ANNEXURE B

COST FOR DELIVERABLES AND ACTIVITIES	
BASIS FOR CALCULATING TIME BASED COST	
Number of working hours per day	**8**
Number of working days per week	**5**
Daily rate	**Hourly rate (as published) X 8**

Hourly rates must align to the latest DPWI "Rates for Reimbursable Expenses" Time Based Fees (excluding VAT)
All resources are listed under each component. It is the bidder's responsibility to determine which resources are necessary to complete the work as outlined in the Scope of Work

Name of Required Resource	Hourly Rate (Rand)	Total Duration of Activities over 68 Weeks (Hours)	Total Cost of Activities over 68 Weeks (Rand)
Lead Professional Architect SACAP			
Professional Civil Engineer/Technologist (water, sewer, roads and stormwater, traffic specialist) ECSA			
Professional Civil Engineer/Technologist (structural) ECSA			
Geomatics Professional/Technologist (Land Surveyor) SAGC			
Geomatics Professional/Technologist (Engineering Surveyor) SAGC/Professional Archiect SACAP			
Professional Civil Engineer/Technologist (geotechnical specialist) ECSA/ Professional Natural Scientist (geotechnical specialist) SACNASP			
Professional Electrical Engineer/Technologist ECSA			
Professional Town Planner SACPLAN			
Landscape Architect Professional/Technologist SACLAP			
Professional Quantity Surveyor SACQSP			
Conveyancing Attorney LPC			
Environmental Assessment Practitioner EAPASA			
Property Management Specialist in Facilities Management/Professional Architect			
Urban Economist/Market Analyst			
TOTAL (5 components)			

Deliverable and Activity (refer to Annexure A: Scope of Work)	Resource (only include resource if work will be excecited during this component of the project)	Duration of Activity over 2 weeks (hours)	Rate (Rand)	Resource Cost (Hours X Rate)
COMPONENT 1: INCEPTION				
•Consultation and finalisation of project brief •Site orientation and assessment •Project programme and timeframes for deliverables (PEP) •Briefing of project team •Preparation and submission of a comprehensive Inception Report •Attending project meetings towards conclusion of Inception Report Deliverable: Inception Report Approved	Lead Professional Architect SACAP			
	Professional Civil Engineer/Technologist (water, sewer, roads and stormwater, traffic specialist) ECSA			
	Professional Civil Engineer/Technologist (structural) ECSA			
	Geomatics Professional/Technologist (Land Surveyor) SAGC			
	Geomatics Professional/Technologist (Engineering Surveyor) SAGC/Professional Archiect SACAP			
	Professional Civil Engineer/Technologist (geotechnical specialist) ECSA/ Professional Natural Scientist (geotechnical specialist) SACNASP			
	Professional Electrical Engineer/Technologist ECSA			
	Professional Town Planner SACPLAN			
	Landscape Architect Professional/Technologist SACLAP			
	Professional Quantity Surveyor SACQSP			
	Conveyancing Attorney LPC			
	Environmental Assessment Practitioner EAPASA			
	Property Management Specialist in Facilities Management/Professional Architect			
	Urban Economist/Market Analyst			
			COMPONENT 1 TOTAL	

Deliverable and Activity	Resource	Duration of Activity over 8 weeks (hours)	Rate (Rand)	Resource Cost (Hours X Rate)
COMPONENT 2: LOCATION ANALYSIS AND SPECIALIST REPORTS/PROCESSES				
•Legislative and policy context •Fitness for purpose: Analysis and confirmation of the user department profile and accommodation needs. •Volumetric Concept •Laser-scan buildings and topographical survey •Land Surveyor Certificate •Conveyancer Certificate •Commence Environmental Authorisation process •Geotechnical Report •Location and site analysis: All required specialists •Market Analysis •Summary of key aspects detailing opportunities, constraints and challenges and the implications for the development •Address and respond to comments received from DPWI project manager •Manage sub-consultants in delivery of project Deliverable: Comprehensive Location Analysis Report inclusive of all detailed specialists' reports	Lead Professional Architect SACAP			
	Professional Civil Engineer/Technologist (water, sewer, roads and stormwater, traffic specialist) ECSA			
	Professional Civil Engineer/Technologist (structural) ECSA			
	Geomatics Professional/Technologist (Land Surveyor) SAGC			
	Geomatics Professional/Technologist (Engineering Surveyor) SAGC/Professional Archiect SACAP			
	Professional Civil Engineer/Technologist (geotechnical specialist) ECSA/ Professional Natural Scientist (geotechnical specialist) SACNASP			
	Professional Electrical Engineer/Technologist ECSA			
	Professional Town Planner SACPLAN			
	Landscape Architect Professional/Technologist SACLAP			
	Professional Quantity Surveyor SACQSP			
	Conveyancing Attorney LPC			
	Environmental Assessment Practitioner EAPASA			
	Property Management Specialist in Facilities Management/Professional Architect			
	Urban Economist/Market Analyst			
			COMPONENT 2 TOTAL	

Deliverable and Activity	Resource	Duration of Activity over 8 weeks (hours)	Rate (Rand)	Resource Cost (Hours X Rate)
COMPONENT 3: PRECINCT DEVELOPMENT PLAN AND SPECIALIST STUDIES (LAND DEVELOPMENT APPLICATION) INCLUDING COST ANALYSIS				
•Urban Design Framework including required specialist studies •Concept Flythrough and Marketing Brochure to support Precinct Investment Plan/Strategy •Facilities Management & Operations Model •Urban Design Guidelines •Cost Analysis and Report •Address and respond to comments received from DPWI project manager •Manage sub-consultants in delivery of the project Deliverables: Final Precinct Development Plan and Report Marketing Brochure (printed and digital copies)	Lead Professional Architect SACAP			
	Professional Civil Engineer/Technologist (water, sewer, roads and stormwater, traffic specialist) ECSA			
	Professional Civil Engineer/Technologist (structural) ECSA			
	Geomatics Professional/Technologist (Land Surveyor) SAGC			
	Geomatics Professional/Technologist (Engineering Surveyor) SAGC/Professional Archiect SACAP			
	Professional Civil Engineer/Technologist (geotechnical specialist) ECSA/ Professional Natural Scientist (geotechnical specialist) SACNASP			
	Professional Electrical Engineer/Technologist ECSA			
	Professional Town Planner SACPLAN			
	Landscape Architect Professional/Technologist SACLAP			
	Professional Quantity Surveyor SACQSP			
	Conveyancing Attorney LPC			
	Environmental Assessment Practitioner EAPASA			
	Property Management Specialist in Facilities Management/Professional Architect			
	Urban Economist/Market Analyst			
			COMPONENT 3 TOTAL	

Deliverable and Activity	Resource	Duration of Activity over 48 weeks (hours)	Rate (Rand)	Resource Cost (Hours X Rate)
COMPONENT 4: SITE CLEARANCE: LAND DEVELOPMENT APPLICATION(S) AND OTHER STATUTORY PROCESSES				
•Prepare land development application(s) •Submit to project manager for input and approval •Submission of land development application(s) •Facilitate public participation and all matters related to the process •Obtain comments from internal Municipal departments •Address and respond to comments received and facilitate engagements between DPWI project manager and municipality where required •Provide timeous input as required by the Municipality in terms of the by-law •Attainment of approval for application(s) from Municipality •Land Surveyor process(es) and approvals (if required) •Assist with process to enter into SLA's with Municipality if required •If required, attend to legal processes (registration of consolidation, subdivision, removal of restrictive conditions of title) in consultation with State Attorney and relevant DPWI Regional Office •Attend all project meetings as and when required •Manage sub-consultants in delivery of the project Deliverables: Land Development Application(s) Site Clearance Report with all required approval(s) including confirmation on bulk service contributions from the local authority and signed SLA's where applicable SG Approvals (where required) Registration in the Deeds Office (where required)	Lead Professional Architect SACAP			
	Professional Civil Engineer/Technologist (water, sewer, roads and stormwater, traffic specialist) ECSA			
	Professional Civil Engineer/Technologist (structural) ECSA			
	Geomatics Professional/Technologist (Land Surveyor) SAGC			
	Geomatics Professional/Technologist (Engineering Surveyor) SAGC/Professional Archiect SACAP			
	Professional Civil Engineer/Technologist (geotechnical specialist) ECSA/ Professional Natural Scientist (geotechnical specialist) SACNASP			
	Professional Electrical Engineer/Technologist ECSA			
	Professional Town Planner SACPLAN			
	Landscape Architect Professional/Technologist SACLAP			
	Professional Quantity Surveyor SACQSP			
	Conveyancing Attorney LPC			
	Environmental Assessment Practitioner EAPASA			
	Property Management Specialist in Facilities Management/Professional Architect			
	Urban Economist/Market Analyst			
			COMPONENT 4 TOTAL	

Deliverable and Activity	Resource	Duration of Activity over 2 weeks (hours)	Rate (Rand)	Resource Cost (Hours X Rate)
COMPONENT 5: CLOSE OUT				
Deliverable: Close Out Report with all required deliverables	Lead Professional Architect SACAP			
	Professional Civil Engineer/Technologist (water, sewer, roads and stormwater, traffic specialist) ECSA			
	Professional Civil Engineer/Technologist (structural) ECSA			
	Geomatics Professional/Technologist (Land Surveyor) SAGC			
	Geomatics Professional/Technologist (Engineering Surveyor) SAGC			
	Profesional Civil Engineer/Technologist (geotechnical specialist) ECSA			
	Professional Electrical Engineer/Technologist ECSA			
	Professional Town Planner SACPLAN			
	Landscape Architect Professional/Technologist SACLAP			
	Professional Quantity Surveyor SACQSP			
	Conveyancing Attorney LPC			
	Environmental Assessment Practitioner EAPASA			
	Property Management Specialist in Facilities Management			
	Urban Economist/Market Analyst			
			COMPONENT 5 TOTAL	

ANNEXURE C

public works
& infrastructure
Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

SCOPE FOR DURBAN CBD ERF 11607 AND REMAINDER OF 11608, APPOINTMENT FOR A PRECINCT DEVELOPMENT PLAN WCS 057036

PLANNING AND PRECINCT DEVELOPMENT PROGRAMME

Contents

1. PURPOSE

The purpose is for the Department of Public Works and Infrastructure (DPWI) to appoint a suitably qualified Professional Service Provider with a supporting multi-disciplinary team with experience in property development projects. Expertise is required in the planning and design of small, medium and large scale Precinct Development Plans towards cost-effective and sustainable integrated planning and development. The Service Provider will be required to inform the optimal use of Erven 11607 and Re/11608, Durban through the Durban CBD Precinct Development Plan and to manage the subsequent Site Clearance process.

2. BACKGROUND

The Government Immovable Asset Management Act, 2007 (GIAMA) aims to achieve efficient and effective management and development of state-owned immovable assets and ensure co-ordination for effective planning in the delivery of government assets.

This mandate includes the provision of accommodation solutions translating into optimised investment decisions where the Department aims to reduce its leasing portfolio as well as to optimise its asset portfolio to meet existing and future accommodation demands, and generate revenue for the State.

The provision of accommodation solutions to Government Departments requires an integrated planning approach with National, Provinces and Municipalities aligned to Spatial Planning and Land Use Management Act (SPLUMA) and municipal Integrated Development Plans (IDP's) and Spatial Development Frameworks (SDF's).

The provision of accommodation in the main to National Government Departments will require packaging of accommodation solutions as part of the Precinct Development Programme process that integrates space and operational accommodation requirements of multiple Users into a consolidated site to ensure efficient service delivery.

The PPD Programme draws its assertion from a number of policy and legislative frameworks including but not limited to the following:

The National Development Plan (NDP 2030)

For the DPWI through Property Management Trading Entity (PMTE) to contribute towards economic growth and increased infrastructure development to unlock development potential.

The National Spatial Development Framework (NSDF 2022) and the Spatial Planning and Land Use Management Act (SPLUMA 2013)

DPWI through PMTE to focus on strategic priority areas identified for economic infrastructure investment purposes.

DPWI to provide integrated and packaged accommodation solutions aligned to the provisions of the SPLUMA and municipal IDPs and SDFs.

DPWI Strategic Spatial Framework (SSF 2022)

The objectives of the DPWI Strategic Spatial Framework (SSF) are as follows:

- Spatial transformation through increased access to social services in urban and rural areas;
- Integrated development supporting spatial planning that aligns with infrastructure investment;
- Catalyst for revitalization and socio-economic stimulus in targeted areas; and
- Optimize the utilization of state-owned assets through sustainable development.

The framework guides investment decisions (accommodation for user departments) through targeted and integrated spatial planning that is aligned to the transformative national spatial agenda as alluded to in the National Government Outcomes of the country.

3. OBJECTIVES

The Precinct Development Programme requires a multi-disciplinary team of professionals and specialists in the built environment to deliver a packaged accommodation solution for the Durban CBD Precinct.

The main objectives are to (1) develop a Precinct Development Plan for the Durban CBD Precinct and to (2) conclude Site Clearance informed by the parameters of the Precinct Development Plan.

The appointed service provider will be guided by development principles that respond to national, provincial and local policies and spatial plans applicable to the identified properties.

Key informants to the development principles and objectives include the following:

- Strategic Location: The property is suitable and well located to support access to government and mixed use services.

- Technically Feasible: The proposed solution must be able to accommodate the user requirements and comply with built environment industry standards.
- Sustainable: Socially responsible, economically viable and environmentally sensitive approach.
- Cost Efficient: The Precinct Development Plan must, when implemented, optimise operations and reduce operational cost for both DPWI and its user departments, and private sector.
- Functionally Integrated: Transportation systems, engineering services and land uses must be integrated and coordinated internally and externally.
- Flexible: Phasing of Precinct Development Plan must be seamless and implementable without being perceived as incomplete.
- People Oriented: Focus should be on the needs of the public and staff.

The planning and design of the Precinct Development Plan and the subsequent Site Clearance process need to respond to an innovative approach to development that can transform spaces into a sustainable and potentially mixed use precinct for the purpose of revenue generation.

4. PROPERTY INFORMATION

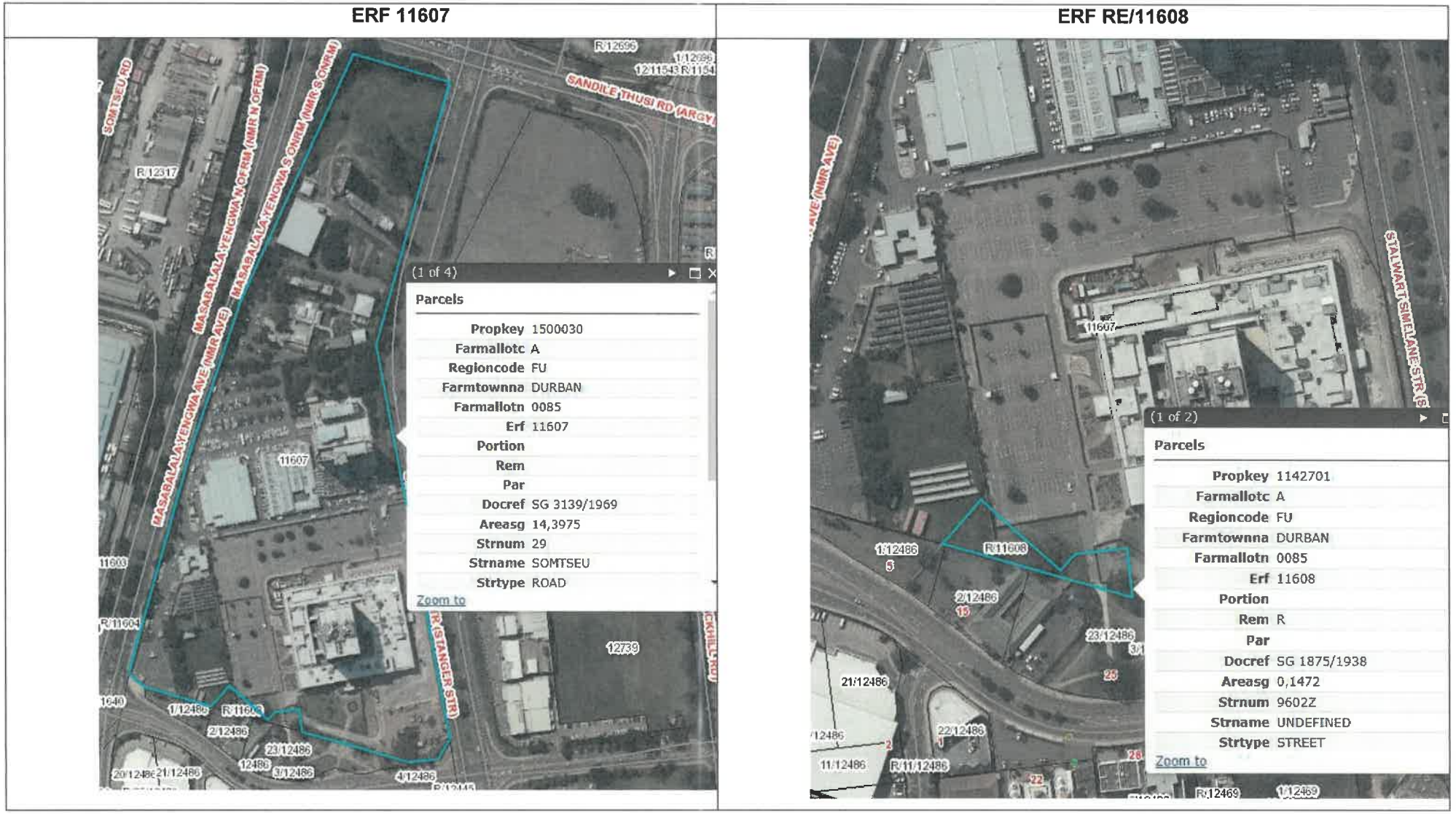
4.1. Property Description and Size

The legal description and size of the properties are as follows:

PROPERTY DESCRIPTION	SIZE
Erf 11607, Durban	14,3975ha
The Remainder of Erf 11608, Durban	0,1472ha
TOTAL	**14,5447ha**

The cadastral configuration of the properties are shown in **Figure 1**. Erf 11607, Durban is a large, 14,3975ha property and Erf Re/11068, Durban located to the south of Erf 11607 and measures only 0,1472ha in extent.

Figure 1: Configuration: Erven 11607 and Re/11608, Durban



Source: http://gis.durban.gov.za/cmv-cgis/viewer/?config=cgisPublicViewer

4.2. Ownership and Vesting

Ownership and vesting of the properties are as follows:

PROPERTY DESCRIPTION	DEED OF TRANSFER	OWNERSHIP	VESTING
Erf 11607, Durban	T7571/973	RSA	National
The Remainder of Erf 11608, Durban	T1683/1940	RSA	Vesting with National in process

4.3. On-Site Land Use and Existing Buildings and Intended Development

Figure 2 shows the current land use of the Site. The table below provides a breakdown of the demarcated areas of the Site, the current land use and the intended development to inform the Precinct Development Plan and subsequent Site Clearance process.

Hatching	Current Use	Intended Development
Green	Magistrate Court with vacant land surrounding the court	Infill development for DoJ&CD users
Pink	Durban Central Police Station (CR Swart Square)	No redevelopment. Only to be included as part of the survey of the Site, no other actions are required for this facility
Orange	Unutilised residential buildings (previously male and female accommodation and married quarters), gym and parking garage. Two low-rise buildings are occupied by the National Intervention Unit and the Tactical Response Unit.	All the buildings in this area will be considered for the following options: demolition/renovation and refurbishment/infill development
No hatching	Vacant land	New construction for (1) user departments that are located in leased accommodation and/or (2) mixed use typologies

A detailed land use analysis must be conducted as part of the Precinct Development Plan.

Figure 2: On-Site Land Use

Source: https://dpwigis.dpw.gov.za/portal/apps/dashboards/e6951474000c4555b471e5ef29e35a8e

5. PROJECT SCOPE

The Service Provider will be required to programme manage and deliver on the following outcomes:

COMPONENT	DESCRIPTION
One (1)	Project Inception
Two (2)	Location Analysis and Specialist Reports (to inform the Precinct Development Plan)
Three (3)	Precinct Development Plan and Specialist Studies (to inform Land Development Application) Including Cost Analysis
Four (4)	Site Clearance: Land Development Application(s) and other Statutory Processes
Five (5)	Project Close-Out

6. PROJECT DELIVERABLES

The project deliverables provide for (1) development of the Durban CBD Precinct Development Plan and also (2) Site Clearance which is typically the preparation, submission, management and approval of land development application/s and other statutory approvals.

The project deliverables as per the scope outlined above are as follows:

6.1 Component 1: Project Inception

Component 1 concludes with the Inception Report and Project Execution Plan (PEP) confirming the detailed methodology, project time frame and associated budget linked with project team members, their role and professional fee and time that will be allocated to each team member. The Inception Report is signed off by the service provider once the project manager Director: Planning and Precinct Development Metropolitan agrees to the content.

6.2 Component 2: Location Analysis and Specialist Reports

The Location Analysis Report provides a contextual status quo framework for the site and the area where it is located. It is seen as an integral part of the Precinct Development Plan. The aim of the Location Analysis Report or contextual framework is to describe the status quo concerning the study area which comprises the development site and areas surrounding the precinct. It develops, identifies and analyses key informants and

becomes the baseline for decision making on the design. Information that require analysis include smart city principles, 4-IR, climate change and other environmental issues, movement and access, current land use, land development parameters, internal and external engineering services capacity and location, urban form, land and open space analysis, etc.

The specials studies, reports and other deliverables that forms part of this component of the project will inform critical decision making and observations in the progressive steps towards the development of the Precinct Development Plan and subsequent parameters of the Site Clearance process.

The minimum contents of the Location Analysis Report include, but are not limited to, the following:

a) **Legislative and policy context.**
An analysis of legal and policy matters that impact the redevelopment of the Site towards implementation of the Precinct Development Plan.

b) **Fitness for purpose: Analysis and confirmation of the identified user department profile and accommodation and operational needs.**
Analysis of accommodation requirements of identified user departments. These include information provided by SAPS and the DoJ&CD as well as the Durban CBD lease portfolio that includes other user departments that may be considered. DPWI will share this information with the professional team.

c) **Laser Scan Topographical Survey of the property: Geomatics Professional/Technologist: Engineering Surveyor/Professional Architect**
This involves the scope of work for the Engineering Surveyor/Professional Architect. The intention of this work is to develop "as-is" laser scan drawings to support Building Information Modeling (BIM). Generating CAD drawings as part of the Precinct Development Plan stage, will inform the use of BIM during detailed design, implementation and the life-cycle management stages of the project.

A detailed site survey is required to generate CAD drawings and 3D point cloud. In this regard the Engineering Surveyor will be responsible for the following:

Detailed site survey to provide:

- A comprehensively detailed contour map of the existing site, also showing all relevant and necessary detail and data required of all existing facilities and services as well as cadastral information, which information will be required for the future design and accurate placing of proposed buildings.
- All natural and manmade features that may have an impact on the placing of the building.
- Contours to 0,25m vertical intervals on a scale of 1:500 and to 0,50m on a scale of 1:1000 with supplementary spot heights wherever the contours are unable to portray ground shapes faithfully. Frequent spot heights shall be given on features such as roads, where elevations may be necessary for engineering design. Tachometric spot heights will be taken on all changes of slope.
- Positions of survey stations and details of survey beacons used for the survey.
- Above ground and/or exposed water mains, sewers, storm water pipes, and other engineering services.
- Power and telephone lines, showing individual poles or pylons in their surveyed positions.
- Routes of underground pipe lines, cables and other buried services, which positions must be obtained from the local authority with support from the relevant professional engineer and from surface and sub-surface indications, e.g. manholes, cable markers, etc.
- Other information which must be detected and recorded are:
    - Confirmation of natural ground level.
    - Road levels.
    - Cuttings and banks (road).
    - Fences and property beacons.
    - Culvert dimension
    - Natural drainage and drainage improvements.
    - Structures affected by planning.
    - Existing access to adjoining properties.
    - Position of foundation test holes with reduced ground levels if available.
    - North direction pointer.
    - Any special features.

- Road and footpaths, differentiating between blacktop and other surfaces.
- Structures, with details regarding the openings, sizes, structure number and type of construction where such a structure has a bearing on the site.
- Drainage and irrigation furrows.
- Gates and fences - differentiating between ordinary, stock proof, jackal proof, security fences, precast concrete, etc.
- Stone, brick or any other type of walls.
- Wells, boreholes, tunnels, railway lines.

❖ Additional deliverable include:

- All individual buildings identified for renovation and refurbishment. Develop "as-is", 2 dimensional drawings in CAD generated from a 3D point cloud towards development of building plans.
- A 3D point cloud at 1cm resolution and 2cm absolute accuracy (SABS 1200) of the individual buildings identified delivered with a 3D viewer capable of make measurements and picking up 3D coordinates.

d) Conveyancing Attorney

This involves the scope of work for the Conveyancing Attorney which amongst other include:

Develop a conveyancing certificate to confirm the following:

- who the registered owner of the properties are,
- the conditions of title or servitudes (if any) recorded in the Title Deeds,
- how these conditions of title or servitudes affect the proposed land development,
- The report must provide guidance and make recommendations towards enabling the Precinct Development Plan where restrictive conditions may hamper implementation of the planned development.

e) Cadastral Information, Surveying: Geomatics Professional/Technologist Land Surveyor

This involves the scope of work for the professional Land Surveyor and include the following:

- A Land Surveyor Certificate including land audit report indicating whether and how the properties are affected by conditions of title or servitudes recorded in the Title Deed and on an approved general plan or small scale diagram.
- All cadastral and servitude information will be shown in the surveyed area, together with the names of owners and municipal boundaries, if applicable.
- Reference system shall be SA WG 84.
- A map in PDF format must also be included in the data provided.

f) Geotechnical Study: Civil Engineer/Professional Natural Scientist (Geotechnical specialist)

This involves the scope of work described hereunder for the Civil Engineer/Professional Natural Scientist (Geotechnical Specialist) in Geological Science and include the following information:

i. Desktop Study

Topographical maps and aerial photographs should be consulted to gain information on the general topography and prominent features. Geological maps should be consulted to gain information on the basic geology and possible dolomite areas.

The Municipality and other organizations should be approached to establish whether they know about and/or have records available on investigations conducted in the area.

The study of overlapping aerial photographs through a stereoscope may be of value in identifying geological features such as faults, dykes, geological boundaries, dolomite, etc. as well as soil types and drainage patterns. These features are often not apparent in the field.

ii. Site Reconnaissance

A site reconnaissance should be undertaken in order to gain geotechnical information from visible features, establish the suitability of various geophysical testing methods and investigate accessibility for drilling equipment.

- Geophysical investigations

Wherever practicable, a geophysical investigation will be undertaken. This investigation will comprise a seismic/resistivity/gravimetric/electromagnetic evaluation of the subsurface conditions of sufficient extent and depth in order to assist in the determination and selection of the most economic detailed investigation, aimed at foundation solutions/types. The service provider shall report on this aspect in his assessment report.

- Detailed investigations – Exploratory holes (typically by back actor)

The purpose of exploratory holes is to permit visual examination, testing of the in-situ material and for the recovery of samples.

Hand or machine (back actor) excavated test pits should suffice for this section. Adequate direction and supervision of the work by competent staff with appropriate knowledge and experience as well as the authority to decide on variations to the investigation when required, is essential in order to obtain the greatest benefit from the investigation.

- Logging and profiling

This work shall be carried out in accordance with the following:

A guide to soil profiling for civil engineering purposes, as Produced by the South African Institute for Engineering and Environmental Geologists (SAIEG), South African Institute of Civil Engineers (SAICE) Geotechnical Division and Association of Engineering Geologists (AEG) (1993), edited by ABA Brink and RM Bruin.

- Format of report

The geotechnical report shall provide clear guidance to the engineer, enabling him to select the most appropriate solutions and foundation types. The report should quantify the parameters required for the design of the proposed foundation and embankments. The report, together with the inspection of the site, will provide the future contractor with sufficient information to reasonably anticipate any problems that may occur during the execution of the works. This will enable the future contractor to tender a realistic price for the construction of the work and to select the most appropriate equipment and techniques. The report shall be compiled under the following headings and shall include - but not be limited to the following, as relevant:

1. Introduction

- Terms of reference;
- Description of the planning stage, and the purpose for which the investigation was conducted.

2. Description of the site

- Location of the site;
- Accessibility of the site;
- Traffic ability of the site for construction equipment;
- Listing of sources where data is available or was obtained from;
- Description of regional geology, vegetation, drainage and other general features of importance.

3. Investigations Carried Out

- Name(s) of firm(s) responsible for the field work (consultant, contractor);
- Name(s) of person(s) responsible for the interpretation of the geophysical work and for the profiling;
- Dates when the work was conducted;
- Description of the types of field work undertaken and equipment used.

4. Investigation Results

- Description of the soils encountered - identifying their stability or potential problems they may present, e.g. tendency to heave, collapse, settle, etc.;
- Description of hard rock geology - identifying the type, quality, degree of weathering, fracturing, etc.;
- Description when potential for boulders and/or other obstructions to deep seated foundations;
- Description of the problems experienced or to be expected;
- Description of ground water and expected variations;
- Field and laboratory testing carried out i.e.:
- Types of tests conducted on the respective materials;
- Results obtained and their reliability.

5. Recommendations

- Type of foundation best suited;
- Expected bearing capacity and settlement for the respective materials on which founding could be considered;
- Precautionary measures;

- ❖ Construction sequences.

6. References

- ❖ Listing of standards used for the classification of materials in respect of soil condition and rock hardness.

7. Annexures

- ❖ Locality plan to appropriate scale;
- ❖ Laboratory test results;
- ❖ Drawings to scale showing the location - including levels of all positions investigated physical features of the site and setting out points.

g) Confirmation and execution of required environmental authorisation and required specialist studies: Environmental Assessment Practitioner

This involves the scope of work for the Environmental Assessment Practitioner (EAP), which amongst others includes:

- Environmental Authorisation in terms of the National Environmental Management Act, 2004 (Act 8 of 2004) ("NEMA") provided that the development is a "listed activity" in terms of the National Environmental Management Amendment Act, 2004 (Act 8 of 2004) (NEMA).
- If the proposed development and envisaged land use rights does not require environmental authorisation from the Department of Forestry, Fisheries and the Environment, submit proof that such authorisation is not required. An updated PEP will be developed for sign off.
- Should the DFFE require submission of an application for environmental authorisation for consideration, such process must be initiated during this stage of the project.
- If required, a Heritage Impact Assessment must be concluded, managed and approval obtained if any structures or building(s) on the property are to be conserved in terms of the National Heritage Resource Act, Act 25 of 1999.
- If required, other specialist studies must be concluded towards issuing of environmental authorisation.

h) Market Study: Urban Economist/Market Analyst

A Market Study is required during this phase of the project with the aim to identify an appropriate development strategy given the market context. Also, the intention is to ensure an integrated and sustainable outcome in terms of its future use which is in line with the mandate of the Department of Public Works and Infrastructure (DPWI) in terms of the Government Immovable Asset Management Act, 2007 (GIAMA). DPWI Feasibility Studies were concluded and the recommendations will be shared with the service provider. The objectives of the study should consider:

- Determine and recommend the options for the highest and most efficient utilisation of the properties;
- Realise the best value for money considering financial, non-financial (e.g. environmental, heritage and cultural benefits) and socio-economic benefits;
- Improve the utilisation of state owned properties and minimise the demand for new properties;
- Maximise the returns and optimise property use;
- Support the vision and strategic goals of the Property Management and Trading Entity (PMTE) within the Department of Public Works and Infrastructure (DPWI);
- Ensure that the option best fits the criteria and goals of the Chief Directorate: Planning and Precinct Development (PPD).

i) Location and site analysis: Town Planner

Analysis of all internal and external town planning aspects that impact the Site.

j) Location and site analysis: Civil Engineer (traffic specialist)

Analysis of all internal and external transportation aspects that impact the Site.

k) Location and site analysis: Civil Engineer (sewer, water, roads and stormwater)

Analysis of all internal and external civil engineering (water, sewer and roads and stormwater) aspects that impact the Site.

l) Structural Analysis: Civil Engineer (structural)

Aspects that must be considered are:

- Conduct condition assessment of identified buildings that are utilised for residential accommodation, the parking garage and current office

accommodation on the Site in light of renovation and refurbishment for offices in line with the options identified in the Market Analysis.

- Consider the laser scan "as-is" CAD drawings generated by the Engineering Surveyor of identified buildings as part of the condition assessment.
- Structural Engineering Report to outline findings, impact/risk and recommendations regarding the defects and potential opportunities for redevelopment identified during the condition assessment.

m) Location and site analysis: Electrical Engineer

Analysis of all internal and external electrical aspects that impact the Site.

n) Location and site analysis: Landscape Architect

Analysis of all internal and external landscape aspects that impact the Site.

o) Location and site analysis: Architect including the following:

- Apply detailed site survey and CAD drawings generated by the Engineering Surveyor and Land Surveyor and 3D point cloud of the Site in support of analysis.
- Review specialist reports to determine renovation and refurbishment opportunity/risks.

6.3 Component 3: Precinct Development Plan and Specialist Studies (Land Development Application) Including Cost Analysis

This component includes the development of the Precinct Development Plan, Specialist Studies in support of the relevant land development application(s) as well as the Cost Analysis towards implementation and management of the precinct.

The purpose of the Precinct Development Plan and Report is to guide implementation of the project, which may be developed or phased over time. It demonstrates the urban design vision for the development. Building Information Modeling (BIM) will form part of the implementation (design and construction) of the project. The laser-scan CAD drawings generated by the Surveying Engineer will support BIM.

The multi-disciplinary team of specialists must develop detailed studies in support of the envisaged land use rights for implementation of the Precinct Development Plan. This relates to the external and internal environment of the identified properties.

The Cost Analysis must consider financial models for implementation and funding of the proposed development in line with National Treasury regulations. Construction of the

precinct may include Public Private Partnerships (PPPs), Build Operate and Transfer (BOT) and Refurbish, Operate and Transfer (ROT) that require both the state and private sector funding. The optimal model for implementation and management must be recommended.

The following information informs the Precinct Development Plan and Report and specialist studies in support of the land development application(s):

6.3.1 Urban Design Framework

The Urban Design Framework is the urban vision or three-dimensional concept with input from the team of specialists and the urban design guidelines. A preliminary Precinct Concept was created for the project by DPWI Architectural Services to test the potential for development. This Precinct Concept must be considered and refined based on the options identified in the Market Analysis. The Urban Design Framework requires input from the following:

a) Spatial and Land Use Framework
b) High Level Volumetric Concept
c) Structural Validation
d) Access and Circulation Framework
e) Public Space and Landscaping Framework
f) Engineering Infrastructure and Services Framework
    - Water Supply
    - Wastewater Disposal
    - Solid Waste Disposal
    - Surface Water Management
    - Electricity Supply

a) Spatial and Land Use Framework

The spatial and land use strategy for the precinct is to promote the development of a highly accessible, well-structured, facility, supported by a high-quality public realm and NMT network and responsive built form. The development will form an integral part of the reception area, capitalising on the opportunities generated by the infrastructure in the area.

The precinct will provide accommodation for national user departments and must include accommodation and support facilities associated with the space and operational requirements of these departments. If a mix of land uses are found to support optimal use of the property, other potential tenants should be considered.

The precinct must consider access to public transport, parking, high levels of accessibility to the precinct and strong linkages to the surrounding urban fabric while striking a balance with public safety. All within the available land-use budget of the optimal zoning.

New building/s will be constructed to accommodate the identified user departments' accommodation needs on the vacant land area and will have a high-quality architectural design that reflects the branding of national government. The design of buildings for alternative uses should also be based on similar principles.

This facility will be designed in a flexible building format that can be adapted to other uses in the future and to accommodate improved service delivery objectives.

It is critical, due to the nature of the services that will be provided, to ensure maximum visibility and exposure and to create a high-quality building edge along the street.

Key public realm interventions will include:

- The development of high-quality access to the building from the adjacent streets.
- The development of a high-quality landscaped environment with the adjoining environment.
- The retention and enhancement of important green corridors and natural drainage systems and their utilisation as important structuring elements and visual, infrastructural and recreational amenities.

b) High Level Volumetric Concept

The volumetric concept translates the space and operational needs of the user departments and other potential uses into three-dimensional form to enable assessment of needs in relation to the optimal zoning and associated land development controls. The volumetric concept will inform other aspects of the

development i.e. engineering services, facilities management, accessibility, landscaping, etc.

A three dimensional animated flythrough visual representation of the concept design simulating a bird's eye view or aerial perspective of the precinct must be generated. A marketing brochure must be developed in digital and printed format to inform the Precinct Investment Plan/Strategy. The information will be also be utilised in presentations.

c) Structural Validation: Civil Engineer (structural)

Aspects that must be considered by a Professional Engineer (structural) are:

- Validation of high level concept design.
- Contribute to building quality in construction by incorporating national and international quality standards in material specifications and construction processes.
- Confirm optimisation of project cost.
- Confirm efficient delivery of design.

d) Access and Circulation Framework: Civil Engineer (Traffic Specialist)

The transport strategy to the precinct is focused around the improvement of access to the precinct through encouraging the use of public transport (PT) and the integration between all transport modes, thus resulting in limited road infrastructure upgrading requirements. Different modes of transport is aimed at ensuring optimal access to the development by ensuring effective and efficient movement of visitors and staff.

The proposed strategy for the precinct must consider the PT options that are available and must integrate with Municipal strategies which will complement each other in the long term.

The Transport Strategy further supports a shift from private vehicles to PT vehicles which will result in a reduction in parking requirements. The integration with land use planning and supporting proposed TOD will further be supported by the PT shift. However, input from the Municipality towards supporting the aim of the

development is critical to ensure success of the intention to concentrate more on PT and less on vehicular transport. With guidance from the Municipality, taxi operators must also be consulted.

The effective circulation and improvement of pedestrian traffic flow will also limit the need for road network upgrading.

The facilities should allow for pedestrianised movement within the precinct and allow for access to and from intermodal transfer facilities as part of supporting TOD. The development concept will mitigate vehicular movement within the precinct.

Increased PT accessibility to and from the precinct will support the intended reduced travel time and travel cost for lower income members of the public wanting to use the facilities.

The following aspects (where applicable) are crucial to the implementation of the transport strategy:

- PT focus and access to BRT and rail services to reduce the emphasis on road upgrades and parking provision.
- Need for road access for staff, delivery vehicles.
- BRT (high quality bus service) from the site with access to bus stations.
- NMT and walkability especially between the multi-modal transport areas. These must be clearly defined and supported by signage approved by the Municipality.
- Limited need for public parking.

The main transport related proposals as follows:

- Introduction of PT drop-of and pick-up off-site with potential time limitation to be regulated
- Introduction of left in-left out/ one way systems where applicable
- Staff and delivery vehicle access.

Road and Street Network and Parking:

- Location and type of access.
- Treatment of the road reserve / lane configuration requirements to enable efficient access.

- Access requirements to provide efficient access to buildings.
- Parking requirements for visitors, staff and loading/deliveries to the building.
- Any other transport issues that will shape the precinct plan.

In support of the land development application process:

This require development of a report to include:

- Undertake traffic impact assessment and develop a traffic impact assessment report
- Provide traffic projections for the proposed development in relation to vehicles in all categories, cycling, motorbikes and pedestrians to name a few.
- Develop a costing model of alternative access options and recommend a feasible option supported by a comprehensive, detailed motivation which should include schematic drawings to information the Precinct Development Plan.
- Consultation with all other professional experts involved in this project is a requirement to ensure an integrated approach.
- Provide inputs on Precinct Development Plan for the development.
- Provide recommendations for traffic routes and management in the proposed development.
- Attain comments on proposed traffic measures from relevant departments and institutions responsible for transportation matters.
- Respond to all traffic related matters in all processes of the development.
- Consider the need to upgrade road network to accommodate the additional land use rights associated with the planned development.
- Take into account the existing and planned public transport network and pedestrianisation of the area.

e) Public Space and Landscaping Framework

The overall strategy for landscaping is to be defined taking consideration of the following aspects:

- The precinct will need to have an overall brand.
- Seek to establish a sense of arrival.

- Establish the main access into the site from surrounding area.
- Sustainable drainage system in collaboration with civil engineer. Rainwater harvesting for irrigation of planted areas is also strongly recommended to be incorporated into the design of new buildings and infrastructure.
- The use of locally indigenous plant species, in particular succulent and geophyte species that will obviate the need for intensive water use (irrigation).
- Grassy lawns should be avoided in the development as these require much greater water use for irrigation.

A Landscape Framework Plan must be developed.

f) Engineering Infrastructure and Services Framework: Civil Engineer

Sustainable Infrastructure

The development of the precinct will need to be serviced by sustainable infrastructure that supports and enhances the future development. Proposed infrastructure strategies include:

- Water re-uses from grey water/ rainwater harvesting.
- Managing of surface water drainage systems holistically in line with sustainable development.
- Storm water storage will assist with retention and attenuation of stormwater runoff and for irrigation to landscaped areas.
- Solar systems for energy generation.
- Waste separation area for all materials that can be recovered to promote recycling.

Water Supply

Aspects that must be considered are:

- Water demand projections including fire protection.
- Consideration of on-site storage options and required capacity to operate partially or fully independently for 24 hours. Facility that will be required to be considered.
- Landscaping requirements (in consultation with landscape architect).
- High level reticulation requirements for development (to support Cost Report) in relation to optimal position of connection point.

- Input into Precinct Development Plan

Wastewater Disposal

Aspects that must be considered are:

- High level wastewater reticulation requirements (to support Cost Report) in relation to optimal position of connection point.
- Input into Precinct Development Plan

Solid Waste Disposal

Over and above the removal of solid waste by the municipality, recycling must also be considered in support of environmental sustainability and possible income generation. The location and management of such a facility must be included as part of this project.

Surface Water Management

Aspects that must be considered are:

- City of eThekwini policy requirements
- Green stormwater infrastructure to reduce stormwater runoff volumes and peak flows by through retention.
- Drainage system for development (to support Cost Report) in consultation with landscape architect.
- Stormwater Plan for incorporation into Precinct Development Plan

In support of the land development application process:

This require development of a report to include:

- Provisional status quo (existing) condition assessment of infrastructure services for water, sewerage, storm water and roads.
- Preliminary calculations for the total wet services infrastructure requirements for the proposed development, with particular reference to water demand (including fire water demand), sewerage collection/discharge and storm water collection/disposal (incl. retention pond requirements, if applicable).
- Providing particular recommendations on the provision of civil engineering services to the development.

- Preliminary detailed cost calculation/s, for the total development, required for the provision of planned on-site wet services infrastructure to inform the Precinct Development Plan.
- Obtain formal confirmation from the relevant municipality about its ability to develop and deliver bulk civil engineering infrastructure services, complete with estimated bulk services contribution costs and timelines for the provision of services.
- Confirmation of 1:100 year flood-line (mapped) if applicable.
- Preparation of a civil engineering report detailing the aforementioned requirements and submission thereof to the municipality for consideration.
- Facilitation, if necessary, of the development and signing of Service Level Agreement (SLA) with the municipality in relation to all Civil Engineering Services required.

g) Engineering Infrastructure and Services Framework: Electricity Supply

Aspects that must be considered:

- Electricity demand projections.
- High-level reticulation requirements for development (to support Cost Report) in relation to optimal position of connection point.
- Alternative/renewable energy supply options to relieve the Municipality/Eskom supply.
- Input into Precinct Development Plan

In support of the land development application process:

This require development of a report to include:

- Assessment of reports prepared by sub-consultants.
- Investigation of existing infrastructure services for electricity.
- Preliminary calculations of the projected capacity demand for electricity in relation to the proposed development.
- Providing particular recommendations on the provision of electricity to the development.
- Preliminary detailed cost calculation/s, for the total scheme development requirements, for the provision of the required electrical infrastructure to inform the Precinct Development Plan.

- Obtain formal confirmation from the relevant municipality about its ability to develop and deliver electrical engineering infrastructure services, complete with estimated bulk services contribution costs and timelines for the provision of electricity.
- Preparation and submission of electrical engineering report detailing the aforementioned requirements.
- Facilitation, if necessary, of the development and signing of Service Level Agreement (SLA) with the municipality in relation to Electrical Engineering Service.
- Attend all project meetings as and when required.

6.3.2 Facilities Management & Operations Model for the Precinct

Total Facilities Management (TFM) (also called 'one-stop-shop') is the management of building and its services and is developed by the Property Management Specialist in Facilities Management/Professional Architect. This encompasses multiple disciplines to ensure functionality of the built environment by integrating people, place, process and technology. It relates to technical or hard services as well as soft services.

The facilities management model for the precinct must be considered based on the option to outsource the service.

This aspect is critical, as it impacts on the life-cycle costing and therefore on the payment of user charges/unitary payments by the identified user departments.

6.3.3 Urban Design Guidelines

The development on the identified property will contribute to the ultimate quality and performance of the precinct for all its identified User Departments, potential mixed-use tenants and visitors.

Urban design guidelines are essential to ensure that the development will add value to quality and experience of the precinct public environment. Having an architectural character with guidelines will enable the Department to control execution of the vision at the implementation stage.

The development contribution will improve the value, attractiveness and performance of the existing urban fabric in the precinct. The urban design guidelines for the development

will form the baseline for future phases. The guidelines supplement other regulatory town planning, engineering, building and development control standards and building-codes that will be used to control development in the precinct.

The purpose of the guidelines include the following:

- An assessment tool to assist the Department in achieving the development vision and create an identity and enhance the prestige of the precinct.
- Guidance for the Department and user departments.
- To assist in integration and contribution of the various components of the precinct, that will be made by the future buildings in the precinct, to grow into a cohesive and integrated complete precinct.
- To establish and protect the value of public and private investment in the area through effective, practical and meaningful development and building quality control.
- To provide Green Building guidelines for an environmentally sustainable design which are to be linked to current best practice systems.

Essential principles which underpin the guidelines are as follows:

- Provide guidelines that enable the creativity and innovation of individual developer teams to add value to the precinct.
- Ensure that the building is designed to respond positively to, and contribute to, the public domain (streets and spaces) within which it is situated.
- Ensure that the building plays its part in creating a legible, identifiable and memorable urban environment through a cohesive architectural branding uniquely South African in character.
- Support the development of mixed use and flexible building typologies that can contribute to urban diversity and environmental sustainability as well as socio-economic responsibility.
- Prioritise pedestrian comfort and convenience and ensure that the built form supports and provides for intended high levels of accessibility, comfort, convenience and safety for people during all phases of the precinct development.
- Ensure easy identifiable accessibility to buildings from public spaces and creating space which improves the micro-climate around buildings for occupants and visitors.

- ❖ The construction of new buildings and new infrastructure are required to be environmentally responsible and embrace "green building" and "green infrastructure" best practice principles from the outset.
- ❖ Determine building footprint, defining street edge, etc.
- ❖ Consider parking calculations (including parking solution for commercial developments)

Important requirements to consider:

Sustainable Green Buildings and Infrastructure

Sustainability-centred approaches that promote the development of energy efficient, sustainable and low impact buildings and infrastructure, such as Sustainable Drainage Systems (SuDS), rainwater harvesting, indigenous landscaping, solar panels, etc.

Architecture and Built Form

Key informants drive the architectural character branding concepts proposed below.

- Respond to the South African development context which reflects and conveys progress, leading edge and global standards.
- Functionality.
- Value for money.

Architectural concepts and styles which portray elements of these imperatives are proposed. The type of buildings which are likely to be established in the precinct, illustrate critical elements relating to local climate, cultural patterns and forms, materials and colours which are practical and which need to be explored to resonate with, and have meaning in, the South African and Regional context.

Building Typology

The shape, configuration, massing and height of the building/s is a critical consideration for both functionality and branding of the precinct and should be used to eventually create a collective built form for the precinct which contributes to the imageability and legibility of the development. The quality of the structure/s is a key principle that needs to be applied to the building typology and its intended function as an administrative and social service hub or mixed use development.

The building must support the operational requirements of the identified user departments. The use of each floor should be considered in relation to the operational requirements. Input from the Department: Architectural Services will be required to provide guidance on the approved norms and the interpretation thereof. These norms are developed for each user department in terms of the Space Planning Norms and Standards for Office Accommodation Use by Organs of State, 2005.

The ground floor of the building should accommodate the mix of uses associated with the service function of the user departments, security, access to the building for different users, weather extremities, etc. The building must provide for a dignified experience for both user departments, visitors and potential mixed-use tenants.

Application of Building Principles

The following are typical high-level applications of the principles described in the previous sections for a Concept for the Precinct:

- Multi-storey building with ground floor security, waiting facilities
- Vehicular access with pick-up and drop-off facilities for public transport
- On-site delivery access and parking provision
- Potential and suitability of basement level for parking and PT access
- Structured parking provision
- Colour
- Material
- Glazing
- Building Modulation
- Roofs

Depending on the outcome of the Market Study informing the highest-and-best use of the identified site, precinct typologies may vary. These could include the following:

- Government precinct for national government departments: security cluster, social cluster, administrative cluster, etc.
- Integrated government precinct: national, provincial and municipal.
- Mixed-use: government and commercial/retail/residential.

- Other.

Renovation and Refurbishment of Existing Buildings and/or New Construction

Renovation and refurbishment of existing buildings are aspects to consider as part of the Precinct Development Plan. The residential buildings that are located on the site will be converted to office accommodation for SAPS. The buildings are no longer used and the Department wishes to renovate the facilities to be used as new offices for SAPS. Due to the condition of buildings, significant renovation will be required. New construction must also be considered.

The following tasks must be completed:

- Consider the client profile (accommodation requirements) to understand the space and operational needs.
- Understanding the requirements of identified users and to develop high level guidelines.
- Based on the accommodation needs and existing features of the Site prepare a high level Renovation and Refurbishment and/or new construction Proposal.
- Review existing building plans, if available.
- Advise on statutory requirements towards implementation of renovation and refurbishment and new construction.

6.3.4 Cost Analysis

a) High Level Development Cost

In order to generate the high level development cost (Quantity Surveyor).

In making cost estimates for the development concept for the precinct, consider the following:

- New construction/renovation and refurbishment of the buildings and all associated on-site infrastructure including landscaping.

- Internal engineering services as well as development charges (bulk engineering services contributions).
- Exterior spaces and costs for perimeter fencing if required.
- Facilities management for the life-cycle of the development.
- Utilise BIM software during design, construction and life-cycle.
- Upgrade external public infrastructure must be separated to inform an SLA with the local municipality.
- Other.

b) Life Cycle Costing

Life cycle costing (LCC) is a method of economic analysis directed at all costs related to constructing, operating, and maintaining a construction project over a defined period of time. In the traditional approach to real estate investment, this can be thought of as the different components of a Net Present Value (NPV) analysis. Life cycle cost analysis is a projection of initial and ongoing costs of ownership, or leasing, and operations for a facility or site over its useful life.

In order to gain the maximum value for money, all costs incurred over the whole life span must be estimated. The optimization of the life cycle costs of a construction project is essential for a complex decision making process by the DPWI and user departments identified to locate within the precinct building/s.

The intended building/s, as the productive outcome of the construction project, is characterized by a long lifespan with operating costs much higher than the initial construction/development cost. This is the reason why all decisions connected with a construction project have a long-term and significant impact. The analysis of the project should not focus simply on the construction costs, but also on how matters such as the building design, facilities and fittings affect future operation and maintenance costs.

Life cycle costs (LCC) in general consist of an initial investment (usually construction costs) and the follow-on costs (ordinary payments, i.e. energy, utilities, cleaning and maintenance, irregular costs for replacement, etc.).

Life cycle costing is one form of analysis for determining whether a project meets the client´s performance requirements. The LCC methodology can be utilised to

assess the tenders for the implementation of the project, where those tenders differ not only in their tender price but also in their operational and maintenance costs. The LCC approach may lead to a different result when evaluating tenders than when the construction tender price is the only criterion taken into consideration.

The use of an LCC methodology can save money by both providing better forecasting and optimising future costs.

The following minimum information must be included as part of the life-cycle costing:

- Current accommodation of identified user departments (leased and state owned)
- Municipal valuation of identified property/s
- Construction cost and time estimate
- Project Location, Gross m², Lettable m², expected occupation date
- Financial Assumptions:
    - Annual escalation(s)
    - Interest/discount rates / cost of capital
    - Repayment period
- Annual Operating Cost
    - Utilities
    - Maintenance
    - Periodic refurbishments/replacements
    - Rates and taxes
    - Insurance
    - Other property management costs
- Residual value

c) Proportionate User Charges for Identified User Departments

The implementation of the project and the associated life cycle costing affects the need to spend public funds efficiently.

The identified user departments must be informed of the optimal financial model for implementation, i.e. whether the project be a capital project or a Public Private Partnership, Build Operate and Transfer (BOT) or Refurbish Operate and Transfer (ROT) and how that impacts on their budget.

The solution must advise the expected capital outflow by the users if the project is recommended as a capital project. The ongoing annual payment, which is after the construction, must be indicated for each development option; that is, the unitary payment in the case of a PPP, BOT, ROT and operational costs (user charges) in the case of a capital project.

6.4 Component 4: Site Clearance: Land Development Application and other Statutory Processes

This deliverable involves the submission, management and conclusion of the required land development application process(es) as well as other statutory processes that may be necessary towards implementation of the Precinct Development Plan:

6.4.1 Town Planner

This involves the scope of work for the professional Town Planner which amongst others include: description, explanation, preparation and management of the appropriate land development application(s) with intended land use rights aligned to the supporting documents by specialist sub-consultants.

Other requirements as part of the process:

- Prepare all land development application documentation in line with the Precinct Development Plan and specialist studies as per the relevant municipal By-law and LUMS.
- The Precinct Development Plan will inform the Site Development Plan that will accompany the land development application(s).
- Submit to DPWI project manager for comments.
- Consider all previous studies and documentation relating to the property.
- Submission of land development application(s).
- Facilitate public participation.

- Address comments received, respond to objections if received and attend to all matters related to objections.
- Obtain comments from internal Municipal departments and external institutions where applicable.
- Address and respond to comments received.
- Provide timeous input as required by the Municipality in terms of the by-law.
- Attainment of approval for application(s) from Municipal Planning Tribunal (MPT).
- Obtain expert input from specialists to inform MPT submission
- Assist with process to enter into SLA's with Municipality if required.
- Facilitate all processes necessary for the delivery of the land development application process.

6.4.2 Land Surveyor

Where required - attend to survey, drafting of subdivision/consolidation diagram and approval (Surveyor General) of subdivision/consolidation in support of registration of the subdivision/consolidation of the properties supporting the task of the Town Planner and Conveyancing Attorney.

6.4.3 Environmental Assessment Practitioner

During this stage of the project, the EAP will conclude the environmental authorisation process in line with NEMA (if required).

6.4.4 Architect and Engineering Professionals

This involves the Architect and Engineering Professionals (civil, electrical, traffic, geotechnical) and the support required as part of the land development application process and will include:

- Supporting capacity throughout land development application process when input is required regarding Precinct Development Plan (Site Development Plan) and engineering services reports.
- Engage municipal departments regarding the SDP and engineering reports to obtain and address comments.

- Support development and conclusion of Service Level Agreement process relating to calculation of engineering services charges.

6.4.5 Conveyancing Attorney

Facilitate removal of restrictive conditions/registration of consolidation and/or subdivision (if required). Provide support to the State Attorney in consultation with the relevant DPWI Regional Office (if required).

6.5 Component 5: Project Close-Out

Fulfil and complete the project close-out including necessary documentation to facilitate effective implementation of the precinct.

7 SKILLS REQUIRED

The Service Provider and the supporting multi-disciplinary built-environment team must possess the relevant skills and experience to undertake the project assignment, which, depending on the project, may include the following additional resources:

a) Professional Architect (SACAP)
b) Professional Civil Engineer/Technologist (sewer, water, roads and stormwater, traffic specialist) ECSA (more than one resource can be included if deemed necessary, i.e. wet services specialist and traffic specialist)
c) Professional Civil Engineer/Technologist (structural) ECSA
d) Geomatics Professional/Technologist Land Surveyor SAGC
e) Geomatics Professional/Technologist Engineering Surveyor SAGC/Professional Architect SACAP
f) Professional Civil Engineer/Technologist (geotechnical specialist) ECSA/ Professional Natural Scientist (geotechnical specialist) SACNASP
g) Professional Electrical Engineer/Technologist ECSA
h) Professional Town Planner SACPLAN
i) Professional/Technologist Landscape Architect SACLAP
j) Professional Quantity Surveyor SACQSP
k) Conveyancing Attorney LPC
l) Environmental Assessment Practitioner EAPASA

m) Property Management Specialist in Facilities Management/Professional Architect SACAP

n) Urban Economist/Market Analyst

8 DOCUMENTATION

The service provider must refer to and comply with the following departmental documentation. This Scope of Work will be deemed the base document:

- All documentation referred to in the tender document.
- Annexure B: Activities and Deliverables Schedule.
- Annexure C: Scope of Work
- Annexure D: National Department of Public Works. Civil and Structural Engineering Services, Guidelines for Site Clearance Requirements, August 2019.

9 FUNCTIONALITY CRITERIA

Table 1: Functionality Criteria

A.	Functionality Criteria	Weight (%)
1.	EXPERIENCE OF COMPANY. Attach valid reference letters or completion letters (not letters of appointment) not older than 10 years, to substantiate project experience in urban design. 7 or more Projects = 5 Points 6 Projects = 4 Points 5 Projects = 3 Points 4 Projects = 2 Points 3 Projects = 1 Point 0, 1 or 2 projects = 0 Points	**20**
2.	EXPERIENCE OF LEAD PROFESSIONAL ARCHITECT. A lead Professional Architect registered with the South African Council for the Architectural Profession (SACAP). 1. Lead Prof. Architect with more than 7 years' experience post registration = 5 Points 2. Lead Prof. Architect with 7 years' post registration experience = 4 points 3. Lead Prof. Architect with 6 years' post registration experience = 3 points 4. Lead Prof. Architect with less than 6 years' experience post registration = 0	**30**
3.	SUPPORTING PROJECT TEAM EXPERIENCE (PROFESSIONAL): Years of experience of the 11 required resources. 1. Supporting project team with more than 4 years' experience post registration = 5 points 2. Supporting team with 4 years' experience post registration = 4 points	**20**

A.	Functionality Criteria	Weight (%)
	3. Supporting team with 3 years' experience post registration = 3 points 4. Supporting team with less than 3 years' experience post registration = 0 The team is scored according to the team member with the least number of years of experience	
4.	SUPPORTING PROJECT TEAM EXPERIENCE (NON-PROFESSIONAL): Years of experience of the 2 required resources. 1. Supporting project team with more than 7 years' experience post qualification = 5 points 2. Supporting team with 7 years' experience post qualification = 4 points 3. Supporting team with 6 years' experience post qualification = 3 points 4. Supporting project team with less than 6 years' experience post qualification = 0 The team is scored according to the team member with the least number of years of experience	**20**
5	FINANCIAL CREDIBILITY: Service provider should provide a letter from a banking institution which is not older than 3 months not a bank statement, letter of good standing or proof of bank account. 1. Bank Rating of 'A' 5 Points 2. Bank Rating of 'B' 4 Points 3. Bank Rating of 'C' 3 Points 4. Bank Rating of 'D' 2 Points 5. Bank Rating of 'E' 1 Point 6. No Bank Rating Letter 0 Points In case of a joint venture, the Lead Company's Bank Rating Letter will be considered when awarding point(s)	**10**
	Total Weight	**100**

10 CRITICAL MILESTONES

The information provides a guideline for preparation of the Project Execution Plan as part of the Inception Report with millstones, responsible professional and associated cost. The Inception Report is submitted to and approved by the Director: Planning and Precinct Development Metropolitan. The Inception Report and the signed tender document regulates execution of the project in terms of the scope, timeframe and budget.

Draft reports must be submitted to the DPWI Project Manager for comments prior to submission of the final report for each component of the project. Sufficient time (at least two weeks) must be allocated for this purpose to ensure that the final deliverable for each component is concluded and submitted on the date stated in the PEP.

Invoices will be issued in accordance with the PEP. Invoices must include the correct project description, WCS number and be accompanied by a time sheet. The time sheet must specify

the activity (deliverable), time and cost for the relevant phase of the project aligned to the PEP and Inception Report.

DETAILS OF MILESTONES	PROJECT DELIVERABLES	DELIVERABLES TIMEFRAMES Maximum
COMPONENT 1: INCEPTION		
• Consultation and finalisation of project brief • Site orientation and assessment • Project programme and timeframes for deliverables (PEP) • Briefing of project team • Preparation and submission of a comprehensive Inception Report • Attending project meetings towards conclusion of Inception Report	Comprehensive Inception Report	2 weeks
COMPONENT 2: LOCATION ANALYSIS AND SPECIALIST REPORTS/PROCESSES		
• Legislative and policy context • Fitness for purpose: Analysis and confirmation of the user department profile and accommodation needs. • Volumetric Concept • Laser-scan buildings and topographical survey • Land Surveyor Certificate • Conveyancer Certificate • Commence Environmental Authorisation process • Geotechnical Report • Location and site analysis: All required specialists • Market Analysis • Summary of key aspects detailing opportunities, constraints and challenges and the implications for the development • Address and respond to comments received from DPWI project manager • Manage sub-consultants in delivery of project	Comprehensive Location Analysis Report inclusive of all detailed specialists' reports	8 weeks
COMPONENT 3: PRECINCT DEVELOPMENT PLAN AND SPECIALIST STUDIES (LAND DEVELOPMENT APPLICATION) INCLUDING COST ANALYSIS		
• Urban Design Framework including required specialist studies • Concept Flythrough and Marketing Brochure to support Precinct Investment Plan/Strategy • Facilities Management & Operations Model	Final Precinct Development Plan and Report Marketing Brochure (printed and digital copies)	8 weeks

• Urban Design Guidelines • Cost Analysis and Report • Address and respond to comments received from DPWI project manager • Manage sub-consultants in delivery of the project		
COMPONENT 4: SITE CLEARANCE: LAND DEVELOPMENT APPLICATION(S) AND OTHER STATUTORY PROCESSES		
• Prepare land development application(s) • Submit to project manager for input and approval • Submission of land development application(s) • Facilitate public participation and all matters related to the process • Obtain comments from internal Municipal departments • Address and respond to comments received and facilitate engagements between DPWI project manager and municipality where required • Provide timeous input as required by the Municipality in terms of the by-law • Attainment of approval for application(s) from Municipality • Land Surveyor process(es) and approvals (if required) • Assist with process to enter into SLA's with Municipality if required • If required, attend to legal processes (registration of consolidation, subdivision, removal of restrictive conditions of title) in consultation with State Attorney and relevant DPWI Regional Office • Attend all project meetings as and when required • Manage sub-consultants in delivery of the project	Final Site Clearance Report with all required approval(s) including confirmation on bulk service contributions from the local authority and signed SLA's where applicable SG Approvals (where required) Registration in the Deeds Office (where required)	48 weeks
COMPONENT 5: CLOSE OUT		
• Close Out Report with all required deliverables	Close Out Report	2 weeks

Submission of deliverables, in line with the allocated time frames, need to consider and allocate time for input and feedback by project manager.

11 CONCLUSION

The Department of Public Works and Infrastructure (DPWI) will appoint a service provider with a supporting team to develop the Durban CBD Precinct Development Plan and to manage the Site Clearance process on Erven 11607 and Re/11608, Durban.

ANNEXURE D

public works
Department:
Public Works
REPUBLIC OF SOUTH AFRICA

NATIONAL DEPARTMENT OF PUBLIC WORKS

CIVIL AND STRUCTURAL ENGINEERING SERVICES

GUIDELINES FOR SITE CLEARANCE REQUIREMENTS

Date: AUGUST 2019

Directorate: Civil and Structural Engineering Services
256 Madiba Street
Pretoria
0001

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1. Objective

1.1. To provide guidelines on minimum requirements regarding aspects to be addressed in a Civil and Structural Engineering Services Report forming part of a Site Clearance Report in respect of the following:

(i) Sites that are undeveloped and that are envisaged to be utilised for new developments,

(ii) Sites with existing facilities that are envisaged to be extended for additional accommodation, and

(iii) Sites with existing facilities that are envisaged to be rehabilitated, upgraded, refurbished, converted or renovated to provide for a change of use or which may result in an increase in the number of occupants and/or users.

2. Introduction

2.1. The term "Site Clearance" is used in the Departmental Town Planning Services context and generally means the culmination of the process of ascertaining and verification of the suitability and the viability of a site (property) for a specific development or use in the issuing of a Site Clearance Certificate by the Directorate: Town Planning Services (TPS).

2.2. The Civil and Structural Engineering Services reports that are to be prepared for site clearance purposes must provide sufficient information regarding the feasibility in respect of the intended development of the property with specific regard to the availability and capacity of bulk and other civil and structural engineering infrastructure services to enable the Department to decide on the suitability of the specific property for the intended development. The relevant aspects in terms of the services listed below must be investigated and confirmation is to be provided that the intended development could be supported by such services.

3. Legislation and Applicable Standards

3.1. The list provided below is by no means non-exhaustive. The onus is on the appointed professional service provide to ensure that all relevant and applicable standards, manuals, specifications and codes of practice are consulted in order to produce a comprehensive report.

Legislation/Code	Description	Level of Consultation
Act 103 of 1977	National Building Regulations and Building Standards Act	Compulsory
SANS 10400 (Applicable parts)	The application of the National Building Regulations	Compulsory
SANS 10161	The design of foundations for buildings	Compulsory
SANS 1936- All Parts	Development on dolomite land	Compulsory (for Dolomite land)
Act 85 of 1993	Occupational Health and Safety Act	Optional
Act 95 of 1998	Housing Consumers Protection Act	Optional
SANS 10160 (Applicable Parts)	Basis of structural design and actions for buildings and industrial structures	Compulsory
SAICE Code of Practice	Code of Practice 1989: Lateral support in surface excavations	Optional
SAICE Code of Practice	Code of Practice 2010: Site Investigation	Optional
Act 107 of 1998	National Environmental Management Act	Optional
SANS10299- Applicable Parts	Development, maintenance and management of groundwater resources	Compulsory
SANS 10252- All Parts	Water supply and drainage for buildings	Compulsory
SANS10100 (where applicable)	The structural use of concrete	Compulsory
SANS10162 (where applicable)	The structural use of steel	Compulsory
PW 345 (where applicable)	Standard specification for domestic and fire water storage and fire water supply for public buildings	Compulsory
PW347	Civil Engineering Manual	Compulsory
PW344	Appropriate development of infrastructure on dolomite: manual for consultants	Compulsory (for Dolomite land)
PW342 (where applicable)	Guidelines for the design of civil services for prisons	Compulsory
PW 2006 (where applicable)	Identification of problematic soils in Southern Africa	Compulsory
PW 2011 (where applicable)	Small waste water treatment works	Compulsory
COTO	Committee of Transport Officials	Compulsory (for traffic engineering)
THM 16 and 17	South African Traffic Impact and Site Traffic Assessment Standards and Requirements Manual	Compulsory (for traffic engineering)

4. Formal Requirements

The following formal requirements must be adhered to:

4.1. The report must be prepared under the supervision of and signed by a Professional Engineer or a Professional Engineering Technologist.

4.2. The Department's Dolomite Risk Management Unit (DRMU) must be consulted for all site clearances undertaken.

4.3. Every report submitted must include a Dolomite Status Certificate (DSC) or a Non-Dolomite Status Certificate (NDSC), whichever is the case.

4.4. For all Department of Defence facilities, the report must be accepted by DOD fire-fighting division where applicable.

5. General

The following information is generic and must be covered in all site clearance reports:

5.1. A brief description of the envisaged facilities as defined by the Client Department in terms of *inter alia* its purpose as well as the building and construction areas. A copy of the Pre-Design Information Request (PDIR) or the Procurement Instruction (PI), whichever is applicable, with the Client's official Accommodation Requirements (certified needs), must be included in the report.

5.2. Basic locality plans (provincial and locality in town).

5.3. Basic site plan showing the following:

(i) Demarcation of the property (boundaries, etc.).

(ii) The topography of the site with 0.5m contours or provide information that would describe the topographical characteristics.

(iii) The 1 in 100 year flood line or if not readily available provide information that would adequately describe the situation (refer 3.4 Storm Water).

(iv) In the case of an existing developed site:

- The position of existing buildings and structures
- The existing access/entrance to the site
- The position of water, sewage and storm water connection points
- Any possible legal and physical constraints such as way-leaves, servitudes, overhead power lines, heritage aspects, graves, rock outcrops, etc. of a civil

engineering nature. The Town Planner as Team Leader to be coordinated with in terms of responsibility for reporting.

6. Technical Requirements

6.1. Civil Engineering

For all Civil engineering services, the following information must be covered in the report:

6.1.1. Water Supply (Domestic and Fire)

(i) An estimate with appropriate preliminary calculations of the average daily water demand with peak flows of the envisaged facility in respect of both for domestic and fire-fighting purposes, with a view to determine the flow volume(s) that will be required by the facility.

(ii) The recommended water source(s) supported with appropriate reasoning in terms of the sufficient quantity and quality of the water and its compliance with the applicable standards as well as the possible need for treatment.

(iii) In the situation where a local authority is proposed as the most viable water source, the following must be provided:

- The availability and sustainable capacity of bulk water
- The capacity of the local authority's infrastructure and distribution network in terms of flows, pressures and condition to provide in the facility's requirements
- The degree of fire-fighting capability of and assistance available from the local authority.
- Written confirmation in principle from the local authority regarding its capacity to provide in the water requirements as indicated above and an estimate of the possible bulk contribution cost
- Written confirmation in principle from the local authority that a water connection will be provided and an estimate of the possible cost
- Any special requirements of the local authority in terms of the provision of water services, e.g. fire-fighting aspects with comments and recommendations in terms thereof.

(iv) In the situation where a local authority as a source is not possible or viable or deemed to be an unacceptable risk and the proposed source is boreholes, a river, etc., the following must be provided:

- Information regarding possible viable source options.
- Information regarding further investigations that will have to be conducted.

- Information regarding compliance with relevant legislation and if applicable further steps that will have to be taken to obtain the necessary approvals, authorisations, licences etc. from the applicable authorities such as Department of Water and Sanitation, Department of Environmental Affairs, etc.
- The sustainability and the possible spare capacity of the proposed source must be commented on.

(v) The possible need for water storage and the availability of a suitable location on the property taking into account and reporting on the environmental requirements in terms of the height of water tower structures.

(vi) If the is site is confirmed to be located on dolomite land, a Dolomite Footprint Stability Investigation (FDSI) must be conducted through the DRMU from which a recommendations will be made on the works that will be implemented on the ground.

6.1.2 Sewage / Waste Water

(i) An estimate with appropriate preliminary calculations of the average daily flow volumes with peak flows of the envisaged facility with a view to determine the flow volumes that will be discharged by the facility.

(ii) An assessment of disposal options with a recommendation of a viable method.

(iii) In the situation where waste water is proposed to be disposed of into a local authority's system the following must be provided:

- Information regarding the availability and capacity of a local authority's treatment facility and sewerage network.
- Written confirmation in principle from the local authority regarding its capacity in terms of its sewerage network and waste water treatment to accept the volumes as estimated and an estimate of the possible bulk contribution cost.
- Written confirmation in principle from the local authority that a sewage connection will be provided and an estimate of the possible cost.
- Any special requirements of the local authority in terms of the provision of waste water disposal services with comments and recommendations in terms thereof.

(iv) In the situation where disposal into a local authority's system is not viable or possible and where on-site treatment or other methods of disposal will be required, the following must be provided:

- Information regarding possible viable options for disposal of waste water.
- Information regarding further investigations that will have to be done.

- Information regarding compliance with relevant legislation and if applicable further steps that will have to be taken to obtain the necessary approvals, authorisations, licences, etc. from the applicable authorities such as Department of Water Affairs and Sanitation, Department of Environmental Affairs, etc.

(v) Should off-site treatment or disposal as a possible result of space constraint on the envisaged property be contemplated, this must be stated together with the proposed means of sewage disposal.

(vi) Conservancy tank solutions should be avoided if possible.

(vii) For dolomite sites the means of disposal shall not be septic tanks with soak-away ("French") drains. This is deemed unacceptable and a recommendation/objection to this effect should be raise.

6.1.3 Solid Waste

(i) An estimate of the volume of waste that will be generated by the facility.

(ii) An assessment of disposal options with a recommendation of a viable method.

(iii) The capacity of a local authority's infrastructure for disposal.

(iv) Written confirmation in principle from the local authority regarding its capacity for disposal of the volume as estimated and an estimate of possible bulk contribution costs.

(v) Any special requirements of the local authority with comments and recommendations in terms thereof.

(vi) Should e.g. an incinerator be required for the facility, then an indication on whether meeting of the legal requirements such as licencing as well as other related criteria will be attainable, should be provided.

(vii) If there are oil separators or fat traps on site, a comment on the location/position in relation to the buildings should be made (possible bad odour). The efficiency of the current system, the frequency of the cleaning fat tray(s) and access to the disposal facilities.

6.1.4 Storm Water

(i) An evaluation of the acceptability of the site's location in terms of the risk of storm water flooding.

(ii) The site's locality relative to the 1 in 100 year flood line and the Local Authority's or other legal specific requirements in respect of flood line relating aspects and development limitations as well as an indication on whether the envisaged

development will comply. (This aspect should normally be the environmental consultant's responsibility if appointed. The civil engineering services report should however provide basic information in this regard. To be coordinated with the appointed town planner and environmental consultant).

(iii) An estimate with appropriate preliminary calculations of the probable storm water run-off according to the frequencies as per the "Guidelines for Human Settlement Planning and Design".

(iv) An assessment of envisaged storm water management on site with a method of discharging from the site.

(v) Written confirmation in principle from the local or other responsible authority regarding its capacity for accepting storm water volumes as estimated from the site and a quotation of possible bulk contribution costs from the local authority if applicable.

(vi) Any special requirements of the local authority e.g. attenuation dams which may impact on the envisaged development with comments and recommendations in terms thereof.

6.2. Traffic and Transportation Engineering

6.2.1. Transportation (Public Transport)

(i) A basic assessment based on applicable codes and standards of the possible need for public transport for users of the facility.

(ii) The availability of public transport with reference to the anticipated need.

(iii) Parking demand adjusted as allowed in TMH 16 and 17

(iv) Written confirmation in principle from the local or other authorities regarding the availability of public transport.

(v) Any special requirements of the local authority with comments and recommendations in terms thereof.

6.2.2. Site Traffic Assessment

(i) An assessment of the available space on the site to satisfy the calculated need for roads and parking. If parking is not provided within the proposed development, a parking layout, compatible with the proposed site layout, must be provided.

(ii) The site layout plan need to allow for both the excess, out of building, parking as well as visitors parking. Where no visitors or employee parking is prescribed

(THM 17) a comparative survey of a similar facility should be used or undertaken to provide realistic planning numbers.

(iii) Parking area layout design as contained in the COTO documents must be applied, with specific attention given to ease of access and traffic flow.

(iv) Access to sites is specific to the development and must be approved by the local authority as part of the Building Application. Provisional approvals will not be accepted.

6.2.3. Traffic Impact Assessment

(i) A basic assessment of the possible impact that the envisaged development will have on existing traffic patterns as well as the resultant possible need for upgrading of relevant traffic and road infrastructure, including on existing traffic management measures.

(ii) A recommendation based on TMH 16, on the need for a detailed traffic impact study, must be made. This will determine the scope of the detail required for the traffic report.

(iii) Written confirmation from the local authority regarding the need for upgrading of traffic and road infrastructure and an estimate of bulk contribution costs.

(iv) Final recommendations regarding access to the site.

(v) Written confirmation in from the local authority regarding the availability of access to the site and an estimate of possible bulk contribution costs.

(vi) Any special requirements of the local authority with comments and recommendations in terms thereof.

6.2.4. Sustainability of Services

(i) The sustainability of the services (3.1 to 3.6) in terms of the future provisioning thereof based on current demand as well as in terms of the possible projected increased demands and requirements due to e.g. possible extensions to the envisaged facility must be commented on. (Information regarding possible future increased utilisation is to be obtained from the Department's Directorate: Town Planning Services. If such information could not readily be obtained then a general opinion should be provided). Where applicable, use must be made of available Integrated Development Plans and the Local Authority's comments in this regard are to be obtained and provided.

6.3. Geotechnical Aspects.

6.3.1 An evaluation of the soil conditions, with a view to point out the possible impact on the design and construction costs of roads, parking and other services must be provided. For this purpose use should be made of the geotechnical report as prepared by the structural engineering and/or geotechnical engineering consultant. It is being advised that geotechnical investigations are to be coordinated between the civil and structural or geotechnical engineering consultants to ensure that the information (soil types, parameters, etc.) gathered by the investigation and tests would be applicable to both civil and structural engineering requirements. The reporting with recommendations on civil and structural engineering aspects should however be presented separately. Geotechnical investigations should be executed in compliance with the Departmental guideline, PW 2006/1 and must be limited to basic investigations and analyses. This should include the following:

(i) Carry out a desktop study (topographical maps, geological maps, gathering information from previously conducted studies within the area maybe obtainable from the local authority and etc.)

(ii) In the event where desktop study outcomes prove insufficient for the purpose, the digging of a limited number of shallow trial holes (until refusal with a TLB) and profiling there of (upon approval from the property owners or authorities)

(iii) Laboratory testing is limited to the determination of the basic soil properties clays (expansiveness), collapsible soils and etc., and only if a visual assessment could not be made and if regarded as an absolute necessity to enable a recommendation to be made on the suitability of the site.

6.3.2. Regarding the possible presence of dolomite, enquiries should be directed to the Directorate: Town Planning Services to provide a copy of, or the DRMU of the Department's Directorate: Civil and Structural Engineering Services for the issuing of a Dolomite Status Certificate, a copy of which should be enclosed in this report.

6.4. Structural Engineering

For existing buildings, the following elements must be covered as part of the structural engineering site clearance report:

6.4.1. A basic description and a layout of existing buildings and other structures (as required under 5.3 above).

6.4.2. Assessment of structural performance and condition.

6.4.3. Identification of any risks that may be associated with the structural condition and recommendation of necessary interventions.

6.4.4. Provide an assessment on any possible effect that existing buildings and services may have on the development of new facilities.

6.4.5. Recommend foundation design criteria based on the geological characteristics of the site as required under 6.3 above. The report should formulate an opinion on the type of foundations required for the envisaged type of buildings, any site specific special requirements and restrictions that may be anticipated.

6.5. Topography

A description with an evaluation of the topography of the site must be provided with reference to its acceptability for the intended use in terms of the feasibility to provide the required civil engineering services, the possible need for excavations, etc.

7. Conclusion and Recommendation

The report must conclude with the provision of inter alia a general expression of opinion on the suitability of the property in terms of its intended use as well as with a recommendation in that regard. An opinion should also be expressed with regards to the site's overall current dolomite compliance relating to the various engineering services.

A general indication of the level of risk and the acceptability thereof in terms of any aspect of the availability and sustainability of services must be provided as part of the recommendation.