



**EXPRESSION OF INTEREST (EOI)  
IN RESPECT OF REDEVELOPMENT  
OF THE CENTRUM: GUGU DLAMINI SUB-PRECINCT**

EOI CONTRACT NO:	TENDER DESCRIPTIONS	SITE SIZE
7E – 27753	EXPRESSION OF INTEREST: REDEVELOPMENT OF THE CENTRUM: GUGU DLAMINI SUB-PRECINCT (BRAM FISCHER ROAD/SOLDIERS WAY/JOE SLOVO STREET)	135658 Ha
<b>Briefing Sessions</b>	The Bidders are advised that a non-compulsory briefing session will be held on the Expression of Interest (EOI) on 14 March 2024 from 10:00 to 11:00 on Teams. The purpose of this session is only for Bidders to gain clarity about the compliance documents that need to be submitted to meet the requirements in the EOI and no other matter. Bidders are requested to send a confirmation email by the 08 <sup>th</sup> of March 2024, 12:00, to the contact email addresses in the EOI, to receive a Teams link meeting invite.	
<b>Delivery of bid</b>	Ground floor Engineering Unit, Municipal Centre 166 K.E. Masinga Road (formerly Old Fort Road) DURBAN	
<b>Closing Date</b>	<b>31 May 2024 @ 11:00am</b>	
<b>Requests and Clarifications</b>	Email queries to be submitted by 16 April 2024 and consolidated answers to questions will be uploaded 25 April 2024	
<b>Project Officer/s contact details for queries</b>	Nasreen.arabi@durban.gov.za and kamalen.gounden@durban.gov.za	
<b>Note to Bidders: N/A</b>		

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## 1. DISCLAIMER

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ETHEKWINI MUNICIPALITY reserves the right to amend, modify or withdraw this EOI or any part of it, at any time, without prior notice and without liability to compensate or reimburse any person pursuant to such amendment, modification, withdrawal, or termination.

The terms and conditions set out in this EOI are stipulated for the express benefit of ETHEKWINI MUNICIPALITY and, save as expressly stated to the contrary, may be waived at ETHEKWINI MUNICIPALITY's sole discretion at any time.

ETHEKWINI MUNICIPALITY reserves the right to at any time include such responses to this EOI in any further procurement documents which may or may not be made available at such later stage, without the obligation or liability to pay any compensation or reimbursement of any nature to any person pursuant to such use.

This Document is provided solely for the purpose set out herein and is not intended to form any part or basis of any investment decisions by the Respondent, its shareholders, members, or its lenders.

Each person that accesses this EOI must make its own independent assessment of the information provided, taking such advice (whether professional or otherwise) as it deems necessary.

No Respondent, its shareholders, members, contractors, suppliers or lenders shall have any claim against ETHEKWINI MUNICIPALITY and or, its officers, employees, servants, agents or Transaction Advisors, under any circumstances whatsoever, arising out of any matter relating to this EOI of any nature whatsoever, including where such claim is based on any act or omission by ETHEKWINI MUNICIPALITY and or, any of its officers, employees, servants, agents or Transaction Advisors of any nature whatsoever, or where such claim is based on the content of, or any omission from, this Document of any nature whatsoever.

## 2. DEFINITIONS AND INTREPRETATION

In this Document, except as otherwise defined herein, the following terms shall have the following meanings:

- 2.1 **Bidder** - any entity or consortium that submits a Bid Response, which must be either a Project Company or a consortium of legal entities, all of whom shall become shareholders (either themselves or through an intermediary entity) in a Project Company, who submits a Bid Response;
- 2.2 **Bid Response** - any bid submitted by a Bidder in response to the invitation contained in the RFP to be issued by ETHEKWINI MUNICIPALITY within its sole and absolute discretion;
- 2.3 **Consents** - all consents, permits, clearances, authorisations, approvals, decisions, required to be issued by or made with any Responsible Authority in connection with the performance of any of the Construction, Operation and maintenance of the Property by the Project Company;
- 2.4 **Document** - this explanation and expression of interest document for the Redevelopment of The Centrum Gugu Dlamini Sub-Precinct
- 2.5 **Preferred Bidder** - any Bidder that is selected by ETHEKWINI MUNICIPALITY pursuant to the issuing of a RFP for the Redevelopment of The Centrum Gugu Dlamini Sub-Precinct following qualification and evaluation of the Bid Response submitted by the Bidder;
- 2.6 **Project** – the Redevelopment of The Centrum Gugu Dlamini Sub-Precinct by Respondent;
- 2.7 **Project Company** - the company that a Bidder proposes using as the vehicle to undertake the Bidder’s Project, that is the subject matter of a Bid Response;
- 2.8 **Project Officer** - the person appointed by ETHEKWINI MUNICIPALITY as the project officer in respect of the Redevelopment of The Centrum Gugu Dlamini Sub-Precinct
- 2.9 **Project site** - the site(s) upon which the Redevelopment of The Centrum Gugu Dlamini Sub-Precinct are to be constructed and operated;
- 2.10 **Respondent** - any entity or consortium that submits a EOI Response in response to this Document;
- 2.11 **EOI** – this Expression of Interest document to which Respondents are required to submit an EOI response to.
- 2.12 **EOI Response** - the completed Response Form, together with all necessary supporting documentation; and
- 2.13 **RFP** - the request for qualification and proposals to be issued to the short-listed Respondents, in respect of the ETHEKWINI MUNICIPALITY Redevelopment of The Centrum Gugu Dlamini Sub-Precinct, in due course.

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#### 4. INTRODUCTION AND PURPOSE

- 4.1 The eThekweni Municipality is the gateway to Africa and the Spatial Development Framework of the eThekweni Municipality identifies the inner-city as the urban core and the gateway to the City of Durban.
- 4.2 Durban has occupied a lead position in South Africa's leisure and recreation market for decades. Apart from being a thriving Port City, having a world-class International Conference Centre (Durban ICC) as well as Ushaka Marine World, popular beaches and a rich culture, several projects such as the Point Development and Durban Bay Waterfront and an inner City that has potential for urban transformation.
- 4.3 "The Inner City of Durban is a diverse and complex part of the city, rich in culture and opportunities. The Durban inner city is a prominent precinct in the municipality and is the largest revenue generator from a rates contribution perspective. The inner city is strategically located near the sea and airport which are key components that make Durban a logistics and economic hub for the metropolitan area; social; and education institutions and government facilities; and is also bound by various key transport networks (Draft Integrated Development Plan (IDP) 2022/2023)
- 4.4 During the last five years, the eThekweni Municipality approved a revised Point Development Framework Plan and the Inner City Inner Local Area Plan (LAP) and Regeneration Strategy (Inner City LAP; Figures 2 to 6 and Figures: 22 to 28):
- Recognised the Durban International Convention Centre / Durban Exhibition Centre (ICC/ DEC) campus; Centrum Precinct; the Durban Beachfront and the Point Development as catalytic assets of the City in terms of economic; regeneration and investment opportunities.
  - Identified the area between the ICC Campus; Beachfront; 'Back of Beach area'/ Mahatma Gandhi Road (former Point Road) and Point as a key priority area for the implementation of the public realm upgrade initiatives.
  - Recognized the need to redevelop and revitalise the area between the ICC and Durban's Beachfront (Rivertown) and to encourage private investment and co-development in the area.
  - Proposed a Rational Road System that promotes linkages and traffic flows, rather than severing areas from each other.
- 4.5 As part of the above-mentioned initiatives, the Economic Development and Planning Cluster conceptualized a program to expedite the implementation of selected high-impact catalytic projects in the city, as identified in the eThekweni Inner City Inner Local Area Plan (LAP) and Regeneration Strategy. The following are initiatives driven by the Municipality within the Inner City (Figures: 7 to 9):
- Point Precinct: Point Waterfront Development
  - Durban Bay Waterfront
  - Rivertown and ICC/DEC Precinct: upgrade of the public realm infrastructure
  - Protect and enhance the beachfront as a key tourism asset and key links from ICC to the Beach
  - Inner City Public Realm Strategy which included the strategic targeting - high profile precincts and the movement routes
  - Alignment with Inner City Public Transportation Plan key streets and attractions
- 4.6 The Municipality issues this EOI as the first formal step in a procurement process to ultimately procure a preferred bidder to enter into a lease (and or sale) agreement. Any sale of land may only be considered for a residential component. The commercial component may be leased for a 50-year period. The land disposal method preferred by the Municipality over the site is leasehold however the Respondent will have to differentiate between the Residential component and the Commercial component and provide the municipality with suitable land disposal options for consideration.

## 5. THE CENTRUM, GUGU DLAMINI PRECINCT – SITE DEVELOPMENT AREA

- 5.1 As part of the approved Inner-City Local Area Plan (2016) and Regeneration Strategy (2017), the Centrum Precinct Plan was developed, which consists of various Sub-precincts, including the Gugu Dlamini Sub-precinct.
- 5.2 The prime location of Gugu Dlamini Sub Precinct intends to unlock the potential for new and expansionary investment within the broader City and Centrum Precinct and directly surrounding the site (ICC, DEC, Workshop, Rivertown, etc.), stimulating long-term growth and development. This process is part of the eThekweni Municipality's economic development strategy, aimed at attracting private investors to the Durban CBD.
- 5.3 The quantum of vacant, underutilized Government-owned land within the Centrum Precinct provides a unique opportunity for the regeneration of the Inner City. However, the role of South African Municipalities is to facilitate development and not act as developers. Therefore, there is a need to engage in a public process to facilitate the call for proposals for a mixed-use development for part of the Gugu Dlamini Sub-precinct within the Centrum Precinct.
- 5.4 **This Expression of Interest will involve inviting suitably qualified and experienced Property Developers/ Consortium to submit proposals expressing their interest in the Centrum site for mixed-use property development and investment purposes.**
- 5.5 Within the eThekweni Municipality, it is the role Catalytic Projects Unit (CPU) to facilitate the development of key investment initiatives within the Municipality. The CPU is being supported by the Real Estate Department in this process.
- 5.6 This EOI document provides potential interested parties with an overview and information on the following.
  - 5.6.1 Strategic Context and Location: Location Centrum Precinct, and Gugu Dlamini Sub-precinct within the Inner City
  - 5.6.2 Site / Property Description
  - 5.6.3 Bidders' response to the development
  - 5.6.4 Centrum Precinct: Planning Background and Legal Status
  - 5.6.5 The Development Vision including the Urban and Architectural Vision
  - 5.6.6 Stakeholder Considerations
  - 5.6.7 Infrastructure Development (high level)
  - 5.6.8 Additional Data Sources

## 6. OBJECTIVE CRITERIA

- The Objective Criteria is framed in terms of Paragraph 2(1)(f) of the Preferential Procurement Policy Framework Act 5 of 2000 is to give effect to Section 25 (5) of the Constitution of the Republic of South Africa.
- In line with Section 25 (5) of the Constitution "The state must take reasonable legislative and other measures, within its available resources, to foster conditions which enable citizens to gain access to land on an equitable basis."
- The objective criteria will be applied in the following manner:
  - o The demographic profile of property ownership or access to property will be assessed using the Municipality's lease register in relation to the location of the subject property and the level of

participation in the sector. Preference will be given to the most underrepresented groups within that property profile.

## 7. EOI PROCESS

- 7.1 The EOI documentation (which expression shall include all other information, written or oral, made available during the procurement process) is being made available by the Municipality Respondents on the condition that it is used solely for the purpose of considering whether or not to submit a Response, and if affirmative, to submit a Response in sufficient detail to allow the Municipality to shortlist Respondents who will participate in the RFP stage of this procurement process, and for no other purpose.
- 7.2 The Municipality issues this EOI as the first formal step in a procurement process to ultimately procure a preferred bidder to enter into a lease (and or sale) agreement for this Project.
- 7.3 The objective of this EOI is to provide prospective Respondents with sufficient background information in relation to the Project (i) to allow the Municipality to take an informed decision as to whether to continue with the procurement process, and (ii) for those who are shortlisted by the Municipality to be invited to submit a full and informative response in the next stage of the procurement process.
- 7.4 The purpose of this EOI is to allow the Municipality to establish a list of shortlisted Respondents who are adjudged to be sufficiently experienced and committed organisations.
- 7.5 The Municipality therefore seeks Responses from experienced and committed organisations who wish to be shortlisted and in due course be given the opportunity to bid at RFP stage.
- 7.6 The Municipality has elected to employ a two-stage procurement process, namely a EOI stage to be followed by an RFP stage. It is accordingly envisaged that –
  - 7.6.1 Responses to this EOI below will be to produce a list of shortlisted Respondents;
  - 7.6.2 the Municipality will approve the shortlisted Respondents;
  - 7.6.3 Shortlisted Respondents will be issued with an RFP in due course, inviting them to submit proposals in response to the RFP to undertake the project.
  - 7.6.4 the shortlisted Respondents will then submit their proposals; and
  - 7.6.5 an evaluation of the proposals will be undertaken by the Department with the view to select a preferred bidder and a reserve bidder.
- 7.7 All MBD forms in this EOI must be properly completed as required, and the document shall not be taken apart or altered in any way whatsoever. Failure to complete the MBD Forms to the satisfaction of the Municipality will lead to rejection of the Response on the grounds that the Response is not responsive.
- 7.8 The Municipality in issuing out this EOI documentation, must ensure that it adheres to the PoPI Act. As part of the requirements of the PoPI Act, all Respondents are requested to consent to the processing of their personal information, and as such are required to complete and sign the section 11 PoPI Act consent



form, contained in Appendix 1 (POPI Act Consent for Proposals) if they wish for their submission or Response to be evaluated.

- 7.9 The Municipality reserves the right to reject a Respondent's Response at any time.
- 7.10 The outcome of the EOI process will culminate in Council and SCM approving shortlisted Respondents who will be invited to submit a proposal in the RFP stage. No other bids, other than those approved shortlisted bids from the EOI process, will be allowed to tender for the RFP process on this project. The RFP process will follow a separate procurement process.
- 7.11 The Municipality has no obligation to pursue the procurement process at any stage if the process is deemed unfeasible and can withdraw the Bid.

## 8. BIDDERS RESPONSE TO THE DEVELOPMENT

- 8.1 The future redevelopment of the Centrum Precinct should consider the following site requirements as a guide as to the needs of the City:
- a) As a **primary civic node of the city**. Civic uses to consider, but not limited to, a new Council Chamber, Central City Library and Natural Science Museum, Government/ Municipal office accommodation, and educational training centre.
  - b) A **major mixed-use node** incorporating a variety of cultural facilities centred around a public realm that is accessible and used 24 hours a day. To accommodate a mix of land uses taking advantage of its central location and investment potential such as retail, offices, hotel, restaurants, entertainment, recreation, residential etc
  - c) A **major multi-modal Public Transportation Node**- Connectivity with transport facilities to support ETA Public Transport plans for Intermodal Transport Facilities planned, catering for a long-term Bus facility, taxi Facilities and other public transport (PT) requirements which may include PRASA future rail requirements.
  - d) **Public Open space provision and enhancement**- Redevelop and improve and possibly expand Gugu Dlamini Square into a well-designed and crafted urban public space that will serve the public good and promote social cohesion and is connected and accessible to the surrounding precincts.
  - e) **Eventing Facilities and Outdoor Events Space** –to complement and support the activities/integration of both the ICC and DEC and consideration for hosting of events to activate and increase the vivacity of the space and to Enhance city's arts and cultural precinct.
  - f) **Parking and or Super basement parking** – Explore various parking models to meet parking requirements and to support events and surrounding developments. Consideration/feasibility for a super basement that can link the Durban ICC, DEC, Workshop and Gugu Dlamini sub precinct to be explored, that will cater for events, conferences, etc and allow for the ground level to be dedicated to the public realm or shared and contra parking facilities to support the greater development and uses of the area.

- g) **Informal Trading** – to explore opportunities for informal trading areas to form part of the precinct in an integrated and coordinated manner.
- h) Contribute and promote the **broader revitalisation** and renewal strategies of the Inner City.

## 8.2 Guidelines to the Concept Development:

The following below are some key guidelines to inform the concept plan development:

- a) **Urban and Architectural Vision:** Development proposal alignment with the approved Inner-City Local Area Plan and Regeneration Strategy which includes the Centrum Precinct Plan and the Gugu Dlamini Sub-precinct. Its integration with the overall vision for the Centrum Site that considers the linkages, connectivity, context integration, mixed -use activity and hard and soft space -making.
- b) **Linkages and Contextual Connectivity:** Opportunity to strengthen Public Transport and pedestrian linkages as well as visual, functional, cultural, and green/open space linkages. Inter- connectedness with a well-defined road hierarchy and non-motorised transport (NMT).
- c) **Place Making Qualities:** Development needs to create spaces which are inspiring, memorable, and multi-sensory environments. To accommodate public areas for a variety of activities to express cultural diversity, space for children to play, people to recreate and exhibit, for social gathering and special events and performances, etc; and be an extension of the outdoor exhibition space that overflows from the ICC/DEC. Another key aspect of place- making is the bulking and rise of built form should be done in a way to create gateways/ architectural enhancements on prominent corners of the site, transition of an increase in height towards the edges of the site, ensure supportive Building Edge and responsiveness of ground floor activities to the context and activities it engages with. Key landmark/iconic buildings, for example Council Chamber and Library/Museum, to be considered as an opportunity to support place-making and a strong urban and architectural vision.
- d) **Enhancement of the Public Realm:** Promoting a vehicle free zone by allowing for ease of internal pedestrian flow between amenities on the site, as well as city-wide pedestrian connectivity. By carefully planning where the ingress/ egress of the movement of vehicles needs to occur, parking of vehicles and by strengthening public transport and pedestrian linkages as well as visual, functional, cultural, and green/open space linkages will allow for an unhindered pedestrian access across the site.
- e) **Meeting Density Targets and a good Development Mix:** A diverse mixed-use precinct with residential apartments, civic uses and supporting commercial activities and a vibrant 24-hour city node. To compliment and reinforce surrounding uses and activities such as: commercial facilities, recreation, and public spaces within a well- balanced and sustainable urban structure, well connected and accessible to surrounding precincts - a place to Live, Work and Play. The pursuit of meeting Densification targets by promoting high rise/ compact living. Surrounding key developments like the ICC and DEC to be enhanced and strengthened by the development. Consideration of neighbouring uses like the Workshop Shopping Centre to be made.

- f) **Development and City Parking needs Provision:** Exploring the feasibility of the super basement or alternative options/models that meets both the city and development requirements. As an option, the super basement is key in unlocking the viability and investment potential for Development on the site and to promote ground level vehicle free zones. It will support functions for the site requirements in terms of the mixed-use facilities as well support operations for the ICC and DEC and link to the Workshop basement parking. It is also intended to provide much needed parking facilities for the Inner City and possible “park and ride” facilities for events within the city.
- g) **Green/Ecological Design Principles and the Sustainable Precinct Approach:** This Terms of Reference aligns to the green building goals of the eThekweni Municipality expressed in the eThekweni New Buildings: Green Policy (2021) (NBGP) which provides minimum energy efficiency standards, reducing energy consumption through building design and high-performance buildings that are resource efficient, as well as the generation of renewable energy. This is an important component of the project to reduce climate change impact. Buildings in the precinct must consider innovative sustainable technological and ecological solutions which integrate as part of the architecture.
- h) **Facilities Management Strategy:** This includes all aspects of facilities management for the entire development, including the basement parking, and existing public spaces and parks neighbouring the development site. This strategy will need to align with the facilities management of all surrounding development including the existing neighbouring developments. UIP strategies to be considered.
- i) **Innovation and uniqueness of design concept:** It is important that the proposal can demonstrate 'out of box' thinking/creativity and innovation given the current economic context/ climate regarding innovation to encourage creative, and more relevant, and affordable local solutions in addressing the development requirements and challenges.

## 9. LOCATION; STRATEGIC CONTEXT AND SITE DESCRIPTION

9.1 The purpose of this Section is to provide contextual information on the Centrum Precinct; Gugu Dlamini Sub-precinct; and the development site. (Figures 1 to 6).

**Figure 1: Location of the development site within National, Provincial and Regional and the Durban Inner City Context which is part of the eThekweni Metropolitan area in Kwazulu-Natal, South Africa.**



### 9.2 The Centrum Precinct

- For the Inner-City LAP, what is commonly thought of as the Centrum precinct has been extended northwards beyond the municipal precinct, to the M17 (Sandile Thusi/ previous Argyle Road), to include the large parcels of state-owned land and government functions.
- Is bounded by: Soldiers Way/Joe Slovo Road and the Rail corridor to the west, Stalwart Simelane Road to the east, and Monty Naicker Road to the south, Sandile Thusi Road to the north, (Figures 3 and 4).
- Is characterised by Durban ICC/DEC, Municipal Complex, Kingsmead Office Park, Courts, Durban Station; and various other public administration functions, which define its current key strategic roles (Figures 2 and 12).
- Includes majority land owned by the eThekweni Municipality (including the development site) and various other spheres of Government (Figure 10).
- Is underutilised and underdeveloped which presents a relatively unencumbered opportunity for development (Figures 2; 10 15).

- Is connected to the region through and past the Gugu Dlamini Sub-Precinct with movement from West to East intersecting with North/South connections.

**Figure 2: The Centrum Precinct and Gugu Dlamini Sub-Precinct in context with the Durban Inner City (Source: Centrum Precinct Plan)**



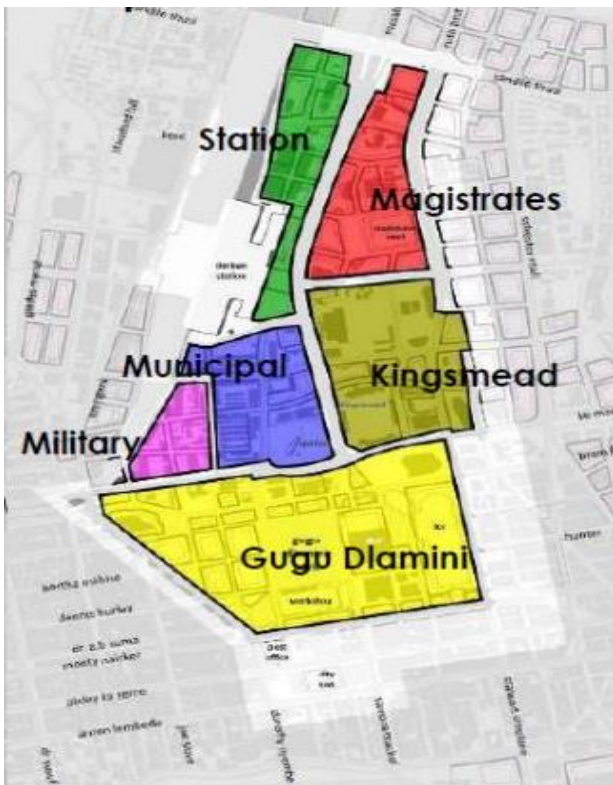
**Figure 3: Centrum Precinct within the Durban Inner City (Source: Centrum Precinct Plan)**



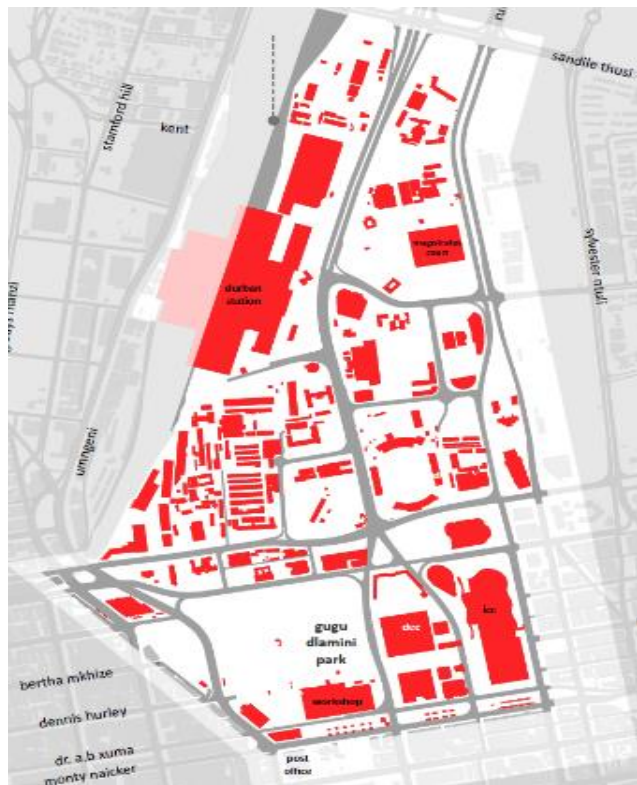
**Figure 4: The extent and the location of the Centrum Precinct (Source: Centrum Precinct Plan)**



**Figure 5: Centrum Precinct Sub-precincts (Source: Centrum Precinct Plan)**



**Figure 6: Centrum Precinct Existing Coverage (red) (Source: Centrum Precinct Plan)**



**Figure 7: The Inner-City Corridors of Excellence (COEs)**

As part of this initiative, the Centrum Precinct and the Gugu Dlamini Sub-Precinct will be connected to the Beachfront and the Point Precincts through various COEs. This programme includes the physical upgrade in an integrated/holistic/coordinated manner with other initiatives such as metro safer city/lighting linkages programs. (Source: Urban Renewal Office)

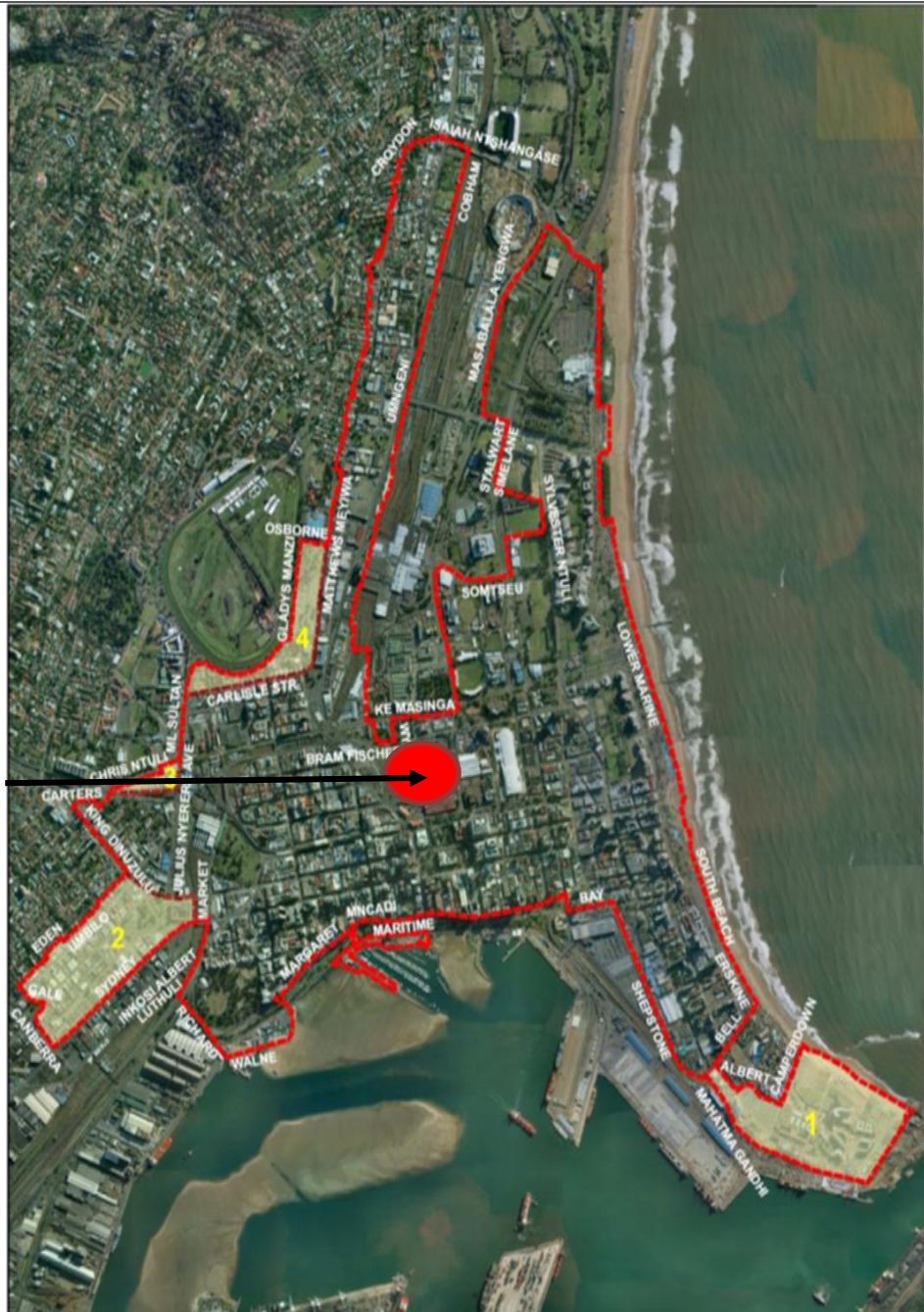


**Figure 8: Incentives to Support and Maximise the Investment in the Inner City includes:**

Economic Incentive Policy –to support regeneration in the inner city.

The Development Site in the Context of the Inner City

(Source: Urban Renewal Office)





**Figure 9: A Phased Spatial Approach to Inner City Implementation**

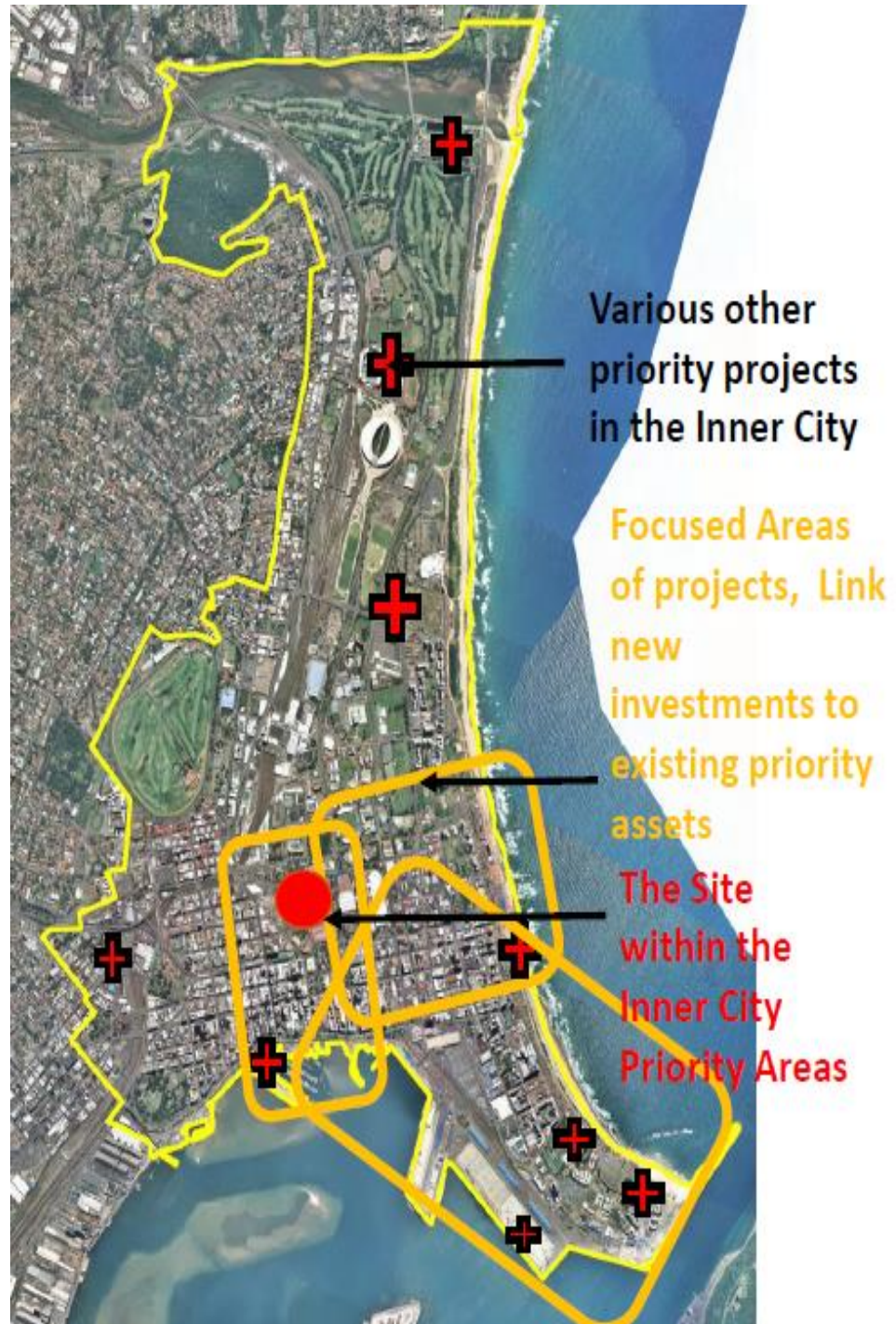
As part of the approved Inner City Regeneration Strategy nodes and priority areas were defined to commence with the Inner-City regeneration process.

Parts of the Centrum Precinct, including the Gugu Dlamini Sub-precinct, are located within the priority Focus Areas as illustrated in Figure 9 on the right.

The Phased Spatial Approach to the Implementation of the Inner-City Regeneration Strategy includes:

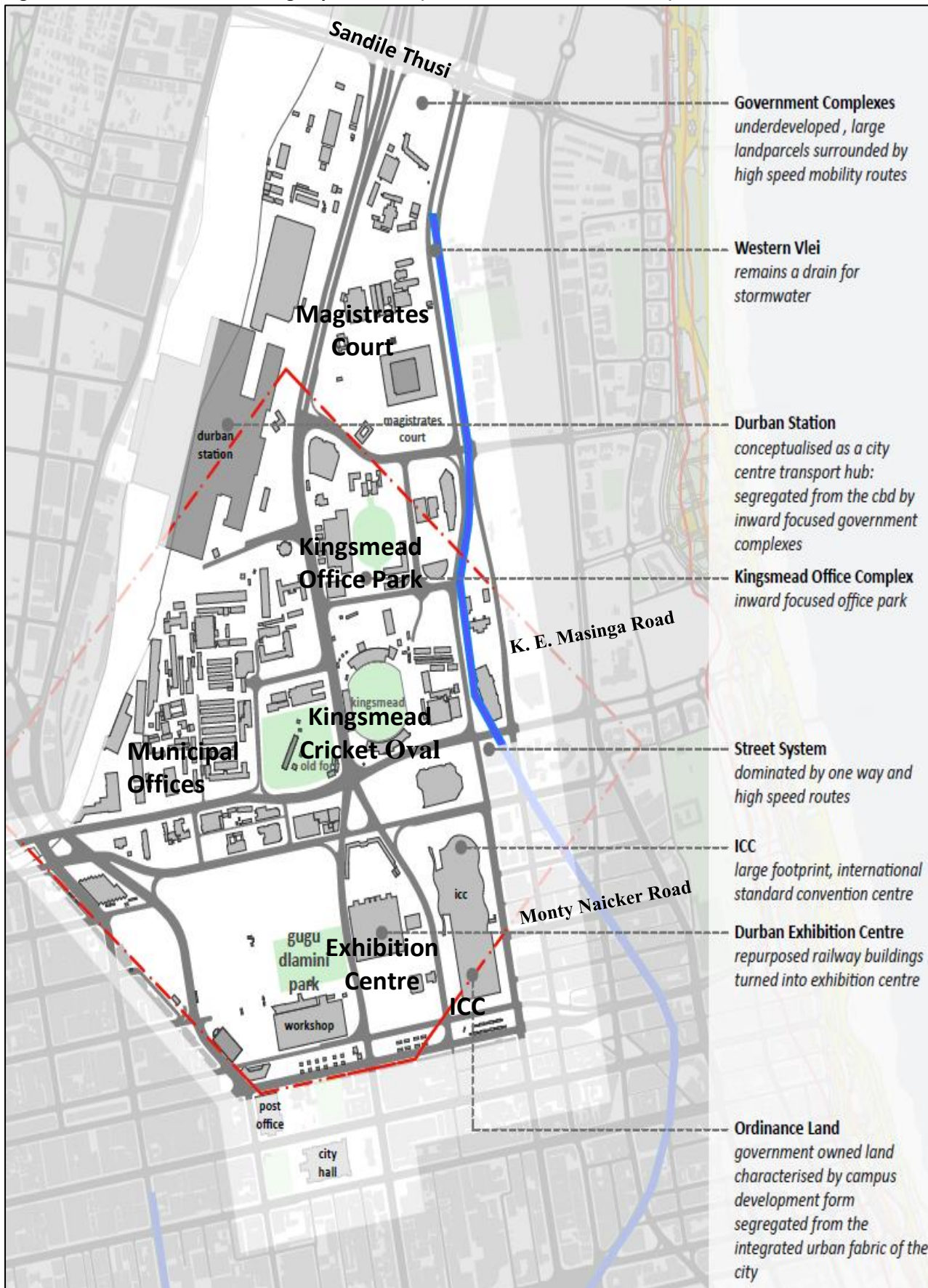
- Spatial Prioritising within the Inner-City Regeneration Framework
- Build on priority assets that define the inner city

Focused Areas of projects, Link new investments to existing priority assets – (Corridors of Excellence: Figure 7)



Source: Urban Renewal Office

Figure 10: Centrum Precinct Existing Key Land Uses (Source: Centrum Precinct Plan)



### 9.3 The Gugu Dlamini Sub-Precinct:

- Forms part of the Centrum Precinct.
- Together with the City's International Convention Centre (Durban ICC), lies to the north of the Durban CBD.
- The largely vacant Gugu Dlamini Sub-precinct stretches from Bram Fischer Road in the north, to Dr A B Xuma Street in the south, and from Samora Machel Street in the east, to Joe Slovo Street in the west (Figures 3; 4; and 11).
- Was formerly Durban's railway station site and today is a vast open "Brownfield site" comprising surface parking (Figures 2; 11- 14).
- Includes Regional (Civic Complex), International Convention Centre (ICC) and the Durban Exhibition Centre (DEC) facilities that are in the Sub-precinct.
- Consists of existing green open space comprised of some 5.6 hectares which is dwarfed in comparison to the large on-grade surface parking lots.
- Consists of large land uses that are disconnected from the rest of the Durban Inner City.
- Has leases on land in place on certain erven and temporary use of some of the sites also takes place.
- Includes heritage structures and spaces which have been adaptively reused.
- Properties are largely owned by the Municipality.

**Figure 11: The Durban ICC and DEC facilities are located within the Sub-precinct to the southeast (Source: Centrum Precinct Plan)**



**Figure 12: Gugu Dlamini Park (Source: Centrum Precinct Plan)**



**Figure 13: Gugu Dlamini Park (Source: Centrum Precinct Plan)**



**Figure 14: Gugu Dlamini Sub-Precinct: Existing key facilities and infrastructure (Source: Centrum Precinct Plan)**



Figure 15: Large land uses disconnect the Centrum from the city (Source: Centrum Precinct Plan)

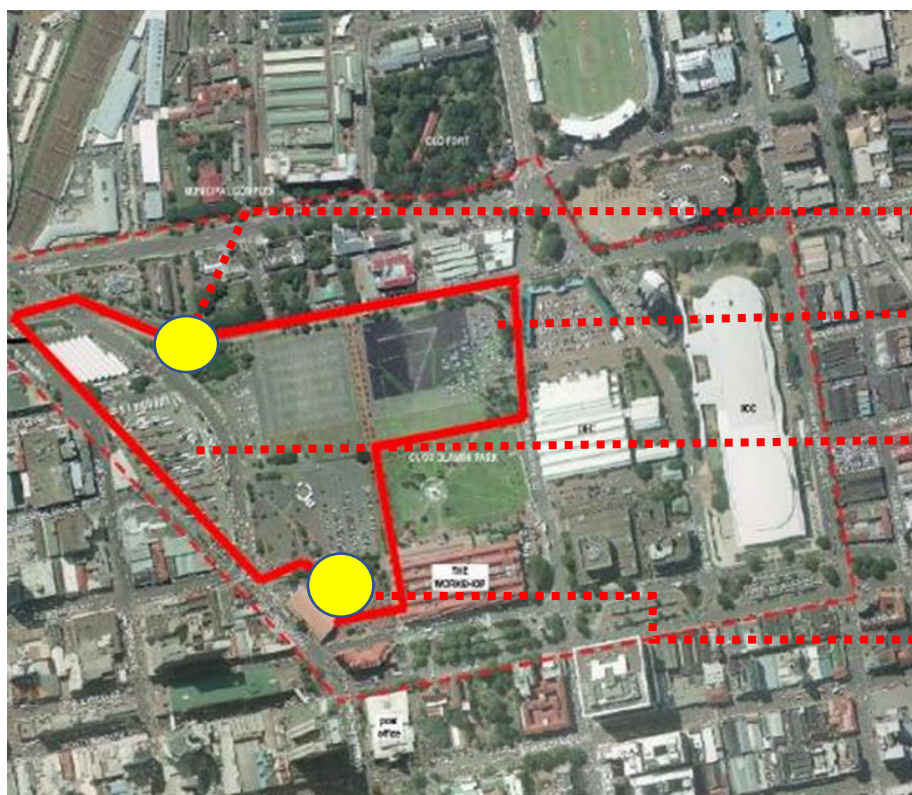


Figure 16: The Site Location within the Gugu Dlamini Sub-Precinct

Shembe Prayer Site

The Study Area

Existing Soldiers Way Rank (Public Transport Facility)

Current location of Informal Trading Activities in front of the Workshop Shopping Mall

**Figure 17: A bird's eye view of the south- western corner of the site with Workshop Retail Centre (to the far left of the photo) and the plaza with informal trader stalls.**



#### 9.4 The Development Site: Description

The development site comprises of 13.5658- with the following key characteristics and features:

- Although part of the Gugu Dlamini Sub-Precinct, the site does not include the entire Sub-precinct as depicted in (Figures: 5 and 24) and excludes:
  - the International Convention Centre (Durban ICC), which is a barrier between the Gugu Dlamini Sub-Precinct Durban Beachfront and Rivertown to the east.
  - Durban Exhibition Centre (DEC) which is a ‘barrier’ between the Gugu Dlamini Park and the Durban ICC
  - Sites with leases in place such as the Workshop retail centre.
- The site includes the public transport interchange of Soldiers Way which is a barrier to pedestrian traffic between Warwick and the Gugu Dlamini Sub-Precinct.
- Has a comparatively flat topography with no noticeable natural features and, does not play a major ecological role.
- Is extremely underdeveloped and presently there is more road surface than building footprints.
- Is essentially an ‘island’ surrounded by a fast-moving, one-way street system to the detriment of pedestrian access and movement.
- Currently the primary economic role of the precinct includes:
  - Part of the local and international convention hub.

- Significant range of commercial and retail.
- Various informal traders operate from the southern-western corner of the development site (Figure 17).
- The civic and public administration strategic roles are also integral to the economic roles.

## 9.5 Existing Roads Infrastructure

The Gugu Dlamini Sub-Precinct, including the development site, is accessible through the following one-way transport network systems which increase traffic speeds to the detriment of pedestrian traffic:

- KE Masinga Road –runs in the west-east direction on the northern end of the site.
- Bram Fischer Road –runs in the east-west direction towards the north of the site.
- Dr AB Xuma Street –located towards the south of the site and it runs in the west-east direction and makes access to the Gugu Dlamini Sub-Precinct, including the development site.
- Samora Machel Road - runs in the east-west direction forming barriers between the DEC and Gugu Dlamini Park and between the DEC and ICC.
- Soldiers Way – runs from north to south.

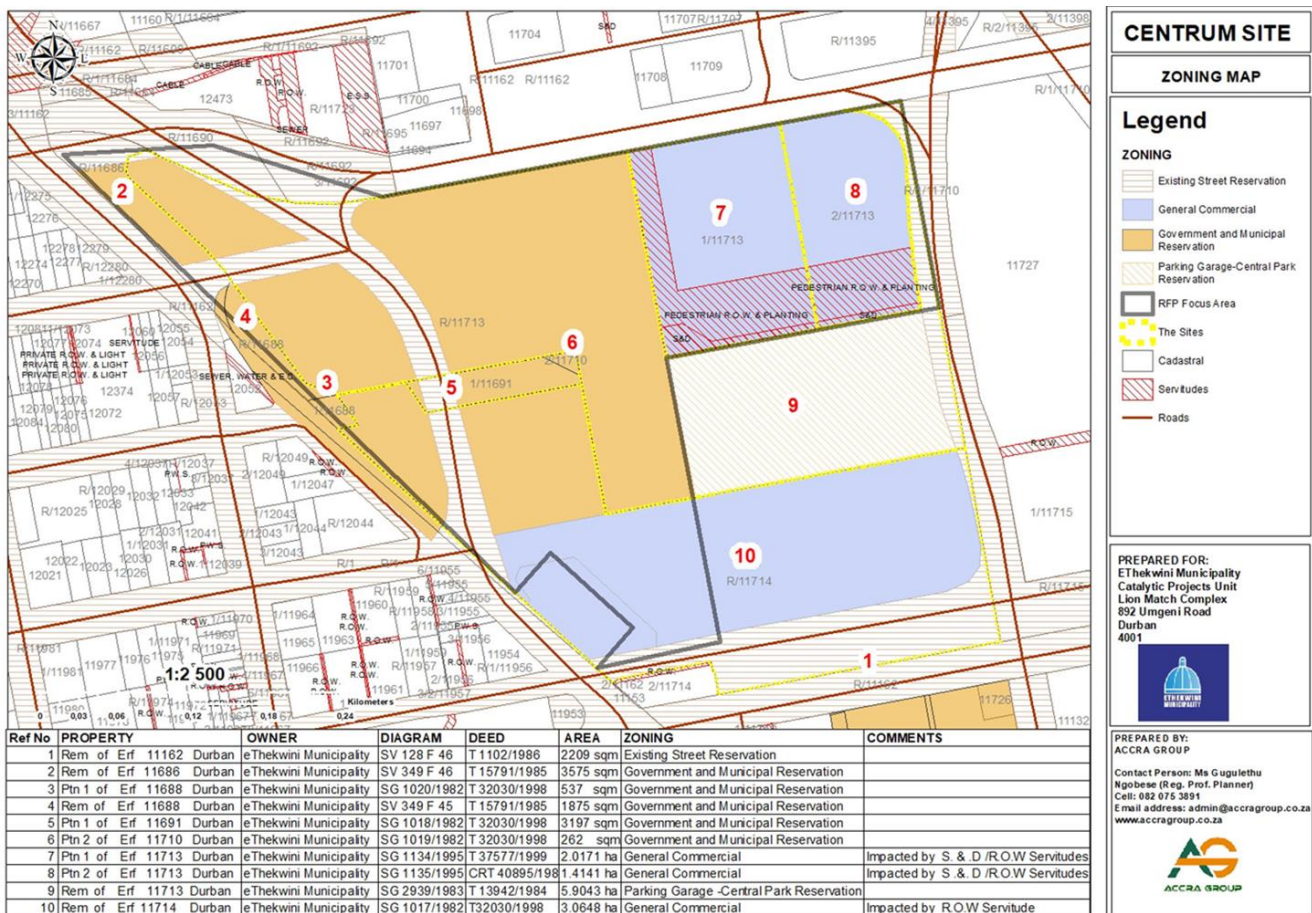
**Figure 18: A view of the North-Western part of the site (Source: Centrum Precinct Plan)**



## 9.6 The Current Zoning

The current zoning and ownership of the site and surrounds is reflected in the Figure below.

Figure: 19 Current Zoning (Municipal GIS 2016) and Land Ownership (Source: Centrum Precinct Plan)



## 9.7 Public Transport

The major public transport systems that service this site are mini-bus taxis and buses. The dedicated routes and stops mostly run along KE Masinga Road, Bram Fischer Road, Walnut Road, and Monty Naicker Road. There are also meter taxis operating in this area, but their frequency is usually much less than mini-bus taxis and buses.

The Detailed Public Transport Study for the Inner City and Outer Ring Area proposed the following and must be in consultation with ETA at the time of preparing the SDP:

- Both Warwick and Centrum Precincts will be the main transportation hubs in the Inner City.
- The 2040 plan proposes the implementation of the 7 IRPTN corridors and feeders; the redevelopment of the Warwick Public Transport Facility; the Development of the Central Facility and the introduction of the TRAM System to support the inner-city distribution of commuters.
- The Inner-City Distribution System (ICDS) capacity will be expanded to support the 2030 demand.
- Distribution of commuters within the Inner City is proposed to be via the ICDS.
- NMT Priority and Associated Infrastructure include:



- Implementation of Dedicated Cycling & Pedestrian Routes from the Outer Ring to Inner City.
- Implementation of Dedicated NMT and pedestrianised Lanes in the Inner City.
- PRASA – proposed possible future rail spur.

## 9.8 HAND PLAN OUTLINING DEVELOPABLE AREA – (SH 9980) ANNEXURE 1

The Hand Plan outlines the extent to the limits of development and reflects land that does not have long-term leases except for the open parking area linked to the Workshop basement parking areas by the Municipality. (Annexure 1): This above-mentioned information was incorporated into the Hand Plan.

### Annexure 1- Hand Plan

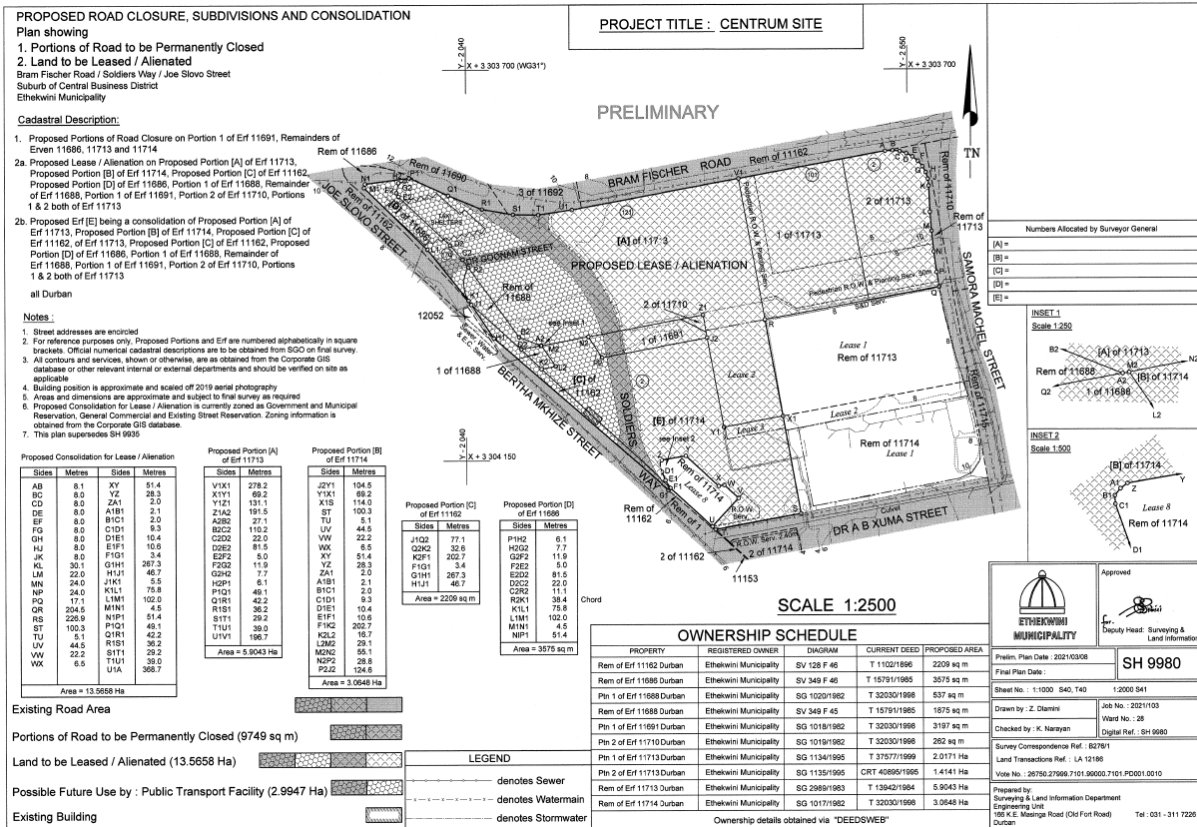


Table 1: Property Attributes

PROPERTY INFORMATION	
<b>Property Description as per hand plan (SH 9980)</b>	Proposed Erf [E] comprising Proposed Portion [A] of Erf 11713, Proposed Portion [B] of Erf 11714, Proposed Portion [C] of Erf 11162, Proposed Portion [D] of Erf 11686, Portion 1 of Erf 11686, Remainder of Erf 11688, Portion 1 of Erf 11691, Portion 2 of Erf 11710, Portions 1 & 2 of Erf 11713 of Durban
<b>Ownership</b>	eThekweni Metropolitan Municipality
<b>Locality</b>	Bram Fischer Road/Soldiers Way/Joe Slovo Street
<b>Land Size</b>	13.5658 ha (135 658 m <sup>2</sup> )



<b>Ward</b>	28
<b>Zoning and development controls In terms of the eThekweni Central Sub-Scheme</b>	General Commercial per zoning certificate Government and Municipal per zoning certificate Existing Street Reservation
<b>Current Use</b>	Parking, taxi rank, informal markets
<b>Heritage</b>	A heritage assessment may be required by AMAFA along with a heritage study and application (triggered by several erven involved and the size of the site).  Stakeholder engagement for heritage proximity and Shembe prayer site.
<b>Structural and Physical feature</b>	There is no known heritage significance, however, on heritage application, AMAFA must advise and confirm this.
<b>Geotechnical Conditional</b>	Any geotechnical conditions will be the responsibility of the Developer; a desktop study is available for preliminary assessment.

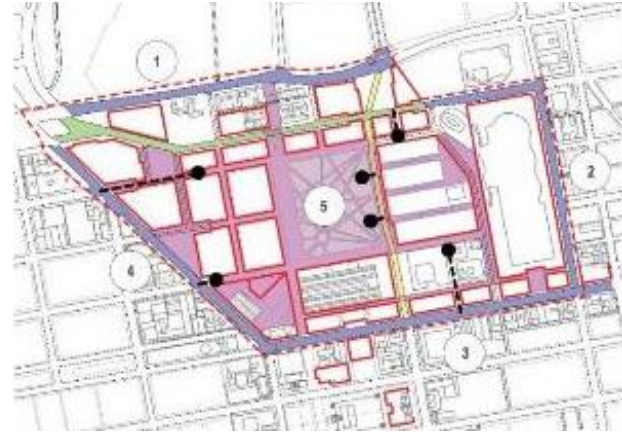
## 10. CENTRUM PRECINCT: PLANNING BACKGROUND AND LEGAL STATUS

- 10.1 It is evident that there are serious risks associated with ad-hoc development on the Centrum Precinct. With the growth of the CBD towards the northeast, stimulated by the presence of the acclaimed Durban International Convention Centre, the Centrum can be expected to acquire new relevance as it becomes increasingly central in its physical location and functional role within the future CBD fabric.
- 10.2 For this reason, in 2014, due to the lack of an Inner-City Local Area Plan, the city appointed an Urban Designer to prepare an urban design framework for the Centrum in its evolving context. The outcomes of this exercise are referred to as '**The Centrum Urban Design Framework (UDF): 2015**'
- 10.3 The above-mentioned information is defined by the approved Inner-City Local Area Plan and Regeneration Strategy which includes the Centrum Precinct Plan and the Gugu Dlamini Sub-precinct.
- 10.4 The Centrum Precinct in the context of the Inner-City LAP, consists of a larger study area than the Centrum UDF (Figures 19 and 20). The Study Area for the Centrum Urban Design Framework Plan consists of what is referred to as the Gugu Dlamini Sub-Precinct in the Durban Inner City LAP.

**Figure 20: The Study Area for the Centrum Urban Design Framework Plan**



**Figure 21: The Centrum Urban Design Framework Plan**



## 10.5 Legal Status of the Durban Inner City Local Area Plan and Regeneration Strategy

10.5.1 The Municipal Systems Act specifies that every Municipality must develop:

- a) An Integrated Development Plan (IDP), and
- b) Spatial Development Framework (SDF).
- c) Aligns with the Spatial Planning and Land Use Management Act (SPLUMA); IDP and SDF; and various other strategic policies adopted by the Municipality.

10.5.2 The requirements of 'Section 26 of the Municipal Systems Act (2000) and SPLUMA (Act No. 13 of 2016)' provide that the strategic intent in the IDP needs to be translated into detailed land use guidelines and schemes as required to make provision for the 'Planning and Development Management Toolbox' referred to as the 'Package of Plans' system which include:

- a) Spatial Development Framework (SDF).
- b) The LAP; all Precinct Plans including the Centrum Precinct Plan.
- c) Town Planning Scheme.

10.5.3 As per the 'eThekweni Municipality: Planning and Land Use Management By-Law, 2016': "the local area plan is a detailed physical plan which provides for:

- a) the inclusion of urban design directives for public and privately-owned land.
- b) detailed urban design directives or proposals.
- c) the inclusion of implementation proposals."

10.5.4 The Centrum Precinct Plan forms part of the eThekweni Inner City Local Area Plan (2016) and Regeneration Strategy (2017) prepared for the eThekweni Municipality. It outlines design principles and project proposals that will assist in achieving the vision of the Inner-City being Africa's leading, most vibrant, liveable, walkable City Centre development. Therefore, the Centrum Precinct and the Gugu Dlamini Sub-Precinct Plans have legal status through the:

- 'Package of Plans'; including the IDP.
- Municipal Systems Act.
- the Spatial Planning and Land Use Management Act (SPLUMA).

- EXCO approval.

10.5.5 The four 'Spatial Principles' that were identified as part of the LAP are:

- Connected.
- Walkable.
- Integrated and Inclusive.
- Unleash the potential.

These principles:

- directly align with the SPLUMA; IDP and Spatial Development Framework; and various other strategic policies adopted by the Municipality.
- Are also part of all development and design proposals in terms of the Precinct and Sub-Precinct Plans

## 11. DEVELOPMENT VISION

The Centrum Precinct: Gugu Dlamini Sub-precinct, is identified as a high-impact Catalytic project under Plan 2 of the IDP, (Developing a Prosperous, Diverse Economy and Employment Creation).

Transformed facilities such as railway stations highlight the past importance of the area. Warwick, Rivertown, the Port, The Point, the Sports Precinct, the Durban Station, and the Integrated Rapid Public Transport Network (IRPTN)/ Inner-City Distribution System (ICDS) networks are some of the projects being undertaken in the Inner City. The Centrum Precinct is spatially located at the centre of these projects.

The Centrum Precinct (and specifically the Gugu Dlamini Sub-Precinct), as the name implies, has always been considered the heart of the expanded and developed city. This is no different today. The potential for the city to expand northwards means that the Centrum will become what Market Square was intended to be when the street grid of the original town was laid out in 1845.

Currently, the Centrum Precinct, including the Gugu Dlamini Sub-Precinct, is in high demand due to its strategic location within the city. Proposed development over the years has triggered the city to plan for a seamless stitching of various precincts into a cohesive urban fabric all within walking distance of each other.

Centrum Precinct Plan identified the following development opportunities:

- Large land parcels in public ownership: collaboration between different spheres of government can unlock huge development potentials in the area.
- Potential to capitalize on the amount of currently undefined public space by reconfiguring it.
- Connect the Centrum to the rest of the city, and the rest of the city to the Centrum.
- Potential to rationalize traffic systems, especially one-way roads, and prioritize pedestrians.
- The precinct has been identified at the National level as strategically important.
- Showcase inner city rejuvenation by combining public and private sector investment.

The Vision (Figures 19-26) for the Centrum Precinct, including the Gugu Dlamini Sub-precinct is to:

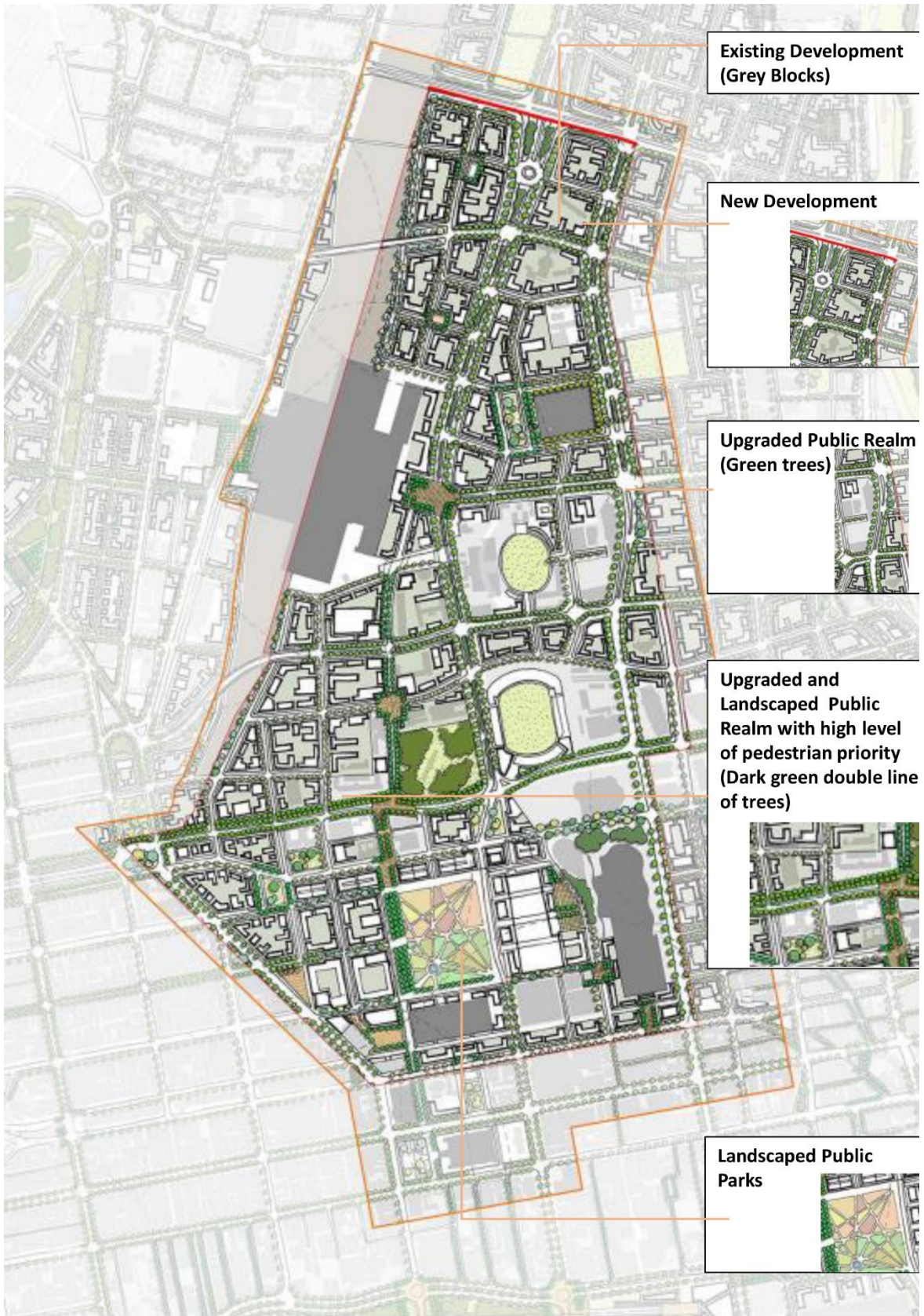
- Be the fulcrum that binds together its various surrounding social, economic, cultural, and ecological precincts.

- Becoming a destination for Durban’s citizens and visitors.
- Be developed as a ‘new mixed-use precinct’ for the city of Durban – an area currently under-utilized and under-developed that lies at the crossroads of the city which could be developed to draw interest back to Durban’s Inner City.
- Through increased public, green and civic space, mixed-use functions, and enhanced pedestrian and public transport, is intended to catalyse a revitalization and renewal process filtering into both its immediate and greater City surroundings.

The extent, location and mixed-use nature of the potential development is such that it is expected to be a catalyst for future growth and development within the inner city, unlocking latent development potential that currently exists.

The proposed development must not only encourage investment into inner-city regeneration and urban renewal initiatives but also stimulate further investment into retail, commercial and residential development within the inner city. Coordinated, inclusive long-term planning and public sector investment into key infrastructure will ensure that both public and private sector investment follows.

Figure 22: The Centrum Precinct Plan which was prepared as part of the Inner-City LAP



**Figure 23: The extent of the Centrum Precinct in the context of the Inner City. The implementation of the Centrum Precinct Plan will result in a walkable structure of the existing city that can be extended across the Centrum site: connecting existing local neighbourhood centres (Source: Centrum Precinct Plan)**



The potential for Gugu Dlamini Square to be the primary public space in the expanded city has always been incorporated into development frameworks for the Centrum. Parts of these frameworks have been built but never fully integrated into the rest of the city.

Centrum Precinct: Gugu Dlamini Sub-precinct Plans propose the following (Figures 19-26):

- Develop a new pedestrianized north-south connection from the Durban Bay, City Hall through the centrum and the municipal precinct, to the Durban Station and surrounding sports precincts.
- Re-configure KE Masinga and Bram Fischer roads as the main central city boulevard.
- Redevelop the Centrum Site as the City's main public square surrounded by significant social and public facilities as per the Centrum urban design framework.
- Develop new connections over the railway lines.
- Set up the reconfigured connection from the Centrum to Warwick along Bertha Mkhize Street. Develop major public realm upgrading including the introduction of indigenous vegetation and micro-green spaces into the public realm.
- Implement the IPTN proposals.
- Release land for fine-grained, perimeter block, mixed-use green/brownfield/infill/conversion development in support of creating high-density, integrated walkable neighbourhoods.

Figure 24: The boundaries of the site within the Gugu-Dlamini Sub-Precinct



The implementation of the projects to achieve the vision will require the use of the four spatial principles (A Connected City, A Walkable City, An Integrated and Inclusive City, Realise the Potential) to assist with all project design, assessment of proposals and budgeting for projects. The precinct plan provides a common vision for all Government Departments and the Private Sector to work towards and ensure integrated and inclusive implementation and development into the future.



**Figure 25: Gugu Dlamini Sub-Precinct: Floor Building Footprints and the Location of Site for TENDER (red boundary) development blocks 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24**  
**Approximate potential bulk: +- 450 000 m2**  
 (Source: Centrum Precinct Plan)



**Figure 26: Conceptual proposals for the Gugu Dlamini Sub-precinct which proposes the existing developments (ICC and DEC) have the potential to be part of the active environment of the Centrum by ensuring that they open onto public spaces** (Source: Centrum Precinct Plan)



Work undertaken on the site in the past has common threads that have been documented in various ways, including:

- The potential of an expanded public open space network connecting various parts of the inner city
- The architectural heritage of the precinct including significant heritage buildings such as the railway sheds, workshops, and station and a cluster of domestic-scale buildings such as the Kwa Muhle Museum

- The role of the site as a civic environment which integrates a variety of services directly accessible to the citizens of the city.
- Development opportunities that relate to existing successful facilities such as the Durban International Convention Centre and The Workshop Shopping Centre.

This local district centre has the:

- Potential to extend east along the Northern edge of Gugu Dlamini square, opening onto the square.
- Providing amenities throughout the day to commuters and visitors.
- Activate a 24/7 square in the heart of the city.

**Figure 27: In a future expanded Inner City, the Centrum and Gugu Dlamini Square would be the civic and symbolic centre of the city.**



**Figure 28: A new civic development located between neighbourhood centres contributes to the activation of the public realm by opening onto it: the public realm becomes the entrance lobby to a variety of public amenities including 24-use cultural facilities like the library. Larger civic uses, surrounding Gugu Dlamini Square, will add to the attraction of the precinct throughout the day.**



## 12. INFRASTRUCTURE DEVELOPMENT

The bulk infrastructure needs will be guided by the bulk requirements of the proposed development and the current infrastructure.

All bulk infrastructure requirements and existing services on site and surrounds, as well as roads, that require upgrade or relocation due to the Development will be the responsibility of the successful bidder/ Developer including all costs to be incurred to enable the development and will be addressed as part of the planning approval processes between the developer and the municipality. Development charges will be in accordance with the relevant eThekweni Municipal Development Charges Policy at the time.

The current demand and capacity of the existing infrastructure is still to be determined. As the Centrum site and surrounding area are highly developed it is assumed the current water and sewer demand is high, and the existing bulk infrastructure adequately meets these demands. However, this needs to be investigated and confirmed by the Developer.

The following are **intended as guidelines based on very high-level input that needs to be reviewed, investigated, and verified by the bidders and the successful developer at the relevant stage of design development**. All necessary Infrastructure assessments and investigations are to be undertaken by the developer.

### 12.1 WATER, SEWER, STORMWATER

The Developer is to:

- Conduct a sewer impact assessment from the Centrum site to the Central Wastewater Treatment Works (WWTW) including all associated sewer infrastructure impacted by the proposed development to determine if there is sufficient sewer capacity to accommodate the additional sewer flows generated by the development.
- Provide a report that needs to be submitted to eThekweni Water and Sanitation (EWS) for review and comment.
- Engage with:
  - EWS (Wastewater Planning, Wastewater Design and Sewer Networks Branches) to identify all sanitation infrastructure constraints and obtain all sanitation-associated information to conduct the sewer impact assessment.
  - EWS (Wastewater Planning Branch) to determine if there is available capacity at the Central WWTW
  - EWS (GIS Branch) to obtain the sewer network layout.

All quantities can be estimated from layouts presented in “The Centrum - Urban Design Framework”.

**12.1.1 Water Infrastructure:** The upgrades proposed to the water infrastructure within the Centrum Precinct include the upsizing of the existing DN300 to DN400 network on Samora Machel Street. The water table is also to be considered in terms of the super basement technical requirements.

**12.1.2 Sewer Infrastructure:** The upgrades proposed to the sewer infrastructure in the Centrum Precinct include the upsizing of the existing DN750 to DN850 trunk sewer which extends from across the Umgeni Railway (servicing the Greyville Precinct), along Somtseu Rd and Stalwart Simelane Street.

**12.1.3 Stormwater:** The Centrum Precinct is currently a built-up area thus proposed developments will be constructed on existing hardened areas with surface runoff as per pre-development volumes. There are no upgrades to the existing system foreseen, however, SUDS will be implemented if

required. Drainage/Pumping of the Super basement will be required, due to the high-water table. The proposed development does not significantly change the permeable area of the site. Hence it can be assumed existing bulk stormwater infrastructure will have enough capacity to handle the storm water from the new development.

## 12.2 ELECTRICITY

Electricity upgrades will be required to the Gugu Dlamini Sub-precinct development. The intention of the municipality is for the development to minimise reliance on City electrical supply through various sustainable, green design principles (solar panels, etc).

The Development will also need to support the Electricity Department's long term capacity building for the Inner-City, as additional Development requirements. The Electricity Department's HV Planning requires space for an HV Substation to support this development and long-term densification plans.

Further investigation by the Developer will have to be implemented to determine the availability of electrical network supply and timeframes. Desktop investigations and analysis will have to be undertaken by the successful bidder in the planning phase to establish the current capacity and the feeder junctions; including future capacity increase planned by the supply authority.

## 12.3 ROADS

Further investigation by the developer is required in respect to the site/development requirements and accommodation for both ETA and surrounding public transport requirements. Proposals need to consider possible realignment of Soldiers Way, access, and egress from existing and affected parking areas, new proposed parking basements/ super-basement, public transport plans, vehicle free zones, etc. These need to be reviewed and planned for by the Developer in consultation with eThekweni Transport Authority for approval.

Note: Geotechnical Investigations (Annexure 3): Desktop Report is for background information only. The third party must undertake detailed Geotechnical investigations as required during the appropriate stage of process.

## 13. INFORMATION TO BE PROVIDED BY THE RESPONDENT IN THIS EOI RESPONSE (MANDATORY)

### 13.1 General Respondents Request:

- The EOI Response submitted should be as comprehensive as possible and include the information requested below and any supporting documentation in respect thereof.
- Respondents are required to provide as much detail as possible about their proposed project solution, including the necessary commercial arrangements which have been put in place or still need to be put in place. Such information will assist the Municipality in determining the readiness of the market.
- **Compliance with the requirements below is mandatory and should form part of the returnable in the Respondent's Response. Failure by a Respondent to comply with the above requirement will result in the Respondent being ineligible for shortlisting.**
- Projects of Similar Nature/Relevant for the purposes of this tender are defined as: Large-scale integrated and mixed-use projects involving property development, inter alia retail, residential, amenities and ancillary land uses, which require external and internal engineering services, and with a capital investment value of R1 billion and above.

### 13.2 Responsiveness of the Bidder:

#### 13.2.1 Respondent Details (Mandatory Requirement)

The Respondent will be required to provide the following information about its Project:

- 13.2.1.1 The name and contact details (email address; and telephone number) of the person appointed by the Respondent as its representative in the event that the Project Officer wishes to engage on the Project
- 13.2.1.2 Designation of contact person;
- 13.2.1.3 The main business of the Respondent;
- 13.2.1.4 Which projects has the respondents implemented whether in a municipal, national or other context in a summary format;

#### 13.2.2 Respondent Professional Team (Mandatory Requirement)

- 13.2.2.1 The professional team made up of built environment professionals/specialists as determined by the respondent required for the redevelopment of the site, each to be qualified, registered and at least 10 years post qualification experience.
- 13.2.2.2 Summary of each of the above professionals must include the following below and not exceed a maximum of 3 pages per professional:
  - Description or outline of relevant projects worked on, of a similar nature/ experience.
  - Personal Particulars;
  - Qualifications; and
  - Skills.
- 13.2.2.3 Name of current employer and position in enterprise

#### 13.2.3 Respondent Company Experience (Refer to MBD 21 A and MBD 21 B) (Mandatory Requirement)

In a maximum of 20 pages the following submission is required from Respondents:

- 13.2.3.1 The Lead Respondent company or joint venture partners in the case of an unincorporated joint venture or consortium, in property development of a similar nature and scale must have been a minimum of ten years relevant development experience or at least three property mixed use development projects completed to the value of R1 billion each and above or evidence of its property portfolio that is equal to or exceeds R5 billion. This should be evidenced by MBD 21 B and signed letters of reference from the Sponsors of those projects.
- 13.2.3.2 Lead Respondent companies should describe their experience in this regard and attach this information to the schedule. (Please note that non-compliance with this requirement makes the Respondent's Response invalid)
- 13.2.3.3 Respondent Responses must describe their experience with the following headings:
- a) **Relevant Development Experience:**
    - Submissions need to include descriptions of relevant completed mixed-use projects/development.
  - b) **Property Portfolio Size and Investment Value (Refer to MBD 21B):**
    - The value of the project/development.
    - The square-meterage (m<sup>2</sup>) of the project/development
    - The percentage split of the various land uses within the project/development.
    - Market / business success of the project
    - Socio-economic benefits yielded from the project.
    - Bulk infrastructure upgrade implemented for the project.
  - c) **Project Development Cycle Experience**
    - Developer's activities and role in the project/development.
    - Land legal development experience in the project/development;
    - Responsibilities across the project life cycle description of the developer's duties in the project life cycle, what was the developer's involvement with the project/development from inception to completion in terms of pre-feasibility, planning, construction, and facilities management.
  - d) **Proof of Relevant Development Experience**
    - Submit hard copy of brochures of relevant experience including the dates the projects were undertaken and completed.
    - The Respondent must also provide a minimum of 3 (three) client reference letters demonstrate its company experience according to the above requirements. Failure by a Respondent to comply with the above requirement may result in the Respondent being ineligible for shortlisting.
  - e) **Project Innovation Experience:** including the following but not limited to:
    - Incorporation of green initiatives and sustainability in the into the scheme at a precinct and building scales.
    - How the development bulk will be optimized

**f) Land legal development Experience**

- Projects of Similar Nature/Relevant for the purposes of this tender are defined as: Large-scale integrated and mixed-use projects involving property development, inter alia retail, residential, amenities and ancillary land uses, which require external and internal engineering services, and with a capital investment value of R1 billion and above.
- Completed for the purposes of this Response is defined as entire life cycle for a development project to be completed and successfully operational.

**13.3 Respondents Project Overview (Mandatory Requirement)**

The Respondent is required to provide the following details:

13.3.1 The bidder must prepare a **Concept Site Development (CSD)** Proposal that provides overview of the Project scope, background and expected cost. The CSD Proposal and approach should consider the following:

- Provide clear evidence that the bidder has a clear understanding of the Durban Inner City dynamics and challenges.
- Should indicate that the Respondent has outstanding experience and knowledge of state-of-the-art, and best practice approaches for large scale mixed use urban development nodes.
- Must provide innovative concepts that could enhance the outcomes and the quality of the urban environment, public realm and future mixed-use developments of the Centrum Precinct, and Gugu Dlamini Sub-Precinct.
- Should indicate how the Respondent will incorporate green/ecological design principles and sustainable precinct approach. In turn the approach could have a catalytic impact on the Durban Inner Regeneration.
- Respondent will have to differentiate between the Residential component and the Commercial component. The CSD must depict areas and location of both the residential and commercial components.

The following below are some key guidelines to inform the crafting of the CSD Proposal (refer to Section 8 of this EOI for more detail):

- a) Urban and Architectural Vision
- b) Linkages and Contextual Connectivity
- c) Place Making Qualities
- d) Enhancement of the Public Realm
- e) Meeting Density Targets and a good Development Mix
- f) Development and City Parking needs Provision
- g) Green/Ecological Design Principles and the Sustainable Precinct Approach
- h) Facilities Management Strategy
- i) Innovation and uniqueness of design concept

13.3.2 Format of CSD proposal (Read in conjunction with Section 15. Format of EOI Response)

The CSD proposal that can consist of either a Poster or Site Hand Plan. The CSD Proposal should communicate key design ideas rather than produce detailed plans.

The CSD proposals should include:

- A poster which outlines the key guidelines (a- i above) in the form of sketches and Cross-sections illustrating key spatial, formal, structural and functional features of the design of the site as a whole for all the buildings and public spaces;
- A report not exceeding 10 pages outlining the basic principles of the design and the general concept of the overall design, including 1 annotated diagram illuminating key aspects of the design; and
- A PowerPoint presentation and 3 dimensional renderings depicting the main aspects of the concept proposal
- The report should comment on the current status of the project regarding project lifecycle stage (concept, design complete, construction commenced, construction complete) including high level costs in Lifecycle staging process.
- Detail to also be provided where relevant on the status of discussions / agreements for land security purposes, whether the project requires any permits or environmental authorization in terms of the National Environmental Management Act, No. 107 of 1998 and, if so, the progress made in obtaining any outstanding regulatory approvals / authorization and anticipated timelines.

#### **13.4 B-BBEE Recognition Level and project contribution to development targets (Mandatory Requirement)**

- 13.4.1 Respondents, as part of their Response, are required to demonstrate their B-BBEE Recognition Level or anticipated BBEE ownership for the project.
- 13.4.2 In the case where the Respondent is an incorporated entity, their B-BBEE Recognition Level will be determined with reference to their B-BBEE status level, as indicated in their valid B-BBEE Verification Certificate or sworn affidavit.
- 13.4.3 In the case where a Respondent is an unincorporated joint venture or a Consortium, their B-BBEE Recognition Level will be determined with reference to the consolidated B-BBEE Recognition Level of the joint venture or consortium. In this regard, Respondents that are a consortia are required to submit a consolidated B-BBEE Verification.
- 13.4.4 Indicate the projects' contribution to economic development including job creation during construction and operations, skills development, local content value, and use and development of SMMEs.

#### **13.5 Information relevant to the Project Timing and Risks (Mandatory Requirement)**

The Respondent is required to state:

- 13.5.1 What is the current or anticipated project debt or equity funding and if the debt is funded, what are the outstanding terms of the debt agreements.
- 13.5.2 Its anticipated critical path between Financial Close and commercial operation date for the Project.
- 13.5.3 Evaluate project complexity [low/medium/high] and identify any key risks relevant to implementation of project; and
- 13.5.4 Disclose any key issues relevant to timing of the submission of a Bid Response for this Project that the Respondent would like to bring to the attention of ETHEKWINI MUNICIPALITY.



### **13.6 Information relevant to the Project Financing (Mandatory Requirement)**

The Respondent is required to provide a general background on how the Respondent intends to finance the overall Project, including as much detail as possible with respect to:

- 13.6.1 How the Respondent proposes to finance the Project; and
- 13.6.2 Proposed debt/ equity mix for the Project;

### **13.7 Additional Information (Mandatory Requirement)**

The Respondent is required to provide capability statements demonstrating;

- 13.7.1 The Respondent is required to indicate the project spatial requirements as well as any need for bulk services from ETHEKWINI MUNICIPALITY or other entity to bring about the proposed project;
- 13.7.2 The Respondent is required to indicate any specific access and/or construction requirements.

## **14. FORMAT AND SUBMISSION OF EOI RESPONSES**

- 14.1 Submission of EOI Responses
  - 14.1.1 The EOI Responses must be submitted to ETHEKWINI MUNICIPALITY as specified in the EOI bid cover page;
  - 14.1.2 EOI Responses reaching ETHEKWINI MUNICIPALITY later than the date and time specified will not be considered by ETHEKWINI MUNICIPALITY;
  - 14.1.3 All costs incurred by a Respondent in connection with this EOI and the preparation of its responses hereto shall be borne by the Respondent;
  - 14.1.4 The Respondent will not have to pay any monies in order to submit an EOI Response;
  - 14.1.5 The Respondent is encouraged to submit any additional information that, in its view, would assist ETHEKWINI MUNICIPALITY in the further development of the Centrum: Gugu Dlamini Precinct;
  - 14.1.6 One (1) Original and one (1) soft copy (on a flash disk in PDF format)
  - 14.1.7 Properly indexed, readable and capable of being opened;

## **15. FORMAT OF EOI RESPONSE**

- 15.1 The Respondent is requested to complete the EOI Response and provide all the information required in terms of this EOI and to address every item in 13.2 to 13.7.
- 15.2 All pages should be numbered consecutively from beginning to end and there should be an index to the entire EOI Response; and

- 15.3 The EOI Response can be contained in more than one document and with annexures as the Respondent may consider appropriate to provide the information requested. All documents comprising the EOI Response must be visible from the index to the EOI.
- 15.4 The CSD proposal that can consist of either a Poster or Site Hand Plan including a report not exceeding 10 pages outlining the basic principles of the design and the general concept of the overall design, cross-sections including 1 annotated diagram illuminating key aspects of the design as well as a PowerPoint presentation and 3 dimensional renderings depicting the main aspects of the concept proposal.
- 15.5 The Respondent Company Experience format must follow the headings as identified 13.2.3.

## **16. LANGUAGE OF THE EOI RESPONSE**

- 16.1 The EOI Response and all documents forming part of it must be in English;
- 16.2 Any printed literature submitted with the EOI Response may be in another language so long as it is accompanied by an English translation (made by an accredited translator) of the entire document;
- 16.3 For the purpose of interpretation of the EOI Response, ETHEKWINI MUNICIPALITY will rely on the English translation provided; and
- 16.4 All correspondence and any other documentation and oral communication exchanged between the Respondent and ETHEKWINI MUNICIPALITY shall be in English.

## **17. SIGNING OF THE EOI RESPONSE**

- 17.1 The Respondent is requested to provide a signed letter with its EOI Response.

## **18. FURTHER INFORMATION**

- 18.1 ETHEKWINI MUNICIPALITY reserves the right to seek additional information from the Respondent regarding its EOI Response, as it may, in its sole discretion, determine, whether such information has been requested under this EOI or otherwise, and may request the Respondent to present supplementary information, in respect of its EOI Response; and
- 18.2 The Respondents may, following the submission of an EOI Response, be requested to engage with ETHEKWINI MUNICIPALITY and / or other relevant Government stakeholders to discuss matters relevant to its EOI Response. Any meetings will take place via MS Teams, unless otherwise arranged.

## **19. CONTACT WITH THE PROJECT OFFICER**

- 19.1 The Respondent must give the name and contact details of the person whom it appoints to undertake all contact with the Project Officer in its EOI Response, as provided for above (Information to be provided by Respondents in their EOI Responses);
- 19.2 After the submission of its EOI Response, the Respondent may only communicate with ETHEKWINI MUNICIPALITY through such person and ETHEKWINI MUNICIPALITY shall be

entitled, at its sole discretion, to disregard any communication from the Respondent, which is not contact person identified through the process.

- 19.3 Where engagement is required with the Respondent as highlighted above, other representatives of ETHEKWINI MUNICIPALITY and the Respondent will be requested to be available for such engagement.

## 20. FORMAL BRIEFING

- 20.1 There will be non-compulsory briefing session held- see cover page for details.
- 20.2 The outcome of the EOI process will culminate in Council and SCM approving shortlisted bidders who will be invited to submit a proposal in the RFP stage. No other bids, other than those approved shortlisted bids from the EOI process, will be allowed to tender for the RFP process on this project.” The RFP process will follow a separate procurement process and
- 20.3 eThekwini Municipality has no obligation to pursue with the Bid at any stage if the process is deemed unfeasible can withdraw the Bid.

## 21. REQUESTS AND CLARIFICATIONS

- 21.1 The Respondent may request clarification on any item contained in this EOI as referenced on the EOI cover page.
- 21.2 All enquiries, queries, and requests for clarification in respect of this EOI must be in writing and addressed to the Project Managers and emailed to **Nasreen.arabi@durban.gov.za** and **Kamalen.gounden@durban.gov.za**; and
- 21.3 ETHEKWINI MUNICIPALITY will endeavor to respond to all reasonable written queries and requests for clarification raised by any Respondent.

## 22. CONFIDENTIALITY

- 22.1 The information contained in this EOI is confidential and proprietary to ETHEKWINI MUNICIPALITY. In accepting this EOI, “suppliers”, “service provider” and/or “Agents” agree to the following conditions under applicable legislation:
- 22.2 Each party recognises and agrees that the Confidential Information has been compiled, created, and maintained by special effort and expense of the other party;
- 22.3 Each party recognises and agrees that disclosing or disseminating Confidential Information to a third party will have a materially adverse effect on the other party and agrees not to disclose or disseminate the Confidential Information to any third party. Except as necessary to perform its obligations hereunder;
- 22.4 Each party shall not use, reproduce, or draw upon the Confidential Information or circulate it within its own organization;
- 22.5 Each party shall provide notice to the other party of any demand made upon it under lawful process to disclose or provide the other party's Confidential Information;

- 22.6 Each party agrees to co-operate with the other party if it elects to seek reasonable protective arrangements or oppose such disclosure, at the expense of the party that is seeking the protective arrangements or opposing the disclosure; and
- 22.7 Any Confidential Information disclosed pursuant to such lawful process shall continue to be Confidential Information, the access to such Confidential Information shall be limited to those persons:
- a) only with a need to review such information for the purposes for which the disclosure was required; and
  - b) who agree in writing to keep the Confidential Information confidential.

### **23. OFFERING OF COMMISSION OR GRATUITY**

- 23.1 If a Respondent, or any person employed by him, is found to have either directly or indirectly offered, promised or given to any person in the employ of ETHEKWINI MUNICIPALITY, any commission, gratuity, gift or other consideration, ETHEKWINI MUNICIPALITY shall have the right and without prejudice to any other legal remedy which it may have in regard to any loss or additional cost or expenses, to disqualify the EOI Respondent from further participation in this process and any other subsequent processes in this regard; and
- 23.2 In such an event, the Respondent will be responsible for all and any loss that ETHEKWINI MUNICIPALITY may suffer as a result thereof. In addition, ETHEKWINI MUNICIPALITY reserves the right to exclude such a Respondent from future business with ETHEKWINI MUNICIPALITY.

### **24. SOURCES**

The eThekwini Municipality has various data sources available which could contribute to this tender.

**PLEASE NOTE THAT IT IS THE RESPONSIBILITY OF THE TENDERING TEAM/DEVELOPER TO FAMILIARISE THEMSELVES WITH ALL RELEVANT INFORMATION AVAILABLE AND IS NOT LIMITED TO THE DOCUMENTS BELOW.**

Some of these data sources included or referred to, but not limited to, are:

- eThekwini Inner City Local Area Plan, November 2016
- The Centrum Urban Design Framework 2015
- Draft Integrated Development Plan (IDP) 2022/2023
- eThekwini Municipality: Planning and Land Use Management By-Law, 2016
- Municipal Systems Act (2000) (Section 26)
- Spatial Planning and Land Use Management Act (No. 13 of 2016)
- eThekwini Spatial Development Framework 2022-2023
- Technical Guidelines: Centrum: Gugu Dlamini Sub-Precinct site project

## 25. MBD COMPLIANCE DOCUMENTS

- 25.1 All MBD forms in this EOI must be properly completed as required, and the document shall not be taken apart or altered in any way whatsoever. Failure to complete the MBD Forms to the satisfaction of the Municipality will lead to rejection of the Response on the grounds that the Response is not responsive.
- 25.2 The Municipality, in issuing out this EOI documentation, must ensure that it adheres to the PoPI Act. As part of the requirements of the PoPI Act, all Respondents are requested to consent to the processing of their personal information, and as such are required to complete and sign the section 11 PoPI Act consent form, contained in Appendix 1 (POPI Act Consent for Proposals) if they wish for their submission or Response to be evaluated.
- 25.3 MBD compliance forms as part of this EOI submission are:
- |             |  |
|-------------|--|
| MBD 4:      | DECLARATION OF INTEREST  |
| MBD 8:      | DECLARATION OF RESPONDENT'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES |
| MBD 9:      | CERTIFICATE OF INDEPENDENT BID DETERMINATION                       |
| MBD 14:     | REGISTRATION   |
| MBD 16:     | PAYMENT OF MUNICIPAL ACCOUNT                                       |
| MBD 21A:    | DEVELOPMENT EXPERIENCE OF THE RESPONDENT ENTITY                    |
| MBD 21B:    | VALUE OF PROPERTY PORTFOLIO  |
| APPENDIX 1: | POPI CONSENT FORM  |

**MBD 4: DECLARATION OF INTEREST**

**DECLARATION OF INTEREST**

- 1. No EOI will be accepted from persons in the service of the state\*.
- 2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this Expression of Interest. In view of possible allegations of favouritism, should the resulting EOI, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the respondent or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.
- 3. In order to give effect to the above, the following questionnaire must be completed and submitted with the EOI.

3.1. Full Name: .....

3.2. Identity Number: .....

3.3. Company Registration Number: .....

3.4. Tax Reference Number: .....

3.5. VAT Registration Number: .....

3.6. Are you presently in the service of the state\* \*\* \* YES / NO

3.6.1. If so, furnish particulars.

.....

.....

3.7. Have you been in the service of the state for the past twelve months? YES / NO

3.7.1. If so, furnish particulars.

.....

.....

\* MSCM Regulations: "in the service of the state" means to be

– (a) a member of –

any municipal council;

any provincial legislature; or

the national Assembly or the national Council of provinces;

(b) a member of the board of directors of any municipal entity;

(c) an official of any municipality or municipal entity;

(d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);

(e) a member of the accounting authority of any national or provincial public entity; or

(f) an employee of Parliament or a provincial legislature.



3.8. Do you, have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this EOI?

YES / NO

3.8.1. If so, furnish particulars.

.....  
.....

3.9. Are you, aware of any relationship (family, friend, other) YES / NO  
between a respondent and any persons in the service of the  
state who may be involved with the evaluation and or  
adjudication of this EOI?

3.9.1. If so, furnish particulars

.....  
.....

3.10. Are any of the company's directors, managers, principal YES/NO shareholders  
or stakeholders in service of the state?

3.10.1. If so, furnish particulars.

.....  
.....

3.11. Are any spouse, child or parent of the company's directors, managers, principal YES /NO  
shareholders or stakeholders in service of the state?

3.11.1. If so, furnish particulars.

.....  
.....

**CERTIFICATION**

I, THE UNDERSIGNED (NAME)

.....

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....

Signature

.....

Date

.....

Position

.....

Name of Respondent





## MBD 8: DECLARATION OF RESPONDENT'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1. This Municipal Expression of Interest (EOI) Document must form part of all EOI's invited.
2. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
3. The EOI of any respondent may be rejected if that Respondent, or any of its directors have:
  - a) abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
  - b) been convicted for fraud or corruption during the past five years;
  - c) wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
  - d) been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
4. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**

Item	Question	Yes	No
4.1	<p>Is the Respondent or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?</p> <p>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied).</p> <p><b>The Database of Restricted Suppliers now resides on the National Treasury's website (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) and can be accessed by clicking on its link at the bottom of the home page.</b></p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.1.1	If so, furnish particulars:		
4.2	<p>Is the Respondent or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?</p> <p><b>The Register for Tender Defaulters can be accessed on the National Treasury's website (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) by clicking on its link at the bottom of the home page.</b></p>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2.1	If so, furnish particulars:		

4.3	Was the Respondent or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If so, furnish particulars:		
<b>Item</b>	<b>Question</b>	<b>Yes</b>	<b>No</b>
4.4	Does the Respondent or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the Respondent and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.7.1	If so, furnish particulars:		

**CERTIFICATION**

I, THE UNDERSIGNED (NAME)

.....

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT.

I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....

Signature

.....

Date

.....

Position

.....

Name of Respondent



## **MBD 9: CERTIFICATE OF INDEPENDENT BID DETERMINATION**

In this document Bid refers to the Expression of Interest (EOI)

1. This Municipal Bidding Document (MBD) must form part of all bids invited.
2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).<sup>2</sup> Collusive bidding is a per se prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
  - a) take all reasonable steps to prevent such abuse;
  - b) reject the bid of any Respondent if that Respondent or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
  - c) cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

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

I, the undersigned, in submitting the accompanying Expression of Interest:

---

(EOI Number and Description)

in response to the invitation for the EOI made by:

---

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of:

---

that:

(Name of Respondent)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying EOI will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the Respondent to sign this Certificate, and to submit the accompanying EOI, on behalf of the Respondent;
4. Each person whose signature appears on the accompanying EOI has been authorized by the Respondent to determine the terms of, and to sign, the EOI, on behalf of the Respondent;
5. For the purposes of this Certificate and the accompanying EOI, I understand that the word "competitor" shall include any individual or organization, other than the Respondent, whether or not affiliated with the Respondent, who:
  - (a) has been requested to submit a EOI in response to this EOI invitation;
  - (b) could potentially submit a EOI in response to this EOI invitation, based on their qualifications, abilities or experience; and
  - (c) provides the same goods and services as the Respondent and/or is in the same line of business as the Respondent
6. The Respondent has arrived at the accompanying EOI independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium<sup>3</sup> will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
  - (a) prices;
  - (b) geographical area where product or service will be rendered (market allocation)
  - (c) methods, factors or formulas used to calculate prices;
  - (d) the intention or decision to submit or not to submit, a EOI;

- (e) the submission of a EOI which does not meet the specifications and conditions of the EOI; or
  - (f) bidding with the intention not to win the EOI.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this EOI invitation relates.
  9. The terms of the accompanying EOI have not been, and will not be, disclosed by the Respondent, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
  10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, EOI's that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

Signature	Date
Position	Name of Respondent

**The following documents must be attached:**

- Natural persons, Sole proprietors and JVs – copy of ID document/passport
- Schools – copy of Provincial School registration certificate
- NGO – copy of Provincial registration certificate
- Society Club/ Association – copy of Constitution / founding document
- Partnership -copy of partnership agreement plus IDs of all partners
- Closed Corporation - Copy of CK1 and/or CK2 and members' agreement
- Company – current CM29,
- Trust – letter of appointment from the Master of the High Court of SA and deed of trust
- Joint Venture / Consortiums– JV agreement plus ID documents/ company Registration document of all members of JV/ Consortiums.

## MBD 16: PAYMENT OF MUNICIPAL ACCOUNT

In This MBD, The Respondent is referred to as "The Tenderer"



### DECLARATION OF MUNICIPAL CHARGES FROM TENDERER

**Ethekwini Revenue**  
Florence Mkhize Building  
251 Anton Lembede Street  
Durban  
4001

Tel: 031 328 1200  
Fax: 031 328 1002  
E-Mail: revline@durban.gov.za  
Website: <http://www.durban.gov.za>

I, \_\_\_\_\_  
(Full Name and Surname)

ID Number  in my capacity as the duly authorised member / director /  
owner or partner of

\_\_\_\_\_  
(Full name of Company / Close Corporation / partnership / sole proprietary/Joint Venture ) hereinafter referred to as the  
TENDERER

do hereby declare that all Municipal charges of the aforesaid TENDERER, are, as at the date hereunder, fully paid or an  
Acknowledgement of Debt has been concluded with the Municipality to pay the said charges in installments.

The following account details relate to property of the said TENDERER:

ACCOUNT	ACCOUNT NUMBER
ELECTRICITY	_____
WATER	_____
RATES	_____
OTHER (specify)	_____

I acknowledge that should the aforesaid Municipal charges fall into arrears, the Municipality may take such remedial action as is  
required, including termination of any contract, and any payments due to the Contractor by the Municipality shall be first set off  
against such arrears. **ATTACHED** please find copies of the above account's and or agreements signed with the municipality.



- Where the **TENDERER'S** place of business or business interests **are outside the jurisdiction of eThewini municipality**, a copy of the accounts/agreements from the relevant municipality must be attached.
- Where the tenderer's Municipal Accounts are part of their lease agreement, then a copy of the agreement, or official letter to that effect is to be attached.

\_\_\_\_\_  
Full Name and Surname

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Designation

\_\_\_\_\_  
Company Stamp

\_\_\_\_\_  
Contact No



**MBD 21 A: DEVELOPMENT EXPERIENCE OF THE RESPONDENT ENTITY**

Certificate of Practical Completion issued in terms of the Joint Building Contracts Committee (JBCC) clearly reflecting the Respondent entity or its Consortium/JV partners as employers or developers, indicating the name and type of development.					
No	NAME / TYPE OF DEVELOPMENT (Shopping centre, Offices, Residential Development)	DATE OF COMPLETION	PROJECT VALUE IN RANDS	PRINCIPAL AGENT NAME	CONTACT DETAILS (PHONE NUMBER AND EMAIL ADDRESS)
1					
2					
3					
4					
5					
6					
7					
8					



9					
10					
11					
12					
13					
14					
15					
16					
17					



**MBD 21: B – VALUE OF PROPERTY PORTFOLIO**

	<b>NAME / TYPE OF DEVELOPMENT</b>	<b>ERF NUMBER, TOWNSHIP AND PHYSICAL ADDRESS</b>	<b>SQUARE METERAGE (EXTENT) OF PROJECT</b>	<b>VALUE OF PROJECT / DEVELOPMENT</b>	<b>% SPLIT OF LAND USES WITHIN THE DEVELOPMENT</b>	<b>BULK INFRASTRUCTURE UPGRADE</b>	<b>SOCIO ECONOMIC BENEFITS YIELDED FROM PROJECT</b>	<b>TITLE DEED NUMBER AND OWNER</b>
1								
2								
3								
4								
5								
6								
7								



**CONSENT TO PROCESS PERSONAL INFORMATION IN TERMS OF THE PROTECTION OF INFORMATION ACT, 4 OF 2013 ("PoPI Act")**

**1. GENERAL**

In order to evaluate Response submitted by Respondents with respect to the EOI, the Municipality is required to process the personal information of Respondents and their constituent members, therefore the Municipality must comply with the provisions of PoPI Act and give effect to the purposes of the PoPI Act, which *inter alia*, includes giving effect to the constitutional right to privacy, by safeguarding personal information of Bidders and their constituent Members when processing same.

**2. INFORMATION BEING COLLECTED AND PROCESSED BY THE MUNICIPALITY**

- 2.1. The Municipality will be collecting and processing the personal information of the Respondent and its members which the Municipality has requested in this EOI document.
- 2.2. The personal information collected and processed by the Municipality will be collected directly from the Respondents and its members, and from the Respondent's Response.
- 2.3. The Municipality reserves the right to seek such further information from any Respondent and/or their constituent members as it determines is required in its absolute and sole discretion, which further information will also be collected and processed for the purpose mentioned in section 3 (The Purpose for Collecting and Processing Information) below.
- 2.4. The Municipality reserves the right to collect and process the Respondent and its member's personal information indirectly, from public records, including but not limited to the website of the Bidder and the website of each of its members. In this regard, the Municipality undertakes to collect and process of such information in a manner that does not prejudice the legitimate interests of the Respondents and its members.

**3. THE PURPOSE FOR COLLECTING AND PROCESSING INFORMATION**

- 1.1. The personal information collected and processed by the Municipality will be for the purpose of requesting from each Respondent a fully developed, comprehensive and firm Response in the prescribed format and capable of acceptance by the Municipality, and for the purpose related to the function and activity of the Municipality as a public body. The full purpose of the EOI is as recorded in section 1.2 of this EOI and personal information of each Respondent and member may also be processed by the Municipality for various components of such EOI purpose.
- 1.2. The Municipality will keep the records of the Respondent and its member's personal information for the period necessary for achieving the purposes of the EOI, and for any period prescribed by law that may require the Municipality to retain the Respondent's and its member's personal information.

**4. SUPPLY OF THE INFORMATION BY EACH RESPONDENT AND ITS MEMBERS**

Each Respondents and its Members acknowledge and understand that the personal information collected and processed by the Municipality is mandatory for purposes of evaluating the Respondent's Response and is provided to the Municipality by the Respondent and its Members voluntarily.

## **5. CONSEQUENCES OF FAILURE TO PROVIDE THE INFORMATION**

Each Bidder and its Members acknowledge and understand that any failure by a Bidder and/or its Members to satisfy the requirements of Annexure 1 (*Mandatory Proposal Requirements*) of Volume 1 to the EOI, may in the sole and absolute discretion of the Municipality result in the disqualification by the Municipality of the Bidder and/or any one or more of its Member.

## **6. PROCESSING OF INFORMATION BY THIRD PARTIES**

The Municipality is assisted by the Transaction Advisory Team in the project, who may as part of its mandate and to the extent required by the Municipality provide support to the Municipality's evaluation officials, and consequently in providing such support, process the EOI and its Member's personal information, on behalf of the Municipality, and under the authority of the Municipality..

## **7. RIGHTS OF EACH RESPONDENT AND ITS MEMBERS**

7.1. The Municipality hereby notifies the Respondents and their members of their rights, with respect to the processing of their personal information, in terms of section 11 of the PoPI Act. Each Respondent and its members are entitled to exercise the rights in paragraph 7.2, below in deference to applicable procurement jurisprudence, such as the provisions of section 217 of the Constitution, section 51(1)(a) of the PFMA, the PPPFA, the PPPFA Regulations and case law.

7.2. In terms of the PoPI Act, each Respondent and its Members, have the right to, *inter alia*:

7.2.1. request access to their personal information;

7.2.2. request, where necessary, the correction, destruction or deletion, of their personal information;

7.2.3. object, on reasonable grounds and with respect to its particular circumstance, to the processing of its personal information, which may in the sole and absolute discretion of the Municipality result in the disqualification by the Municipality of the Respondent concerned;

7.2.4. access its personal information;

7.2.5. submit a complaint to the Regulator, as contemplated by the provisions of the PoPI Act, with respect to an alleged interference regarding the protection of its personal information; and

7.2.6. institute civil proceedings regarding an alleged interference with the protection of its personal information.

## **8. CONSENT**

By signature hereunder, each Respondent and each of its Members acknowledge that they know and understand the terms and conditions for the processing of their personal information and consent to the collection and processing of their personal Information by the Municipality as set out in this consent form.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Authorised Member

\_\_\_\_\_  
Name of Respondent

\_\_\_\_\_  
Capacity or position of signatory in  
Authorised Member

\_\_\_\_\_  
Name of signatory



## 26. EOI DOCUMENT ANNEXURES

CENTRUM ANNEXURE 1:	Hand Plan
CENTRUM ANNEXURE 2.1:	Survey Combined E2015-038 - Copy
CENTRUM ANNEXURE 2.2:	Survey Combined E2015-038
CENTRUM ANNEXURE 3:	Desk-top Geotechnical Assessment_2021.03.25
CENTRUM ANNEXURE 4:	EPCPD comment
CENTRUM ANNEXURE 5:	Centrum Workshop basement parking survey
CENTRUM ANNEXURE 6:	Basement & Samora Machel investigation
CENTRUM ANNEXURE 7:	GBCSA Guidelines

# ANNEXURE 1

## Hand Plan





**PROPOSED ROAD CLOSURE, SUBDIVISIONS AND CONSOLIDATION**  
Plan showing

1. Portions of Road to be Permanently Closed
2. Land to be Leased / Alienated

Bram Fischer Road / Soldiers Way / Joe Slovo Street  
Suburb of Central Business District  
Ethekwini Municipality

**Cadastral Description:**

1. Proposed Portions of Road Closure on Portion 1 of Erf 11691, Remainers of Erven 11686, 11713 and 11714
- 2a. Proposed Lease / Alienation on Proposed Portion [A] of Erf 11713, Proposed Portion [B] of Erf 11714, Proposed Portion [C] of Erf 11162, Proposed Portion [D] of Erf 11688, Portion 1 of Erf 11688, Remainder of Erf 11688, Portion 1 of Erf 11691, Portion 2 of Erf 11710, Portions 1 & 2 both of Erf 11713
- 2b. Proposed Erf [E] being a consolidation of Proposed Portion [A] of Erf 11713, Proposed Portion [B] of Erf 11714, Proposed Portion [C] of Erf 11162, of Erf 11713, Proposed Portion [C] of Erf 11162, Proposed Portion [D] of Erf 11688, Portion 1 of Erf 11688, Remainder of Erf 11688, Portion 1 of Erf 11691, Portion 2 of Erf 11710, Portions 1 & 2 both of Erf 11713

all Durban

**Notes:**

1. Street addresses are encircled
2. For reference purposes only, Proposed Portions and Erf are numbered alphabetically in square brackets. Official numerical cadastral descriptions are to be obtained from SGO on final survey.
3. All contours and services, shown or otherwise, are as obtained from the Corporate GIS database or other relevant internal or external departments and should be verified on site as applicable
4. Building position is approximate and scaled off 2019 aerial photography
5. Areas and dimensions are approximate and subject to final survey as required
6. Proposed Consolidation for Lease / Alienation is currently zoned as Government and Municipal Reservation, General Commercial and Existing Street Reservation. Zoning information is obtained from the Corporate GIS database.
7. This plan supersedes SH 9935

**Proposed Consolidation for Lease / Alienation**

Sides	Metres	Sides	Metres
AB	8.1	XY	51.4
BC	8.0	YZ	2.0
CD	8.0	ZA1	2.1
DE	8.0	A1B1	2.1
EF	8.0	B1C1	2.0
FG	8.0	C1D1	9.3
GH	8.0	D1E1	10.4
HJ	8.0	E1F1	10.6
JK	8.0	F1G1	3.4
KL	30.1	G1H1	267.3
LM	22.0	H1J1	46.7
MN	24.0	J1K1	5.5
NP	24.0	K1L1	75.8
PQ	17.1	L1M1	102.0
QR	204.5	M1N1	4.5
RS	226.9	N1P1	51.4
ST	100.3	P1Q1	49.1
TU	5.1	Q1R1	42.2
UV	44.5	R1S1	36.2
VW	22.2	S1T1	29.2
WX	6.5	T1U1	39.0
		U1A	368.7
Area = 13.5658 Ha			

**Proposed Portion [A] of Erf 11713**

Sides	Metres
V1X1	278.2
X1Y1	28.3
Y1Z1	131.1
Z1A2	191.5
A2B2	27.1
B2C2	110.2
C2D2	22.0
D2E2	81.5
E2F2	5.0
F2G2	11.9
G2H2	7.7
H2P1	6.1
P1Q1	49.1
Q1R1	42.2
R1S1	36.2
S1T1	29.2
T1U1	39.0
U1V1	196.7
Area = 5.9043 Ha	

**Proposed Portion [B] of Erf 11714**

Sides	Metres
J2Y1	104.5
Y1X1	69.2
X1S	114.0
ST	100.3
TU	5.1
UV	44.5
VW	22.2
WX	6.5
XY	51.4
YZ	28.3
ZA1	2.0
A1B1	2.1
B1C1	9.3
C1D1	10.4
D1E1	10.6
E1F1	102.0
F1K2	202.7
K2L2	16.7
L2M2	29.1
M2N2	55.1
N2P2	28.8
P2J2	124.6
Area = 3.0648 Ha	

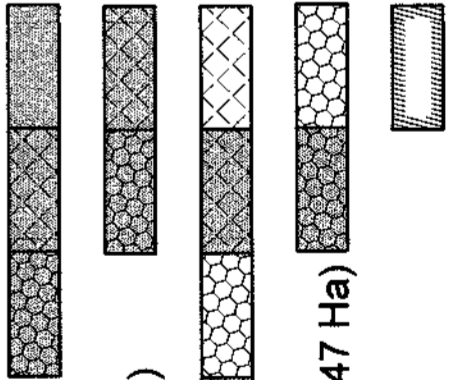
**Proposed Portion [C] of Erf 11162**

Sides	Metres
J1Q2	77.1
Q2K2	32.6
K2F1	202.7
F1G1	3.4
G1H1	267.3
H1J1	46.7
Area = 2209 sq m	

**Proposed Portion [D] of Erf 11686**

Sides	Metres
P1H2	6.1
H2G2	7.7
G2F2	11.9
F2E2	5.0
E2D2	81.5
D2C2	22.0
C2R2	11.1
R2K1	38.4
K1L1	75.8
L1M1	102.0
M1N1	4.5
N1P1	51.4
Area = 3575 sq m	

**Existing Road Area**



Portions of Road to be Permanently Closed (9749 sq m)

Land to be Leased / Alienated (13.5658 Ha)

Possible Future Use by Public Transport Facility (2.9947 Ha)

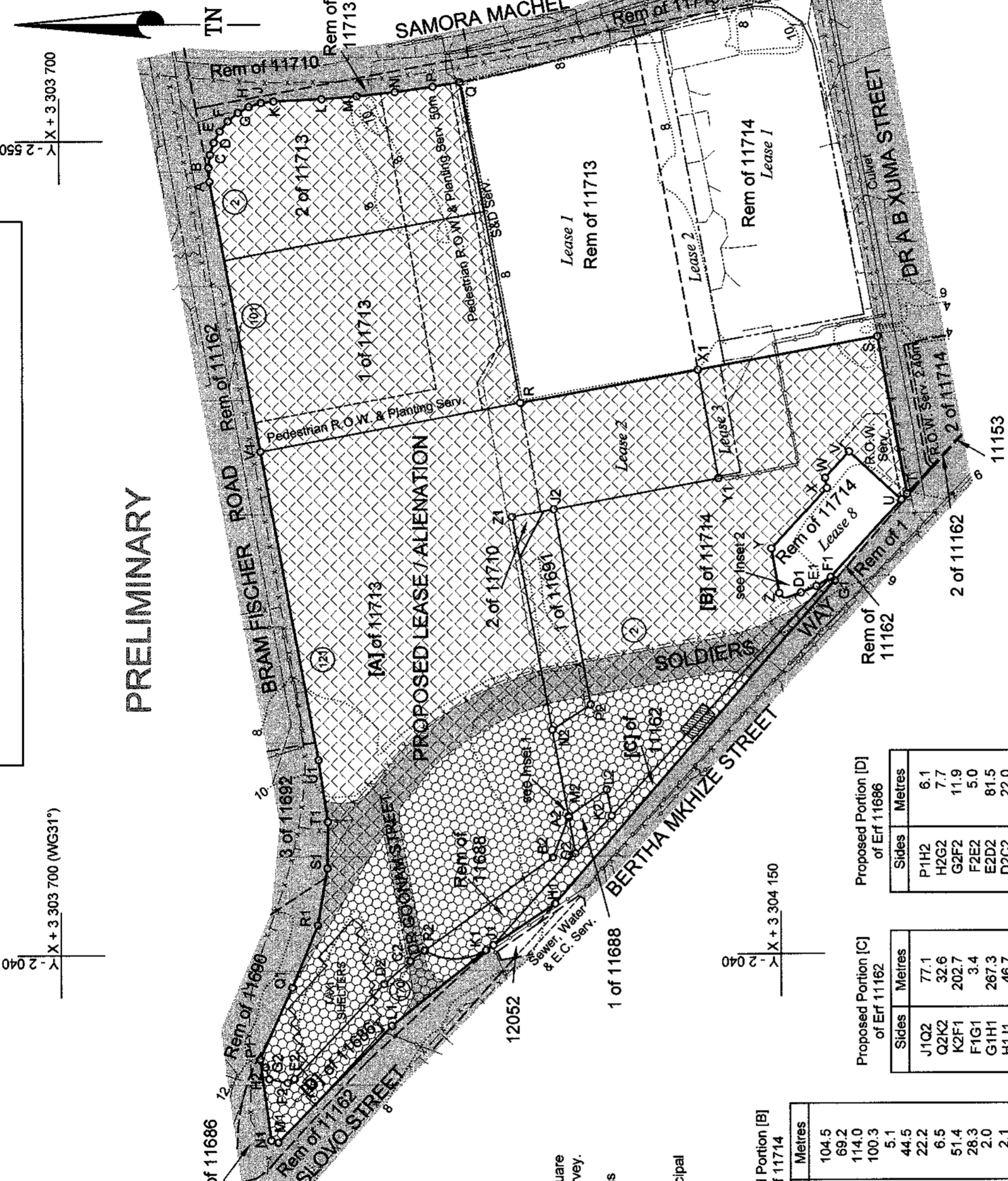
Existing Building

**LEGEND**

- denotes Sewer
- denotes Watermain
- denotes Stormwater

PROJECT TITLE : **CENTRUM SITE**

**PRELIMINARY**



**SCALE 1:2500**

**OWNERSHIP SCHEDULE**

PROPERTY	REGISTERED OWNER	DIAGRAM	CURRENT DEED	PROPOSED AREA
Rem of Erf 11162 Durban	Ethekwini Municipality	SV 128 F 46	T 1102/1896	2209 sq m
Rem of Erf 11686 Durban	Ethekwini Municipality	SV 349 F 46	T 15791/1985	3575 sq m
Pin 1 of Erf 11688 Durban	Ethekwini Municipality	SG 1020/1982	T 32030/1998	537 sq m
Rem of Erf 11688 Durban	Ethekwini Municipality	SV 349 F 45	T 15791/1985	1875 sq m
Pin 1 of Erf 11691 Durban	Ethekwini Municipality	SG 1018/1982	T 32030/1998	3197 sq m
Pin 2 of Erf 11710 Durban	Ethekwini Municipality	SG 1019/1982	T 32030/1998	262 sq m
Pin 1 of Erf 11713 Durban	Ethekwini Municipality	SG 1134/1995	T 37577/1999	2.0171 Ha
Pin 2 of Erf 11713 Durban	Ethekwini Municipality	SG 1135/1995	CRT 40895/1995	1.4141 Ha
Rem of Erf 11713 Durban	Ethekwini Municipality	SG 2989/1983	T 13942/1984	5.9043 Ha
Rem of Erf 11714 Durban	Ethekwini Municipality	SG 1017/1982	T 32030/1998	3.0648 Ha

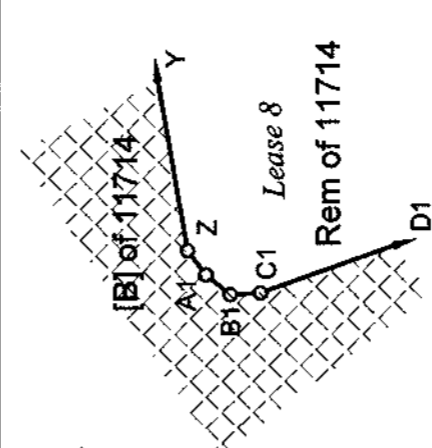
Ownership details obtained via "DEEDSWEB"

[A]=	Numbers Allocated by Surveyor General
[B]=	
[C]=	
[D]=	
[E]=	

INSET 1  
Scale 1:250



INSET 2  
Scale 1:500



Prelim. Plan Date : 2021/03/08

Final Plan Date :

**SH 9980**

Sheet No. : 1:1000 S40, T40 1:2000 S41

Drawn by : Z. Dlamini

Job No. : 2021/103

Ward No. : 28

Checked by : K. Narayan

Digital Ref. : SH 9980

Survey Correspondence Ref. : B276/1

Land Transactions Ref. : LA 12186

Vote No. : 26750.27999.7101.99000.7101.PD001.0010

Prepared by :

Surveying & Land Information Department

Engineering Unit

166 K.E. Masingira Road (Old Fort Road)

Durban

Tel : 031 - 311 7226

# ANNEXURE 2.1

## Survey Combined E2015- 038





# ANNEXURE 2.2

## Survey Combined E2015- 038





# ANNEXURE 3

## Desk-top Geotechnical Assessment



**ETHEKWINI MUNICIPALITY**  
**HUMAN SETTLEMENTS AND INFRASTRUCTURE CLUSTER**  
**ENGINEERING UNIT, ROADS PROVISION DEPARTMENT**  
**PAVEMENT & GEOTECHNICAL ENGINEERING BRANCH**



Tel : 031-3117367

Email : [debbie.abel@durban.gov.za](mailto:debbie.abel@durban.gov.za)

Ref No.

23 March 2021

Catalytic Projects Unit

by email : [nasreen.arabi@durban.gov.za](mailto:nasreen.arabi@durban.gov.za)

**Attention : Ms N. Arabi**

**DESK-TOP REVIEW OF IN-HOUSE GEOLOGICAL DATA ON THE CENTRUM SITE,  
DURBAN CBD**

It is ultimately intended to have a 'precinct' of multi-level government related offices, depots and public facilities (including a new main municipal library and probable bus terminus) on the greater Centrum site. Buildings will typically be multi-storey, some with single or double level parking basements. Blocks and nodes will be developed individually at some time in the future as needs and finances dictate but within an overall, unified architectural framework.

There is in-house data available, collected over the years, and that is reviewed herein to give a general idea of the subsoil conditions to be expected across this site.

## **1. HISTORICAL DATA**

Seventeen boreholes of various depths are recorded on site or in the immediate vicinity. These were variably drilled for the new Central Library (1989), the Workshop shopping centre basement (1985), the Ordinance Road underpass (1985), the Centrum NE Corner (1996) and Water and Sanitation Head Office (1993). As a rule, they were wash bored holes with Standard Penetration Tests (SPTs) at 0.75m, 1.0m or 1.5m intervals; some are shallow at only 8m, most are in the 20 – 30m range still in estuarine sediments, while two continued to drill into bedrock at 29 & 42m.

The site plan, Figure 1, shows the positions and numbers of the boreholes; these relate to the borehole profiles recorded in Appendix A; it also shows two cross-section alignments, A-A' & B-B', which feed into the inferred subsoil profiles contained in Figures 2 & 3. Table 1 below shows the borehole numbers relative to the projects on record.

**Table 1 : Borehole Numbers for Projects**

<b><u>PROJECT</u></b>	<b><u>BH NUMBERS</u></b>
Central Library	375, 376, 377
Centrum NE Corner	437, 441
Ordinance Rd Underpass	948, 949, 950, 951, 952
Water and Sanitation Head Office	1301, 1302
Workshop	1321, 1322, 328

Available in-house reports / data are included as follows:

- Appendix B : New Central Library (slightly different footprint to the current proposed location).
- Appendix C : Ordinance Road Underpass
- Appendix D : Centrum NE Corner

## **2. SUMMARY OF ON-SITE CONDITIONS**

### **2.1 Site Description**

The site is virtually level (between about 7 and 8msl over a 400m distance) with a slight incline in the far north-west and covers about 9ha (excluding the Workshop basement footprint). It is largely undeveloped but is paved and used for parking or large scale events.

### **2.2 Geology**

To summarise the subsoil conditions expected on the greater Centrum site, the region is underlain by the Harbour Beds, an unconsolidated, interlayered sand and/or silt and/or clay sequence laid down in estuarine / back-bay swamp conditions. Locally, this formation is between about 25 and 40m thick, overlying the Cretaceous age siltstone bedrock (St Lucia Formation) and its residual silty soils at depth. There are isolated areas where 'reclamation' / dumping has occurred in the past, such as at the Ordinance Rd Underpass site (6m thickness of rubble north-west of the Centrum site), and it is feasible that similar, isolated, dumped materials may be found on the Centrum site – there is no evidence that this may be a widespread phenomenon though.

As per the available reports, the subsoils may comprise pale grey / yellow brown / orange silty or slightly clayey sand overlying / interlayered with a grey mottled orange brown / red / black sandy clay. With depth the sand layers may have variable grading and variable proportions of silt and clay. Subsoil consistency is equally variable (loose to very dense, but typically medium dense becoming dense with depth) depending on the particle size distribution and angularity of the grains. The silty/sandy clays are typically firm to stiff, however, soft clay layers were identified.



Layer thickness is variable over short lateral distances, lensing out into different materials. This variability in grain size (gravel to clay) and lateral distribution reflects the seasonal changes in channel position and changes in energy levels (flood, low water, slow water as season, climate and sea levels fluctuated) in the estuarine depositional environment over time.

There is a possibility of very soft to soft, typically grey or light grey clay (again variable thickness, depth and lateral extent), within the profile. If thick enough and shallow enough, these lenses may have a significant impact on settlement of any large structure placed above them as they are expected to be moderately to highly compressible. They were encountered in the Ordinance boreholes (off site to the west) at depths of about 8 – 11.5m & 9.5 – 12.6m, and below the NE Centrum site at between about 5 & 7m. Although not nearly as soft as some shale derived Hippo Muds can be (in the Riverhorse area the SPT values can be 0, even to depth), too shallow or too thick, this layer could certainly affect settlement of a large structure.

Cretaceous siltstone bedrock at depth is a soft rock containing varying proportions of shell fossils. Residual dark grey-green, predominantly silty soils, with varying proportions of clay and sand, may be present above the bedrock. Where recorded, the residual material was encountered at depths of between about 23 & 32m below present ground level.

### **2.3 Water Table**

There are two water tables to consider. In the wetter summer season or following prolonged, heavy rain, a shallow perched water table develops in the upper sand horizon, perched on the underlying clay at (typically) between about 2 & 4m below ground level (see the 1980s summary on page 5 of Appendix B). This feature typically dissipates during drier seasons. The permanent water table lies at depth, probably akin to sea level which is about 7 – 10m below present ground levels (being higher in the north-west).

Past road rehabilitation projects a short distance to the south-east of the Centrum have encountered a water table as shallow as 0.5m below surface, requiring considerable dewatering effort until such time as the pioneering layer works were raised above that water level. That could be a consequence of a lower site elevation to the east, or the impermeable clay horizon being very shallow as is the case in the Ordinance Rd boreholes.

## **3. GEOTECHNICAL IMPLICATIONS**

A number of geotechnical constraints will potentially impact any development in this area, particularly with the intended use of multi-storey buildings and single or double volume basements.

### **3.1 Shallow Water Table**

Any excavation must be assumed to require dewatering, particularly in or after a wet summer. This will typically affect excavations deeper than 2-4m but may be from <1m depth. The source of groundwater is regional so dewatering will be ongoing for the duration of the excavation, until the hole is backfilled or sealed (in the case of a basement).

### **3.2 Excavatability and Trench Stability**

In so far as the subsoil materials are unconsolidated sediments, excavation will be 'soft', as defined by SANS1200, to 20m+, but, the shallow table will cause collapse and/or liquefaction of low cohesion soils in excavations of 2-4m+. Even above the water table, looser layers of sandy soil may also collapse into steep excavations, necessitating either shoring or trimming back the sidewall batters, even in the short term.

All excavations must be assumed to require sidewall support from surface for the full duration of construction. Even where soils may be more cohesive clays, the risk of collapse may still be high if soils are wet and soft.

### **3.3 Basement Construction**

Basements are possible but will be potentially costly to construct, requiring dewatering and lateral support from early in the excavation. Construction will likely be by installing contiguous piled walls, or similar, around the outer edge prior to excavation of the core. Details will obviously flow from the geotechnical investigation of each node.

### **3.4 Construction Materials**

There are no laboratory analyses for materials within the site, however, being predominantly sandy in nature, there is a good possibility that much of the soil taken from a basement excavation may be usable elsewhere for filling or lower selected layers. This will have to be done under strict supervision to avoid mixing the sands with unsuitable lenses of more clayey material. Anything from below the water table will also require drying out before use.

### **3.5 Founding Conditions**

Subsoils are highly variable in nature, consistency and extent, for tens of metres below surface. Depths to soft siltstone bedrock can vary between about 29 and 42m below present ground levels. Lightly loaded, compact structures may be adequately supported on stiffened concrete rafts or engineered soil rafts but larger, more complex structures will certainly require piling; either friction piles or end bearing, depending on conditions at depth compared to the loads and sensitivity of the structure.

Identifying the presence or absence of the compressible, soft clay lenses will be significant in assessing potential settlement or downdrag on the piles. That said, those lenses are totally erratically located and of variable lateral extent so may not be picked up, no matter how many boreholes are drilled below a footprint.


#### **4. CONCLUSION**

As became evident going through the data, the only constant is the variability so, prior to development, each block will require its own site-specific, deep geotechnical investigation to determine specific conditions and provide quantified soil parameters for founding and lateral support design; it will also be prudent to confirm the presence or absence of compressible soft clays at shallow depth below a site.

The site is certainly suited to high rise buildings, as have been constructed across the Durban CBD. Shallow groundwater and predominantly sandy soils will make for challenging basement excavation and construction, but it can be done. Foundations for larger structures will almost certainly be deep piles while smaller, compact structures may be accommodated by stiffened rafts.

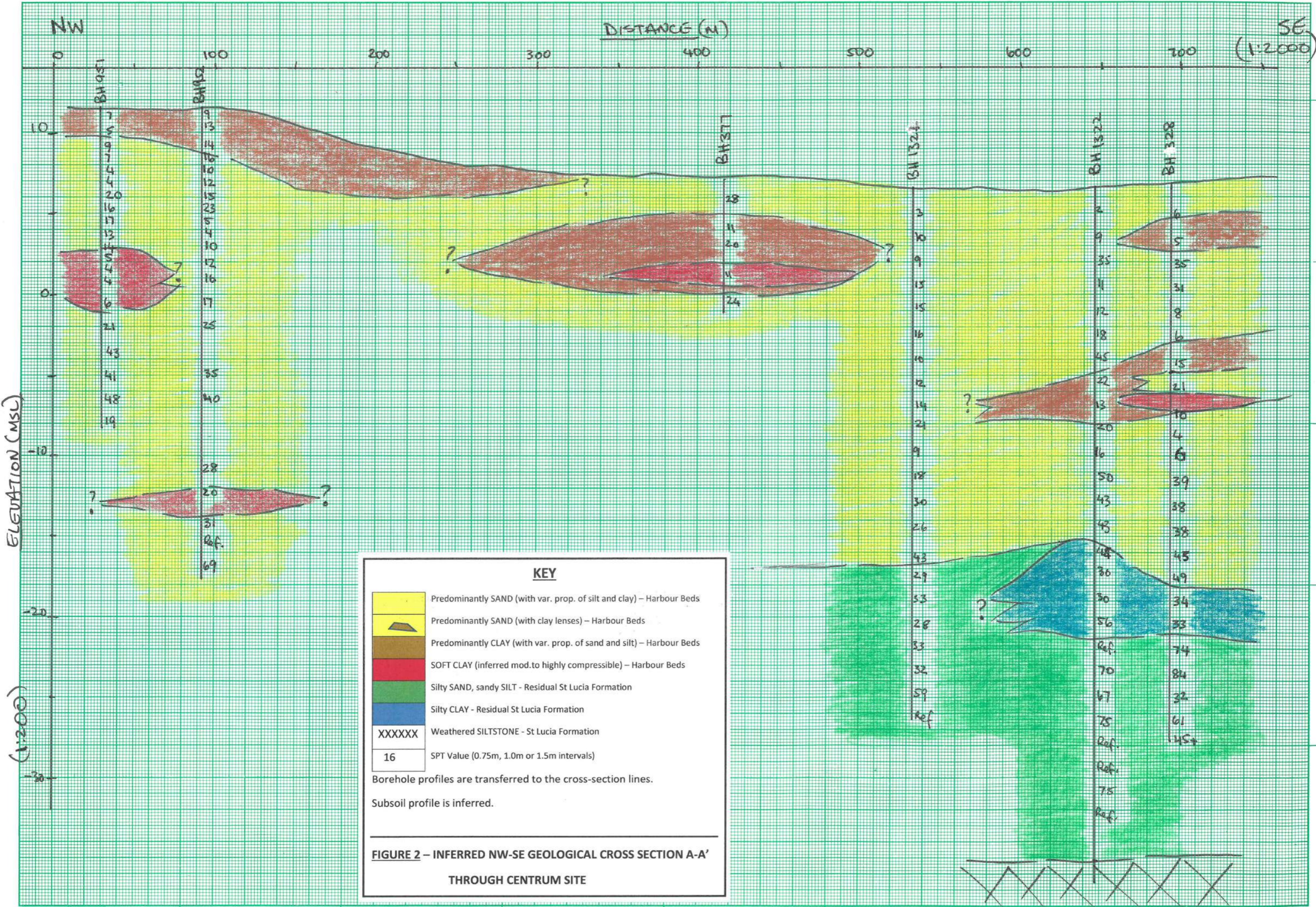
If there are any further queries, please contact the writer.

**Yours faithfully,**



**D. J. ABEL Pr.Sci.Nat. MSAIEG  
Engineering Geologist**





NW

SE  
(1:2000)

DISTANCE (M)

ELEVATION (MSL)

(1:200)

BH 951

BH 952

BH 377

BH 324

BH 322

BH 328

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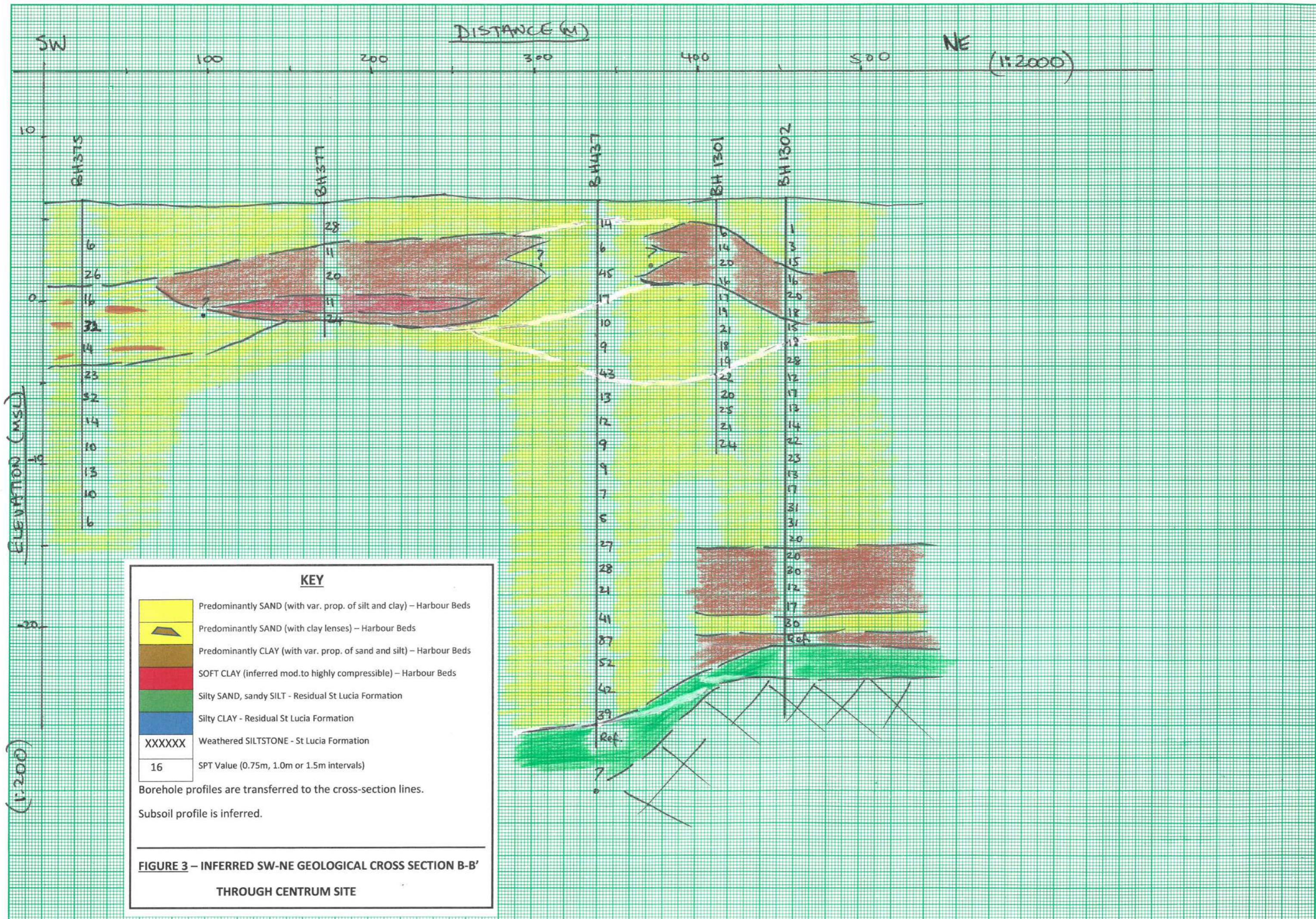
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## **APPENDIX A**

### **DATABASE BOREHOLE PROFILES IN OR NEAR CENTRUM**

**Borehole log ID 328**

0-2m: Dark grey slightly silty fine and medium SAND.

2-4m: Moist red mottled yellow-grey soft to firm sandy CLAY.

4-10m: Moist pale grey, yellow brown, pale brown fine silty SAND. Medium grained 9.0-9.45m.

10-11.5m: Moist red mottled grey sandy CLAY.

11.5-13m: Moist pale grey, orange medium and coarse sand in silty clay matrix.

13-14m: Moist pale grey and orange soft CLAY.

14-19m: Moist pale grey to pale brown fine silty SAND. Medium from 18.0-19m

19-20m: Moist pale green - blue mottled brown fine clayey SAND.

20-25m: Slightly moist pale brown to grey becoming grey with depth fine silty SAND.

25-28m: Slightly moist dark grey firm silty CLAY with shell fragments at 26.6m.

28-30m: Slightly moist pale grey silty fine SAND.

30-32m: Slightly moist grey fine and some medium slightly silty SAND.

32-33.2m: Slightly moist pale grey fine and medium SAND with abundant shell remains.

33.2-34.45m: Dark grey - blue fine sand and silt.

**SPT**

2m=6

3.5m=5

5m=35

6.5m=31

8m=8

9.5m=6

11m=15

12.5m=21

14m=10

15.5m=4

17m=6

18.5m=39

20m=38

21.5m=38

23m=45

24.5m=49

26m=34

27.5m=33

29m=74

30.5m=84

32m=32

33.5m=61

34.45m=45+

BH Water analysis 25/11/1983:

pH: 8.1

Turbidity: 2.3 NTU

Colour [Hazen]: <5

Conductivity: 55 mS/m

Total Dissolved Solids mg/l: 365

Total Hardness: 116 mg/l as CaCO<sub>3</sub>

Calcium Hardness: 72 mg/l as CaCO<sub>3</sub>

Total Alkalinity: 147 mg/l as CaCO<sub>3</sub>

Chloride: 94 mg/l

Sulphate SO<sub>4</sub>: 9 mg/l

Na: 84 mg/l

K: 5.6 mg/l

Nitrate [N/NO<sub>3</sub>] mg/l:

Fe mg/l: 0.6

Mn mg/l: 0.22

NH<sub>4</sub>:



### **Borehole log ID 375**

0-1.16m: Backfill comprising 50 mm cobbles, matrix not recovered.

1.16-3m: No recovery.

3-5.5m: Brown loose to medium dense fine & medium SAND.

5.5-10m: Light brown streaked orange & grey to light brownish grey medium dense to dense very slightly clayey slightly silty fine & medium SAND with moderately clayey lenses to base.

10-11.25m: Light grey flecked orange very stiff moderately clayey fine & medium SAND.

11.25-14.25m: Light grey flecked orange medium dense to dense very slightly clayey slightly silty fine & medium SAND with thin lenses of fine grained gravel to top.

14.25-20m: Light grey to brown loose to medium dense slightly silty fine & medium SAND.

#### **SPT**

3m=6

4.5m=26

6m=16

7.5m=32

9m=14

10.5m=23

12m=32

13.5m=14

15m=10

16.5m=13

18m=10

19.5m=6

### **Borehole log ID 377**

0-2.5m: Moist pale grey-brown silty fine SAND.

2.5-4m: Moist red mottled orange, grey, brown firm fissured sandy CLAY.

4-5.5m: Yellow-brown silty coarse SAND layered with grey fine sandy CLAY.

5.5-6.4m: Moist grey very soft CLAY.

6.4-7m: Grey mottled brown sandy CLAY.

7-7.95m: Pale yellow-brown silty fine & medium SAND.

#### **SPT**

1.5m=28

3m=11

4.5m=20

6m=11

7.5m=24

### **Borehole log ID 378**

0-2.5m: Moist brown silty fine SAND.

2.5-4m: Moist red orange mottled grey firm fissured sandy CLAY with black tubelets.

4-7.95m: Moist brown mottled pale grey-brown clayey fine SAND.

#### **SPT**

1.5m=14

3m=14

4.5m=15

6m=15

7.5m=17

### **Borehole log ID 437**

0-2m: Asphalt & C/R road base over grey-brown fine & medium SAND.

2-7m: Pale yellow-brown silty slightly clayey fine & medium SAND.

7-10.5m: Pale yellow-brown-grey silty slightly clayey fine & medium SAND.

10.5-12m: Pale yellow-brown silty medium SAND.

12-24m: Brown slightly silty fine & medium SAND.

24-30m: Brown silty fine SAND.

30-32m: Brown silty fine SAND.

32-33.3m: Brown fine SAND over dark grey SILT: St. Lucia Formation.

#### **SPT**

1.5m=14

3m=6

4.5m=45

6m=17

7.5m=10

9m=9

10.5m=43

12m=13.5

13.5m=12

15m=9

16.5m=9

18m=7

19.5m=5

21m=27

22.5m=28

24m=21

25.5m=41

27m=87

28.5m=52

30m=42

31.5m=39

33m=35/ref.

### **Borehole log ID 441**

0-2m: Asphalt & C/R road base over grey-brown medium & fine silty SAND.

2-4m: Wet orange, red, grey gravelly clayey plastic medium & fine SAND.

4-8.5m: Grey mottled brown slightly clayey silty fine & medium SAND.

8.5-14m: Pale grey silty fine SAND.

14-16m: Grey mottled brown clayey fine SAND with shells.

16-17.5m: Grey soft to firm silty CLAY.

17.5-20m: Pale grey silt fine SAND.

20-21.5m: Grey mottled brown silty fine SAND.

21.5-24.2m: Dark grey to green-grey fine sandy SILT. St. Lucia Formation?

### **SPT**

1.5m=5

3m=10

4.5m=32

6m=32

7.5m=22

9m=12

10.5m=10

12m=35

13.5m=31

15m=29

16.5m=8

18m=32

19.5m=33

21m=70

22.5m=64

24m=37/ref.

## **Borehole log ID 948**

0-5.8m: Wet pale brown to pale grey mottled brown slightly silty fine & medium SAND.

5.8-6.5m: Moist grey mottled brown soft sandy CLAY.

6.5-13.2m: Moist pale grey brown silty fine & medium SAND. Stiff clayey sand at 10.5m. Samples slightly cohesive.

13.2-15m: Wet grey speckled white medium & coarse slightly silty SAND.

15-20m: Wet grey-green silty fine SAND. Slightly cohesive.

### **SPT**

0.75m=19

1.5m=7

2.25m=14

3m=8

3.75m=9

4.5m=18

5.25m=3

6m=5

6.75m=17

7.5m=44

8.25m=21

9m=16

9.75m=17

10.5m=21

12m=18

13.5m=40

15m=25

16.5m=31

18m=47

19.5m=26

### **Borehole log ID 949**

0-6.5m: Wet pale brown to pale grey silty fine SAND with medium sand from 5.25m.

6.5-8m: Moist orange-brown to grey clayey fine & medium SAND.

8-11.4m: Moist black soft to very soft CLAY. Occasional sand zones, 10-20 mm diam.

11.4-19.95m: Wet pale grey slightly silty medium SAND. Grey sandy clay lens 19.5-19.8m.

#### **SPT**

0.75m=10

1.5m=12

2.25m=12

3m=16

3.75m=21

4.5m=25

5.25m=17

6m=21

6.75m=16

7.5m=7

8.25m=9

9m=6

9.75m=4

10.5m=5

12m=64

13.5m=20

15m=81

16.5m=68

18m=98

19.5m=31

### **Borehole log ID 950**

0-2.8m: Moist red mottled yellow, grey firm CLAY.

2.8-11.4m: Wet pale grey brown silty fine & medium SAND. Samples slightly cohesive. Coarse sand & gravel lens 8.25-8.4m.

11.4-12.9m: Pale grey firm sandy CLAY.

12.9-19.95m: Pale grey to green grey from 18 m silty fine & medium SAND. Coarse at 15m.

### **SPT**

0.75m=5

1.5m=12

2.25m=15

3m=10

3.75m=8

4.5m=9

5.25m=12

6m=9

6.75m=5

7.5m=15

8.25m=42

9m=32

9.75m=13

10.5m=11

12m=17

13.5m=20

15m=20

16.5m=36

18m=25

19.5m=35

## **Borehole log ID 951**

0-2m: Wet brown mottled grey soft plastic sandy CLAY.

2-8.9m: Wet pale grey silty fine SAND.

8.9-9.5m: Moist orange mottled grey soft CLAY.

9.5-12.7m: Moist black very soft to soft CLAY.

12.7-20m: Wet grey slightly silty fine SAND.

### **SPT**

0.75m=7

1.5m=5

2.25m=9

3m=7

3.75m=4

4.5m=4

5.25m=20

6m=16

6.75m=17

7.5m=13

8.25m=14

9m=5

9.75m=4

10.5m=4

12m=6

13.5m=21

15m=43

16.5m=41

18m=48

19.5m=19

## **Borehole log ID 952**

0-2.8m: Moist red mottled yellow, grey firm sandy CLAY.

2.8-5m: Moist brown slightly silty fine & medium SAND.

5-6.6m: Pale grey-brown speckled white slightly silty fine to coarse SAND.

6.6-19.3m: Moist pale brown mottled red & pale grey silty fine & medium SAND. Samples slightly cohesive.

19.3-23.5m: Moist green-grey to grey silty fine SAND.

23.5-25.1m: Moist dark grey soft silty CLAY.

25.1-28.9m: Pale grey brown speckled white silty fine SAND. Pebbles of soft siltstone at 28.95m.

## **SPT**

0.75m=9

1.5m=13

2.25m=14

3m=16

3.75m=10

4.5m=12

5.25m=15

6m=23

6.75m=5

7.5m=4

8.25m=10

9.75m=12

10.5m=16

12m=17

13.5m=25

16.5m=35

18m=40

19.5m=41

21m=40

22.5m=28

24m=20

25.5m=31

27m=32/ref.

28.5m=69



**Borehole log ID 1301**

0-1.5m: No recovery

1.5-2.5m: Moist reddish brown sandy CLAY with grey & yellow sandy clay lenses.

2.5-3.5m: Moist reddish brown sandy CLAY with grey & yellow sandy clay lenses.

3.5-4.5m: Moist pinkish brown sandy CLAY with grey sandy clay lenses.

4.5-5.5m: Moist grey sandy CLAY with pink and light brown streaks.

5.5-6.5m: Moist light brown clayey SAND with grey sandy lenses.

6.5-7.5m: Wet light brown/grey clayey SAND with reddish brown streaks.

7.5-10.5m: Wet greyish brown fine SAND.

10.5-11.5m: Moist light grey fine SAND with moist light brown bands of fine sand.

11.5-13.5m: Moist grey fine SAND with streaks of yellow brown sand.

13.5-15.5m: Moist light brown grey fine SAND.

**SPT**

2m=6

3m=14

4m=20

5m=16

6m=17

7m=19

8m=21

9m=18

10m=19

11m=22

12m=20

13m=25

14m=21

15m=24

## **Borehole log ID 1302**

0-2.5m: Moist light brown/yellow SAND with red & orange stiff clayey lenses.  
2.5-3.5m: Moist light brownish grey clayey SAND with reddish orange clayey lenses.  
3.5-4.5m: Moist orange brown clayey SAND with light grey/brown stiff sandy clay lenses.  
4.5-5.5m: Moist orange/brown with greyish brown streaked stiff sandy CLAY.  
5.5-6.5m: Wet light brown/orange/grey stiff sandy CLAY.  
6.5-7.5m: Moist light brown/orange stiff sandy CLAY.  
7.5-8.5m: Moist light brown/grey with orange streaks clayey SAND.  
8.5-9.5m: Wet light grey/brown SAND with wet orange/yellow sand lenses.  
9.5-18.5m: Moist to wet light grey fine SAND.  
18.5-21.5m: Moist orange to grey fine SAND.  
21.5-23.5m: Moist orange brown stiff sandy CLAY.  
23.5-25.5m: Moist greyish black stiff sandy CLAY to CLAY.  
25.5-26.5m: Moist light brown fine SAND.  
26.5-27.5m: Moist orange brown very fine sandy CLAY.  
27.5-29.5m: Moist greenish grey very fine SAND.  
29.5-30.5m: Grey green soft to medium hard Cretaceous SILTSTONE.  
30.5-31.5m: Grey green soft to medium hard Cretaceous SILTSTONE with bands of green grey fine silt.

### **SPT**

2m=1  
3m=3  
4m=15  
5m=16  
6m=20  
7m=18  
8m=15  
9m=18  
10m=28  
11m=12  
12m=17  
13m=13  
14m=12  
15m=22  
16m=23  
17m=13  
18m=17  
19m=31  
20m=31  
21m=20  
22m=20  
23m=30  
24m=12  
25m=17  
26m=30  
27m=ref.

## **Borehole log ID 1321**

0-5m: Grey mottled orange & yellow loose very silty fine SAND. Cohesive to semi-cohesive.

5-7m: Light grey mottled orange medium dense slightly silty fine SAND.

7-10m: Light brown medium dense fine to medium SAND.

10-17m: Light grey brown with traces of yellow medium dense slightly silty fine SAND.

17-23.5m: Light yellow brown & grey medium dense to dense clean fine SAND.

23.5-33m: Dark grey stiff sandy SILT with occasional shell fragments. In situ completely weathered Cretaceous siltstone.

### **SPT**

1.5m=3

3m=10

4.5m=9

6m=15

7.5m=15

9m=16

10.5m=10

12m=12

13.5m=14

15m=21

16.5m=9

18m=18

19.5m=30

21m=26

22.5m=43

24m=29

25.5m=33

27m=28

28.5m=33

30m=32

31.5m=59

33m=ref.

## **Borehole log ID 1322**

0-3.5m: Grey mottled orange & yellow loose very silty fine to medium SAND. Contains lenses of sandy silt. Cohesive.

3.5-11.5m: Light yellow brown & grey medium dense to dense slightly silty to clean fine SAND.

11.5-14.5m: Yellow brown mottled grey firm to stiff partially fissured silty CLAY.

14.5-22m: Light olive medium dense to dense slightly silty to clean fine SAND. Streaked black at 19.5m.

22-28m: Dark grey stiff silty CLAY with fine silty sand lenses. Scattered shell fragments.

28-42m: Dark grey flecked white dense to very dense silty fine SAND. In situ completely weathered Cretaceous siltstone.

42-43m: Dark grey highly weathered closely fractured very soft rock Cretaceous SILTSTONE. Core in short cylindrical pieces, scattered fossil shell fragments.

### **SPT**

1.5m=2

3m=9

4.5m=35

6m=11

7.5m=12

9m=18

10.5m=45

12m=22

13.5m=13

15m=20

16.5m=16

18m=50

19.5m=43

21m=43

22.5m=44

24m=30

25.5m=30

27m=56

28.5m=ref.

30m=70

31.5m=67

33m=75

34.5m=ref.

36m=ref.

37.5m=75

39m=ref.

**APPENDIX B**

**NEW CENTRAL LIBRARY DATA**

# BOREHOLE LOG

TERRADRILL (PTY) LTD  
24 RICHMOND ROAD  
PINETOWN 3600

Project Centrum Library  
Site .....  
Job No .....  
Logged by J.E.F. Date 9/11/89  
Machine Gow bore  
Drilling Dates 26/10/89

Hole No 1  
Sheet 1 of 1 S41  
Location .....  
Elevation 6.53 m  
X Co-ord 3303718  
Y Co-ord -2333  
Orientation Vertical  
Total Depth 7.95 m

Driller Ben

Drilling Method and size	% Materials Recovery	R.O.D. %	Fracture Frequency	Sample and Test	Value	Depth Metres	Legend	DESCRIPTION
								SOIL Moisture, Colour, Consistency, Structure, Soil Type, Origin, Inclusions, Field Assessment, Classification
								ROCK Colour, Weathering, Fabric, (Text, Struc, Disc) Rock Hardness, Rock Type, Discontinuities, Field Assessment, Classification
NX				↓	28	1 2 2.50		Moist pale grey - brown silty fine <u>SAND</u> .
				↓	11	3 4 4.00		Moist red mottled orange, grey, brown firm fissured sandy <u>CLAY</u> .
				↓	20	5 5.50		Yellow brown silty coarse <u>SAND</u> layered with grey fine sandy <u>CLAY</u> .
				↓	11	6 6.40		Moist grey very soft <u>CLAY</u> .
				↓		7 7.00		Grey mottled brown sandy <u>CLAY</u> .
				↓	24	8 7.95		Pale yellow - brown silty fine and medium <u>SAND</u> .

Standard Penetration Test  
 Water Level  
 Approximate Material Changes  
 End of Borehole

SPT Blow N  
 Disturbed Sample  
 Undisturbed Sample  
 PL Pinhead Test  
 (Index in MPa)

Lab Test  
 I Indicator  
 C Consolidation  
 S Shearbox  
 T Triaxial  
 R Recompacted

**REMARKS**

Water level 2,60m  
3,93 msl

REF No

FIG.

# BOREHOLE LOG

TERRADRILL (PTY) LTD  
24 RICHMOND ROAD  
PINETOWN 3600

Project Central Library  
Site .....  
Job No .....  
Logged by T.E.F. Date 9/11/89  
Machine Gowbore  
Drilling Dates 30/10/89

Hole No 2  
Sheet 1 of 1  
Location .....  
Elevation 6.16 m  
X Co-ord 330 3835  
Y Co-ord -2373  
Orientation Vertical  
Total Depth 7.95 m

Driller Ben

Drilling Method and size	Materials Recovery %	R.O.D. %	Fracture Frequency	Samples and Test	Value	Depth Metres	Legend	DESCRIPTION
NX				↓	14	2.50	[Dotted Pattern]	SOIL Moisture, Colour, Consistency, Structure, Soil Type, Origin, Inclusions, Field Assessment, Classification ROCK Colour, Weathering, Fabric, (Text, Struc, Disc) Rock Hardness, Rock Type, Discontinuities, Field Assessment, Classification
				↓	14	4.00	[Diagonal Lines]	Moist brown silty fine <u>SAND</u> .
				↓	15		[Diagonal Lines]	Moist red, orange mottled grey firm fissured sandy <u>CLAY</u> with black tubelets
				↓	15		[Dotted Pattern]	Moist brown mottled pale grey - brown clayey fine <u>SAND</u>
				↓	17	7.95	[Dotted Pattern]	

Standard Penetration Test  
Water Level  
Approximate Material Changes  
End of Borehole

SPT Blow N  
Disturbed Sample  
Undisturbed Sample  
PL Pointload Test (Index in MPA)

Lab Test  
I Indicator  
C Consolidation  
S Shearbox  
T Triaxial  
R Recompacted

REMARKS

Water level 2.84 m  
3.32 msl

REF No ..... FIG. ....

# BOREHOLE LOG

**TERRADRILL (PTY) LTD**  
 24 RICHMOND ROAD  
 PINETOWN 3600

Project Central Library

Title N° 3  
 Sheet 1 of 1:541

Site

Location

Job N°

Elevation 5,23 m

Logged by J.E.F. Date 9/11/89

X Co-ord 3303816

Machine Gawhara

Y Co-ord -2410

Driller Ben

Drilling Dates 1/11/89

Orientation Vertical

Total Depth 7,95 m

Drilling Method and size	% Materials Recovery	R.Q.D. %	Fracture Frequency	Sample and Test	Value	Depth Metres	Legend	DESCRIPTION	
								SOIL	ROCK
NX						 1,60		Moisture, Colour, Consistency, Structure, Soil Type, Origin, Inclusions, Field Assessment, Classification	Colour, Weathering, Fabric, (Text, Struc, Disc) Rock Hardness, Rock Type, Discontinuities, Field Assessment, Classification
						4,00		Moist red mottled orange grey firm fissured sandy <u>CLAY</u> .	
						5,50		Moist orange grey sandy <u>CLAY</u> .	
						7,95		Moist pale grey clayey fine <u>SAND</u> .	

V Standard Penetration Test --- Water Level - - - Approximate Material Changes U End of Borehole	SPI Blow N O Disturbed Sample □ Undisturbed Sample PL Pointload Test Index in MPa	Lab Test I Indicator C Consolidation S Shearbox T Triaxial R Recompacted
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**REMARKS**

Water level 1,60m  
 (3,63m MSE)

REF N° FIG.



Entrance

BH

-2344.910 3712.600

① W.T.:  
3.93m  
MSL

EXISTING  
OPEN PARKING

Lease 2 on sub 11

~~MUSEUM~~  
BUILDING

LIBRARY

-2363.920 3815.390

BH W.T.:  
3.63m  
MSL

Lease 3 on sub 7

-2367.550 3829.220

BH ②  
W.T.: 3.32m  
MSL

-2338.900

3814.580

-2363.000

3842.000

LIBRARY SITE WATER TABLE:  
 DETAILS OF SURROUNDING  
 BOREHOLES.

BOREHOLE	COLLAR M.S.L. (m)	W.T. LEVEL (m)	W.T. M.S.L. (m)	DATE.
ORDNANCE RD				
U/PASS: 1.	4,41	0,5	3,91	30/8/85
2.	4,54	0,6	3,94	
3	6,13	2,1	3,93	
4	6,18	2,2	3,98	
5	5,53	1,7	3,83	
<u>MEAN:</u>			<u>3,92 m</u> →	
OLD STATION: 1	5,5 (?)	3,25	2,25	22/8/88
2	6,4 (?)	3,28	3,12	
<u>MEAN:</u>			<u>2,69 m</u> →	
MEDWOOD GARDENS: P.R+B PARKING:	6,01	4,16	<u>1,85 m</u> →	3/10/83

NOTE: TERRADRILL SHOULD FINISH FIRST  
 HOLE BY EARLY A.M. of 20/10/89.

**APPENDIX C**

**ORDINANCE ROAD UNDERPASS DATA**

CITY ENGINEER'S DEPARTMENT

JOB NO. 18/86

MATERIALS TESTING SECTION

DATE: 20/9/85

Ordnance Rd. Udderston-  
foundation investigation.

REQUESTED BY :-

PE(S.S.)

PE(M.R.) - G. PAYNE.

TESTS PERFORMED:- 5 borholes by Continuous Core.

Report.

The site is underlain by interlayered fine sands, silty sands and clays typical of the Holton Beds profile in the Central City area. A 3m thick layer of very soft black clay was intersected in holes 2 and 4. Fine red mottled yellow sandy clays approximately 3m thick originally covered the surface sands but appears to have been removed for the original railway lines. The water table lies very close to surface.

Significant settlements will occur under the proposed structures and earth fills. Accurate estimates cannot be made due to the difficulty of estimating the in situ compressibility of sands and the layered nature of the profile.

Assuming the proposed fill density will

be  $20 \text{ kN/m}^3$ , the resulting bearing pressure of  $120-140 \text{ kPa}$  will cause settlements of between  $100$  and  $200 \text{ mm}$  to occur. The greatest movements will occur over the areas where the soft black clay is thickest. The rate of settlement will be rapid, with most movement complete within  $3-6$  months. Ongoing creep will continue after this however, and it is possible that a further  $50-100 \text{ mm}$  may occur in  $5-10$  years.

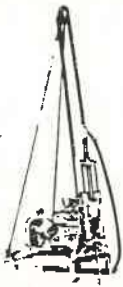
The movement under the proposed retaining walls should be similar in magnitude although the variable pressure distribution under their foundations will cause differential settlement and tilting.

The design pressure of  $180 \text{ kPa}$  under the tunnel footings will theoretically result in settlements between  $70$  and  $130 \text{ mm}$  occurring. This will be differential in nature, with again the greatest movement probable over the black clays.

Most excavations will be below the water table. Great difficulty will be experienced in the ~~the~~ construction of the road through the tunnels as earth moving equipment will cause shear failure of the saturated sands and clays at surface.

The retaining walls on the west side of the underpass will be reported on separately.

J.S. Davis



# CONTINUOUS CORE

115 KNOWLES CENTRE  
22 CHANCERY LANE  
PINETOWN 3600

KNOWLES SENTRUM 115  
CHANCERYSTEEG 22  
PINETOWN 3600

TEL: 724651, 729864

Projek: **ORDNANCE ROAD**  
Project: .....  
Terrein: **UNDERPASS**  
Site: .....  
Taak No.: .....  
Job No.: .....  
Beskryf deur: ..... Datum: **29/8/85**  
Logged By: **I.E.F.** Date: .....  
Masjien: **BBS 10**  
Machine: .....  
Boorwerk begin: **13/8/85** Eindig: .....  
Drilling Started: ..... Completed: .....

Boorgat No.: **1**  
Hole No.: .....  
Vel.: **1 of 2 S41**  
Sheet: .....  
Lokalisering: **-2023.14**  
Location: **303.516.70**  
Hoogte: .....  
Elevation: **+ 4.41 m.**  
Oriëntasie: **VERT**  
Orientation: .....

Drilling Method and Size	% Core Recovery	RQD %	Fracture Frequency	Test or Sample	Value	Depth Metres	Legend	DESCRIPTION
Boormetode en grootte	% Kern Herwins	RKD %	Breuk Frekwensie	Toets of Monster	Waarde	Diepte Meter	Simbool	BESKRYWING
				↓	19	1		Wet pale brown to pale grey mottled brown slightly SILTY fine and medium SAND
				↓	7	2		
				↓	14	3		
				↓	8	4		
				↓	9	5		
				↓	18	5		
				↓	3	6		Moist grey mottled brown soft SANDY CLAY
				↓	5	6		
				↓	17	7		Moist pale grey, brown SILTY fine and medium SAND. Stiff CLAYEY SAND at 10.50m Samples slightly cohesive.
				↓	44	8		
				↓	21	9		
				↓	16	10		
				↓	17	11		
				↓	21	12		
				↓	18	13		
				↓	40	14		Wet grey speckled white medium and coarse slightly SILTY SAND
				↓		15		

✚ Standaard Penetrasie Toets  
Standard Penetration Test

⏊ Watervlak  
Water Rest Level

--- Benaderde Materiaal Verandering  
Approximate Material Changes

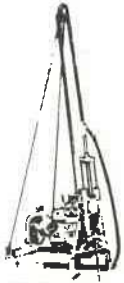
☐ Deurlatentheidstoets  
Permeability Test

● Versteerde Monster  
Disturbed Sample

◻ Onversteerde Monster  
Undisturbed Sample

N S.P.T. Resultaat  
S.P.T. Result  
I Klasifikasie Toets  
Classification Test  
S Sterkte Bepaling  
Strength Test  
C Sterkte Bepaling  
Consolidation Test  
Konsolidasie Toets

Opmerkings  
Remarks



# CONTINUOUS CORE

115 KNOWLES CENTRE  
22 CHANCERY LANE  
PINETOWN 3600  
KNOWLES SENTRUM 115  
CHANCERYSTEEG 22  
PINETOWN 3600  
TEL: 724651, 729864

Projek: ORDNANCE ROAD  
Project: ORDNANCE ROAD  
Terrein: UNDERPASS  
Site: UNDERPASS  
Taak No.:  
Job No.:  
Beskryf deur: T.E.F. Datum: 29/8/85  
Logged By: T.E.F. Date: 29/8/85  
Masjien: BBS 10  
Machine: BBS 10  
Boorwerk begin: Eindig  
Drilling Started: Completed:

Boorgat No. 1  
Hole No.: 1  
Vel. 2 of 2  
Sheet: 2 of 2  
Lokaliteit:  
Location:  
Hoogte:  
Elevation:  
Oriëntasie:  
Orientation: VERT

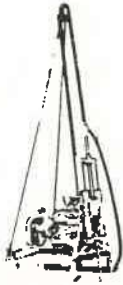
Drilling Method and Size	% Core Recovery	RQD %	Fracture Frequency	Test or Sample	Value	Depth Metres	Legend	DESCRIPTION
Boormetode en grootte	% Kern Herwins	RQD %	Breuk Frekwensie	Toets of Monster	Waarde	Diepte Meter	Simbool	BESKRYWING
				↓	25	15	[Patterned Box]	Wet grey - green SILTY fine SAND, slightly cohesive.
				↓	31	16		
				↓	47	17		
				↓	26	18		
				↓		19		
						20		

- ↓ Standaard Penetrasie Toets  
Standard Penetration Test
- ▽ Watervlak  
Water Rest Level
- Benaderde Materiaal Verandering  
Approximate Material Changes

- [ Deurlatentheidstoets  
Permeability Test
- Versteerde Monster  
Disturbed Sample
- Onversteerde Monster  
Undisturbed Sample

- N S.P.T. Resultaat  
S.P.T. Result
- I Klasifikasie Toets  
Classification Test
- S Sterkte Bepaling  
Strength Test
- C Konsolidasie Toets  
Consolidation Test

Opmerkings  
Remarks



# CONTINUOUS CORE

115 KNOWLES CENTRE  
22 CHANCERY LANE  
PINETOWN 3600  
KNOWLES SENTRUM 115  
CHANCERYSTEEG 22  
PINETOWN 3600  
TEL: 724651, 729864

Projek: ORDNANCE ROAD  
Project: . . . . .  
Terrein: . . . . .  
Site: . . . . . UNDERPASS  
Taak No.: . . . . .  
Job No.: . . . . .  
Beskryf deur: . . . . . Datum: . . . . .  
Logged By: T.E.E. . . . . Date: 29/8/85  
Masjien: . . . . . BBS 10  
Machine: . . . . .  
Boorwerk begin: . . . . . Eindig: . . . . .  
Drilling Started: 15/8/85 . . . . . Completed: . . . . .

Boorgat No. 2  
Hole No.: . . . . .  
Vol. 1 of 2 Set  
Sheet: . . . . .  
Lokalisering -1995.31  
Location: 35 03504.13  
Hoogte  
Elevation: + 4.54 m  
Oriëntasie  
Orientation: VERT

Drilling Method and Size	% Core Recovery	RQD %	Fracture Frequency	Test or Sample	Value	Depth Metres	Legend	DESCRIPTION
Boormetode en grootte	% Kern Herwins	RKD %	Breuk Frekwensie	Toets of Monster	Waarde	Diepte Meter	Simbool	BESKRYWING
				↓	10	1	[Dotted pattern]	Wet pale brown to pale grey SILTY fine SAND with medium SAND from 5,25m
				↓	12	2		
				↓	12	3		
				↓	16	4		
				↓	21	5		
				↓	17	6		
				↓	21	6		
				↓	16	7	[Cross-hatched pattern]	Moist orange - brown to grey CLAYEY fine and medium SAND
				↓	7	8		
				↓	9	9	[Diagonal hatched pattern]	U 100 8 - 8,40m Moist black soft to very soft CLAY. Occasional SAND zones, 10 - 20mm diameter
				↓	6	9		
				↓	4	10		
				↓	5	11		
				↓	64	12	[Dotted pattern]	Wet pale grey slightly SILTY medium SAND
				↓		13		
				↓	20	14		
				↓		15		

ID 949



U 100 8 - 8,40m

↓ Standaard Penetrasi Toets  
Standard Penetration Test

▽ Watervlak  
Water Rest Level

--- Benaderde Materiaal Verandering  
Approximate Material Change

[ ] Deurlatentheidstoets  
Permeability Test

● Versteerde Monster  
Disturbed Sample

■ Onversteerde Monster  
Undisturbed Sample

N S.P.T. Resultaat  
S.P.T. Result

I Klasifikasie Toets  
Classification Test

S Sterkte Bepaling  
Strength Test

Opmerkings  
Remarks





# CONTINUOUS CORE

115 KNOWLES CENTRE  
22 CHANCERY LANE  
PINETOWN 3600

KNOWLES SENTRUM 115  
CHANCERYSTEEG 22  
PINETOWN 3600

TEL: 724651, 729864

Projek: **ORDNANCE ROAD**  
Project: ..  
Terrein: **UNDERPASS**  
Site: ..  
Taak No.: ..  
Job No.: ..  
Beskryf deur: **T.E.F.** Datum: **29/8/85**  
Logged By: .. Date: ..  
Masjien: **BBS 10**  
Machine: ..  
Boorwerk begin: **15/8/85** Eindig: ..  
Drilling Started: .. Completed: ..

Boorgat No. **2**  
Hole No.: ..  
Vel. **2 of 2**  
Sheet: ..  
Lokalliteit: ..  
Location: ..  
Hoogte: ..  
Elevation: ..  
Oriëntasie: ..  
Orientation: ..

Drilling Method and Size	% Core Recovery	RQD %	Fracture Frequency	Test or Sample	Value	Depth Metres	Legend	DESCRIPTION
Boormetode en grootte	% Kern Herwins	RQD %	Breuk Frekwensie	Toets of Monster	Waarde	Diepte Meter	Simbool	BESKRYWING
				↓	81	16	Grey SANDY CLAY Tens 19.50 - 19.80m	
				↓	68	17		
				↓	98	18		
				↓	31	19		

↓ Standaard Penetrasie Toets  
Standard Penetration Test

W Watervlak  
Water Rest Level

--- Benaderde Materiaal Verandering  
Approximate Material Changes

□ Deurlatentheidstoets  
Permeability Test

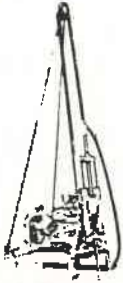
● Versteerde Monster  
Disturbed Sample

□ Onversteerde Monster  
Undisturbed Sample

N S.P.T. Resultaat  
S.P.T. Result  
I Klasifikasie Toets  
Classification Test  
S Sterkte Bepaling  
Strength Test  
C Konsolidasie Toets  
Consolidation Test

Opmerkings  
Remarks

romvert(Duplikaat)



# CONTINUOUS CORE

115 KNOWLES CENTRE  
22 CHANCERY LANE  
PINETOWN 3600

KNOWLES SENTRUM 115  
CHANCERYSTEEG 22  
PINETOWN 3600

TEL: 724651, 729864

Projek: . . . . . **ORDNANCE ROAD**  
 Terrein: . . . . . **UNDERPASS**  
 Site: . . . . .  
 Taak No.: . . . . .  
 Job No.: . . . . .  
 Beskryf deur: . . . . . **T.E.F.** Datum: **29/8/85**  
 Logged By: . . . . . Date: . . . . .  
 Masjien: . . . . . **BBS 10**  
 Machine: . . . . .  
 Boorwerk begin: **15/8/85** Eindig: . . . . .  
 Drilling Started: . . . . . Completed: . . . . .

Boorgat No. . . . . **3**  
 Hole No.: . . . . .  
 Vel: . . . . . **1 of 2** *S4ff*  
 Sheet: . . . . .  
 Lokalliteit: **-2017.90**  
 Location: **3303534.29**  
 Hoogte: . . . . .  
 Elevation: **+ 6.13 m**  
 Oriëntasie: . . . . .  
 Orientation: . . . . . **VERT**

Drilling Method and Size	% Core Recovery	RQD %	Fracture Frequency	Test or Sample	Value	Depth Metres	Legend	DESCRIPTION
Boormetode en grootte	% Kern Herwins	RKD %	Breuk Frekwensie	Toets of Monster	Waarde	Diepte Meter	Simbool	BESKRYWING
				↓	5	1		Moist red mottled yellow, grey firm SANDY CLAY
				↓	12	2		
				↓	15			
				↓	10	3		Net pale grey, brown SILTY fine and medium SAND. Samples slightly cohesive
				↓	8	4		
				↓	9	5		
				↓	12	6		
				↓	9	7		
				↓	5	8		
				↓	15			
				↓	42	9		Coarse SAND and gravel lens 8.25 - 8.40 m
				↓	32	10		
				↓	13	11		
				↓	11			
				↓	17	12		Pale grey firm SANDY CLAY
				↓	13			
				↓	20	14		
				↓		15		

ID 950

↓ Standaard Penetrasie Toets  
Standard Penetration Test

▽ Watervlak  
Water Rest Level

--- Benaderde Materiaal Verandering  
Approximate Material Change

☐ Deurlatent heldstoets  
Permeability Test

● Versteerde Monster  
Disturbed Sample

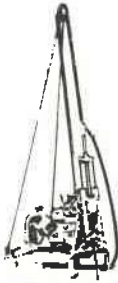
⬇ Onversteerde Monster  
Undisturbed Sample

N S.P.T. Resultaat  
S.P.T. Result

I Klasifikasie Toets  
Classification Test

S Sterkte Bepaling  
Strength Test

Opmerkings  
Remarks



# CONTINUOUS CORE

115 KNOWLES CENTRE  
22 CHANCERY LANE  
PINETOWN 3600  
KNOWLES SENTRUM 115  
CHANCERYSTEEG 22  
PINETOWN 3600  
TEL: 724651, 729864

Projek Project: . . . . . **ORDNANCE ROAD**  
 Terrain Site: . . . . . **UNDERPASS**  
 Taak No. Job No.: . . . . .  
 Beskryf deur: . . . . . **T.E.F.** Datum . . . . . **29/8/85**  
 Logged By: . . . . . Date . . . . .  
 Masjien Machine: . . . . . **BBS 10**  
 Boorwerk begin Drilling Started: . . . . . **15/8/85** Eindig Completed: . . . . .

Boorgat No. **3**  
 Hole No.: . . . . .  
 Vel. **2 of 2**  
 Sheet: . . . . .  
 Lokalliteit Location: . . . . .  
 Hoogte Elevation: . . . . .  
 Oriëntasie Orientation: . . . . . **VERT**

Drilling Method and Size	% Core Recovery	R Q D	Fracture Frequency	Test or Sample	Value	Depth Metres	Legend	DESCRIPTION
Boormetode en grootte	% Kern Herwins	R Q D	Breuk frekwensie	Toets of Monster	Waarde	Diepte Meter	Simbool	BESKRYWING
				↓	20	15	[Hatched Pattern]	Pale grey to green grey from 18.0m SILTY fine and medium SAND. Coarse at 15.0 m
				↓	36	16		
				↓	25	17		
				↓	25	18		
				↓	35	19		

- ↓ Standaard Penetrasie Toets  
Standard Penetration Test
- ▽ Watervlak  
Water Rest Level
- Benaderde Materiaal Verandering  
Approximate Material Changes

- [ Deurlatentheidstoets  
Permeability Test
- Versteerde Monster  
Disturbed Sample
- Onversteerde Monster  
Undisturbed Sample

- N S.P.T. Resultaat  
S.P.T. Result
- I Klasifiekasie Toets  
Classification Test
- S Sterkte Bepaling  
Strength Test
- C Konsolidasie Toets  
Consolidation Test

Opmerkings  
Remarks



# CONTINUOUS CORE

115 KNOWLES CENTRE  
22 CHANCERY LANE  
PINETOWN 3600

KNOWLES SENTRUM 115  
CHANCERYSTEEG 22  
PINETOWN 3600

TEL: 724651, 729864

Projek Project: ORDNANCE ROAD  
Terrein Site: UNDERPASS  
Taak No. Job No.:  
Beskryf deur: T.E.F. Datum: 29/8/85  
Logged By: Date: 29/8/85  
Masjien Machine: BBS 10  
Boorwerk begin: 20/8/85 Eindig Completed:  
Drilling Started: Completed:

Boorgat No. 4  
Hole No.:  
Vel. 1 of 2 541  
Sheet:  
Lokalliteit -1990.84  
Location: 3303521:57  
Hoogte Elevation: +6.18 m  
Orientasie Orientation: VERT

Drilling Method and Size	% Core Recovery	RQD %	Fracture Frequency	Test or Sample	Value	Depth Metres	Legend	DESCRIPTION
Boormetode en grootte	% Kern Herwins	RKD %	Breuk Frekwensie	Toets of Monster	Waarde	Diepte Meter	Simbool	BESKRYWING
				↓	7	1		Wet brown mottled grey soft plastic SANDY CLAY
				↓	5	2		
				↓	9	3		Wet pale grey SILTY fine SAND
				↓	7	3		
				↓	4	4		
				↓	4	5		
				↓	20	6		
				↓	16	6		
				↓	17	7		
				↓	13	8		
				↓	14	8		Orange - grey at 8.25 m
				↓	5	9		Moist orange mottled grey soft CLAY
				↓	4	10		
				↓	4	11		Moist black very soft to soft CLAY
				↓	6	12		
				↓		13		
				↓	21	14		
						15		

↓ Standaard Penetrasie Toets  
Standard Penetration Test

▽ Watervlak  
Water Rest Level

--- Benaderde Materiaal Verandering  
Approximate Material Changes

☐ Deurlatentheidstoets  
Permeability Test

● Versteerde Monster  
Disturbed Sample

▬ Onversteerde Monster  
Undisturbed Sample

N S.P.T. Resultaat  
S.P.T. Result

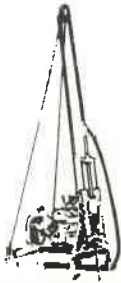
I Klasifikasie Toets  
Classification Test

S Sterkte Bepaling  
Strength Test

C Sterkte Bepaling  
Consolidation Test

Konsolidasie Toets

Opmerkings  
Remarks



# CONTINUOUS CORE

115 KNOWLES CENTRE  
22 CHANCERY LANE  
PINETOWN 3600

KNOWLES SENTRUM 115  
CHANCERYSTEEG 22  
PINETOWN 3600

TEL: 724651, 729864

Projek: ORDNANCE ROAD  
Project: .....  
Terrein: UNDERPASS  
Site: .....  
Taak No.: .....  
Job No.: .....  
Beskryf deur: T.E.F. Datum: 29/8/85  
Logged By: ..... Date: .....  
Masjien: BBS 10  
Machine: .....  
Boorwerk begin: 20/8/85 Eindig: .....  
Drilling Started: 20/8/85 Completed: .....

Boorgat No.: 4  
Hole No.: .....  
Vel.: 2 of 2  
Sheet: .....  
Lokalisiteit: .....  
Location: .....  
Hoogte: .....  
Elevation: .....  
Oriëntasie: VERT  
Orientation: .....

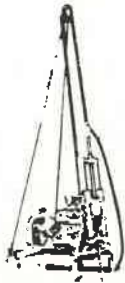
Drilling Method and Size	% Core Recovery	RQD %	Fracture Frequency	Test or Sample	Value	Depth Metres	Legend	DESCRIPTION
Boormetode en grootte	% Kern Herwins	RKD %	Breuk Frekwensie	Toets of Monster	Waarde	Diepte Meter	Simbool	BESKRYWING
				↓	43	15	[Pattern]	Wet grey slightly SILTY fine SAND
				↓	47	16		
				↓	48	17		
				↓	19	18		
				↓	19	19		
						20		

- ✚ Standaard Penetrasie Toets  
Standard Penetration Test
- ▽ Watervlak  
Water Rest Level
- .... Benaderde Materiaal Verandering  
Approximate Material Changes

- ☐ Deurlatent heldstoets  
Permeability Test
- ⊙ Versteerde Monster  
Disturbed Sample
- ▬ Onversteerde Monster  
Undisturbed Sample

- N S.P.T. Resultaat  
S.P.T. Result
- I Klasifikasie Toets  
Classification Test
- S Sterkte Bepaling  
Strength Test
- C Konsolidasie Toets  
Consolidation Test

Opmerkings  
Remarks



# CONTINUOUS CORE

115 KNOWLES CENTRE  
22 CHANCERY LANE  
PINETOWN 3600

KNOWLES SENTRUM 115  
CHANCERYSTEEG 22  
PINETOWN 3600

TEL: 724851, 729864

Projek: **ORDNANCE ROAD**  
Project: .....  
Terrein: **UNDERPASS**  
Site: .....  
Taak No.: .....  
Job No.: .....  
Beskryf deur: **T.E.F** Datum: **30/8/85**  
Logged By: ..... Date: .....  
Masjien: **BBS 10**  
Machine: .....  
Boorwerk begin: **23/8/85** Eindig: .....  
Drilling Started: ..... Completed: .....

Boorget No. **5**  
Hole No.: .....  
Vel: **1 of 2** 541  
Sheet: .....  
Lokalisering: **-2055.89**  
Location: **30°35'32.42"**  
Hoogte: .....  
Elevation: **+ 5.53 m**  
Oriëntasie: **VERT**  
Orientation: .....

Drilling Method and Size	% Core Recovery	RKD	Fracture Frequency	Test or Sample	Value	Depth Metres	Legend	DESCRIPTION
Boormetode en grootte	% Kern Herwins	RKD	Breuk Frekwensie	Toets of Monster	Waarde	Diepte Meter	Simbool	BESKRYWING
				↓	9	1		Moist red mottled yellow, grey firm SANDY CLAY
				↓	13	2		
				↓	14			
				↓	16	3		Moist brown slightly SILTY fine and medium SAND
				↓	10	4		
				↓	12	5		
				↓	15	6		Pale grey - brown speckled white slightly SILTY fine to coarse SAND
				↓	23			
				↓	5	7		Moist pale brown mottled red and pale grey SILTY fine and medium SAND. Samples slightly cohesive.
				↓	4	8		
				↓	10	9		
				↓	12	10		
				↓	16	11		
				↓	17	12		
				↓	13			
				↓	25	14		
				↓		15		

ID 952

↓ Standaard Penetrasie Toets  
Standard Penetration Test

▼ Watervlak  
Water Rest Level

.... Benaderde Materiaal Verandering

☐ Deurlatentheidstoets  
Permeability Test

● Versteerde Monster  
Disturbed Sample

○ Onversteerde Monster

N S.P.T. Resultaat  
S.P.T. Result  
↑ Klasifikasie Toets  
Classification Test  
S Sterkte Toets  
Strength Test  
- Sterkte Bepaling

Opmerkings  
Remarks



# CONTINUOUS CORE

115 KNOWLES CENTRE  
22 CHANCERY LANE  
PINETOWN 3600

KNOWLES SENTRUM 115  
CHANCERYSTEEG 22  
PINETOWN 3600

TEL: 724651, 729864

Projek: **ORDNANCE ROAD**  
Project: .....  
Terrein: **UNDER PASS**  
Site: .....  
Taak No.: .....  
Job No.: .....  
Beskryf deur: **T.E.F.** Datum: **30/8/85**  
Logged By: ..... Date: .....  
Masjien: **BBS 10**  
Machine: .....  
Boorwerk begin: **23/8/85** Eindig: .....  
Drilling Started: **23/8/85** Completed: .....

Boorgat No.: **5**  
Hole No.: .....  
Vel: **2 of 2**  
Sheet: .....  
Lokalliteit: .....  
Location: .....  
Hoogte: .....  
Elevation: .....  
Oriëntasie: **VERT**  
Orientation: .....

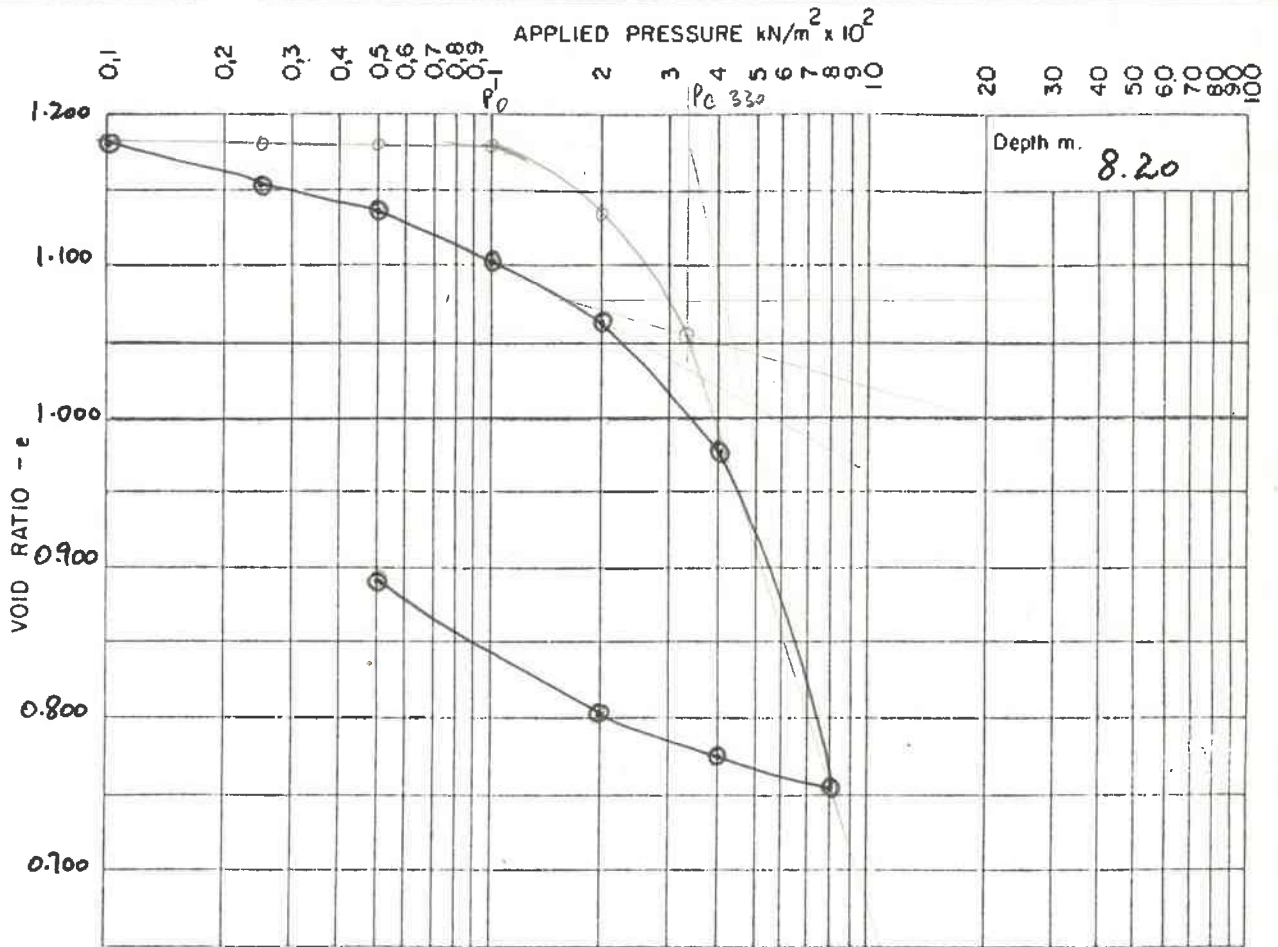
Drilling Method and Size	% Core Recovery	RQD %	Fracture Frequency	Test or Sample	Value	Depth Metres	Legend	DESCRIPTION
Boormetode en grootte	% Kern Herwins	RKD %	Breuk Frekwensie	Toets of Monster	Waarde	Diepte Meter	Simbool	BESKRYWING
						15		
				↓	35	17	[Stippled pattern]	Moist pale brown mottled red and pale grey SILTY fine and medium SAND. Samples slightly cohesive.
				↓	40	18		
				↓	41	20	[Stippled pattern]	Moist green - grey to grey SILTY fine SAND
				↓	40	21		
				↓	28	23		
				↓	20	24	[Diagonal hatching]	Moist dark grey soft SILTY CLAY
				↓	31	26	[Stippled pattern]	Pale grey brown speckled white SILTY fine SAND. Pebbles of soft SILTSTONE at 28.95 m
				↓	32/R	27		
				↓	69	28		

<p>↓ Standaard Penetrasie Toets Standard Penetration Test</p> <p>▽ Watervlak Water Rest Level</p> <p>--- Benaderde Materiaal Verandering Approximate Material Change</p>	<p>[ Deurlatentheidstoets Permeability Test</p> <p>● Versteerde Monster Disturbed Sample</p> <p>○ Onversteerde Monster Undisturbed Sample</p>	<p>N S.P.T. Resultaat S.P.T. Result</p> <p>I Klasifikasie Toets Classification Test</p> <p>S Sterkte Toets Strength Test</p> <p>C Sterkte Bepaling Consolidation Test</p>	<p>Opmerkings Remarks</p>
--	---	---	-------------------------------

# CONSOLIDATION TEST DATA

## ORDNANCE ROAD UNDERPASS WALLS

Borehole N<sup>o</sup>  
**2 (sample 1)**



APPLIED PRESSURE $\text{kN/m}^2$	0.42 = 0.496 VOID RATIO		PRESSURE RANGE $\text{kN/m}^2$	$m_v$ $\frac{\text{m}^2}{\text{MN}}$		$C_v$ ( $\sqrt{t}$ fitting) $\text{m}^2/\text{yr}$	$C_v$ (log fitting) $\text{m}^2/\text{yr}$
	LAB.	FIELD		LAB.	FIELD		
0	1.181	1.181					
25	1.154	1.181	0-25	0.49	-		
50	1.136	1.181	25-50	0.33	-		
100	1.106	1.181	50-100	0.28	-		
200	1.064	1.134	100-200	0.20	0.22		
400	0.974	0.974	200-400	0.22	0.37		
800	0.754	0.754	400-800	0.28	0.28		
400	0.775						
200	0.807						
50	0.891						

MOISTURE CONTENT %	DRY DENSITY $\text{kg/m}^3$	SPECIFIC GRAVITY	L.L.	P.L.	P.I.	OVERBURDEN PRESSURE $\text{kN/m}^2$	$P_c$ $\text{kN/m}^2$
46.8	1215	2.65 ASS.	44	27	17	100	330

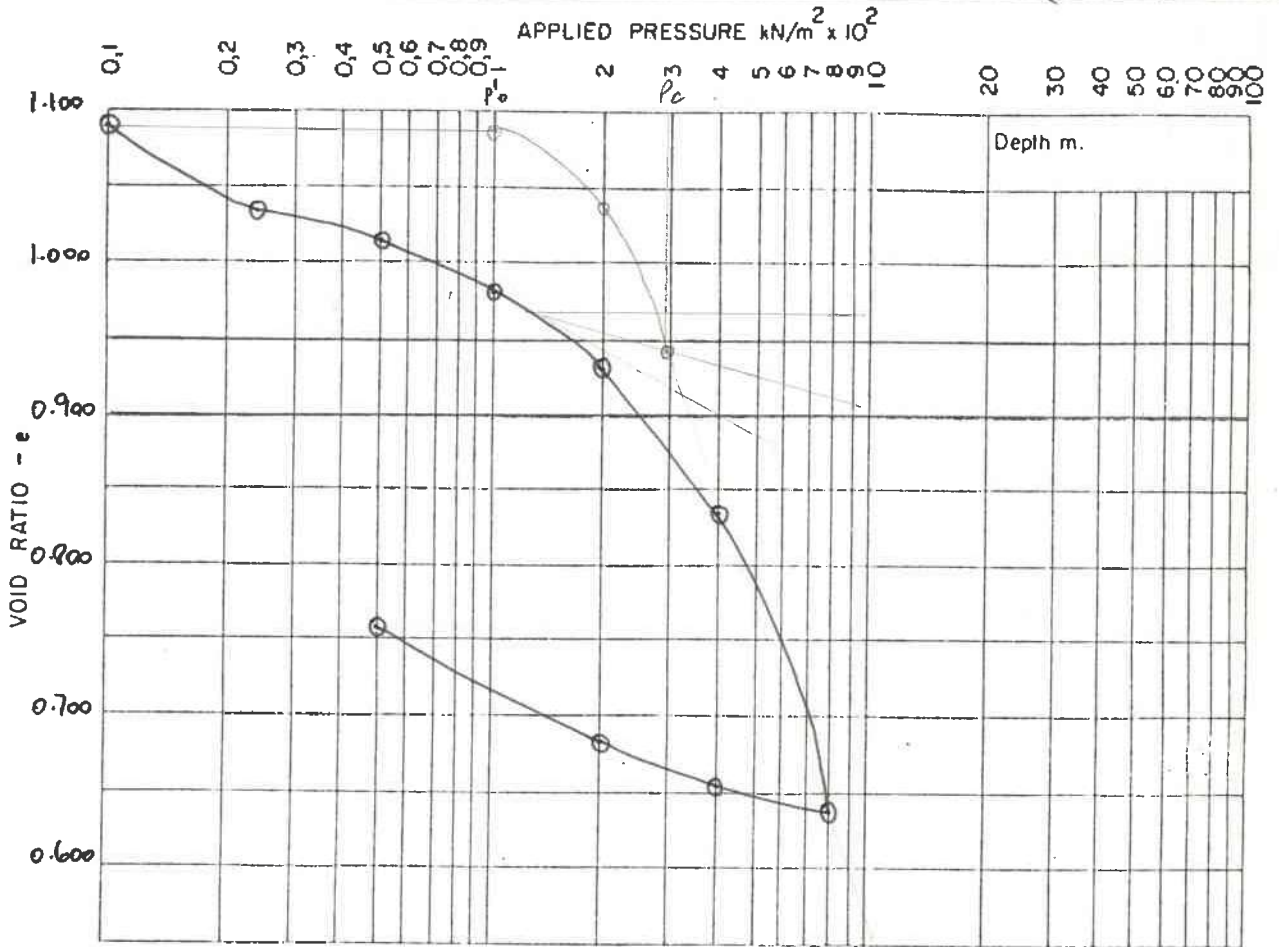
LABORATORY SOIL DESCRIPTION  <b>MOIST BLACK VERY SOFT CLAY.</b>	MOISTURE CONTENT AFTER TEST : <b>39.5</b> AND SATURATION RATIO : <b>129</b>	REF. NO.
	SATURATION RATIO BEFORE TEST : <b>105</b>	FIG. NO.



# CONSOLIDATION TEST DATA

Borehole N°

2  
(sample 2)



APPLIED PRESSURE kN/m <sup>2</sup>	VOID RATIO		PRESSURE RANGE kN/m <sup>2</sup>	$m_v$ m <sup>2</sup> /MN		$C_v$ ( $\sqrt{t}$ fitting) m <sup>2</sup> /yr	$C_v$ (log fitting) m <sup>2</sup> /yr
	LAB.	FIELD		LAB.	FIELD		
0	1.090						
25	1.033		0-25	1.08			
50	1.014		25-50	0.37			
100	0.980	1.090	50-100	0.33	0.0		
200	0.930	1.035	100-200	0.25	0.26		
400	0.836	0.836	200-400	0.24	0.49		
800	0.639		400-800	0.27	0.37		
400	0.655						
200	0.682						
50	0.758						

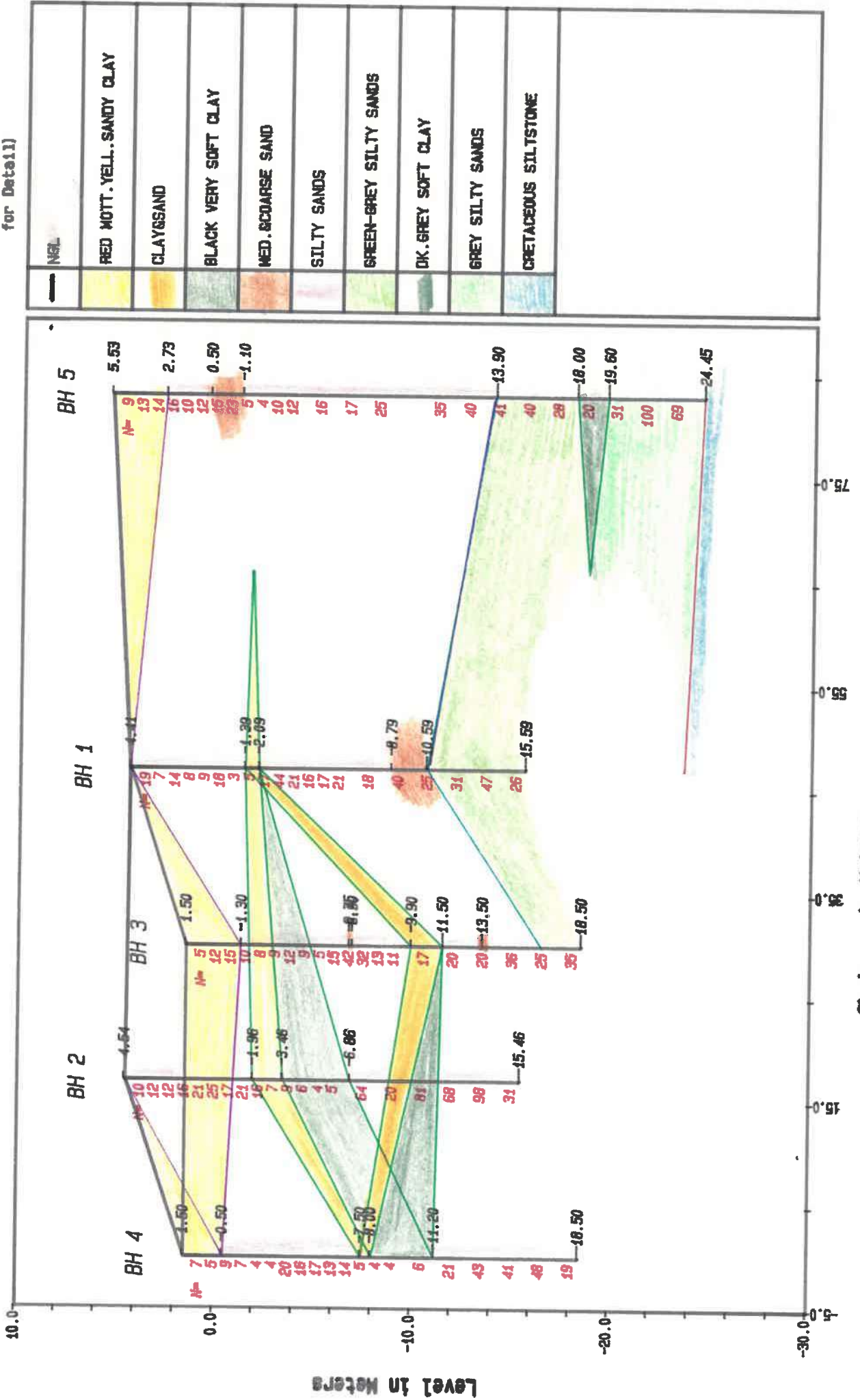
MOISTURE CONTENT %	DRY DENSITY kg/m <sup>3</sup>	SPECIFIC GRAVITY	L.L.	P.L.	P.I.	OVERBURDEN PRESSURE kN/m <sup>2</sup>	$P_c$ kN/m <sup>2</sup>
						100	300

LABORATORY SOIL DESCRIPTION	MOISTURE CONTENT AFTER TEST : _____ AND SATURATION RATIO : _____	REF. NO.
	SATURATION RATIO BEFORE TEST : _____	FIG. NO.

# Project: ORDNANCE RD. UNDERPASS-EAST SIDE

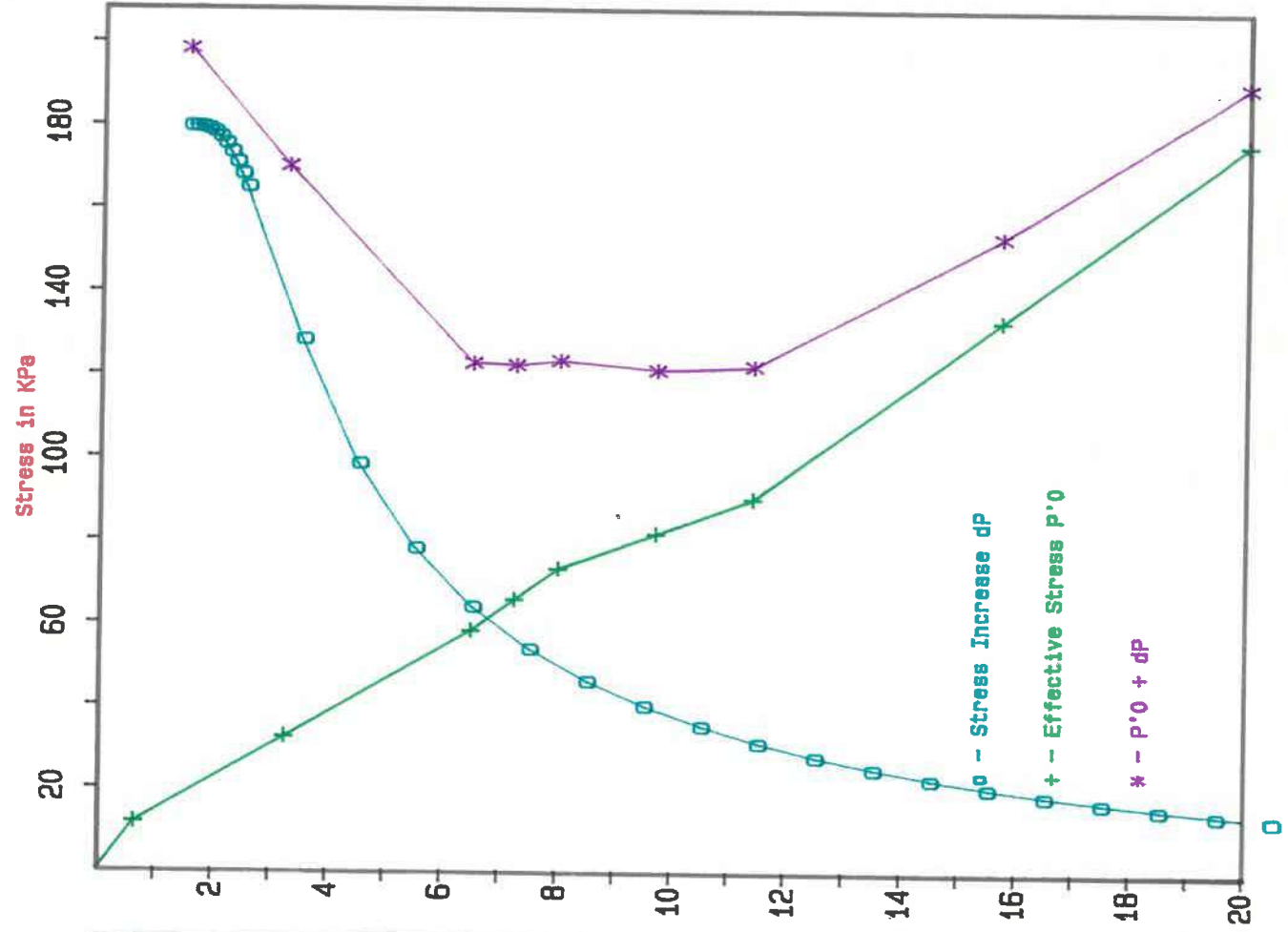
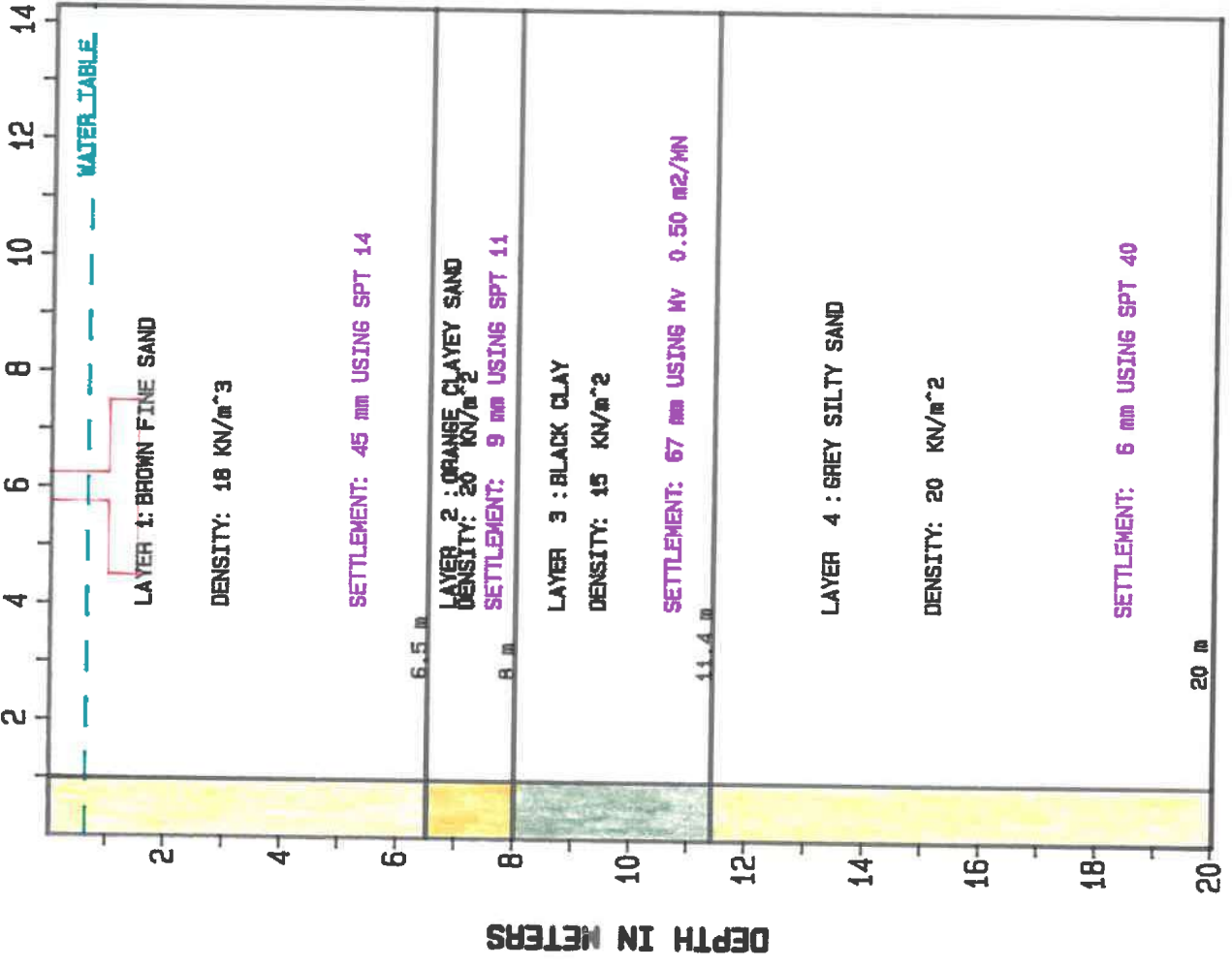
Date:

**Legend**  
(See Logs  
for Detail)



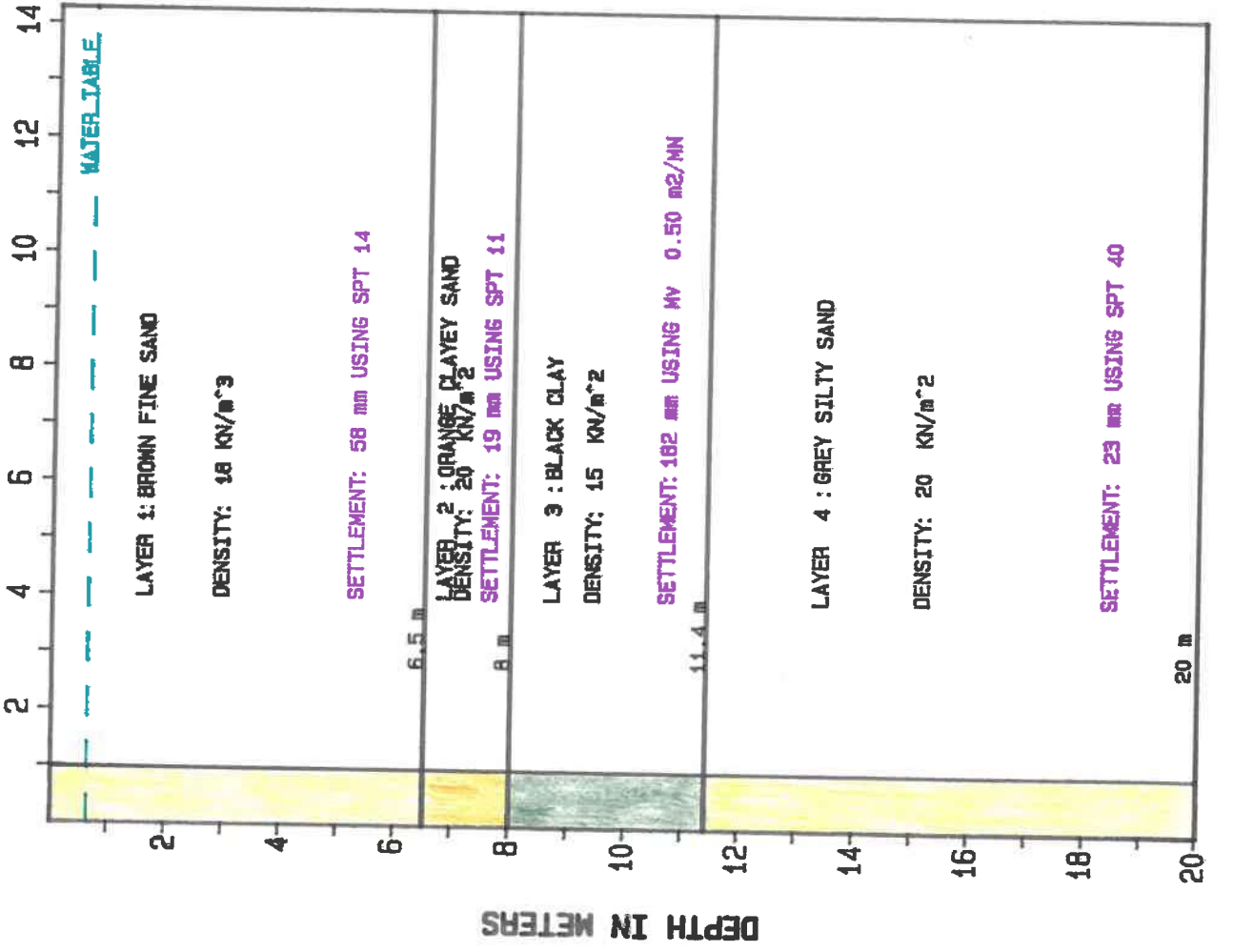
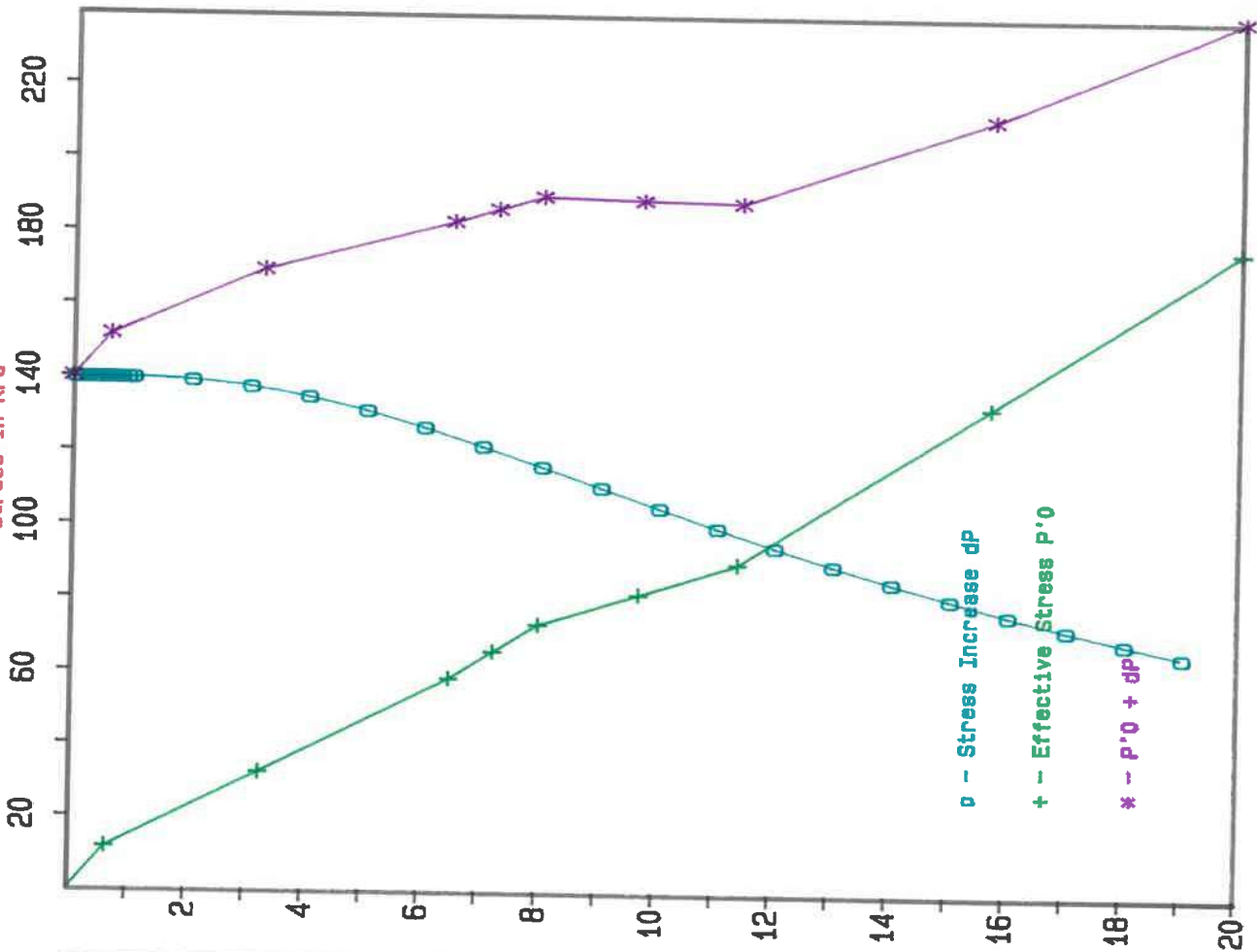
**PROJECT: ORDNANCE RD. UNDERPASS (SECTION B-B) DATE:**

Scale in Meters - 0 = 180 KPa L: 25 m B: 3 m R: 0 m



**PROJECT: ORDNANCE RD. UNDERPASS (SECTION B-B) DATE:**

Scale in Meters- 0- 140 KPa L: 50 m B: 17 m R: 0 m



WATER TABLE

6.5 m

8 m

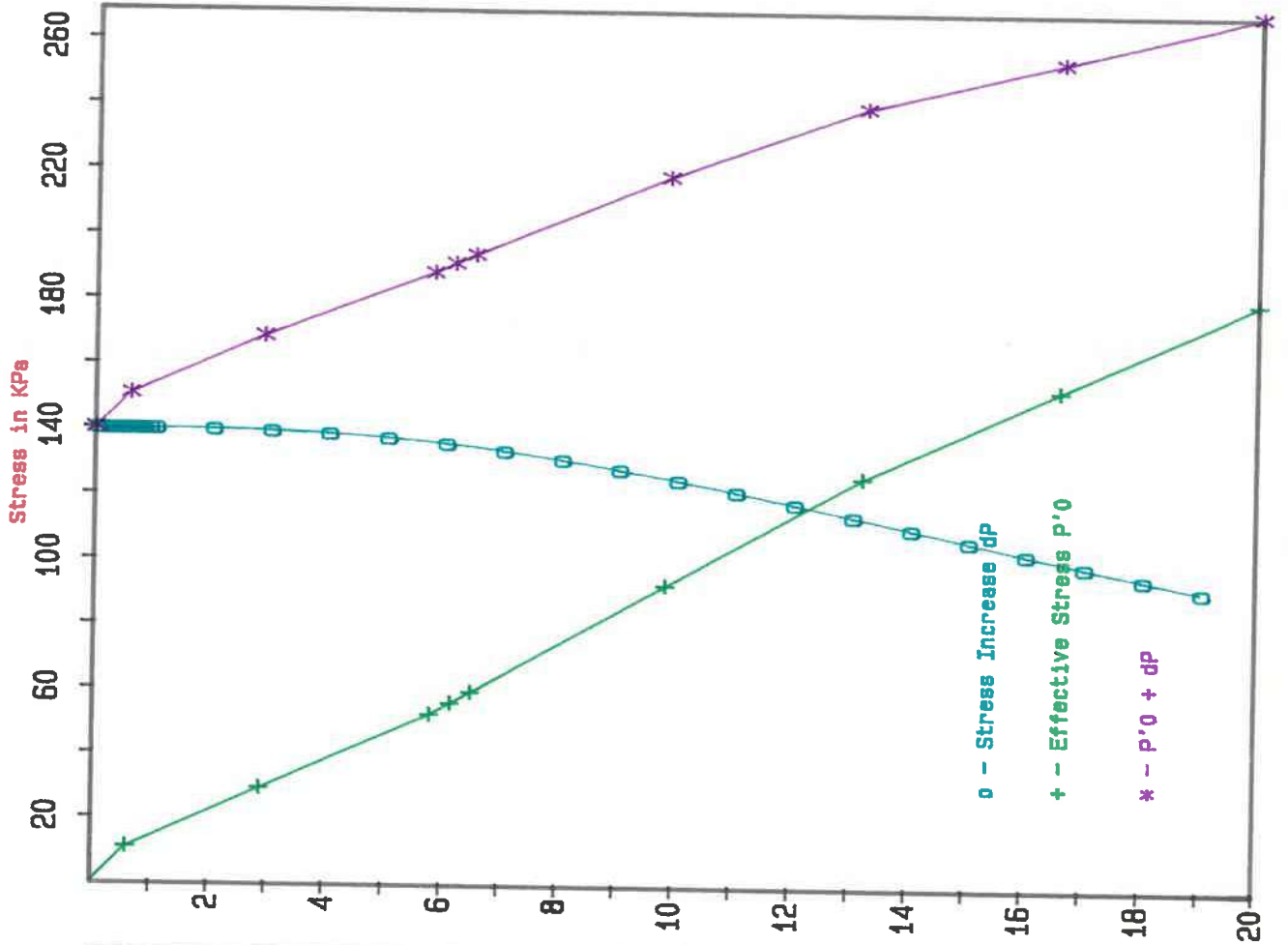
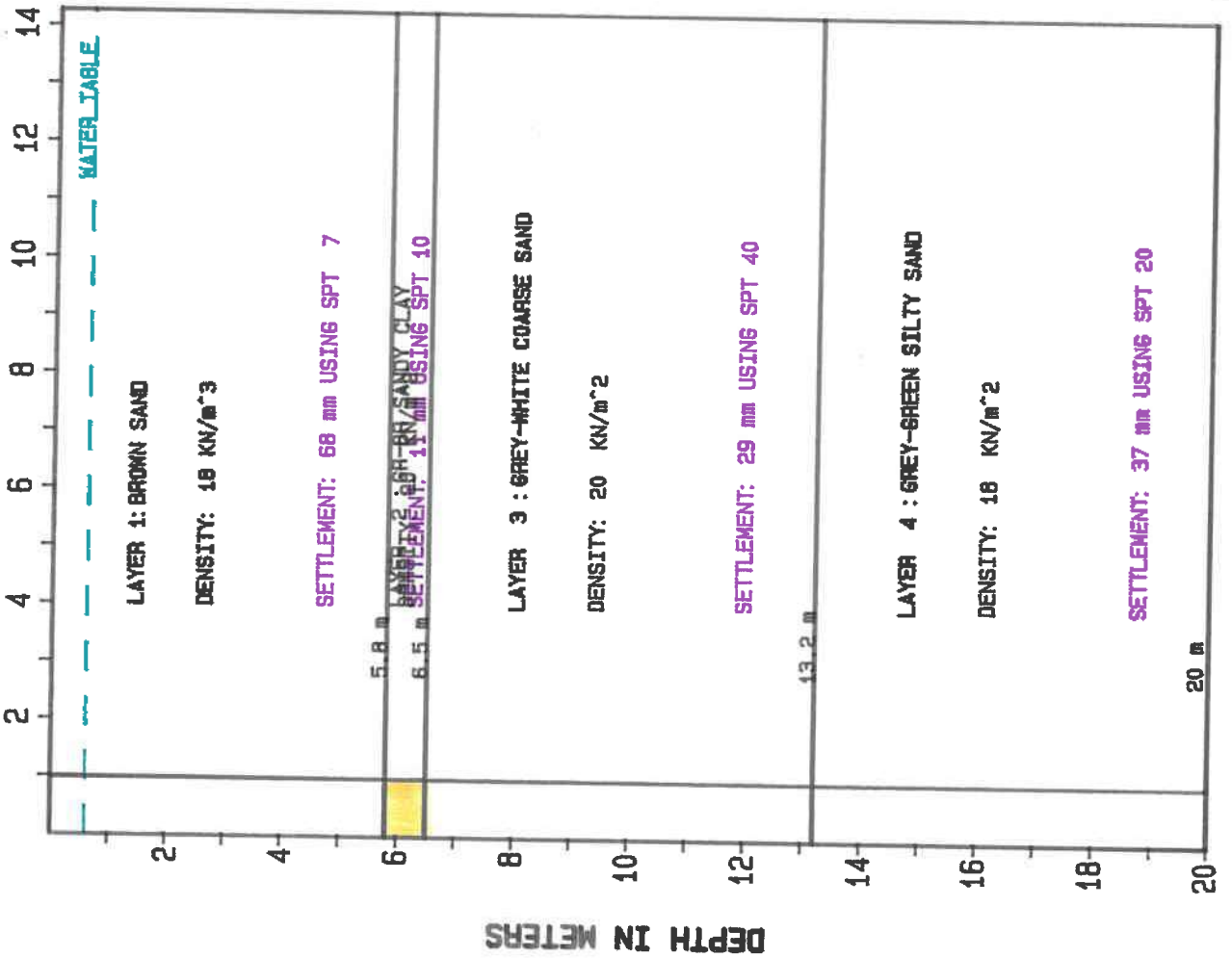
11.4 m

20 m

DEPTH IN METERS

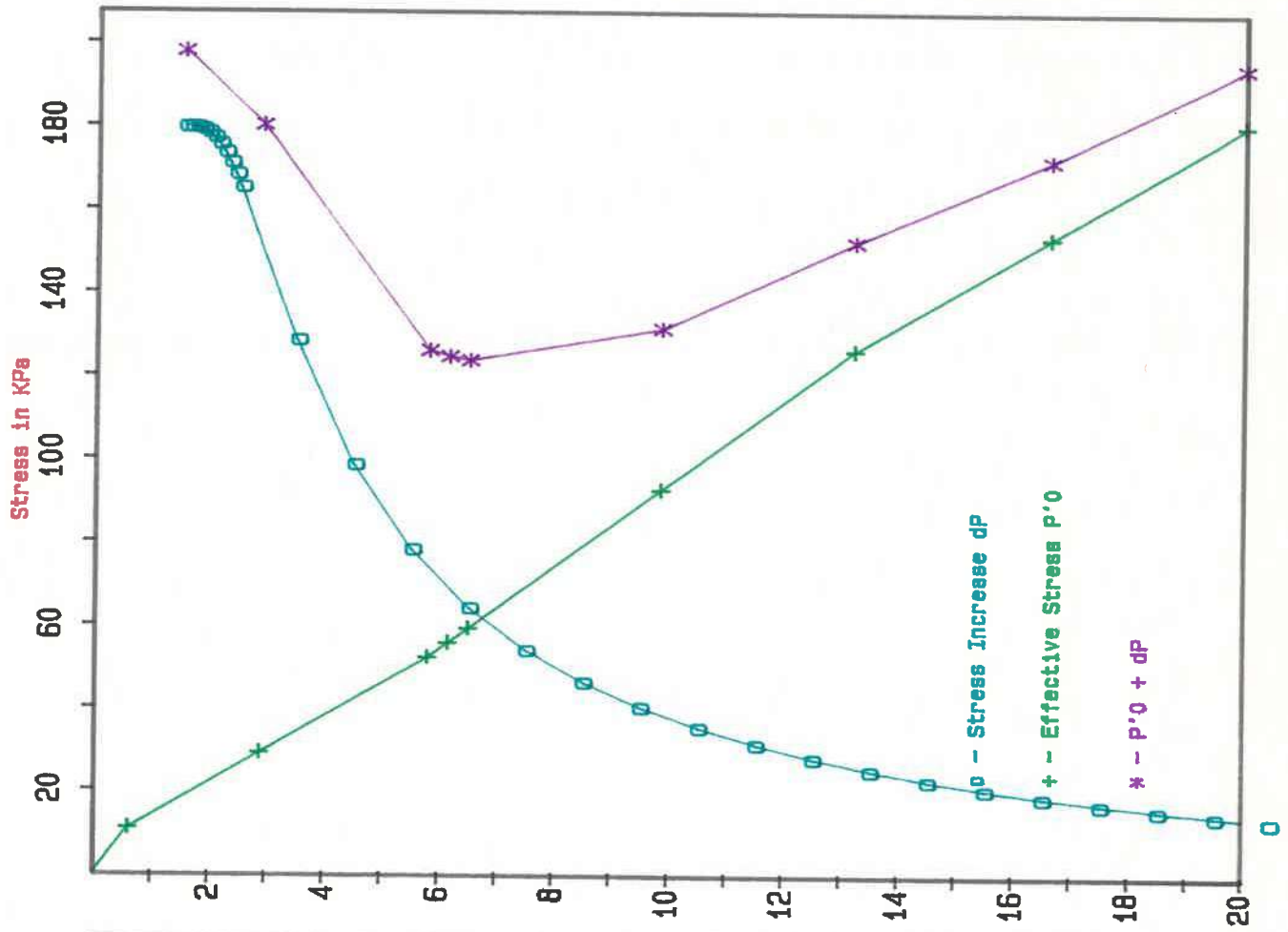
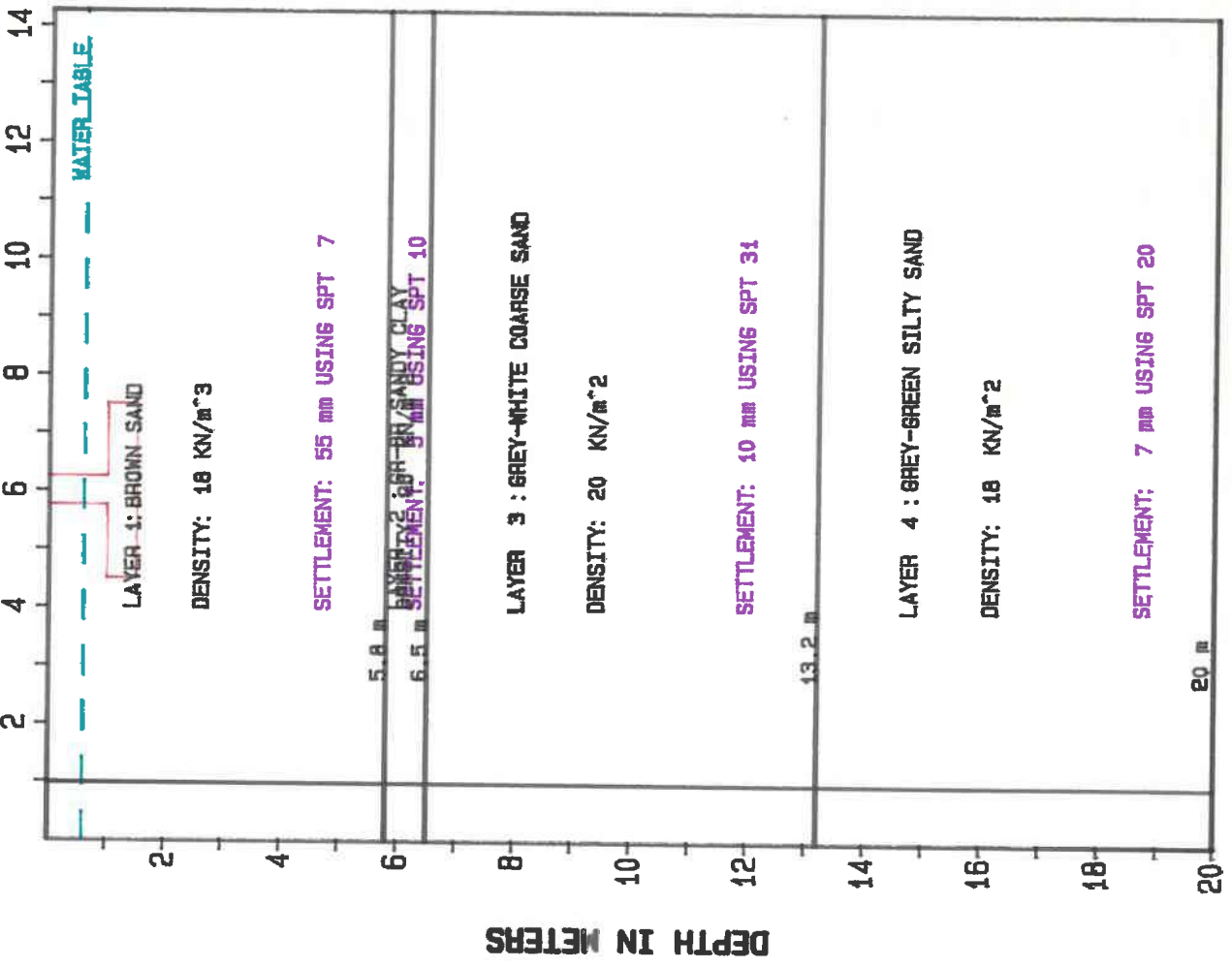
**PROJECT: ORONANCE RD (SECTION A-A) DATE:**

Scale in Meters- B- 140 KPa L: 50 m B: 28 m R: 0 m



**PROJECT: ORDNANCE RD (SECTION A-A) DATE:**

Scale in Meters--  $Q = 180 \text{ KPa}$  L: 25 m B: 3 m R: 0 m



**APPENDIX D**

**NE CENTRUM SITE DATA**

PHYSICAL ENVIRONMENT SERVICES UNIT: MATERIALS TESTING  
SECTION.

GEOLOGY & BOREHOLE PROFILES AT THE N.E. CORNER OF THE CENTRUM  
SITE: LOT 11713

Ref no.: 96/192

Job no.: RMT 4508

To: Manager: Land Transactions.

From: Dr. T.E. Francis.

Date: 18 June 1996.

INTRODUCTION.

Two boreholes with standard penetrometer testing were drilled at the site in the positions shown on the attached plan. Log sheets of these are attached. In addition, existing boreholes drilled in the Centrum area were reviewed to determine the regional geology.

GEOLOGY.

The area is underlain by pale grey, silty fine sand deposited on grey mottled orange-brown clayey sand to sandy clay, being part of the estuarine sediments of the Harbour Beds. With increasing depth the mottled clay grades into yellow to grey and brown fine and medium sand layers, containing small but variable quantities of silt and clay. Thicknesses of individual sand layers vary over short distances, lensing out to become more clayey or silty. The sands vary from loose to very dense, depending on particle size distribution and grain angularity. BH 1 to the west of the site refused on silt or siltstone of the St. Lucia Formation at about 33 m depth, whereas BH 2 in the east refused at shallower depth in grey-green sandy silt. Much of the site is covered by crusher run, surfaced with asphalt. Geological conditions are considered to be normal for central Durban.

In wet seasons the area is underlain by at least two groundwater tables, the upper one being perched in the shallow grey sand on the low permeability mottled clayey sand layer. This watertable tends to dissipate during dry periods, whereas the deeper water level lies permanently some metres below ground. Water levels of about 2.5 m were measured in the two boreholes after drilling. Excavations below the groundwater table collapse rapidly, due to seepage inflow.

*T.E. Francis*

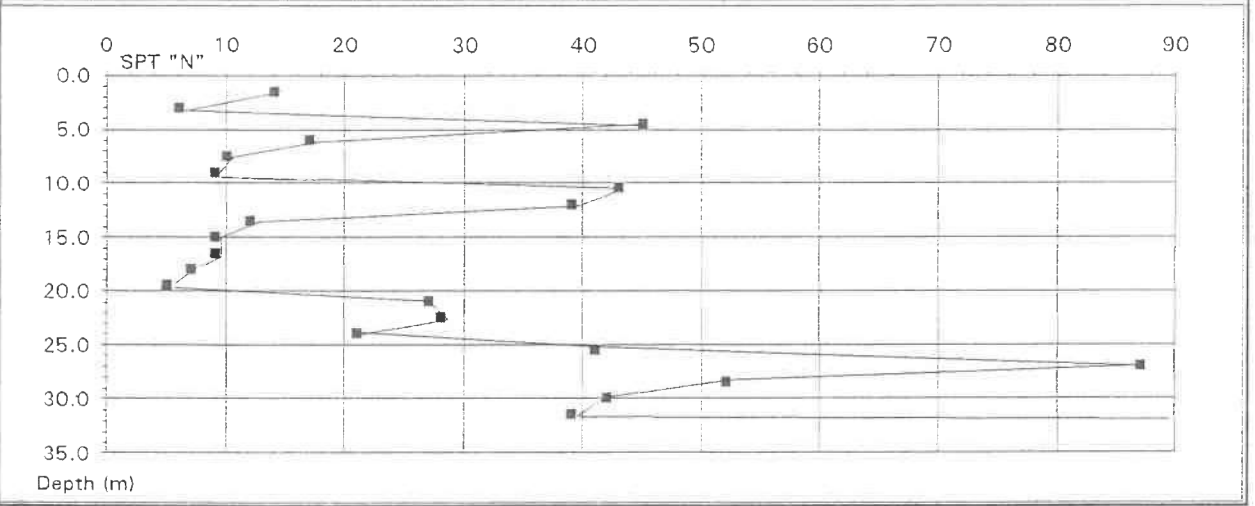
Dr. T.E. Francis.



**BOREHOLE LOG SHEET**

Drilled by: Dynamic Drilling	Project: Centrum N.E.	BH No.: 1
Date: 30/5/96	Corner lot 11713	Elevation: 6 m
Logged by: T.E.F.	Water rest level: 2.5m	Y co-ord: -2440
Date: 30/5/96	Polyflip drilling fluid used in open hole.	X co-ord: 3303570
Washbore with casing to 3 m.		

Size & depth	Core rec.	RQD	F.F	Test	Value	Depth	Leg and	Description
2.00				SPT	14	1.5		Asphalt & C/R road base over grey-brown fine & medium SAND.
7.00				SPT	6	3.0		Moist grey mottled orange-brown cohesive clayey fine & medium SAND.
				SPT	45	4.5		
				SPT	17	6.0		
10.50				SPT	10	7.5		Pale yellow-brown-grey silty slightly clayey fine & medium SAND.
				SPT	9	9.0		
				SPT	43	10.5		
12.00				SPT	39	12.0		Pale yellow-brown silty medium SAND.
24.00				SPT	12	13.5		Pale grey silty slightly clayey slightly cohesive fine SAND.
				SPT	9	15.0		
				SPT	9	16.5		
				SPT	7	18.0		
				SPT	5	19.5		
				SPT	27	21.0		
				SPT	28	22.5		
				SPT	21	24.0		
30.00				SPT	41	25.5		Brown slightly silty fine & medium SAND.
				SPT	87	27.0		
				SPT	52	28.5		
				SPT	42	30.0		
32.00				SPT	39	31.5		Brown silty fine SAND.
33.30	Refusal			SPT	35/ref	33.0		Brown fine sand over dk. grey SILT: St. Lucia.



**BOREHOLE LOG SHEET**

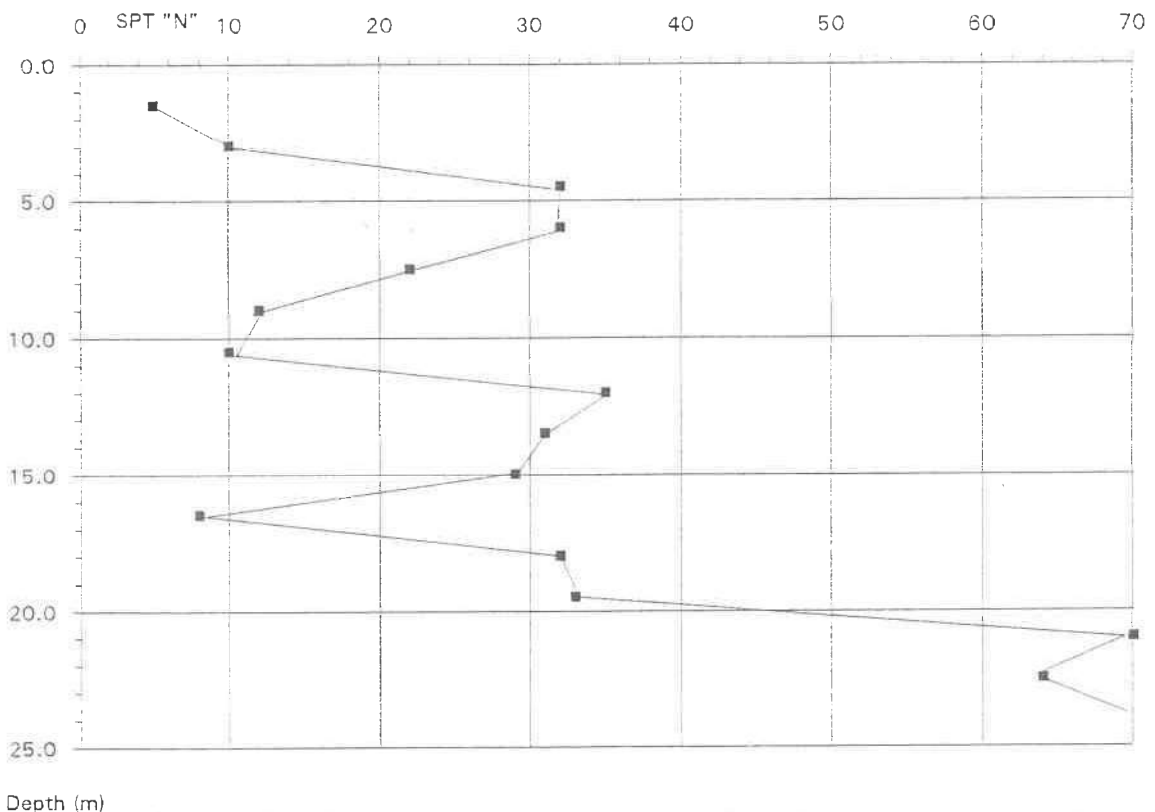
Drilled by: Dynamic Drilling  
 Date: 14/6/96  
 Logged by: T.E.F.  
 Date: 14/6/96

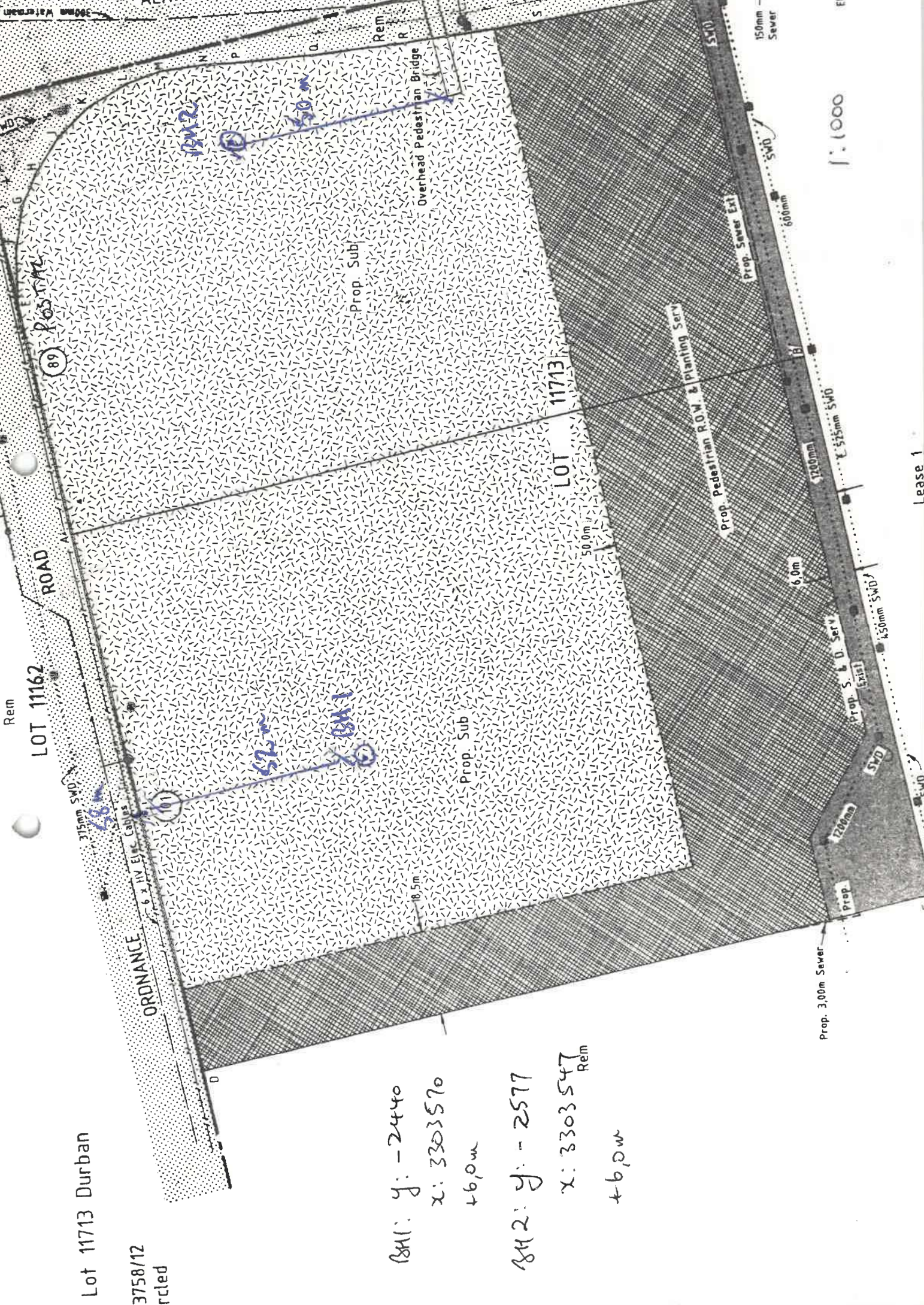
Project: Centrum N.E.  
 Corner lot 11713  
 Water rest level: 2.65m  
 Polyflip drilling fluid used in open hole.  
 Washbore with casing to 3 m.

BH No.: 2  
 Elevation: 6 m  
 Y co-ord: -2577  
 X co-ord: 3303547

54

Size & depth	Core rec.	RQD	F.F	Test	Value	Depth	Leg end	Description
W/B 2.00				SPT	5	1.5		Asphalt & C/R road base over grey-brown medium & fine silty SAND.
				SPT	10	3.0		Wet orange, red, grey gravelly clayey plastic medium & fine SAND.
4.00				SPT	32	4.5		
				SPT	32	6.0		Grey mottled brown slightly clayey silty fine & medium SAND. Slightly plastic.
8.50				SPT	22	7.5		
				SPT	12	9.0		Pale grey silty fine SAND.
				SPT	10	10.5		
				SPT	35	12.0		
14.00				SPT	31	13.5		
16.00				SPT	29	15.0		Grey mottled brown clayey fine SAND with shells.
17.50				SPT	8	16.5		Grey soft to firm silty CLAY.
				SPT	32	18.0		Pale grey silty fine SAND.
20.00				SPT	33	19.5		
21.50				SPT	70	21.0		Grey mottled brown silty fine SAND.
24.20				SPT	64	22.5		Dark grey to green-grey fine sandy SILT. St. Lucia Formation?
				SPT	37/ref.	24.0		





Lot 11713 Durban  
 3758/12  
 irtcd

BM1: y: -2440  
 x: 3303570  
 +6,0m

BM2: y: -2577  
 x: 3303547  
 Rem  
 +6,0m

1:1000

Lease 1

# ANNEXURE 4

## EPCPD comment





## Development Planning, Environment & Management Unit Environmental Planning & Climate Protection Department

166 K. E Masinga Road, Durban, 4001  
PO Box 680, Durban, 4000  
Tel: 031 311 7875  
Fax: 031 311 7134  
Deputy Head: Dr D Roberts

### OFFICE MEMORANDUM

Attention: Nasreen Arabi  
Catalytic Projects Units

ENQUIRIES: Ms SA. Makhwedzha  
TEL: 031-311 7919  
FAX: 031-311 7134  
MAIL: [shoni.makhwedzha@durban.gov.za](mailto:shoni.makhwedzha@durban.gov.za)  
OUR REFERENCE: C/1140

[Nasreen.arabi@durban.gov.za](mailto:Nasreen.arabi@durban.gov.za)

#### RE: EPCPD COMMENT: PROPOSED CENTRUM/GUGU DLAMINI SUB-PRECINCT DEVELOPMENT

Herewith find the comment from the Environmental Planning and Climate Protection Department on the proposed Centrum/Gugu Dlamini sub-precinct development. This Department's comment dated 25 April 2012 still has reference.

Based on the information provided on the enquiry form, this Department understands the proposal to be as follows:

Catalytic projects are going out on an Expression of Interest process to Private Developers to develop the Centrum/Gugu Dlamini sub-precinct. The City will be leasing the site to a Developer.

Real Estate has advertised on the 23 Oct 2020 to commence with the Public Participation process for sites that do not have leases (excludes Workshop, ICC, DEC, etc) for Development. If no objections, the Unit will commence with the procurement process early next year for the appointment of a Developer by June/July 2021.

The intention is that the site will be leased to private developers. The agreement will be between the City and a Private Developer with possible Turnkey developments for the Municipal buildings, budget dependant, (library, council chamber, museum, ETA requirements) as well Private Developer's buildings and the Super-basement.

The prime location of Gugu Dlamini Sub-precinct is certain to unlock the potential for new and expansionary investment within the broader City and Centrum Precinct and directly surrounding the site (ICC, DEC, Rivertown, etc.), stimulating long term growth and development.

The proposed site and proposed activities were reviewed under the following environmental parameters/requirements:

- Proximity to:
  - Durban Metropolitan Open Space System (DMOSS);
  - Watercourses (32m);
  - Wetlands (500m) which have a level of risk of impact associated (usually downstream); and

Please note that this is an initial desktop response to your enquiry, provided in order to guide your action. It is submitted largely from a biodiversity perspective, and as such there may be other departments, including planning who may also have concerns that need to be addressed. This office will make an official comment to Planning on submission of any formal application submitted by you to the planning offices.

RE: EPCPD COMMENT: PROPOSED CENTRUM/GUGU DLAMINI SUB-PRECINCT DEVELOPMENT

- 1:100year floodlines.
- National Environmental Management Act (Act No. 107 of 1998) (NEMA) 2014 EIA Regulation triggers;
- National Water Act (Act No. 36 of 1998) - IWULA Regulation triggers.; and
- Any other applicable environmental legislative requirements.

From the desktop assessment of the proposed site using various environmental data sets, herewith find the comment from the Environmental Planning and Climate Protection Department on the proposed project.

### **1. Biodiversity comment:**

The proposed site has not been included within the Durban Municipal Open Space Systems (D'MOSS). Although the site is not in D'MOSS, please note that site is in the public eye, if the proposal will involve the removal of trees within the portion where the Shembe church is located, that is therefore likely to generate a lot of attention from the public. Although the trees may not be legally protected in terms of Section 15(1) of the National Forests Act, 1998, as amended, in the urban context, these trees are of high ecological value. For example, in addition to absorbing Carbon dioxide and releasing Oxygen, these trees are currently providing an alternative refuge and feeding site to the many species that inhabit the inner city. For example, many birds, insects, and bats will rely on urban trees for food and shelter. These trees are thus a valuable resource to birds and animal species in a relatively ecologically impoverished landscape.

In light of the above reasons, this Department recommends that in the absence of feasible alternatives to retain these trees in their current location, an identification of all the trees, including their ecological and conservation status must be done. In addition to tree identification, *Duty of Care and Remediation* of environmental damage that will occur during the implementation of the proposed project must be exercised. Details on how *Duty of Care and Remediation* will be exercised must be forwarded to this Department for further consideration.

### **2. EIA Requirements:**

Based on the information provided above, there is no detail in terms of the specific projects. Detail must be submitted in order to screen for EIA requirements in terms of the 2014 EIA Regulations as amended in 2017. In the absence of EIA requirements, please note that your Department is reminded of its responsibility to ensure *Duty of Care and Remediation* of environmental damage that may occur during the construction, operation and maintenance of the individual projects.

### **3. Water Use License Application (WULA) Requirements:**

Based on the desktop wetland mapping, there are no wetlands and/or streams mapped at the site. This proposal must be presented to the Department of Water and Sanitation (DWS) for them to officially confirm the requirements for WULA.

Please note that this is an initial desktop response to your enquiry, provided in order to guide your action. It is submitted largely from a biodiversity perspective, and as such there may be other departments, including planning who may also have concerns that need to be addressed. This office will make an official comment to Planning on submission of any formal application submitted by you to the planning offices.

**4. Legal and Financial Implications:**

Your Department is also reminded of the legal and financial implications for non-compliance with environmental legislative requirements in terms of Section 49A (Offences) and Section 49B (Penalties) of the NEMA.

Please also note that everyone (including organs of state) no longer has the protection against criminal liability and/or prosecution.

Please feel free to contact this Department for further enquiries in this regard.

Yours sincerely,



**S.P DLAMINI**

**Regional Coordinator: Biodiversity & Climate Compliance Enforcement**

**Biodiversity Impact Assessment Branch**

**Environmental Planning and Climate Protection Department**

**Date: 03 November 2020**

Please note that this is an initial desktop response to your enquiry, provided in order to guide your action. It is submitted largely from a biodiversity perspective, and as such there may be other departments, including planning who may also have concerns that need to be addressed. This office will make an official comment to Planning on submission of any formal application submitted by you to the planning offices.

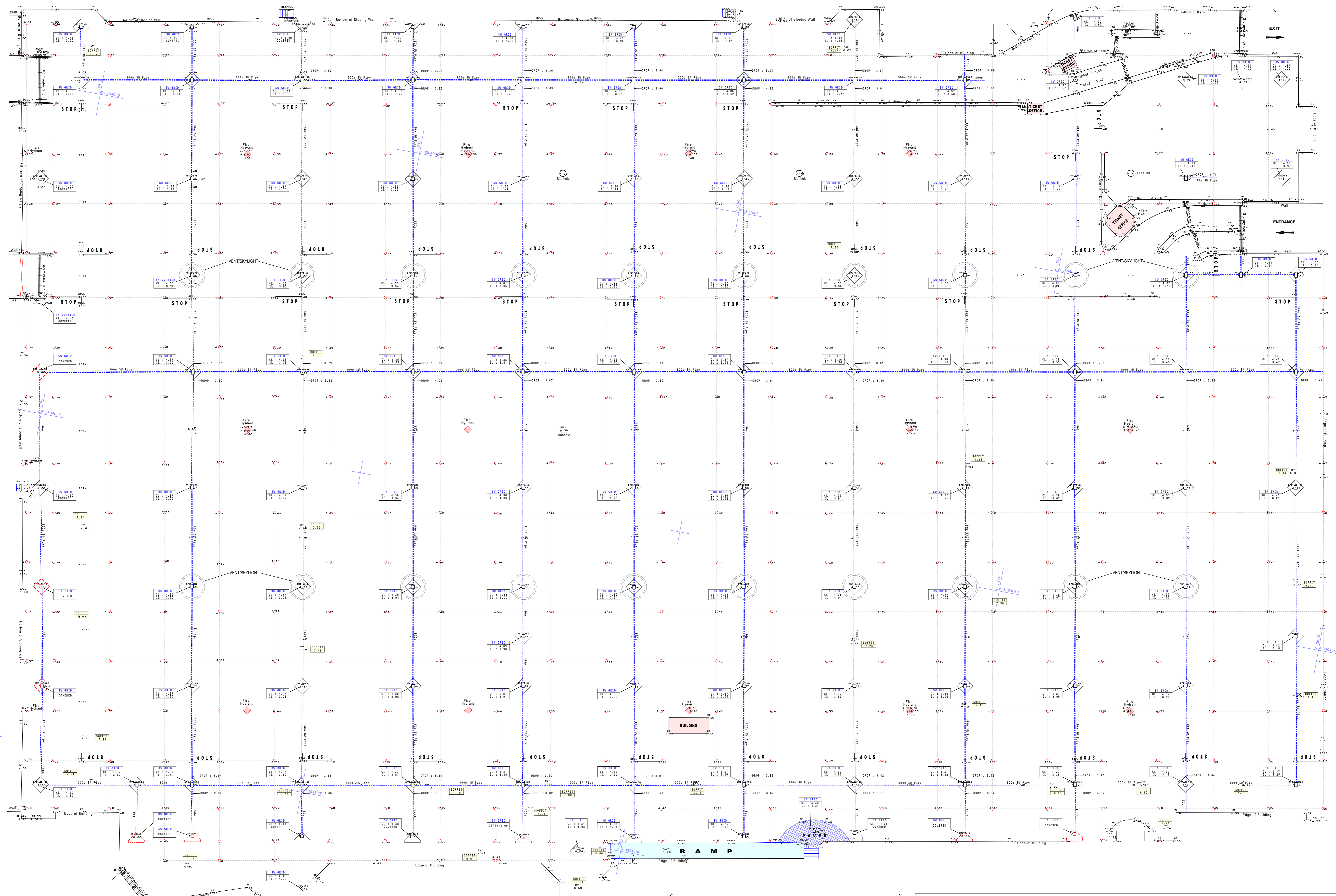
**RE: EPCPD COMMENT: PROPOSED CENTRUM/GUGU DLAMINI SUB-PRECINCT DEVELOPMENT**

# ANNEXURE 5

## Centrum Workshop basement parking survey







**SETTING OUT CONTROL (SYSTEM : WGS 84)**

Name	X	Y	Description
Constants	0.000	0.000	0.000
LG1	-2322.892	3304013.254	6.893 12m Peg 1m Tar
LG10	-2621.261	3303989.167	5.741 12m Peg 1m Tar

- ALL STORMWATER MANHOLES WERE SILTED, THEREFORE PIPE SIZES AND DIRECTION OF FLOW WERE IMPOSSIBLE TO OBTAIN  
 - ALL MANHOLE INVERTS ARE APPROXIMATE

**LEGEND :-**  
 ◊ - COLUMN

◊ GRID MANHOLES WITH APPROXIMATE POSITIONS  
 ⊙ VENTS ADOPTED FROM GROUND LEVEL SURVEY

**NOTES :-**  
 (1) Survey based on Trig (WGS84) and all levels related to W.S.L.  
 (2) Only visible services were surveyed.  
 (3) All cadastral information adopted from Ethekezi Municipality - Survey Department's GIS System - TO BE VERIFIED PRIOR TO DESIGN  
 (4) All stormwater manholes were silted, therefore pipe sizes and direction of flow were impossible to obtain  
 (5) All manhole inverts are approximate.

**SINGH AND ASSOCIATES**  
 Topographical, Engineering & G.P.S. Surveyors  
 Construction Surveys & Site Supervision

Unit 2  
 Syasha Gardens  
 66 Firwood Road  
 Redhill  
 4051

P.O.Box 40284  
 Redhill 4071  
 Tel: (031) 5840200  
 Fax: (031) 5834897  
 e-mail: singhdp@iirca.com

Surveyed by : D.P.SINGH  
 Drawn by : A.MISRA  
 Date : JULY 2011  
 Date : JULY 2011  
 Ref : D/205-B

**DETAIL SURVEY : GUGU DLAMINI PARK – BASEMENT PARKING (WO 1518022)**

Sheet 1 of 1  
 Scale 1 : 200

# ANNEXURE 6

## Basement & Samora Machel investigation





# ANNEXURE 7

## GBCSA Guildelines





**GREEN  
BUILDING  
COUNCIL**  
SOUTH AFRICA



**ETHEKWINI  
MUNICIPALITY**

# **eThekweni Municipality Proposal**

**09 March 2021**

## Green Building Council South Africa Overview

The construction and on-going operation of buildings consumes 40% of total energy usage worldwide and generates a third of all carbon emissions. The transformation of the built environment and property sector value chain is integral to South Africa's transition to a green economy. With the aim to transition to a low carbon, resilient, resource efficient and equitable economy and society, whilst protecting biodiversity and essential ecosystem goods and services.

As a result, green buildings are becoming increasingly mainstream with the environmental, social and economic benefits of green buildings beyond dispute. Green building is a major part of the solution to mitigating climate change, resource scarcity, ecosystem degradation and enhancing resilience.

Established in 2007, The Green Building Council South Africa (GBCSA), a non-profit organisation, has led and continues to lead the transformation of the South African property industry to ensure that all buildings are designed, built and operated in an environmentally responsible way to reduce adverse environmental and social impacts. The integration of sustainable building practices, allows South Africans to work and live in a healthy, efficient and productive built environment.

The transition to a green economy and sustainable built environment is well supported by the national policy and regulatory framework, inclusive of the: Constitution: Bill of Rights, National Development Plan 2030, National Climate Change Response White Paper, Draft Climate Change Bill, Draft Carbon Tax Bill, Draft Carbon Tax offset regulations, Energy performance certificates (SANS 1544), Energy Efficiency in Buildings (SANS 204) amongst others.

Furthermore, at an international level Green buildings contribute to the achievement of the Paris agreement and sustainable development goal objectives. The World Green Building Council has committed to advancing net zero globally with the aim to support the implementation of the globally recognized targets of net zero new buildings by 2030, and all (inclusive of new and existing buildings) buildings net zero by 2050.

Capacity development is an enabler integral to the effective implementation of green buildings. One of the GBCSA's core mandates is to build awareness and increase the knowledge around green buildings by offering education and training to enable the scaling up of green building implementation in the public and private sector, through accredited in-house and public training courses.

The certification processes governed by the GBCSA involve certification of buildings using the Green Star, Net Zero, EWP, EDGE rating tools. Our suite of rating systems offers tools for almost any type of building. Certification creates a universal platform for credible and objective measurement of green buildings. Each tool recognises and rewards environmental leadership and is a recognised symbol of sustainability achievement.

This document provides an overview of the GBCSA rating tools, the benefits of certification and guidelines to assist eThekweni municipality incorporate green principles in the Terms of Reference for property development and refurbishments tender documents. The business case for green certified buildings and training recommendations have also been included.

## Starting the Green Building Journey

1. Portfolio Assessment
  - a. Identify property portfolio silos
    - i. precincts, new build, existing buildings
    - ii. commercial, retail, residential, public facilities
  - b. Assess each silo identifying properties ready for certification
  - c. Create a certification strategy for each silo.
  - d. Appoint an experienced practicing Accredited Professional/s
  - e. Review properties for certification with AP and gather relevant data
2. Awareness at all levels
  - a. Engage Key stakeholders and tenants in journey
  - b. Engage staff, service providers and contractors in journey
  - c. External Marketing
3. Training
  - a. Train internal teams and relevant service providers
  - b. Ensure all developers and commercial contractors received relevant training
  - c. Regularly evaluate training needs
4. Interventions
  - a. Align all Terms of Reference and tender documents to the green building goals of the municipality
  - b. Update procurement and maintenance policies to comply with sustainability goals and green star tool
  - c. Install interventions where required
5. Project Registration
  - a. Obtain pricing for bulk registrations
  - b. Register projects for certification
6. Reporting
  - a. Publish commitment to the green building journey
  - b. Set 5 year targets, e.g. Certification and Energy & Water targets
  - c. Highlight green building support of SDG's

## Business Case for Green Star Rated Buildings

- Higher returns on assets
- Future proofing of assets - more resistant to external disruptions e.g. power cuts, droughts etc.
- Ability to attract and retain tenants
- Opportunity to engage the ESG Investor community
- Access to preferential interest rates linked to green / eco loans from major financial institutions

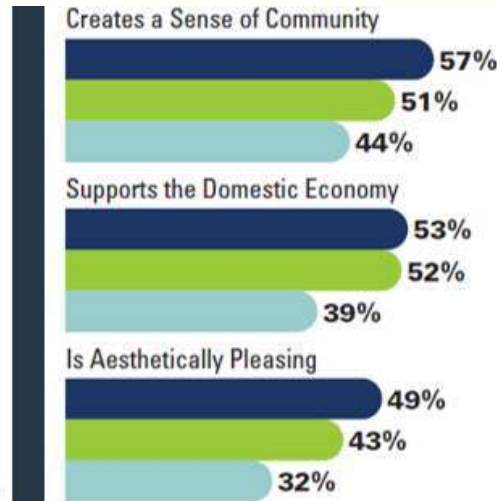
- Efficiencies resulting in decreased operating & maintenance costs
  - up to 30% on energy, water and waste saving
- Potential for increased office staff productivity
- Integration of a building management tool for continual improvement
- Alignment of business practices and design to a set of best practice green building standards
- Reduction in property rates – once promulgated
- Market differentiator

There is a great opportunity for eThekweni Municipality to promote Durban as an eco-friendly holiday destination, showcasing its Sustainable Precincts that boast Green Star and EDGE rated buildings. Existing features such as the beach front promenade can be complemented by green initiatives like waste separation facilities for recycling, low energy and low water public facilities to name but a few options.

### Social Case for Green Buildings - The World-GBC Metric Framework



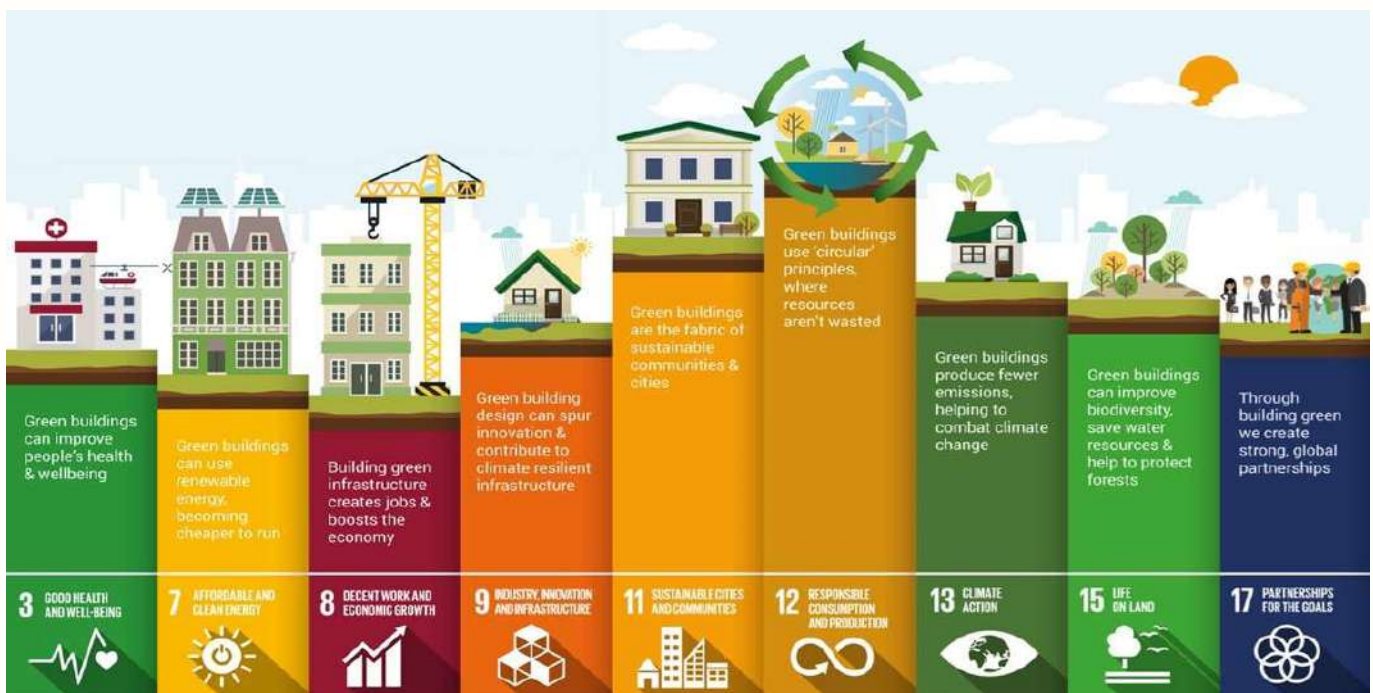




SmartMarket Report  
DODGE DATA & ANALYTICS  
**World Green Building Trends 2018**

### Sustainable Development Goals

Green Buildings addresses 9 of the 17 Sustainable Development Goals. Relevant categories can be used in reporting by municipality, developers and property owners who have obtained Green Star and Sustainable Precinct ratings.



# Technical Guidelines

## Precinct Development and Green Star Ratings

### Green Star Rating Tools

The GBCSA offers a range of certification tools spanning different building lifecycles as well precinct and neighborhood scale. The certification processes governed by the GBCSA involve certification of buildings using the Green Star, Net Zero, EWP, EDGE rating tools. Our suite of rating systems offers tools for almost any type of building. Certification creates a universal platform for credible and objective measurement of green buildings. Each tool recognises and rewards environmental leadership and is a recognised symbol of sustainability achievement.

GBCSA certification tools offer a robust technical framework for what to consider when going green on a built environment project. Targeting and achieving a formal certification through the GBCSA offers several market differentiation benefits and assures external stakeholders that no greenwashing has occurred.

GBCSA launched the Green Star Sustainable Precincts tool in 2016, in response to the growing recognition and call from industry that green buildings require integrated and sustainable planning and urban design.

The vision and focus of the Green Star Sustainable Precincts tool is to create more sustainable neighbourhoods, precincts and communities by focusing on five critical components of urban planning, design and construction. The tool provides a framework for neighbourhood scale projects to align themselves to, and obtain third party validation of their sustainable development credentials, according to international best practice that is locally relevant.

In response to the local government request that the development includes *“sustainability principles in the design and have a green star rating if possible”* the GBCSA would recommend that the Centrum proceeds according to the following two steps:

- Ensure that the professional team uses the Green Star Sustainable Precincts tool framework and principles to inform the design and construction of the project
- Aims to target a minimum 4-star Green Star Sustainable Precincts certified rating

### Green Star Sustainable Precincts tool framework – informing design and construction from first principles

In order to inform the design and construction of the Centrum Development with the Green Star Sustainable Precincts tool framework, the following range of sustainability initiatives and associated objectives, where appropriate to the project site, context and budget, can be considered.

The developer and professional team, in consultation with the local government, will need to select which initiatives are most appropriate to the site. This will be informed by the overarching project goals, client drivers and desired level of sustainability performance.

The Green Star Sustainable Precincts tool framework assesses projects against a holistic set of distinct social, environmental, and economic categories, and an innovation category. The key categories are called:

- Governance
- Liveability
- Economic Prosperity
- Environment
- Innovation

The aim of the initiatives associated with the Governance, Liveability, Economic Prosperity and Environment categories are outlined below in more detail, as a guide to what the Centrum Development can consider for inclusion, as appropriate to the project and agreed with eThekweni authorities.

**GOVERNANCE:**

The purpose of the Governance category is to encourage and recognise developers and projects that demonstrate leadership within the sector, by the establishment and maintenance of strong governance practices. The category promotes engagement, transparency, and community and industry capacity building. It also seeks to ensure that community projects are resilient to a changing climate.

<b>Initiative</b>	<b>High level objective</b>
<b>Industry capacity building</b>	To recognise projects that engage a Green Star SA Accredited Professional to support the Green Star SA Sustainable Precincts certification process.
<b>Design Review</b>	To encourage and recognise projects that undertake a design review process designed to facilitate sustainable urbanism.
<b>Engagement</b>	To encourage and recognise projects that develop and implement a comprehensive, project specific stakeholder engagement strategy early in the planning process.
<b>Adaptation and Resilience</b>	To encourage and recognise projects that are resilient to the impacts of a changing climate and natural disasters.
<b>Corporate Responsibility</b>	To encourage and recognise projects with a project applicant that has corporate responsibility as a core value.
<b>Sustainability Awareness</b>	To encourage and recognise those projects that enhance knowledge and understanding of its sustainability attributes.

<b>Community Participation and Governance</b>	To encourage and recognise projects that establish mechanisms for community participation in management arrangements for facilities and programs.
<b>Environmental Management</b>	To encourage and recognise the adoption of formal environmental management practices.

**LIVEABILITY:**

The purpose of the Liveability category is to encourage and recognise developments that deliver safe, accessible and culturally rich communities. The category encourages the development of healthy and active lifestyles, and rewards communities that have a high level of amenity, activity, and inclusiveness.

<b>Initiative</b>	<b>High level objective</b>
<b>Healthy and Active Living</b>	To encourage and recognise projects that promote healthy and active living.
<b>Community Development</b>	To encourage and recognise projects that engage in and facilitate the development of the project's community.
<b>Sustainable Buildings</b>	To encourage and recognise projects that deliver sustainable buildings and energy efficient homes designed and constructed to meet the changing needs of occupants across their lifetime.
<b>Culture Heritage and Identity</b>	To encourage and recognise projects that celebrate and incorporate the heritage, culture and historical context of the project site, supporting communities and places with the development of a sense of place and identity.
<b>Walkable Access to Amenities</b>	To encourage and recognise projects that celebrate and incorporate the heritage, culture and historical context of the project site, supporting communities and places with the development of a sense of place and identity.
<b>Access to Fresh Food</b>	To encourage and recognise projects where occupants have access to fresh food within walking distance of where they live or work.
<b>Safe Places</b>	To recognise projects in which the activity of planning and detailed design for land use, development and redevelopment takes into consideration designing out crime principles.

**ECONOMIC PROSPERITY:**

The purpose of the Economic Prosperity category is to encourage and recognise projects that promote prosperity and productivity. The category encourages affordable living and housing, investment in education and skills development, and the facilitation of community capacity building.

The Economic Prosperity category also promotes greater productivity via emerging opportunities in the digital economy.

<b>Initiative</b>	<b>High level objective</b>
<b>Community Investment</b>	To encourage and recognise those projects that make optional investments in infrastructure for the benefit of the community
<b>Affordability</b>	To encourage and recognise projects that deliver affordability strategies for or as part of housing and/or business premises
<b>Employment and Economic Resilience</b>	To encourage and recognise projects with local and diverse employment opportunities
<b>Education and Skills Development</b>	To encourage and recognise projects that have access to further education and/or provide a skills and industry capacity development opportunities
<b>Return on Investment</b>	To encourage and recognise holistic methods to assess the return on investment in response to the sustainability goals for the project
<b>Incentives Programmes</b>	To encourage and recognise projects that provide incentives to encourage sustainable practices that reduce the cost of living and working
<b>Digital</b>	To encourage and recognise projects that use digital infrastructure to create greater efficiencies in the connection of individuals with other people, goods, services, and information.
<b>Peak Electricity Demand</b>	To encourage and recognise projects that reduce peak demand load on the electricity network infrastructure

**ENVIRONMENT:**

The purpose of the Environment category is to reduce the impact of urban development on ecosystems. It encourages resource management and efficiency by promoting infrastructure, transport, and buildings, with reduced ecological footprints. The Environment category seeks to reduce the impacts of projects on land, water, and the atmosphere.

<b>Initiative</b>	<b>High level objective</b>
<b>Integrated Water Cycle</b>	To encourage and recognise best practice sustainable urban water management.
<b>Greenhouse Gas Strategy</b>	To encourage and recognise projects that include a greenhouse gas strategy that reduces greenhouse gas (GHG) emissions due to energy use on the project site.

<b>Materials</b>	To reward the reduction of the environmental impacts of construction materials for the site wide works over their life cycle
<b>Sustainable Transport and Movement</b>	To encourage and recognise integrated responses to transport and movement that encourage a people-focused hierarchy.
<b>Sustainable Sites</b>	To encourage projects that avoid or minimise impacts on environmentally sensitive sites while recognising projects that reuse previously developed land and reclaim contaminated land using best practice remediation.
<b>Ecological Value</b>	To encourage and recognise projects that enhance the ecological value or biodiversity of the project site
<b>Waste Management</b>	To encourage and recognise projects that reduce the environmental impact of waste.
<b>Heat Island Effect</b>	To encourage and recognise projects that implement measures to reduce heat island effect.
<b>Light Pollution</b>	To encourage and recognise projects that minimise the adverse impact of light emissions.

# eThekweni Sustainability Guidelines

## Target a minimum 4-star Green Star Sustainable Precincts certified rating

In the event of targeting a Green Star Sustainable Precincts certified rating, the following high level overview of tasks and the certification process are to be considered and incorporated into the project programme. This list is not exhaustive – please consult an Accredited Professional for more detailed guidance.

### Finding a Green Star AP (Accredited Professional)

An independent Green Star AP must be appointed by the project developer at market related rates to collate and submit the documents to GBCSA for review and certification. Green Star AP are third-party professionals whose fees will be directly negotiated with the project developers and not set by GBCSA. A list of Sustainable Precinct APs is available on the GBCSA Hub for download.

When appointing consultants to undertake certification related consulting services, the GBCSA recommend the following, especially where a client does not yet have experience of working with green building consultants:

- Obtain at least 2 or more proposals to ensure a comparison can be made between services and pricing offered
- Provide the same outline of the scope of services required to all consultants providing prices to ensure consultants are pricing for the same scope of services
- Preferably appoint a green building consultant with past experience of a successful certification, or somebody that will partner or receive support from a consultant with past experience of a successful certification – the GBCSA encourages growth and mentorship of young emerging companies, and thus would encourage clients to explore such collaborations with green building consultants.
- Clearly understand what is required for the certification, and what is offered as over and above value add

Because of South Africa's Competition Board, the GBCSA is not allowed to publish recommended fees that consultants should charge, and instead GBCSA has published typical scope of services. The breakdown of typical scope of services is provided below.

### Green Star AP Consulting scope

The scope of service typically includes the following, but is not limited to (not all of which are required for certification purposes):

- Assisting the client to register the project
- Green Star Initial Certification rating submission (within 3 years of project registration)
- Green Star Recertification rating submission (once every five years after Initial Certification or at a time period otherwise agreed by the GBCSA)
- Calculations and modelling if performance pathways are adopted (depending of strategy and number of points being targeted)
- Sustainable design consulting (value add consulting service to advise on sustainable design solutions throughout project)

The services and scope of work would generally include the following at various typical project stages:

### **Project planning and Inception phases**

- Clarify scope of works, fees, documentation programme and sign appointment letter with client
- Confirm/review project eligibility
- Work with project team to develop the Green Star strategy, to determine which points will be targeted and what star rating will be targeted, and what the order of magnitude costs will be for these (each professional or QS responsible for determining the cost of various initiatives), including a buffer of points beyond the rating threshold – this is typically done through an initial workshop with the project team.
- Identify risks and mitigation plans for credits at risk of being achieved
- Registration of the project with GBCSA: signed certification agreement and pay GBCSA registration fees
- Incorporate management and planning of targeted credits

### **Design phases**

- Work with the design team in identifying the areas that will be targeted to achieve certification goals, feeding them with relevant Green Star criteria and documentation requirements that they will need to meet in the various areas of their design responsibility, for example, the architect will be given a list of all the credits and all the credit criteria, and all the documentation that he/she will be responsible for if the project wishes to achieve those credits.
- Providing templates to the various project team members for documentation/reports that they will need to prepare as part of the projects intent to achieve a Green Star rating, including where specifications or drawings need to be prepared in line with Green Star criteria
- Keeping track of the overall Green Star strategy and guiding the project team in terms of requirements to meet these objectives
- Attending various project design meetings to allow regular engagement with the project team on the above items

### **Documentation & Procurement for Initial Certification and subsequent Recertification's**

- Collation of documentation for design stage submittal from the project team (each team member remains responsible for compilation of their documented evidence for Green Star). The AP must make use of the submission templates available from the GBCA website.
- Working with the contractor to ensure they are fully aware of their responsibility on various credits
- Attending specific, limited meetings during construction, to keep track of the overall Green Star strategy and to guide the project team in terms of any revised requirements to meet these objectives
- Collation of all relevant TCs and CIRs prior to submission
- Collation and submission of the round 1 documentation to the GBCSA
- Feedback to the project team on round 1 results and corrections needed to be made by all project team members in preparation of round 2 submission
- Review of round 2 documentation
- Collation and submission of the round 2 documentation to the GBCSA
- Round 2 results shared with project team and explained

In most cases projects will take 2 rounds to achieve the desired rating, but in some cases it will take only 1 round – discuss and agree in the scope of services agreement what the fee implications of this are, if any.



It should be mentioned here that the amount of documentation required from the project team is significant, and typically more than what they would typically spend time on documentation, especially for project team members that have not worked on Green Star projects.

It is essential that the project team and contractor are appointed and contractually required to submit documentation for the Green Star submission, so that they can be held to account for their part in the project achieving a Green Star rating.

Some green building consultants also offer additional advisory services that extend beyond the certification collation scope of services and modelling. These scope of services can vary significantly from one consultant to another, depending on their experience. The GBCSA recommend clients explore these services with their consultants, as they often unlock additional value to delivering a greener, better precinct. The GBCSA advise that clients ensure that the additional services are specifically described for each project stage by consultants. The GBCSA has not described these services here, because they vary so much between consultants. These could include things like:

- Sustainability masterplanning on large urban scale development
- Developing a detailed project sustainability strategy and advising on design solutions
- Water strategy
- Energy strategy
- Waste strategy
- Advising the project on all material selection
- Detailed façade thermal and energy analysis
- Life Cycle Analysis of selected design solutions

### **Confirming project eligibility**

It is the responsibility of each project team to check the most current Eligibility Criteria at the time of registration and to ensure that their project(s) is eligible. Whenever unsure, project teams can request an eligibility confirmation from the GBCSA by forwarding a brief description of the project to the GBCSA Zendesk.

### **Register the Project with GBCSA for Green Star Certification**

You or your selected Green Star AP will submit the project details to the GBCSA. Registration establishes a connection with the GBCSA and gives the project access to essential information and assistance with the submission process. Registration and project certification is only available to projects that meet the eligibility criteria for Green Star Sustainable Precincts.

### **Preparing the submission**

Once your project is registered and your Green Star certification strategy has been agreed between Client and professional team, the project team should prepare documentation, drawings and calculations to satisfy the Green Star Sustainable Precincts credit requirements. If appointed, the Green Star Accredited Professional should take responsibility for the quality of submission. It is important to ensure that documentation for all claimed credits adheres to the Documentation Requirements outlined in the Green Star Sustainable Precincts Submission Guidelines and Technical

Manual as there are only two rounds of Assessment and one opportunity for resubmission (Appeal) available.

**Initial certification assessment:**

The project AP will issue the Round 1 submission to the GBCSA, who will then conduct an independent third party assessment. The Assessment Panel, containing one or more third-party Assessors will review the submission. Recommendations will then be made to the GBCSA. The GBCSA will forward the results of the Round 1 assessment to the project contact and the applicant. The project may accept the results as the final rating or request to resubmit Documentation for credits 'to be confirmed' for a Round 2 assessment, which is typically the case. The Round 2 assessment follows the same process as the Round 1. Thereafter, assuming that all credits are approved in Round 2, the project is awarded a certified rating.

# Green Star and Sustainable Precinct Training

It is advisable for all eThekweni Municipality staff involved in the precinct developments or that is part of any new or existing building projects and all facilities management teams receive training in green building principles or one of the Green Star tools.

Encouraging all developers and contractors working on precinct developments or municipal properties, will be beneficial. Knowledge of green building principles and or Green Star requirements will equip them to support eThekweni to achieve its certification and sustainability goals.

## Overview of GBCSA Courses

### Introduction to Green Building Workshop

The Introduction to Green Building Workshop is a high level overview of green buildings and the green building industry of South Africa.

#### Who should attend?

This workshop is designed for anyone who is interested in learning about green buildings and starting their green building journey.

This course can also be provided to contractors and sub-contractors working on green star projects to ensure they comply to the certification requirements.

## Accredited Professional (AP) Courses

### Pre-requisite Qualifications

The trainee is required to hold an appropriate tertiary level qualification or demonstrate a minimum of 2 years work experience in the industry.

### How to become an Accredited Professional (AP)

In order to become a fully Accredited Professional (AP) registered with the GBCSA the following is to be fulfilled per training package:

Our three-part training courses will now be conducted completely online:

- Complete an online course (12 modules, approximately 10 hour input within a two-week period first
- Attend training webinar hosted by the GBCSA and a faculty member
- Online assessment

The trainee will be fully accredited for all the courses included in the chosen package, provided the relevant online course, webinar and assessment is completed.

The online course have to be completed before attending the webinar, once both have been completed the trainee will be eligible for the assessment.

### **AP Accreditation Benefits**

- Recognition as a professional with a greater understanding of environmental issues related to the built environment and the property industry, with an understanding of how to apply sustainable development and integrated building design principles.
- Equipped with the knowledge to guide a project team in the implementation of green initiatives during the urban planning, design, construction and operational phases of a project.
- Recognised and registered as an Accredited Professional with the GBCSA.
- Act as an AP, guiding the project team through the certification process, collating documentation and submitting to the GBCSA for assessment
- Receive Continuing Professional Development (CPD) points.
- Ability to inform procurement specifications/ requirements for built environment projects.
- Become a part of the AP community to exchange ideas and experiences.
- Support implementation of green building and sustainable development policies.
- Opportunity to become certification assessors and training faculty.

### **CPD Points**

The GBCSA training programmes are validated by the following professional bodies for CPD points

- Consulting Engineers South Africa (CESA)
- South African Institute of Architects (SAIA)
- South African Facilities Management Association (SAFMA)

### **eThekweni Bespoke Accelerated Precinct Training**

It would be beneficial to identify key individuals involved in precinct development projects and that will continue supporting future developments to attend a bespoke Green Star Accelerated Training course focusing on SUP training.

Similar accelerated packages can be offered for groups wanting to focus on any of the other Green Star tools

### Green Star Accredited Professional Accelerated Training Package

- Initial GS AP online learning content (video, downloadable GBCSA Tools and technical Manuals, other resources, eBooks, Quizzes).
- Bespoke workshops for your enrolled delegates on a date to be confirmed (post completing online learning),
  - THREE live workshops for a simulated GBCSA Project Registration and Certification Process for enrolled delegates on a date to be confirmed.
  - A suitable building/precinct/development will be identified for this simulation and can be one of eThekweni's planned Sustainable Precincts.
  - Enrolled delegates will work in teams for the simulated Registration and Certification exercise
  - Delegates will be required to submit practical exercises (in.pdf format) at least 1 week in advance of each live workshop.
- Delegates will submit final practical exercise within 4 weeks of final live workshop.
- These accelerated programme workshops will be facilitated by a specialist GBCSA AP who is also an experienced GBCSA Project Assessor
- Minimum 8 delegates
- Cost: R 12 000.00 per person

We look forward to working with eThekweni Municipality to support you in achieving your Green Building goals. It is with the support of our members and industry leaders that we are able to pioneer the way to a better built environment for people and planet.

For further information or to arrange suitable training dates, please contact:

Michelle De Nysschen  
Business Development and Key Account Specialist  
Mobile: +27 (0)72 586 2919  
Email: michelle.denysschen@gbcsa.org.za

or

Georgina Smit  
Head of Technical  
Mobile: +27(0) 79 523 8009  
Email: georgina.smit@gbcsa.org.za