FINAL SCOPING REPORT FOR PUBLIC REVIEW

PROPOSED SUPPORT PRECINCT 2 ON THE REMAINDER OF PORTION
11 OF THE FARM LA MERCY NO. 15124, NEAR THE KING SHAKA
INTERNATIONAL AIRPORT/DUBE TRADEPORT, KWAZULU-NATAL

Prepared for:

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SEF Ref No: 505100 DEA Ref No: 14/12/16/3/3/2/549

PURPOSE OF DOCUMENT

SEF Project Code: 505100

A period of 40 calendar days (24 July 2013 to 03 September 2013) was provided to the State Departments and the General Public for the review and commenting phase of the Draft Scoping Report. All Interested and Affected Parties (I&APs) as well as State Departments were notified of this review period. Subsequent to this, the Final Scoping Report was submitted to the registered I&APs and the Department of Environmental Affairs (DEA). In a letter dated 29 November 2013 (refer to the DEA letter in Appendix 2), the DEA rejected the Final Scoping Report. The Final Scoping Report was rejected on the grounds that the proposed Support Precinct 2 Development encroaches into the proposed conservation area as defined by the on-site Mitigation Phase 1 (EKZNW Letter dated 3 August 2007), which contradicts with the conditions specified in the King Shaka International Airport (KSIA) Record of Decision (RoD) dated 29 October 2008. Condition 3.2.6.5 which read as 'No structures must be located within the newly delineation conservation area as defined by the on-site Mitigation Phase 1 (EKZNW Letter dated 3 August 2007). DEA added that the Department will not authorise any development within the conservation area as defined by the on-site Mitigation Phase 1 (EKZNW Letter dated 3 August 2007) until the conservation area has been defined. DEA advised that the Amended Draft Scoping Report must be submitted for public review and comments.

This Amended Draft Scoping Report was available for public review and comments from **28 January 2014 to 10 March 2014**. The Final Scoping Report includes the comments that were received from the I&APs during public review of the Amended Draft Scoping Report. The Final Scoping Report is available for public review and comment from **16 April 2014 to 29 May 2014** and contains the following information:

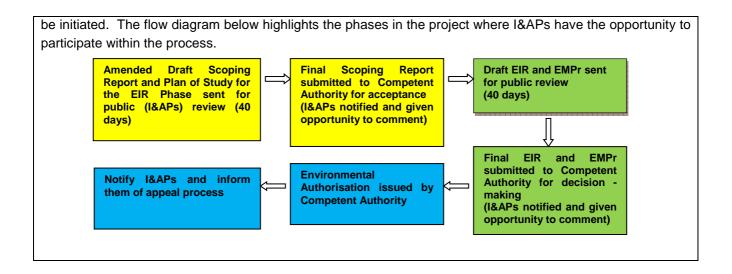
- A description of the project, including project motivation;
- Developable area of Support Precinct 2 vs. the conservation area;
- · Discussion of applicable alternatives;
- A description of the environment affected by the project;
- The public participation process; and
- The plan of study for the Environmental Impact Reporting (EIR) phase.

The Final Scoping Report can be viewed at the following venue:

Name of public venue	Name of Contact Person	Contact Number(s)	Viewing Times
Tongaat Library	Ms. Vigie Padayachee	(032) 944 4734	Tongaat Library
1 Victoria Avenue,			Mondays (12h00 to 18h00)
Tongaat Central, 4400			Tuesdays to Fridays
Tongaat ochtrai, 4400			(10h00 to 17h00)
			Saturdays (08h30 to 12h30)

Should you wish to participate in the Scoping and Environmental Impact Reporting (S&EIR) process by contributing issues of concerns/comments, please register as an Interested and Affected party (I&AP) by completing the enclosed Registration and Comment Sheet or please visit SEF's website at http://www.sefsa.co.za. To register as an I&AP or comment on the project, click on "Stakeholder Engagement". Click on the "register" button and complete the compulsory fields to register as an I&AP. On completion of these fields, you will be logged in. Click on stakeholder engagement under categories on the right hand side of the page. Then click the Final Scoping Report for the Proposed Support Precinct 2 Development to view the report and the associated appendices. Should you have any problems in obtaining the information from the Internet, please feel free to contact Strategic Environmental Focus (SEF) for assistance.

Following the commenting period, the Scoping Report will be updated and submitted to the Department of Environmental Affairs (DEA) for consideration. After the acceptance of the Scoping Report, the EIR phase will



PROJECT SUMMARY		
Project Name	Proposed Support Precinct 2 Development	
Farm Name and Portion	Remainder of Portion 11 of the Farm La Mercy No. 15124	
Brief Development Overview	La Mercy Joint Venture (Pty) Ltd proposes to develop the site for the proposed 'Support Precinct 2'. Support Precinct 2 is proposed to be located in the area south-east of the runway. The land is owned by the La Mercy Joint Venture (Dube TradePort Corporation (DTPC) and Airports Company South Africa (ACSA). It is proposed that the proposed development will consist of Mixed Use development including Business Parks, Hotels, Petrol Filling Station and open space to complement the proposed 'conservation area'. Additional infrastructure will include support facilities and roads, parking areas and gate houses.	
Development Footprint	The site is approximately 30 hectares (ha) in extent.	
Development / Structure Height	The height of the proposed development will be provided within the EIR.	
Lay Down Area Dimensions	To be addressed within the EIR.	

ENVIRONMENTAL ASSESSMENT PRACTITIONER

SEF Project Code: 505100

Strategic Environmental Focus (Pty) Ltd (SEF) is a privately owned company and was formed in 1997 with the objective of providing **expert solutions to pressing environmental issues. SEF is one of Africa's largest multi-disciplinary consultancies**, offering sustainable environmental solutions to private and public sector clients. With our integrated services approach in the management of natural, built and social environments; and with over a decade of experience, we bring a wealth of knowledge and expertise to each project.

SEF's Vision

SEF is a national sustainability consultancy that provides integrated social, biophysical & economic solutions by forging strategic stakeholder relationships, underpinned by SEF's core values.

SEF's Mission

SEF offers holistic sustainable solutions in response to global change.

SEF has assembled a team of professionals, consisting of a core of environmental experts with extensive experience in dealing with Environmental Impact Assessments (EIAs), Public Participation Processes, Architectural and Landscape Architecture, Mining and Environmental Management. SEF also has a team of specialist practitioners such as specialists in Heritage Impact Assessments (HIA), Wetland Delineation and Functional Assessments; Wetland/ Riparian Rehabilitation, Aquatic Assessments; Ecological (Fauna, Avifauna and Flora) Assessment, Visual Impact Assessments (VIAs), Soils and Agricultural Potential Assessments, Socio-Economic Assessments, etc.

SEF is a Qualifying Small Enterprise and a **Level 2 contributor in terms of the Broad Based Black Economic Empowerment** Act, 2003 (Act No. 53 of 2003) and has a procurement recognition level of 135%.

SEF commits itself to comply with the requirements and the implementation of a Quality Management System (QMS). The QMS will be reviewed and implemented to continually improve efficiency and effectiveness of the organisation.

SEF uses a "green" approach to anything we embark on. We believe in using technology to our and the environment's best advantage. We encourage the use of green alternatives such as telephone and video conferencing instead of travelling for workshops and meetings and CDs instead of printed material, where possible.

The following project team members are involved in this S&EIR application process.

Table 1: Project Team Members

Name	Organization	Project Role
Ms Natasha Lalie	SEF	Environmental Manager
Ms Mamo Seliane	SEF	Public Participation

Ms. Natasha Lalie

Natasha has an MSc. Environment and Society and has been an Environmental Assessment Practitioner (EAP) for almost nine years. She has undertaken numerous Scoping Reports, Environmental Management Programmes (EMPr's) and Exemption Applications, as required by the Environment Conservation Act, 1989 (Act No. 73 of 1989); Environmental Screening and Feasibility Studies; and S&EIRs as well as BAs, as required by NEMA and the EIA Regulations. She has been involved in a wide range of projects, which include waste management, industrial, township establishments, mixed-use development, road upgrades, infrastructure developments, change of land use, lodge developments, proposed bulk water pipelines, proposed transmission power lines, proposed filling stations, shopping centre developments and so on.

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Ms. Mamoluoane Seliane

Mamoluoane Seliane holds an MSc in Environmental and Geographical Science from the University of Cape Town. She conducts both Heritage Specialist and Environmental Practitioner duties. As an environmental practitioner, she undertakes feasibility and environmental impact studies, public participation as well as Environmental Control Officer (ECO) duties.

She in particular has experience with conducting Environmental Audits of projects during construction and rehabilitation phases including the provision of professional guidance to enforce the implementation of Environmental Authorizations (EA) and Environmental Management Programmes (EMPrs) and monitoring the contractor's compliance with the EMPr, EA and any specialist requirements. In addition, she is a member of the International Association for Impact Assessments (IAIA) and is a professional member of the Association of Southern African Professional Archaeologists (ASAPA).

Table 2: Contact Details of Environmental Assessment Practitioner

Name	Contact Details
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EXECUTIVE SUMMARY

SEF Project Code: 505100

1 INTRODUCTION

Strategic Environmental Focus (Pty) Ltd (SEF) has been appointed by La Mercy Joint Venture (Pty) Ltd, herein referred to a LMJV, to undertaken an environmental application process for the proposed Support Precinct 2 Development.

A Scoping and Environmental Impact Reporting (S&EIR) process will be conducted for this project based on triggered listed activities within the Environmental Impact Assessment (EIA) Regulations of 2010 (Government Notice (GN) No's 543; 544; 545 and 546) promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).

The purpose of the Scoping phase is to describe the proposed activity and those reasonable alternatives that have been identified as well as the receiving environment that may be affected by the proposed project. The report also describes the required specialists studies, public participation process followed during the Scoping phase as well as how these will be carried out during the EIR phase. The Draft Scoping Report was available for public review and comment to Interested and Affected Parties (I&APs) from 24 July 2013 to 3 September 2013. The Final Scoping Report was submitted for public review and comment from 7 October 2013 to 8 November 2013 to registered I&APs. In a letter dated 29 November 2013, DEA rejected the Final Scoping Report. The Final Scoping Report was rejected on the grounds that the proposed Support Precinct 2 Development will occur within the proposed conservation area as defined by the on-site Mitigation Phase 1 (EKZNW Letter dated 3 August 2007), which contradicts with the conditions specified in the King Shaka International Airport (KSIA) Record of Decision (RoD) dated 29 October 2008. Condition 3.2.6.5 which read as 'No structures must be located within the newly delineation conservation area as defined by the on-site Mitigation Phase 1 (EKZNW Letter dated 3 August 2007). DEA added that the Department will not authorise any development within the conservation area as defined by the on-site Mitigation Phase 1 (EKZNW Letter dated 3 August 2007) until the conservation area has been defined. DEA advised that the Amended Draft Scoping Report must be submitted for public review and comments.

The Amended Draft Scoping Report was available for public review and comment from **28 January 2014 to 10 March 2014**. The development footprint of Support Precinct 2 has been overlaid on the conservation area. Refer to the Locality Map and Preliminary Site Layout Map in Appendix 1. The applicant amended the Preliminary Layout Plan as per DEA's requirements, such that no proposed land uses and structures occur within the conservation area. The applicant has indicated that proposed ancillary services such as internal road is required to connect the two development areas within the SP 2 site¹. The terrestrial and wetland ecologists will assess any potential negative impacts of the proposed infrastructure to the surrounding sensitive environment such as the natural open space systems and the conservation area. The specialist findings will be included in the forthcoming Draft EIR. Refer to the amended Layout Plan in Appendix 1.

The Amended Draft Scoping Report aimed at providing all I&AP with an opportunity to assess whether or not their comments/ concerns have been included and adequately addressed.

All registered Interested and Affected Parties (I&APs) were provided with an opportunity to comment on the Amended Draft Scoping Report. Comments on the Amended Draft Scoping Report are addressed in this, the Final Scoping Report. Essentially, the Scoping Report defines the scope of the Impact Assessment Phase of the project. The Final Scoping Report has been submitted to registered I&APs from 16 April 2014 to 29 May 2014 for public review. This report has been also submitted to the Department of Environmental Affairs (DEA), concurrently, for review and decision.

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¹ Personal communication between SEF and DTPC on 14 March 2014.

The DEA will, based on the review of the Final Scoping Report, issue a decision on whether or not the application may proceed to the Environmental Impact Reporting (EIR) phase.

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2 BRIEF PROJECT DESCRIPTION

The proposed Support Precinct 2 Development will occur on the remainder of Portion 11 of the Farm La Mercy No. 15124.

The site occurs approximately 40km north of the Durban Central Business District (CDB) within the eThekwini Municipality. The site is strategically located adjacent southeast of the King Shaka Airport. The GPS points of the centre of the site are approximately 29° 38′ 04.87″ south and 31° 06′ 35.16″ east. Refer to the locality map in Figure 2.

The site is approximately 30ha in extent and falls within Ward No. 58 of the eThekwini Municipality in KZN (refer to the Locality Map in Appendix 1).

The current land use zoning of the site is 'undetermined', but it is currently fallow after discontinuation of sugarcane cultivation. Support Precinct 2 is proposed to be located in the area south-east of the runway. The land is owned by the La Mercy Joint Venture (DTPC and ACSA). It is proposed that the proposed development will consist of Mixed Use development including Business Parks, Hotels, Petrol Filling Station and open space to complement the proposed 'conservation area'. Additional infrastructure will include bulk infrastructure, support facilities and roads, parking areas and gate houses. The applicant amended the Preliminary Layout Plan as per DEA's requirements, such that no development takes place in the conservation area. The applicant indicated that the proposed ancillary service internal road is required to connect the two development areas within the SP 2 site². The terrestrial and wetland ecologists will assess the impact of any proposed infrastructure to the surrounding environment such as the open space system and the conservation area. The specialist findings will be included in the forthcoming Draft EIR.

Refer to the amended Layout Plan in Appendix 1.

3 KEY IMPACTS

The following key impacts were identified and will be carried forward into the EIR phase for further investigation and assessment:

Biophysical Impacts:

- Impact on ground and surface water due to hydrocarbon spillages during both the construction and operational phases of the development;
- Impact on wetlands and riparian areas due to creation of platforms and various other land-uses during construction;
- Potential for soil erosion due to soil compaction and increased surface water run-off associated with establishment of hard internal surfaces and vegetation clearing during construction and operational phases;
- Impact on loss of flora/fauna as a result of construction activity such as vegetation clearing;
- Impact on geological formations as a result of the proposed development;

Socio-Economic Impacts:

- Impact of air pollution caused by dust during construction and fumes during the operational phase;
- Impact of noise caused by construction and operational activity;

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² Personal communication between SEF and DTPC on 14 March 2014.

- Impacts on heritage resources and culture;
- · Impact on safety and security;
- Job creation during the construction and operational phases of the proposed project.
- Impacts on localised traffic;
- Impact on existing services;
- Compatibility with the municipal plans; and
- Impact on visual character.

Cumulative Impacts:

Cumulative impacts of the proposed development and other projects within the KSIA/DTP Precinct;

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- Increased traffic associated with additional road users especially heavy-duty vehicles;
- Impact on the surrounding conservation areas and ecological linkages/corridors; and
- Cumulative loss of wetlands on a regional and local level.

4 PROJECT ALTERNATIVES

To give effect to the principles of NEMA and Integrated Environmental Management (IEM), an EIA should assess a number of reasonable and feasible alternatives that may achieve the same end result as that of the preferred project alternative. The following alternatives have been identified as part of this Scoping exercise:

Alternative 1: Site/ Location Alternatives:

The developer owns the site which is strategically located and in close proximity to the Phase 1 of Dube Trade Port and the KSIA. The development of the site would therefore be compatible with the adjacent land-uses, as services rendered by the proposed development will be complementary to the existing KSIA.

Alternative 2: Layout/ Design Alternatives:

Alternative layout/ design plans may evolve from the findings of specialist studies that will be undertaken to inform the EIR phase. Design and layout alternatives will be proposed based on the environmental sensitivities.

Alternatives which are compatible with adjacent and surrounding land uses, and compatible with the receiving environment will be presented and assessed, as well as land use options within the framework for the Airport City.

Alternatives with regards to the design and layout of the proposed development will also be investigated and assessed within the EIR phase. There may well be layout alternatives related to the various wetlands and watercourses on site, which will be investigated.

Alternative 3: Land-use Alternatives:

Landuse alternatives would accommodate mixed use development including office park, hotels and residential. The feasibility of such landuses will need to be further investigated at the EIR phase taking into account the noise contours associated with the King Shaka International Airport.

<u>Alternative 4: No Development Alternative:</u>

The 'no-go' or 'do nothing' alternative would be applicable if the proposed development is not approved by the DEA. Should the proposed development not be implemented, the study area will not be affected by any construction-related or operational phase impacts. Therefore, the present state of the biophysical, social and economic environment will remain, unaffected.

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Rehabilitation of the site, erosion control and eradication of alien invasive plants will have a positive impact on the site and will complement the surrounding Durban Metropolitan Open Space System (DMOSS) should the no-go alternative be adopted.

5 CONCLUSIONS AND RECOMMENDATIONS

In accordance with GN No. 543, the Draft Scoping Report is aimed at describing the proposed activity and those reasonable alternatives that have been identified as well as the receiving environment that may be affected by the proposed project. In accordance with the EIA Regulations, an identification of relevant legislation and guidelines is also given as well as a description of the public participation process that will be followed.

Comments and/or concerns identified by Interested and Affected Parties (I&APs) during the review period of the Amended Draft Scoping Report (public review dates 28 January 2014 to 10 March 2014) were incorporated into the Final Scoping Report for further investigation during the EIR Phase to follow. The Final Scoping Report is available for public review and comment from 16 April 2014 to 29 May 2014 and submitted to the DEA for consideration, together with the Plan of Study for the EIR phase of the project and other relevant supporting information.

The EAP proposes that, on the basis of the information contained in this Scoping Report, that the DEA accept the Scoping Report and Plan of Study for the EIR phase and allow the EAP to proceed with the EIR phase of the project, such that the more pertinent issues can be thoroughly investigated and assessed, in terms of their significance and impact.

The ability to mitigate any of the potential impacts identified in this Scoping Report will also be investigated during the EIR phase and summarised into a working/ dynamic Environmental Management Programme (EMPr) for consideration by I&APs and ultimately by the DEA.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACSA	Airports Company South Africa
ASAPA	Association of South African Professional Archaeologists
ASGISA	Accelerated Shared Growth Initiative of South Africa
ВА	Basic Assessment
CSDM	Chief Directorate Surveys and Mapping
CRR	Comments and Response Report
DEA	Department of Environmental Affairs (previously DEAT)
DEAT	Department of Environmental Affairs and Tourism
DMOSS	Durban Metropolitan Open Space System
DNL	Day Night Average Sound Level
DTP	Dube TradePort
DTPC	Dube TradePort Corporation
DWA	Department of Water Affairs
EAP	Environmental Assessment Practitioner
EA	Environmental Authorisation
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EIR	Environmental Impact Reporting
ENPAT	Environmental Potential Atlas
EMPr	Environmental Management Programme
GIS	Geographic Information Systems
GN	Government Notice
ha	Hectares

на	Heritage Impact Assessment
IAIA	International Association for Impact Assessment
IDP	Integrated Development Plan
I&APs	Interested and Affected Parties
IEM	Integrated Environmental Management
LMJV	La Mercy Joint Venture
KSIA	King Shaka International Airport
KZN DAEA	KwaZulu-Natal Department of Agriculture and Environmental Affairs
LED	Local Economic Development
ME	Mitigation Efficiency
NBSA	National Spatial Biodiversity Assessment
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NUDC	North Urban Development Corridor
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
NWA	National Water Act, 1998 (Act No. 36 of 1998)
PSEDS	Provincial Spatial Economic Development Strategy
QMS	Quality Management System
SANBI	South African Botanical Institute
SEF	Strategic Environmental Focus (Pty) Ltd
SIA	Social Impact Assessment
SFM	Significance Following Mitigation
S&EIR	Scoping and Environmental Impact Reporting
SDF	Spatial Development Framework
SFM	Significance Following Mitigation

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TIA	Traffic Impact Assessment
ToR	Terms of Reference
WOM	Without Mitigation Measures
WM	With Mitigation Measures

GLOSSARY OF TERMS

Applicant	Any person who applies for an authorisation to undertake an activity or to cause such activity to be undertaken as contemplated in sections 24(5), 24M and 44 of the National Environmental Management Act, 19998 (Act No. 107 of 1998).
Ecology	The study of the interrelationships between organisms and their environments.
Environment	The surroundings within which humans exist and that are made up of $-$ (i) the land, water and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.
Environmental Impact Assessment	Systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes basic assessment and S&EIR.
Environmental Management Programme	A working document on environmental and socio-economic mitigation measures, which must be implemented by several responsible parties during all the phases of the proposed project.
Interested and Affected Party	Any person or groups of persons who may express interest in a project or be affected by the project, positively or negatively.
Key Stakeholder	Any person who acts as a spokesperson for his/her constituency and/or community/organization, has specialized knowledge about the project and/or area, is directly or indirectly affected by the project or who considers himself/herself a key stakeholder.
Stakeholder	Any person or group of persons whose live(s) may be affected by a project.
Study Area	Refers to the entire study area encompassing all the alternatives as indicated on the study area or locality map.
Succession	The natural restoration process of vegetation after disturbance.
State Department	Any department or administration in the national or provincial sphere of government exercising functions that involve the management of the environment.

SECTION A: INTRODUCTION

Strategic Environmental Focus (Pty) Ltd (SEF) has been appointed by La Mercy Joint Venture (LMJV) to undertake an environmental application process for the proposed establishment of the Support Precinct 2 Development situated on the remainder of Portion 11 of the Farm La Mercy No. 15124.

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A-1 DESCRIPTION OF PROPOSED ACTIVITY

A-1.1 Locality

The site occurs approximately 40km north of the Durban CBD within the eThekwini Municipality. The site is strategically located between the N2 and the King Shaka Airport. Access to the site will be from the M65 (Dube Boulevard). The GPS points of the centre of the site are approximately 29°38'04.87" south and 31°06'35.16" east. Refer to the locality map in Appendix 1.

The Umhloti River occurs adjacent to the southern boundary of the site. The site is approximately 30ha in extent and falls within Ward 58 of the eThekwini Municipality in KZN (refer to the Locality Map in Appendix 1). La Mercy, Verulam, Umhloti, Ballito and Tongaat are the nearest towns to the site. The site is presently unutilised and fallow, after discontinuation of agricultural activities i.e. sugar cane cultivation. The site occurs adjacent to the DMOSS and areas set aside for conservation as per the previous EIA for the KSIA/DTP. The site for development does not occur within the DMOSS and areas set aside for 'conservation' as per the previous EIA for KSIA/DTP (refer to the Locality Map and Site Layout Plan in Appendix 1). The different land cover types that make up the conservation area is illustrated on the Locality Map.

The development footprint of the site for the proposed Support Precinct 2 development does not occur within the conservation areas. This development node was identified during the EIA for the entire King Shaka International Airport (KSIA) and as such, is being proposed for development by the applicant (Dube TradePort Corporation). The applicant indicated that the proposed ancillary infrastructure such as the internal road is required to connect the two development areas within the SP 2 site³. The terrestrial and wetland ecologists will assess the potential negative impacts of the proposed ancillary services including the internal road. The specialist findings will be included in the forthcoming Draft EIR. Please find the development site in relation to the proposed conservation areas in Appendix 1: Locality Map.

A-1.2 Surrounding Land Use

To further place the site in context, the land uses within all four major compass directions are described in the table below.

Table 3: Surrounding Land Use Table

Direction	Land Use	Distance (m)
North	King Shaka International Airport (KSIA)	Adjacent to site
	Dube Boulevard	Adjacent to site
North east	Agricultural land	Adjacent to site
North west	Agricultural land	Adjacent to site
	R102	2.4km
South	Umdloti River	Adjacent to the site

³ Personal communication between SEF and DTPC on 14 March 2014.

South east	Agricultural land	Adjacent to the site
South west	Mount Moreland Residential	1km
East	N2	Adjacent to the site
West	Agricultural land	Adjacent to the site

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A-1.3 Details of the Project

The current land use zoning of the site is 'undetermined', and is currently fallow subsequent to past agricultural activities on site i.e. sugarcane cultivation. Support Precinct 2 is proposed to be located in the area south-east of the runway. The land is owned by the La Mercy Joint Venture Pty (DTPC and ACSA). It is proposed that the development will consist of Mixed Use development including Business Parks, Hotels, Petrol Filling Station and open space to complement the proposed 'conservation area'. Additional infrastructure will include support facilities, bulk infrastructure and roads, parking areas and gate houses. Refer to the Preliminary Site Layout Plan in Appendix 1.

The development will require sewerage, water, stormwater and electricity infrastructure. The service requirements and solutions will be investigated through the EIR process. Access to the site is proposed to be taken from the existing M65 (Dube Boulevard).

A-2 LEGAL REQUIREMENTS APPLICABLE TO THIS APPLICATION

The application form informing the Department of intent to obtain an Environmental Authorisation was submitted to the DEA on 29 April 2013. Refer to Appendix 2.The DEA acknowledged receipt of the application form in a letter dated 23 May 2013. The following reference numbers were issued to the project viz, DEA Reference: 14/12/16/3/3/549. Refer to Appendix 2.

The legislation, guidelines and policies applicable to this project are as follows:

A-2.1 NEMA and the Environmental Impact Assessment Regulations

The EIA Regulations, promulgated under NEMA, focus primarily on creating a framework for co-operative environmental governance. NEMA provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by State Departments and to provide for matters connected therewith.

In terms of the EIA Regulations of 2010 and activities listed in GN No. 544 and 546 (requiring a Basic Assessment process) and Government Notice (GN) No. 545 (requiring a S&EIR process), the following listed activities are deemed by the Environmental Assessment Practitioner (EAP) to be applicable to the proposed Support Precinct 2 project based on the information provided by the project proponent.

Number and date of the relevant notice:	Activity No (s) (in terms of the relevant or notice):	Project Description
GN.R545 dated	(15) Physical alteration of undeveloped,	The site for the proposed 'Support Precinct
18 June 2010	vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more; except where such physical alteration takes place for: i. linear development activities;	2' is approximately 30 hectares (ha) in extent. It is anticipated that the proposed development will consist of Mixed Use development including Business Parks, Hotels, Petrol Filling Station and open space. Additional infrastructure will include support facilities and roads, parking areas

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iii. the seashore;

existing watercourses.

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	iv. the littoral active zone, an estuary or a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is the greater but excluding where such infilling, depositing, dredging, excavation, removal or moving a. is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or b. occurs behind the development setback line.	
GN.R544 dated 18 June 2010	 (22) The construction of a road, outside urban areas, i. with a reserve wider than 13.5 meters; or ii. where no reserve exists where the road is wider than 8 meters, or iii. for which an environmental authorization was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Notice 545 of 2010. 	Roads will be constructed to provide access to the proposed site.
GN.R546 dated 18 June 2010	(6) The construction of resorts, lodges or other tourism accommodation facilities that sleep 15 people or more. (a) In KZN (ii) outside urban areas in areas on the watercourse side of the development setback line or within 100m from the edge of a watercourse where no setback lien has been determined.	A hotel is proposed to be constructed.
GN.R546 dated 18 June 2010	(19) The widening of a road by more than 4 meters or the lengthening of a road by more than 1 kilometer. (a) In KZN, outside urban areas in, (ii) areas on the watercourse side of the development setback line or within 100m from the edge of a watercourse where no such setback line has been determined.	Roads will be constructed to provide access to the proposed site. The site for development occurs 100m from the edge of a watercourse

^{*} Text in bold is indicative of the activities applicable to the proposed development.

It must be noted that activities requiring a Basic Assessment process, as well as activities requiring a S&EIR process are triggered by the proposed development. Therefore, according to the above listed activities, a situation arises, whereby; the legal requirements of the activity listed in terms of GN No. 545 of 2010 supersede those of the activities listed in terms of GN No. 544 and 546 of 2010, and as such **this application shall undergo a S&EIR process**.

The aforementioned listed activities are deemed to include activities that could potentially have a detrimental impact on the social and biophysical state of an area and as such, are required to undergo an EIA process.

A-2.2 National Water Act, 1998 (Act No. 36 of 1998)

The National Water Act, 1998 (Act No. 36 of 1998) (NWA) aims to provide management of the national water resources to achieve sustainable use of water for the benefit of all water users. This requires that the quality of

water resources is protected as well as integrated management of water resources with the delegation of powers to institutions at the regional or catchment level. The purpose of the Act is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in responsible ways.

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Of specific importance to this application is Section 19 of the NWA, which states that an owner of land, a person in control of land or a person who occupies or uses the land which thereby causes, has caused or is likely to cause pollution of a water resource must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring and must therefore comply with any prescribed waste standard or management practices.

Due to the various streams, tributaries and drainage lines that occur on site as well as the proposed storage of water on site, according to the NWA, the proposed Support Precinct 2 Development may trigger the following water uses listed in Section 21:

- (c) impeding or diverting the flow of water in a watercourse; and
- (i) altering the bed, banks, course or characteristics of a watercourse.

Accordingly, the proposed project may thus require a water use licence, which is administered by the Department of Water Affairs (DWA).

A-2.3 Other Legal Requirements

A-2.3.1 Acts

Constitution of the Republic of South Africa

The Constitution of the Republic of South Africa has major implications for environmental management. The main effects are the protection of environmental and property rights, the change brought about by the sections dealing with administrative law, such as access to information, just administrative action and broadening of the locus standi of litigants. These aspects provide general and overarching support and are of major assistance in the effective implementation of the environmental management principles and structures of the NEMA. Section 24 in the Bill of Rights of the Constitution specifically states that:

Everyone has the right -

- To an environment that is not harmful to their health or well-being; and
- To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that
 - o Prevent pollution and ecological degradation;
 - o Promote conservation; and
 - Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)

The purpose of the Biodiversity Act is to provide for the management and conservation of South Africa's biodiversity within the framework of the NEMA and the protection of species and ecosystems that warrant national protection. As part of its implementation strategy, the National Spatial Biodiversity Assessment was developed.

This Act is applicable to this application for environmental authorisation, in the sense that it requires the project applicant to consider the protection and management of local biodiversity.

National Heritage Resources Act, 1999 (Act No. 25 of 1999)

This Act legislates the necessity for cultural and heritage impact assessment in areas earmarked for

development, which exceed 0.5 hectares (ha) and where linear developments (including roads) exceed 300 metres in length. The Act makes provision for the potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the Amafa KwaZulu-Natal (Provincial Heritage Resources Authority).

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National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)

The purpose of this Act is to provide for the protection, conservation and management of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes.

Subdivision of Agricultural Land Act, 1970 (Act No. 70 of 1970)

The purpose of the Act is to control the subdivision and, in connection therewith, the use of agricultural land. The Minister of Agriculture, Forestry and Fisheries ("Minister of Agriculture") must consent to the proposed subdivision.

Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)

To provide for control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith.

Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

To provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)

To reform the law regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development; to provide for institutional arrangements and planning matters; to provide for national norms and standards for regulating the management of waste by all spheres of government; to provide for specific waste management measures; to provide for the licensing and control of waste management activities; to provide for the remediation of contaminated land; to provide for the national waste information system; to provide for compliance and enforcement; and to provide for matters connected therewith.

Promotion of Access to Information Act, 2000 (Act No. 2 of 2000)

The Act recognises that everyone has a Constitutional right of access to any information held by the state and by another person when that information is required to exercise or protect any rights. The purpose of the Act is to foster a culture of transparency and accountability in public and private bodies and to promote a society in which people have access to information that enables them to exercise and protect their rights.

Planning and Development Act, 2008 (No. 6 of 2008)

To provide for the adoption, replacement and amendment of schemes, to provide for the subdivision and consolidation of land; to provide for the development of land outside schemes; to provide for the phasing or cancellation of approved layout plans for the subdivision or development of land; to provide for the alteration, suspension and deletion of restrictions relating to land; to establish general principles for the permanent closure of municipal roads or public places; to provide for the adoption and recognition of schemes, to provide for compensation in respect of matters regulated by the Act; to establish the KwaZulu-Natal Planning and Development Appeal Tribunal; to provide for provincial planning and development norms and standards; and to provide for matters connected therewith.

A-2.3.2 Provincial Policies and/or Guidelines

Integrated Environmental Management (IEM)

IEM is a philosophy for ensuring that environmental considerations are fully integrated into all stages of the development process. This philosophy aims to achieve a desirable balance between conservation and development (DEAT, 1992). The IEM guidelines intend encouraging a pro-active approach to sourcing, collating and presenting information in a manner that can be interpreted at all levels.

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The DEA Integrated Environmental Management Information Series guidelines are also considered during this S&EIR application process.

The National Building Regulations and Building Standards Act, 1997 (Act No. 103 of 1997)

"To promote the promotion of uniformity in the law relating to the erection of buildings in the areas of jurisdiction of local authorities for the prescribing of building standards and for matters connected therewith".

National Spatial Biodiversity Assessment

The National Spatial Biodiversity Assessment (NSBA) classifies areas as worthy of protection based on its biophysical characteristics, which are ranked according to priority levels.

Protected species – Provincial Ordinances

Provincial ordinances were developed to protected particular plant species within specific provinces. The protection of these species is enforced through permitting requirements associated with provincial lists of protected species. Permits are administered by the Provincial Departments of Environmental Affairs.

KwaZulu-Natal Heritage Act, 2008 (Act No. 4 of 2008)

KwaZulu-Natal Heritage Act provides for the conservation, protection and administration of both the physical and the living or tangible heritage resources of the Province of KwaZulu-Natal; and to establish a statutory Council to administer heritage conservation in the Province. Amafa / Heritage KwaZulu-Natali is the provincial heritage conservation agency for KwaZulu-Natal. Amafa was established as a statutory body in terms of the KZN Heritage Act of 1997, replaced by the KZN Heritage Act of 2008.

Provincial Spatial Economic Development Strategy (PSEDS)

The PSEDS is aimed at transforming the structure of the economy and narrowing and eventually eliminating the gap between the first and second economies. The four pillars of the strategy are as follows:

- Increasing investment in the province;
- · Skills and capacity building;
- Broadening participation in the economy; and
- Increasing competitiveness.

The PSEDS identifies the sectors of the provincial economy which will drive the growth of the province and address unemployment and poverty as follows:

- Agriculture including agri-industry (with opportunities to impact considerably on the economic needs
 of the poor through Land Reform);
- Industry including heavy and light industry and manufacturing;
- Tourism including domestic and foreign tourism; and
- Service sector including financial, social, transport, retail and government.

The logistics and transport sector (including rail) in the services sector are also identified as important subsectors underpinning growth in all four sectors.

The PSEDS also acknowledges that the potential for industrial development in the province is anchored by the nodes of eThekwini and Umhlatuze. The corridors between these two nodes form the primary zone of industrial development in the province.

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One of the principles of the PSEDS is that settlements and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or link the main growth centres. The eThekwini – Umhlathuze development corridor has been identified as having the potential for greatly impacting on economic growth and the development of impoverished areas.

Accelerated Shared Growth Initiative for South Africa (ASGISA)

ASGISA resulted from Government's commitment to halve unemployment and poverty by 2014 and was launched in February 2006. ASGISA is not a government programme but a national initiative supported by key groups in the economy viz, Business, Labour, State-owned enterprises, Government economic agencies, Entrepreneurs and all spheres of government4.

A-2.3.3 Local Policies and/or Guidelines

Durban Metropolitan Open Space System (DMOSS)

The proposed development site occurs adjacent to the conservation areas as per the previous EIA for the KSIA/DTP and DMOSS. The development footprint of the site for the proposed Support Precinct 2 development does not occur within the conservation areas. This development node was identified during the EIA for the entire King Shaka International Airport (KSIA) and as such, is being proposed for development by the applicant (Dube TradePort Corporation). Refer to Figure 1: Locality Map for an illustration of the development site in relation to the conservation areas.

D'MOSS is a system of open spaces, some 74 000 ha of land and water, that incorporates areas of high biodiversity value linked together in a viable network of open spaces. D'MOSS is mapped by the Biodiversity Planning Branch of the Environmental Planning and Climate Protection Department (EPCPD) in consultation with relevant experts. D'MOSS thus provides a unique opportunity to conserve many of South Africa's threatened ecosystems. If protected and managed, D'MOSS will assist the province and the country in meeting biodiversity conservation targets.

Apart from contributing to the attainment of provincial and national biodiversity conservation targets, D'MOSS provides a range of ecosystem goods and services to all residents of Durban, including the formation of soil, erosion control, water supply and regulation, climate regulation, cultural and recreational opportunities, raw materials for craft and building, food production, pollination, nutrient cycling and waste treatment.

Increased flood events can be moderated by ensuring that wetlands and floodplains are protected and where necessary rehabilitated. Predicted increased temperatures can also be alleviated by D'MOSS as vegetated areas help to reduce temperatures.

eThekwini Municipality Integrated Development Plan (IDP)

eThekwini Municipality's IDP ((2012/2013) has identified the following challenges:

- High rates of unemployment and low economic growth;
- High levels of poverty;
- Low levels of skills development and literacy;
- Limited access to basic household and community services;
- Increased incidents of HIV/AIDS and communicable diseases:

4 http://www.info.gov.za/asgisa/

- Loss of Natural Capital;
- Unsustainable developmental practises;
- High levels of crime and risk;
- Ensuring adequate energy and water supply;
- Ensuring food security;
- Infrastructure degradation;
- Climate change;
- Ensuring financial sustainability;
- Ineffectiveness and inefficiency of inward-looking local government still prevalent in the Municipality.

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In order to achieve the vision of the municipality six key choices have been identified which are used to create a framework around which the IDP can be implemented. These choices are as follows: -

- Creating Sustainable Livelihoods;
- · Promoting an accessible City;
- Create a safe City;
- · Environmental Sustainability;
- Financial Sustainability; and
- Caring and Empowering City.

These choices, together with the city's 8 Point Plan, provide the underlying basis upon which the city is to grow and develop.

A-3 DETAILS OF THE APPLICANT

The details of the project applicant are:

Name of Applicant	Postal Address	Relevant Numbers
Ms. Saxen van Coller La Mercy Joint Venture (Pty) Ltd	PO Box 57757 King Shaka Airport 4407	Tel: (032) 814 0000 Fax: (032) 814 0100 E-mail: saxen.vancoller@dubetradeport.co.za

A-4 NEED AND DESIRABILITY OF THE PROJECT

The new DTP incorporating the KSIA not only provides for an increased number of passengers and direct international flights, but also as, a new trade and logistics gateway for Southern Africa. It is therefore important to ensure this foundation and the associated significant investment that has been made is fully utilized and supported. The proposed development will significantly contribute to this existing platform that has been created, by attracting investment that will support the Dube TradePort, as well as the broader region.

The proposal is to develop, in support of the KSIA, business parks, offices and retail opportunities within Support Zone 2, in line with the "airport City" concept. An opportunity also exists for companies dependent on air travel to maximise business efficiency through close proximity to air connectivity. This, in turn will also support the airport as well as future air route development, allowing for the economic growth and benefits to the wider region as a result.

The importance of the Dube TradePort (DTP) project as a potential major contributor to the local and provincial economy has been stressed through both the provincial growth and development plan, as well as eThekwini integrated development plan (IDP). Indeed, the project is highlighted in the City's IDP as a node for

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further investment. The DTP precinct is also governed by a development framework plan indicating how the precinct will develop over time, and this development proposal is entirely in line with this plan.

The wider region is also likely to benefit from increased job opportunities, economic activity, and consumer choice (with respect to retail development).

There is a substantial amount of existing and/ or new service infrastructure proposed for this area and this development would therefore contribute towards the effective use of this infrastructure's capacity.

SECTION B: THE RECEIVING ENVIRONMENT

In order to, with any level of confidence, assess the potential impacts of the proposed Support Precinct 2 Development on the receiving environment, one need to first assess the baseline conditions found over the study area. Using this *Status Quo* one can then, broadly speaking, determine the likely impacts that will emanate from a specific development typology on a well-defined receiving environment.

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B-1 BIOPHYSICAL ENVIRONMENT

B-1.1 Geology and Geotechnical Suitability

The study area consists of a number of geological formations such as the following:

- Sandstone of the Vryheid Formation, Ecca Group and dolerite;
- Shale of the Pietermaritzburg Formation, Ecca Group, with small areas of tillite of the Dwyka Formation, and dolerite;
- Alluvium, with small areas of sandstone of the Vryheid Formation, Ecca Group; and
- Red dune cordon sand of the Berea Formation.5.

A Geotechnical Assessment will be conducted at the EIR phase of the project to determine the geotechnical suitability of the site for construction purposes.

B-1.2 Soils and Agricultural Potential

The study area consists of soil types such as the following⁶.:

- Prismacutanic and/or pedocutanic diagnostic horizons dominant. In addition, one or more of: vertic, melanic, red structured diagnostic horizons;
- One or more of: vertic, melanic, red structured diagnostic horizons, undifferentiated;
- Glenrosa and/or Mispah forms (other soils may occur), lime rare or absent in the entire landscape;
 and
- Red-yellow apedal, freely drained soils; red, dystrophic and/or mesotrophic.

The site was previously used for sugar cane cultivation, but this activity has been discontinued.

B-1.3 Topography and Hydrology

An undulating topography characterizes the site, moderate to gentle, weakly drained low-lying plains within wetland environs define substantial portions of the site.

There are a number of wetlands and drainage lines on the site⁷. The Umhloti River occurs adjacent to the southern boundary of the site boundary. The site falls within the U30B quaternary catchment. A Wetland Delineation and Functional Assessment will be conducted during the EIR phase and the findings thereof will be presented in the forthcoming Environmental Impact Report (EIR).

A Floodline Determination Assessment will be undertaken in the EIR phase to identify hydrological constraints to the proposed development and determine the 1:100 year floodlines of the study area and identify mitigation

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⁵ Department of Environmental Affairs and Tourism 2001, ENPAT. Pretoria: DEAT

⁶ Department of Environmental Affairs and Tourism 2001, ENPAT. Pretoria: DEAT

Department of Rural Development and Land Reform. Chief Directorate: Surveys and Mapping 2009: Hydrology. Cape Town: CDSM

measures where impact as a result of the 100 year floods may be encountered. Mitigation measures will focus on determining whether the site can be protected from flooding in a sustainable and economical way. This will result in defining proposed mitigation actions in the placement of the infrastructure necessary for the protection and will also define no-go areas in terms of the placement of the various proposed structures/land-uses.

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The proposed Support Precinct 2 Development may trigger water uses listed in Section 21(c) impeding or diverting the flow of water in a watercourse; and Section 21(i) altering the bed, banks, course or characteristics of a watercourse.

Accordingly, the proposed project may thus require a water use licence, which is administered by the Department of Water Affairs (DWA).

B-1.4 Climate

The climate of the KwaZulu-Natal coastal belt within which the site is situated is classified as humid-subtropical with a warm summer which, due to its latitudinal position, comes under the influence of both temperate and tropical weather systems.

The mean annual temperature is approximately 21°C Mean monthly temperatures range from 16.6°C in July to 23.7°C in February, while average daily maximum temperatures fluctuate between 22.3°C (July) and 27.4°C (February), and minimum temperatures between 11°C (July) and 20°C (February). The area is frost-free.

The average annual rainfall for the area is approximately 1000mm, 70% of which falls between October and March with January having the highest rainfall. The highest recorded rainfall in 24 hours is 264mm. Such extreme rainfall events require careful planning to manage storm water runoff and to prevent soil erosion.

The area experiences high evaporation regimes, with 60% evaporation occurring between October and March (the high temperature months). The mean annual evaporation is 1830mm and in average dry years there is a moisture deficit. The humidity is greatest in February and lowest in July. The average relative humidity level is 78% with 95% and 57% being typical of upper and lower extremes. The prevailing wind directions are north-easterly and south—westerly, with the rain bearing storm winds typically coming from the south and south west. The strongest winds blow in October.

B-1.5 Flora and Fauna

Historically, the study area would have comprised habitats typical of that of the KwaZulu-Natal Coastal Belt vegetation type as described by Mucina and Rutherford (2006). Therefore prior to the transformation this area would have been represented by a complex of species-rich grasslands and subtropical forests. However, at present, the KwaZulu-Natal Coastal Belt as a whole is classified as Endangered due to the extremely high levels of transformation and habitat degradation associated with the development of extensive sugarcane fields and timber plantations, urbanisation, building of roads and alien plant infestations.

Majority of the site was cultivated for sugar cane production and very little indigenous vegetation remains within the site. Alien invasive vegetation, such as *Lantana camara, Solanum mauritianum, Schinus terebinthifolius, Chromalaena Odorata, Ricinus communis, Melia azedarach* occur predominantly within the riparian areas of the site.

The alien invasive vegetation at the site has a negative impact on the survival of the indigenous vegetation as well as on ecological functioning and biodiversity.

A detailed ecological assessment (with a focus on both flora and fauna) will be conducted during the EIR phase of the project. This study will provide details on the sensitive areas, species of conservation importance and significant corridors with respect to the associated flora and fauna on the site.

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B-2 SOCIAL ENVIRONMENT

B-2.1 Visual

Scenic value can be described as the reaction to aesthetics of the environment as perceived by an individual or a group and therefore it is a very subjective perception. The KSIA and DTP is notably an extensive feature in the landscape and the land uses of the proposed development may blend in or be compatible with these adjacent land-uses. There are no residential areas in close proximity to the site and therefore, the proposed development will not be visually obtrusive.

B-2.2 Heritage

As per the National Heritage Resources Act, 1999 (Act No. 25 of 1999), the proposed development will undergo a Phase 1 Heritage Impact Assessment, due to the size of the development exceeding 0.5 ha. Should any heritage artefacts be uncovered, the relevant heritage agency will be appropriately consulted.

B-2.3 Noise

Noise control must form part of the planning stage of any development. During the construction phase, noise may be generated as a result of construction related activities such as: the use of machinery and equipment, and the movement of construction vehicles, etc. These potential noise impacts must be mitigated, where possible. This will be investigated during the EIR phase of the project and suitable mitigation measures will be recommended.

The site that is earmarked for the proposed development falls within the sensitive noise zones of 55dB for 2010, 2015 and 2035 noise contours of the KSIA. The site is presently impacted by noise generated from aircraft flights.

As mentioned in the NUDC for the Tongaat-DTP LAP (2010), the operations of KSIA and DTP have a negative impact on neighbouring land uses due to noise. This is particularly applicable to residential neighbourhoods where the ambient noise exceeds acceptable levels. For planning purposes, the eThekwini Municipality has adopted an 'in-principle' decision to use the noise contours for the 2035 development footprint of the airport as a guideline to directing urban development within the region. Any development within the 55dB DNL (Day Night Average Sound Level)8 contour is considered sensitive to noise (SANS 1010) and must adhere to additional development controls if permitted.

In view of the close proximity of the proposed development to the airport, it is recommended that the design of the buildings within the study area incorporate noise reduction principles to minimize noise impacts on the occupants. A Screening Noise Assessment will be undertaken at the EIR phase to assess the impact that the noise from aircrafts will have on the proposed development and the level of mitigation required.

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⁸ DNL is Day Night Average Sound Level – recognised industry standard to measure average aircraft noise levels over a 24 hour period.

B-2.4 Air Quality

Vehicles travelling on exposed surfaces, earthworks as well as wind are the main generators of dust. The nuisance and aesthetic impacts associated with the dust generated during the construction phase should be minimal, if mitigating measures are implemented.

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Dust generated off the earth's surface is generally regarded as a nuisance rather than a health or environmental hazard. On a large scale dust will impair atmospheric visibility; however, in the context of the proposed activity, the impact of dust production on air quality should be minimal taking into account that effective dust suppression techniques are available and will be recommended during the EIR phase.

The proposed filling station may be a source of fumes from fuel storage and air emissions may impact on the receiving environment. Since the adjacent area is not residential in nature, this is not expected to be a significant impact. The on-site filling station may impact on the residents at the proposed on-site hotel. This impact will be investigated in further detail at the EIR phase.

B-2.5 Servitudes

The only servitudes on Portion 11 are the pipeline as well as the road servitude registered in favour of eThekwini Municipality. It is currently unknown what the pipeline transports, but this detail will be provided and assessed in the Draft EIA Report. At the time of submission of the Final Scoping Report, the exact location and type of the pipeline was unknown. Any potential impact that the servitudes will have on the site layout plan will be assessed in the forthcoming draft EIR.

SECTION C: ENVIRONMENTAL IMPACT ASSESSMENT (EIA) PROCESS

C-1 APPROACH TO THE EIA

An Environmental Impact Assessment (EIA) is an effective environmental planning tool. It identifies the environmental impacts of a proposed project and assists in ensuring that a project will be environmentally acceptable and integrated into the surrounding environment in a sustainable way.

The EIA for this project complies with the requirements of the National Environmental Management Act, 1998 (Act 107 of 1998) [NEMA] and the NEMA EIA Regulations, 2010 of the DEA. The guiding principles of an EIA are listed below.

Definition of the term "environment"

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The term "environment" is used in the broadest sense in an environmental impact assessment. It covers the physical, biological, social, economic, cultural, historical, institutional and political environments.

C-2 GUIDING PRINCIPLES FOR AN EIA

The EIA must take an open participatory approach throughout. This means that there should be no hidden agendas, no restrictions on the information collected during the process and an open-door policy by the proponent. Technical information must be communicated to stakeholders in a way that is understood by them and that enables them to meaningfully comment on the project.

There should be on-going consultation with Interested and Affected Parties (I&APs) representing all walks of life. Sufficient time for comment must be allowed. The opportunity for comment should be announced on an on-going basis. There should finally be opportunities for input by specialists and members of the public. Their contributions and issues should be considered when technical specialist studies are conducted and when decisions are made.

The eight guiding principles that govern the entire process of EIA are as follows (see Figure below):

- Participation: An appropriate and timely access to the process for all interested parties.
- Transparency: All assessment decisions and their basis should be open and accessible.
- **Certainty:** The process and timing of the assessment should be agreed in advanced and followed by all participants.
- **Accountability:** The decision-makers are responsible to all parties for their action and decisions under the assessment process.
- Credibility: Assessment is undertaken with professionalism and objectivity.
- **Cost-effectiveness:** The assessment process and its outcomes will ensure environmental protection at the least cost to the society.
- **Flexibility:** The assessment process should be able to adapt to deal efficiently with any proposal and decision making situation.
- **Practicality:** The information and outputs provided by the assessment process are readily usable in decision making and planning.

A S&EIR process is considered as a project management tool for collecting and analysing information on the environmental effects of a project. As such, it is used to:

- Identify potential environmental impacts;
- Examine the significance of environmental implications;

- · Assess whether impacts can be mitigated;
- Recommend preventive and corrective mitigating measures;
- Inform decision makers and concerned parties about the environmental implications; and
- Advise whether development should go ahead.

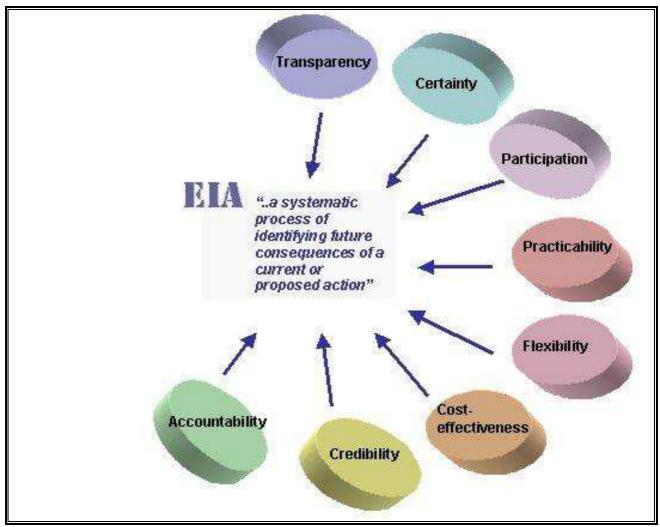


Figure 1: The eight guiding principles for the EIA process

A S&EIR process typically has four phases, as illustrated in the Figure below. The Public Participation process forms an integral part of all four phases and is discussed in greater detail in Section C-4 of this final Scoping Report.

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C-3 S&EIR TECHNICAL PROCESS

This section provides a summary of the technical process to be followed for this S&EIR process.

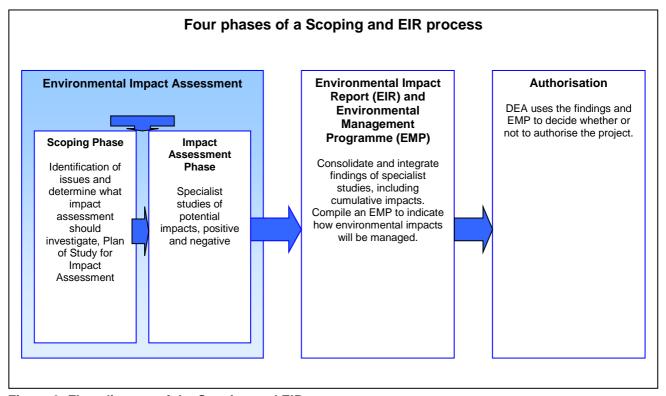


Figure 2: Flow diagram of the Scoping and EIR process

C-3.1 Pre-application Consultation with the DEA

No pre-consultation meeting was held between SEF and DEA. The EAP conducting the S&EIR process for the applicant, in support of their application for an environmental authorisation, is deemed to have a good understanding of the information requirements of the Department for the proposed Support Precinct 2 Development, such that the Department's specific information requirements are deemed to have been met for the scoping phase of this project.

C-3.2 Application for Authorization

The application form informing the Department of intent to obtain an Environmental Authorisation was submitted to the DEA on 29 April 2013. Refer to Appendix 2. The DEA acknowledged receipt of the Application Form on 23 May 2013. DEA issued reference number 14/12/16/3/3/549 to the project. Refer to Appendix 2.

C-3.3 Information Gathering

Early in the EIA process, the technical specialists identified the information that would be required for the impact assessment and the relevant data was obtained. In addition, the specialists sourced available information about the receiving environment from reliable sources, I&APs, previous documented studies in the area and previous EIA Reports.

C-3.4 Specialist Studies

The following specialist studies were identified to be undertaken during the EIR phase:

- Ecological (Flora and Fauna).
- · Engineering Services Report;
- Floodline Determination Assessment;
- Geohydrological Assessment;
- Geotechnical Assessment;
- Emergency Response and Spill Contingency Plan;
- Heritage Impact Assessment;
- Environmental Screening Noise Assessment;
- Socio-Economic Assessment (Contributes to motivation);
- Traffic Impact Assessment; and
- Wetland/Riparian Delineation and Functional Assessment.
- Screening Risk Assessment for the Installation of the petrol station

C-4 PUBLIC PARTICIPATION PROCESS

The principles of NEMA govern many aspects of the S&EIR process, including consultation with I&APs. These principles include the provision of sufficient and transparent information to I&APs on an on-going basis, to allow them to comment; and ensuring the participation of historically disadvantaged individuals, including women, the disabled and the youth.

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The principal objective of public participation is thus to inform and enrich decision-making. This is also the key role in the scoping phase of the process.

C-4.1 Identification of Interested and Affected Parties

I&APs representing the following sectors of society have been identified in terms of Regulation 55 of the EIA Regulations R543 of 2010 (see Appendix 3 for a the contacted I&APs and registered I&APs distribution list):

- National Authorities;
- Provincial Authorities;
- Local Authorities;
- Ward Councillors;
- Parastatal/ Service Providers;
- Non-governmental Organisations;
- Local forums/ unions; and
- Adjacent Landowners.

C-4.2 Public Announcement of the Project

The project was announced on 24 July 2013 in the following manner (see Appendix 3) for public announcement documentation):

- Publication of media advertisement (in English) in the local newspaper, Coastal Weekly and in the Mercury;
- On-site notices advertising the S&EIR process were placed on and around the site, as well as at the Tongaat Library, M65 entrance and Dube City; and
- Distribution of letters by fax/ by hand/ post/ email to I&APs including Registration and Comment

Sheets.

C-4.3 Draft Scoping Report

A period of **40 calendar days** (insert date) was provided to the **State Departments** and the **General Public** for the review and commenting phase of the Draft Scoping Report. All Interested and Affected Parties (I&APs) as well as State Departments were notified of this review period. I&APs and relevant State Departments had the opportunity to raise issues either in writing, by telephone or email on the Draft Scoping Report.

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The availability of the Draft Scoping Report was announced by means of personal letters to all the registered I&APs on the distribution list, and by adverts placed in the abovementioned newspapers.

In addition, the Draft Scoping Report was distributed for comment as follows:

- Left in a public venue (Tongaat Public Library);
- Hand-delivered/ couriered to the relevant authorities; and
- Posted on SEF's website at http://www.sefsa.co.za.

All the comments and concerns raised by I&APs during the S&EIR process has been captured in a Comment and Response Report (refer to Appendix 3). I&APs were sent letters acknowledging their contributions.

C-4.4 Final Scoping Report (Round 1)

The Final Scoping Report was updated with comments and/or concerns raised by I&APs during public review of the Draft Scoping Report. The Comment and Response Report is attached in this, Amended Draft Scoping Report. The Final Scoping Report was submitted to the DEA and registered I&APs simultaneously for review and comment.

A period of 30 calendar days (Monday, 7th October 2013 to Friday, 8 November 2013) was provided to registered I&APs to comment on the Final Scoping Report. Registered I&APs were advised to submit any additional comments on the final Scoping Report directly to the DEA prior to the lapsing of the 30 day review period. Refer to the notification letter in Appendix 3.

In a letter dated 29 November 2013, the DEA rejected the Final Scoping Report (refer to the DEA rejection letter in Appendix 2). The Final Scoping Report was rejected on the grounds that the proposed Support Precinct 2 Development will occur within the proposed conservation area as defined by the on-site Mitigation Phase 1 (EKZNW Letter dated 3 August 2007), which contradicts with the conditions specified in the King Shaka International Airport (KSIA) Record of Decision (RoD) dated 29 October 2008. Condition 3.2.6.5 which read as 'No structures must be located within the newly delineation conservation area as defined by the on-site Mitigation Phase 1 (EKZNW Letter dated 3 August 2007). DEA added that the Department will not authorise any development within the conservation area as defined by the on-site Mitigation Phase 1 (EKZNW Letter dated 3 August 2007) until the conservation area has been defined. DEA advised that the Amended Draft Scoping Report must be submitted for public review and comments.

C-4.5 Amended Draft Scoping Report

The Amended Draft Scoping Report was available for public review and comment from 28 January 2014 to 10 March 2014.

C-4.6 Final Scoping Report (Round 2)

The Final Scoping Report is available for public review and comment from 16 April 2104 to 29 May 2014.

Refer to Appendix 1 for an illustration of the Amended Site Layout Plan which has been overlaid on the 'conservation areas' for the KSIA/DTP Phase 1. There are no land uses proposed through the conservation area, with the exception of a proposed internal road through the site. The applicant indicated that the proposed internal road is required to connect the two development areas within the SP 2 site⁹. The terrestrial and wetland ecologists will assess the impact of the proposed road through the conservation area. The specialist findings will be included in the forthcoming Draft EIR.

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C-4.7 Public participation during the Impact Assessment Phase

Public participation during the Impact Assessment Phase of the S&EIR process will revolve around a review of the findings of the Environmental Impact Report (EIR) and inputs into the Environmental Management Programme (EMPr). The findings will be presented in a Draft Environmental Impact Report and EMPr (including the specialist studies conducted), which will be available for public review and comment.

⁹ Personal communication between SEF and DTPC on 14 March 2014.

SECTION D: IDENTIFICATION OF IMPACTS

D-1 IDENTIFICATION OF IMPORTANT ENVIRONMENTAL IMPACTS

The key environmental impacts listed in the following section have been determined through:

- Legislation; and
- Experience of the Environmental Assessment Practitioner (EAP).

The following issues were identified and will be carried forward into the EIR phase for further investigation and assessment:

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D-1.1 Biophysical Impacts

- Impact on ground and surface water due to hydrocarbon spillages during both the construction and operational phases of the development;
- Impact on wetlands and riparian areas due to creation of platforms and various other land-uses during construction;
- Potential for soil erosion due to soil compaction and increased surface water run-off associated with establishment of hard internal surfaces and vegetation clearing during construction and operational phases;
- Impact on loss of flora/fauna as a result of construction activity such as vegetation clearing;
- Impact on geological formations as a result of the proposed development;

D-1.2 Socio-Economic Impacts

- Impact of air pollution caused by dust during construction and fumes during construction;
- Impact of noise caused by construction and airport noise on the proposed development during the operational activity;
- Impacts on heritage resources and culture;
- · Impact on safety and security;
- Job creation during the construction and operational phases of the proposed project.
- Impacts on localised traffic;
- Impact on existing services;
- Compatibility with the municipal plans; and
- Impact on visual character.

D-2 IDENTIFICATION OF CUMULATIVE IMPACTS

Cumulative impacts, as illustrated below, occur as a result from the combined effect of incremental changes caused by other activities together with the particular project. In other words, several developments with insignificant impacts individually may, when viewed together, have a significant cumulative adverse impact on the environment (see Figure below).

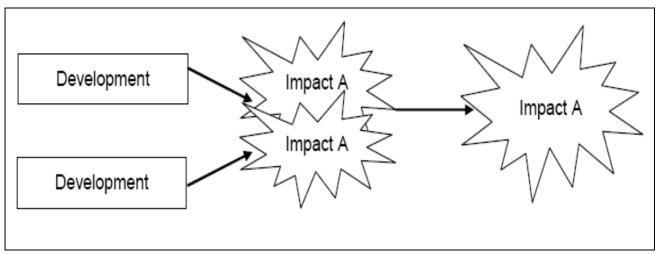


Figure 3: The identification of Cumulative Impacts

The following cumulative impacts have been identified in terms of the proposed development and warrant further investigation during the assessment phase:

- Cumulative impacts of the proposed development and other projects within the KSIA/DTP Precinct;
- Increased traffic associated with additional road users especially heavy-duty vehicles;
- Impact on the surrounding conservation areas and ecological linkages/corridors; and
- Cumulative loss of wetlands on a regional and local level.

SECTION E: ALTERNATIVES

E-1 IDENTIFICATION OF ALTERNATIVES

The EIA procedures and regulations stipulate that the environmental investigation needs to consider feasible alternatives for any proposed development. Therefore, a number of possible proposals or alternatives for accomplishing the same objectives should be identified and investigated. During the EIR phase of the project, the identified alternatives will be assessed, in terms of environmental acceptability as well as socio-economic feasibility. To define the term alternatives as per Government Notice No. 543 of the NEMA EIA Regulations 2010 means:

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- "...in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to:
- (a) The property on which or location where it is proposed to undertake the activity;
- (b) The type of activity to be undertaken;
- (c) The design or layout of the activity;
- (d) The technology to be used in the activity;
- (e) The operational aspects of the activity; and
- (f) The option of not implementing the activity."

The alternatives below will be further investigated during the EIR phase of the project:

Alternative 1: Site/ Location Alternatives:

The developer owns the site which is strategically located and in close proximity to the Phase 1 of Dube Trade Port and the KSIA. The development of the site would therefore be compatible with the adjacent land-uses, as services rendered by the proposed development will be complementary to the existing KSIA.

Alternative 2: Layout/ Design Alternatives:

Alternative layout/ design plans may evolve from the findings of specialist studies that will be undertaken to inform the EIR phase. Design and layout alternatives will be proposed based on the environmental sensitivities.

Alternatives which are compatible with adjacent and surrounding land uses, and compatible with the receiving environment will be presented and assessed, as well as land use options within the framework for the Airport City.

Alternatives with regards to the design and layout of the proposed development will be investigated and assessed within the EIR phase. There may be layout alternatives related to the wetlands and watercourses on site, which will be investigated.

Alternative 3: Land-use Alternatives:

Landuse alternatives would accommodate mixed use development including office park and hotels. The feasibility of such landuses will need to be further investigated at the EIA phase taking into account the noise contours associated with the King Shaka International Airport.

<u>Alternative 4: No Development Alternative:</u>

The 'no-go' or 'do nothing' alternative would be applicable if the proposed development is not approved by the DEA. Should the proposed development not be implemented, the study area will not be affected by any

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construction-related or operational phase impacts. Therefore, the present state of the biophysical, social and economic environment will remain, unaffected.

Rehabilitation of the site, erosion control and eradication of alien invasive plants will have a positive impact on the site and will complement the surrounding Durban Metropolitan Open Space System (DMOSS) should the no-go alternative be adopted.

SECTION F: PLAN OF STUDY FOR EIR PHASE

F-1 SCOPE AND PURPOSE OF THE EIR PHASE

The EIR phase will focus on the proposed Support Precinct 2 Development and the associated impacts thereof. The next step of the S&EIR process is the development of guidelines for the execution of the impact assessment and the compilation of an Environmental Impact Report, as well as an Environmental Management Programme (EMPr). The compilation of these documents will take into account all comments and concerns raised by I&APs which are captured within the CRR as well as the findings of various specialist studies.

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The Final Environmental Impact Report and EMPr will be submitted to the DEA for consideration towards environmental authorisation.

F-2 METHODOLOGY OF THE EIR PHASE

F-2.1 Specialist Investigations and Terms of Reference

A team of specialists were identified to provide technical and scientific input in assessing the impacts of the proposed Support Precinct 2 Development. The following specialist studies will be incorporated into the Draft Environmental Impact Report:

- Ecological (Flora and Fauna);
- · Engineering Services Report;
- Geohydrological Assessment;
- · Geotechnical Assessment;
- Emergency Response and Spill Contingency Plan;
- Floodline Determination Assessment;
- Heritage Impact Assessment;
- Screening Noise Assessment;
- Socio-Economic (Contributes to motivation);
- Traffic Impact Assessment;
- Wetland/Riparian Delineation and Functional Assessment; and
- Screening Risk Assessment for proposed on-site filling station.

The Environmental and Technical Investigation Team of Specialists will focus on discipline-specific problems and examine each significant issue in further detail through the relevant specialist studies.

As per the Environmental Management Guidelines, specialists' Terms of Reference (ToR) must be clearly defined and clarified. This is to ensure that the specialists have covered all the issues and topics in an appropriate manner and at an appropriate level of detail. The proposed studies will take into consideration the present state of the receiving environment and provide an assessment of the impacts likely to be associated with the proposed project, as well as mitigation measures to be used to minimise possible impacts. The ToR for each specialist study is explained in greater detail below.

F-2.1.1 Flora and Fauna Assessment

The Floral and Faunal Assessment will aim to:

• Describe the relevant baseline conditions relating to the natural vegetation communities and faunal species in the area of investigation;

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- Describe the anticipated environmental impacts on the natural vegetation and fauna during the construction and operational phases of the project;
- Describe how the negative environmental impacts will be managed;
- Assess the cross-boundary impacts and integration with the ecological corridors occurring within the adjacent DMOSS areas;
- Provide a description of the dominant and typical species occurring on site; and
- Provide a description of threatened, endemic or rare species to the Province, with an indication of the relative functionality and conservation importance of the specific community in the area under investigation.

F-2.1.2 Phase 1: Heritage Impact Assessment

A Heritage Impact Assessment will be undertaken in order to assess the impacts and significance in terms of culture and heritage on the site and propose mitigation measures. The ToR includes *inter alia*:

- A desk-top investigation of the area;
- A site visit to the proposed development site;
- Identify possible archaeological, cultural and historic sites within the proposed development area;
- Evaluate the potential impacts of construction and operation of the proposed development on archaeological, cultural and historical resources; and
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

F-2.1.3 . Wetland/Riparian Delineation and Functional Assessment

The Wetland/Riparian Delineation and Functional Assessment will aim to:

- Verify the boundary of the wetland/riparian habitat;
- Report on the status quo and current state of the wetland/riparian areas;
- Provide mitigation measures against any potential impacts on the wetland/riparian system during the planning of the proposed development;
- Illustrate the wetlands/riparian areas and their recommended buffer distances on a map;
- Assess the impact of cross-boundary wetlands and integration with the ecological corridors within the adjacent DMOSS areas;
- · Assess the cumulative impact on net loss of wetlands through infilling;
- Assess the opportunities and methods for offsets, if applicable;
- Determine whether, and to what extent, the proposed development will impact on (i) the biophysical functioning and dynamics of wetland systems and (ii) wetland determinants should the wetland areas be retained;
- Impact assessment and mitigation including rehabilitation measures and potential offset areas.

F-2.1.4 . Geotechnical Assessment

- To undertake a preliminary geotechnical investigation for the proposed development;
- Describe the underlying geology, presence of perched water table.
- To determine the potential geotechnical aspects of the site relevant to the proposed land uses i.e.:
 - Potentially problematic soil types, i.e. heaving/collapsing/compressible and anticipated foundation types required;
 - Excavatability, erodability;

- Steep slopes and potentially unstable slopes;
- Seepage zones;
- Construction material suitability, etc.
- A map and CAD files must be produced highlighting the above, where applicable;
- The geotechnical investigation should include an assessment of the dolerite intrusion in the south western corner of the site for potential roads borrow materials for use within the development.
- In addition, recommendations will be made with regard to the following:
 - Anticipated suitability of the materials for construction and for road layerworks; and
 - Anticipated foundation types required for structures relative to the prevailing conditions.

F-2.1.5 Floodline Assessment

The Floodline Determination Assessment will provide specialist advice on the hydrological assessment and hydraulic analysis relating to the impacts of flooding.

The tasks that must be performed towards the execution of a project of this nature would include the following:

- Task 1 Hydrological Assessment
 - o Rainfall Data Analysis
 - General Catchment Overview
 - Design Flood Estimation
 - Other information that must be derived during for the hydrological assessment must include the following:
 - · General description of the tributary and river channel
 - Details related to catchment land use

Task 2 Hydraulic Analysis

Creation of River Model and Floodline delineation

A baseline model which represents the existing river geometry and flood discharge values based on existing catchment runoff conditions will first be created. This model provides information on flood levels that would be expected under present catchment and river conditions. Floodline results will be presented in a GIS or AutoCAD format.

Flood Risk and Hazard Rating

Flood risk assessment basically involves assigning areas of a floodplain with different probabilities of being inundated.

The concept of a flood hazard rating is useful in determining those areas of a floodplain which present a hazard either to human life or structural integrity of buildings. The rating would take into account flow conditions such as depth and velocity. Address the impacts of changing weather conditions/climate change along the east coast in terms of floodline delineation and adaptation strategies.

Mitigation Options

This task must focus on determining whether the sites can be protected from flooding in a sustainable and economical way. This will result in defining proposed mitigation actions in the placement of the infrastructure necessary for the protection, it will also define areas of no-go in terms of the placement of the various proposed structures, this will be based mainly on the hazard ratings which are based on flow velocity and depth.

Task 3 Deliverables

- o AutoCAD A0 plotting size 1:100 year floodline drawings:
- o GIS format (WGS 84) 1: 100year floodlines submitted on a softcopy; and
- A report which will give a detailed description of the works conducted, peak discharge data, floodline data and properties/areas affected by the 1:100 year floodline shall be included in this report.

F-2.1.6 Socio-Economic Impact Assessment

The following procedure will be undertaken with regard to the Socio-Economic Assessment.

LITERATURE REVIEW

 To complete an examination of the relevant literature which pertains to this type of project and the various different aspects of the project.

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This will provide a best practice framework as well as an overview of potential issues which may arise.

The literature review will inform the Social Impact Assessment. This is through the insights gained which will allow for the specialist to engage with the issues which are highlighted and use them to frame the study of the proposed development. Thus the research is of great importance in directing the Social Impact Study and the findings will inform the questionnaires that are used when engaging with the stakeholders. This is through highlighting potential areas of contestation, issues of concern, as well as areas in which there are opportunities to maximise the benefits of projects and providing potential mitigation measures.

The specialist will undertake a thorough examination of the policy documents of the local and district municipalities. These will include the Spatial Development Framework (SDF) as well as the Integrated Development Plan (IDP) in order to ensure that the proposed project aids in meeting the objectives of these documents. The sustainability of the proposed project will be assessed to ensure the longevity and sustainability of the project, and that continued positive impacts accrue.

SCREENING REPORT

Following the project initiation meeting, the specialist will carry out an initial site inspection on the various components of the project. This will allow for the immediate investigation of the area and the identification of any obvious obstacles to any of the components, or highlight issues that should be monitored. The Social Specialist will also attend a Public Information Meeting. Here the specialist will minute the issues relevant to the Social Impact Assessment for further consideration.

The specialist will engage in consultation with the various stakeholders regarding the project components. This qualitative approach will prioritise individual in-depth interviews and focus groups. This approach is valued as it leads to the collection of detailed, dense, information that renders a large amount of information regarding the stakeholders' views on the proposed project. This approach respects the knowledge which the stakeholders have of the local environment and can identify potential effects which may not have been otherwise considered by the specialist team. These stakeholders will include local government authorities, traditional leaders, residents, farmers and ward councillors, as well as other stakeholders who emerge during the Public Information Meeting. Where focus groups are held, care will be given to ensuring that these occur in a manner which is not threatening to any party and which allows full participation. Therefore each interest group will be separately dealt with.

Following this, a Screening Report will be delivered, which will detail the preliminary findings which are identified regarding the various components of the proposed project. This report will provide an overview of the issues which will be investigated more rigorously in the SIA phase.

SOCIAL IMPACT ASSESSMENT

- To undertake a Social Impact Assessment (SIA) to understand the potential impacts of the development on the community.
- This will include a broad overview of the demographics of the area, the land use, policy frameworks and social trends experienced in the area and the eThekwini municipality.
- The SIA will also consider future socio-economic trends the area is likely to experience.
- The SIA will detail the current living conditions of the surrounding residents in terms of service levels, access to health and education and income levels.

 An examination of vulnerable groups and communities will also be undertaken, particularly with respect to the activities being proposed on site.

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- In-depth consultation with the community and the various stakeholder groups (including famers, traditional authorities, residents, schools and ward councillors) in order to determine their views and concerns regarding the process.
- All and any impacts which could occur as a result of the proposed project both positive and negative in nature – will be evaluated.

The compilation of the Social Impact Assessment will be informed by three key stages of research.

The first will be a literature review and desktop research which will have been completed focussing on the broader strategic policy documents, as well as various guidelines regarding best practice for this type of project. This will provide the overall context within which the proposed project falls and which will highlight certain key development imperatives. Issues raised in the Scoping phase will be further researched in this literature review.

The specialist will conduct stakeholder engagement in the second research stage that is specific to the Social Impact Assessment. This engagement will consist of one focus group meeting or in-depth interview (whichever is most suitable) with each of the following groups: farmers, business chamber, mines, community representative, NGO, government. The consultation with the government will include local and district municipality representatives. These consultations will ensure that the relevant stakeholders as well as the Interested and Affected Parties (I&APs) are all able to engage in the process and share their views on the proposed project. As per the above, this stakeholder engagement process will be qualitative in nature. However the literature review and desktop research will provide the quantitative background in terms of demographic statistics that are relevant to the area. This will ensure that the project meets the needs of the community and gains their support. Furthermore, by engaging with the I&APs, the project team will be exposed to unique ways in which to improve the project, mitigate harmful impacts and expand upon positive aspects of the proposed project.

The Final stage involves the analysis of the information which has been gathered in the research and literature review stage, and from the public consultation. This will be delivered in the Draft and Final Social Impact Assessment. The specialist will then present the draft report to the public at a public open day and public meeting. Any alterations which are required to be made to the Final Social impact assessment report will be included as required and the final input for inclusion in the Final Environmental Impact Assessment will be submitted.

F-2.1.7 Civil Engineering Services Report

The report will assess the existing services infrastructure and available capacity in terms of water supply, sewerage provision, solid waste disposal, stormwater management as a result of the proposed development, It will then investigate technical solutions for the provision of the above services in light of the various proposed land uses and anticipated demand to sustain long-term needs and make recommendations for required upgrades, if required or new infrastructure, where necessary.

Where upgrades and new service infrastructure are required, detailed information on the location, development footprint, capacity etc will be provided.

Where capacity is available to tap into the existing municipal infrastructure, the applicant will obtain a services agreement from the municipality.

The services report will provide detail on the stormwater management measures for the proposed development and illustrate all stormwater infrastructure on a site layout plan. Climate change/changes to the weather patterns along the east coast must be addressed in the stormwater management plan.

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With regard to solid waste removal, the report will indicate how this will be managed and measures will be suggested for waste minimisation.

The electrical services report will investigate the existing electrical infrastructure and the available capacity. It will also indicate the electrical load requirements for the proposed development and make recommendations for infrastructure requirements to accommodate the proposed development.

F-2.1.8 Geohydrology

Desktop assessments and site visits will be undertaken to serve as an initial data collection and site familiarisation phase. The outcome of this phase will be a preliminary report that highlights critical aspects that may be at risk (i.e. shallow groundwater that can lead to unstable foundations).

Phase 1: Preliminary Report

- a) Data Collection
 - All geohydrological information, available from the public domain will be accumulated.
 - Public domain data will include:
 - o Google satellite images;
 - 1: 50 000 Topographical Maps;
 - o 1: 250 000 Geological Maps;
 - o Hydrogeological Maps;
 - Groundwater Databases (KZN Groundwater Resources Information Project data from the Department of Affairs);
 - Geological and geohydrological literature pertaining to the study area.

b) Data Capture, Collation and Mapping

This data will be consolidated into a Geographic Information System (GIS) based database for interpretation, mapping and spatial representation.

c) Hydrogeology

The following geohydrological data will be represented spatially:

- Location and distribution of groundwater supply boreholes;
- Major mapped geological structures and discontinuities which may offer zones of higher groundwater development potential;
- Potentially sensitive groundwater resources;
- The proximity of all surface water bodies to be established within a 1km radius of site;
- 1:50 and 1:100 year flood line relating to rivers on site and in vicinity of the site will be established and demarcated on map.

Phase 2: Hydrogeological Assessment

A groundwater assessment will be conducted to cover the critical aspects identified in Phase 1. The scope of work for this phase can only be anticipated at this stage but could change as gaps are identified during phase 1. The project engineer as well as a hydrologist will be consulted to determine any infrastructural areas that will affect groundwater as well as the surface water/groundwater interaction.

a) Field Work

On completion of the data collection, consolidation and initial spatial mapping, gaps in the available geological and geohydrological data will be identified.

b) Groundwater and Surface Water Sampling

Groundwater samples will be collected from the available boreholes. Surface water sampling will be conducted upstream and downstream of the site to determine the impact of the proposed filling station. These samples will be submitted to an accredited laboratory for analyses according to the SANS 241-1:2011 standards for human consumption to verify available chemistry data.

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Phase 3 - Reporting

All data and maps will be compiled into a Geohydrological Assessment Report, which will detail the findings of the geohydrological investigations. Additionally, this report will outline the proposed groundwater monitoring and management for the project. Data will be interpreted and discussed for the study area. Areas of sensitive geohydrological settings will be highlighted, along with any other issues identified during the investigation.

F-2.1.9 Environmental Noise Screening Report

As mentioned in the Local Area Plan (LAP): Northern Urban Development Corridor (NUDC) for the Tongaat-DTP Local Area (2010), the operations of King Shaka International Airport and Dube Trade Port have a negative impact on neighbouring land uses due to noise. This is particularly applicable to residential neighbourhoods where the ambient noise exceeds acceptable levels. For planning purposes, the Ethekwini Municipality has adopted an 'in-principle' decision to use the noise contours for the 2035 development footprint of the airport as a guideline to directing urban development. Any development within the 55dB DNL (Day Night Average Sound Level)10 contour is considered sensitive to noise (SANS 1010) and must adhere to additional development controls if permitted. No permanent residential development is permitted within the 55dB DNL (2035) noise contour i.e. tourist accommodation permissible with sound attenuation.

- The baseline/scoping assessment must be completed as per the requirements of SANS 10103:2008 as well as SANS 10328.
- The identification of potential noise-sensitive receptors using available information (GoogleEarth, EIAs
 in Public Domain, Noise Impact Assessment for the proposed King Shaka International Airport),
 supported by a site visit (during the field work phase);
- The development site must be investigated in terms of the sensitive noise zones of 55dB for 2015 and 2035.
- Measurement of the background noise levels must be undertaken at the site;
- Data acquiring: including, GIS maps for sound level contours, flight paths, airplane specifications and data management.
- The noise measurements as obtained during fieldwork will be displayed in an appropriate scale on a topographical map, using contours of constant sound levels, if relevant.
- In view of the close proximity of the proposed development to the airport, recommendations/mitigation measures for the design of the proposed buildings on site must incorporate noise reduction principles to minimize noise impacts on the occupants (especially proposed office block and hotel).
- The compilation of an Environmental Noise Screening Report for the EIR Phase as per SANS 10328:2008.

F-2.1.10 Emergency Preparedness and Response, and Spill Contingency Plan

 An Emergency Preparedness and Response Plan must be compiled that outlines the identification of training needs and environmental awareness training, training methods and the training record, employee communication process, roles and responsibilities, response to environmental emergencies, Emergency Plan, identification of environmental risks reporting of emergencies, records of responses/incidences, description of solutions to risks;

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¹⁰ DNL is Day Night Average Sound Level – recognised industry standard to measure average aircraft noise levels over a 24 hour period.

The Spill Contingency Plan must outline the procedures to be undertaken to ensure that, the
operation prevents spills and, in the event that spills occur, respond appropriately and in accordance
with this procedure.

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 This procedure must cover both the construction and operational phases of the proposed development, with recommendations of the steps to be taken in the event of a spill and the necessary reporting procedure to be undertaken and remediation measures.

F-2.1.11 Traffic Impact Assessment

A broad-scale Traffic Impact Assessment (TIA) was conducted for the KSIA/DTP Precinct and also covered the proposed Support Precinct 2 development. However, the traffic impacts relating to the proposed development will be considered in detail and a traffic impact assessment will be undertaken.

The TIA will evaluate the traffic impact on the road network surrounding the site, as a result of the proposed land uses envisaged for the proposed Support Precinct 2.

The scope of the TIA, will focus on the following traffic related aspects:

- Manual traffic counts at the affected intersections (if required);
- Determine the vehicle trips generated by the proposed development and estimate the
- distribution of these trips based on the current traffic flows and local knowledge;
- Determine the ability of the surrounding road network to accommodate the anticipated volumes of traffic during AM and PM peak hours;
- Propose road upgrades, if required;
- Proposed access arrangements to the site and provide technical details of road length, width etc;
- Sight distance requirements;
- Parking requirements; and
- Site access requirements.

F-2.1.12 Screening Risk Assessment for Proposed On-Site Filling Station

A Screening Risk Assessment will be undertaken at the EIR phase for the proposed on-site filling station. A quantitative assessment will be carried out for the risk posed by the processes, operations and fuel handling and storage facilities. The assessment will comprise the following tasks:

- Assessment of drawings, maps, procedures, failure modes, and causes e.g. rupture, leaks, venting etc
- Performing a consequence analysis to identify the effects of the major hazards.
- Proposing recommendations to either reduce or eliminate the risk.
- Proposing an emergency plan and procedures to deal with these major hazards.

All the information, analysis, assessments and conclusions as detailed above will be compiled in a report.

F-2.2 Approach to Assessment of Impacts

The EAP in association with the relevant specialists will provide an outline of the approach used in the study. Assumptions and sources of information will also be clearly identified.

F-2.2.1 Impact Identification and Assessment

The EAP must make a clear statement, identifying the environmental impacts of the construction, operation and management of the proposed development. As far as possible, the EAPs must quantify the suite of potential environmental impacts identified in the study and assess the significance of the impacts according to the criteria set out below. Each impact will be assessed and rated. The assessment of the data must, where possible, be based on accepted scientific techniques, failing which the specialist is to make judgements based

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on his/ her professional expertise and experience.

F-2.2.2 Assessment Procedure: Proposed Impact Assessment Methodology

For the purpose of assessing impacts during the EIR phase of the project to follow, the project will be divided into two phases from which impacting activities can be identified, namely:

Construction Phase: All the construction related activities on site, until the contractor leaves the site.

Operational Phase: All activities, including the operation and maintenance of the proposed development.

The activities arising from each of these phases will be included in the impact assessment tables. This is to identify activities that require certain environmental management actions to mitigate the impacts arising from them. The methodology for assessment of impacts is as per Section 31(2)(h) of GNR No. 543.

The assessment of the impacts will be conducted according to a synthesis of criteria required by the integrated environmental management procedure.

Extent The physical and spatial scale of the impact.	Footprint	The impacted area extends only as far as the activity, such as footprint occurring with the total site area.					
	Site	The impact could affect the whole, or a significant portion of the site.					
	Regional	The impact could affect the area including the neighbouring farms, the transport ro					
		and the adjoining towns.					
phys	National	The impact could have an effect that expands throughout the country (South Africa).					
The	International	Where the impact has international ramifications that extend beyond the boundaries of South Africa.					
Duration The lifetime of the impact, that is measured in relation to the lifetime of the proposed development.	Short Term	The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than that of the construction phase.					
	Short-Medium Term	The impact will be relevant through to the end of a construction phase.					
	Medium Term	The impact will last up to the end of the development phases, where after it will be entirely negated.					
	Long Term	The impact will continue or last for the entire operational lifetime of the development, bu will be mitigated by direct human action or by natural processes thereafter.					
	Permanent	This is the only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.					
Intensity Is the impact destructive or benign, does it destroy the impacted environment, alters its functioning, or slightly alter the environment itself?	Low	The impact alters the affected environment in such a way that the natural processes or functions are not affected.					
	Medium	The affected environment is altered, but functions and processes continue, albeit in a modified way.					
	High	Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.					
bility e ood of pacts ally ring.	Improbable	The possibility of the impact occurring is none, due either to the circumstances, design or experience. The chance of this impact occurring is zero (0%).					
Probability The likelihood of the impacts actually occurring.	Possible	The possibility of the impact occurring is very low, due either to the circumstances, design or experience. The chances of this impact occurring is defined as 25%.					

Likely

Highly Likely

Definite

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Mitigation - The imp	pacts that are	generated by	the deve	elopment ca	an be mi	inimised if m	easures are
implemented in order to reduce the impacts. The mitigation measures ensure that the development considers							
the environment and	the predicted	l impacts in	order to	minimise	impacts	and achieve	sustainable
development.							

The impact will take place regardless of any prevention plans, and only mitigation actions

or contingency plans to contain the effect can be relied on. The chance of this impact

Determination of Significance - Without Mitigation - Significance is determined through a synthesis of impact characteristics as described in the above paragraphs. It provides an indication of the importance of the impact in terms of both tangible and intangible characteristics. The significance of the impact "without mitigation" is the prime determinant of the nature and degree of mitigation required. Where the impact is positive, significance is noted as "positive". Significance will be rated on the following scale:

No significance: The impact is not substantial and does not require any mitigation action;

defined as 75%.

occurring is defined as 100%.

<u>Low:</u> The impact is of little importance, but may require limited mitigation;

Medium: The impact is of importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels; and

High: The impact is of major importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

Determination of Significance - With Mitigation - Determination of significance refers to the foreseeable significance of the impact after the successful implementation of the necessary mitigation measures. Significance with mitigation will be rated on the following scale:

No significance: The impact will be mitigated to the point where it is regarded as insubstantial; Low: The impact will be mitigated to the point where it is of limited importance;

Low to medium: The impact is of importance, however, through the implementation of the correct mitigation measures such potential impacts can be reduced to acceptable levels;

Medium: Notwithstanding the successful implementation of the mitigation measures, to reduce the negative impacts to acceptable levels, the negative impact will remain of significance. However, taken within the overall context of the project, the persistent impact does not constitute a fatal flaw;

Medium to high: The impact is of major importance but through the implementation of the correct mitigation measures, the negative impacts will be reduced to acceptable levels; and

High: The impact is of major importance. Mitigation of the impact is not possible on a cost-effective basis. The impact is regarded as high importance and taken within the overall context of the project, is regarded as a fatal flaw. An impact regarded as high significance, after mitigation could render the entire development option or entire project proposal unacceptable.

Assessment Weighting - Each aspect within an impact description was assigned a series of quantitative criteria. Such criteria are likely to differ during the different stages of the project's life cycle. In order to establish a defined base upon which it becomes feasible to make an informed decision, it will be necessary to weigh and rank all the identified criteria.

Ranking, Weighting and Scaling - For each impact under scrutiny, a scaled weighting factor will be

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attached to each respective impact. The purpose of assigning such weightings serve to highlight those aspects considered the most critical to the various stakeholders and ensure that each specialist's element of bias is taken into account. The weighting factor also provides a means whereby the impact assessor can successfully deal with the complexities that exist between the different impacts and associated aspect criteria.

Simply, such a weighting factor is indicative of the importance of the impact in terms of the potential effect that it could have on the surrounding environment. Therefore, the aspects considered to have a relatively high value will score a relatively higher weighting than that which is of lower importance (See Figure below: Weighting description).

Extent	Duration	Intensity	Probability	Weighting Factor (WF)	Significance Rating (SR)	Mitigation Efficiency (ME)	Significance Following Mitigation (SFM)
Footprint	Short term 1	Low	Probable	Low	о-19	High	0-19
						/	
Site 2	Short to medium 2		Possible 2	Lowto medium 2	Low to medium 20-39	Medium to high 0,4	Low to medium 20-39
Regional	Medium term	Medium	Likely	Medium	Medium	Medium	Medium
3	3	3	3	3	40-59	0,6	40-59
National 4	Long term 4		Highly Likely 4	Medium to high 4	Medium to high 60-79	Low to medium 0,8	Medium to high 60-79
International	Permanent	High	Definite	High	High	Low	High
5	5	5	5	5	80-100	1,0	80-100

Figure 4: Description of bio-physical assessment parameters with its respective weighting

Identifying the Potential Impacts Without Mitigation Measures (WOM) – Following the assignment of the necessary weights to the respective aspects, criteria are summed and multiplied by their assigned weightings, resulting in a value for each impact (prior to the implementation of mitigation measures).

Equation 1: Significance Rating (WOM) = (Extent + Intensity + Duration + Probability) x Weighting Factor

Identifying the Potential Impacts With Mitigation Measures (WM) – In order to gain a comprehensive understanding of the overall significance of the impact, after implementation of the mitigation measures, it will be necessary to re-evaluate the impact.

Mitigation Efficiency (ME) – The most effective means of deriving a quantitative value of mitigated impacts is to assign each significance rating value (WOM) a mitigation effectiveness (ME) rating. The allocation of such a rating is a measure of the efficiency and effectiveness, as identified through professional experience and empirical evidence of how effectively the proposed mitigation measures will manage the impact.

Thus, the lower the assigned value the greater the effectiveness of the proposed mitigation measures and subsequently, the lower the impacts with mitigation.

Equation 2: Significance Rating (WM) = Significance Rating (WOM) x Mitigation Efficiency
Or
WM = WOM x ME

Significance Following Mitigation (SFM) – The significance of the impact after the mitigation measures are taken into consideration. The efficiency of the mitigation measure determines the significance of the impact. The level of impact will, therefore, be seen in its entirety with all considerations taken into account.

F-2.2.3 Integration of Specialist's Input

In order to maintain consistency in the impact assessment, it is suggested that all potential impacts to the environment (or component of the environment under review) should be listed in a table similar to the example shown below (more than one table will be required if impacts require assessment at more than one scale). The assessment parameters used in the table should be applied to all of the impacts and a brief descriptive review of the impacts and their significance will then be provided in the text of the specialist reports and consequently in the EIR. The implications of applying mitigation are reviewed in Section F-2.2.4 below.

Table 4: Example of an Impact Table

Nature		Status	-
Impact source(s)		·	
Affected stakeholders			
	Extent		
	Intensity		
Magnitude	Duration		
	Reversibility		
	Probability		
Significance	Without mitigation		Н
Significance	With mitigation		L
Confidence			

F-2.2.4 Mitigation Measures

Mitigation measures will be recommended in order to enhance benefits and minimise negative impacts and they will address the following:

- <u>Mitigation objectives:</u> what level of mitigation must be aimed at: For each identified impact, the
 specialist must provide mitigation objectives (tolerance limits) which would result in a measurable
 reduction in impact. Where limited knowledge or expertise exists on such tolerance limits, the
 specialist must make an "educated guess" based on his/ her professional experience;
- Recommended mitigation measures: For each impact the specialist must recommend practicable
 mitigation actions that can measurably affect the significance rating. The specialist must also
 identify management actions, which could enhance the condition of the environment. Where no
 mitigation is considered feasible, this must be stated and reasons provided;
- <u>Effectiveness of mitigation measures:</u> The specialist must provide quantifiable standards (performance criteria) for reviewing or tracking the effectiveness of the proposed mitigation actions, where possible; and
- Recommended monitoring and evaluation programme: The specialist is required to recommend an appropriate monitoring and review programme, which can track the efficacy of the mitigation objectives. Each environmental impact is to be assessed before and after mitigation measures have been implemented. The management objectives, design standards, etc., which, if achieved, can eliminate, minimise or enhance potential impacts or benefits. National standards or criteria are examples, which can be stated as mitigation objectives.

Once the above objectives have been stated, feasible management actions, which can be applied as mitigation, must be provided. A duplicate column on the impact assessment tables described above will indicate how the application of the proposed mitigation or management actions has reduced the impact. If the proposed mitigation is to be of any consequence, it should result in a measurable reduction in impacts (or, where relevant, a measurable benefit).

F-2.3 Approach to the Assessment of Cumulative Impacts

Cumulative impacts can arise from one or more activities. A cumulative impact may result in an additive impact i.e. where it adds to the impact which is caused by other similar impacts or an interactive impact i.e. where a cumulative impact is caused by different impacts that combine to form a new kind of impact. Interactive impacts may be either countervailing (the net adverse cumulative impact is less than the sum of the individual impacts) or synergistic (the net adverse cumulative impact is greater than the sum of the individual impacts).

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Possible cumulative impacts of the project will be evaluated in the EIR. In addition, various other cumulative impacts e.g. other external impacts that could arise from the project will be further investigated in the EIR phase of the project.

The assessment of cumulative impacts on a study area is complex; especially if many of the impacts occur on a much wider scale than the site being assessed and evaluated. It is often difficult to determine at which point the accumulation of many small impacts reaches the point of an undesired or unintended cumulative impact that should be avoided or mitigated. There are often factors which are uncertain when potential cumulative impacts are identified.

F-2.3.1 Steps in Assessing Cumulative Impacts

The assessment of cumulative impacts will not be done separately from the assessment of other impacts. Cumulative impacts however, tend to have different time and space dimensions and therefore require specific steps. This may even mean that some of the actions in the assessment process, that preceded general impact identification, may have to be revisited after potential cumulative impacts have been identified. This will ensure that the scope of the EIR process is adequate to deal with the identified cumulative impacts.

Three (3) general steps, which are discussed below, will be recommended to ensure the proper assessment of cumulative impacts.

F-2.3.2 Determining the Extent of Cumulative Impacts

To initiate the process of assessing cumulative impacts, it is necessary to determine what the extent of potential cumulative impacts will be. This will be done by adopting the following approach:

- Identify potentially significant cumulative impacts associated with the proposed activity;
- Establish the geographic scope of the assessment;
- Identify other activities affecting the environmental resources of the area; and
- Define the goals of the assessment.

F-2.3.3 Describing the Affected Environment

The following approach is suggested for the compilation of a description of the environment:

- Characterise the identified external environmental resources in terms of their response to change and capacity to withstand stress;
- Characterise the stresses affecting these environmental resources and their relation to regulatory thresholds; and
- Define a baseline condition that provides a measuring point for the environmental resources that will be impacted on.

F-2.3.4 Assessment of Cumulative Impacts

The general methodology which is used for the assessment of cumulative impacts should be coherent and should comprise of the following:

 An identification of the important cause-and-impact relationships between proposed activity and the environmental resources;

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- A determination of the magnitude and significance of cumulative impacts; and
- The modification, or addition, of alternatives to avoid, minimize or mitigate significant cumulative impacts.

F-3 PUBLIC PARTICIPATION PROCESS DURING THE EIR PHASE

F-3.1 Stakeholder Engagement

All I&APs registered on the project's database will be kept informed of the EIA process. Notification letters will be submitted informing all registered I&APs of the availability of draft and final Environmental Impact Reports and EMPrs for review and comment.

All comments and/or concerns received via telephone, fax, email or post will be incorporated into a Comment and Response Report (CRR) and included within the Final Environmental Impact Report. All correspondence received will be acknowledged.

F-3.2 Public Review of the Draft Environmental Impact Report

It is proposed that the Draft Environmental Impact Report will be available for comment at the public venue towards May 2014. The report will also be available on SEF's website (www.sefsa.co.za).

F-3.3 Public Review of the Final Environmental Impact Report

It is proposed that the Final Environmental Impact Report will be available for comment at the public venue from around July 2014. The report will also be available on SEF's website (www.sefsa.co.za). The public review period of the final report will run concurrently with the submission of the final report to the DEA for consideration towards environmental authorisation.

SECTION G: CONCLUSION AND RECOMMENDATIONS

In accordance with GN No. 543, the Amended Draft Scoping Report is aimed at describing the proposed activity and those reasonable alternatives that have been identified, as well as the receiving environment that may be affected by the proposed project. In accordance with the EIA Regulations, an identification of relevant legislation and guidelines was also given, as well as a description of the public participation process that was and will be followed.

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In conclusion, the Final Scoping Report established the scope of the proposed project throughout its phases, as well as its key impacts on the receiving and surrounding environments. The project motivation has also been described. The Final Scoping Report also sets out the proposed scope of the EIR phase that will be undertaken for the proposed project (Section F).

Comments and/or concerns identified by Interested and Affected Parties (I&APs) during the review period of the Draft, Amended and Final Scoping Report (Round 1) have been incorporated into the Final Scoping Report (Round 2) for further investigation during the EIR Phase to follow. The Final Scoping Report has been submitted to the DEA for consideration, together with the Plan of Study for the EIR phase of the project and other relevant supporting information. All comments received on the Final Scoping Report will also be forwarded to the DEA for consideration.

The EAP proposes that, on the basis of the information contained in this Scoping Report, that the DEA accept the Scoping Report and Plan of Study for the EIR phase and allow the EAP to proceed with the EIR phase of the project, such that the more pertinent issues can be thoroughly investigated and assessed, in terms of their significance and impact.

The ability to mitigate any of the potential impacts identified in this Scoping Report will also be investigated during the EIR phase and summarised into a working/ dynamic Environmental Management Programme (EMPr) for consideration by I&APs and ultimately by the DEA.

SECTION H: REFERENCES

Department of Environmental Affairs and Tourism. 2001. ENPAT. Pretoria: DEAT.

Department of Rural Development and Land Reform. Chief Directorate: Surveys and Mapping 2009: Hydrology. Cape Town: CDSM

eThekwini Municipality. Integrated Development Plan (IDP) 5 year plan, 2012/2013 Annual Review. June 2012.

South African National Botanical Institute (SANBI). 2006. Vegmap. Cape Town.

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SECTION I: APPENDICES

Appendix 1: Locality Map and Preliminary Site Layout Map

Appendix 2: Authority Correspondence

Appendix 3: Public Participation