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ENVIRONMENTAL CONSULTING

TELKOM SA SOC LIMITED

EIA REPORT

SECTION 24 G APPLICATION FOR TELKOM PARK, 61 OAK AVENUE, HIGHVELD, CENTURION, GAUTENG

DFFE NUMBER: 14/12/16/3/2/105

SEC REFERENCE: 023045

May 2026

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Executive Summary

Telkom Park is situated at 61 Oak Ave, Highveld, Centurion and consists of the Core, Nexus, and Hub areas.

PREVIOUSLY UNLAWFULLY INSTALLED TANKS (i.e., current fuel storage and supply facility present on site)

Background

As part of the emergency and uninterrupted power supply on site, Telkom has an existing fuel storage system.

This existing fuel storage was installed without prior environmental authorisation in 1999 (Nexus and Core areas) and 2003 (Hub area), respectively.

The fuel storage system at Telkom Park for the emergency and uninterrupted power supply consists of decentralized below-ground tanks connected to various day tanks and includes the tanks pump's, pump controllers, filtering, and distribution manifolds.

Legislative Requirements

The installation of these tanks during 1999 and 2003 with a total capacity storage capacity of 155 000 litres triggered Schedule 1 (c) of ECA, Act No 73 of 1989, and given that an environmental authorisation was not obtained prior to this installation, a Section 24G Application is required.

.2 EXISTING FUEL STORAGE

The bulk fuel storage for the campus consists of a decentralized system that can be summarized as follow:

Generator	Power Demand		Fuel Demand		Day Tanks		Bulk Storage			Total
Description	kVA	Load	(L/hr.)	(L/hr.)	(L)	(L)	QTY	(L)	(L)	(L)
CORE 1	1500	50%	185	619	300	1200	2	23000	46000	47200
CORE 2	1500	50%	185		300					
BACKUP	2000	0%			300					
NEXUS C	1250	66%	249		300					
NEXUS A	1250	66%	249	868	300	1200	2	1400	48800	50000
NEXUS B	1250	66%	249		300					
NEXUS 1	1500	50%	185		300		2	23000		
NEXUS 2	1500	50%	185		300					
HUB A	1250	66%	170	1082	300	2500	3	9000	55000	57500
HUB B	1250	66%	170		300					
HUB C	1250	66%	170		300					
HUB 1	1000	50%	158		300		2	14000		
HUB 2	1225	50%	158		300					
HUB 6	2000	50%	256		1000					
HUB5	550	100%	170		300	300				300

The Purpose of This EIA Report

The purpose of the EIA phase of the process is to assess the impacts associated with a) the activities that have already taken place unlawfully together with possible alternatives that could have been considered at the time of these activities taking place, and their associated impacts.

As previously mentioned, the applicant unlawfully installed fuel storage with a capacity of 155 000 litres during 1999 and 2003.

The impacts associated with the bulk fuel storage facility have been assessed in detail against their parameters, such as extent, duration, intensity, probability and the reversibility of the impact. The overall significance of impacts has then been determined, based on these parameters in combination with other factors such as stakeholder concern around the identified impact. For this application and in accordance with the requirements of the EIA Regulations, the No-Go Alternative has also been assessed in detail. In this instance, the No-Go Alternative would be the option of ceasing operation of the emergency and uninterrupted fuel supply to the Telkom Park facility and/or rehabilitating the site.

The assessment of impacts has identified what, in SEC's opinion, would have been the Best Practicable Environmental Option (BPEO) for achieving the purpose of the unlawful activity within the context of the receiving environment and associated operational requirements of the Telkom Park Campus.

BPEO is defined as "the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term".

Potentially Significant Impacts Identified

The activity entails previous installation of fuel storage for the emergency and uninterrupted fuel supply to the Telkom Park site, consisting of the Core, Nexus and Hub areas.

PREVIOUSLY UNLAWFULLY INSTALLED TANKS (i.e., current fuel storage and supply facility present on site)

The applicant unlawfully installed fuel storage with a capacity of 155 000 litres during 1999 and 2003.

The petroleum product stored on site both currently as well as proposed in future is diesel. Diesel has a flashpoint of 55˚C and is not a regarded as a “combustible liquid” according to the Petroleum Product Act and the SANS standards.

The current fuel storage system consists of decentralized below-ground tanks connected to various day tanks. The tanks, pumps, pump controllers, filtering, and distribution manifold are configured as TIER I. The storage facility under discussion is classed as an atmospheric tank, which means that the internal pressure ranges from 0 to 3.5 kPa.

The following possible risks have been identified as associated with the **current** fuel storage and supply facility:

- An event or failure (such as a spill) could occur, that could eventually lead to a major *incident*. A possible cause of such a failure could be, for example, failure of a pipeline or valve of a product storage tank or incorrect product handling procedures. An *incident* would be a toxic release, a fire or an explosion on the premises; with the incident resulting in impacts on humans and assets both at and surrounding the site, such as minor injury, major injury and fatality and destructive effect on assets.
- Soil and groundwater contamination could occur in the event of a spill or leak of product (through, for example, a tank and bund failure; or incorrect product delivery procedures).
- Air quality could be impacted due to vapour release, a fire or explosion of base raw materials (waste) and/or finished goods due to insufficient operational control of for example storage, heating and fuel burning equipment.
- Impacts on human health could occur associated with incorrect storage or handling of products at the site resulting in exposure to harmful materials and/or processes;
- The impact on the use of finite natural resources for the manufacture of diesel.

The following potential benefits have been identified as associated with the operation:

- Socio-economic impacts in terms of the contribution of the in terms of income and employment opportunities offered for employees at the site.

The receiving environment that was present prior to the installation of the 155 000 litres of fuel storage was a fully developed, completely cleared industrial/commercial office use site. Sensitive receptors to the impacts identified as potentially associated with the unlawfully installed fuel storage and supply facility include:

- The health and safety of staff on the site, as well as on neighbouring and nearby sites.
- Freshwater resources in the form of groundwater.
- Subsurface soil on which natural ecosystems are reliant; and
- On a broader scale, loss of finite natural resources (such as fossil fuels).

Alternatives Identified and Investigation

Based on the impacts identified as potentially being associated with the bulk fuel storage and supply facility, alternative means of fulfilling the general purpose of the application, which is the storage of diesel for the emergency and uninterrupted power supply, by means of generators, to the Telkom Park facility, have been identified and investigated during this EIA process.

Activity alternatives: Solar power could have been considered as an activity alternative energy instead of relying on diesel-powered generators. This was however not deemed as a feasible alternative at the time, i.e. in 1999 and 2003 as solar power was expensive at the time with high upfront costs as well as high costs associated with energy storage of solar power.

Site alternatives: It was deemed impractical to consider an alternative location for the bulk fuel storage and supply facility, as the fuel directly supplies the generators on the Telkom Park site, and the generators are essential for emergency and uninterrupted power supply to the Telkom Park facility**.**

Design, layout and operational alternatives: The design and layout of the bulk fuel storage and supply facility, including the infrastructure, plant and equipment such as tanks, processing equipment and bunds, will affect the potential of the facility to impact negatively on the health and safety of staff at the site and at nearby facilities; to impact underlying soil and groundwater resources and air quality of the surrounding area.

The design of the infrastructure and abatement equipment is therefore a key aspect to consider for effective management of the potential impacts listed above.

Process/Operational alternatives: Operational alternatives such as standard operating procedures and preventative maintenance schedules for equipment and infrastructure are a key aspect to consider in ensuring safe working practices.

Effective operational procedures can also assist with the minimisation of emissions and associated negative air quality impacts; as well as the minimisation of potential spills and leaks of hazardous inputs and wastes, which are contamination risks.

The No-Go Option: In accordance with the requirements of the EIA Regulations, any of the alternatives which are found upon rigorous investigation to be reasonable and feasible alternatives for meeting the general purpose of the application, will be comparatively assessed against the No-Go Option during the EIA phase of the application process.

The No-Go Option is ordinarily understood as maintaining the status quo at a site, with the applicant meeting all of his legal responsibilities in terms of maintaining a site or operating a facility (DEA&DP *Guideline on Alternatives, October 2011*).

In this instance, the status quo at the site is an operational fuel supply and storage facility, which will have to obtain authorisation in terms of the NEMA Section 24G process, in line with the legal responsibilities of the applicant.

With respect to approaching the No-Go Option in this instance, in order to determine the drawbacks and benefits of operating the fuel storage and supply against the baseline of no such facility being established, the No-Go Option is considered in this case to be the option of the fuel supply facility ceasing to operate and the Telkom Park site thus not having emergency and uninterrupted power supply.

The option of not having emergency and uninterrupted power supply to the Telkom Park site in the form of diesel operated generators is assessed against the continued operation and management of the existing underground fuel storage infrastructure associated with the unlawful activity.

Public Participation

A key component of the EIA process – i.e. where possible impacts associated with the proposed activity are identified, is public participation. Public participation allows stakeholders to assist in identifying issues or concerns around the activity which may need further investigation or assessment. In this way, stakeholders can also contribute to the identification of alternatives for achieving the Best Practicable Environmental Option.

The various steps in the public participation process are strictly prescribed by the regulations contained in Chapter 6 of the EIA Regulations (contained in Government Notice No. R543 of 2010 and Government Notice No. R982 of 2014), and include the following:

- The identification of potential stakeholders and the process whereby these stakeholders are notified of the Scoping/EIA application process
- Providing stakeholders with an opportunity to register as “Interested and Affected Parties” (I&APs) and to comment on all reports published during the process
- The Environmental Assessment Practitioner and the project team then addressing any and all issues raised by registered I&APs;
- Then lastly the notification of registered I&APs of the decision which the national DFFE reaches on the Section 24 G application.

The public participation appendix, **Appendix J**, includes a database of registered stakeholders; a summary as well as proof of all public participation activities undertaken to date; copies of comments and responses received and sent; as well as a Comments and Responses Report, which provides a summary of issues raised and the project team’s response to these issues.

Impact Statement

PREVIOUSLY UNLAWFULLY INSTALLED TANKS (i.e., current fuel storage and supply facility present on site)

Summary of Key Findings of the EIA

The activities assessed as part of this Section 24G application relate solely to the historical unlawful installation and operation of the existing underground fuel storage and supply infrastructure located within the Core, Nexus and Hub areas of the Telkom Park Campus.The impacts which were identified as associated with the current bulk fuel storage and supply facility are:

- Impact on people and assets due to a major incident.
- Risk of contamination of soil, groundwater and freshwater ecosystems and associated human health risks.
- Human health impacts associated with product handling.
- Air quality impacts.
- Impacts in terms of the use of scarce natural resources.
- Benefits / impacts in terms of income, employment and service contribution of the Telkom Park facility.

The option of operating the facility has been assessed against the No-Go Alternative, which has been interpreted as the option of not having emergency and uninterrupted power supply to the Telkom Park facility. The No-Go Alternative has thus provided a baseline against which to assess the benefits and drawbacks of the fuel storage and supply facility for generation of power in the case of emergencies.

It has been found that the negative impacts associated with the initial installation of the bulk fuel storage and supply facility could have been avoided altogether or could be reduced to acceptable levels should appropriate mitigation have been implemented. All identified impacts have been assessed as being capable of management to acceptable levels through the implementation of the mitigation, monitoring, remediation and operational management measures contained within the EMPr. On the other hand, the identified benefits associated with the existing bulk fuel storage and supply facility were found to be of Medium benefit.

With the No-Go Alternative, no benefits were identified besides the absence of any of the risks identified as associated with the bulk fuel storage and supply facility. These risks, as stated above, are all of Low significance, however, and easily avoidable or manageable.

Closing the bulk fuel storage and supply facility and thereby not having emergency and uninterrupted power supply to the Telkom Park site does have associated negative impacts of Low significance, however. Coupled with the loss of the benefits associated with operating the fuel storage and supply facility and thereby providing emergency power supply, it has been found that closing the facility (or the No-Go Alternative) is not the preferred alternative in this case.

Table 1: Summary of Impacts Associated with the Fuel Storage and Supply Facility and with the No-Go Alternative

Refer to Section 10 of this report for a full description of the Impact Assessment Process and calculation of significance ratings.

Impact	Impact Significance with Mitigation (Where Mitigation is Applicable)			
	Fuel Storage Facility		No-Go Alternative	
Impact on people and assets due to a major incident	Low	-3	None	
Risk of contamination of soil, groundwater and freshwater ecosystems and associated human health risks	Low	-2	None	
Human health impacts associated with product handling	Low	-2	None	
Air quality impacts	Low	-2	None	
Benefits / impacts in terms of income, employment and contribution to community	Low to Medium	28 to 52	Low	-12 to -20

Recommendations of the EAP

It is SEC's recommendation that the DFFE authorises the unlawfully installed bulk fuel storage and supply facility. This recommendation is based on the outcome of the impact assessment process, which has been informed by SEC's professional experience in environmental management as well as on specialist input and on detailed process information provided by the applicant.

The facility should be designed and operated with all the mitigation measures recommended by the specialists and required by the commenting authorities, implemented. All of these measures are contained in the EMPr, which is attached as **Appendix M**. The implementation of the EMPr should therefore be a condition of the S24G Application.

An initial site audit by a suitably qualified and experienced Environmental Compliance Officer should also form a condition of authorisation. This is to ensure that every aspect of the design and layout of the site is in accordance with the recommendations and requirements contained in the EMPr.

Thereafter, all on-going emissions monitoring, health and safety training, and other on-going management measures contained in the EMPr, should be reported on to the DFFE on an annual basis. On a biennial basis, the site should be audited against the conditions of the EMPr by an independent ECO. The audit reports should be submitted to the DFFE for their records and for any compliance action needing to be taken.

Audit reports must contain monitoring laboratory results, chain-of-custody receipts to show safe disposal of hazardous waste, incident reports from the environmental register, etc.

These recommendations for monitoring and auditing of operations against the EMPr are contained in the EMPr and should therefore be a condition of authorisation.

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Structure of the EIA Report

Section 1 provides details on the professional competence and independence of the Environmental Assessment Practitioner, SEC.

Section 2 provides an introduction including a brief project background and history; and the legal context in which this Integrated Section 24 G is being made.

Section 3 provides the regional planning context for the facility; as well as an investigation into the Need and Desirability of the activity, i.e. whether the activity is appropriate given the regional planning and environmental management imperatives for the area.

Section 4 provides a brief introduction to the public participation process which has been undertaken during this Scoping/EIA process, with full details of the process contained in the public participation appendix, **Appendix J**.

Section 5 provides a description of the receiving social, economic and bio-physical environment in which the activity is to take place.

Section 6 provides a detailed project description, including information on facility's history in terms of the establishment of infrastructure on site.

Section 7 provides a detailed background description of the legislative non-compliances and illegal commencements relevant to the facility.

Section 8 provides a brief description of the potential significant impacts identified as associated with the reasonable and feasible alternatives for the application.

Section 9 provides an introduction to the investigation of the alternatives for meeting the general purpose and requirements of the application, which is the operation of the fuel storage and supply facility.

Section 10 provides a detailed assessment of the potential significance of the impacts identified as associated with the reasonable and feasible alternatives for the application. Section 10 includes a comparative assessment of the facility against the No-Go Alternative. Section 10 also includes an Impact Statement, with key findings of the EIA process and recommendations of the EAP with respect to the authorising of the facility.

Section 11 contains a summary of findings and conclusions as well as the suggested way forward.

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Appendix J	**Public Participation Information**	• Proof of Public Participation
Appendix L	**Applicant Confirmations and Specialist Input**	• Baseline Report, Spoormaker and Partners
Appendix M	**Management and Monitoring**	• Environmental Management Programme (EMPr)

DRAFT EIA REPORT

SECTION 24 G APPLICATION FOR TELKOM PARK, 61 OAK AVENUE, HIGHVELD, CENTURION, GAUTENG

1 DETAILS OF ENVIRONMENTAL ASSESSMENT PRACTIONERS

Sillito Environmental Consulting (Pty) Ltd (SEC) has been appointed as the independent Environmental Assessment Practitioner (EAP) to submit an S24G Application to the national Department of Forestry, Fisheries and the Environment (DFFE) on behalf of the applicant, Telkom SA SOC Limited. The application process is a S24G EIA process. This report was prepared by Chantel Muller of SEC and reviewed by Adrian Sillito.

Adrian Sillito is a certified environmental assessment practitioner (CEAPSA), Professional Natural Scientist (Pr.Sci.Nat.) and a member of the International Association for Impact Assessment (IAIA). Adrian has more than 20 years' experience in the field of environmental management and impact assessment.
Chantel holds an MPhil in Environmental Management from the University of Stellenbosch and has more than 14 years' experience in environmental management and impact assessment. She is also a certified environmental assessment practitioner (CEAPASA), member of IAIA and an Accredited Professional with the Green Building Council of South Africa.

SEC has extensive experience in the Scoping and Environmental Impact Assessment (EIA) process and has completed many thousands of such applications in most provinces of South Africa since 2001.
SEC does not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014, as amended, and any specific environmental management Act; and does not have and will not have any vested interest in the proposed activity proceeding.

2 INTRODUCTION

Sillito Environmental Consulting (Pty) Ltd (SEC) has been appointed as the independent Environmental Assessment Practitioner (EAP) by the applicant Telkom SA SOC Limited. SEC is to facilitate the Section 24G rectification process in terms of the National Environmental Management Act for the bulk fuel storage and supply facility at 61 Oak Avenue, Highveld, Centurion, Gauteng, known as Telkom Park.
Telkom Park is zoned as Industrial 2 and is situated within Centurion, Gauteng and is surrounded by light to medium industrial, commercial and warehousing as well as medium density residential areas.

<u>PREVIOUSLY UNLAWFULLY INSTALLED TANKS (i.e., current fuel storage and supply facility present on site)</u>

As part of the emergency and uninterrupted power supply on site, Telkom has an existing fuel storage system with a total capacity storage capacity of 155 000 litres. This existing fuel storage was installed without prior environmental authorisation in 1999 (Nexus and Core areas) and 2003 (Hub area), respectively.

The fuel storage system at Telkom Park for the emergency and uninterrupted power supply consists of decentralized below-ground tanks connected to various day tanks and includes the tanks pump's, pump controllers, filtering, and distribution manifolds.

.2 EXISTING FUEL STORAGE

The bulk fuel storage for the campus consists of a decentralized system that can be summarized as follow:

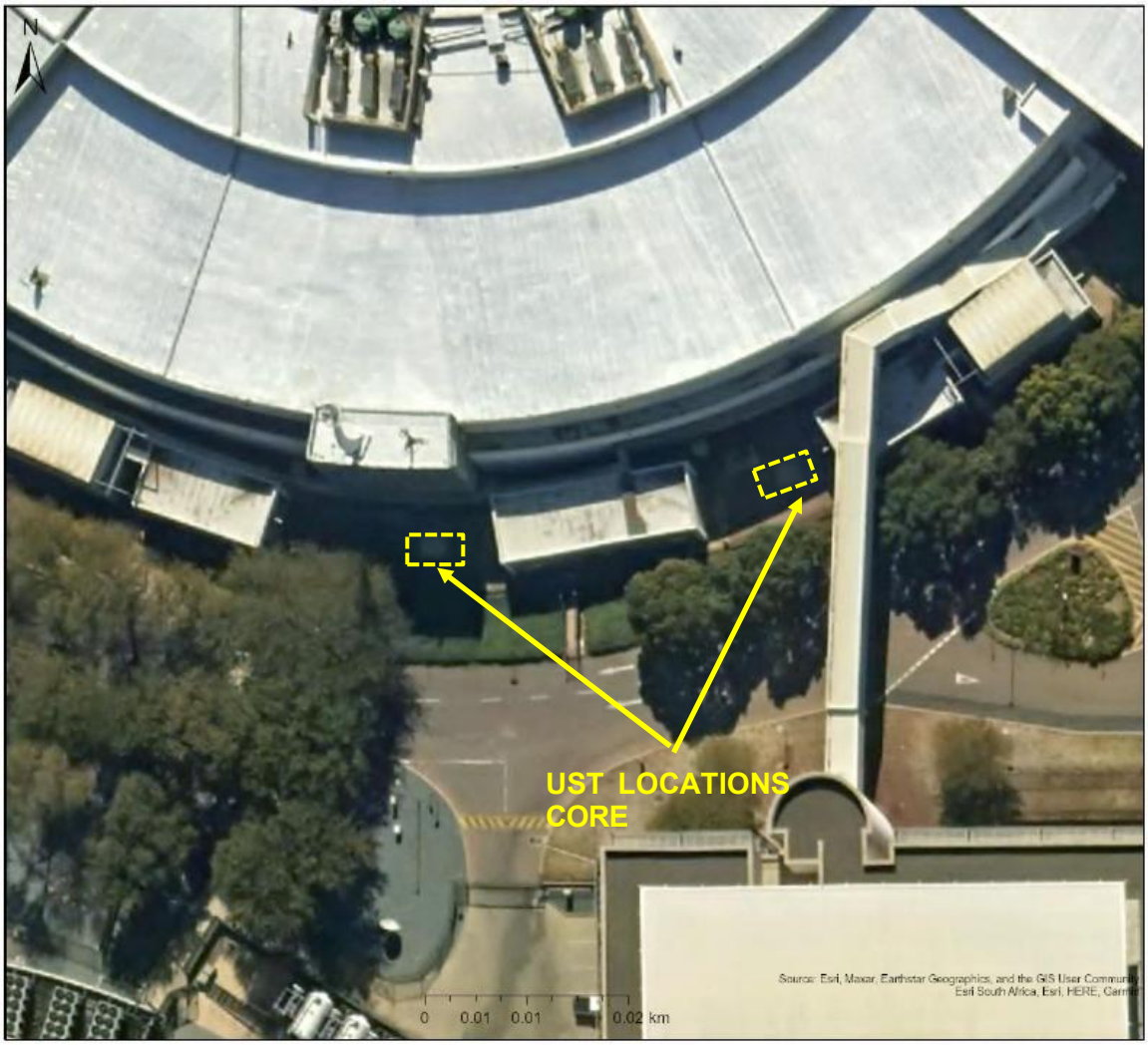
Generator	Power Demand		Fuel Demand		Day Tanks		Bulk Storage			Total
Description	kVA	Load	(L/hr.)	(L/hr.)	(L)	(L)	QTY	(L)	(L)	(L)
CORE 1	1500	50%	185	619	300	1200	2	23000	46000	47200
CORE 2	1500	50%	185		300					
BACKUP	2000	0%			300					
NEXUS C	1250	66%	249		300					
NEXUS A	1250	66%	249	868	300	1200	2	1400	48800	50000
NEXUS B	1250	66%	249		300					
NEXUS 1	1500	50%	185		300		2	23000		
NEXUS 2	1500	50%	185		300					
HUB A	1250	66%	170	1082	300	2500	3	9000	55000	57500
HUB B	1250	66%	170		300					
HUB C	1250	66%	170		300					
HUB 1	1000	50%	158		300		2	14000		
HUB 2	1225	50%	158		300					
HUB 6	2000	50%	256		1000					
HUB5	550	100%	170		300	300				300

2.1 SITE HISTORY AND RELATED INFRASTRUCTURE

a) Previously installed fuel storage

1999:

Building	EPS Plant	Tank Capacity (L)	Estimated year of installation	Existing tanks Location (Coordinates)
CORE	EPS 1			Lat:25.87759°S, Long: 28.18671°E
	BACKUP	23000	1999	
	EPS 2			
	NEXUS C	23000	1999	
NEXUS	EPS 1	23000	1999	Lat:25.87846°S, Long: 28.18540°E
	EPS 2	23000	1999	
	EPS 3 (NEXUS A)	14000	1999	
	EPS 4 (NEXUS B)	14000	1999	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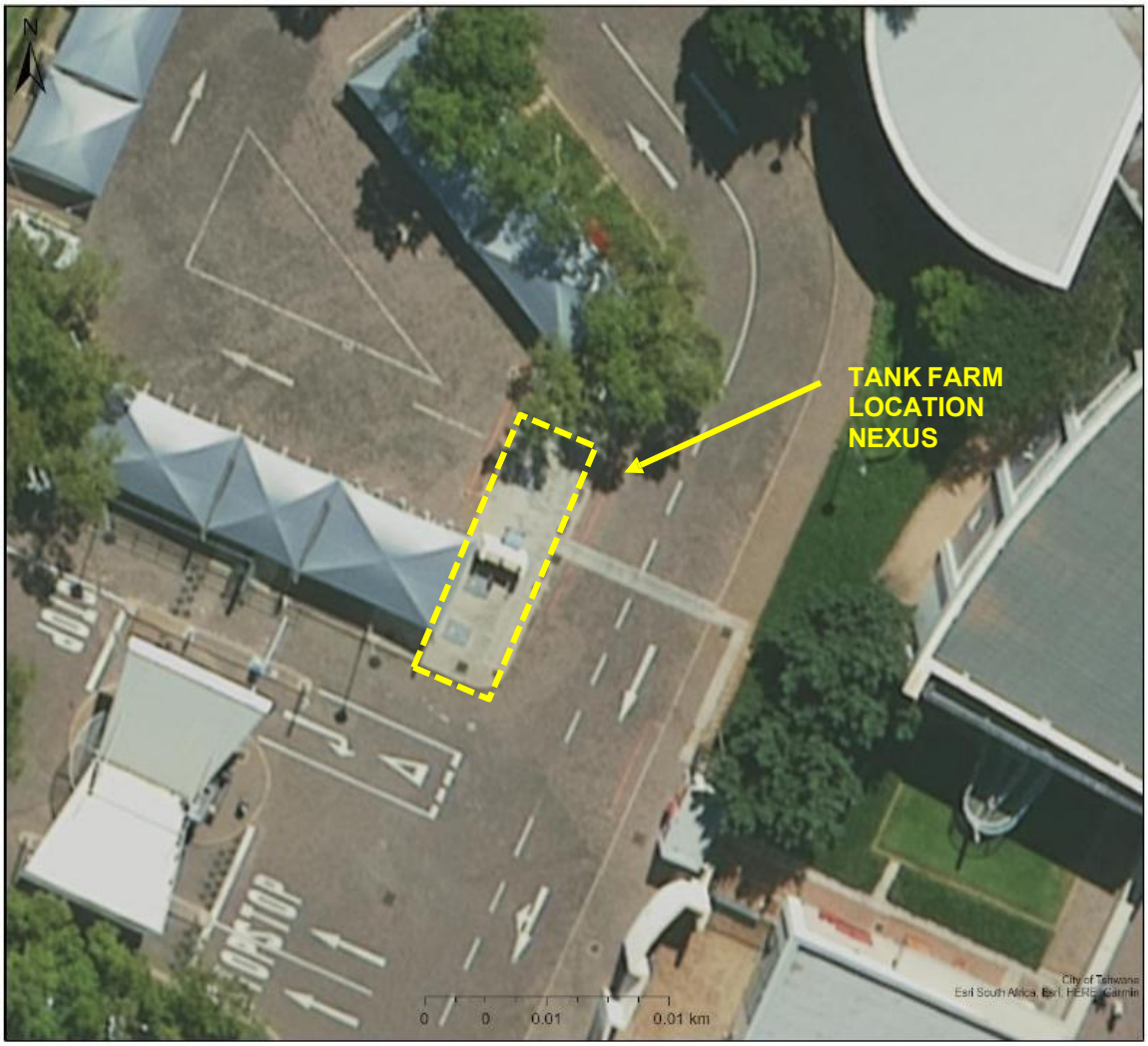
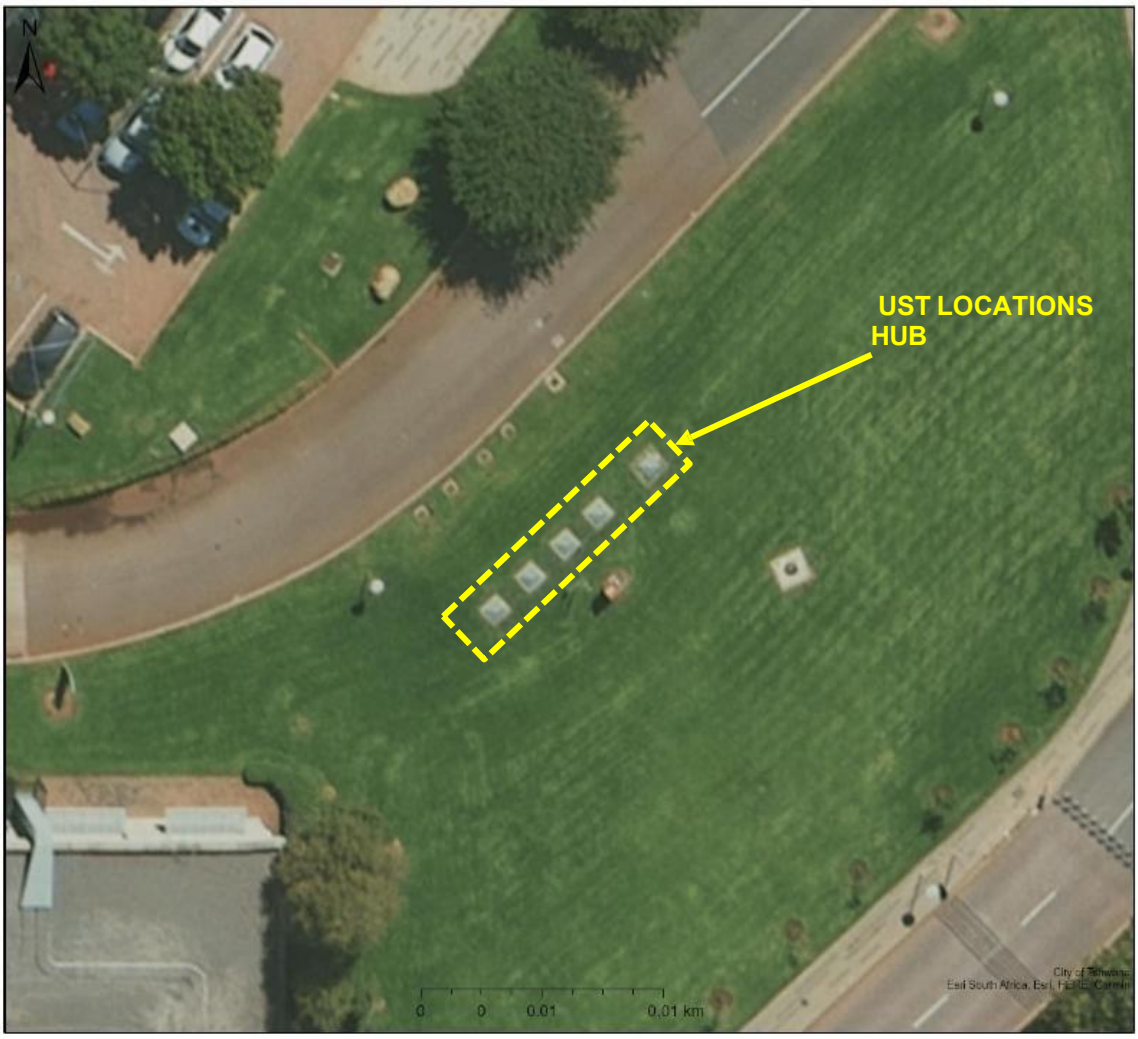


2003:

Building	EPS Plant	Tank Capacity (L)	Estimated year of installation	Existing tanks Location (Coordinates)
	EPS 1			
	EPS 6	**14000**	2003	
	EPS 2	**14000**	2003	
	EPS 7 (HUB A)	**9000**	2003	
	EPS 8 (HUB B)	**9000**	2003	Lat: 25.87775°S,
HUB	**EPS 9 (HUB C)**	**9000**	2003	Long: 28.18830°E



2.2 LEGAL CONTEXT

PREVIOUSLY UNLAWFULLY INSTALLED TANKS (i.e., current fuel storage and supply facility present on site)

The installation of these tanks during 1999 and 2003 triggered Schedule 1 (c) of ECA, Act No 73 of 1989, and given that an environmental authorisation was not obtained prior to this installation, a Section 24G Application is required.

The application will address the following:

PREVIOUSLY UNLAWFULLY INSTALLED TANKS (i.e., current fuel storage and supply facility present on site)

The installation of the bulk storage UST's in the Nexus and Core areas during 1999 would have triggered Schedule 1 (1. (c)(I & ii) of GNR 1182 of 5 September 1997 and required an Environmental Authorisation prior to commencing, which was not undertaken.

The installation of the above 5 tanks in the Hub area during 2003 would have triggered Schedule 1 (1. (c)(I & ii) of GNR 670 of 10 May 2002 and required an Environmental Authorisation prior to commencing, which was not undertaken.

As such, the installation of these tanks, as described in more detail in the table below, was unlawfully installed on site and a Section 24G Application is now required for the installation of these tanks.

Activity or Equipment	DATE OF INSTALLATION	TRIGGERED ENVIRONMENTAL LEGISLATION
NEXUS TANKS: 23 000 litre UST 23 000 litre UST 14 000 litre UST 14 000 litre UST	 1999 1999 1999 1999	 GNR 1182, Schedule 1 1. c) with regard to any substance which is dangerous or hazardous and is controlled by national legislation— (i) infrastructure, excluding road and rail, for the transportation of any such substance; and (ii) manufacturing, storage, handling, treatment or processing facilities for any such substance;
CORE TANKS: 23 000 litre UST 23 000 litre UST	 1999 1999	GNR 1182, Schedule 1 1. c) with regard to any substance which is dangerous or hazardous and is controlled by national legislation— (i) infrastructure, excluding road and rail, for the transportation of any such substance; and (ii) manufacturing, storage, handling, treatment or processing facilities for any such substance;

The installation of the above 6 tanks in the Nexus and Core areas during 1999 would have triggered Schedule 1 (1. (c)(I & ii) of GNR 1182 of 5 September 1997 and required an Environmental Authorisation prior to commencing, which was not undertaken.		
HUB TANKS: 14 000 litre UST 14 000 litre UST 9 000 litre UST 9 000 litre UST 9 000 litre UST	 2003 2003 2003 2003 2003 2003	GNR 670, Schedule 1 1. c) with regard to any substance which is dangerous or hazardous and is controlled by national legislation— (i) infrastructure, excluding road and rail, for the transportation of any such substance; and (ii) manufacturing, storage, handling, treatment or processing facilities for any such substance;
The installation of the above 5 tanks in the Hub area during 2003 would have triggered Schedule 1 (1. (c)(I & ii) of GNR 670 of 10 May 2002 and required an Environmental Authorisation prior to commencing, which was not undertaken.		

3 REGIONAL PLANNING CONTEXT AND THE NEED AND DESIRIBILITY OF THE ACTIVITY

According to the Department of Environmental Affairs and Development Planning Guideline on Need and Desirability (October 2011) as well as the DEAT (2005) Environmental Reporting, Integrated Environmental Management Information Series 17, Department of Environmental Affairs and Tourism (DEAT), the need and desirability assessment in this instance relates to the continued operation and rectification of the existing underground fuel storage infrastructure situated within the Telkom Park Campus.

According to the Guideline, the "need" for a facility relates to whether the facility is needed at this point in time; whilst the desirability of the facility relates to the location or the receiving environment in which the facility is situated; i.e. "is this the right time and is it the right place for locating the type of land-use/activity being proposed"?

The concept of ***sustainable development*** is thus the cornerstone of any investigation into the need and desirability of a development proposal (or an existing facility). Sustainable development is commonly defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Our Common Future, WCED, 1987).

Guiding legislation and policy for determining the need and desirability of the facility include the following:

The National Environmental Management Principles contained in Chapter 1 of the NEMA, which include the following:

- "Environmental Management must place people and their needs at the forefront of its concern and equitably serve their interests."
- "Environmental Management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option."
- "Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person."
- "Decisions must take into account the interests, needs and values of all interested and affected parties."
- "The Environment is held in public trust for the people; the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage."

The Draft National Framework for Sustainable Development (2006), which states that "sustainable development is about enhancing human well-being and quality of life for all over time, in particular those most affected by poverty and inequality". The NFSD goes on to state that "fundamental to understanding sustainable development is recognising the interdependence between the way in which we devise and manage our economic, social and environmental systems".

The Western Cape Department of Environmental Affairs and Development Planning's Guideline on Need and Desirability, October 2011 and the DEAT (2005) Environmental Reporting, Integrated Environmental Management Information Series 17, Department of Environmental Affairs and Tourism (DEAT)

The DEA&DP's *Guideline on Need and Desirability and the DEAT Guideline series* poses a series of questions, the answers to which will determine whether the facility is necessary and desirable given the broader planning and environmental management imperatives, policies and plans (such as those detailed above) which relate to the area. as

These questions have been answered below:

1) Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible Integrated Development Plan IDP)?

Yes. Telkom Park is zoned Industrial II

2) Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) occur here at this point in time?

Yes. Telkom Park is zoned Industrial II.
The site is situated in an area already developed for industrial and commercial use within the urban edge of Centurion. As such the current facility is appropriate for this area.

3) Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)

Yes. On a strategic level, the Telkom Park facility houses the National Network Operations centre which monitors and provides IT and network related services to South Africa's digital infrastructure. The benefits are derived by the entire country which the facility services. The facility also provides direct employment for over 4900 people. The decommissioning of the fuel storage and supply system will implicate that there will be no emergency back-up power supply for the facility.

4) Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development?

Yes, the site has long been supplied with bulk engineering services.

5) Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)?

This question is not applicable, as the site is already serviced.

6) Is this project part of a national programme to address an issue of national concern or importance?

Yes. Telkom Park hosts three large Data Centres, which deliver Data Centre hosting and support to a large number of Telkom customers throughout South Africa.

7) Is the development the best practicable environmental option for this land/site?

The DEA&DP's *Guideline on Need and Desirability as well as the DEAT Guideline Series* references the NEMA as stating that the "Best Practicable Environmental Option" means "the option that provides the most benefit and causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term"

The bulk fuel storage and supply facility fuels generators and UPS systems in order to provide emergency and uninterrupted power supply to the Telkom Park facility. Telkom Park hosts three large Data Centres, which deliver Data Centre hosting and support to a large number of Telkom customers throughout South Africa.

The facility is thus considered to be the "Best Practicable Environmental Option" for the site.

8) Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF as agreed to by the relevant authorities?

Telkom Park is zoned Industrial II

9) Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as defined in EMFs), and if so, can it be justified in terms of sustainability considerations?

No. Given that the facility was established on fully transformed, previously developed industrial premises, which is situated in a long-established industrial area, the facility aligns with the spatial planning for the area.

10) Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)

The site is fully transformed and has been developed for a number of years for industrial purposes. The site is also situated in a long-established industrial/commercial office use area. In addition, specialist input has ascertained that the nearby sensitive receptors to the potential impacts associated with the bulk fuel storage facility, can be effectively protected from these impacts by appropriate design, layout and operational measures. The location can thus be considered appropriate.

11) How will the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?

The site is fully transformed and is located within a fully developed industrial/commercial area. The bulk fuel storage and supply facility therefore does not have an impact on any sensitive natural areas.

The only impact on natural resources would be on groundwater. According to the subsurface and effluent assessment, there is the possibility that operating the facility can impact on soil and freshwater ecosystems in the area.

Based on the fieldwork assessment as well as reference to Google Earth the site has a slight slope to the north-east of <2°.

The 1: 250 000 scale geological map for the area (2528 Johannesburg) indicates that the site is underlain at depth by the Malmani Subgroup bedrock comprising dolomite, stromatolitic, interbedded chert, minor carbonaceous shale, limestone, and quartzite.
The 1:500 000 scale hydrogeological map series and the 1:3 000 000 scale Aquifer Classification Map of South Africa compiled by the Department of Water and Sanitation indicates that the site is underlain predominantly carbonate rocks (dolomite). This results in the formation of a karst aquifer in this area with borehole yields typically ranging from > 5.0 l/s.

The aquifer is further classified as having a high vulnerability[1] and a high susceptibility[2] rating. Water quality is typically good with electrical conductivity values ranging between 0 and 70 mS/m.

[1] Vulnerability**:** likelihood of contaminants reaching a specific position in the groundwater system after introduction at some location above the uppermost aquifer
[2] Susceptibility: a qualitative measure of the relative ease with which a groundwater body can be potentially contaminated by anthropogenic activities and includes both aquifer vulnerability and the relative importance of the aquifer in terms of its classification.

Permanent monitoring wells have been installed at the Core, Nexus and Hub areas where the current tanks are located.

Groundwater monitoring was undertaken during 2023, 2024 and 2026 across the Core, Nexus and Hub fuel storage areas. Monitoring results for the 2023 and 2024 monitoring events indicated that none of the analysed groundwater samples exceeded the applicable screening values of the RISC (Risk Integrated Software for Clean-ups) Version 5, Tier 1 criteria for the assessed exposure pathways.

The 2026 groundwater monitoring event identified approximately 250 mm of diesel-type Free Phase Product ("FPP") within monitoring well TCMW1 associated with The Core fuel storage area, together with the continued presence of hydrocarbon indicators and Diesel Range Organics ("DRO") within certain downgradient monitoring wells associated with The Nexus fuel storage area. Notwithstanding these findings, the 2026 groundwater risk assessment concluded that none of the assessed exposure pathways exceeded the applicable RISC Version 5, Tier 1 screening criteria and that no unacceptable risk to on-site receptors was identified at the time of assessment.

(Refer to the Groundwater Monitoring Reports for 2023, 2024 and 2026 attached in **Appendix O**.)

With respect to sensitive cultural features, no such features have been identified on or near the site, which is situated in a developed industrial/commercial area.

12) How will the development impact on people's health and wellbeing (e.g. in terms of noise, odours, visual character and sense of place, etc.)?

The impact assessment has found that human health impacts can be associated with operating the facility. These can occur through inappropriate facility design and operation which can cause, for example, excessive dermal contact or inhalation of vapours during product handling.

The assessment has found that these impacts are easy to avoid, given the implementation of appropriate design and operational measures for product storage and handling.
With respect to the visual impacts and sense of place associated with the facility, the site is situated the long developed industrial/commercial area. The facility, which has been in operation in one form or another for many years and is in keeping with the industrial character of the surrounds.

13) Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?

No: An opportunity cost is defined in the DEA&DP's *Guideline on Need and Desirability* as well as the DEAT Guideline Series as "the net benefit that would have been yielded by the next best alternative". It is reasonable to suggest that the site would be used for some other industrial use, given the location, zoning and historic land use of the site.

There is no reasonable motivation for suggesting that some alternative industrial land use must take place on that particular site; and that if the alternative activity could not go ahead, there would be unacceptable costs incurred.

14) Will the proposed land use result in unacceptable cumulative impacts?

The impact assessment has found that there are no impacts associated with the facility, including cumulative impacts, which following mitigation are unacceptably high. The impacts have all been found to be possible to prevent or minimise through implementation of appropriate design and operational measures.

4 PUBLIC PARTICIPATION PROCESS

4.1 Identification of and Communication with Stakeholders

A public participation process is an essential component of the Scoping/EIA process. Through public participation, possible issues and concerns around the bulk fuel storage and supply facility can be raised and addressed by the project team during the Scoping/EIA process. Public participation can also assist with the identification of alternative means of fulfilling the general purpose of the application.

The public participation process is rigorously prescribed by the regulations contained in Chapter 6 of the 2010 NEMA EIA Regulations. These regulations will govern the public participation process for this application.

In accordance with the requirements of the EIA Regulations, possible Interested and Affected Parties (I&APs) have been identified. These I&APs were notified of the application process and provided with an opportunity to formally register as I&APs. Notification was undertaken by registered letter, fax or email.

The identified I&APs included land owners or occupants of land adjacent to Telkom Park; and State Departments and Organs of State.

In addition, community representatives in the form of the ward councillor and community organisations such as ratepayers' associations were notified. In addition to notifications sent out, an advertisement was placed in the *Pretoria Centurion Record.* A site notice was also erected at the entrance of the site.

All identified I&APs were given 30 days in which to register as an I&AP and lodge with SEC their comments, issues or suggestions pertaining to the application.

Appendix J contains a full record of public participation undertaken to date.

4.2 Issues Raised by Interested and Affected Parties

No comments were received during the public participation process.

5 DESCRIPTION OF RECEIVING ENVIRONMENT

a. Introduction

Telkom Park is situated at 61 Oak Ave, Highveld, Centurion and consists of the Core, Nexus, and Hub areas.

The site is completely transformed and there is therefore no indigenous vegetation cover or freshwater systems present on site.

Hydrogeology/Groundwater Environment

Subsequent to the December 2024 Groundwater Monitoring Report, additional groundwater monitoring was undertaken during March 2026 and reported in April 2026. The monitoring programme included groundwater level measurements, free phase product assessments and laboratory analysis of groundwater samples collected from the monitoring well network associated with the Core, Nexus and Hub fuel storage facilities.

Based on the fieldwork assessment, together with a review of historical aerial imagery available on Google Earth, the site is characterised by a slight north-easterly slope of less than 2°. The 1:250 000 scale geological map for the area (2528 Johannesburg) indicates that the site is underlain at depth by the Malmani Subgroup bedrock comprising dolomite, stromatolitic, interbedded chert, minor carbonaceous shale, limestone and quartzite. Furthermore, the 1:500 000 scale hydrogeological map series and the 1:3 000 000 scale Aquifer Classification Map of South Africa compiled by the Department of Water and Sanitation indicate that the site is predominantly underlain by carbonate rocks (dolomite), resulting in the formation of a karst aquifer system with borehole yields typically exceeding 5.0 l/s.

The aquifer system underlying the site is further classified as having a high groundwater vulnerability and high groundwater susceptibility rating. Groundwater quality within the region is generally considered good, with electrical conductivity values typically ranging between 0 and 70 mS/m. The hydrogeological setting of the site therefore confirms that groundwater represents a sensitive environmental receptor requiring ongoing management and monitoring.

The monitoring identified approximately 250 mm of diesel Free Phase Product ("FPP") within monitoring well TCMW1 located at the Core facility. TAME additives and Diesel Range Organics ("DRO") were also detected within portions of the groundwater monitoring network associated with the Nexus facility. Notwithstanding these findings, no exceedances of the applicable RISC Tier 1 screening criteria were identified and no currently defined risk to on-site receptors was identified.

The monitoring results confirm the presence of localised hydrocarbon contamination associated with the historical operation of the underground fuel storage infrastructure. Continued groundwater monitoring, source investigation and implementation of appropriate management measures have been recommended to manage and reduce long-term environmental risk.

Site location details are presented in **Figure 1** below.

[3] Vulnerability**:** likelihood of contaminants reaching a specific position in the groundwater system after introduction at some location above the uppermost aquifer

[4] Susceptibility: a qualitative measure of the relative ease with which a groundwater body can be potentially contaminated by anthropogenic activities and includes both aquifer vulnerability and the relative importance of the aquifer in terms of its classification.

Figure 1. Site locality imagery of the Telkom Park site and immediately surrounding area.

Management of Geohydrological Risks Associated with Existing Infrastructure

The baseline investigations undertaken as part of the Section 24G process confirmed that the Telkom Park Campus is located within a dolomitic environment underlain by the Malmani Subgroup carbonate formations. The underlying karst aquifer system is characterised by a high groundwater vulnerability and high groundwater susceptibility rating, thereby increasing the sensitivity of the groundwater environment to hydrocarbon contamination.

It has further been identified that portions of the existing underground fuel reticulation infrastructure do not comply with current dolomite management requirements, including the requirement for underground piping systems to be sleeved. Groundwater monitoring undertaken as part of the Section 24G process has already identified evidence of localised hydrocarbon contamination associated with the historical operation of the underground fuel storage infrastructure.

Notwithstanding the above, the existing underground fuel storage systems are intended to be decommissioned and removed once the new aboveground fuel storage infrastructure becomes operational and the associated authorisation processes have been completed. The continued operation of the existing underground systems is therefore regarded as temporary pending implementation of the replacement infrastructure.

In order to manage and minimise further geohydrological impacts associated with the existing underground fuel storage infrastructure prior to decommissioning, the following management measures will be implemented:

- Continued groundwater monitoring at all installed monitoring wells associated with the Core, Nexus and Hub facilities;
- Ongoing inspection and maintenance of the underground fuel storage and reticulation systems to identify leaks or failures;
- Immediate repair and containment of any identified leaks or spill events;
- Removal of any identified Free Phase Product from monitoring wells where practicable;
- Implementation of spill response and contamination containment procedures;
- Continued investigation of contamination sources where required;

- Decommissioning and removal of the underground fuel storage systems once the replacement infrastructure becomes operational; and
- Rehabilitation of affected areas following decommissioning activities.

The implementation of the above measures is expected to minimise the risk of continued groundwater contamination and reduce long-term geohydrological impacts associated with the unlawful activity.

b. Biophysical Environment

Vegetation

There is no natural vegetation left on the Telkom Park site, which has been developed for a number of years for industrial purposes. Similarly, there are no untransformed areas situated anywhere near the site.

c. Socio-Economic Environment

(a) What was/is the expected capital value of the activity on completion?	R38 000 000	
(b) What was/is the expected yearly income or contribution to the economy that will be generated by or as a result of the activity?	R300 000 000/day losses	
(c) Did/does the activity contribute to service infrastructure?	YES	NO
(d) How many permanent new employment opportunities were created?	0	
(e) What was/is the expected current value of the employment opportunities to date?	R10 000 000	
(f) What percentage of this accrued to previously disadvantaged individuals?	100%	

How was (is) this (to be) ensured and monitored (please explain):
The existing fuel storage infrastructure forms part of the operational emergency power supply system servicing the Telkom Park Campus. Losses that emanated from the last failure cost Telkom R300 000 000.

HISTORICAL ENVIRONMENTAL SENSITIVITY AND BASIS OF ASSESSMENT

As the underground diesel storage infrastructure was installed between approximately 1999 and 2003, the National Web-Based Environmental Screening Tool was not available at the time the unlawful activity commenced. The historical environmental sensitivity of the receiving environment was therefore determined through a review of historical aerial imagery, historical site records, fuel storage infrastructure information, specialist investigations undertaken as part of the Section 24G process, site inspections, groundwater monitoring information, and the current environmental setting of the Telkom Park Campus.

Historical aerial imagery confirms that the Telkom Park Campus was already established as an operational telecommunications and technology campus prior to and during the period in which the underground diesel storage infrastructure was installed. The site contained the Core, Nexus and Hub facilities together with associated buildings, internal roads, parking areas, engineering services infrastructure and landscaped areas. The fuel storage infrastructure was therefore installed within an already transformed and operational development footprint rather than within previously undisturbed natural habitat.

Available infrastructure records indicate that the underground diesel storage systems associated with the Core and Nexus facilities were installed during approximately 1999, while the underground diesel storage systems associated with the Hub facility were installed during approximately 2003. The underground fuel storage infrastructure accordingly formed part of the existing operational requirements of the Telkom Park Campus and was integrated into an already developed institutional and commercial environment.

In assessing historical environmental sensitivity, consideration was also given to the findings of the specialist investigations undertaken as part of the Section 24G application process, together with the outcomes of the current Environmental Screening Tool Report. While the Screening Tool identifies several regional environmental sensitivities within the broader area, including terrestrial biodiversity, plant species, defence and paleontological sensitivities, the fuel storage infrastructure itself is located

within a highly transformed operational campus environment. The specialist investigations undertaken for the Section 24G process similarly confirmed that the fuel storage infrastructure was situated within previously disturbed areas characterised by buildings, paved surfaces, parking areas, underground services and associated infrastructure.

The historical terrestrial sensitivity of the fuel storage footprints is therefore considered to have been low due to the existing developed nature of the site at the time of installation. Likewise, the Screening Tool identifies low aquatic biodiversity sensitivity and low archaeological and cultural heritage sensitivity within the immediate development area. Notwithstanding the transformed nature of the surface environment, groundwater remains the primary environmental receptor associated with the unlawful activity. The site is underlain by a dolomitic aquifer system which is inherently vulnerable to contamination. Groundwater investigations and monitoring undertaken as part of the Section 24G process identified hydrocarbon contamination associated with the historical fuel storage infrastructure, confirming that groundwater quality represents the most environmentally sensitive receptor requiring ongoing management and remediation.

Based on the available historical aerial imagery, infrastructure records, specialist investigations, groundwater monitoring information and current screening results, it is concluded that the underground diesel storage infrastructure was installed within an already transformed operational Telkom Park campus and that the principal environmental sensitivity associated with the unlawful activity relates to the protection and rehabilitation of the underlying groundwater resource.

Historical Versus Current Environmental Condition and Cumulative Impact Assessment

A comparison of the historical environmental conditions present at the time of installation of the underground diesel storage infrastructure and the current environmental conditions was undertaken to assess the cumulative impacts associated with the unlawful activity.

The available historical aerial imagery, infrastructure records and specialist investigations indicate that the Telkom Park Campus was already substantially developed at the time the underground diesel storage systems were installed between approximately 1999 and 2004. The site comprised an operational telecommunications and technology campus containing buildings, roads, parking areas, engineering services infrastructure and landscaped areas. The fuel storage infrastructure was installed within these already transformed areas.

The current environmental condition of the site remains largely unchanged from a land use and terrestrial environmental perspective. The site continues to function as an operational telecommunications and technology campus, and the fuel storage infrastructure remains located within the existing developed footprint. No evidence was identified to indicate that the unlawful activity resulted in the loss of natural habitat, fragmentation of ecological corridors, impacts to surface water resources, impacts to heritage resources or impacts to surrounding land uses.

Notwithstanding the above, groundwater investigations undertaken as part of the Section 24G process have identified evidence of hydrocarbon contamination associated with the historical operation of the fuel storage infrastructure. The current groundwater monitoring programme identified approximately 250 mm of diesel Free Phase Product ("FPP") within monitoring well TCMW1, together with the presence of TAME additives and Diesel Range Organics within portions of the groundwater monitoring network. These findings indicate that the cumulative environmental impact associated with the unlawful activity is primarily related to the long-term storage and handling of diesel within the underground storage systems and the resulting contamination of the underlying groundwater environment.

The cumulative impact of unlawful activity can therefore be summarised as follows:

Environmental Aspect	Historical Condition (1999–2004)	Current Condition	Cumulative Impact
Land Use	Developed Telkom Campus	Developed Telkom Campus	Negligible
Terrestrial Biodiversity	Transformed environment	Transformed environment	Negligible
Surface Water Resources	No known impacts	No known impacts	Negligible
Heritage Resources	Developed environment	Developed environment	Negligible
Groundwater Quality	No known contamination records	Localised hydrocarbon contamination	Moderate

	available	identified	
Fuel Storage Infrastructure	Newly installed	Operational for approximately 20–25 years	Moderate

The assessment therefore concludes that the cumulative environmental impacts associated with the unlawful activity are predominantly limited to the groundwater environment. While contamination has been identified, monitoring undertaken to date indicates that impacts remain localised and confined to the operational area associated with the fuel storage infrastructure. Continued groundwater monitoring, contamination management and future decommissioning of the underground storage systems are expected to further reduce the long-term cumulative environmental risk associated with the unlawful activity.

PROJECT DESCRIPTION

Sillito Environmental Consulting (Pty) Ltd (SEC) has been appointed as the independent Environmental Assessment Practitioner (EAP) by the applicant Telkom SA SOC Limited. SEC is to facilitate the Section 24G rectification process in terms of the National Environmental Management Act for the bulk fuel storage and supply facility at 61 Oak Avenue, Highveld, Centurion, Gauteng, known as Telkom Park.

Telkom Park is zoned as Industrial 2 and is situated within Centurion, Gauteng and is surrounded by light to medium industrial, commercial and warehousing as well as medium density residential areas.

PREVIOUSLY UNLAWFULLY INSTALLED TANKS (i.e., current fuel storage and supply facility present on site)

Background

As part of the emergency and uninterrupted power supply on site, Telkom has an existing fuel storage system.

This existing fuel storage was installed without prior environmental authorisation in 1999 (Nexus and Core areas) and 2003 (Hub area), respectively.

The fuel storage system at Telkom Park for the emergency and uninterrupted power supply consists of decentralized below-ground tanks connected to various day tanks and includes the tanks pump's, pump controllers, filtering, and distribution manifolds.

Legislative Requirements

The installation of these tanks during 1999 and 2003 triggered Schedule 1 (c) of ECA, Act No 73 of 1989, and given that an environmental authorisation was not obtained prior to this installation, a Section 24G Application is required.

.2 EXISTING FUEL STORAGE

The bulk fuel storage for the campus consists of a decentralized system that can be summarized as follow:

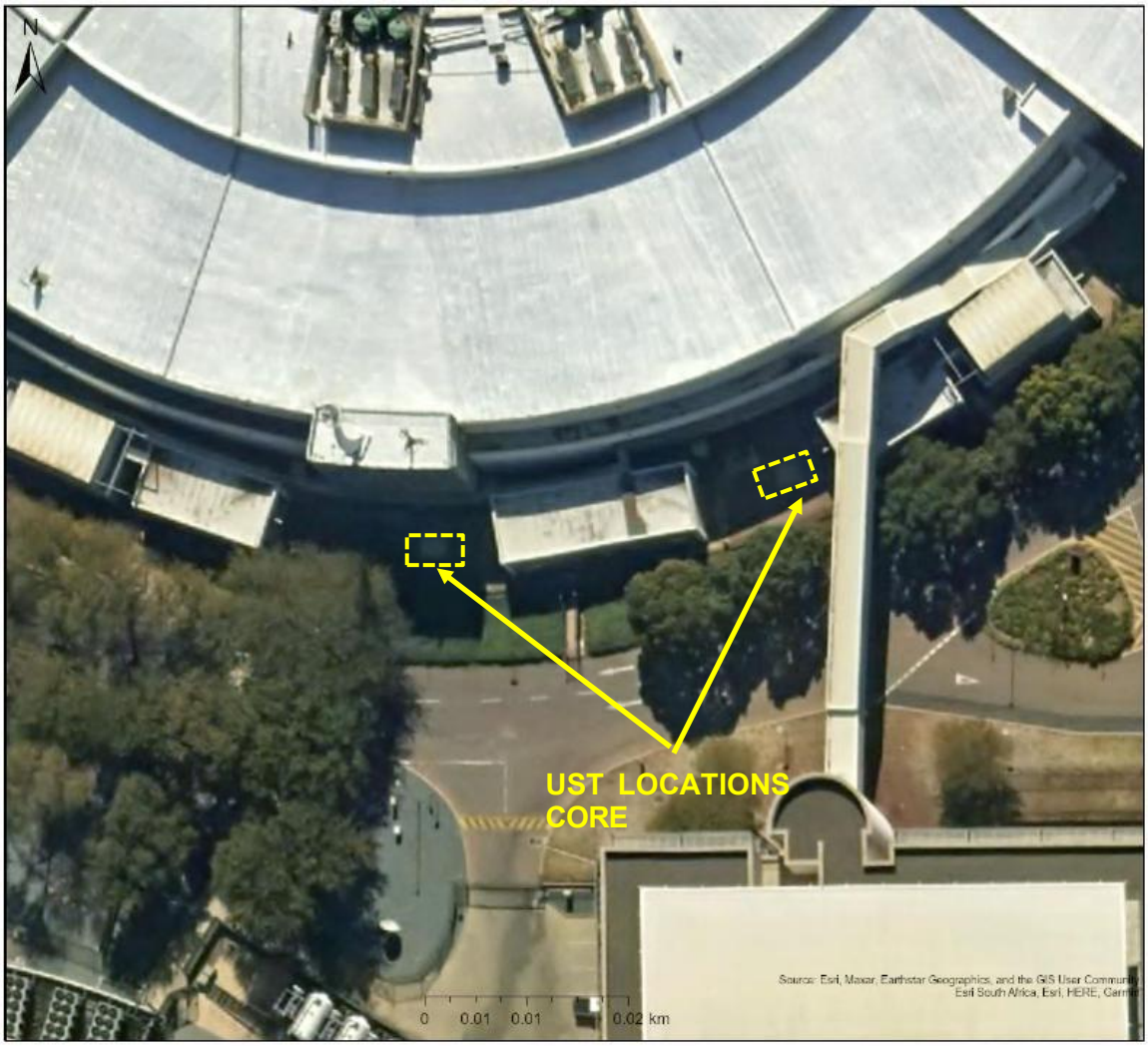
Generator Description	Power Demand		Fuel Demand		Day Tanks		Bulk Storage			Total
	kVA	Load	(L/hr.)	(L/hr.)	(L)	(L)	QTY	(L)	(L)	(L)
CORE 1	1500	50%	185	619	300	1200	2	23000	46000	47200
CORE 2	1500	50%	185		300					
BACKUP	2000	0%			300					
NEXUS C	1250	66%	249		300					
NEXUS A	1250	66%	249	868	300	1200	2	1400	48800	50000
NEXUS B	1250	66%	249		300					
NEXUS 1	1500	50%	185		300		2	23000		
NEXUS 2	1500	50%	185		300					
HUB A	1250	66%	170	1082	300	2500	3	9000	55000	57500
HUB B	1250	66%	170		300					
HUB C	1250	66%	170		300					
HUB 1	1000	50%	158		300		2	14000		
HUB 2	1225	50%	158		300					
HUB 6	2000	50%	256		1000					
HUB5	550	100%	170		300	300				300

6.1. INFRASTRUCTURE DESCRIPTION

6. Previously installed fuel storage

1999:

Building	EPS Plant	Tank Capacity (L)	Estimated year of installation	Existing tanks Location (Coordinates)
CORE	EPS 1			Lat:25.87759°S, Long: 28.18671°E
	BACKUP	23000	1999	
	EPS 2			
	NEXUS C	23000	1999	
NEXUS	EPS 1	23000	1999	Lat:25.87846°S, Long: 28.18540°E
	EPS 2	23000	1999	
	EPS 3 (NEXUS A)	14000	1999	
	EPS 4 (NEXUS B)	14000	1999	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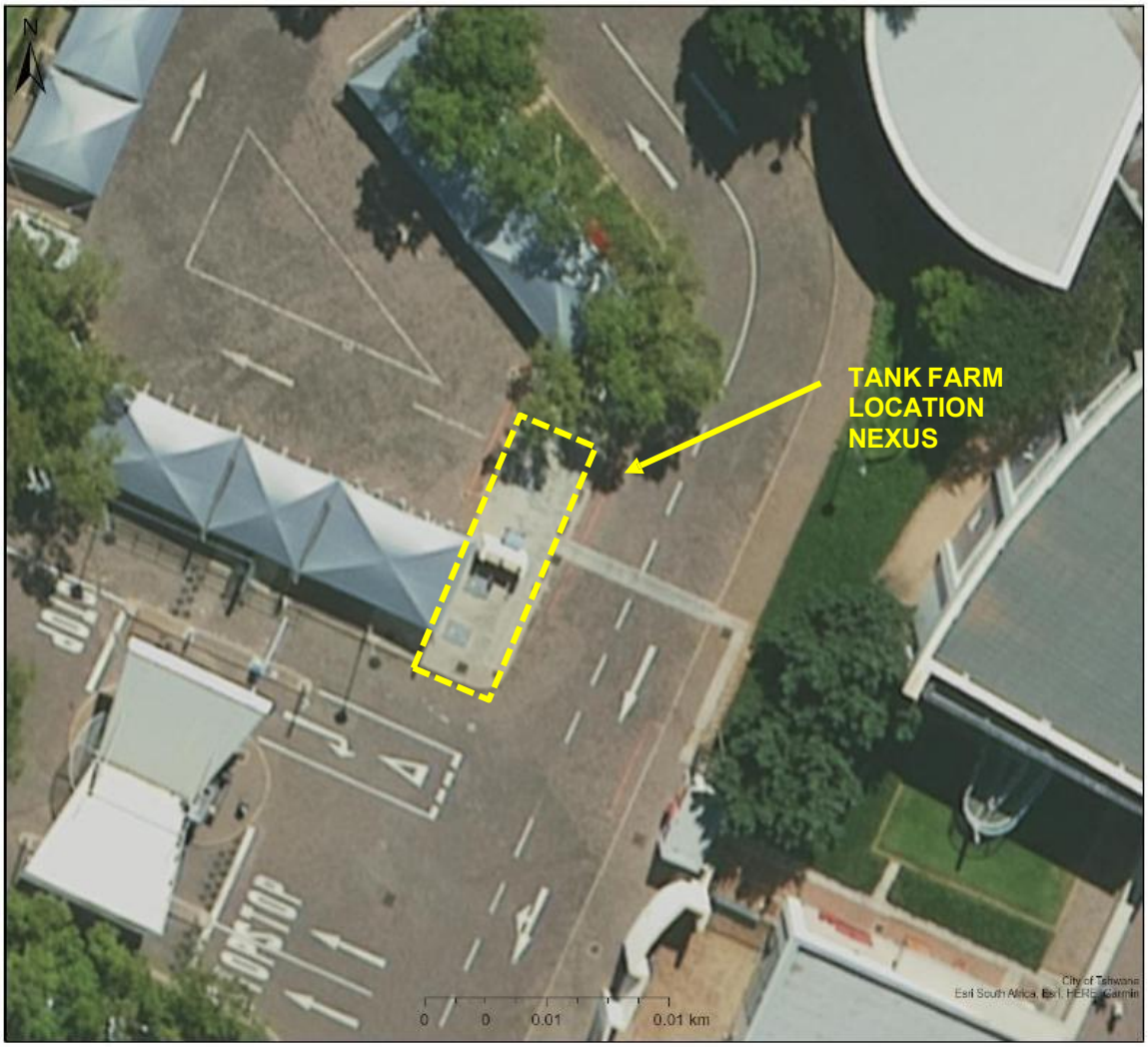
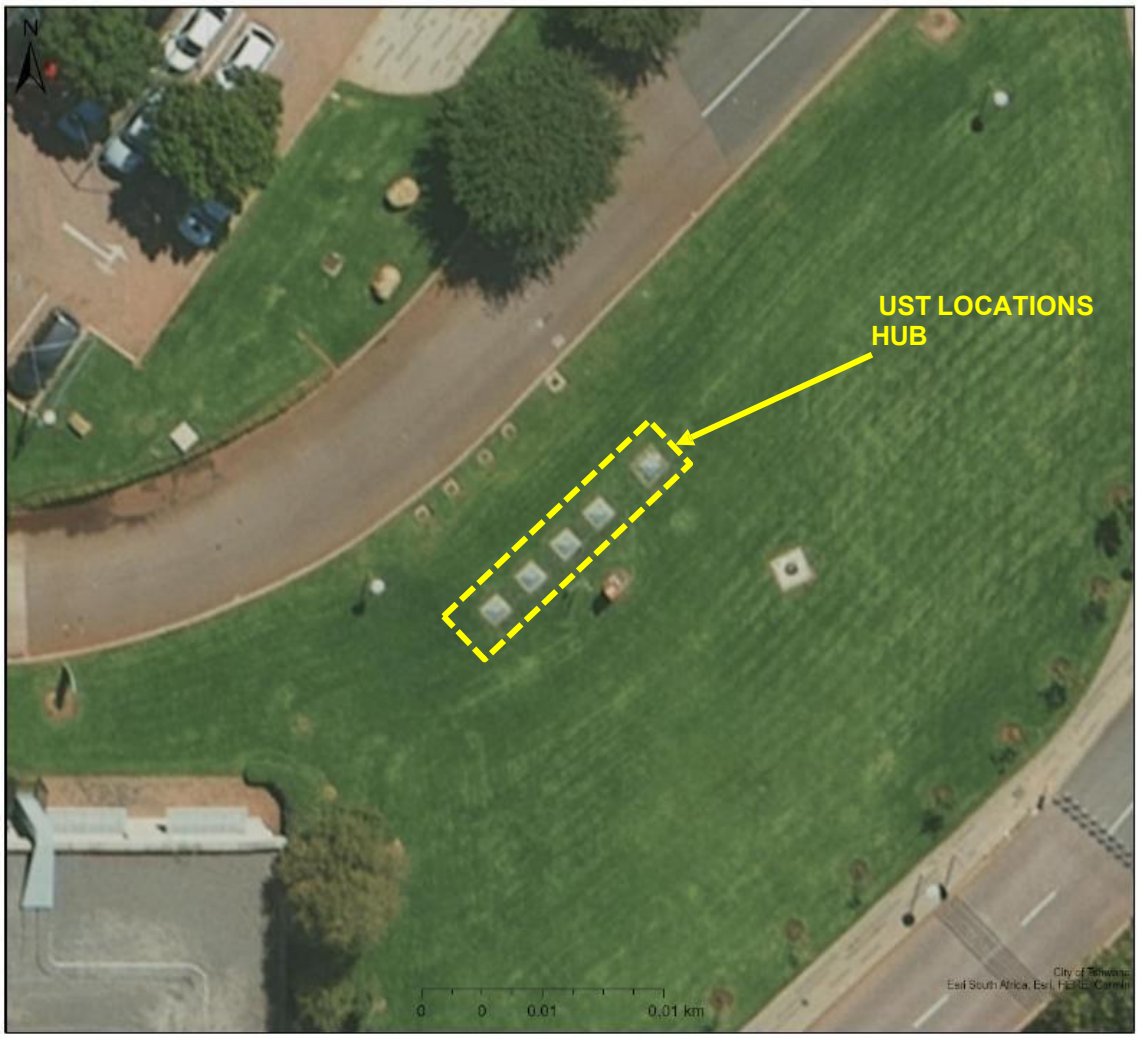


2003:

Building	EPS Plant	Tank Capacity (L)	Estimated year of installation	Existing tanks Location (Coordinates)
HUB	**EPS 1**			Lat: 25.87775°S, Long: 28.18830°E
	EPS 6	**14000**	2003	
	EPS 2	**14000**	2003	
	EPS 7 (HUB A)	**9000**	2003	
	EPS 8 (HUB B)	**9000**	2003	
	EPS 9 (HUB C)	**9000**	2003	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LEGISLATIVE NON-COMPLIANCES AND ILLEGAL COMMENCEMENTS

PREVIOUSLY UNLAWFULLY INSTALLED TANKS (i.e., current fuel storage and supply facility present on site)

The installation of these tanks during 1999 and 2003 triggered Schedule 1 (c) of ECA, Act No 73 of 1989, and given that an environmental authorisation was not obtained prior to this installation, a Section 24G Application is required.

PREVIOUSLY UNLAWFULLY INSTALLED TANKS (i.e., current fuel storage and supply facility present on site)

The installation of the bulk storage UST's in the Nexus and Core areas during 1999 would have triggered Schedule 1 (1. (c)(I & ii) of GNR 1182 of 5 September 1997 and required an Environmental Authorisation prior to commencing, which was not undertaken.

The installation of the above 5 tanks in the Hub area during 2003 would have triggered Schedule 1 (1. (c)(I & ii) of GNR 670 of 10 May 2002 and required an Environmental Authorisation prior to commencing, which was not undertaken.

As such, the installation of these tanks, as described in more detail in the table below, was unlawfully installed on site and a Section 24G Application is now required for the installation of these tanks.

Activity or Equipment	DATE OF INSTALLATION	TRIGGERED ENVIRONMENTAL LEGISLATION
NEXUS TANKS: 23 000 litre UST 23 000 litre UST 14 000 litre UST 14 000 litre UST	 1999 1999 1999 1999	 GNR 1182, Schedule 1 1. c) with regard to any substance which is dangerous or hazardous and is controlled by national legislation— (i) infrastructure, excluding road and rail, for the transportation of any such substance; and (ii) manufacturing, storage, handling, treatment or processing facilities for any such substance;
CORE TANKS: 23 000 litre UST 23 000 litre UST	 1999 1999	GNR 1182, Schedule 1 1. c) with regard to any substance which is dangerous or hazardous and is controlled by national legislation— (i) infrastructure, excluding road and rail, for the transportation of any such substance; and (ii) manufacturing, storage, handling, treatment or processing facilities for any such substance;

The installation of the above 6 tanks in the Nexus and Core areas during 1999 would have triggered Schedule 1 (1. (c)(I & ii) of GNR 1182 of 5 September 1997 and required an Environmental Authorisation prior to commencing, which was not undertaken.		
HUB TANKS: 14 000 litre UST 14 000 litre UST 9 000 litre UST 9 000 litre UST 9 000 litre UST	 2003 2003 2003 2003 2003 2003	GNR 670, Schedule 1 1. c) with regard to any substance which is dangerous or hazardous and is controlled by national legislation— (i) infrastructure, excluding road and rail, for the transportation of any such substance; and (ii) manufacturing, storage, handling, treatment or processing facilities for any such substance;
The installation of the above 5 tanks in the Hub area during 2003 would have triggered Schedule 1 (1. (c)(I & ii) of GNR 670 of 10 May 2002 and required an Environmental Authorisation prior to commencing, which was not undertaken.		

7. IMPACTS IDENTIFIED AS POTENTIALLY ASSOCIATED WITH THE BULK FUEL STORAGE AND SUPPLY FACILITY

The impact of any activity on the receiving environment where the activity is to be established or is to take place is dependent on the nature of the activity, together with the nature of the receiving environment.

The activity entails the storage of diesel fuel. As such, the activities associated with the bulk fuel storage facility which have been identified as possibly impacting on the surrounding environment (social, economic and bio-physical environment) are:

- An event or failure (such as an diesel spill) could occur, that could lead to a major *incident*. A possible cause of such a failure could be, for example, corrosion of a product storage tank or incorrect material handling procedures. An *incident* would be a toxic release, a fire or an explosion on the premises; with the incident resulting in impacts on humans and assets at and surrounding the site, such as minor injury, major injury and fatality and destructive effect on assets.
- Soil and groundwater contamination could occur in the event of a spill or leak of diesel fuel and associated hydrocarbons (through, for example, a tank and bund failure; or incorrect product delivery procedures)
- Impacts on human health could occur associated with incorrect storage or handling of diesel fuel and associated hydrocarbons at the site;
- Impacts on air quality in the area due to emissions associated with the fuel storage and handling activities, with downstream human and environmental health impacts.
- The impact on the use of scarce, finite natural resources.

The receiving environment is a fully developed, industrial environment. Sensitive receptors to the impacts identified as potentially associated with the bulk fuel storage facility include:

- The health and safety of staff on the site, as well as on neighbouring and nearby sites
- Freshwater resources in the form of groundwater
- Subsurface soil on which natural ecosystems are reliant; and
- On a broader scale, loss of finite natural resources (such as fossil fuels).

Each of the impacts potentially associated with the bulk fuel storage facility is investigated in some detail below.

7.1. Impact on people and assets due to a major incident at the site

A MHI Risk Assessment was not conducted at the time of installation of the current fuel supply as the quantities did not require the need for an MHI.

7.2. Contamination of soil and freshwater ecosystems

With the storage and handling of dangerous goods which is taking place at the site, there is the possibility that contamination of soil and freshwater ecosystems could occur in the event of a failure of tanks and bunds; or associated with incorrect handling procedures during the loading and offloading of diesel fuel..

The following source-pathway-receptor scenario would apply in the event of such a spill or leak:

Table 4: Source-pathway-receptor scenario for potential soil and groundwater contamination

Source	Pathway	Receptor
Spill or leak of diesel fuel from tanker offloading.	Migration across hardened surfaces to the municipal storm water system and on to freshwater ecosystems	Freshwater ecosystems; associated human health risk (through dermal contact; vapour inhalation; ingestion of groundwater)
Spill or leak of diesel fuel below ground storage tanks and associated bunded areas.	Through exposed or broken surfacing to permeable sub soils beneath the site migrating down to the shallow perched water table	Groundwater; fresh water ecosystems; aquifer, soil; soil ecosystems; associated human health risk (through dermal contact; vapour inhalation; ingestion of groundwater)

The types of impacts which could be expected on soil and freshwater ecosystems include the substances creating anoxic conditions, which is an environment which cannot support life; and which cannot naturally remediate itself. These impacts can be localised but could also be experienced further away in the event of an off-site migration of product.

There is also the potential for human health impacts due to the potential for contaminated soils and groundwater, which is described in Section 9.3.

7.3. Impact on human health due to product handling

The nature of the diesel fuel on the site is such that there are associated human health and safety impacts. These impacts could be due to such routes as dermal contact or vapour inhalation.

In addition, diesel has a flashpoint of 55˚C and is not a regarded as a “combustible liquid” according to the Petroleum Product Act and the SANS standards.
The impacts on human health and safety that have been described would occur due to inappropriate storage and handling of the product, such as employees not wearing Personal Protective Equipment (PPE); allowing ignition sources on site; and inappropriate handling and storage of products to the extent that spills or leaks occur.

In the event of a product loss resulting in contamination of soil and freshwater ecosystems, human health could also be affected: dermal contact or vapour inhalation could occur with people undertaking works in contaminated soils or water (such as repairs to storm water drains; excavation of trenches for construction work, etc.); as well as inhalation of indoor vapours in the event of contamination of subsoil’s beneath a building.

7.4. Impact on air quality due to emissions associated with operating the facility

Findings from a Baseline Report done by Spoormaker and Partners in May 2022, include the following:

Current bulk fuel storage system (which was installed unlawfully without Environmental Authorisation)

- Inadequate filtration on bulk and day tanks. Various filters system was installed on the service tanks but are not operational;
- Each bulk & day tank has a separate vent pipe. Various day tanks do not have any means of venting. This means when diesel enters the day tank all the vapor is then released inside the plant room where there is an adequate ignition source
- Hub vent piping all interlinked;
- None of the system layouts are concurrently maintainable (Uptime TIER 1);
- The majority of the electrical equipment associated with the installation do not adhere to the required Hazard classification as Zone 1 & 2 in terms of SANS10108.
- The system has reached it's the end of its mean expected life and reliability it will become more onerous to maintain and ensure reliability.

7.5. Impact of diesel fuel on scarce, finite natural resources

Diesel fuel is a non-renewable resource that comes from crude oil, and its use contributes to the depletion of finite natural resources.

The facility also has the potential to impact on natural resources such as soil and freshwater ecosystems due to potential incidences such as product spills or leaks.

7.6. Socio-economic impacts associated with the Fuel Storage Facility

On a strategic level, the Telkom Park facility houses the National Network Operations centre which monitors and provides IT and network related services to South Africa's digital infrastructure. The benefits are derived by the entire country which the facility services. The facility also provides direct employment for over 4900 people. The decommissioning of the fuel storage and supply system will implicate that there will be no emergency back-up power supply for the facility.
The impact assessment has found that human health impacts can be associated with operating the facility. These can occur through inappropriate facility design and operation which can cause, for example, excessive dermal contact or inhalation of vapours during product handling.

The assessment has found that these impacts are easy to avoid, given the implementation of appropriate design and operational measures for product storage and handling.
With respect to the visual impacts and sense of place associated with the facility, the site is situated within a the long developed industrial/commercial area. The facility, which has been in operation in one form or another for many years and is in keeping with the industrial character of the surrounds.

8. INVESTIGATION OF ALTERNATIVES FOR MEETING THE GENERAL PURPOSE AND REQUIREMENTS OF THE APPLICATION

8.1. Introduction

According to the Western Cape Department of Environmental Affairs and Development Planning's *Guideline on Alternatives (March 2013) as well as the DEAT (2005) Environmental Reporting, Integrated Environmental Management Information Series 17, Department of Environmental Affairs and Tourism (DEAT),* alternatives in relation to a proposed activity mean different means of meeting the general purposes and requirements of the activity.

The types of alternatives which can be considered include, for example, alternative locations for the activity; alternative technologies and designs to be used in the activity; and alternative operational processes to be used in undertaking the activity.

The rationale behind investigating alternatives is to try and ascertain ways of fulfilling the general purpose of an activity, whilst at the same time ensuring that the possible impacts on the receiving environment (social, economic and bio-physical environment) associated with the proposed activity are avoided altogether or at least minimised to acceptable levels.

A thorough investigation and assessment of alternatives should result in the identification of the Best Practicable Environmental Option (BPEO), which is defined as "the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term".

In accordance with the NEMA EIA Regulations contained in Government Notice No. R543 of 2010, read together with the DEA&DP's and DEAT's *Guideline on Alternatives*, the EIA report must contain a detailed investigation of alternatives identified. The investigation must include potential advantages and disadvantages which the identified alternatives may have for the receiving environment.

Based on this investigation, reasonable and feasible alternatives have been identified and only these feasible alternatives are now comparatively assessed during the EIA phase.

The investigation and assessment of alternatives must, in accordance with the EIA Regulations, include the "No-Go Option" as a baseline against which all other alternatives are assessed.

Alternatives identified for investigation and assessment relate to reasonable operational, design and management alternatives associated with the historical underground fuel storage and supply infrastructure forming part of this Section 24G rectification application.

Based on the impacts identified as potentially being associated with the bulk fuel storage and supply facility, alternative means of fulfilling the general purpose of the application, which is the storage of diesel for the emergency and uninterrupted power supply, by means of generators, to the Telkom Park facility, have been identified and investigated during this EIA process.

Activity alternatives: Solar power could have been considered as an activity alternative energy instead of relying on diesel-powered generators. This was however not deemed as a feasible alternative at the time, i.e. in 1999 and 2003 as solar power was expensive at the time with high upfront costs as well as high costs associated with energy storage of solar power.

Site alternatives: It is impractical to consider an alternative location for the bulk fuel storage and supply facility, as the fuel directly supplies the generators on the Telkom Park site, and the generators are essential for emergency and uninterrupted power supply to the Telkom Park facility**.**

Design, layout and operational alternatives: The design and layout of the bulk fuel storage and supply facility, including the infrastructure, plant and equipment such as tanks, processing equipment and bunds, will affect the potential of the facility to impact negatively on the health and safety of staff at the site and at nearby facilities; to impact underlying soil and groundwater resources and air quality of the surrounding area.

The design of the infrastructure and abatement equipment is therefore a key aspect to consider for effective management of the potential impacts listed above.

Process/Operational alternatives: Operational alternatives such as standard operating procedures and preventative maintenance schedules for equipment and infrastructure are a key aspect to consider in ensuring safe working practices.

Effective operational procedures can also assist with the minimisation of emissions and associated negative air quality impacts; as well as the minimisation of potential spills and leaks of hazardous inputs and wastes, which are contamination risks.

The No-Go Option: In accordance with the requirements of the EIA Regulations, any of the alternatives which are found upon rigorous investigation to be reasonable and feasible alternatives for meeting the general purpose of the application, will be comparatively assessed against the No-Go Option during the EIA phase of the application process.

The No-Go Option is ordinarily understood as maintaining the status quo at a site, with the applicant meeting all of his legal responsibilities in terms of maintaining a site or operating a facility (DEA&DP *Guideline on Alternatives, October 2011 and DEAT (2005) Environmental Reporting, Integrated Environmental Management Information Series 17, Department of Environmental Affairs and Tourism (DEAT)*).

In this instance, the status quo at the site is an operational fuel supply and storage facility, which will have to obtain authorisation in terms of the NEMA Section 24G process, in line with the legal responsibilities of the applicant.

With respect to approaching the No-Go Option in this instance, in order to determine the drawbacks and benefits of operating the fuel storage and supply against the baseline of no such facility being established, the No-Go Option is considered in this case to be the option of the fuel supply facility ceasing to operate and the Telkom Park site thus not having emergency and uninterrupted power supply.

The option of not having emergency and uninterrupted power supply to the Telkom Park site in the form of diesel operated generators is assessed against the continued operation and management of the existing underground fuel storage infrastructure associated with the unlawful activity.

These are discussed in some detail below:

8.2. Activity alternatives

Solar power could have been considered as an activity alternative energy instead of relying on diesel-powered generators. This was however not deemed as a feasible alternative at the time, i.e. in 1999 and 2003 as solar power was expensive at the time with high upfront costs as well as high costs associated with energy storage of solar power.

Telkom Park does however have a solar photovoltaic (PV) 3 MW plant, which has 1,118 solar panels and 3 x MW inverters that are linked into the municipal supply for daily operations.

8.3. Site alternatives

It is impractical to consider an alternative location for the bulk fuel storage and supply facility, as the fuel directly supplies the generators on the Telkom Park site, and the generators are essential for emergency and uninterrupted power supply to the Telkom Park facility**.**

8.4. Design, layout and operational alternatives

The design and layout of the bulk fuel storage and supply facility, including the infrastructure, plant and equipment such as tanks, processing equipment and bunds, will affect the potential of the facility to impact negatively on the health and safety of staff at the site and at nearby facilities; to impact underlying soil and groundwater resources and air quality of the surrounding area.

The investigation of possible impacts associated with the bulk fuel storage facility contained in Section 9 identifies impacts on health and safety of those at and around the site; as well as impacts on soil and freshwater ecosystems at and near the site.

The design of the infrastructure and abatement equipment is therefore a key aspect to consider for effective management of the potential impacts listed above.

Layout, design and operational alternatives have been identified as:
Layout Alternative 1: One possible layout alternative is for the **current** 150 000 litre decentralised diesel storage and supply system to remain in place as is.

The fuel storage system for the emergency and uninterrupted power supply currently consists of decentralized below-ground tanks connected to various day tanks. The tanks, pumps, pump controllers, filtering, and distribution manifold are configured as TIER I. The storage facility under discussion is classed as an atmospheric tank, which means that the internal pressure ranges from 0 to 3.5 kPa. The petroleum product is a diesel.

The continued operation of the existing underground fuel storage system remains subject to ongoing monitoring, maintenance and environmental management measures pending eventual decommissioning of the infrastructure in accordance with applicable legislative requirements. It will become more onerous to maintain and ensure reliability and safety.

8.5. The No-Go Option

In accordance with the requirements of the EIA Regulations, any of the alternatives which are found upon rigorous investigation to be reasonable and feasible alternatives for meeting the general purpose of the application, will be comparatively assessed against the No-Go Option during the EIA phase of the application process.

The No-Go Option is ordinarily understood as maintaining the status quo at a site, with the applicant meeting all of his legal responsibilities in terms of maintaining a site or operating a facility (DEA&DP *Guideline on Alternatives, October 2011 and DEAT (2005) Environmental Reporting, Integrated Environmental Management Information Series 17, Department of Environmental Affairs and Tourism (DEAT)*).

In this instance, the status quo at the site is an operational fuel supply and storage facility, which will have to obtain authorisation in terms of the NEMA Section 24G process, in line with the legal responsibilities of the applicant.

With respect to approaching the No-Go Option in this instance, in order to determine the drawbacks and benefits of operating the fuel storage and supply against the baseline of no such facility being established, the No-Go Option is considered in this case to be the option of the fuel supply facility ceasing to operate and the Telkom Park site thus not having emergency and uninterrupted power supply.

On a strategic level, the Telkom Park facility houses the National Network Operations centre which monitors and provides IT and network related services to South Africa's digital infrastructure. The benefits are derived by the entire country which the facility services. The facility also provides direct employment for over 4900 people. The decommissioning of the fuel storage and supply system will implicate that there will be no emergency back-up power supply for the facility.
The option of not having emergency and uninterrupted power supply to the Telkom Park site in the form of diesel operated generators and UPS is therefore not deemed to be a feasible alternative as down-time of the Telkom Park facility during emergencies will have a national negative impact.

8.6. Conclusion

In conclusion, the impacts associated with this option have been comparatively assessed in Section 12 against the impacts associated with the No-Go Alternative, which is the option of not having a bulk fuel storage system and therefore not having generators and UPS back at the facility.

9. IMPACT ASSESSMENT SECTION

9.1.1. Introduction to Impact Assessment Methodology

The impacts identified and described in Section 8 as potentially being associated with the bulk fuel storage facility are assessed in this section in detail. The impact assessment is aimed at determining the likely significance of any impacts (positive or negative) associated with the facility. The significance of the impacts is determined by investigating certain key aspects, or parameters, of the potential impact, which are determined by the nature of the activity, as well as the nature of the receiving environment. Aspects investigated include the extent, duration and timing, and magnitude of the impact.

The table below provides an explanation of the parameters used to determine the significance of an impact, as well as what "significance" means in the context of this impact assessment.

Parameters Used to Establish Impact Significance

ITEM	DEFINITION
EXTENT	
Local	Extending only as far as the boundaries of the activity, limited to the site and its immediate surroundings
Regional	Impact on the broader region
National	Will have an impact on a national scale or across international borders
DURATION	
Short-term	0-5 years
Medium-Term	5-15 years
Long-Term	>15 years, where the impact will cease after the operational life of the activity
Permanent	Where mitigation, either by natural process or human intervention, will not occur in such a way or in such a time span that the impact can be considered transient.
MAGNITUDE OR INTENSITY	
Low	Where the receiving natural, cultural or social function/environment is negligibly affected or where the impact is so low that remedial action is not required.
Medium	Where the affected environment is altered, but not severely and the impact can be mitigated successfully and natural, cultural or social functions and processes can continue, albeit in a modified way.
High	Where natural, cultural or social functions or processes are substantially altered to a very large degree. If a negative impact then this could lead to unacceptable consequences for the cultural and/or social functions and/or irreplaceable loss of biodiversity to the extent that natural, cultural or social functions could temporarily or permanently cease.
PROBABILITY	
Improbable	Where the possibility of the impact materialising is very low, either because of design or historic experience
Probable	Where there is a distinct possibility that the impact will occur
Highly Probable	Where it is most likely that the impact will occur
Definite	Where the impact will undoubtedly occur, regardless of any prevention measures
SIGNIFICANCE	
Low	Where a potential impact will have a negligible effect on natural, cultural or social environments and the effect on the decision is negligible. This will not require special design considerations for the project
Medium	Where it would have, or there would be a moderate risk to natural, cultural or social environments and should influence the decision. The project will require modification or mitigation measures to be included in the design
High	Where it would have, or there would be a high risk to natural, cultural or social environments. These impacts should have a major influence on decision making.
Very High	Where it would have, or there would be a high risk of, an irreversible negative impact on biodiversity and irreplaceable loss of natural capital that could result in the project being environmentally unacceptable, even with mitigation. Alternatively, it could lead to a major positive effect. Impacts of this nature must be a central factor in decision making.
STATUS OF IMPACT	
Whether the impact is positive (a benefit), negative (a cost) or neutral (status quo maintained)	
DEGREE OF CONFIDENCE IN PREDICTIONS	
The degree of confidence in the predictions is based on the availability of information and specialist knowledge (e.g. low, medium or high)	

MITIGATION
Mechanisms used to control, minimise and or eliminate negative impacts on the environment and to enhance project benefits. Mitigation measures should be considered in terms of the following hierarchy: (1) avoidance, (2) minimisation, (3) restoration and (4) off-sets.

Other factors which are also considered in the assessment of impacts include whether the impact is direct, indirect or cumulative. A direct impact can be explained as being a direct result of activities associated with operating the facility, such as fugitive emissions of Volatile Organic Compounds (VOC's) and any associated health impacts on staff.

An indirect impact would be a downstream, secondary or "knock-on" impact resulting from an impact directly associated with the facility (such as stress on the public health system due to ill staff).

A cumulative impact would be an impact which already occurs in the receiving environment associated with other activities taking place in proximity to the facility, such as emissions which are produced by various manufacturing processes taking place in the industrial area. A cumulative impact associated with operating the bulk fuel storage facility would then add to the impacts already being experienced in the area.

Other factors considered include whether the impact is reversible; and whether the impact could cause an irreplaceable loss of resources.

The impact assessment methodology used has been closely guided by the DEAT EIA Guideline Document 5, on the assessment of impacts and alternatives (DEAT 2006); as well as reference to the description of the criteria used for the assessment of impacts as contained in the DEA&DP Specialist Guidelines Series (2005) and DEAT (2005) Environmental Reporting, Integrated Environmental Management Information Series 17, Department of Environmental Affairs and Tourism (DEAT).

The assessment of the potential impacts has been based on SEC's extensive experience related to environmental impact assessment as well as specialist assessment and input, where applicable. Specialist input includes Groundwater Monitoring Reports. Please refer to **Appendix O** for copies of these specialist reports.

The impact assessment has also been informed by review by the professional team, including specialists, and on the basis of professional judgement.

It must be noted that determining the significance of impacts, although carefully and systematically considered, still remains a subjective judgement, as there are no truly objective measures that can be used to judge significance.

9.2. Introduction to Mitigation

A key aspect of the impact assessment process is the identification of mitigation measures which can and should be implemented in order to prevent or minimise any negative impacts associated with the bulk fuel storage facility; or conversely, to ensure that any associated benefits are maximised.

The DEA&DP's October 2011 *Information Document on Biodiversity Offsets* defines mitigation as "A hierarchy of four broad groups of possible measures to [1] avoid, [2] minimize, [3] repair/restore and/or [4] compensate for (i.e. offset) negative impacts".

The mitigation of impacts begins with identifying, as has been shown in Section 11 of this report, alternative means of meeting the general purpose of an application, in a manner that has the least possible negative impact on, or the greatest benefit for the surrounding environment.

Once this has been done, any impacts still associated with an application, must be able to be mitigated to an acceptable level. This means that the "residual impacts", or impacts which remain after mitigation has been implemented, need to be of a sufficiently low significance that the decision-making authority can be confident that the proposed application should be allowed to proceed.

The mitigation measures which pertain to an application – in this case, an application to operate a bulk fuel storage facility - must be included in the Environmental Management Programme, which will govern the life cycle of activities associated with the application (facility).

The DEA&DP's 2005 *Guideline for Involving Biodiversity Specialists in EIA Processes* points out that the mitigation, management and monitoring measures included in an EMP need to be clearly defined: clear targets should be given for avoiding or minimising any identified significant impacts. The EMP also needs to make clear "when, where, how often and by whom" the mitigation measures need to be implemented. Lastly, the capacity of the proponent – in this case the applicant, Telkom SOC Limited – needs to be considered when mitigation measures are recommended.

These factors have been considered in the drafting of the EMP contained in **Appendix M.**

For this application, the identification and investigation of alternatives, as well as the recommendation of mitigation measures for reducing any residual impacts, has been guided by specialist input, as well as by SEC's extensive experience in environmental management. Specialist input includes Groundwater Monitoring reports.

9.3. Impact Assessment

The methodology which has been used to assess the significance of the impacts associated with the bulk fuel storage facility has already been described. In order to allow for a comparative assessment of the impacts associated with the bulk fuel storage facility (including all feasible and reasonable process, design, layout and operational alternatives) against the impacts associated with the No-Go Alternative (or the option of closing down the facility); the following impact rating method has been used:

Scoring System for Impact Assessment Ratings

IMPACT PARAMETER	**SCORE**	
Extent (A)	**Rating**	
Local	1	
Regional	2	
National	3	
Duration (B)	**Rating**	
Short term	1	
Medium Term	2	
Long Term	3	
Permanent	4	
Probability (C)	**Rating**	
Improbable	1	
Probable	2	
Highly Probable	3	
Definite	4	
IMPACT PARAMETER	**NEGATIVE IMPACT SCORE**	**POSITIVE IMPACT SCORE**
Magnitude/Intensity (D)	**Rating**	**Rating**
Low	-1	1
Medium	-2	2
High	-3	3
Stakeholder Concern (E)	**Rating**	**Rating**
Low (0-5 stakeholders)	-1	1
Medium (5-10 stakeholders)	-2	2
High (10+ stakeholders)	-3	3
SIGNIFICANCE RATING (F) = ((A*B*D)+E)*C	**Rating**	**Rating**
Low	0 to – 40	0 to 40
Medium	- 41 to - 80	41 to 80
High	- 81 to - 120	81 to 120
Very High	> - 120	> 120
The above significance bands have been determined through calculating a maximum potential score of 156 (positive or negative) using the above methodology. This was then subdivided into broad bands as indicated to provide a comparative assessment of all impacts in relation to the maximum possible significance score.		

9.3.1. Impact on people and assets due to a major incident at the site

Impact Description
An event or fault (such as spill) could occur, that could eventually lead to a major incident. A possible cause of such a fault could be, for example, corrosion of a product storage tank or incorrect product handling procedures. An incident would be a toxic release, a fire or an explosion on the premises; with the incident resulting in impacts on humans and assets at and surrounding the site, such as minor injury, major injury and fatality and destructive effect on assets.

The impact is a cumulative impact, since there are other facilities in the area which are possible sources of a major incident. The impact would not be reversible but could easily be prevented by following the design and operational measures contained within the EMPr and Emergency Response Report. The impact would definitely cause an irreplaceable loss of resources, such as human life, if it were to occur.

With the No-Go Alternative, or the option of ceasing to operate the facility, there is no such associated risk of a major incident occurring.

Assessment of Impact Significance

Assessment of Impact on People and Assets due to a Major Incident

Bulk Fuel Storage Facility					**No-Go Alternative**	
	Score without Mitigation		Score with Mitigation			Score (no mitigation applicable)
(A) Extent	Local	1	Local	1	Extent	There is no risk of a major incident occurring if the facility ceases to operate.
(B) Duration	Short-term	1	Short-term	1	Duration	
(C) Probability	Highly Probable	3	Improbable	1	Probability	
(D) Intensity / Magnitude	High	-3	Medium	-2	Intensity / Magnitude	
(E) Stakeholder Concern	Low	-1	Low	-1	Stakeholder Interest	
Significance ((A*B*D)+E)*C	**Low**	**-12**	**Low**	**-3**	**Significance**	
Confidence	The assessment is based on the EAP's experience with facilities storing and handling dangerous goods; as well as on the specialist assessments and other relevant management plans. And the Confidence in the impact prediction is High.					

Significance of Impact before Mitigation: Low

Proposed Mitigation: Extensive design and operational mitigation measures relating to, amongst others, evacuation procedures, health and safety, fire safety, emergency and risk management as well as the transporting, storage and handling of fuel have been included within the following documents: (Refer to **Appendix N** of this report)

- Bulk Tank and Bowser Refuelling Safe Operating Procedure.
- Emergency Preparedness and Response Procedure and the
- SEC Groundwater Monitoring Reports – Appendix O).

All of the recommended and required measures have been included in full in the EMPr, attached in **Appendix M**

of this report.

Significance of Impact after Mitigation: Low (the mitigation measures are specifically designed to (a) reduce the likelihood of the impact occurring at all; and (b) reduce the severity of an incident if it did occur).

Conclusion: The risk of a major incident occurring associated with operating the facility is Low once all recommended mitigation measures have been implemented. This impact is not significant enough to warrant closing the facility.

9.3.2. Contamination of soil, groundwater and freshwater ecosystems

Impact description

With the storage, handling and processing of fuel, there is an associated risk of leaks or spills occurring due to incorrect infrastructure design and with incorrect operational procedures. Ingress into the subsoils and groundwater at the site; or into the stormwater system or even nearby drainage channels could occur. Soil and freshwater ecosystems would be impacted, e.g. anoxic conditions could be created, which is an environment that cannot readily support life and which cannot readily remediate. There could also be associated human health risks (through dermal contact; vapour inhalation; ingestion of groundwater).

Groundwater monitoring undertaken during 2023, 2024 and 2026 confirmed the presence of localised hydrocarbon impacts associated with portions of the underground fuel storage infrastructure, including the identification of Free Phase Product ("FPP") within monitoring well TCMW1 during the 2026 monitoring event. Notwithstanding these findings, the groundwater risk assessment concluded that no exceedances of the applicable RISC Tier 1 screening criteria for the assessed exposure pathways were identified and that no unacceptable risk to on-site receptors was identified at the time of assessment.

The risk of contamination is a cumulative impact, since the facility is situated in an area where a number of other manufacturing activities take place which have associated contamination risks. Due to the nature and scale of the impact, the impact is considered to be reversible and also unlikely to cause the loss of irreplaceable resources: appropriate remediation can restore the quality of most affected soils or freshwater resources.

With the No-Go Alternative, which is the option of the facility ceasing to operate, there would be no associated risk of contamination.

Assessment of Impact Significance

Assessment of Risk of Contamination of Soil, Groundwater and Freshwater Ecosystems and Associated Human Health Risks

Fuel Storage Facility			No-Go Alternative	
	Score without Mitigation	Score with Mitigation		Score (no mitigation applicable)

(A) Extent	Local	1	Local	1	Extent	There is no risk of contamination occurring if the facility ceases to operate.
(B) Duration	Short-term	1	Short-term	1	Duration	
(C) Probability	Highly Probable	3	Improbable	1	Probability	
(D) Intensity / Magnitude	Medium	-2	Low	-1	Intensity / Magnitude	
(E) Stakeholder Concern	Low	-1	Low	-1	Stakeholder Interest	
Significance ((A*B*D)+E)*C	**Low**	**-9**	**Low**	**-2**	**Significance**	
Confidence	The assessment is based on the EAP's experience with facilities storing and handling dangerous goods. Confidence in the impact prediction is High.					

Impact significance without mitigation: Low

Proposed Mitigation: Measures to avoid contamination include measures stipulated by the Sillito Groundwater Monitoring Reports as well as within the Emergency Preparedness and Response Procedure and the Bulk Tank and Bowser Refuelling Safe Operating Procedure.

All recommended and required measures relating to soil, groundwater and freshwater contamination have been included in the EMP.

Impact significance with mitigation: Low (the mitigation measures recommended are aimed at (a) preventing any contamination or pollution; and (b) minimising the extent, duration and magnitude of any contamination or pollution which might occur in the event of failure of one or another of the measures recommended).

Conclusion: The significance of the potential contamination associated with operating the Telkom Park fuel supply facility once all appropriate mitigation has been implemented, is sufficiently low to suggest that the facility should be allowed to continue to operate.

9.3.3. Impact on human health associated with product handling

Impact description

The nature of the fuel stored and handled on the site is such that there are associated human health and safety impacts. These impacts could be due to such routes as dermal contact or vapour inhalation.

In addition, the substances are flammable with the associated vapour emissions being potentially explosive. The impacts on human health and safety that have been described would occur due to inappropriate storage and handling of the product, such as employees not wearing Personal Protective Equipment (PPE); allowing ignition sources on site; and inappropriate handling and storage of products to the extent that spills or leaks occur.

In the event of a product loss resulting in contamination of soil and freshwater ecosystems, human health could also be affected: dermal contact or vapour inhalation could occur with people undertaking works in contaminated soils or water (such as repairs to storm water drains; excavation of trenches for construction work, etc.); as well as

inhalation of indoor vapours in the event of contamination of subsoil's beneath a building.

The impact is considered to be a direct impact and not a cumulative impact in the highly localised context of the Telkom Park facility itself: it is unlikely that the health of staff at the facility would be impacted by manufacturing activities taking place at neighbouring industrial facilities, which include handling of products with associated human health impacts.

There is a small possibility that an irreplaceable loss of resources could occur, i.e. that someone could die due to over-exposure to the fuel products on the site. This would only occur in the event of gross negligence and failure to follow any health and safety protocols in place at the facility. With the small scale of the activities taking place at the Fuel Storage Facility the loss of life is considered to be very unlikely.

It is unknown, however, to what extent any human health impacts which may occur are reversible.

With the No-Go Alternative, which is the option of the facility ceasing to operate, there will be no hazardous waste or products storage or handling taking place and so there would be no associated human health risks.

Assessment of impact significance:

Assessment of human health impacts associated with product handling

Fuel Storage Facility					**No-Go Alternative**	
	Score without Mitigation		Score with Mitigation			Score (no mitigation applicable)
(A) Extent	Local	1	Local	1	Extent	If the facility ceases to operate, there will be no waste or product handling taking place and so no associated human health risks.
(B) Duration	Short-term to Permanent	1 to 4	Short-term	1	Duration	
(C) Probability	Highly Probable	3	Improbable	1	Probability	
(D) Intensity / Magnitude	Low to High	-1 to -3	Low	-1	Intensity / Magnitude	
(E) Stakeholder Concern	Low	-1	Low	-1	Stakeholder Interest	
Significance ((A*B*D)+E)*C	**Low**	**-6 to -36**	**Low**	**-2**	**Significance**	
Confidence	The assessment is based on the EAP's experience with facilities storing and handling dangerous goods. However, the health impacts associated with the fuel depends on the severity and timeframe of exposure. Due to this uncertainty, confidence in the impact prediction is Medium.					

Impact significance without mitigation: Low

Proposed mitigation: The design, layout and operational measures recommended within the Emergency Preparedness and Response Procedure as well as the Bulk Tank and Bowser Refuelling Safe Operating Procedure all serve to prevent health and safety impacts associated with a poorly designed facility for example inappropriate operating protocols (such as employees not wearing Personal Protective Equipment, allowing ignition sources on site and inappropriate handling and storage of products to the extent that spills or leaks occur). (Refer to Appendix N of this report for the above listed reports)

All recommended and required measures included in these reports have been included in the EMP attached in Appendix M of this report.

Impact significance with mitigation: Low (the mitigation measures are specifically designed to prevent human health impacts associated with the storage and handling of the fuel product).

Conclusion: With the implementation of the recommended mitigation measures, the significance of human health impacts associated with the facility are sufficiently low to allow for the facility to continue operating.

9.3.4. Impact on air quality due to emissions associated with operating the facility

Impact description:

The applicant has confirmed that vacusonic tests/ tank integrity tests are conducted on annual basis.

If the facility were to cease to operate, which is the No-Go Alternative in this case; there would be no sources of emissions and no associated human health or air quality impacts.

Assessment of impact significance:

Assessment of air quality impacts

Fuel Storage Facility					**No-Go Alternative**	
	Score without Mitigation		Score with Mitigation			Score (no mitigation applicable)
(A) Extent	Regional	2	Local	1	Extent	If the facility ceases to operate, there will be no activities taking place at the site which have associated emissions.
(B) Duration	Short-term	1	Short-term	1	Duration	
(C) Probability	Improbable	1	Improbable	1	Probability	
(D) Intensity / Magnitude	Low	-1	Low	-1	Intensity / Magnitude	
(E) Stakeholder Concern	Low	-1	Low	-1	Stakeholder Interest	

Significance ((A*B*D)+E)*C	**Low**	**-3**	**Low**	**-2**	**Significance**	
Confidence	The assessment is based on specialist and authority input. Confidence in the impact prediction is High.					

Impact significance without mitigation: Low

Proposed mitigation:

- The design of the tank farms shall comply with the requirements for liquid storage tanks or vessels contained in Category 2: Storage List of Minimum Emissions Standards
- Implementation of the Rational Fire Design (Refer to Rational Fire Design as attached to **Appendix N** of this report)

Impact significance with mitigation: Low

Conclusion: The air quality impacts associated with the Telkom Park facility have been found to be low and therefore do not warrant the closure of the facility.

9.3.5. Socio-economic impacts associated with the Telkom Park facility

Impact description:

There are socio-economic impacts associated with the facility. On a strategic level, the Telkom Park facility houses the National Network Operations centre which monitors and provides IT and network related services to South Africa's digital infrastructure. The benefits are derived by the entire country which the facility services. The facility also provides direct employment for over 4900 people.

The benefit can be considered to be cumulative, as there are other national network operation services in South Africa and supported by government policy and legislation.

Since the impact is a benefit, no loss of resources is applicable, and the reversibility of the impact is not a concern.

With the No-Go Alternative, which is the option of closing down the facility, there would be a loss of income and employment for the applicant and staff and will implicate that there will be no emergency back-up power supply for the facility.

The impact would be a direct impact associated with the facility closure, affecting the applicant and staff. The impact would not cause an irreplaceable loss of resources, however, as it is likely that staff and the applicant would be able to find an alternative means of income and employment at some stage. The impact would be reversible, with the re-opening of the facility.

Assessment of impact significance:

Assessment of Benefits / Impacts in terms of Income, Employment and Contribution to Telecommunications Infrastructure

Fuel Storage Facility				**No-Go Alternative**		
	Score without Mitigation		Score with Mitigation		Score (no mitigation applicable)	
(A) Extent	Local to National	1 to 2	No mitigation is applicable as the impact is a benefit.	Extent	Local to Regional	1 to 2

(B) Duration	Long-term	3			Duration	Short-term	1
(C) Probability	Definite	4			Probability	Definite	4
(D) Intensity / Magnitude	Medium	2			Intensity / Magnitude	Medium	-2
(E) Stakeholder Concern	Low	1			Stakeholder Interest	Low	-1
Significance ((A*B*D)+E)*C	**Low to Medium**	**28 to 52**			**Significance**	**Low**	**-12 to -20**
Confidence	The assessment is based on information provided by the applicant. Confidence in the impact prediction is High.						

Impact significance without mitigation: Low to Medium

Proposed Mitigation: No mitigation is needed as the impact is a benefit.

Impact significance with mitigation: Not applicable.

Conclusion: The facility should not cease to operate since this option has associated negative impacts on income, jobs and telecommunication services in the area. Coupled with the loss of the socio-economic benefits associated with operating the facility, the negative impact of closing the facility would be quite significant.

9.4. Impact Statement

9.4.1. Summary of Key Findings of the EIA

The option assessed as part of this application is the continued operation and environmental management of the existing underground fuel storage and supply infrastructure associated with the Telkom Park Campus.

The impacts which were identified as associated with the operating facility are:

- Impact on people and assets due to a major incident
- Risk of contamination of soil, groundwater and freshwater ecosystems and associated human health risks
- Human health impacts associated with product handling
- Air quality impacts
- Benefits / impacts in terms of income, employment and telecommunication services within South Africa

The option of operating the facility has been assessed against the No-Go Alternative, which has been interpreted as the option of closing the facility. The No-Go Alternative has thus provided a baseline against which to assess the benefits and drawbacks of the Fuel Storage Facility.

It has been found that any negative impacts associated with operating the facility can be avoided altogether or can be reduced to acceptable levels through appropriate mitigation. All of these negative impacts have been found to be of Low significance.

On the other hand, the identified benefits associated with the Telkom Park facility in general were found to be of

Medium benefit.

With the No-Go Alternative, no benefits were identified besides the absence of any of the risks identified as associated with the facility. These risks, as stated above, are all of Low significance, however, and easily avoidable or manageable.

Closing the facility does have associated negative impacts of Low significance, however. Coupled with the loss of the benefits associated with operating the Telkom Park facility, it has been found that closing the facility (or the No-Go Alternative) is not the preferred alternative in this case.

Summary of Impacts Associated with the Facility and with the No-Go Alternative

Impact	**Impact Significance with Mitigation (Where Mitigation is Applicable)**			
	Fuel Storage Facility		**No-Go Alternative**	
Impact on people and assets due to a major incident	Low	-3	None	
Risk of contamination of soil, groundwater and freshwater ecosystems and associated human health risks	Low	-2	None	
Human health impacts associated with product handling	Low	-2	None	
Air quality impacts	Low	-2	None	

9.4.2. Uncertainties, Assumptions and Gaps in Knowledge

The following uncertainties, assumptions and gaps in knowledge pertain to this impact assessment:

- It has been assumed that specialist findings are accurate and impartial; that mapping data from sources such as Google Earth is accurate; and that information on the processes and the site history provided by the applicant, is accurate.
- It has been assumed that the applicant and staff would be able to find an alternative means of employment / income within five years, and so the duration of this impact associated with closing down the facility has been considered as Short-term.
- The specific human health impacts of inappropriate exposure to the waste and products stored and handled at the facility are varied. Due to this uncertainty, the assessment of this impact has used a duration varying from Short-term to Permanent; and an intensity varying from Low to High.
- Besides the above, there are no assumptions, uncertainties or gaps in knowledge which are material to this application.

10. Motivation for Favourable Consideration of the Section 24G Application

The unlawful activity forming part of this Section 24G rectification application relates to the historical installation and operation of underground diesel storage infrastructure associated with the existing Telkom Park Campus emergency power supply systems. The infrastructure was installed between approximately 1999 and 2003 within an already established and operational telecommunications and technology campus characterised by historically transformed land uses and existing infrastructure. It is further acknowledged that portions of the underground fuel storage and reticulation infrastructure predate a number of current groundwater protection, dolomite risk management and fuel infrastructure design standards applicable to modern fuel storage installations.

The underground fuel storage infrastructure forms an integral component of the emergency and uninterrupted power supply systems servicing the Telkom Park Campus and supports the continued operation of critical telecommunications and data infrastructure.

Although the site is situated within a dolomitic environment characterised by a high groundwater vulnerability and susceptibility rating, the unlawful infrastructure is located entirely within previously transformed and operational areas of the Telkom Park Campus. No intact terrestrial ecosystems, wetlands, protected vegetation communities or significant natural habitat areas were directly impacted by the historical installation of the underground fuel storage infrastructure.

Notwithstanding the above, the groundwater environment has been identified as the primary environmentally sensitive receptor associated with the unlawful activity. Groundwater monitoring undertaken as part of the Section 24G process identified evidence of localised hydrocarbon contamination associated with portions of the underground fuel storage infrastructure. In response thereto, the DEIA Report and associated EMPr have been revised to include detailed groundwater monitoring, contamination management, spill response, maintenance, decommissioning, rehabilitation and closure measures aimed at preventing further environmental degradation and reducing long-term environmental risk.

The revised EMPr further includes ongoing groundwater monitoring requirements, free phase product

management measures, operational mitigation measures, environmental auditing requirements and closure objectives associated with the eventual decommissioning and removal of the underground fuel storage infrastructure.

The unlawful infrastructure is intended to remain operational only pending the implementation of an alternative lawful fuel supply solution, following which the underground fuel storage infrastructure will be decommissioned and removed in accordance with the mitigation, rehabilitation and closure measures contained within the EMPr.
No biodiversity offsets are considered necessary in this instance as the unlawful activity is situated within an already transformed operational footprint and no significant residual terrestrial biodiversity impacts were identified as part of the specialist assessment process. The primary environmental concern associated with the unlawful activity relates to groundwater contamination risk, which is proposed to be managed through the implementation of the revised mitigation and monitoring measures contained within the DEIA Report and EMPr.

Considering:

- the historically transformed nature of the site;
- the operational necessity of the infrastructure;
- the implementation of detailed environmental management and groundwater mitigation measures;
- the proposed decommissioning and rehabilitation commitments;
- the ongoing groundwater monitoring programme; and
- the absence of significant residual terrestrial ecological impacts,

it is respectfully submitted that the Section 24G rectification application may be considered favourably by the competent authority.

11. CONCLUSION AND WAY FORWARD

It is SEC's recommendation that the facility be allowed to continue to operate. This recommendation is based on the outcome of the impact assessment process, which has been informed by SEC's professional experience in environmental management as well as on specialist input and on detailed process information provided by the applicant.

The facility should continue to be operated and managed in accordance with all mitigation and management measures contained within the EMPr. All of these measures are contained in the EMP, which is attached as **Appendix M**. The implementation of the EMP should therefore be a condition of the S24G Application.

On-going health and safety training and other on-going management measures contained in the EMP, should be reported on to the DFFE On a biennial basis, the site should be audited against the conditions of the EMP by an independent ECO. The audit reports should be submitted to the DFFE for their records and for any compliance action needing to be taken.

Audit reports must contain monitoring laboratory results, chain-of-custody receipts to show safe disposal of waste, incident reports from the environmental register, etc.

These recommendations for monitoring and auditing of operations against the EMP are contained in the EMP and should therefore be a condition of authorisation.

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