



Prepared for:
GBN Joint Venture



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MOKOLO CROCODILE WATER AUGMENTATION PROJECT PHASE 2 (MCWAP-2A) RIVER MANAGEMENT SYSTEM (RMS)

CIVIL AVIATION COMPLIANCE STATEMENT



**FINAL REPORT
REVISION 02**

JUNE 2024



Prepared by:
Delta Built Environment Consultants (Pty) Ltd



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DATE:	June 2024	
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RECORD OF REVISIONS

REV. NO.	STATUS	DESCRIPTION OF REVISION	REV. DATE
00	Draft	Issued for comments	25/10/2023
01	Final	Issued for comments and approval	17/11/2023
02	Final	The report includes comments from the South African Civil Aviation Authority (SACAA).	06/06/2024

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GLOSSARY OF TERMS AND ABBREVIATIONS

ATNS	Air Traffic Navigation Services
Delta BEC	Delta Built Environment Consultants
DFFE	Department of Forestry, Fisheries and the Environment
EIA	Environmental Impact Assessment
FATI	Thabazimbi Aerodrome
ICAO	International Civil Aviation Organisation
MCWAP	Mokolo Crocodile Water Augmentation Project
OLS	Obstacle Limitation Surface
RMS	River Management System
SACAA	South African Civil Aviation Authority
TCTA	Trans-Caledon Tunnel Authority

1 CIVIL AVIATION SITE SENSITIVITY VERIFICATION

1.1 INTRODUCTION

GIBB (Pty) Ltd, Bigen Africa Services (Pty) Ltd, and Nyeleti (Pty) Ltd Joint Venture (GBN-JV) was appointed by the Trans-Caledon Tunnel Authority (the TCTA) on behalf of the Department of Water and Sanitation (DWS) for the Consultancy Services for Mokolo Crocodile Water Augmentation Project Phase 2A (MCWAP-2A) River Management System.

Delta Built Environment Consultants (Delta BEC) was appointed by GBN-JV to do the Civil Aviation Compliance Statement that serves as an input to the verification and Basic Impact Assessment for the Mokolo Crocodile Water Augmentation Project Phase 2A (MCWAP-2A) River Management System.

1.2 NEED FOR THE SITE SENSITIVITY VERIFICATION

Government Notice No. 320, dated 20 March 2020, includes the requirement for an Initial Site Sensitivity Verification Report to be produced for a development footprint. As per Section 2.3, the outcome of the Initial Site Verification must be recorded in the form of a report that -

- a) Confirms or disputes the current use of the land and environmental sensitivity as identified by the national web-based environmental screening tool.
- b) Contains motivation and evidence of either the verified or different use of the land and environmental sensitivity.
- c) Is submitted together with the relevant reports prepared in accordance with the requirements of the Environmental Impact Assessment Regulations.

This report has been produced specifically to consider the Civil Aviation theme and addresses the content requirements of (a) and (b) above.

This specific protocol states that proposed developments that occur on sites identified as Very High, High or Medium sensitivity, as depicted on the National Web-Based Environmental Screening Tool (Screening Tool), must include a Civil Aviation Compliance Statement. It further states that there are no requirements if the proposed developments occur on sites identified as Low sensitivity on the Screening Tool.

The protocol further states that where information gathered from the site sensitivity verification differs from the designation of very high, high or medium sensitivity on the screening tool and is found to be of low sensitivity, no further assessment requirements are identified. However, a Site Sensitivity Verification is required for the Civil Aviation Protocol.

1.3 METHODOLOGY

The following methodology was used to develop the site sensitivity verification report:

- The proposed project site was plotted on the screening tool to identify the sensitivity allocated.
- A desktop analysis was undertaken to confirm civil aviation infrastructure in the surrounding area by means of satellite imagery and available sources of information.
- Additional research was undertaken to substantiate the site sensitivity verification process. The research included the calculation of the distance between the proposed development and nearby aerodromes, the assessment of the ICAO classifications of these adjacent aerodromes, and the collection of data regarding their runway lengths, widths, and elevations.
- Professional judgement based on experience gained from similar projects.
- A Civil Aviation Compliance Statement was compiled – (this report).

The following information sources were used in the assessment of the development in relation to civil aviation infrastructure:

- 1) Department of Forestry, Fisheries and the Environment (DFFE) National Web-Based Environmental Screening Tool
- 2) RSA Airspaces in 3D KMZ file – Air Traffic and Navigation Services (ATNS)
- 3) Design Drawings of three (3) proposed sites.

1.4 PROPOSED PROJECT LOCATION

The study area is the reach of the Crocodile River (West) downstream of the Hartbeespoort Dam up to the Vlieëpoort Abstraction Weir. Furthermore, the RMS will also be applicable to the reach of the Moretele River downstream of Klipvoor Dam up to its confluence with the Crocodile River (West), as well as to the reach of the Elands River downstream of Vaalkop Dam up to its confluence with the Crocodile River (West).

The following are the approximate coordinates indicating the site's location:

- Roodekopjes Dam/Beestekraal Weir: S 25.403640°, E 27.574750°
- Atlanta Weir: S 25.206310°, E 27.557940°
- Paul Hugo Weir: S 24.69508°, E 27.40900°

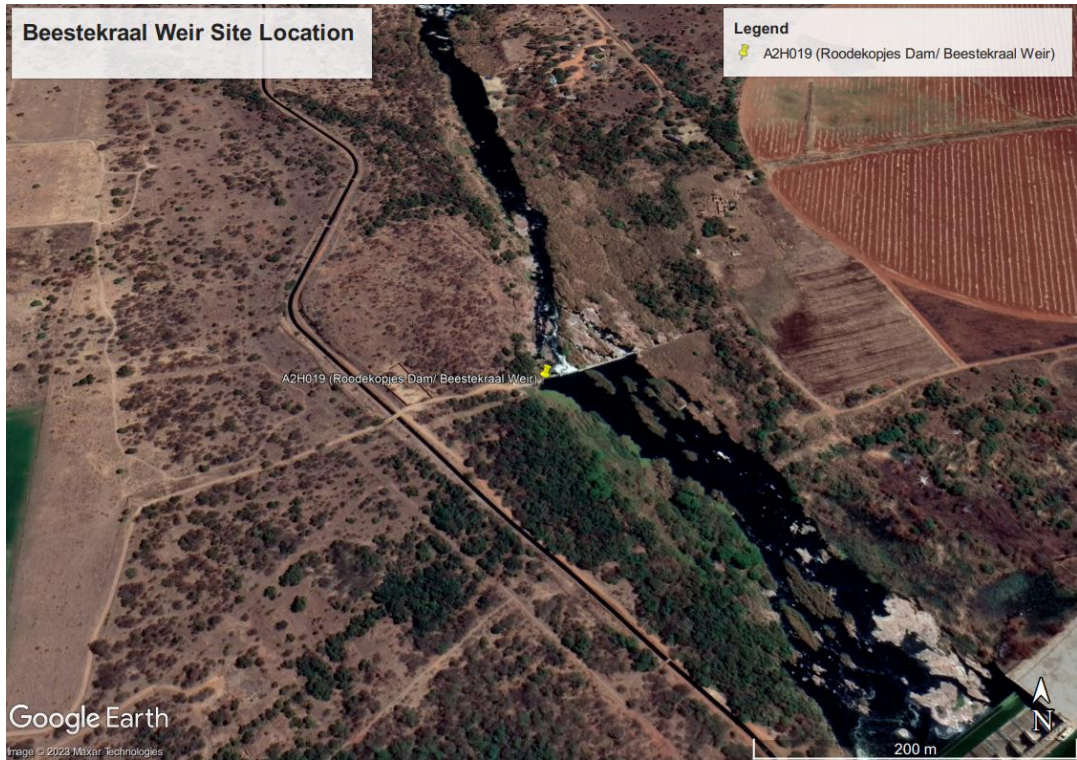


Figure 1-1: Beestekraal Weir Site Location

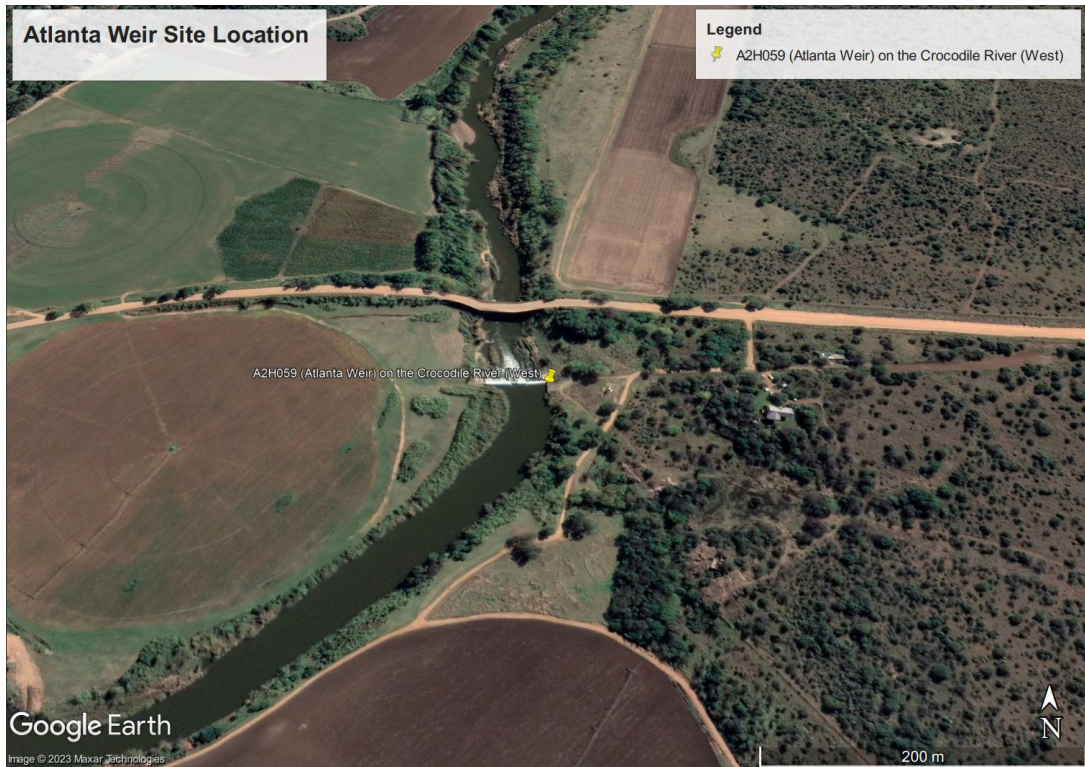


Figure 1-2: Atlanta Weir Site Location



Figure 1-3: Paul Hugo Weir Site Location

1.5 FINDINGS OF THE SCREENING TOOL

The project study area was divided into three separate sites because these sites are not co-located, and the screening process was conducted for each site. A Screening Tool Report has been generated for each site, employing the following classification: "Any activities within or in proximity to a watercourse." This classification was selected as the most suitable option due to the developments' proximity to a watercourse.

The maps of the relative civil aviation theme sensitivity are represented by the following figures:

- Figure 1-4 shows the screening tool map indicating the proposed Roodekopjes Dam/Beestekraal Weir in terms of the Civil Aviation Sensitivity.
- Figure 1-5 shows the screening tool map indicating the proposed Atlanta Weir in terms of the Civil Aviation Sensitivity.
- Figure 1-6 shows the screening tool map indicating the proposed Paul Hugo Weir in terms of the Civil Aviation Sensitivity.

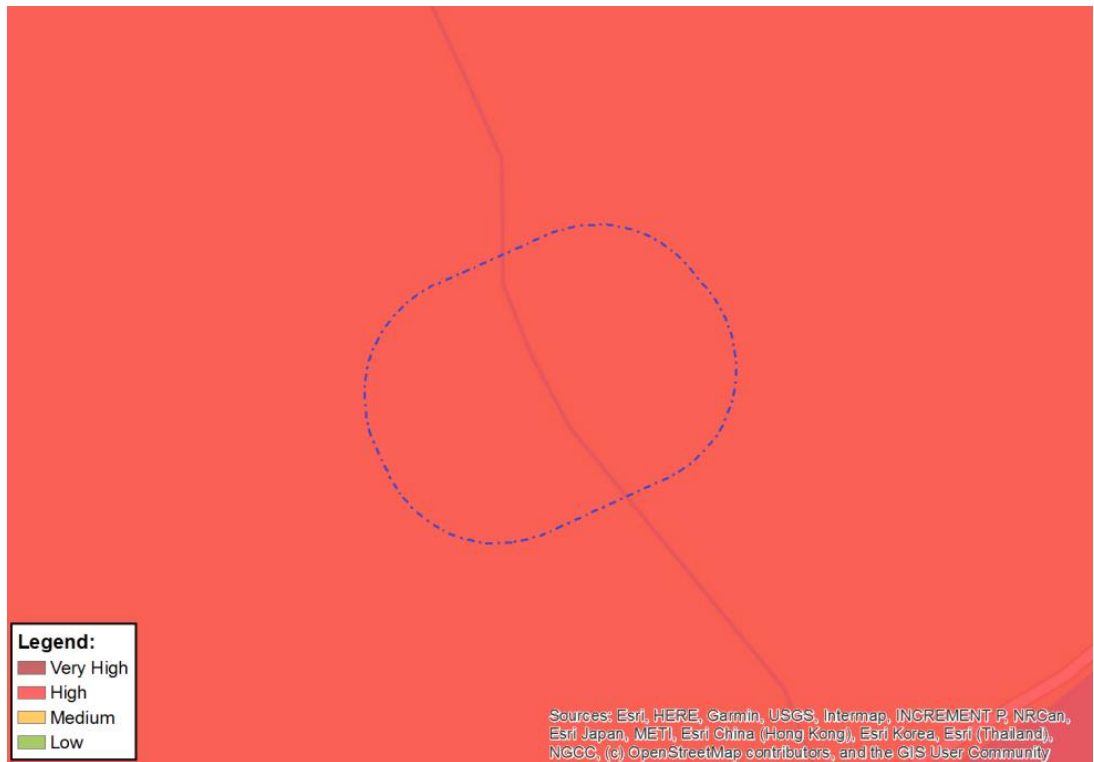


Figure 1-4: Screening Tool Map indicating the proposed A2H019 Roodekopjes Dam/Beestekraal Weir in terms of Civil Aviation Sensitivity

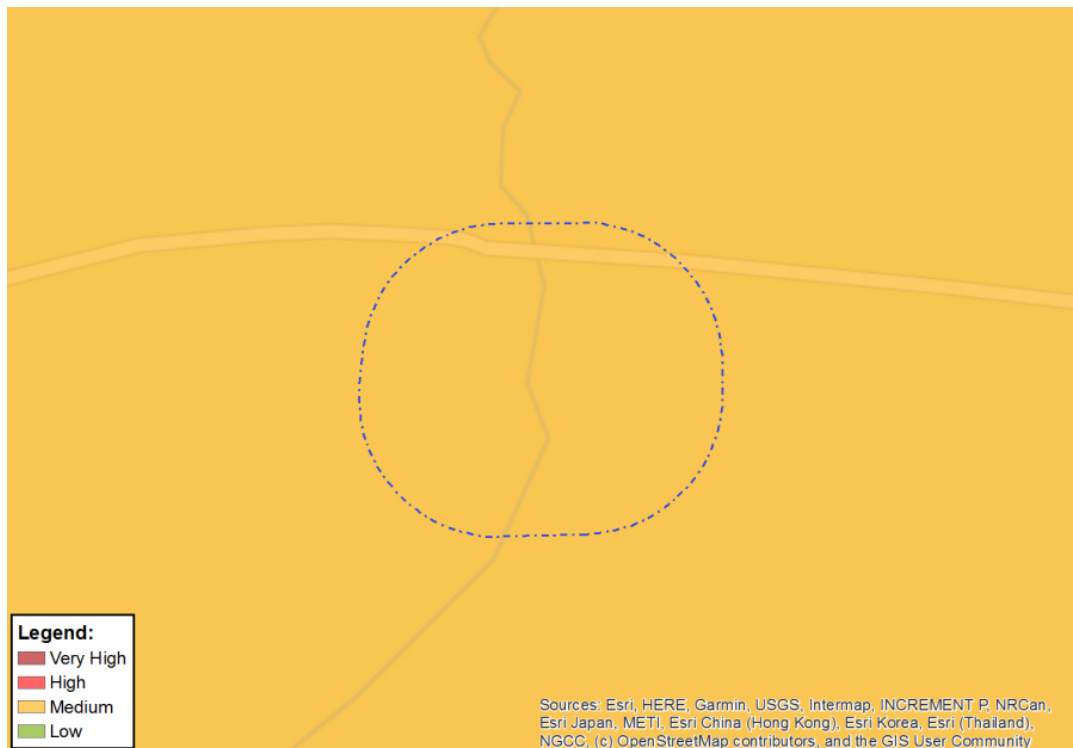


Figure 1-5: Screening Tool Map indicating the proposed A2H059 Atlanta Weir in terms of Civil Aviation Sensitivity



Figure 1-6: Screening Tool Map indicating the proposed A2H116/A2H132 Paul Hugo Weir in terms of Civil Aviation Sensitivity

1.6 ASSESSMENT

Site Visit

A site visit was not deemed necessary since all the information required for the study was readily available, and a desktop analysis of the site commenced.

Desktop Analysis

The DFFE National Web-Based Screening Tool identified the following aerodromes as triggers for a medium to high civil aviation theme sensitivity to the proposed developments due to the following:

- A2H019 (Roodekopjes Dam/Beestekraal Weir) on the Crocodile River (West): The site is situated approximately 5 km from R067 Nyumbu Aerodrome.
- A2H059 (Atlanta Weir) on the Crocodile River (West): The site is situated approximately 11 km from an unregistered and unlicensed landing strip.
- A2H116/A2H132 (Paul Hugo Weir) on the Crocodile River (West): The site is situated approximately 13 km from FATI Thabazimbi Aerodrome.

1.6.1 AERODROMES CHARACTERISTICS

1.6.1.1 R067 Nyumbu Aerodrome

The Nyumbu Aerodrome (R067) is an unlicensed aerodrome registered with the South African Civil Aviation Authority (SACAA); see Figure 1-7 below.

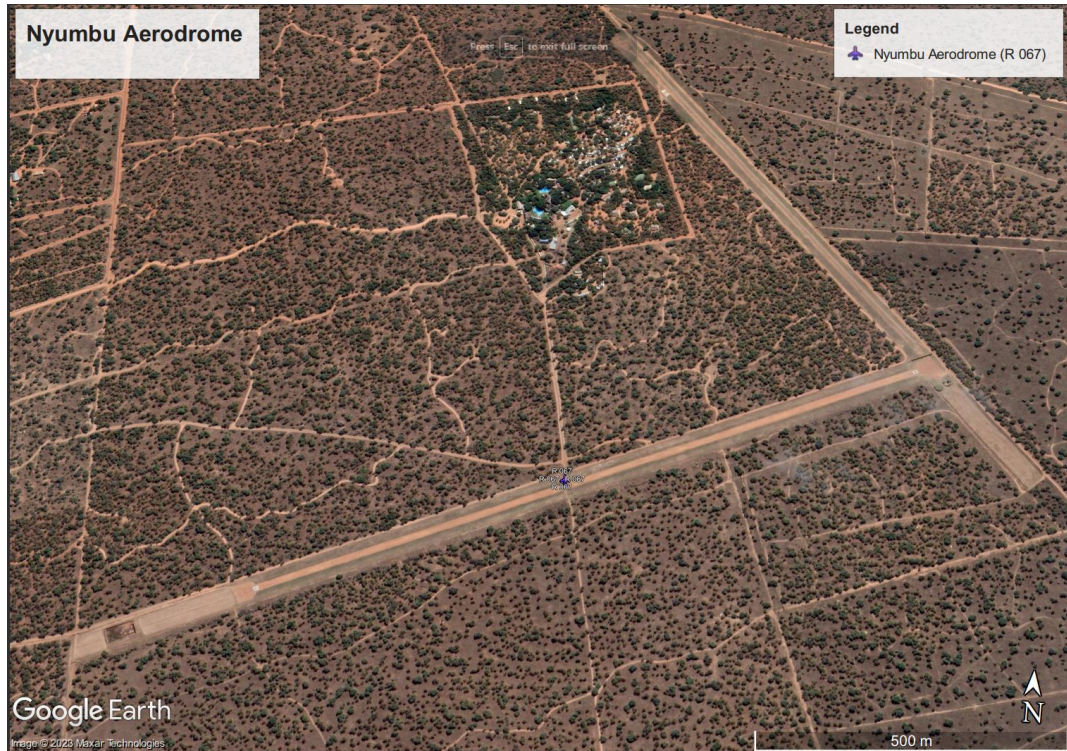


Figure 1-7: Nyumbu Aerodrome (R067)

The aerodrome has the following physical characteristics:

- Runway length: 1 200 m
- Runway width: +-14 m
- Non-Instrument Runway
- Runway Elevation: +-1 048 m (3 438 ft).

1.6.1.2 FATI Thabazimbi Aerodrome

The Thabazimbi Aerodrome (FATI) is an unlicensed aerodrome registered with the South African Civil Aviation Authority (SACAA); see Figure 1-8 below.



Figure 1-8: Thabazimbi Aerodrome (FATI)

The aerodrome has the following physical characteristics:

- Runway length: +-1 190 m
- Runway width: +-15
- Non-Instrument Runway
- Runway Elevation: +-980 m (3 215 ft).

1.6.1.3 Unidentified Landing Strip

An unregistered and unlicensed landing strip has been identified on a private farm, Tweerivier, owned by Allied Rivers Farming (Pty) Ltd, located to the north of the proposed Atlanta Weir development. This landing strip is picked up on the screening tool, but it is not registered or licenced by the SACAA. The landing strip is a gravel runway, measuring approximately 850 metres in length and 15 metres in width, with an elevation of 991 metres (3 251 ft) above sea level. Figure 1-9 displays the identified landing strip.



Figure 1-9: Unregistered/Unlicensed Landing Strip

1.6.2 RESULTS

1.6.2.1 Roodekopjes Dam/Beestekraal Weir in relation to the Nyumbu Aerodrome

The following observations of the Beestekraal Weir site are made in relation to the Nyumbu Aerodrome:

- The distance from the Nyumbu (R067) aerodrome runway to the nearest point of the weir structure is approximately 5 km.
- The height of the weir structure is approximately 3.5 m above ground level.

Figure 1-10 shows the geometric information and dimensions of the proposed A2H019 Beestekraal Weir development.

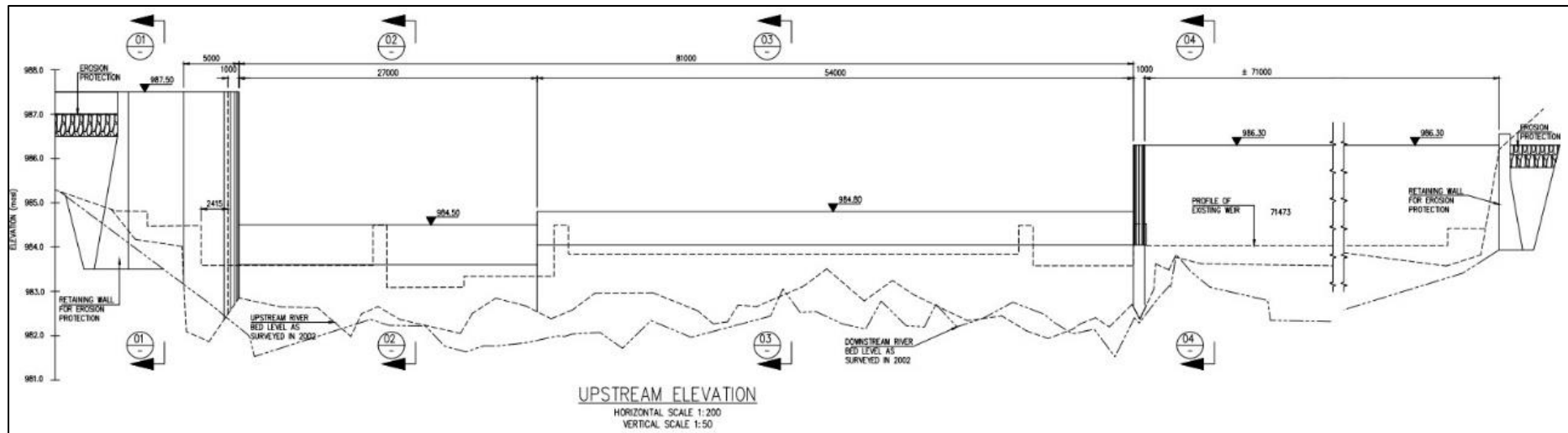


Figure 1-10: Proposed Beestekraal Weir Design

1.6.2.2 Atlanta Weir in relation to the unidentified landing strip

The following observations of the Atlanta Weir site are made in relation to an unregistered/unlicensed aerodrome:

- The distance from the aerodrome's runway to the nearest point of the weir structure is approximately 11 km.
- The height of the weir structure is approximately 1 m above ground level.

Figure 1-11 shows the geometric information and dimensions of the proposed A2H059 Atlanta Weir development.

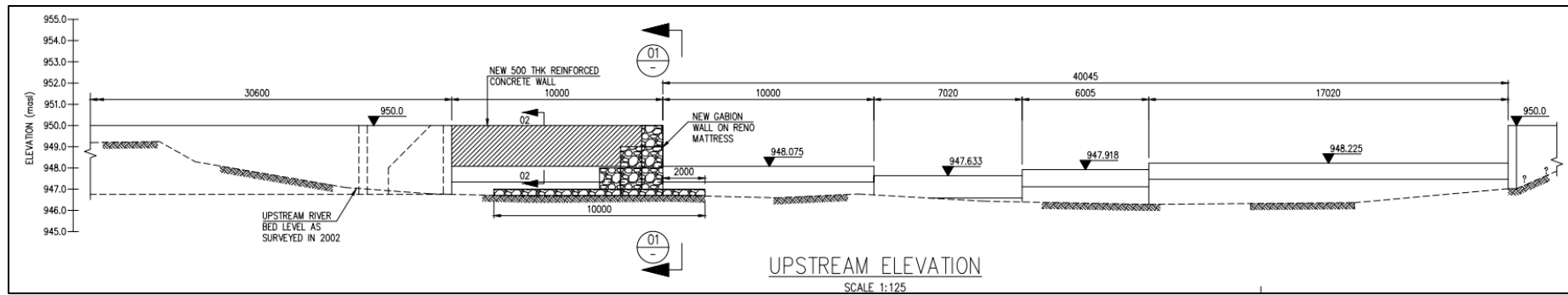


Figure 1-11: Proposed Atlanta Weir Design

1.6.2.3 Paul Hugo Weir in relation to the Thabazimbi Aerodrome

The following observations of the Paul Hugo Weir site are made in relation to the Thabazimbi Aerodrome:

- The distance from runway FATI THR 07 to the nearest point of the weir structure is approximately 13 km.
- The height of the weir structure is approximately 4 m above ground level.

Figure 1-12 shows the geometric information and dimensions of the proposed A2H116/A2H132 Paul Hugo Weir development. The study also considered an option for a gantry weir with a height of approximately 4m above ground level. No diagrams are available for this option.

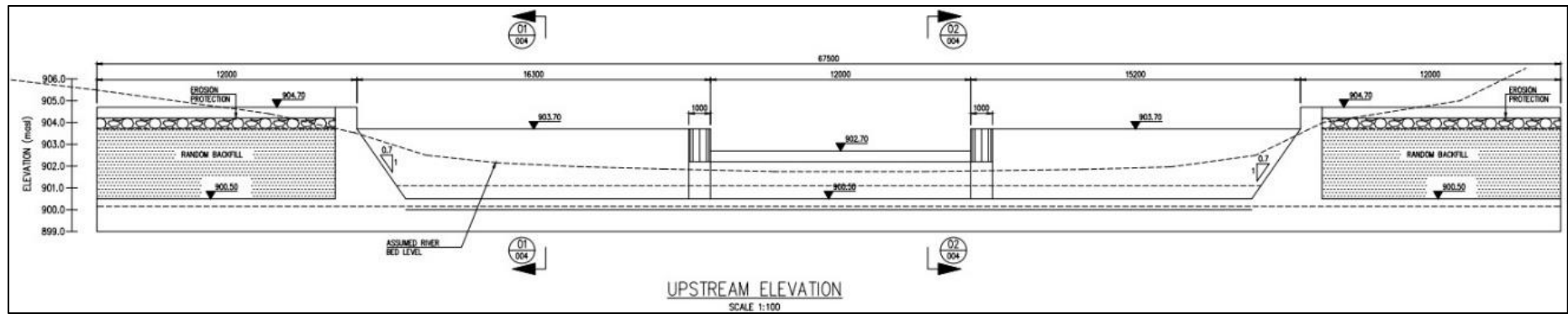


Figure 1-12: Proposed Paul Hugo Weir Design

1.6.3 MITIGATION TO CHANGE SENSITIVITY TO LOW

1.6.3.1 Roodekopjes Dam/Beestekraal Weir

The following arguments are proposed in mitigation of the sensitivity of the Beestekraal Weir development in relation to existing civil aviation infrastructure, i.e., Nyumbu Aerodrome:

- The height to the top of the top of the weir structure is approximately 987 m/3 238 ft, and this is approximately 61 metres below the Runway Elevation and does not negatively impact the civil aviation infrastructure.
- The overall height of the weir above ground level is 3.5 m and unlikely to protrude above the existing tree canopy.
- The nearest point of the proposed weir is approximately 5 km from the Nyumbu Aerodrome, which is more than 2.5 km from the edge of the aerodrome's 45 m high inner horizontal surface (radius of 2.5 km from the aerodrome), and the weir thus does not negatively impact the civil aviation infrastructure.

1.6.3.2 Atlanta Weir

The following arguments are proposed in mitigation of the sensitivity of the Atlanta Weir development in relation to the unregistered/unlicensed landing strip:

- The height to the top of the top of the weir structure is approximately 950 m/3 116 ft, and this is approximately 41 metres below the Runway Elevation and does not negatively impact the civil aviation infrastructure.
- The overall height of the weir above ground level is 1 m and unlikely to protrude above the existing tree canopy.
- The nearest point of the proposed weir is approximately 11 km from the unregistered/unlicensed aerodrome, which is more than 2.5 km from the edge of the aerodrome's 45 m high inner horizontal surface (radius of 2.5 km from the aerodrome), and the weir thus does not negatively impact the civil aviation infrastructure.

1.6.3.3 Paul Hugo Weir

The following arguments are proposed in mitigation of the sensitivity of the Paul Hugo Weir development in relation to the Thabazimbi Airport:

- The height to the top of the weir structure is approximately 904 m/2 965 ft, and this is approximately 75 m below the Runway Elevation and does not negatively impact the civil aviation infrastructure.
- The overall height of the weir above ground level is 4 m and unlikely to protrude above the existing tree canopy.
- The nearest point of the proposed weir is approximately 13 km from the Thabazimbi Aerodrome, which is more than 2.5 km from the edge of the

aerodrome's 45 m high inner horizontal surface (radius of 2.5 km from the aerodrome), and the weir thus does not negatively impact the civil aviation infrastructure.

1.7 SOUTH AFRICAN CIVIL AVIATION AUTHORITY

On June 5, 2024, comments were received from the South African Civil Aviation Authority (SACAA), which do not oppose the proposed weir development. In accordance with SACAA's recommendations, the client should inform Nyumbu and Thabazimbi airports about the planned development

Refer to **Appendix B: SACAA Comments** for letters received from the South African Civil Aviation Authority regarding the proposed developments.

1.8 CONCLUSION

The DFFE Screening Tool was employed to assess the sensitivity of the sites concerning the civil aviation theme. The Beestekraal Weir exhibited a high sensitivity, whereas the Atlanta and Paul Hugo sites showed a medium sensitivity.

The assessment found the proposed construction of weirs will have no impact on the civil aviation infrastructure. The proposed structures are situated a significant distance away from the aerodromes and have a height ranging from 1 to 4 m above ground level, which is below the elevation of the runways and their associated obstacle-free zones.

The assessment also considered the development of a gantry weir structure at the Paul Hugo site, which were found to have not impact on civil aviation infrastructure.

APPENDIX A: DETAILS OF THE SPECIALIST



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF THE SPECIALIST, DECLARATION OF INTEREST AND UNDERTAKING UNDER OATH

	(For official use only)
File Reference Number:	
NEAS Reference Number:	DEA/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

PROJECT TITLE

Mokolo CROCODILE WATER Augmentation PROJECT PHASE 2A RMS

Kindly note the following:

1. This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
2. This form is current as of 01 September 2018. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at <https://www.environment.gov.za/documents/forms>.
3. A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
4. All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
5. All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address:
 Department of Environmental Affairs
 Attention: Chief Director: Integrated Environmental Authorisations
 Private Bag X447
 Pretoria
 0001

Physical address:
 Department of Environmental Affairs
 Attention: Chief Director: Integrated Environmental Authorisations
 Environment House
 473 Steve Biko Road
 Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:
 Email: EIAAdmin@environment.gov.za

1. SPECIALIST INFORMATION

Specialist Company Name:	DELTA BUILT ENVIRONMENT CONSULTANTS		
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	Percentage Procurement recognition	
Specialist name:	WALTER RINGELMANN		
Specialist Qualifications:	B.Sc. Eng (Elec), GDE		
Professional affiliation/registration:	ECSA 20050163 PR Pr Eng		
Physical address:	3rd Floor, Kynlabld, 320 the Hillside, Lynnwood, Pretoria		
Postal address:	P.O. Box 35703 MENLO PARK		
Postal code:	0102	Cell:	0824698263
Telephone:	012 368 1850	Fax:	—
E-mail:	Walter.Ringelmann@deltabec.com		

2. DECLARATION BY THE SPECIALIST

I, Walter Ringelmann, declare 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 expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- 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 in terms of regulation 48 and is punishable in terms of section 24F of the Act.

WRingelmann

Signature of the Specialist

DELTA BUILT ENVIRONMENT CONSULTANTS

Name of Company:

25 Oct 2023

Date

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, Walter Ringelmann, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

W Ringelmann

Signature of the Specialist

DELTA BUILT ENVIRONMENT CONSULTANTS

Name of Company

24 Oct 2023

Date


[Signature]

Signature of the Commissioner of Oaths

25/10/2023

Date

COMMISSIONER OF OATHS (RSA)
Riegald du Toit
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1st Floor Rynlal Centre
320 Hillside Road
Lynnwood
Pretoria



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CURRICULUM VITAE

NAME	Walter Ringelmann
DATE OF BIRTH	10 September 1957
PROFESSION/SPECIALISATION	Director
NATIONALITY	South African
YEARS' EXPERIENCE	42 Years
CIVIL STATUS	Married

KEY QUALIFICATIONS:

Walter is a professional engineer with more than 40 years' experience.

Walter has extensive experience in project and program management as well as in system integration. He has managed various multidisciplinary projects and programmes in the fields of electromechanical systems, air cargo handling system, ICT and airports.

Airport experience:

Walter led the consortium for the development and construction of the Kruger Mpumalanga International Airport. This project management task required the integration of various sub-projects such as the design, the earthworks, building works, roads and runways, various bulk services as well as the support services.

Walter was the client engineering team leader for the development of the new Dube TradePort that included the King Shaka International Airport. He was responsible for the initial master plan, including obtaining the regulatory approval. He was responsible for the team that prepared the specification and procurement documentation for the turnkey execution. He was leader of the engineering team that supervised the construction of the Dube TradePort infrastructure as well as the airport.

Walter was project leader for the aviation and navigation elements on the St Helena Airport Project, which is the third greenfield airport of his career.

As the company director responsible for airport projects, he was project lead for various projects at the Lanseria international airport, including the design and construction supervision of the new runway, the new control tower and fire and rescue building, the expansion of the terminal building and various minor airport infrastructure projects.

Air Cargo Systems

He was project leader for the design and supply of the cargo handling equipment at the Asia Airfreight Cargo Terminal at the new Hong Kong International Airport. He was lead engineer for the Dube TradePort cargo terminal at the King Shaka International Airport. He was lead engineer for both the phase 1 and phase 2 of the Ethiopia Airlines Cargo Terminals in Addis Ababa. He was the lead engineer of the design team for the MC Cargo Terminal in Nairobi, Kenya. He prepared the feasibility study for the Ethiopian Airlines eCommerce facility in Assis Ababa.

ITC

Walter was project leader for the development of the Dube TradePort ICT, campus fibre network and Core network system. Walter is currently leading the ICT development for the Tshilidzini Hospital.

Systems Experience

In the first 15 years of his career, Walter developed embedded microprocessor-controlled systems for various mobile applications, including airborne navigation equipment. Walter developed a solid understanding and expertise for Logistic Support as these systems were supplied with extensive Spares, Training, Document and Maintenance Support Systems. Walter was project lead for ABB for



CURRICULUM VITAE

the engineering, supply, installation, and commissioning of a 9 paint-robot installation at the Venture Plant in Rosslyn Pretoria.

EMPLOYMENT RECORD:

2005 – Present	Delta Built Environment Consultants Pr. Electrical Engineer
2004 – 2005	Africon, Project Manager Pr. Electrical Engineer
1999 – 2004	ABB (South Africa), Divisional Manager
1997 – 1999	ABB (Germany), Divisional Manager
1996 – 1997	ICM GmbH (Germany), Assistant GM
1982 – 1996	ESD Pty Ltd and Reutech Pty Ltd, Director

PROFESSIONAL EXPERIENCE:

National Air Freight Strategy: Client – Department of Transport: September 2022 – ongoing

Delta BEC are appointed to lead the team to prepare the Air Freight Strategy for the National Department of Transport. Walter is the project leader for of the project.

Cape Town Air Freight Cargo Strategy: Client – Wesgro: September 2022 – November 2022

Delta BEC are appointed to lead the team to prepare the Air Freight Strategy for Cape Town and the Western Cape. Walter is supporting the team lead by AIH Econogistics.

Cargo Terminal of the Future: Client – Liege Airport: November 2022 – ongoing

Delta BEC are appointed to lead the team to prepare the concept design for a “Cargo Warehouse of the Future” to be constructed at the Liege Airport, Belgium. Walter is the team leader.

Tshilidzini Hospital: Client – National Department of Health, 2015 – ongoing

Delta BEC are appointed for the **Mechanical Engineering and ICT Services** for the new 550 bed hospital to be constructed at Thohoyandou, Limpopo Province. Walter is project director responsible for the mechanical services for the project, including HVAC, wet services, medical gas as well as specialist areas such as kitchen, laundry, mortuary.

Tshilidzini Hospital: Client – National Department of Health, 2015 – ongoing

Delta BEC are appointed for the **Electronics and ICT Services** for the new 550 bed hospital to be constructed at Thohoyandou, Limpopo Province. Walter is lead engineer for the electronics and ICT services for the project, including the ICT backbone (servers, switches, fibre and CAT 6 network, WiFi), security services (access control, CCTV), integration of software apps such as the central health information system, patient queuing, nurse call, bed management, meal booking and planning, and the hospital administration systems.

Exxaro Control Centre: Client – Krypton, March 2022 – ongoing

Delta BEC were appointed by Krypton Engineering for the engineering design of the command control centre at the Exxaro Grootegeeluk Mine. Walter is the project director responsible for the architect, QS and engineering and ICT aspects of the project.

Ethiopian Airlines eCommerce feasibility study: Client – AVIC, October 2021 – July 2022

Delta BEC were appointed by Chinese company AVIC (China National Aero-Technology International Engineering Corporation) for the preparation of a feasibility study for an Ethiopian Airlines eCommerce facility. Walter was the project leader for the project.

Richards Bay Airport: Client – uMthathuze Municipality, October 2020 – ongoing

Walter is the project leader for the preparation of a feasibility study and the associated procurement documents for a PPP process to relocate the Richards Bay Airport to a new greenfield site.

Dube TradePort Master Plan: Client – Dube TradePort and Airports Company South Africa October 2019 – ongoing

Walter is the project leader for the revision of the master plan and the preparation of a business plan for the Dube TradePort precinct in eThekweni.

District 6 – Housing Project: Client – Department for Agriculture, Rural Development and Land Reform (DARDLR), January 2019 – ongoing

Walter is project director supporting two social housing projects in the District 6 precinct in Cape Town.

Lanseria Airport: Client – Lanseria Airport Management (Airport Infrastructure) January 2017 – ongoing

Walter is the project leader for various infrastructure projects at the Lanseria International Airport, Johannesburg, South Africa. The most recent project was extension of the passenger terminal building. He is currently supporting Lanseria in the concept planning of new cargo and aircraft maintenance facilities.

Nairobi, Kenya: Client – Mitchell Cotts at the Jomo Kenyatta Int. Airport (Cargo Terminal) September 2015 – 2019

Walter is the project leader for the engineering and concept design of the new cargo warehouse for Mitchell Cotts at Jomo Kenyatta International Airport, Kenya.

Addis Ababa, Ethiopia: Client - Unitechnik Systems GmbH (Cargo Terminal) in a joint venture with Varnero Construction. July 2013 – June 2017.

Walter was the project leader for the engineering and design of the new 600 000-ton cargo facility for Ethiopian Airlines at the Bole International Airport, Addis Ababa, Ethiopia. The facility comprises the 40 000 m² cargo terminal, a 10 000 m² office block, airside apron for 5 Code-E cargo aircraft, landside roads, parking and truck staging and the associated water, waste water, electricity and ICT utilities.

Johannesburg South Africa: Client – Lanseria International Airport (Airport Master Plan). July 2016 – 2019

Walter was the project leader of the design team that reviewed and updated the airport master plan of the Lanseria International Airport.

Johannesburg South Africa: Client – Lanseria International Airport (Control Tower). July 2016 – June 2017

Walter was the project leader for the design and construction supervision of the control tower, and fire and rescue facility for the Lanseria International Airport, Johannesburg.

Johannesburg & Durban South Africa: Client - ACSA (Airport Master Plan). July 2014 – June 2017

Walter is the project leader of the design team that is reviewing and updating the airport master plans of the O.R. Tambo International Airport and the King Shaka International Airport for the Airports Company of South Africa.



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Johannesburg RSA: Client – ACSA (impact assessment remote apron stands). 2015 – 2016

Walter was the project leader to coordinate and oversee the team responsible for assessing the impact assessment of the remote apron stands on the ground handling services at the OR Tambo International Airport. This assessment includes a traffic impact assessment, and the flow analysis of the passengers, baggage, and cargo.

Johannesburg, South Africa: Client – City of Joburg (Lanseria Aerotropolis Master Plan). Feb 2009 - 2014

Walter was the project manager of the project for the master planning of a future green city around the Lanseria International Airport. Walter was the Project Leader of the team that prepared the Master Plan and the Economic Feasibility Study for the City of Johannesburg.

St Helena Airport: Client - Worsley Parson, (aviation and navigation elements), July 2013 - 2017

Walter was the project leader for the aviation and navigation elements of this R 3 billion greenfield airport. Included in the scope of works were the airport geometric design, PANS-OPS studies, design support for navigation systems (AGL, DVOR, ILS) as well as design support for ancillary equipment such as the aviation fuel facility and the aircraft fire training rig.

Johannesburg South Africa: Client – Lanseria International Airport (new runway), 2014 - 2015

Lanseria Airport replaced the two runways with a single new runway. Walter was the project leader for this project, which included civil works as well as navigation equipment (AGL DVOR and ILS).

Durban, South Africa, King Shaka Intl Airport: Client Airports Company South Africa, 2004 – 2013

Walter as the project manager (team leader) for master planning of new international airport at La Mercy north of Durban. The master planning responsibilities included the airport master plan preparation, township rezoning formalities, environmental impact assessment, management of interfaces to government departments (such as international border control), preparation of EPC (Engineering, Procurement and Construction) and Tender documents.

The preparation of the EPC Tender documents included the preparation of the technical specifications of the airside and landside infrastructure. Walter's responsibilities were primarily the overall coordination of the EPC Documents.

Walter's specialist knowledge lies in the electrical and electronic fields, and his expertise was highlighted in the specification and integration of the electrical and electronic systems, including airfield ground lighting, navigation aids, electrical reticulation, lightning protection, IT infrastructure and airport security infrastructure.

Walter's air cargo terminal experience was instrumental in the preparation of the specification and conceptualisation of the air cargo terminal at the King Shaka International Airport.

Walter was leader of the technical tender adjudication team, as well as leader of the construction supervision engineer's team.

On completion of the construction, he was team leader for the review and update of the airport master plan. In addition, he was joint team leader for the preparation of the master plan for the Dube Aerotropolis, covering the 15 km area surrounding the airport. Included in this planning were public transport (rail and bus) plans, open space system planning, preparing of strategies for sustainable development such as carbon and water neutrality initiatives.

Durban, South Africa: Client Dube TratePort (ICT System), 2009 – 2012

Walter was the project leader to plan, design and supervise the design and construction of an ICT network and related service's, including the Data Centre and precinct wide switch and fibre reticulation network.

Addis Ababa, Ethiopia: Client Ethiopian Airlines (Cargo Terminal), 2005 – 2006

Walter was the project manager for the project for the design and supply of the material handling equipment for the airfreight cargo terminal. The services provided included the design and procurement of steel from Germany for the ULD racking, procurement and supply of automated mechanisation systems from Germany, and specification and procurement of an inventory management system.

Johannesburg and Durban International; Client - South African Airways, (Cargo Terminal), 2004

Walter was responsible for the feasibility study for the extension of air cargo facilities.

Paint Robot Installation; Client – Venture (Rosslyn, Pretoria), 2003 – 2004

Project manager. This project entailed the design, procurement of robots and paint applicators, procurement of paint storage and reticulation equipment (paint kitchen), installation, programming and commissioning at the BMW bumper manufacturing plant in Rosslyn Pretoria.

Johannesburg and Durban International; Client - ACSA, (Baggage Handling System) 2001 – 2002

Project director. This project entailed the design, supply and installation of new baggage handling equipment for the Johannesburg and Durban International Airport.

Kruger Mpumalanga International Airport: Client - Primkop Airport Management Pty Ltd, 1999 – 2003

Walter was the EPC Contract Consortium Leader.

The EPC Consortium comprised three companies, ABB South Africa, ABB Airport Technologies (Germany) and Grinaker LTA.

This project included the engineering, procurement and construction of all airport infrastructure and equipment, including airside infrastructure, airfield ground lighting, navigation aids, the terminal building, the control tower, the fire and rescue building, the access road, parking areas, bulk services and all equipment required for the airport operation.

The engineering work included the preparation of the master plan and obtaining the necessary regulatory approvals such as environmental, water use, land zoning, aviation and airspace, building plan, airport international port of entry and the airport operation licence.

The infrastructure comprises a 3400m x 60m runway, taxiway, apron, control tower, fire and rescue building, terminal building with domestic and international facilities and an aviation fuel facility.

Maputo Airport Concession, Airports Company Mozambique, 1999 – 2001

Project Manager. This project entailed the identifying of a consortium comprising engineering specialists, a construction company and an airport operator for the preparation of a concession to upgrade and operate the Maputo Airport.

Hong Kong: Client - Asia Airfreight Terminal. 1996 – 1999

Project manager. This project entailed the design and build of the material handling equipment for the airfreight cargo terminal. The services provided included the design and procurement of steel from China, procurement and supply of automated mechanisation systems from Germany and the USA, as well as specification and procurement of an inventory management system.

Avionics Systems, South African Airforce, 1980 – 1996

In this period of his career, Walter was the project manager, divisional manager and later technical director at ESD, a division of Reunert. He was responsible for the development and manufacture of various electro-mechanical and aviation products, including airborne navigations aids, equipment



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for the Maritime Patrol Aircraft and secondary surveillance radar. The development included the establishment of logistic support systems for the products, including the planning of spares holding (using FMECA), training, preparation of manuals and repair processes and procedures.

EDUCATION:

University of Witwatersrand, 1979	BSc.Eng (Elec)
University of Witwatersrand, 1985	GDE (Graduate Diploma Engineering)

PROFESSIONAL AFFILIATIONS:

20050163	Engineering Council of South Africa
12118/D	South African Institute of Electrical Engineers
2007228	Project Management Professional (PMP) at PMI
D/2538/2018	Professional Construction Project Manager (SACPCMP)

LANGUAGE:

LANGUAGE	SPEAKING	READING	WRITING
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent
German	Moderate	Moderate	Moderate

APPENDIX B: SACAA COMMENTS

SOUTH AFRICAN



**CIVIL AVIATION
AUTHORITY**

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Aviation Environmental Compliance
Tel No: +27 11 545 1199
Email: environment@caa.co.za
Enquiries: Ms. Evelyn Shogole

06 June 2024

Delta Built Environment Consultants (Pty) Ltd
P.O. Box 35703
Menlo Park
0102
Attention: Keamogetswe Boikanyo

Dear Sir/ Madam

RE: AVIATION ENVIRONMENTAL COMPLIANCE COMMENT ON MOKOLO CROCODILE WATER AUGMENTATION PROJECT PHASE 2 (MCWAP-2A) RIVER MANAGEMENT SYSTEM FOR THE PROPOSED WEIR DEVELOPMENT.

We acknowledge receipt of email dated 23 April 2024. The South African Civil Aviation Authority (CAA) is an agency of the Department of Transport (DoT). The Civil Aviation Act 13 of 2009 provides for the establishment of the CAA as a stand-alone authority mandated with controlling, promoting, regulating, supporting, developing, enforcing and continuously improving levels of safety and security throughout the civil aviation industry. The CAA exercises this mandate through the Civil Aviation Regulations (CARs).

Please see our comments below:

The screening tool indicates that the proposed construction of weir has medium and high sensitivity toward civil aviation infrastructure and activities. Considering that the height of the proposed weir ranges from 4-1 meters, it is unlikely that the proposed will have an impact on civil aviation operation. It is recommended to notify the nearby Nyumbu and Thabazimbi airports for their comments and inputs.

Yours sincerely,

Ms. Evelyn Shogole
Aviation Environmental Compliance Department