3	Design Development	15%	10%	15%	15%	15%	15%	10%
4	Detailed Design	25%	30%	25%	25%	25%	25%	20%
5	Works	35%	45%	35%	35%	35%	35%	50%
6	Handover	5%	0%	5%	5%	5%	5%	0%
7	Close out	10%	10%	10%	10%	10%	10%	20%
	TOTALS	100%	100%	100%	100%	100%	100%	100%