



water & sanitation

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REPUBLIC OF SOUTH AFRICA

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SCOPING PHASE WATER USE LICENCE APPLICATION PRELIMINARY SUMMARY REPORT FOR VAAL AEROTROPOLIS (PHASE 1)

DWS Reference:

WU40964

Name Of Applicant:



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Compiled By:



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Signature:

Date:

2026-09-25

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LIST OF ABBREVIATIONS

ADWF	Average Dry Weather Flow
BCEA	Basic Conditions of Employment Act (Act 75 of 1997)
BID	Background Information Document
CAPEX	Capital Expenditure
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EAPASA	Environmental Assessment Practitioner Association of South Africa
ECC	Economic Cost of Capital Rate
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ERR	Economic Rate of Return
e-WULAAS	Electronic Water Use Licence Application and Authorisation System
GDEnv	Gauteng Department of the Environment
GDP	Gross Domestic Product
GG	Government Gazette
GIS	Geographic Information System
GN	Government Notice
ha	Hectare
IAIASa	International Association for Impact Assessment (South Africa)
I&APs	Interested and Affected Parties
ICAO	International Civil Aviation Organization
LSDF	Local Spatial Development Framework
NEMA	National Environmental Management Act (Act 107 of 1998)
NWA	National Water Act, 1999 (Act 36 of 1998)
OHSA	Occupational Health and Safety Act (Act 85 of 1993)
OPEX	Operating Expenditure
PPP	Public Participation Process
SACNASP	South African Council for Natural Scientific Professions
SANS	South African National Standard
SEZ	Special Economic Zone
SDF	Spatial Development Framework
SPLUMA	Spatial Planning and Land Use Management Act (Act 16 of 2013)
SSMEs	Small, Medium and Micro Enterprises
SWMP	Stormwater Management Plan
VOCMA	Vaal-Orange Catchment Management Agency

WTW	Water Treatment Works
WU	Water Use
WULA	Water Use Licence Application
WWTW	Wastewater Treatment Works
WMA	Water Management Area
QR Codes	Quick Response Code
RQOs	Resource Quality Objectives



1 Applicant Details

The Applicant is the entity that will assume responsibilities as the holder of the water use license, if granted. Details of the applicant are contained in Table 1. Most of the properties are owned by the Applicant. Properties not owned by the Applicant are being leased by the applicant and all relevant owners have given consent for the proposed development.

Table 1: Details of Applicant

Applicant:	Vaal Aerozone (Pty) Ltd
Contact Person:	Mr. P. Atanassov

Vaal AeroZone (Pty) Ltd is the development company established to facilitate the planning, investment, development, operation and long-term management of the proposed Vaal Aerotropolis in the Sedibeng District of Gauteng, South Africa. The organisation serves as the primary vehicle through which public and private sector stakeholders collaborate to advance a catalytic regional development initiative aimed at enhancing trade, logistics, aviation, manufacturing, agricultural exports and economic growth within the Vaal region.

The Vaal Aerotropolis is envisaged as a strategically located aviation-centred economic hub that will integrate an international airport, cargo and logistics facilities, commercial precincts, agri-business zones, industrial development opportunities and supporting infrastructure. As the project proponent, Vaal AeroZone is responsible for coordinating investment, project planning, stakeholder engagement and regulatory compliance to ensure that the development is implemented in a sustainable and responsible manner.

Vaal AeroZone is led by a board and management team comprising experienced professionals with expertise in airport development, aviation operations, infrastructure planning, investment facilitation, strategic management and economic development. The company reports that its leadership collective possesses decades of experience across airport operations, airline route development, air cargo systems, airport planning, aviation project management, security systems, investment structuring and risk management. This breadth of expertise provides the technical and managerial capacity necessary to oversee the development of complex aviation and logistics infrastructure projects.

The organisation's leadership includes professionals with extensive international and South African aviation experience. The management team has been involved in airport development initiatives, aviation consultancy, route development programmes, airport operations management and the delivery of aviation-related infrastructure projects. Such experience allows Vaal AeroZone to engage

effectively with regulatory authorities, investors, specialist consultants, infrastructure providers and surrounding communities throughout the planning and implementation phases of the project.

In addition to its internal expertise, Vaal AeroZone has established relationships with key public and private sector stakeholders. The project is being advanced through collaboration with government institutions, regional development agencies, investors and municipal authorities. These partnerships are intended to support the long-term viability of the Vaal Aerotropolis while promoting regional economic development, job creation, industrial diversification and enhanced trade linkages.

Vaal AeroZone is committed to responsible development principles, including sound governance, transparency, stakeholder engagement and sustainable economic growth. Through the EIA process and associated environmental authorisation requirements, the company seeks to ensure that environmental considerations are appropriately integrated into project planning and decision-making. This commitment reflects the applicant's intention to balance economic development objectives with environmental stewardship and social responsibility.

Accordingly, Vaal AeroZone possesses the organisational capacity, industry experience, leadership expertise and stakeholder support necessary to act as the applicant for the Environmental Impact Assessment process and to responsibly advance the planning and implementation of the proposed Vaal Aerotropolis development.



Scan the QR-codes for the company website (<https://vaalaerozone.co.za/>) and information on the proposed Vaal Aerotropolis development.



2 Person Submitting Application

Mr De Wet Botha (Pr.Sci.Nat., Reg. EAP) is a Principal Environmental Scientist and Biodiversity, Wetland and Aquatic Specialist with more than 23 years of professional experience in environmental management, regulatory authorisation processes and specialist environmental investigations in South Africa. He has extensive experience in the management and execution of Water Use Licence Applications (WULAs), Environmental Impact Assessments (EIAs), Environmental and Social Impact Assessments (ESIAs), environmental compliance audits and environmental management programmes.

Mr Botha has completed more than 50 Water Use Licence Applications and over 125 wetland delineation, assessment and rehabilitation projects across a broad range of sectors, including mining, infrastructure, municipal services, water and wastewater treatment, residential developments, industrial facilities and energy projects. His expertise includes wetland delineation and functional assessment, aquatic ecology, hydropedology, biodiversity assessment, watercourse impact assessment, rehabilitation planning, environmental compliance auditing and regulatory liaison with relevant authorities.

He has acted as project lead, specialist consultant and environmental auditor on numerous large-scale integrated authorisation projects where WULAs formed a critical component of environmental approvals. Mr Botha combines strong technical expertise with advanced GIS and spatial modelling capabilities, enabling comprehensive sensitivity mapping, impact assessment and environmental planning.

Professional Registrations and Affiliations:

- Professional Natural Scientist (Pr.Sci.Nat.) - Registration No. 119979, South African Council for Natural Scientific Professions (SACNASP)
- Registered Environmental Assessment Practitioner (EAP) - Registration No. 2019/1209, Environmental Assessment Practitioners Association of South Africa (EAPASA)
- Member, International Association for Impact Assessment South Africa (IAIAsa)
- Member, South African Wetland Society
- Member, Gauteng Wetland Forum
- Certified Green Drop Lead Auditor
- Member, Golden Mole Research Group, University of Pretoria

Due to his experience, Mr Botha is the Principal WULA Practitioner for this application as detailed below in Table 2.

Table 2: Details of the EAP

Principle EAP:	De Wet Botha			
Company:	Prism Environmental Management Services Africa			
Address:	PO Box 1401, Wilgeheuwel, Johannesburg, 1736			
Tel:	066 208 1585			
Email:	dewet@prismems.co.za / prism@prismems.co.za			
Website:	www.prismems.co.za			
Prism EMS Africa Team				
Designation	Name	Qualification	Professional Registration	Specialist Assessment
Project Director Principle EAP	De Wet Botha	MA. Environmental Management PHED	SACNASP: Pr.Sci.Nat. (119979) EAPASA: Reg.EAP (2019/1209) Member of the International Association for Impact Assessors (IAIAsa) (1653) Member of the Gauteng Wetland Forum Member of the South African Wetland Society Member of the Society of Wetland Scientists (International)	• Project Management • Document Compilation • Quality Control and Review.
Senior EAP	Elizmarie Bester	MSc Environmental Sciences	SACNASP: Pr.Sci.Nat. (135627) EAPASA: Reg.EAP (2020/2575) Member of IAIAsa (6450)	• Document Compilation • Quality Control and Review
Junior EAP	Brett Collett	B.Sc. Hons. (Env. Man.) B.Sc. (Env. Man. – Zoology)	FGASA Level 2 EAPASA: Cand.EAP (2025/20560) SACNASP: Cand.Sci.Nat (181127) Member of IAIAsa (2916561)	• Document Compilation
Junior EAP	Belinda Jacobs	BA Environmental Management	EAPASA: Cand EAP (2026/21709)	• Document Compilation

3 Background and Purpose

Vaal Aerozone (Pty) Ltd intends to develop and manage the Vaal Aerotropolis, planned for an area ± 9km west of the N1 and Vanderbijlpark in the Sedibeng district located within the Emfuleni and Rand West City Local Municipalities, Gauteng Province. An Aerotropolis is defined as a metropolitan sub-region whose infrastructure, land use and economy are centred on and around an airport. This development, which will be known as the Vaal Aerotropolis, aims to serve as a key freight and

logistics hub, featuring a two-terminal design and integrated air cargo services containing state-of-the-art facilities and infrastructure. The Vaal Aerotropolis will serve as a driving force and strategic investment for economic growth and global trade, thereby revitalising Emfuleni and creating sustainable value in the region.

The planned Vaal Aerotropolis will be developed in three (3) phases over a period of 60 years, to include a Cargo Terminal, Airport City, Solar Farm, Agri Zone and Trade Zone. Each phase is designed to progressively expand the airport's capacity and functionality to accommodate increasing demand. Vaal Aerozone (Pty) Ltd will develop, operate and manage the Vaal International Airport alongside, and with collaboration from the Vaal Special Economic Zone (SEZ), to ensure that the development is managed in an effective and efficient manner and to prevent delays in implementation.

Phase 1 (subject of this application) will establish the core infrastructure and catalytic components of the project. The designated approximately 3 545 hectares will be divided into 29 erven zoned for aerodrome, business, public services / utilities, agriculture, Private open space and Private Streets. Economically, Phase 1 is projected to generate R82.18 billion in business sales and R36.07 billion in Gross Domestic Product (GDP) during construction, creating approximately 118 498 jobs, and once operational, it will add R19.68 billion in annual business sales, R9.28 billion to GDP, and sustain nearly 19,838 jobs. Infrastructure related to this phase includes, but is not limited to, development as indicated in the table below.

Type	Infrastructure Components
Airport Precinct	• A 4.2 km runway designed for International Civil Aviation Organization (ICAO) Code F aircraft • Two rapid-exit taxiways • A passenger terminal with a capacity of 7.2 million passengers per annum • A cargo terminal capable of handling 150 000 tons of freight annually
Airport City	• 90-room hotel • Premium office space • Medical consulting rooms • 4-star rated Green Environment with pedestrian friendly tree-lined boulevards

Agri-Zone	• Climate controlled greenhouses including hydroponic farm • Live animal holding platform for transport by air • Tissue culture facility • Agricultural export facilities including perishable supply chain and packhouses
Trade Zone	• Integration between air, rail ports, factories and motorways • Airside freight orientated export environment of ± 26 ha • Manufacturing area of ± 72 000 m² • Warehousing and distribution area of ± 72 000 m² • Offices of ± 16 000 m²
Additional Infrastructure	• Access points from the P24 (R54) • Parking apron for local and international aircraft • Aircraft maintenance hangar • Car parking areas for short-stay, long-stay, rental and staff • Fuel storage facility • Water supply infrastructure • Wastewater treatment works • Stormwater infrastructure • Electrical supply • Railway services

In summary, while the Vaal Aerotropolis is a long-term, multi-phase development, **this application specifically seeks approval for Phase 1** in terms of Section 40 of the National Water Act (Act 36 of 1998) (NWA). This will serve as the foundation for future growth and deliver immediate economic, social, and infrastructural benefits to the region. Subsequent applications will be lodged for authorization as the phases and related services / activities develop in due course.

A Water Use License Application (WULA) was logged on the Department of Water and Sanitation's (DWS) e-WULAAS platform bearing Reference Number WU40964. Section 21 water uses anticipated for Phase 1 thus far (pending DWS site visit) include:

- 21(a) – taking water from a water resource.
- 21(b) – storing water.
- 21(c) – Impeding or diverting the flow of water in a watercourse.
- 21(i) – altering the bed, banks, course or characteristics of a watercourse.

Prism Environmental Management Services Africa (Pty) Ltd (Prism EMS Africa) has been appointed as the independent Environmental Assessment Practitioner (EAP) to undertake the Phase 1 WULA process/s (DWS Ref No. WU40964) as well as the Phase 1 Environmental Authorisation (GDEnv Ref No. GAUT 002/25-26/E0240) as required by a host of environmental legislations and Competent Authorities.

4 Location of Water Uses

Phase 1 of the proposed Vaal Aerotropolis, in respect of which this WULA is being compiled, will take place within the C22J Quaternary Catchment, within the Vaal-Orange Water Management Area (WMA). The Application Area is situated within the Emfuleni Local Municipality, Sedibeng District Municipality located within the borders of the Gauteng Province.

Note:

- **Application Area** refers to the 13 farm portions that will be affected during Phase 1 of the Vaal Aerotropolis development (Table 3, Table 4, and Figure 1), while
- **Total Survey Area** refers to total assessment area where *in-situ* surveys were conducted (Figure 2).

The corner point coordinates of the Application Area are indicated in Table 4 and can be seen in Figure 1. Geographic locations of individual water uses / activities will be determined in due course, following specialist assessments.

Table 3: Property Details

Surveyor General Diagram number	Property Description	Title Deed Number	Owner
T0IQ00000000053000047	Part of Portion 47 Klipkop 530 IQ (Proposed Portion 49 Klipkop 530 IQ)	T5973/2007	Republic of South Africa
T0IQ00000000053000000	Part of the Remainder of the Farm Klipkop 530, IQ (Proposed Portion 50 Klipkop 530 IQ)	T46824/2007	
T0IQ00000000055400003	Remaining Extent Portion 3 of the Farm Rietkuil 554, IQ	T68017/2023	Vaal AeroZone (Pty) Ltd
T0IQ00000000055400009	Remainder of Portion 9 (a Portion of Portion 3) of the Farm Rietkuil 554, IQ		
T0IQ00000000055400026	Portion 26 of the Farm Rietkuil 554, IQ		
T0IQ00000000055500005	Portion 5 of the Farm Vlakplaats 555, IQ	T68018/2023	
T0IQ00000000055500006	Remainder of Portion 6 of the Farm Vlakplaats 555, IQ	T68016/2023	
T0IQ00000000055500007	Portion 7 of the farm Vlakplaats 555, IQ		
T0IQ00000000055500018	Portion 18 (a Portion of Portion 6) of the Farm Vlakplaats 555. IQ		

Surveyor General Diagram number	Property Description	Title Deed Number	Owner
T0IQ00000000055500017	Remaining Extent of Portion 17 of the Farm Vlakplaats 555, IQ	T68017/2023	
T0IQ00000000055500020	Portion 20 of the Farm Vlakplaats 555, IQ		
T0IQ00000000055500051	Portion 51 of the Farm Vlakplaats 555, IQ		
T0IQ00000000055500052	Portion 52 of the Farm Vlakplaats 555, IQ		

Table 4: Corner Coordinates of the Application Area

Point	Latitude	Longitude	Point	Latitude	Longitude
A	-26,5631367	27,6782414	X	-26,6235514	27,680876
B	-26,5724473	27,7119542	Y	-26,6191821	27,6800494
C	-26,5717003	27,7137366	Z	-26,618773	27,6828394
D	-26,56716498	27,71454084	AA	-26,6169503	27,6818275
E	-26,56964767	27,7325621	AB	-26,6177115	27,6797446
F	-26,59642674	27,72835109	AC	-26,6132766	27,6781567
G	-26,5953853	27,7389373	AD	-26,6090808	27,6737655
H	-26,5970682	27,7497903	AE	-26,6082232	27,6755423
I	-26,6107626	27,756443	AF	-26,6013198	27,6784528
J	-26,6111093	27,7620265	AG	-26,6022384	27,6692059
K	-26,61789189	27,73396112	AH	-26,6254136	27,7111204
L	-26,6280137	27,7317545	AI	-26,6226418	27,7300366
M	-26,6334741	27,6815306	AJ	-26,6158528	27,7287589
N	-26,6320755	27,6809037	AK	-26,6162669	27,7265421
O	-26,6325433	27,6795379	AL	-26,6196283	27,7271593
P	-26,6339856	27,6801395	AM	-26,6200073	27,7248711
Q	-26,6359671	27,664727	AN	-26,6166971	27,7242392
R	-26,6292231	27,665541	AO	-26,6175542	27,7196511
S	-26,6279971	27,6739314	AP	-26,6207734	27,7202449
T	-26,629237	27,6755218	AQ	-26,621167	27,7178678
U	-26,6290538	27,6776773	AR	-26,6180009	27,7172592
V	-26,6274935	27,6773765	AS	-26,6193681	27,7099374
W	-26,6272606	27,6789693			

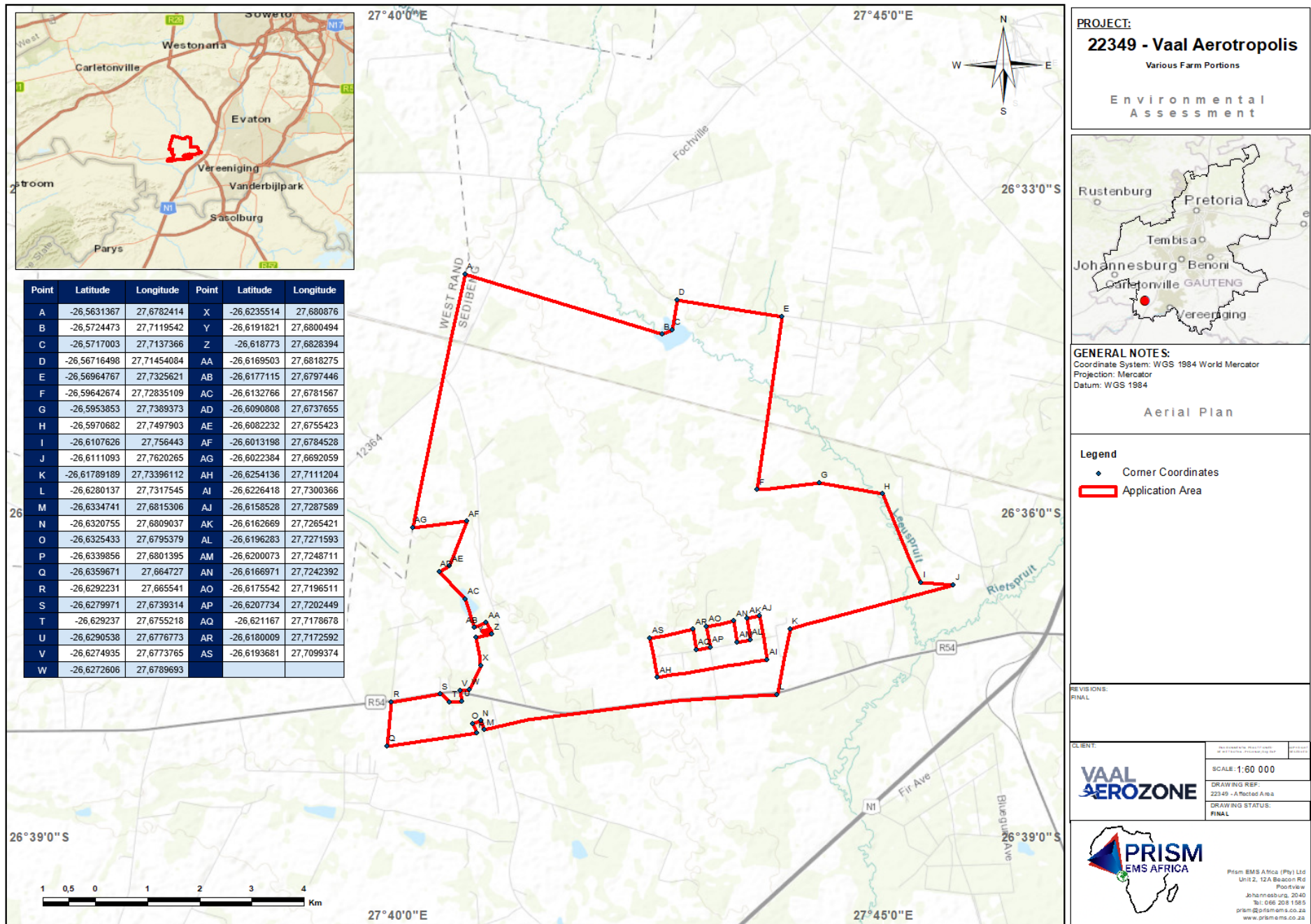


Figure 1: Locality Map of Application Area

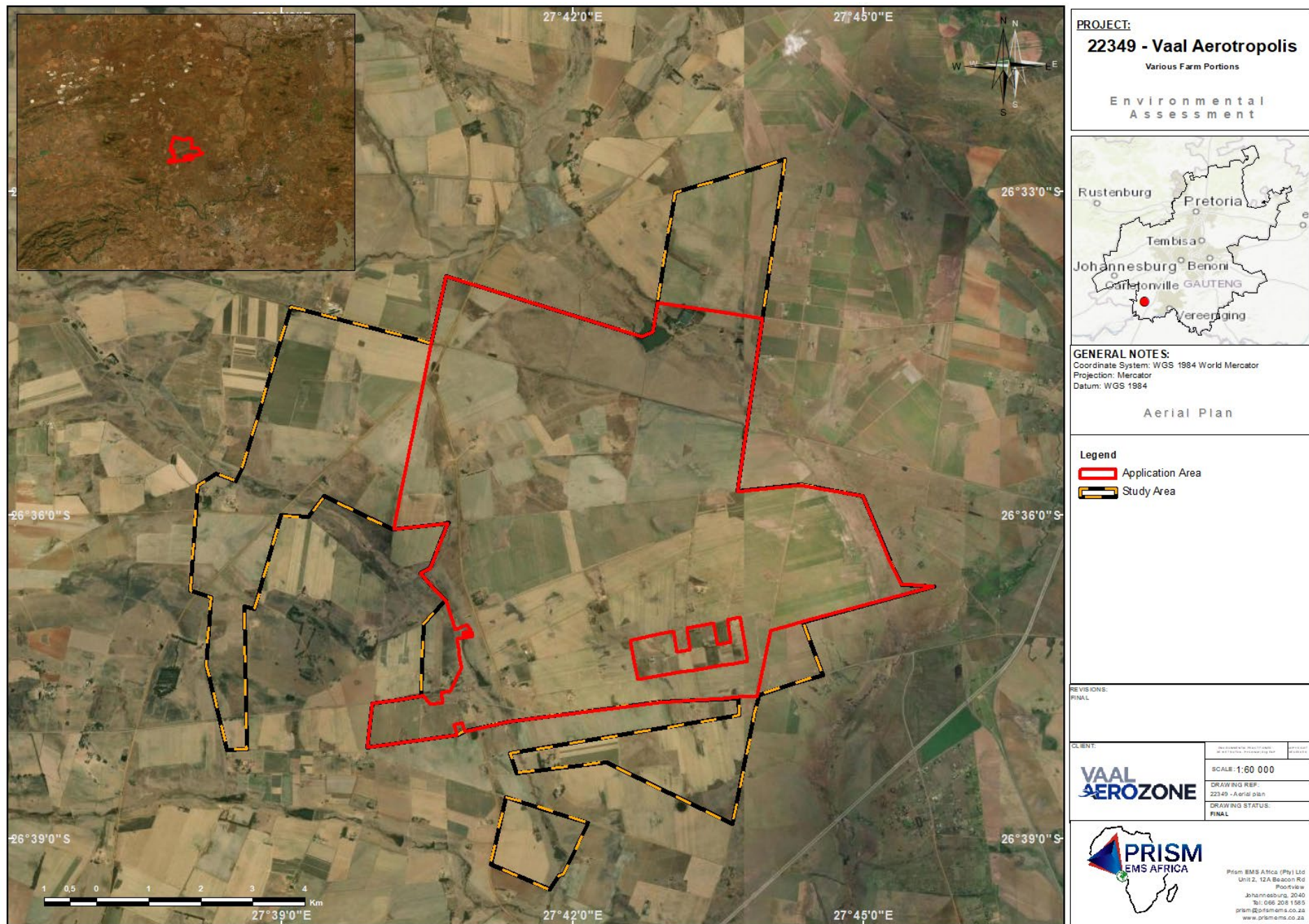


Figure 2: Aerial Map of Total Survey Area

5 Administrative Documents and Technical Reports Submitted by Applicants

5.1 Administrative Documents

At this stage of the WULA process, only the consultant appointment letter, Vaal Aerozone's company registration documentation, and the authorised representative's identity document together with the associated contact details have been uploaded to the Department of Water and Sanitation (DWS) e-WULAAS portal. As the project progresses and additional requirements are addressed, the following administrative documents will be uploaded to the e-WULAAS portal in due course:

- Applicable Title Deeds / Certificates
- Company Registration Documents
- Certified ID of Representative
- Letters of Authorization, as and where applicable.

5.2 Reports and other technical documents

The required technical documents and specialist studies to accompany the WULA are currently being confirmed in consultation with the Department of Water and Sanitation (DWS). Notwithstanding this, a number of specialist investigations are already being undertaken as part of the broader proposed development and will inform the WULA process. These specialist studies include, but are not limited to, the following as indicated in Table 5.

Table 5: Technical Documents and Specialist Studies to be Compiled

Nr	Report	Author	Date
1	Agricultural Assessment	Digital Soils Africa (DSA)	In Progress
2	Air Quality Impact Assessment	Rayten Engineering Solutions	In Progress
3	Terrestrial Biodiversity Assessment	Prism EMS	In Progress
4	Aquatic Impact Assessment	Prism EMS	In Progress
5	Avi-Faunal Assessment	Cossypha Ecological	In Progress
6	Animal Impact Assessment	Prism EMS	In Progress
7	Plant Species Assessment	Prism EMS	In Progress
8	Geohydrological Assessment	Delta-H Water System Modelling & Aqua Earth	In Progress
9	Hydropedology Assessment	Digital Soils Africa (DSA)	In Progress
10	Wetland Assessment	Prism EMS	In Progress
11	Heritage Impact Assessment	Beyond Heritage	In Progress
12	Palaeontology Impact Assessment	Prof Marion Bamford	In Progress
13	Noise Impact Assessment	Machoy Consulting	In Progress
14	Visual Impact Assessment	SRK Consulting	In Progress
15	Climate Change Assessment	Rayten Engineering Solutions	In Progress
16	Geotechnical Assessment	PeraGage Specialist Geoconsultants	In Progress

6 Project Description

The proposed Vaal Aerotropolis (to be developed, managed, and owned by Vaal Aerozone (Pty) Ltd) aims to become a lush aviation oasis featuring a two-terminal design and integrated air cargo services containing state-of-the-art facilities and infrastructures. The planned Vaal Aerotropolis will be developed to include a Cargo Terminal, Airport City, Solar Farm, Agri Zone, and Trade Zone. Each phase is designed to progressively expand the airport's capacity and functionality to accommodate increasing demand. All necessary ancillary services (e.g., water reticulation, roads, electricity, etc.) will be provided for the development, and subsequent applications will be lodged with the relevant competent authorities in due time.

The development of the Vaal Aerotropolis, as mentioned above under Section 3 above, will be rolled out in three phases over a timeframe of approximately 60 years depending on national and international economic factors. The spatial requirements of the airport facilities are based on the air traffic demand forecasted as well as airport planning assumptions based on the forecasted airport operations. The requirements have been defined at a high level using the annual volumes, planning ratios, benchmarking and industry best practice foreseen for the development.

In terms of a water use license application, several proposed development components / infrastructure/s are applicable for the Phase1 development. *Please note that some components are for information only and provided for the sake of information sharing. Specific and focussed applicable applications / authorisations will be applied for in due course with the Competent Authorities as the project proceeds.*

The following includes a short description on services that will be provided for the development either by the developer or, if applicable an external service provider. *Please note that this information is only provided for the sake of information sharing. Separate applications will be lodged in future for the authorisation of the services as and when required with the appropriate Competent Authorities.*

6.1 Water and Sewer Services

6.1.1 Water

The proposed water requirements for the Vaal Aerotropolis development according to the different phases are provided in Table 6 and Table 7 below. As the development will be phased, the water supply infrastructure will be aligned with the phased construction plans. Water demand has been estimated based on the land use and occupancy characteristics of each zone, factoring in peak demand scenarios and future growth. The phased approach ensures that the water supply infrastructure is both cost-effective and scalable, meeting the immediate needs of each phase while allowing for seamless expansion in subsequent phases. This design prioritizes sustainability, reliability, and compliance with relevant regulations and standards.

The bulk water supply, especially during the construction phase and initial stage of Phase 1 of the development, will be primarily sourced from high-yielding boreholes located within or near the proposed development area. Initial assessment results demonstrate the presence of productive water-bearing fracture zones whereby additional boreholes can be drilled if so required (the necessary authorisations and licenses will be obtained as and when required).

Treatment, storage, and distribution infrastructure will be installed and expanded as each phase of the Aerotropolis is implemented. The storage requirements will incorporate provisions for emergency (48-hour supply) as well as fire storage. For Phase 1 an on-site WTW is proposed including i) a 20 000 m³ raw water storage reservoir, ii) an 8 000 m³ concrete reservoir for treated water storage, iii) a 2 000 m³ tower for adequate pressure supply, and iv) a 1 500 m³ fire storage reservoir. The bulk water distribution network will be comprised of 90 mm to 250 mm diameter pipelines that will allow the boreholes, WTW, and airport precinct to be interconnected (Figure 3).

Proposed WTW will flow as follows: Raw water storage > Inlet Works > Screening > Coagulation > Flocculation > Sedimentation > Filtration > Disinfection > 8 000 m³ Reservoir. Detailed Design Drawings will be provided during the EIA Phase.

Table 6: Projected Potable Water Demands

Detailed Land Use	Annual Average Daily Demand (AADD)	Phase 1	Phase 2	Phase 3
		Water Demand (kl/day)	Water Demand (kl/day)	Water Demand (kl/day)
Airport	25 l/passenger/day	493	1 712	3082
Hospital	1 kl/100m ² /day	80	80	80
Hotel Park	1 kl/100m ² /day	68	68	68
Shopping World	0.65 kl/100m ² /day	306	306	306
Office Park	0.65 kl/100m ² /day	483	483	483
Head Office	0.65 kl/100m ² /day	54	54	54
Conference Centre	0.65 kl/100m ² /day	44	44	44
Trade Zones	10 kl/ha/day	360	810	3985
Security House	0.3 kl/unit	2	2	2
Total Potable AADD		1 890	3 559	6 934
Conveyance Losses		10%	10%	10%
Treatment Losses		10%	10%	10%
Total GAADD		2 268	4 271	7 627
Peak Factor		1,5	1,5	1,5
Total Peak Hour Potable Water Demand		3 402	5 873	11 441

Table 7: Projected Non-Potable Water Demands (for Agriculture Uses)

Detailed Land Use	Annual Average Daily Demand (AADD)	Phase 1	Phase 2	Phase 3
		Water Demand (kl/day)	Water Demand (kl/day)	Water Demand (kl/day)
Agri-Lab	6 kl/ha	-	393	393
Agrizones	12 kl/ha	4 267	5 365	4 713
Total Non-Potable Water Demand		4 267	5 758	5 106

The conceptual design of the bulk water infrastructure (both potable and fire) shall make provision to eventually have a bulk supply ring surrounding the Vaal Aerotropolis supplying water to a system of reservoirs distributed at different development nodes. Figure 3 shows the water services pipelines that will be put in place for the Vaal Aerotropolis.

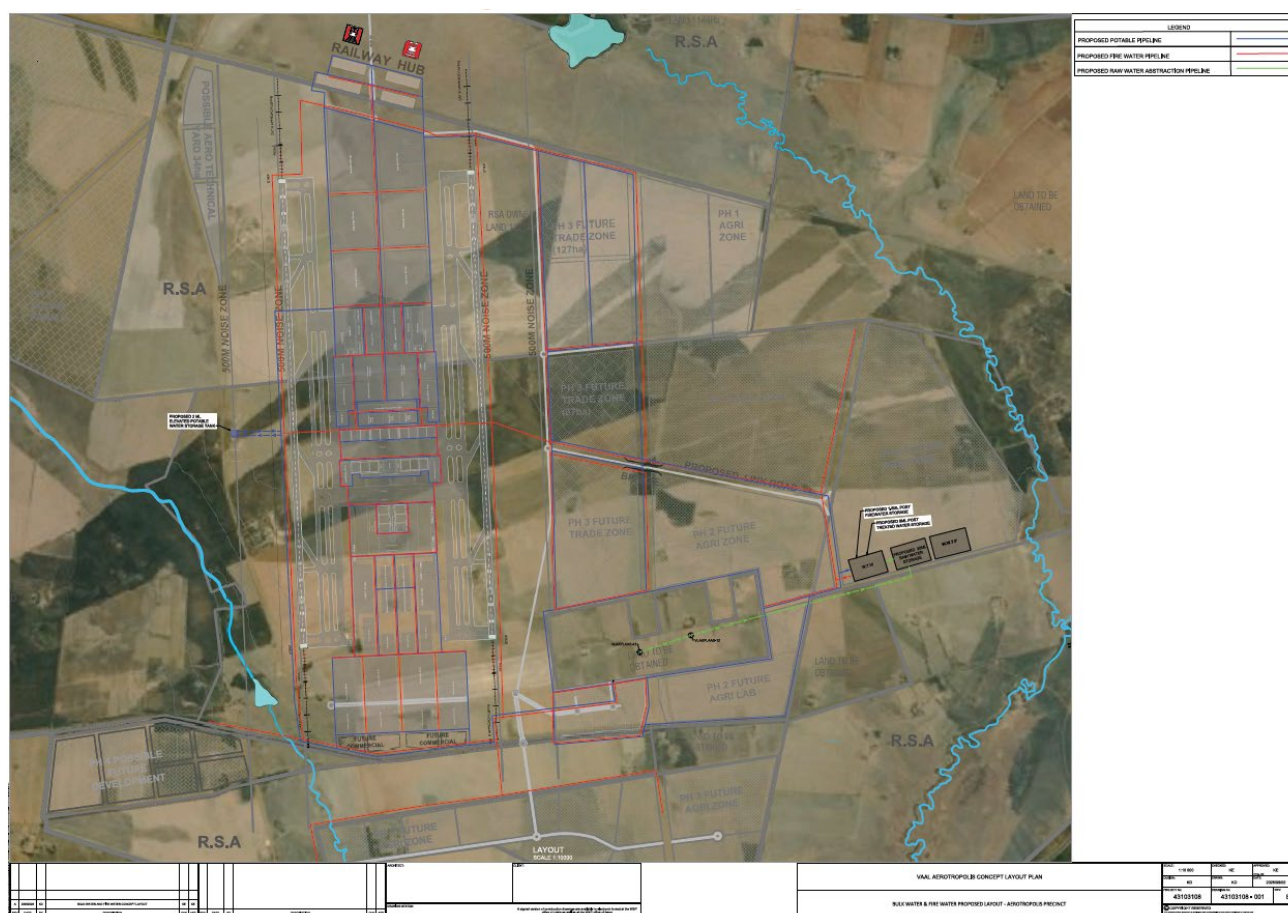


Figure 3: Proposed Water Services

6.1.2 Sewer

The bulk sewer services for the new development (Figure 4) are designed to manage sewerage generated across all zones, including, but not limited to, the airport precinct, airport city, and trade zones. The proposed sewer requirements for the Vaal Aerotropolis are provided in Table 8 During each phase of the Aerotropolis' expansion, the bulk sewer infrastructure will be installed, expanded,

and adapted to meet the increasing capacity requirements of the growing development. To that end, taking into consideration Emfuleni municipality's constraints and Vaal Aerotropolis' requirements, the following has been proposed for Phase 1 of the Vaal Aerotropolis development.

Phase 1 involves the construction of a 1.8ML/day on-site Wastewater Treatment Works (WWTW) which will be located east of the airport (Figure 4) ultimately discharging treated effluent into the nearby water resource in accordance with DWS standards. The bulk sewer infrastructure will focus on collecting sewerage from the airport, Airport City, and initial portions of the trade zones through a 300 mm diameter bulk sewer pipeline. A gravity sewer pipeline collecting the effluent will convey wastewater through 450 mm diameter bulk sewer pipes to the on-site WWTW.

This phase will include:

- **Gravity Sewer Network:** Designed to optimize flow from the airport, trade zones, and adjacent areas, minimizing the need for pumping stations.
- **Pump Stations:** Strategically located pump stations, where required, to assist flow from low-lying areas.
- **On-Site WWTW:** The WWTW will be designed with an initial treatment capacity of 1.8 ML/day, incorporating processes such as primary sedimentation, biological treatment, and tertiary treatment for reuse purposes. The treatment processes are subject to the requirements for treated effluent to be reused on the Vaal Aerotropolis.
- **Reclamation and Reuse:** Treated wastewater will be, where possible, used for landscaping, industrial processes, and other non-potable applications. Sludge generated during treatment will be treated via sludge drying beds prior to being transferred to a designated composting area.

The design of the wastewater treatment system shall account for flexibility and adaptability to accommodate future demands. The proposed on-site WWTW will form part of a separate focussed WULA with DWS being the competent authority.

Table 8: Proposed sewer requirements

Detailed Land Use	Phase 1			Phase 2			Phase 3		
	Average Dry Weather Flow (kl/day)	Peak Dry Weather Flow (kl/day)	Peak Wet Weather Flow (kl/day)	Average Dry Weather Flow (kl/day)	Peak Dry Weather Flow (kl/day)	Peak Wet Weather Flow (kl/day)	Average Dry Weather Flow (kl/day)	Peak Dry Weather Flow (kl/day)	Peak Wet Weather Flow (kl/day)
Airport	395	592	651	1 370	2 055	2 260	2 466	3 699	4 253
Hospital	64	95	105	64	95	105	64	95	110
Hotel Park	55	82	90	55	82	90	55	82	94
Shopping World	244	367	403	244	367	403	244	367	422
Office Park	387	580	638	387	580	638	387	580	667
Head Office	43	65	71	43	65	71	43	65	75
Conference Centre	35	52	58	35	52	58	35	52	60
Trade Zones	288	432	475	648	972	475	3 188	4 782	5 499
Security House	2	3	3	2	3	3	2	3	3
Total	1 512	2 268	2 608	2 847	4 271	4 291	6 483	9 725	11 183

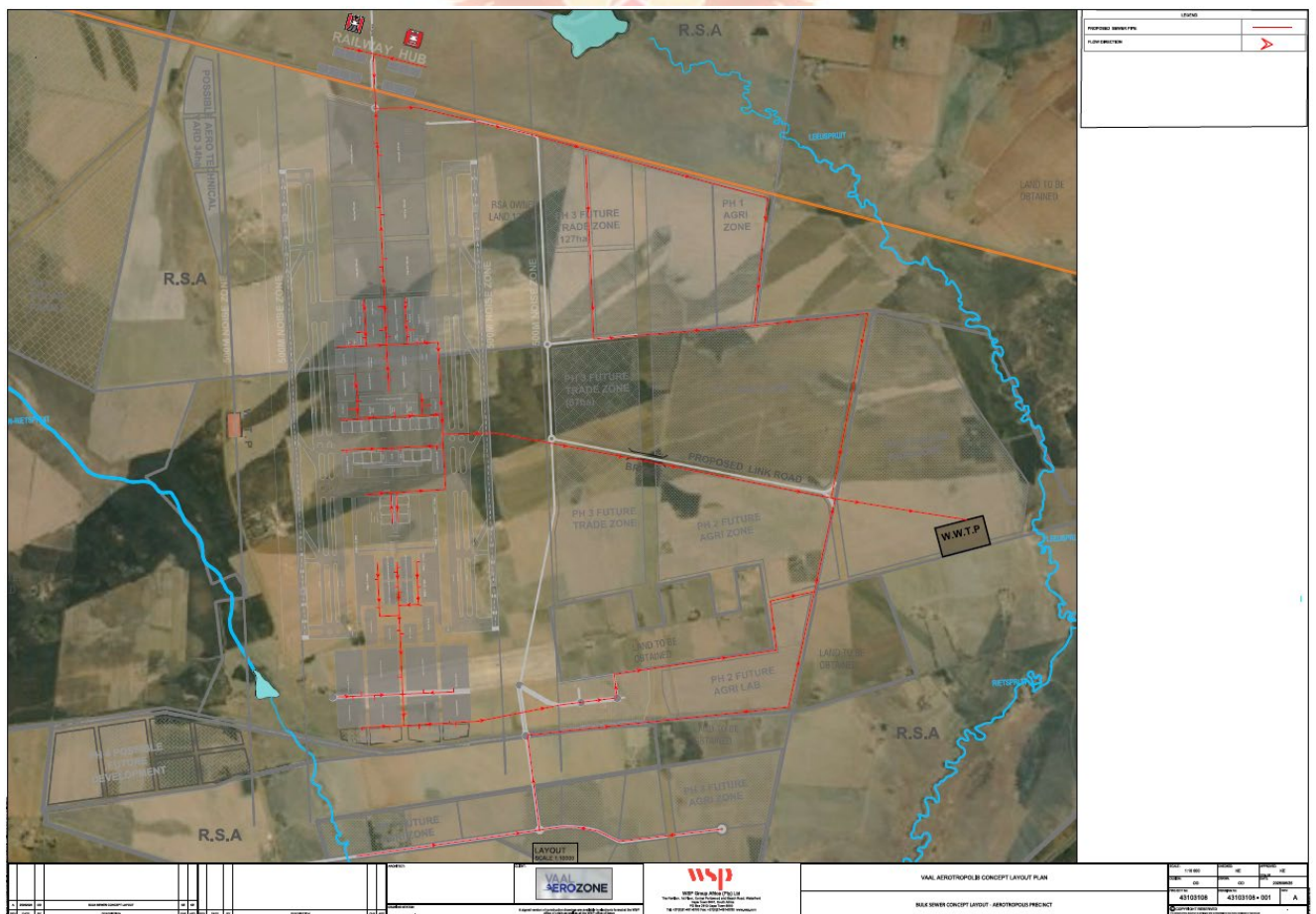


Figure 4: Proposed Sewer Services

6.2 Roads

A new and upgraded network will be provided to serve the access and mobility needs of the Vaal Aerotropolis site and surrounding land-uses. The proposed site is surrounded by numerous high, medium and low order roads that will provide vehicle and public transport access to the site. As part of this broader context, a TIA was undertaken to evaluate the potential impact of Phase 1 of the Vaal Aerotropolis on the surrounding road network, including the required new and upgraded roads, interchanges, access points and futureproofing for subsequent development phases. The assessment also included SANRAL's N1 interchange Fatal Flaw Report and the N1 Interchange Application to SANRAL as well as the split diamond interchange application to the Gauteng Department of Roads and Transport (GDRT).

All roads and access points will be designed to meet the following objectives:

- To ensure appropriate regional and metropolitan access to the aerotropolis and surrounding Agri zones.
- Ensure direct and efficient road access to and linkage between various sub-zones of the greater aerotropolis and its precincts.
- To establish a suitable, economical and hierarchical movement network for all vehicles, for passengers, staff, freight and non-motorised transport.
- Enable the establishment of effective and efficient public transportation access.
- Promote integrated and safe vehicle and non-motorised access and circulation to site, on site, for an efficient connected site.
- Promote a multi-modal approach to transport provision.

The key municipal and provincial routes that will support the Vaal Aerotropolis, includes the N1 freeway, P24 (R54 / K178), D2459 (Roots Road), and possible future links, all of which will require upgrades (primarily to dual carriageways) to accommodate development traffic. Presently, there are no suitable direct access points to the N1 (Figure 5), making new interchange infrastructure critical to the development's viability.

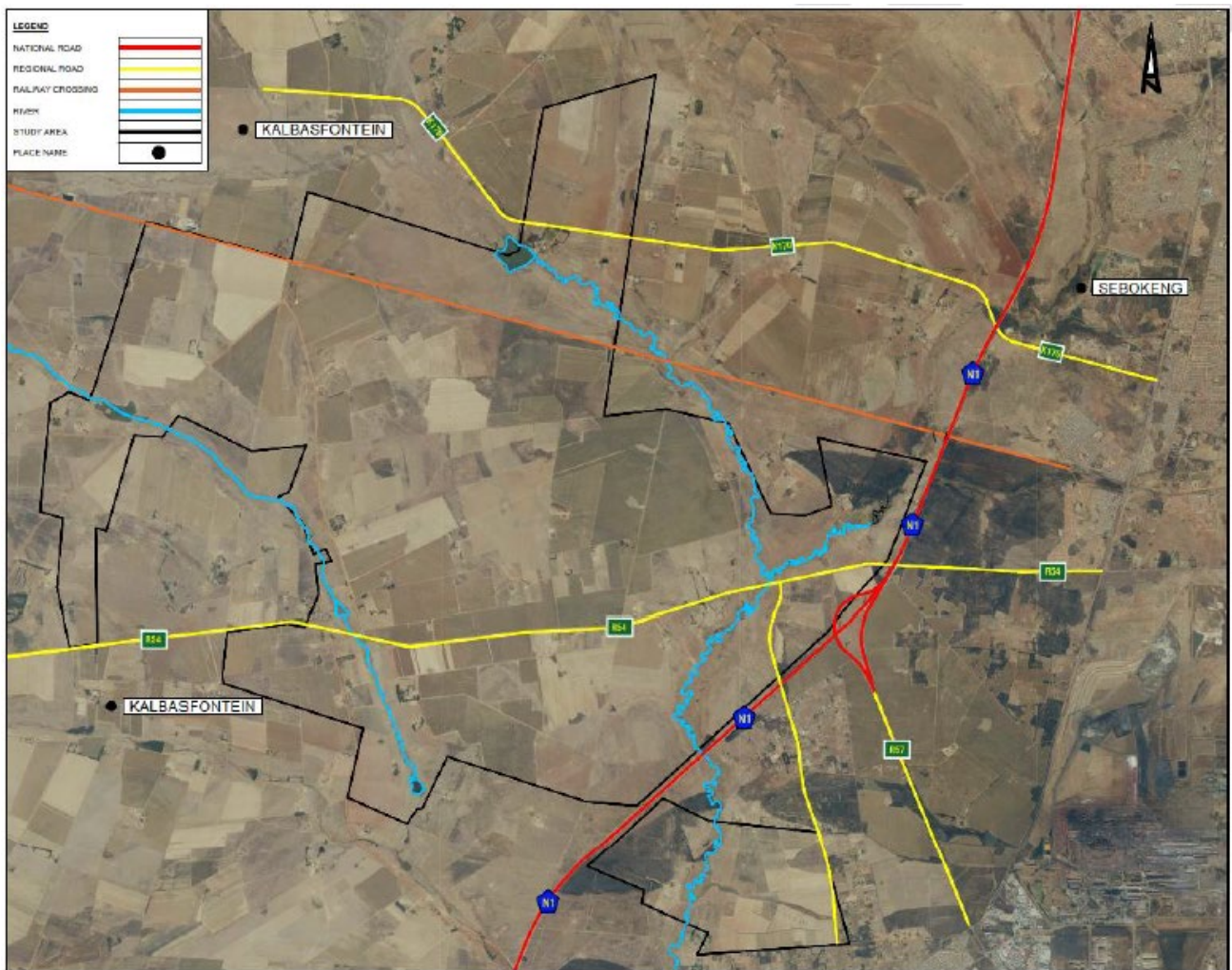


Figure 5: Layout of Existing Major Road Network

6.2.1 External Roads

Several interchange options were assessed and refined based on safety, spacing, and network performance, with unsuitable options discarded. To that end, a Split Diamond Interchange (SDI) at the N1 / P24 (R54) / D2459 is deemed the preferred option subject to approval from SANRAL and the Gauteng Department of Roads and Transport.

The SDI at the N1 / P24 (R54) / D2459 best satisfies operational efficiency, network integration, and planning objectives while meeting the necessary technical and regulatory criteria. It offers seamless integration between Sebokeng (east of the N1) and the planned airport development (west of the N1). The SDI contains the following in accordance with Figure 6:

- N1 split diamond access interchange with the P24 and D2459:
 - The northern portion of the split diamond is an on- and off-ramp with the P24 serving traffic to and from the North on the N1. These two ramp terminals will be dual lane roundabouts for increased capacity and safety.

- In the South an on-and off-ramp with the D2459 to the N1 will serve traffic from and to the South of the N1. These two ramp terminals will be dual lane roundabouts for increased capacity and safety, however, as this is a low volume interchange, priority Stop-controlled junctions will also have ample spare capacity.
- The two interchange components will allow connectivity between the N1 and the P24 and the D2459 on- and off-ramps.
- P24 and D2459 intersection:
 - This intersection is currently a priority-controlled T-junction, it is proposed to convert it to a narrow diamond grade separated junction with ramp terminal roundabouts.
- P24 (K178):
 - This road is currently a single carriageway; it is proposed to convert it to a dual carriageway from east of N1 interchange to West of the Airport (Access 1).

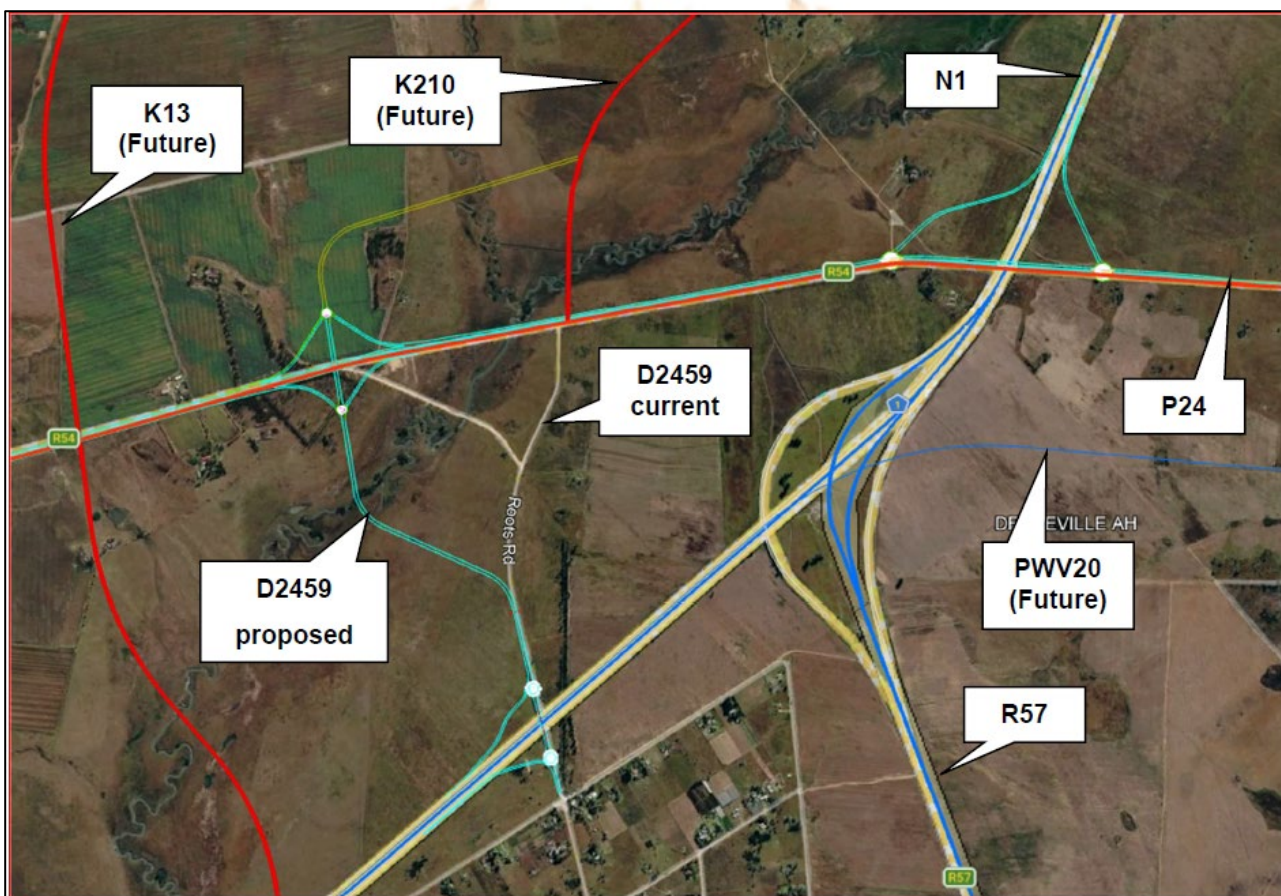


Figure 6: Proposed Split Diamond Interchange

6.2.2 Internal Roads

The accesses to the Vaal Aerotropolis from the P24 for Phase 1 will be as follows:

- Access 1 (Figure 7): The access will be a partial free flow grade separated junction with access from and to the P24 east of the interchange. The interchange will not have an on or

off-ramp serving the P24 to and from the west, this movement will be accommodated at Access 2.

- Access 2 (Figure 8): This access will be a grade-separated diamond interchange with full accessibility from the P24 (to and from the east and west). All ramps will be free flowing with an additional grade separation between the Westbound off-ramp from the P24, and the on-ramp Westbound to the P24.

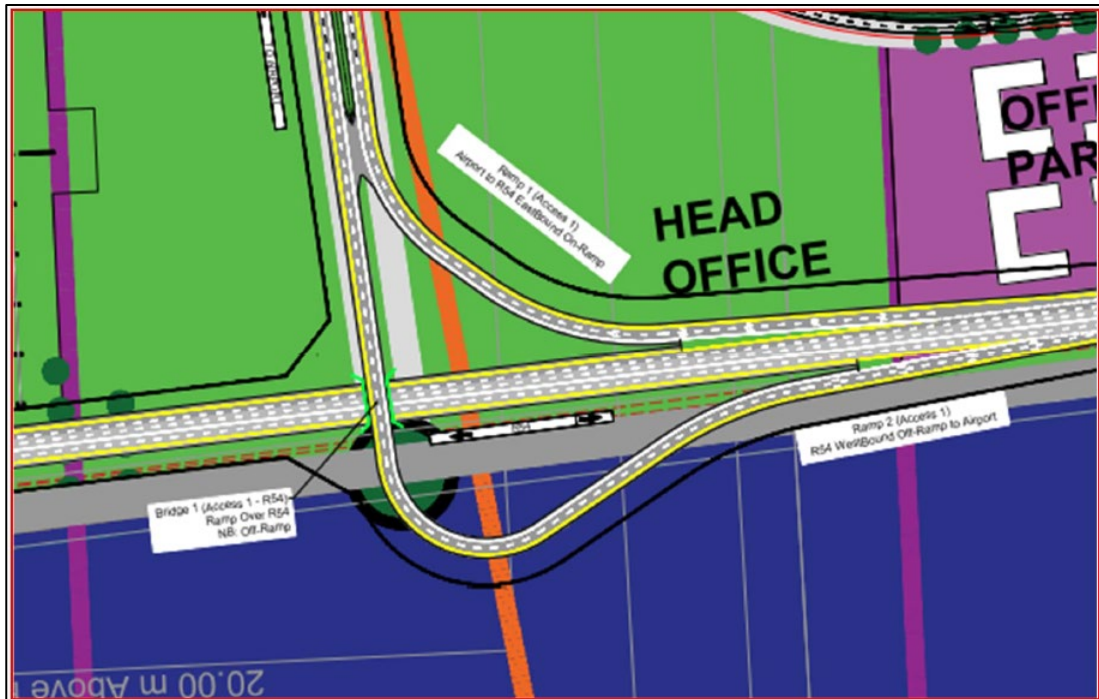


Figure 7: Internal Access Road 1 (East)

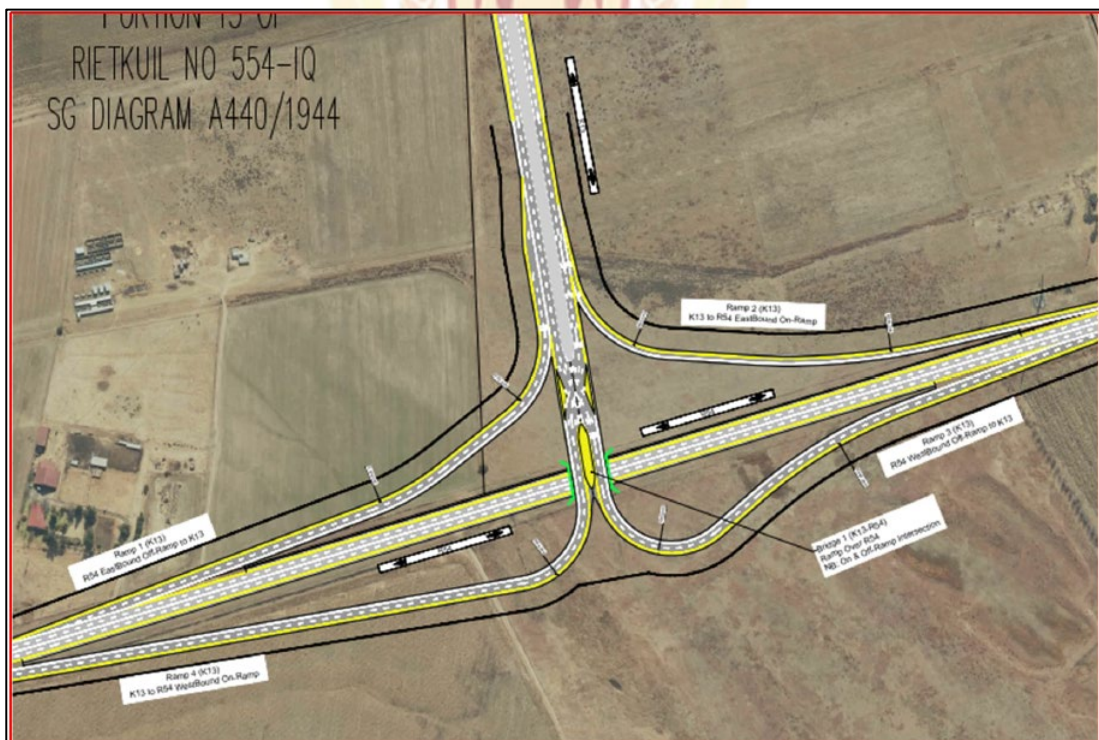


Figure 8: Internal Access Road 2 (West)

Additionally, there are two major internal junctions within the Vaal Aerotropolis development. These two junctions connect with Access 1 and Access 2 from the P24 and provides access to the different areas of the development such as the passenger terminal, freight/cargo terminals, airport city, trade zone and Agri-zones.

6.3 Electrical

The proposed development is estimated to have a maximum energy demand of approximately 50 Mega Volt-Amperes (MVA) by the end of Phase 3. During Phase 1, however, the development will be limited to an initial 20 MVA supply. The primary source of power shall be supplied by ESKOM via a 132/11kV bulk intake substation configured with three transformer bays, of which:

- Two 40MVA transformers are to be installed initially to satisfy the Phase 1 demand (20MVA), and
- The third transformer position is reserved for future installation, allowing capacity expansion toward the ultimate demand without major substation redesign.

Phase 1 specifically requires a dedicated bulk electrical supply which can be defined as:

- Notified Maximum Demand (NMD): 20 000 kVA
- Connection Voltage Level: 11kV (delivery)
- Upstream Connection Level: 132 kV transmission / distribution interface.

In addition to the above-mentioned power supply scope, existing 88kV infrastructure will be realigned along the northern boundary of the site. This involves the construction of approximately 15km of new overhead line, decommissioning and dismantling of existing infrastructure within the development area, and implementation of ESKOM-controlled connection works and servitude adjustments.

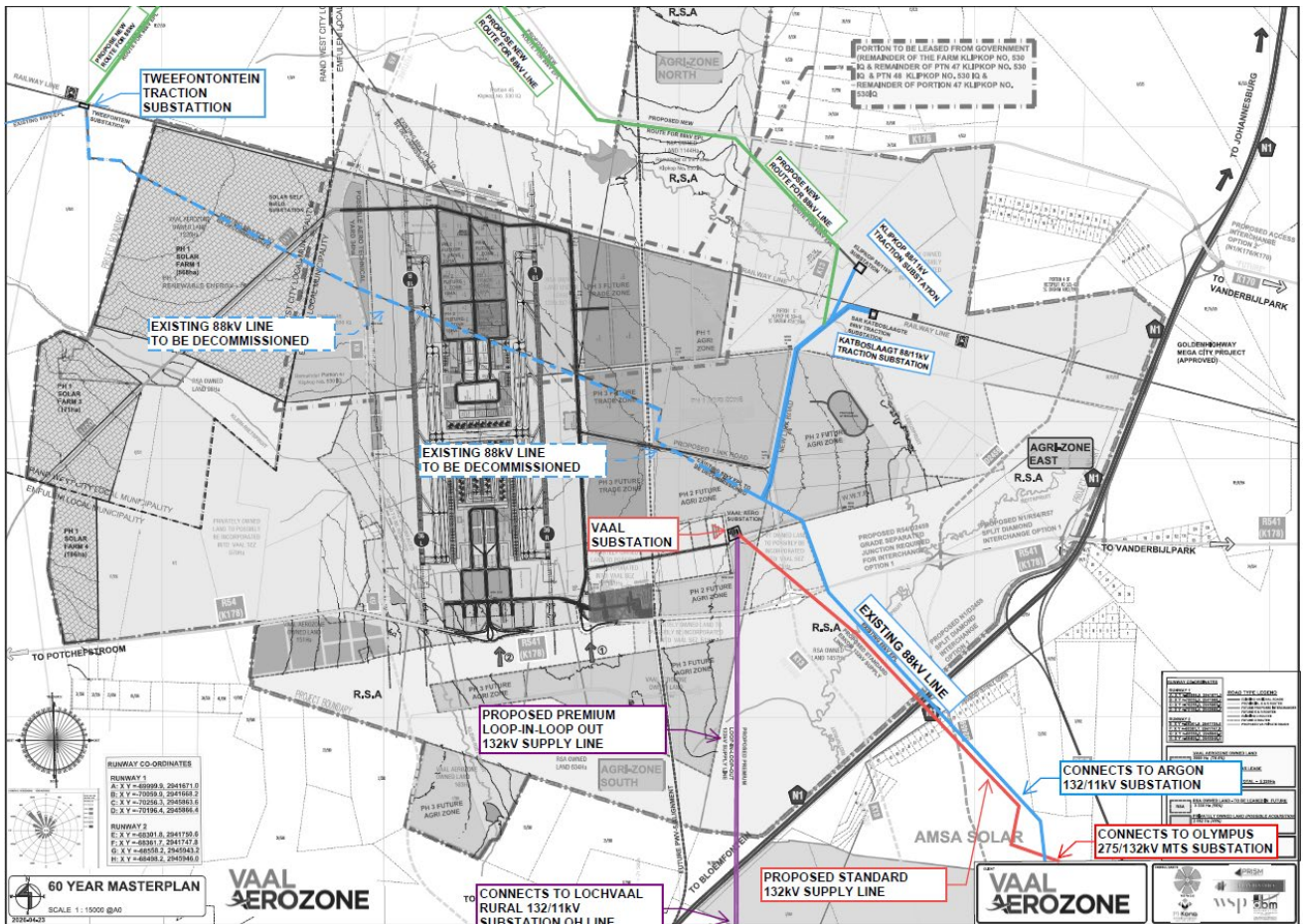


Figure 9: Proposed electrical infrastructure

In terms of The Vaal Aerotropolis' electricity demand and supply, relevant environmental authorisations will be obtained. These will follow individual separate applications as per legislative requirements.

7 Methods Statement (only for c and i activity)

Several Section 21 water uses in terms of the NWA will be triggered as part of this WULA (Sections 3 and 10). As the project proceeds to the EIA phase WULA Summary Report, specialist studies as well as detailed engineering design drawings will be conducted and/or finalised to inform the environmental safeguarding processes. Hence, method statements will be compiled and shared with the competent authorities in due course.

8 Stormwater Management Plan

A Stormwater Management Plan (SWMP) has been developed by WSP Group Africa (Pty) Ltd to ensure that the development will minimise environmental impacts, minimise the risk of flooding, and protect receiving water bodies against negative influences.

8.1 Aerotropolis Precinct

Based on topography and sub-catchments identified, three (3) main stormwater outfall locations were identified for the site. These are summarized below, as can be seen in Figure 10 below.

- To the Northeast, below the existing dam (26°34'43" S; 27°43'14" E).
- To the East near the P24 (R54) (26°35'45" S; 27°44'48" E).
- To the Southwest near the existing dam (26°37'24" S; 27°40'58" E).

Ultimately, catchment B and C were consolidated, and flows will be routed to the same outfall point (Outfall 2 in Figure 10) while catchment A and its associated outfall were retained (Outfall 3 in Figure 10).

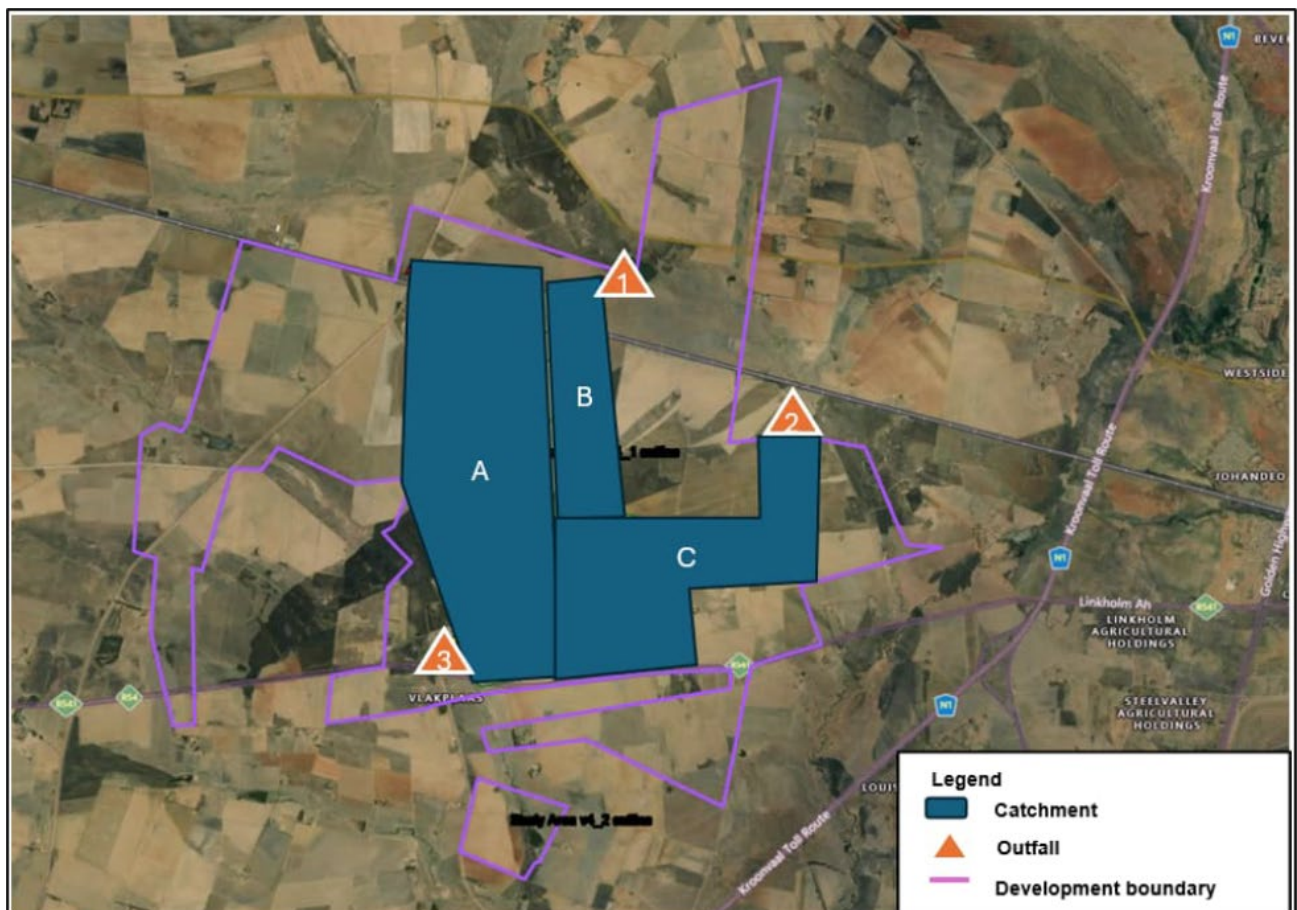


Figure 10: Stormwater Catchment Delineation and Outfall Map

In terms of the precinct itself (Figure 11), it is proposed that i) major and minor stormwater routes will be interlinked to form the bulk stormwater services, ii) the minor routes will consist of drainage from the surrounding aerotropolis buildings, runways, parking areas, and internal road networks, iii) stormwater runoff will be directed from the minor routes into the major routes, iv) internal roads will have a chamber directing flow along the kerbs along the road towards catchpits to facilitate drainage for the full extent of the internal roads, and v) internal roads will discharge to roadside channels and convey attenuated flow for discharge into the surrounding watercourses.

The minor system, in accordance with Emfuleni Municipality guidelines, will be able to accommodate the 1 in 50-year return period. It will consist of Class 100D 900 mm diameter pipes (SANS 677), contain kerbs for collecting run-off along internal roads, and include channels along the major internal roads. Run-off from taxiways and runways will be diverted towards strategically placed catch pits and dry swale systems to reduce surface stormwater volumes.

The major system will be comprised of a grid system containing multiple catch pits and specific airside drainage systems to collect runoff through the minor network. This system will consist of 100D 1350 mm diameter concrete pipes (SANS 677) specifically designed to maximize flow movement away from the runway.

An attenuation dam (dry detention basin) was designed for Outfall 2 since this area will cater for the eastern half of the development and will include runways and future agrizones. The attenuation dam will have an active volume of 950 M³; cover an estimated area of 29 ha; and have a maximum depth of 4 m.



Figure 11: Stormwater Proposed Layout - Aerotropolis Precinct

8.2 Road Interchanges

The development of the proposed aerotropolis demands that existing access roads be upgraded / expanded and that a new access point to and from the N1 highway be created (refer to Section 6.2 above). Any alterations in the road network will result in changes in the adjoining drainage.

The proposed drainage system will consist of new channels, culverts, and one bridge at the P24(R54) / D2459 interchange (Figure 12). The proposed drainage will tie into the existing drainage which may require upgrades based on the flow volumes generated.

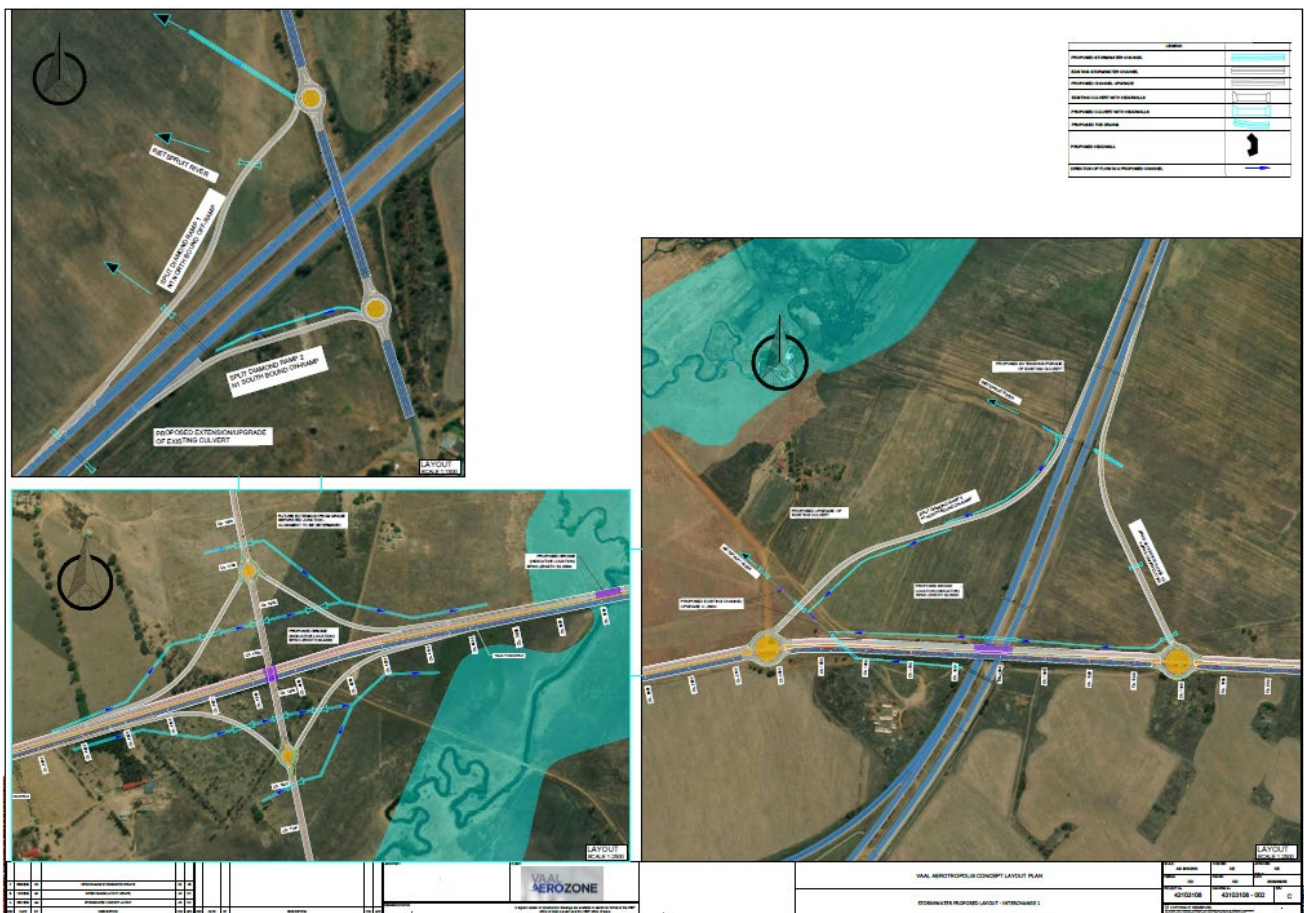


Figure 12: Proposed Stormwater Infrastructure at Road Interchanges

8.3 Overview

Stormwater management of the Vaal Aerotropolis will be designed with the overall development context in mind. The development will encompass minor and major systems designed for the recommended 1 in 50-year return period with a 30% climate change buffer added. Runoff calculations will be based on the symmetrical rainfall distribution in a 24-hour period; however, it is expected that post-development flows will be much larger than pre-development flows. As such, attenuation, erosion control, and water quality remediation of post-development flows will be considered in the final stormwater management plan and will have the ultimate aim of preserving the surrounding ecosystem and water resources.

9 Rehabilitation Plan

Rehabilitation and ongoing maintenance, particularly with respect to aquatic resources, are regarded as essential to maintaining and enhancing the ecological integrity and functional processes of the receiving environment. The conservation and, where feasible, improvement of key ecological drivers and ecosystem services are therefore considered fundamental principles in the planning and implementation of the proposed development. Development activities should be designed and managed in a manner that enables sustainable use of natural resources while safeguarding environmental values for present and future generations.

At this stage of the application process, a detailed Rehabilitation and Maintenance Plan has not yet been compiled. This is due to the fact that the specialist studies required to inform rehabilitation objectives, methodologies, mitigation measures, monitoring requirements, and long-term management actions have not yet been concluded (Section 5.2). Upon completion of the relevant specialist investigations, a Rehabilitation and Maintenance Plan will be developed, incorporating the findings and recommendations of the specialist studies, and submitted as part of the WULA documentation where required.

10 Water Uses Applied For

Anticipated Section 21 water uses for Phase 1 of the Vaal Aerotropolis development thus far (pending DWS site visit) include:

- 21(a) – taking water from a water resource.
- 21(b) – storing water.
- 21(c) – Impeding or diverting the flow of water in a watercourse.
- 21(i) – altering the bed, banks, course or characteristics of a watercourse.

Initial site visits and preliminary engineering designs have provided a broad overview of what water uses will be triggered as part of this WULA (Table 9). Detailed, more accurate, water uses and their associated locations will be made available for review during the EIA phase WULA Summary Report once specialist studies have been completed and detailed engineering design drawings provided.

Table 9: Anticipated Water Use To Be Applied For

Water use(s) activities	Purpose	Capacity / Volume	General Area	General Co-ordinates
Section 21(a)				
Abstraction of water from boreholes	Supply of water for Phase 1 of the Vaal Aerotropolis development	± 3 ML/day	Southern and Eastern side of the Vaal Aerotropolis	26°37'23.86"S 27°42'30.40"E

Water use(s) activities	Purpose	Capacity / Volume	General Area	General Co-ordinates
On site Water Treatment Works			Western side of the Vaal Aerotropolis	26°36'16.67"S 27°40'55.08"E
Section 21(b)				
Development of an attenuation pond	Capture of stormwater discharge	Active volume: 950 ML Estimated area: 29Ha Average depth: 3.5m	Eastern side of Vaal Aerotropolis	26°36'19.10"S 27°44'48.16"E
Section 21(c) and (i)				
Infrastructure (e.g., runways, treatment plants, buildings, roads etc.) proximity to watercourses.	Infrastructure required / related to the development of an airport	Various	Across the entire Vaal Aerotropolis	26°36'6.51"S 27°42'27.73"E

11 Impacts and Mitigation Measures

As the project proceeds to the EIA phase WULA Summary Report, specialist studies will be conducted and/or finalised to inform the environmental impact assessment. Concerns raised by I&AP's pertaining to the proposed development and their potential impacts on the physical, biological aspects of the proposed site will also be assessed at an appropriate level of detail.

The findings, recommendations and statements compiled by the specialists will be integrated along with the other environmental aspects into an impact assessment report which will include recommended mitigation measures. Results on this process will be communicated during the EIA phase WULA Summary Report.

12 Water Demand and Water Supply

Due to the rural nature of the site, there are currently no bulk sewer, water, stormwater, and roads infrastructure available in the area. The Emfuleni municipal supplies (e.g., water, sewer, electricity, etc.) are currently restricted to the municipality's operational, more urban zones; east of the N1 highway. To that end, bulk infrastructure services will be provided for the development either by the developer or, if available an external service provider.

12.1 Water Demand

Water supply infrastructure will be aligned with the phased construction plan. The phased approach ensures that the water supply infrastructure is both cost-effective and scalable, meeting the immediate needs of each phase while allowing for seamless expansion in subsequent phases. This design prioritizes sustainability, reliability, and compliance with relevant regulations and standards.

As mentioned above under Section 6.1.1 above, water demand has been estimated based on the land use and occupancy characteristics of each zone, factoring in peak demand scenarios and future growth. The proposed water requirements for Phase 1 of the Vaal Aerotropolis are summarized in Table 10 below.

Table 10: Projected Water Demands for Phase 1

Detailed Land Use	Annual Average Daily Demand (AADD)	Phase 1
		Water Demand (kl/day)
Airport	25 l/passenger/day	493
Hospital	1 kl/100m ² /day	80
Hotel Park	1 kl/100m ² /day	68
Shopping World	0.65 kl/100m ² /day	306
Office Park	0.65 kl/100m ² /day	483
Head Office	0.65 kl/100m ² /day	54
Conference Centre	0.65 kl/100m ² /day	44
Trade Zones	10 kl/ha/day	360
Security House	0.3 kl/unit	2
Total Potable AADD		1 890
Conveyance Losses		10%
Treatment Losses		10%
Total GAADD		2 268
Peak Factor		1,5
Total Peak Hour Potable Water Demand		3 402

Table 11 : Projected Non-Portable Water Demands (for agriculture)

Detailed Land Use	Annual Average Daily Demand (AADD)	Phase 1
		Water Demand (kl/day)
Agri-Lab	6 kl/ha	-
Agrizones	12 kl/ha	4 267
Total Non-Potable Water Demand		4 267

12.2 Water Supply

Based on the conceptual hydrogeological understanding of the site, the following hydro-stratigraphic zones are differentiated within the area:

- **Intergranular aquifer system:** The proposed area is situated upon an integral and weathered zone of the unconfined or semi-confined shallow weathered aquifer or hydro-stratigraphic zone. Water intersections in the intergranular and weathered aquifer are mostly above or at the interface to fresh bedrock, where less permeable layers of weathering products and capillary forces limit the vertical percolation of water and promote lateral water movement.
- **Fractured hard rock aquifer:** Groundwater flow is governed by secondary porosities such as faults, fractures, joints, bedding planes and other geological contacts in rocks such as sandstone, shale and mudstones. The flow through secondary structures is due to the less permeable matrix of the rock itself.

A basic hydrogeological study has been conducted by Delta-H Water System Modelling (Pty) Ltd. In addition, borehole yield tests and groundwater quality reports are being compiled. Results hereof will be communicated during the EIA phase WULA Summary Report.

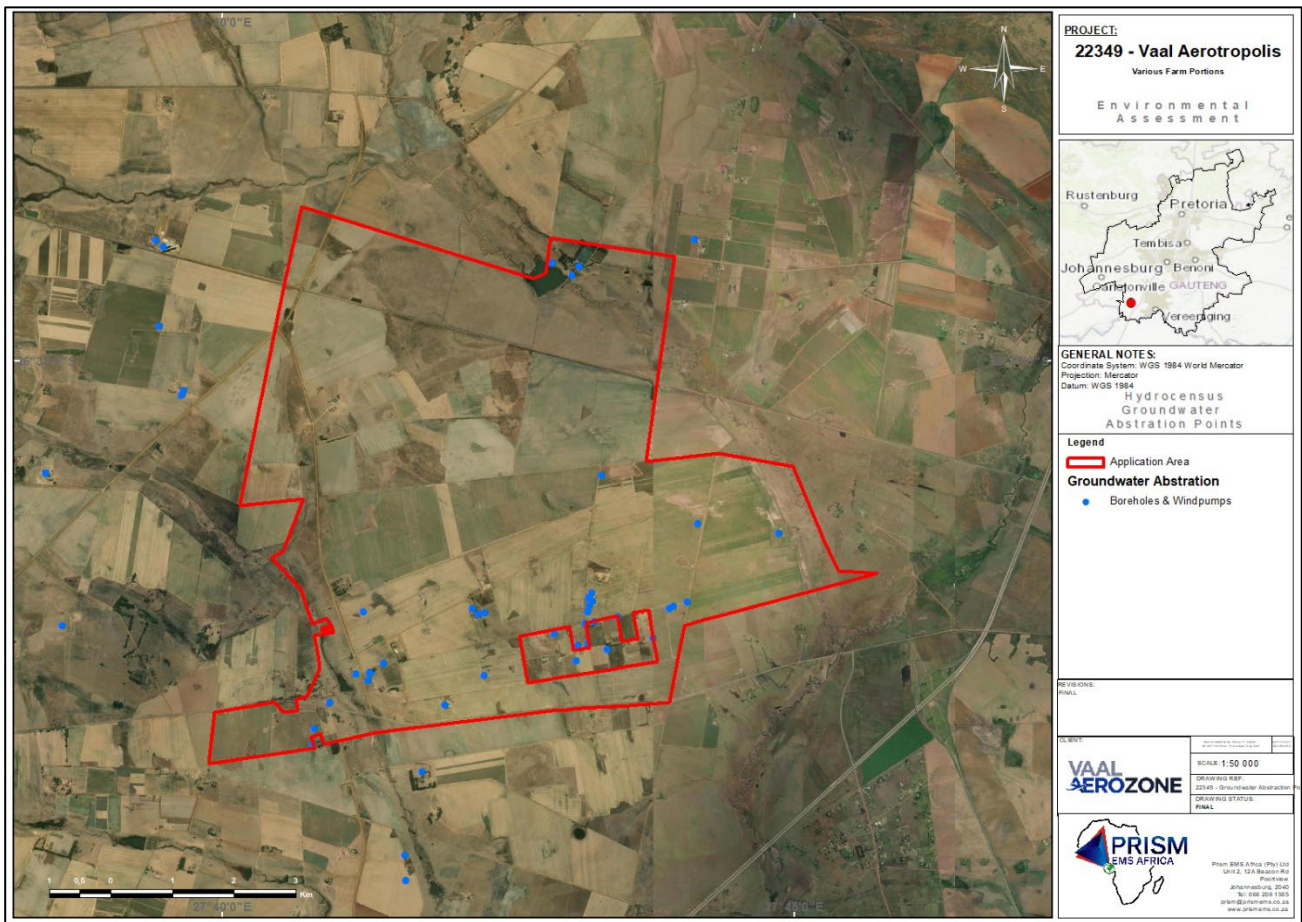


Figure 13: Location of Groundwater Abstraction Points in the Study Area

13 Public Participation

The purpose of the Public Participation Process (PPP) is to provide information regarding the proposed project to any potentially Interested and/or Affected Parties (I&APs) for use and consideration throughout the environmental assessment process and WULA assessment. Hence, a 60-day public participation process will be done in terms of Section 41(4) of the National Water Act, 1998 (Act No 36 of 1998) read together with the Water Use License Application and Appeals Regulations, 2017 (GN R267 in GG 40713 of 24 March 2017) as well as the Environmental Impact Assessment Regulations, 2014, promulgated under the National Environmental Management Act, 1998 (Act No 107 of 1998).

The Public Participation Process will be inclusive of:

- A potential I&AP database has been compiled and includes adjacent / affected landowners, Ward Councillors, Authorities and Potential I&APs. This database will be continuously updated as the PPP proceeds and as registration requests and associated comments are addressed.
- Communication with authorities were initiated to i) commence / discuss application procedures, ii) acquire reference numbers, and iii) confirm whether submissions should be in hard and/or electronic format.

- Newspaper adverts were placed in the Vaalster, Westrand Advertiser and Sedibeng Star Newspapers on 29 September and 01 October 2026. The adverts includes the dates associated with the registration period as well as review periods for the Scoping Report and WULA Summary Report.
- Several site notices, showing a map of the proposed development and associated components, were placed on and around the site on 28 September 2026. The site notices also include the dates associated with the registration period as well as review periods for the Scoping Report and WULA Summary Report.
- A Background Information Document (BID) was compiled and includes more in-depth information on the proposed development. The BID clearly explains details associated with the 60-day public participation period as well as the review period for the Scoping Report and WULA Summary Report which will be available from 01 October to 02 December 2026. The BIDs were emailed, hand delivered or messaged to adjacent landowners/tenants, affected landowners/tenants, potential I&APs and commenting authorities starting on 30 September 2026.
- A proposed Open Day/s has been suggested and will be made known in due course.
- A Comments and Responses register has been opened and all requests to register and/or comments received will be included and continuously updated.

The comments received during the PPP period (01 October 2026 – 2 December 2026) will be summarised in the Comments and Responses Report. All comments received from I&AP's will be addressed in detail and submitted as part of the WULA Phase 3 submission to DWS, to enable formal assessment of the submissions. All aspects will be carried out in line with the Protection of Personal Information Act, 2013 (Act No. 4 of 2013). Personal information collected by Prism EMS Africa will not be made available to the public or Authorities unless written consent is given by registered I&APs.

14 Other Authorisations Applicable to the Activity

An application for an Environmental Authorisation (EA) has been registered with the Gauteng Department Environment (GDEnv) and is currently in the initial stage of consultation. The Scoping Report will be made available to commenting authorities and potential and registered I&APs to enable their review and comment on the project and proposed development.

The reference number for the EA application with GDEnv is Ref No: GAUT 002/25-26/E0240.

All other applicable authorizations / licenses / applications will be obtained as the project proceeds.

15 Section 27 Motivation

a) Existing Lawful Water Uses

As the proposed development is in the planning, pre-construction phase, the applicant does not yet hold a water use license or an EA. As part of these applications, several specialist studies are being conducted which include, but are not limited to:

- Aquatic Biodiversity Assessment
- Wetland Assessment
- Geohydrology Assessment
- Hydropedology Assessment
- Climate Change Assessment

The aim of these specialist studies is to identify, and provide mitigation measures for any impacts, both present and future, that may critically impact upon the surrounding environment and land users, especially downstream water users.

b) Need to redress the results of past racial and gender discrimination

The National Airport Development Plan is a plan for South Africa to eliminate poverty, unemployment and reduce inequality by 2030. This plan has highlighted structural weaknesses to overcome, including poor transport links and infrastructure which raise the cost of doing business and hobble both trade and investment. Airports have been shown to contribute to socio-economic development in a range of ways, including, improving accessibility for people to geographical areas, whether for personal, essential services, trade, business or tourism reasons. Ultimately, an airport contributes towards the image of the country.

Summary of Construction Phase Impacts

An estimated 347 additional formal small, medium and micro-enterprise opportunities could be created. Black-owned SMMEs would potentially represent 72.91% of new formal SMME opportunities, given the prevailing legislative environment. Formal employment during the construction phase represents 92 746 jobs (total direct, indirect and induced). Approximately 22.92% of formal employment opportunities are expected to be filled by skilled labourers compared to 58.53% semi-skilled labourers and 18.55% low-skilled labourers. Additional compensation paid to employees during the construction phase is estimated to be approximately R13.33 billion.

It is estimated that approximately R9.98 billion in additional taxes could be generated during the construction phase. The largest contributor to new taxes is as a result of personal income tax, contributing 33.45% to all taxes collected economywide.

Summary of Operational Phase Impacts

An estimated 91 additional formal small, medium and micro-enterprise opportunities could be created. Black-owned SMMEs would potentially represent 70.33% of new formal SMME opportunities, given the prevailing legislative environment. Formal employment opportunities created throughout the lifetime of the project represents 16 175 jobs (total direct, indirect and induced). Approximately 28.18% of formal employment opportunities are expected to be filled by skilled labourers compared to 49.03% semi-skilled labourers and 22.79% low-skilled labourers. Additional annual compensation paid to employees during the operational phase is estimated to be approximately R3.1 billion.

It is estimated that approximately R2.29 billion in additional taxes could be generated during the operational phase. The largest contributor to new taxes is as a result of personal income tax, contributing 37.34% to all taxes collected economywide.

c) Efficient and beneficial use of water in the public interest

Overall, the construction and operational phases of the project would have a measurable positive effect on the Gauteng provincial economy, generating sizeable GDP over the short- to long-term, high additional business sales and new business formation and a considerable number of new employment opportunities across all skill levels. Additional taxes can contribute to national and local treasuries and households across the province can increase their livelihoods. The proposed development will have a multiplier effect not only within the Gauteng area, but also the wider South African economy.

None of the above-mentioned, however, will be possible if a sustainable water supply and healthy surrounding ecosystem cannot be guaranteed. Hence, it is in the applicant's best interest to ensure the implementation of every recommended mitigation measure to ensure the protection, preservation, and sustainable usage of the environment, especially regarding the quality and quantity of surrounding water resources.

d) Socio-economic impact –

i) Of water use or uses if authorised:

The proposed development holds significant opportunity for the local, regional and national perspective; especially in term of job creation (Table 12).

The total capital expenditure (CAPEX) of the project is projected to generate R82.18 billion in business sales and R36.07 billion in Gross Domestic Product (GDP) and approximately 118 498 once-off jobs (formal and informal) throughout the Gauteng provincial economy.

The total annualised operational expenditure (OPEX) of the project could annually add approximately R19.68 billion in additional business sales, R9.28 billion in additional GDP (contributes +0.44% to the provincial economy) and approximately 19 838 sustained jobs (formal and informal) throughout the Gauteng provincial economy.

The project is predicted to have an Economic Rate of Return (ERR) of 11.1% which is higher than the Economic Cost of Capital Rate (ECC) of 10.0% as prescribed by National Treasury. This indicates that the implementation of Phase 1 of the Vaal Aerotropolis over the medium- to long-term would provide an overall benefit to society and the economy because the project has the potential to generate economic returns. Therefore, the implementation of the project offers the potential to generate social and economic value beyond the expected rates of return over the medium- to long-term implementation and operational periods

Table 12: Direct and Indirect Job Opportunities

Job Opportunities		Number of Job Opportunities	Type of Employment	Affected Sectors of the Economy
Construction Phase	Direct	73 546	Temporary	Industry and its suppliers
	Indirect	6 348	Temporary	All other rounds of suppliers to the economy
	Induced	38 604	Temporary	Increased consumption expenditure
Operational Phase	Direct	7 934	Permanent & Temporary	Industry and its suppliers
	Indirect	1 320	Permanent & Temporary	All other rounds of suppliers to the economy
	Induced	10 584	Permanent & Temporary	Increased consumption expenditure
Total		± 138 336		

ii) Of the failure to authorise water use or uses:

If the proposed water use is not authorised, then the status quo / current use will remain in effect. Under the current use, commercial agricultural activities will remain in effect which may hold some environmental value e.g., ecology preservation and visual aesthetic.

However, if the status quo is to remain in place, then the CAPEX and OPEX mentioned above will not be generated, new employment opportunities will not be created, and all funds invested into the project to date will be lost. In addition, economic predictions indicate that the status quo will have an ERR of 0.0% which is much less than the 10% ECC prescribed by National Treasury. The ECC rate represents the minimum rate of return that National Treasury requires for a project or capital

investment to be considered economically viable and beneficial to communities, as it will make use of scarce community resources.

Ultimately, the development of the Vaal Aerotropolis would have a measurable positive effect on the Gauteng provincial economy and South Africa as a whole, however, failure to authorise the water use license will result in significant potential economic losses.

e) Any catchment management strategy applicable to the relevant water resource

The DWS has a mandate to manage water resources in a sustainable manner. The department realises that in its pursuit to stimulate development and social-economic growth, that there will be a negative water quality impact on the environment. The main objective is therefore to ensure a sound and reasonable balance between development impacts and the protection of the resource.

Vaal Aerotropolis is located in Quaternary Catchment C22J which falls within the Vaal Orange Water Management Area. This area is managed by the Vaal-Orange Catchment Management Agency (VOCMA) which was established in terms of Section 78 of the NWA (No 36 of 1998).

f) Likely effect of the water use to be authorized on the water resource and on other water users.

The Vaal Aerotropolis, due to its localised area of occupancy within a large area surrounding the key development area and subsidiary land uses associated with the development, will in all likelihood have a lesser impact on surrounding land and water users. Several specialist studies (Section 5.2) are being undertaken to determine the type and full extent of these impacts. Results and recommendations of these studies will be shared during the EIA phase WULA Summary Report and technical documents.

Ultimately, only activities as authorized by the Environmental Authorisation and/or Water Use License will be permitted to take place and every possible recommendation / mitigation measure will be implemented to ensure the safeguarding of the surrounding environment, especially concerning water resources.

g) Class and the resource quality objectives of the water resource

Chapter 3 of the NWA, 1998 (No. 36 of 1998) provides for the protection of water resources through the implementation of Resource Directed Measures (RDM) which includes the Classification of water resources, setting the Reserve, preventing pollution, and determination of Resource Quality Objectives (RQOs). Classification of water resources aims to ensure that a balance is reached between the need to protect and sustain water resources on one hand and the need to develop and use them on the other. Below is a summary of some of the water-related specialist studies conducted;

final results and recommended mitigation measures will be communicated during the EIA phase WULA Summary Report.

Aquatic Assessment

An initial site visit as part of an aquatic biomonitoring assessment has been conducted. The aim is to utilize this information to determine the health of the aquatic ecosystems traversing the site, based on a combination of the stressor indicators, habitat indicators, and response indicators (i.e., diatoms, SASS5, fish).

Wetland Assessment

As with the aquatic assessment, an initial wetland assessment site visit has been conducted. Preliminary results indicate that the proposed activities will in all likelihood impact on the wetland but can be mitigated to satisfactory standards if all mitigatory actions are implemented with due care. It is key to preserve water quantity, water quality and overall supply to the downstream aquatic resources.

Geohydrology Assessment

The area is characterised by intergranular and fractures aquifer system with a typical potential yield of 0.5 – 2.0 litres per second, consisting of sedimentary deposits, sandstone, shale and mudstones. The aquifer is seen as an unconfined or semi-confined shallow weathered aquifer or hydro-stratigraphic zone. Due to direct rainfall recharge and dynamic groundwater flow through the unconfined aquifer in weathered rock, the water quality is generally good, but in the absence of an overlying confining layer also vulnerable to pollution. Reasonable groundwater protection measures are recommended to ensure that no cumulative pollution affects the aquifer, even in the long term. Borehole sustainability yields will be communicated in due course.

h) Investments already made and to be made by the water user in respect of the water use in question

Significant investments have already been made by the applicant who has invested vast capital into the feasibility of the proposed development. Major activities, during each phase of the project life-cycle, are listed below to provide an indication of investments to date and anticipated future investments:

- Feasibility Studies:
 - Technical, economic and environmental screening of proposal and alternatives.
 - Development of Preliminary Design Reports.
 - Environmental, Social and Geotechnical Assessments.
 - Local Spatial Development Framework (LSDF) approved.
 - Special Economic Zone (SEZ) – Vaal SEZ approved.
 - Establishment of township application in process.

- Air traffic forecasting.
- Discussions with affected / adjacent landowners and IAP's (where applicable).
- Environmental Authorization and WULA processes.
- Pre-construction Phase:
 - Detailed layouts and services designs.
 - Procurement process for Contractors.
 - Land acquisition (where necessary).
 - Procurement of other necessary materials.
 - Appoint Environmental Control Officer.
 - Liaison with specialists (where applicable).
- Construction for Phase 1:
 - Appointments and site camp set up:
 - Set up site camp with temporary offices and administrative facilities.
 - Set up ablutions.
 - Set up access control, security; signage and lighting.
 - General materials storage and laydown areas.
 - Construction employment.
 - Change-houses, chemical toilets and showering facilities (linked to conservancy tanks – removal of contents by exhauster vehicle and disposal at permitted facility).
 - Temporary waste storage areas; these shall be established and managed in accordance with EMP requirements to be developed in the EIA phase.
 - Sourcing of construction materials and equipment:
 - All bulk materials (aggregate, cement, steel etc.) will be sourced from existing lawful commercial sources; or should it be necessary separate applications for mining permits to allow for borrow pits will be undertaken prior to use.
 - Excavation and earthworks:
 - Removal of existing surfacing material where necessary (topsoil, housing structures, agricultural fields, etc.) which could involve excavation below ground level.
 - Levelling and compaction using heavy machinery / earthmoving equipment.
 - Potential for excavations and trenching in order to lay of below ground level equipment (cables, pipes, sumps, drainage etc.).
 - Potential for excavation dewatering in the event of water-table interception.
 - Use of general mechanical equipment within construction areas (generators, cutting and welding equipment, compressors etc.).
 - Operating according to specifications
 - Adhere to all relevant legislations (OHSA, NEMA, BCEA, etc.).
 - Adhere to engineering specifications.

- Implement all specialist recommendations and mitigation measures.
- Operation Phase:
 - Maintenance of infrastructure.
- Expansion of infrastructure as Phases 2 and 3 are implemented.
 - Obtaining of permits / licenses / authorisations as Phases 2 and 3 implemented.
- Decommissioning Phase:
 - Decommissioning of the development and associated services is not envisioned. However, should decommissioning be required the activity will need to comply with the appropriate environmental legislation and best practices at that time.

i) Strategic importance of the water use to be authorised

To better understand the need and desirability, as well as the strategic importance of the water use/s, the proposed development needs to be properly understood. The proposed Vaal Aerotropolis is a mixed-use development based in the south-western regions of Gauteng that will be comprised of an Airport Precinct, Airport City, Agri-Zone, Trade Zone, and Ancillary Infrastructures.

In terms of need, the Vaal Aerotropolis is clear and compelling. It addresses critical economic, spatial, and infrastructural challenges facing the Emfuleni region and aligns with national and provincial development priorities. It is deemed essential for the future prosperity of southern Gauteng and the broader national economy.

In terms of desirability, critical factors (i.e., the National, Provincial and Local legislative frameworks) influence existing and new developments. To that end, this project is in line with, but not limited to, the following:

- Spatial Planning and Land Use Management Act (No 16 of 2013) (SPLUMA)– the proposed development of an international airport in Emfuleni complies with the relevant principles of the act as it provides a uniform framework for spatial planning and land use management in South Africa as well as promoting consistency and uniformity in procedures and decision-making.
- Sedibeng Spatial Development Framework (SDF) – this SDF supports 1) the development of SEZs, 2) the alignments of municipalities' SDFs and 3) appropriate major current and new development initiatives; all of which are applicable to Vaal Aerotropolis. The proposed Vaal Aerotropolis will address issues related to linkages, transport modes, and storage facilities as it provides for linkages to not only local but international markets with easy transport modes via railway and road transport to and from the Aerotropolis.
- District Development Model One Plan – the Vaal Aerotropolis has been described as a catalytic project in that it intends to generate development momentum and attract further investment. Hence, it supports the vision and strategies of the One Plan.

- Vaal-River Regional Spatial Development Framework – this SDF has clearly defined spatial planning and economic development objectives which are in support of the establishment of an aerotropolis in the Vaal River region. Vaal Aerotropolis is seen as an important flagship project within the Vaal River region.
- Emfuleni Spatial Development Framework – the proposed site falls within the urban development zone as well as the area demarcated for the development of an airport. The mixed land use development will invest in and strengthen existing communities and achieve more balanced regional development and facilitate the provision of a variety of transportation choices. In addition, Emfuleni approved the LSDF for the Vaal Aerotropolis in January 2026.
- Gauteng Spatial Development Framework and Provincial Growth and Development Strategy – the provincial SDF highlighted that Gauteng is a “freight and logistics hub”. Thereby the Vaal Aerotropolis aligns with the province’s vision.
- Growing Gauteng Together (2030) – the Vaal Aerotropolis is seen as a main pillar of future economic growth for the southern Gauteng corridor due to its dedicated international cargo, agricultural, Agri-processing and logistical aspects.
- The National Department of Transport, through its approved revised Strategic Plan (2020-2025), promotes the growth of the economy through economic initiatives such as the aerotropolis concept, airport cities, and SEZ linked to international airports.

The proposed Vaal Aerotropolis will therefore contribute to the local and regional economy as well as provide an additional international entry point for the Gauteng Province and South Africa as a whole. This, however, will not be possible if the proposed water uses are not authorized and utilized sustainably.

j) The quality of water in the water resource which may be required for the Reserve and for meeting international obligations

Phase 1 of the Vaal Aerotropolis will consist of (among others) a i) 4.2 km runway designed for International Civil Aviation Organization (ICAO) Code F aircraft, ii) passenger terminal with a capacity of 7.2 million passengers per annum, and iii) cargo terminal capable of handling 150 000 tons of freight annually. Hence, not only are international obligations associated with this project, but a significant user group is dependent on a sustainable water supply.

As such, several specialist studies are being conducted to determine not only potential impacts on water resources but also the overall environment. Results on these studies will be communicated during the EIA phase WULA Summary Report.

k) Probable duration of any undertaking for which a water use is to be authorised

The planned Vaal Aerotropolis is a long-term, multi-phased development which will be initiated in three (3) phases over a period of 60 years, to include a Cargo Terminal, Airport City, Solar Farm, Agri Zone, and Trade Zone. Hence, maximum duration of the WULA is applied for as the duration is long term, according to the lifespan of the operation.



16 Declaration by the applicant with signature confirming that the information submitted is correct

EAP Name	Mr D. Botha
Declaration of Independence	I declare, as an Environmental Assessment Practitioner, appointed in terms of the National Water Act, 1998 (No. 36 of 1998) that: • I act as the independent specialist in this application. • I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant. • I declare that there are no circumstances that may compromise my objectivity in performing such work. • I have experience in conducting the specialist reports relevant to this application, including knowledge of applicable Acts, Regulations and any guidelines that have relevance to the proposed activity. • I will comply with the Act, Regulations, and all other applicable legislations. • I have no, and will not engage in, conflicting interests in the undertaking of the activity. • I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing – any decision to be taken with respect to the application by the competent authority; and – the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority. • All the particulars furnished by me in this form are true and correct; and • I realise that a false declaration is an offence and punishable by law.
Signature	
Date	25 September 2026

[END OF WATER USE LICENCE APPLICATION SUMMARY]