

AECOM

RICHARDS BAY PORT EXPANSION

SOCIAL IMPACT ASSESSMENT

Specialist Study Report

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SOCIAL IMPACT ASSESSMENT

Specialist Study Report

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EXECUTIVE SUMMARY

INTRODUCTION

Background

The Port of Richards Bay is situated 160 km north-east of Durban and 465 km (by road) south-west of Maputo, Mozambique. Currently, the port occupies 2,157 ha of land and 1,495 ha of water but has the potential to expand. Studies suggest that there is to be a sharp increase in demand for rail, road and harbour bound conveyor linked industry over the next ten years. Therefore, Transnet has identified the need to expand and recapitalise facilities in the Port of Richards Bay to cater for this increase in demand.

In order to investigate different alternatives for the expansion of the port, a conceptual study for the Richards Bay Port Expansion Programme was undertaken by Aurecon (completed during July 2012). The investigations have since progressed through the pre-feasibility phase during which time a preferred option was identified to be investigated during the feasibility phase. The feasibility phase is inclusive of an application for environmental authorisation and detailed engineering design. Following the completion of scoping, the need for a Social Impact Assessment (SIA) was identified. In this regard, AECOM appointed ACER to undertake an SIA for the Richards Bay Port Expansion Programme.

Purpose and scope of this specialist study report

The following scope was agreed between ACER and AECOM:

- Phase 1 – Scoping.
The scoping phase of the project was to include an intensive desktop analysis of existing reports, maps and images of the study area. In addition, during scoping, a site visit was to be conducted to verify findings from the desktop assessment. The scope of services for the scoping phase included:
 - Desktop description of the social environment.
 - Stakeholder identification and analysis.
 - Identification and description of any sensitive receptors that occur in the study area.
 - Screening to identify any critical social issues (potential fatal flaws).
 - Identification and description of potential impacts that may result from the proposed activity.
 - Identification of gaps in knowledge or data.
 - Identification of impacts which require further investigation during the EIA phase.
 - Identification of legal provisions.

- Phase 2 – EIA/Environmental Management Programme (EMPr) level assessment.
On completion of the scoping phase and the identification of alternatives, the EIA/EMPr phase commenced. The EIA phase was inclusive of a further site visit and included the following:
 - Baseline social environment.
 - A detailed social impact assessment based on the proposed activities and the alternatives identified during scoping. Impacts were assessed for each phase of the project.
 - Impacts were assessed in accordance with an agreed methodology to determine significance. This is inclusive of residual and latent impacts after mitigation.
 - Contribution to the preparation of a detailed site-specific EMPr.

- Identification and recommendation of practical mitigation and management measures to reduce potential negative impacts and enhance positive aspects.
- Compilation of an Action Plan for the management of all identified impacts and implementation of the proposed mitigation measures.
- Identification of gaps in knowledge.

Given that ACER was appointed after scoping had been completed, the two phases were collapsed into one.

Legal aspects and planning guidelines

The following legislation and associated regulations are relevant to this SIA:

- ❑ Constitution of the Republic of South Africa Act, 1996 (Act No. 108 of 1996) as amended.
- ❑ National Environmental Management Act, 1998 (NEMA) (Act No. 107 of 1998) as amended.

The following planning documents are relevant to the proposed Richards Bay Port Expansion.

- ❑ Transnet Long Term Planning Framework 2014 – Chapter 4 Port Development Plan.
- ❑ City of uMhlathuze Integrated Development Plan 2014 – 2015.

Project description

Study area

The study area is situated within the City of uMhlathuze Local Municipality (LM). The natural environment in this area is highly sensitive and under severe development pressure. The local landscape is characterised by an interconnected network of hydrological ecosystems. It also sustains a growing population in an area with very high levels of poverty. As the port expansion is beneficial to more than just the Port of Richards Bay, the study area was delineated as: primary study area (Port of Richards Bay), secondary study area (Richards Bay and surrounding settlements) and tertiary study area (KwaZulu-Natal province and South Africa).

Project activities

The proposed project entails the following:

- ❑ Extension of the existing railway lines with a rail balloon with a split off for Ferro-Manganese, a short train arrival yard and a long train arrival yard.
- ❑ Construction of new railway siding to the 600 series berths.
- ❑ Construction of 2 new Tipplers (i.e. rail unloading equipment).
- ❑ Relocation of the break-bulk from the eastern side of the port behind the 700 series berths to the western side of the port next to the 600 series berths.
- ❑ Construction of a new discard coal stockpile on the eastern side of the port behind the 700 series berths.
- ❑ Expansion of the magnetite facility to the south.
- ❑ Extension of the existing ferro manganese slab by 260 m to the east.
- ❑ Construction of a new ferro manganese slab 780 m in length to the south of the existing ferro manganese slab.
- ❑ Upgrading or realignment of existing roads within the port.
- ❑ Construction of a new road-over-rail bridge at the eastern entrance to the port.
- ❑ Construction of 32 conveyors totalling approximately 13 kilometres.
- ❑ Construction of a new 142,030 m² container handling terminal.
- ❑ Construction of two new Panamax shipping berths at the 600 series berths, with associated dredging of a channel to a depth of 14 m and an 800 m turning circle.
- ❑ Extension of the Finger Jetty (800 series berths) with two new Capesize coal shipping berths, requiring significant dredging around the existing Finger Jetty.

- ❑ Construction of a new 610,000 m³ stormwater surge dam inside the rail balloon, water pump stations, and upgrading of drains throughout the port.
- ❑ Development of a waste transfer station inside the port, which will serve as the 'nerve centre' for managing waste in the port.
- ❑ Construction of a facility to discharge dredged material from the proposed construction of the berths or disposal of the dredged material off-shore.

Description of the receiving environment

Demographics

The study area is located in Richards Bay on the east coast of South Africa within the KwaZulu-Natal province. Richards Bay is situated in the City of uMhlathuze LM which falls under the jurisdiction of the uThungulu District Municipality (DM). Richards Bay has developed into an industrial city with several large-scale industries. The town is surrounded by agricultural activities and is interspersed with rural settlements with small-scale agriculture, much of which take places on traditional authority land. The City of uMhlathuze is strategically placed along the N2 national route, and is linked to the economic hub of South Africa, Gauteng, via railway and road, and is in close proximity to the King Shaka International Airport and the Dube Trade Port. In addition, the City of uMhlathuze is home to the largest deep-water port in Africa with an Industrial Development Zone in close proximity to the port.

Population

Data from the 2011 national census show that the population within the City of uMhlathuze LM is 334,459 persons. The growth rate experienced is reportedly higher than that experienced by the uThungulu DM and the province. In 2011, 67% of the population in the City of uMhlathuze LM were reported to be between the ages of 15 and 64, which is noticeably higher than the uThungulu DM and the province. An increase in the population within the ages of 15 – 64 can be seen as a positive development as it indicates that there are a higher number of people within the potentially economically active sector of the population.

Education

Between 2001 and 2011, there has been a significant decrease in the percentage of the population over the age of 20 within the City of uMhlathuze LM reporting no access to formal education while there has been an increase in the percentage of this sector of the population reporting a Grade 12 level of education. Access to education in the City of uMhlathuze LM is overall better than the district and provincial averages.

Unemployment

Despite improvements between 2001 and 2011, unemployment within the City of uMhlathuze LM remains high at 31%. This, however, is below the level of unemployment reported for the uThungulu DM and KwaZulu-Natal, but higher than the national average.

Economic indicators

Income and expenditure patterns

Richards Bay had an average monthly income of R 23,130 (higher than the national, provincial and district levels) with a significantly smaller portion of households living on less than R 3,200 per month. The relatively high average income is likely attributable to the high level of industrialisation in Richards Bay.

The economy and its structure

Economic production and Gross Domestic Product per Region (GDP-R)

The GDP-R of the City of uMhlathuze LM was valued to be R 23,946 million in 2013 current prices. This is equal to a per capita GDP-R of R 70,310, which is significantly higher than the national and provincial economies. Another important indicator of the well-being of a region's economy is the rate at which it is growing. Between 2003 and 2013, the City of uMhlathuze LM's economy grew on average 3% per year. This is lower than the national CAGR of 3.4% per annum.

Sectoral employment structure

Sectoral employment patterns are similar across all sectors with the only difference being the relatively high importance of the agricultural sector in the DM; 7.19% compared with 3.89% and 4.3% in the LM and province, respectively. Within the City of uMhlathuze LM, the greatest contributor towards employment creation is the utilities sector, creating almost a quarter of employment opportunities within the local economy. The manufacturing sector, which comprises 20% of the economy, creates 7.74% of the employment opportunities within the LM's economy.

Access to basic services

Access to water

Access to piped water improved significantly within the City of uMhlathuze LM between 2001 and 2011, with 92% of all households reported to have access to piped water either within their household or within their yard.

Access to sanitation

Improvements to sanitation have been experienced by households throughout KwaZulu-Natal, within the uThungulu DM and within the City of uMhlathuze LM. This is evident in the reduction in the number of households without access (16% to 7% (KZN), 30% to 13% (uThungulu) and 9% to 4% (City of uMhlathuze)).

Access to electricity

Access to electricity for lighting (the most basic level of access) within the City of uMhlathuze LM is better than access on a district and provincial level. However, noticeable improvements have been seen throughout KwaZulu-Natal between 2001 and 2011.

Access to healthcare

Primary healthcare within the municipality is provided from two main clinics, one in Richards Bay and one in Empangeni, supported by satellite clinics. The main healthcare conditions reported are hypertension, diabetes and tuberculosis. Sexually transmitted infections are reported to remain a growing concern within the municipality.

Description of findings

Social change processes

"Social change processes are set in motion by project activities or policies. Depending on the characteristics of the local social setting and mitigation processes that are put in place, social change processes can lead to social impacts" (Vanclay, 2003). The following social change processes have been identified as potentially occurring as a result of the proposed project.

- Demographic processes.
 - In-migration,
- Economic processes.
 - Waged labour.
 - Indirect economic opportunities.

- Geographical processes.
 - Conversion and diversification of land use.
 - Enhanced transportation systems.
- Socio-cultural processes.
 - Deviant social behaviour.

Social impacts during construction

The following social impacts have been identified as potentially occurring during the construction phase of the proposed project.

- Health and social wellbeing.
 - Increased spread of disease.
 - Reduced road safety.
 - Increase in informal dwellers and/or destitute people.
- Quality of the living environment.
 - Increased noise.
 - Increased pressure on road and services infrastructure.
 - Increased air emissions and dust.
 - Increased criminal activity.
 - Loss of recreational areas.
- Economic impacts.
 - Increased employment opportunities.
 - Increased opportunities for local service providers.
 - Increased investment.
 - Disruption to port activities.
- Institutional, legal, political and equity impacts.
 - Opposition to the public participation process.

Social impacts during operations

The following social impacts have been identified as potentially occurring during the operational phase of the proposed project.

- Health and social wellbeing.
 - Reduced road safety.
 - Increased air emissions and dust.
- Quality of the living environment.
 - Increased noise.
 - Increased pressure on road and services infrastructure.
- Economic impacts.
 - Increased employment opportunities.
 - Increased investment.

Social impacts during decommissioning

Considering the nature of the project, it is unlikely that the complete decommissioning of the port will take place in the foreseeable future but rather that specific sections may be decommissioned or upgraded overtime. In this regard, it is likely that the social impacts that may occur will be similar in nature to those that occur during construction.

Mitigation and management of impacts**During construction*****Increased spread of disease***

- An HIV and AIDS awareness/education component should be included in the induction programme for all personnel working on the proposed project.
- Ensure there is easy access to HIV and AIDS related information and condoms for all workers involved with the proposed project.
- Encourage voluntary HIV and AIDS counselling and testing.

Reduced road safety

- The Traffic Specialist should develop a traffic management plan, which should be implemented throughout all stages of construction.

Increase in informal dwellers and/or destitute people

- Inform the City of uMhlatuze LM of the possibility of an increase in informal dwellers and/or destitute people.
- Provide clarity in the media regarding the available number of jobs so that there are not raised expectations, which hopefully will reduce population in-migration.

Increased noise

- Noise suppression techniques should be used as far as possible.
- Avoid construction before sunrise and after sunset.
- Inform neighbouring residential areas and businesses beforehand if excessively high noise generating activities are going to be taking place.

Increased pressure on road and services infrastructure

- Communicate with the relevant authorities regarding water and electrical requirements.
- Follow recommendations provided in the traffic management plan.

Increased air emissions and dust

- Ensure that dust suppression techniques are practiced, such as spraying of exposed areas with water to suppress dust.
- Keep exposed surfaces to a minimum and for the shortest possible time.
- Ensure that air emissions are within the required legal limits.

Increased criminal activity

- Construction staff should be clearly identified by wearing uniforms and/or wearing identification cards that should be exhibited in a visible place on their body.
- Instant dismissal and prosecution of any staff caught in criminal activities of any kind.
- Inform local law enforcement agencies of the possibilities of increased criminal activity in the area.

Loss of recreational areas

- Engage with affected parties to assess their concerns and establish how other recreational areas may be improved.
- Endeavour to improve the facilities (toilets, picnic areas, etc.) at other recreational areas, in particular, Pelican Island and Naval Island.
- Put in place maintenance programmes to keep these recreational areas clean and safe.

Increased employment opportunities

- Endeavour to employ locally based labour as far as possible.
- Ensure that contractors are required, as far as is feasibly possible, to employ local labour.

-
- ❑ Conduct training and upskilling of employees so as to help them find employment after the construction phase of the project.

Increased opportunities for local service providers

- ❑ In conjunction with local government, develop a database of locally based vendors with the necessary expertise to provide the required services.
- ❑ As far as possible employ local service providers.

Increased investment

- ❑ Communicate with the RBIDZ regarding planned projects and potential investors.
- ❑ Through the media and other public platforms conduct marketing campaigns regarding the benefits of the proposed port expansions as well as the benefits of investing in the IDZ. It should be noted that this is a programme that can be run in conjunction with the IDZ.

Disruption to port activities

- ❑ Phase project stages so as to limit disruptions.
- ❑ Inform port users of potential disruptions prior to any disruptions taking place.

Opposition to the public participation process

- ❑ Review the existing public participation process.
- ❑ Contact existing I&APs as well as additional stakeholders and determine if there is a demand for additional consultation.
- ❑ If deemed necessary, undertake additional consultation.

During operation***Reduced road safety***

- ❑ Implement the traffic management plan.

Increased air emissions and dust

- ❑ Ensure that air emissions comply with legal requirements.
- ❑ Practice dust suppression techniques at all exposed stock piles.

Increased noise

- ❑ Comply with recommendation provided in the noise impact assessment.

Increased pressure on road and services infrastructure

- ❑ Communicate with the relevant authorities regarding future water and electrical requirements.
- ❑ Follow recommendations provided in the traffic management plan.

Increased employment opportunities

- ❑ Endeavour to employ locally based labour as far as possible.
- ❑ Ensure that contractors are required, as far as is feasibly possible, to employ local labour.

Increased investment

- ❑ Communicate with the IDZ regarding potential investors.
- ❑ Conduct public awareness and marketing campaigns through the media and other social platforms informing industry and business of the benefits of the expanded port and the IDZ.
- ❑ Ensure that all infrastructure (roads, railways, etc.) are maintained and remain competitive with other ports.

Conclusions and recommendations

Conclusions

Transnet has identified the need to expand and recapitalise facilities in the Port of Richards Bay to cater for an increase in demand for rail, road and harbour bound conveyor linked industry over the next ten years. Various different alternatives for the expansion of the port have been investigated, with environmental fatal flaws and commercially unviable alternatives identified. The investigations have since progressed through the pre-feasibility phase during which time a preferred option was identified to be investigated during the feasibility phase. The feasibility phase is inclusive of an application for environmental authorisation and detailed engineering design. Following the completion of scoping, the need for an SIA was identified. In this regard, AECOM appointed ACER to undertake an SIA as documented in this report.

The proposed project, while potentially bringing numerous benefits for Richards Bay and surrounding communities (employment opportunities, increased investment, etc.), is also of strategic importance to KwaZulu-Natal and South Africa. **At the completion of the SIA, it can be confirmed that there are no red flags or fatal flaws from a social perspective.** Nevertheless, the recommendations described hereunder are relevant.

Recommendations

In-migration

It is anticipated that as a result of the proposed project there could potentially be a significant in-migration of people to the area. This is inclusive of employees, job seekers and criminal opportunists as well as dependents of these people. In the context of South Africa at present, this in-migration has the potential to create various social impacts including increased criminal activity, an increase in destitute people and informal settlements, increased pressure on existing services, xenophobic attacks, etc. The manner in which these issues will be addressed needs to be included in the planning of the proposed project.

Employment

Data on the approximate number of jobs likely to be created during the construction and operational phases of the proposed project are not available. It has, however, been assumed that considering the size of the project and the extended duration over which it will be taking place, that a relatively significant number of jobs will be created. Considering the high levels of unemployment in the study area, the proposed project is believed to have the ability to make a significant contribution to an improvement in the livelihoods for a relatively significant portion of the population. Therefore, every effort should be made to ensure that as far as possible, local residents and service providers are given priority in terms of employment.

Public participation

During interactions with key stakeholders while undertaking the SIA, it regularly came to the fore that there was concern about the lack of communication with the public regarding the proposed project. While it is understood that significant consultation was undertaken during the FEL 1 and FEL 2 phases of the study and that the legal requirements for public participation have been met, the reported lack of information provided to interested and affected parties, and, in some cases, the exclusion of key stakeholders from the public participation process is of concern. Considering the strategic importance of the proposed project (both nationally and locally) and the benefits which may accrue to local residents, it is suggested that more information regarding the proposed project be placed in the public domain.

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ABBREVIATIONS AND ACRONYMS

ACER	ACER (Africa) Environmental Consultants
CAGR	Compound Annual Growth Rate
DM	District Municipality
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EPFI	Equator Principle Financial Institutions
GDP	Gross Domestic Product
GDP-R	Gross Domestic Product per Region
GVA	Gross Value Added
I&APs	Interested and Affected Parties
IDP	Integrated Development Plan
LM	Local Municipality
MPT	Multi-Purpose Terminal
NEMA	National Environmental Management Act, 1998
RBIDZ	Richards Bay Industrial Development Zone
SAPO	South African Port Operations
SIA	Social Impact Assessment
StatsSA	Statistics South Africa

AUTHORS

The Social Impact Assessment was undertaken by Mr DN Keal (ACER (Africa) Environmental Consultants) (ACER) who was the principle author of this Specialist Study Report. The assignment was undertaken under the direction of Dr R-D Heinsohn (ACER) who also conducted an internal review of this report.

DECLARATION OF INDEPENDENCE



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

DETAILS OF SPECIALIST AND DECLARATION OF INTEREST

	(For official use only)
File Reference Number:	12/12/20/
NEAS Reference Number:	DEAT/EIA/
Date Received:	

Application for authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2010

PROJECT TITLE

Richards Bay Port Expansion Programme

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The specialist appointed in terms of the Regulations

I Duncan Keal declare that --

General declaration:

- I act as the independent specialist in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity
- I will comply with the Act, regulations and all other applicable legislation
- I have no, and will not engage in, conflicting interests in the undertaking of the activity
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority
- all the particulars furnished by me in this form are true and correct
- I realise that a false declaration is an offence in terms of Regulation 71 and is punishable in terms of section 24F of the Act



Signature of the specialist:

ACER (Africa) Environmental Consultants

Name of company (if applicable):

13/04/2015

Date:

1. INTRODUCTION

1.1 Background

The Port of Richards Bay is situated 160 km north-east of Durban and 465 km (by road) south-west of Maputo, Mozambique (Figure 1). Currently, the port occupies 2,157 ha of land and 1,495 ha of water but has the potential to expand.

Exports are the primary activity of the port, serving the coalfields of KwaZulu-Natal and Mpumalanga (a dedicated railway line connects the port with Gauteng and Mpumalanga, designed specifically to handle the majority of South Africa's coal exports) as well as timber and granite exports from the Eastern and Northern Cape. In addition, the port has extensive rail and conveyor belt systems servicing the berths from nearby factories and plants.

Studies suggest that there is to be a sharp increase in demand for rail, road and harbour bound conveyor linked industry over the next ten years. Therefore, Transnet has identified the need to expand the port and recapitalise facilities in the Port of Richards Bay to cater for this increase in demand.

In order to investigate different alternatives for the expansion of the port, a conceptual study for the Richards Bay Port Expansion Programme was undertaken by Aurecon and completed during July 2012. The purpose of the study was to conceptualise the commercially-viable immediate and long-term engineering options, as well as to conduct an environmental fatal flaws analysis of all the options to expand the Port of Richards Bay. The investigations have since progressed through the pre-feasibility phase during which time a preferred option was identified to be investigated during the feasibility phase. The feasibility phase is inclusive of the application for environmental authorisation and detailed engineering design.

Following the completion of scoping (as part of the Environmental Impact Assessment (EIA)), the need for a Social Impact Assessment (SIA) was identified. In this regard, AECOM appointed ACER (Africa) Environmental Consultants (ACER) to undertake a Social Impact Assessment for the Richards Bay Port Expansion Programme.

1.2 Qualifications and experience of the practitioners

ACER (Africa) Environmental Consultants was established in 1991 and operates throughout Southern Africa. This investigation was conducted by Mr Duncan Keal who has theoretical and practical experience in the assessment of social and socio-economic processes and issues involved in large, often complex projects. The investigation was carried out under the guidance and directorship of Dr Dieter Heinsohn.

Dr Heinsohn has developed an impeccable reputation in environmental management. Of particular note is his experience in social impact assessments, the design and running of public involvement programmes, resettlement planning and implementation, and the management of large and/or complex environmental impact assessment processes.

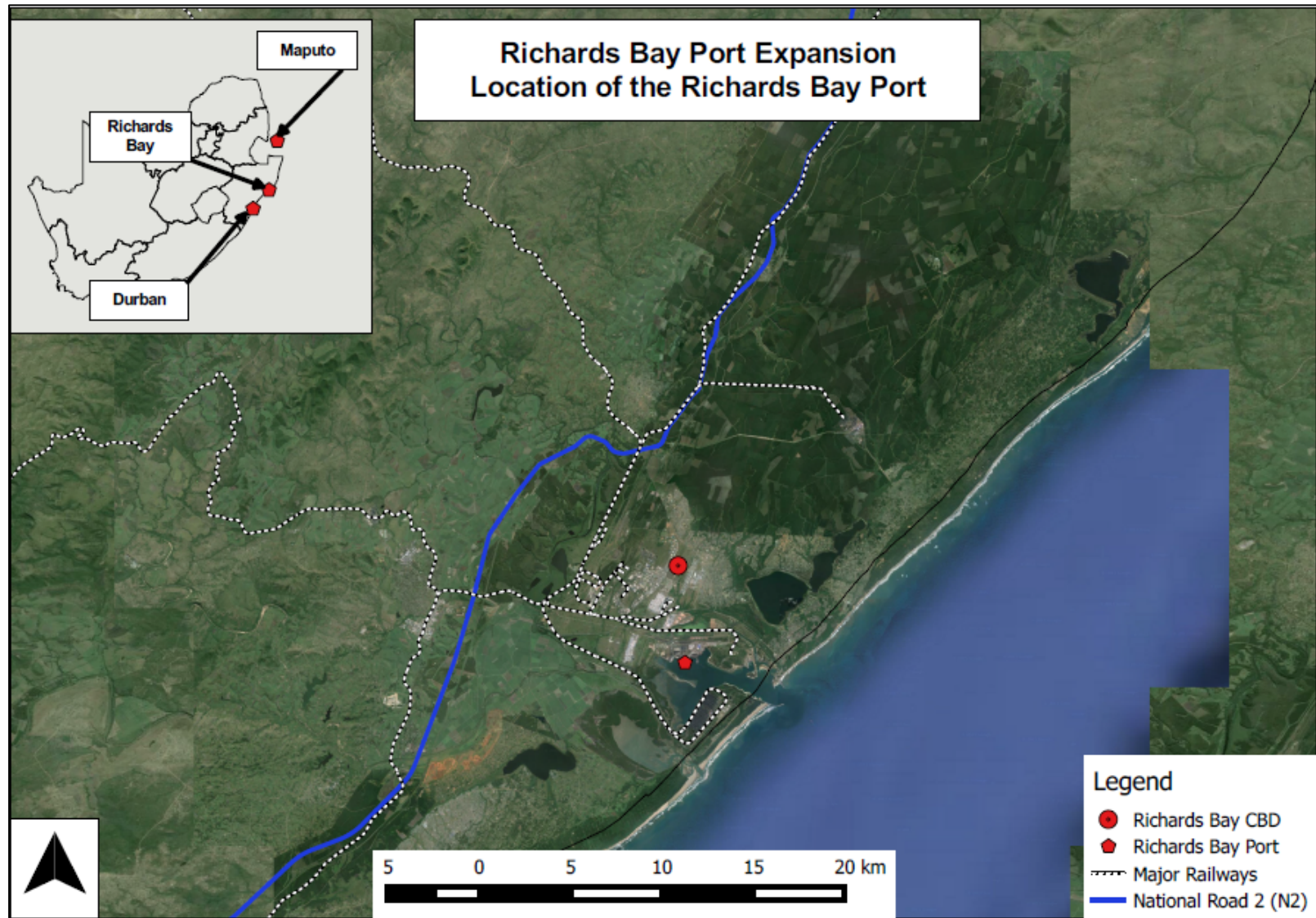


Figure 1 Location of the Port of Richards Bay

He is a contributing author to UNEP's Dams and Development Project: *Relevant Practices for Improved Decision-Making. A Compendium of Relevant Practices for Improved Decision-Making on Dams and their Alternatives*, responsible for Social Impact Assessment, a contributing author to *A Training Manual on Selected Economic and Social Aspects of Large Water Infrastructure, for the Sustainable Major Water Infrastructure Development Programme in Eastern and Southern Africa. SADC, EAC, UNEP, InWEnt*, and principle author of *Network for Sustainable Hydropower Development in the Mekong Countries (NSHD-M). Training Manual (Generic): Dealing with Social Aspects. GIZ, MRC*. Relevant qualifications and experience are provided in Table 1.

Table 1 Qualifications and experience

Practitioner	Academic Qualification	Relevant Work Experience
Dr Dieter Heinsohn	PhD	Dieter Heinsohn has more than 25 years experience in environmental management and social and socio-economic impact assessments. He is registered with the South African Council for Natural Scientific Professions in the field of environmental science (Registration No 400442/04) and certified with the Interim Certification Board. He has worked across a wide variety of sectors and has contributed to various international publications
Mr Duncan Keal	MA	Duncan Keal is a graduate of Rhodes University and has completed an Advanced Certificate in Social Impact Assessment through the University of Johannesburg. He has four years' experience in consulting, with a focus on social and socio-economic assessments

1.3 Purpose and scope of this specialist study report

The following scope was agreed between ACER and AECOM:

- Phase 1 – Scoping.
 - The scoping phase of the project will include an intensive desktop analysis of existing reports, maps and images of the study area. In addition, during scoping, a site visit will be conducted to verify findings from the desktop assessment. The scope of services for the scoping phase included:
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 - Baseline social environment.
 - A detailed social impact assessment based on the proposed activities and the alternatives identified during scoping. Impacts were assessed for each phase of the project.
 - Impacts were assessed in accordance with an agreed upon methodology to determine significance. This is inclusive of residual and latent impacts after mitigation.
 - Contribution to the preparation of a detailed site-specific EMPr.
 - Identification and recommendation of practical mitigation and management measures to reduce potential negative impact and enhance positive aspects.
 - Compilation of an Action Plan for the management of all identified impacts and implementation of the proposed mitigation measures.
 - Identification of gaps in knowledge.

Following the appointment of ACER to conduct the SIA for the proposed project it was determined that the Scoping process for the project had already been completed. As such, in order to meet the scope of work it was agreed that the scoping and EIA phase for the study would be ‘collapsed’ into a single report.

1.4 Report structure

This specialist study report consists of ten chapters. The report is structured as follows:

- Chapter 1 – Introduction.
 - Brief background to the project, details of practitioners and scope of work.
- Chapter 2 – Legal aspects and planning guidelines.
 - Relevant legislation and planning guidelines are discussed.
- Chapter 3 – Project description.
 - The project and all associated components are presented.
- Chapter 4 – Methodology.
 - Discusses the manner in which the research and assessment were conducted.
- Chapter 5 – Assumptions and limitations, and gaps in knowledge.
 - All assumptions made and limitations experienced in compiling this specialist study report are identified.
- Chapter 6 – Description of the receiving environment.
 - The socio-economic conditions prevailing in the study area are discussed.
- Chapter 7 – Description of findings.
 - Possible social impacts are identified and discussed.
- Chapter 8 – Assessment of social economic impacts.
 - All identified impacts, both positive and negative, are assessed according to the required methodology.
- Chapter 9 – Mitigation and management of social impacts.
 - Mitigation and management measures are identified.
- Chapter 10 – Conclusions and recommendations.
 - Final comments on the social impacts are provided.

2. LEGAL ASPECTS AND PLANNING GUIDELINES

2.1 Applicable legislation

The following legislation and associated regulations are relevant to this SIA:

- Constitution of the Republic of South Africa Act, 1996 (Act No. 108 of 1996) as amended.
- National Environmental Management Act, 1998 (NEMA) (Act No. 107 of 1998) as amended.

2.1.1 ***Constitution of the Republic of South Africa Act, 1996 (Act No. 108 of 1996) as amended***

The Constitution is the supreme law of South Africa, against which all other laws are measured. It sets out a number of fundamental environmental rights, important ones of which are described hereunder.

The Environmental Clause

Section 24 of the Constitution outlines the basic framework for all environmental policy and legislation: It states:

“Everyone has the right –

- a) to an environment that is not harmful to their health or well-being; and*
- b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that –*
 - i) prevent pollution and ecological degradation;*
 - ii) promote conservation; and*
 - iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development”.*

Access to Information

Section 32 of the Constitution provides that everyone has the right of access to any information held by the State or another juristic person, and that is required for the exercise or protection of any rights.

Fair Administrative Action

Section 33 of the Constitution provides the right to lawful, reasonable and procedurally fair administrative action.

Enforcement of Rights and Administrative Review

Section 38 of the Constitution guarantees the right to approach a court of law and to seek legal relief in the case where any of the rights that are entrenched in the Bill of Rights are infringed or threatened.

2.1.2 National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended

The National Environmental Management Act (NEMA) promotes citizens' right to an environment that is not harmful to their health and wellbeing. This right is closely linked to the Constitution where Clause 32 of the Bill of Rights stipulates that current and future generations have a right to a healthy environment. NEMA defines the environment as the natural environment as well as the physical, chemical, aesthetic and cultural properties that influences a person's health and well-being.

NEMA provides the legislative framework for Integrated Environmental Management in South Africa. Section 24 provides that all activities that may significantly affect the environment and require authorisation by law, must be assessed prior to approval. Section 2 of NEMA provides a set of principles that apply to the actions of all organs of state that may significantly affect the environment. These principles include the following:

- ❑ The sustainability principle.
- ❑ The life-cycle, cradle-to-grave principle.
- ❑ The 'polluter pays' principle.
- ❑ The precautionary principle.
- ❑ The duty of care principle.
- ❑ Fair and transparent public consultation.

2.2 Applicable planning documents

The following planning documents are relevant to the proposed Richards Bay Port Expansion.

2.2.1 Transnet Long Term Planning Framework 2014 – Chapter 4 Port Development Plan

This document provides details of the short-, medium- and long-term development plans for the South Africa ports that fall under the custodianship of Transnet. The proposed expansion in the Port of Richards Bay is consistent with the provisions of the Richards Bay Port Development Plan.

2.2.2 City of uMhlathuze Integrated Development Plan 2014 – 2015

The Integrated Development Plan (IDP) for the City of uMhlathuze Local Municipality provides the overall framework for development within the city. The IDP recognises the precincts of the Port of Richards Bay and acknowledges that port expansion will occur over time; therefore, the proposed expansion of the Port of Richards Bay is consistent with the provisions of the IDP.

3. PROJECT DESCRIPTION

3.1 Project location

The proposed development is located within the Port of Richards Bay and is located on Portions 45, 21 and 157 of Erf 5333 and Lot 223 of the Farm Mhlatusi, in the Umhlathuze Local Municipality.

3.2 Study area

In order to delineate the study area, it is important to understand the concept of social impacts. The social impacts on the project area and surrounds are dependent on the activity itself, as well as the structure and composition of the locality. The more diversified the immediate locality of the project is in terms of its socio-economic variables, the more concentrated the impact will be in that area. Understanding the potential distribution and concentration of impacts is important to determine the magnitude and significance of these impacts in the context of spatial units.

The study area is situated within the City of uMhlathuze LM. The natural environment in this area is highly sensitive and under severe development pressure. The local landscape is characterised by an interconnected network of hydrological ecosystems that sustain a combination of locally important habitats and species, and contributes to the maintenance of one of South Africa's biodiversity hotspots. It also sustains a growing population in an area with very high levels of poverty.

The Port of Richards Bay, South Africa's premier bulk and deepest port, falls within the same area. Its strategic location and the availability of land offer opportunities for further growth and port expansion.

Richards Bay has a surface area of 97.41 km², with a population of approximately 340,579; 3.3% of KwaZulu-Natal's population. As the expansion of the port is beneficial to more than just the Port of Richards Bay's economy, for the purpose of this study, the study area is delineated as follows:

- Primary study area.
 - Port of Richards Bay.
- Secondary study area,
 - Richards Bay and surrounding settlements within the City of uMhlathuze Local Municipality (LM) and Uthungulu District Municipality (DM).
- Tertiary study area.
 - KwaZulu-Natal province.
 - South Africa.

3.3 Project activities

The proposed expansion programme entails the following (Figure 2):

- ❑ Extension of the existing railway lines with a rail balloon with a split off for Ferro-Manganese, a short train arrival yard and a long train arrival yard.
- ❑ Construction of new railway siding to the 600 series berths.
- ❑ Construction of 2 new Tipplers (i.e. rail unloading equipment).
- ❑ Relocation of the break-bulk from the eastern side of the port behind the 700 series berths to the western side of the port next to the 600 series berths.
- ❑ Construction of a new discard coal stockpile on the eastern side of the port behind the 700 series berths.
- ❑ Expansion of the magnetite facility to the south.
- ❑ Extension of the existing Ferro Manganese slab by 260 m to the east.
- ❑ Construction of a new Ferro Manganese slab 780 m in length to the south of the existing Ferro Manganese slab.
- ❑ Upgrading or realignment of existing roads within the port.
- ❑ Construction of a new road-over-rail bridge at the eastern entrance to the port.
- ❑ Construction of 32 conveyors totalling approximately 13 kilometres.
- ❑ Construction of a new 142,030m² container handling terminal;
- ❑ Construction of two new Panamax shipping berths at the 600 series berths, with associated dredging of a channel to a depth of 14 m and an 800 m turning circle.
- ❑ Extension of the Finger Jetty (800 series berths) with two new Capesize coal shipping berths, requiring significant dredging around the existing Finger Jetty.
- ❑ Construction of a new 610,000 m³ stormwater surge dam inside the rail balloon, water pump stations, and upgrading of drains throughout the port.
- ❑ Development of a waste transfer station inside the port, which will serve as the 'nerve centre' for managing waste in the port.
- ❑ Construction of a facility to discharge dredged material from the proposed construction of the berths or disposal of the dredged material off-shore.

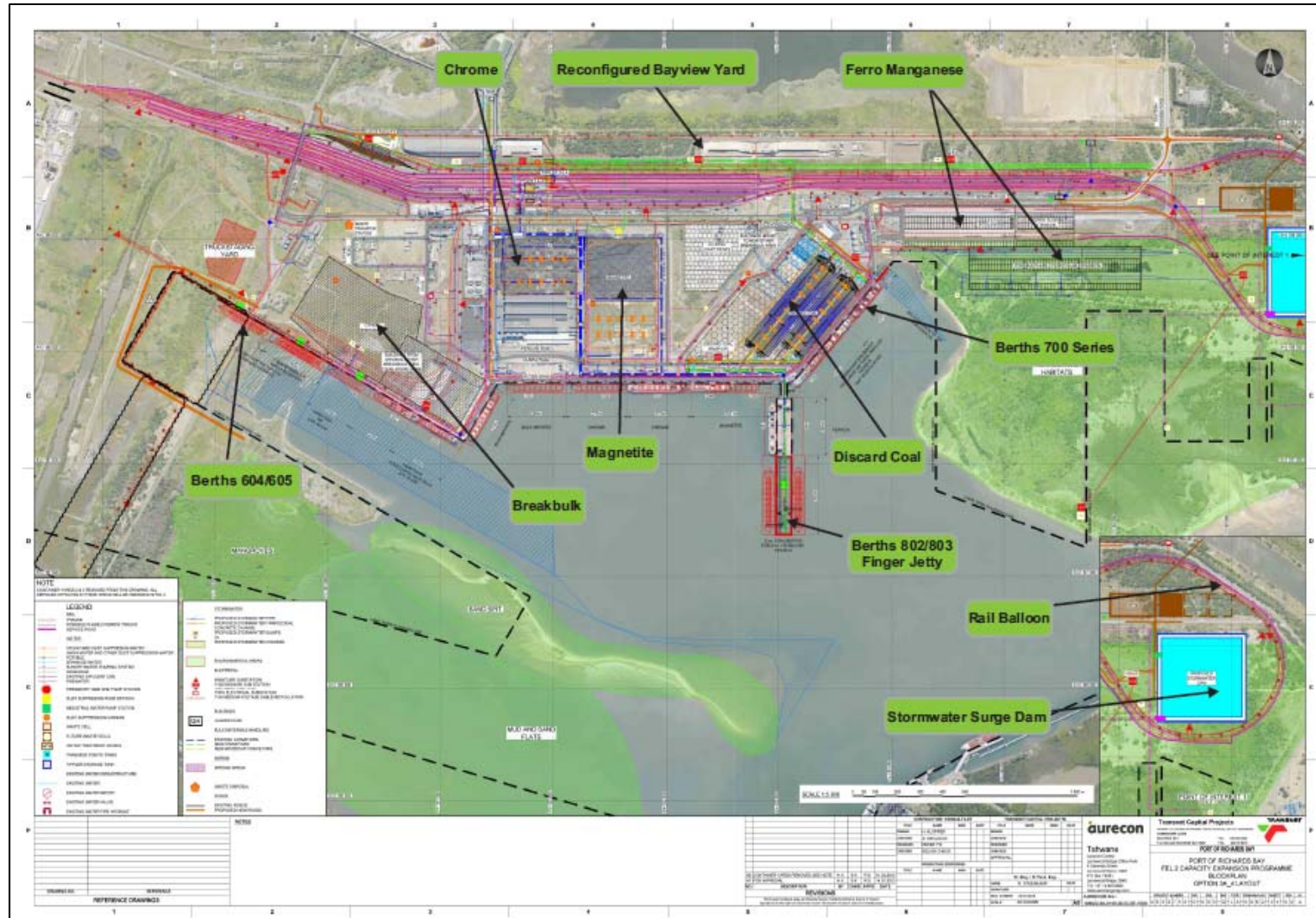


Figure 2 Proposed project components

4. METHODOLOGY

4.1 Research methodology

Both qualitative and quantitative data analysis techniques were applied (using primary and secondary data sources) in order to successfully undertake the social impact assessment.

Secondary data sources were used largely to conduct the baseline study of the receiving environment. Sources from which qualitative secondary data were gathered to provide a description of the receiving social environment included:

- City of uMhlathuze Integrated Development Plan, 2014/2015.
- City of uMhlathuze Spatial Development Framework, 2014/2015.
- Richards Bay Port Expansion Programme. Final Scoping Report, 2014.
- Richards Bay Port Expansion Programme, Comments and Responses Report, 2014.
- Richards Bay Port – Strategic Environmental Assessment, 2005.
- Port of Richards Bay – Development Framework Plan, 2007.

Secondary sources of quantitative data used in compiling the baseline conditions of the receiving environment included:

- 2011 National Census Data – Statistics South Africa.
- 2001 National Census Data – Statistics South Africa.

Qualitative primary data were gathered through meetings and interviews with identified key Interested and Affected Parties (I&APs). One on one meetings were held with the following key stakeholders:

- City of uMhlathuze Spatial and Environmental Planning Department.
- Transnet Senior Planners.
- Representatives of the Tuzi Gazi Waterfront.
- Representatives of neighbouring residential developments.

Email and telephone discussions were held with representatives from the following organisations:

- Richards Bay Clean Air Association.
- Richards Bay Port Users Committee.
- Richards Bay Business Against Crime.
- Zululand Chamber of Commerce and Industry – Empangeni Division.
- Zululand Chamber of Commerce and Industry – Richards Bay Division.

The use of both secondary and primary data as well as quantitative and qualitative data allowed for the triangulation of findings.

The impact assessment was undertaken using conventions and criteria provided by AECOM. The conventions used are elaborated in section 4.2.

4.2 Assessment methodology

The criteria used for the assessment of the potential impacts of the proposed project are described in Table 2.1. Cumulative impacts will be included as part of the impact assessment process.

Table 2 Impact Assessment Criteria

Criteria	Description
Nature	Includes a description of what causes the effect, what will be affected and how it will be affected
Extent	The physical and spatial scale of the impact
Duration	The lifetime of the impact is measured in relation to the lifetime of the proposed development
Intensity	Examines whether the impact is destructive or benign, whether it destroys the impacted environment, alters its functioning, or slightly alters the environment itself
Probability	This describes the likelihood of the impacts actually occurring. The impact may occur for any length of time during the lifecycle of the activity, and not at any given time
Status	Description of the impact as positive, negative or neutral
Significance	A synthesis of the characteristics described above and assessed as low, medium or high. A distinction is made for the significance rating without the implementation of mitigation measures and with the implementation of mitigation measures

4.2.1 Classification of extent

The physical and spatial scale of the impact is classified in Table 3.

Table 3 Extent

Description	Explanation	Scoring
Footprint	The impacted area extends only as far as the activity, i.e. the footprint occurring within the total site area	1
Site	The impact could affect the whole, or a significant portion of the site	2
Local	The impact could affect the area around the site including neighbouring farms, transport routes and adjoining towns	3
Regional	The impact could have an effect that expands throughout the region of the KwaZulu-Natal Province	4
National	The impact could have an effect that expands throughout the country	5

4.2.2 Duration

The lifetime of the impact is measured in relation to the lifetime of the proposed project, as elaborated in Table 4.

Table 4 Classification of duration

Description	Explanation	Scoring
Short term	The impact will either disappear with mitigation or will be mitigated through a natural process in a period shorter than any of the development phases	1
Medium term	The impact will be relevant through to the end of the construction phase	2
Long term	The impact will continue or last for the entire operational lifetime of the development, but will be mitigated by direct human action or by natural processes thereafter	3
Permanent	This is the only class of impact that 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	4

4.2.3 Intensity

This is a relative evaluation within the context of all the activities and the other impacts within the framework of the project, as described in Table 5.

Table 5 Classification of intensity

Description	Explanation	Scoring
Low	The impact alters the affected environment in such a way that the natural processes or functions are not affected	2
Low-Medium	The impact alters the affected environment in such a way that the natural processes or functions are slightly affected	4
Medium	The affected environment is altered, but functions and processes continue, albeit in a modified way	6
Medium-High	The affected environment is altered, and the functions and processes are modified immensely	8
High	Function or process of the affected environment is disturbed to the extent where the function or process temporarily or permanently ceases	10

4.2.4 Probability

This describes the likelihood of the impacts actually occurring. The impact may occur for any length of time during the lifecycle of the activity, and not at any given time. The probability classes are provided in Table 6.

Table 6 Classification of probability

Description	Explanation	Scoring
Improbable	The possibility of the impact occurring is none, due either to the circumstances, design or experience. The chance of this impact occurring is thus zero (0%)	1
Possible	The possibility of the impact occurring is very low, either due to the circumstances, design or experience. The chances of this impact occurring is defined as 25%	2
Likely	There is a possibility that the impact will occur to the extent that provisions must, therefore, be made. The chances of this impact occurring is defined as 50%	3
Highly likely	It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up before carrying out the activity. The chances of this impact occurring is defined as 75%	4
Definite	The impact will take place regardless of any prevention plans, and only mitigation actions or contingency plans to contain the effect can be relied upon. The chance of this impact occurring is defined as 100%	5

4.2.5 Confidence

The level of knowledge the EAP or a specialist had in their judgement is provided in Table 7.

Table 7 Classification of confidence

Description	Explanation
Low	The judgement is based on intuition and not on knowledge or information
Medium	The judgement is based on common sense and general knowledge
High	The judgement is based on scientific and/or proven information

4.2.6 Level of Significance

Based on the above criteria, the significance of issues is determined. The following formula was used to determine the level of significance:

$$\text{Significance} = (\text{Scale} + \text{Duration} + \text{Intensity}) \times \text{Probability}$$

This is the importance of the impact in terms of physical extent and time scale, as described in Table 8.

Table 8 Level of significance

Description	Explanation	Scoring
No Impact	There is no impact	0-10
Low	The impacts are less important, but some mitigation is required to reduce the negative impacts	11-30
Medium	The impacts are important and require attention; mitigation is required to reduce the negative impacts	31-60
High	The impacts are of high importance and mitigation is essential to reduce the negative impacts	61-89
Fatal Flaw	The impacts present a fatal flaw, and alternatives must be considered	90-100

5. ASSUMPTIONS, LIMITATIONS AND GAPS IN KNOWLEDGE

5.1 Assumptions

- All data and information provided by AECOM and Transnet are current and accurate.
- The proposed port layout plan provided by AECOM is the most up-to-date revision.

5.2 Limitations

- Attempts to contact the District Municipality were unsuccessful; thus, no input has been received from the District Municipality.
- Statistical data were not available below a municipal level.
- Without data on the number of jobs likely to be created onsite during construction and operation, it is not possible to accurately quantify some social impacts.
- No shapefiles were provided.

5.3 Gaps in knowledge

- Data on the number of jobs likely to be created onsite during construction and operation were not available.
- Information pertaining to how construction materials will be transported to site was not available.

6 DESCRIPTION OF THE RECEIVING ENVIRONMENT

6.1 Overview of the project area

The study area is located in Richards Bay on the east coast of South Africa within the KwaZulu-Natal province. Richards Bay is situated in the City of uMhlathuze LM which falls under the jurisdiction of the uThungulu DM. Richards Bay has developed into an industrial city with several large-scale industries including the Hillside Aluminium smelter, the Foskor fertiliser plant, Mondi pulp and paper, Richards Bay Minerals, Richards Bay Coal Terminal, Bell Equipment, Tata Steel ferrochrome smelter and multiple support industries. The town is surrounded by agricultural activities (mainly sugar cane and forestry) and is interspersed with rural settlements with small-scale agriculture, much of which take places on traditional authority land (City of uMhlathuze IDP, 2014 – 2015). The City of uMhlathuze is strategically placed along the N2 national route, and is linked to the economic hub of South Africa, Gauteng, via railway and road, and is in relatively close proximity to the King Shaka International Airport and Dube Trade Port, especially considering the quality of the road infrastructure. In addition, the City of uMhlathuze is home to the largest deep-water port in Africa with an Industrial Development Zone (IDZ) in close proximity to the port (City of uMhlathuze IDP, 2014-2015).

The City of uMhlathuze LM has the largest economy of all municipalities in the uThungulu DM and is the third largest municipal economy in KwaZulu-Natal (City of uMhlathuze IDP, 2014 – 2015).

6.2 Port of Richards Bay

The Port of Richards Bay is both one of the busiest and largest ports in Africa and, while playing a critical role in the shaping of the town, has also assisted in Richards Bay marketing itself as an attractive area for major industrial investment opportunities (City of uMhlathuze IDP, 2014/2015). However, the influence of the port extends beyond Richards Bay as it plays an important role in both the national and provincial economies (City of uMhlathuze IDP, 2014/2015). This is evident in the fact that the port has been listed by the Presidential Infrastructure Co-ordinating Commission as a Strategic Infrastructure Project 1 - the Unlocking of the Northern Mineral Belt with Waterberg as the Catalyst - which links Mpumalanga and Richards Bay by rail (NIP, 2012). The development of the port and rail network is likely to open up various opportunities for Richards Bay and, thus, is likely to have a positive impact on the local Gross Geographic Product (City of uMhlathuze IDP, 2012/2017).

According to Transnet National Port Authority's (TNPA) Development Framework Plan (DFP), the port handles approximately 60% of South African's seaborne cargo, with coal the largest export (TNPA DFP, 2014). The port is currently made up of six cargo handling terminals of which four are privately owned and two are operated by South African Port Operations (SAPO) (AECOM, 2014). The four private terminals are the Richards Bay Coal Terminal, the largest single coal exporting terminal in the world, the Bulk Liquid Terminal, operated by Island View Storage (Ltd), that handles all the bulk hazardous liquids and liquefied gasses, the Richards Bay Bunker Terminal, operated by Joint Bunker Services, that imports bunker fuel from Durban and Cape Town, and the Facilities Terminal which is made up of a phosphoric acid export loading facility operated by Foskor (Ltd), and a liquid pitch import facility operated by BHP Billiton (AECOM, 2014; Transnet Handbook, undated).

The two SAPO operated terminals are the Bulk Terminal and the Break Bulk Terminal. The Break Bulk Terminal handles all the steel (finished and scrap) and granite for export (Transnet Port Terminals, 2015). It also handles small dry bulk parcels and all forestry products (Transnet Port Terminals, 2015). The Break Bulk Terminal also offers a container packing service for commodities such as pulp paper and bagged cargo, and weighing and remarking cargo (Transnet Port Terminals, 2015). The Bulk Terminal exports merchandise such as andalusite, chrome, clay, copper concentrates, ferro alloys, fertilisers, rock phosphate, rutile, titanium slag, vanadium slag, vermiculite, woodchips and zircon (Transnet Port Terminals, 2015). It also provides a facility for imports such as alumina, coking coal, fertiliser, petcoke, potash, rock phosphate, sulphur and urea (Transnet Port Terminals, 2015).

6.3 Richards Bay Industrial Development Zone (RBIDZ)

The RBIDZ is key to the development of industry and manufacturing in the City of uMhlatuze LM. The RBIDZ aims to position itself as an export-manufacturing platform making use of nationally driven investment incentives. Benefits for new industries locating in the customs secure area of the IDZ include:

- Expedited customs procedures.
- Duty-free imports of raw materials incorporated into export products.
- VAT exemption.
- Benefits of first-world infrastructure links (Department of Agriculture, Environmental Affairs and Rural Development, 2011).

While various industries have expressed interest in the RBIDZ, to date, only Tata Steel and Lovemore Brothers have been established within the RBIDZ (Langa, P. pers. comm., 2015).

6.4 Demographics

6.4.1 Population

Data from the 2011 national census show that the population within the City of uMhlatuze LM is 334,459 persons. This shows an annual increase of 1.5% between the 2001 national census and the 2011 national census (StatsSA, 2011). This growth rate is higher than that experienced by the uThungulu DM (0.2%) and the province (0.7%) (StatsSA, 2011). While not confirmed, it is likely that the higher growth rate within the City of uMhlatuze LM can be linked to the rural to urban migration of people, in particular into Richards Bay, in search of employment. The growth in population is shown in Figure 3, which illustrates that while the population has continued to grow, there has been a noticeable levelling off in the rate of growth experienced between 2001 and 2011 in comparison with the growth between 1996 and 2001.

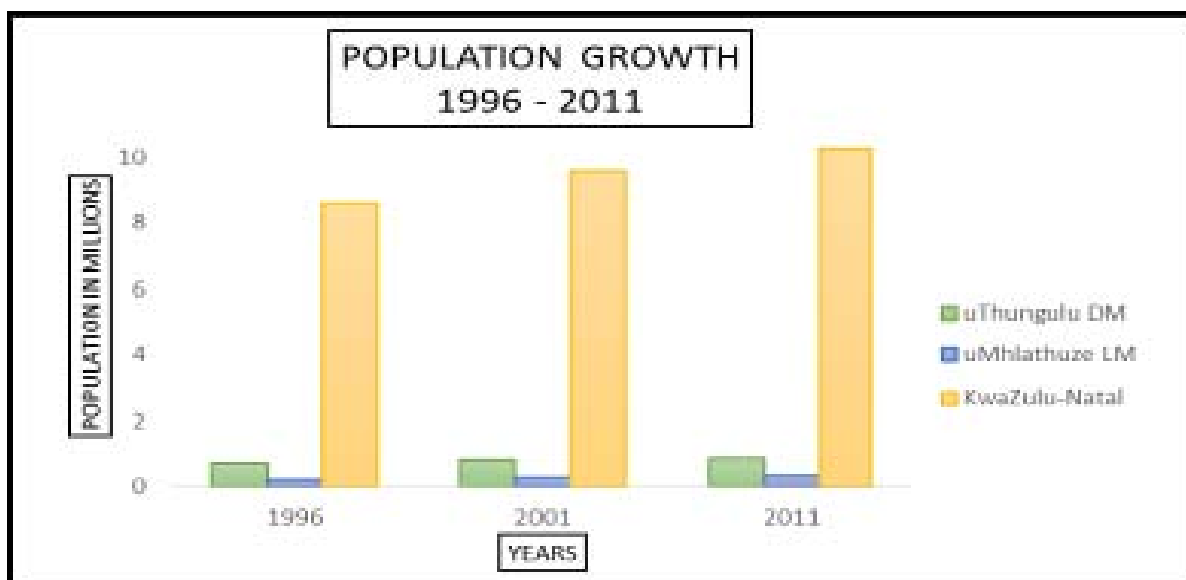


Figure 3 Population growth between 1996 and 2011 (StatsSA, 2011)

In 2011, 67% of the population in the City of uMhlathuze LM were reported to be between the ages of 15 and 64, which is noticeably higher than the uThungulu DM and the province, which reported 61% and 63% in this age category, respectively. In addition, between 1996 and 2011, there has been a continuous increase in the percentage of the population within this age category while there has been a decrease in the population below the age of 15 (Table 9) (StatsSA, 2011).

Table 9 Breakdown of the population by age group

	KZN			uThungulu			City of uMhlathuze		
	1996	2001	2011	1996	2001	2011	1996	2001	2011
0-14	36%	35%	32%	41%	39%	34%	34%	33%	29%
15-64	59%	60%	63%	55%	57%	61%	63%	64%	67%
65+	5%	5%	5%	4%	4%	5%	3%	3%	4%

An increase in the population within the ages of 15 – 64 can be seen as a positive development on a provincial, district and municipal level. This is because it indicates that there are a higher number of people within the potentially economically active sector of the population, which should reduce levels of dependency.

6.4.2 Education

Between 2001 and 2011, there has been a significant decrease in the percentage of the population over the age of 20 within the City of uMhlathuze LM reporting no access to formal education, with the figure dropping from 18% to 8%. These figures are better than those reported for both the uThungulu DM and KwaZulu-Natal, with 16% and 11%, respectively of the population over the age of 20 reporting never having had access to formal education (StatsSA, 2011).

The trend of better access to education within the City of uMhlathuze LM compared to the uThungulu DM and province is also evident in the percentage of the population over the age of 20 reporting to have a Grade 12 level of education and some form of tertiary education, 39% and 15% in City of uMhlathuze, 30% and 9% in uThungulu and 31% and 9% in KwaZulu-Natal, respectively (Stats SA, 2011). However, it should be noted that improvements between 2001 and 2011 in the percentage of the population with a Grade 12 and with some form of tertiary education have been seen on a LM, DM and provincial level (Table 10).

Table 10 Highest level of education of the population over the age of 20, 2001 to 2011

	City of uMhlathuze		uThungulu		KZN	
	2001	2011	2001	2011	2001	2011
No Schooling	18%	8%	32%	16%	22%	11%
Grade 12	25%	39%	17%	30%	20%	31%
Higher	11%	15%	6%	9%	7%	9%

Despite improvements in education levels, school attendance by females between the ages of five and twenty remains below that of males within the LM, DM and on a provincial level (despite school attendance improving between 2001 and 2011, there has been little improvement in the disparity between school attendance between males and females).

6.4.3 Unemployment

Unemployment levels are an important indicator of socio-economic well-being as formal employment indicates access to income and the ability to provide for basic needs. Despite improvements between 2001 and 2011, unemployment within the City of uMhlathuze LM remains high at 31%; however, this is below the level of unemployment reported for the uThungulu DM (34.7%) and KwaZulu-Natal (33%) (StatsSA, 2011). The levels of unemployment reported within the LM, DM and province as a whole are all higher than the national average of 29.8% (StatsSA, 2011a). Unemployment is reported to be highest in the municipal wards which encompass those areas which are developing on the urban periphery such as Esikhaleni and Nseleni, while employment levels are highest in the urban areas of Richards Bay and Empangeni (City of uMhlathuze IDP, 2014-2015).

6.5 Economic indicators

6.5.1 Income and expenditure patterns

There is a direct link between household expenditure and economic growth. An increase in household expenditure leads to a greater demand for goods and services, which implies an increase in production and, thus, an increase in the size of the economy. Richards Bay had an average monthly income of R 23,130 (higher than the national, provincial and district levels) with a significantly smaller portion of households living on less than R 3,200 per month. The relatively high average income is likely attributable to the high level of industrialisation in Richards Bay. The highest number of households living on less than R 3,200 per month is observed in the uThungulu DM, with 69% of its households considered to be living in extreme poverty. This comparison with the district can be seen as an indication of the relative economic importance and the size of the development that has taken place in Richards Bay (Urban Econ, 2015). Household income levels are shown in Table 11.

6.5.2 The economy and its structure

Analysis of the structure of the economy and the structure of its employment provides insight into the scale of reliance of an area on a specific sector(s) and, thus, the sensitivity of the area to changes in different sectors of global and regional markets. Understanding the size and composition of each sector in the economy in the area under analysis is important for studying the economic impacts that a proposed project may have, assisting to predict the changes that may occur because of a project (Urban Econ, 2015).

Table 11 Household income distribution

Income category	South Africa	KwaZulu-Natal	Uthungulu DM	City of uMhlathuze LM	Richards Bay
No Income	14.9%	15.1%	13.5%	15.2%	11.9%
R 1 – R 4,800	4.5%	4.9%	4.8%	4.4%	1.4%
R 4,801 – R 9,600	7.4%	8.6%	9.2%	8.0%	2.8%
R 9,601 – R 19,200	17.1%	19.4%	20.2%	13.7%	5.6%
R 19,201 – R 38,400	19.0%	19.8%	21.1%	15.5%	6.6%
R 38,401 – R 76,801	13.1%	11.9%	11.5%	11.9%	9.1%
R 76,801 – R 153,600	9.3%	8.3%	8.0%	11.1%	13.9%
R 153,601 – R 307,200	7.2%	6.3%	6.0%	10.1%	20.9%
R 307,201 – R 614,400	4.7%	3.9%	4.1%	7.2%	18.8%
R 614,401 – R 1,228,800	1.9%	1.2%	1.2%	2.2%	7.0%
R 1,228,801 – R 2,457,600	0.6%	0.4%	0.3%	0.5%	1.2%
R 2,457,601 and above	0.3%	0.2%	0.2%	0.3%	0.8%
Average monthly income (2011)	R 8,696	R 7,100	R 6,935	R 10,502	R 23,130

6.5.2.1 Economic production and Gross Domestic product per Region

The Gross Domestic Product per Region (GDP-R) of the City of uMhlathuze LM was valued to be R 23,946 million in 2013 current prices. This is equal to a per capita GDP-R of R 70,310, which is significantly higher than the national and provincial economies, with a GDP-R per capita of R 57,160 and R 45,898, respectively. The uThungulu District has the weakest economy in GDP terms with a per capita figure of R 40,340. In addition to signalling a weak economy, a lower GDP-R per capita is usually associated with a decreasing standard of living. Details are provided in Table 12 (Urban Econ, 2015).

Table 12 GDP-R and GVA-R per capita (2013)

	GDP-R (R' million)	GDP-R per capita (R)
South Africa	R 3,030,263	R 57,160
KwaZulu-Natal	R 480,382	R 45,898
Uthungulu DM	R 37,245	R 40,340
City of uMhlathuze LM	R 23,946	R 70,310

(Quantec, 2014, cited in Urban Econ, 2015)

Another important indicator of the well-being of a region's economy is the rate at which it is growing. Between 2003 and 2013, the City of uMhlathuze LM's economy grew on average 3% per year. This is lower than the national Compounded Annual Growth Rate (CAGR) of 3.4% per annum (Urban Econ, 2015).

When one considers the structure of the economy in nominal terms, it becomes evident that the national economy is predominantly a service economy. The tertiary sector comprised 70% of the national economy in 2013, and grew by 4%. The primary sector that includes agriculture and mining, contributed the smallest amount to the national economy. These sectors are, however, strategically important for food security and job creation. The mining and agricultural sectors experienced the lowest growth rates nationally. This could indicate potential job losses for individuals who are typically low to semi-skilled, with a specific skills set. The major drivers of the 3.4% national growth rate were the finance, insurance and business sectors, and the trade, transport and communication sectors (Urban Econ, 2015).

In KwaZulu-Natal, the primary sector is significantly smaller than at national level, with agriculture comprising 4.4% of the province's primary economy as opposed to mining, which is the dominant primary sector at national level. Another notable difference between the province and South Africa is that the manufacturing industry is bigger within the provincial economy, suggesting that although the manufacturing industry grew by 2.6% in both regions, the impact is more significant in KwaZulu-Natal (Urban Econ, 2015).

Within the primary study area, the importance of the manufacturing industry is evident in that this sector comprises more than 20% of the LM's economy. However, the manufacturing sector's growth in the LM (0.6% per annum) is below the growth recorded in the wider study area, 2.0% on a district level and 2.6% provincially and nationally per year between 2003 and 2013. The lower than average growth of this sector can be seen as an indication that the secondary sector within the City of uMhlathuze LM is experiencing pressure as a result of the relatively slow growth experienced by the local economy. A breakdown of the structure of the study areas' economies is shown in Table 13 (Urban Econ, 2015).

Table 13 Structure of the study areas' economies (nominal 2013 prices) and Compound Annual Growth Rate (2003-2013)

Sectors	South Africa		KwaZulu-Natal		Uthungulu DM		City of uMhlathuze LM	
	Nominal 2013	CAGR ('03-'13)	Nominal 2013	CAGR ('03-'13)	Nominal 2013	CAGR ('03-'13)	Nominal 2013	CAGR ('03-'13)
Primary sector	11.6%	0.2%	6.6%	1.3%	13.4%	-1.3%	11.4%	-1.9%
Agriculture, forestry and fishing	2.4%	1.9%	4.4%	1.8%	6.5%	1.1%	3.4%	4.4%
Mining and quarrying	9.2%	-0.4%	2.2%	-0.2%	6.9%	-4.1%	8.0%	-4.7%
Secondary sector	18.4%	3.0%	22.1%	2.9%	25.1%	2.3%	27.3%	0.9%
Manufacturing	11.6%	2.6%	15.7%	2.6%	18.6%	2.0%	20.5%	0.6%
Electricity, gas and water	3.0%	1.6%	3.0%	0.9%	2.7%	0.3%	3.3%	0.8%
Construction	3.7%	6.8%	3.5%	6.8%	3.7%	6.7%	3.5%	4.8%
Tertiary sector	70.0%	4.0%	71.3%	4.1%	61.5%	4.6%	61.3%	3.8%
Trade	16.6%	3.7%	18.2%	4.0%	16.0%	5.8%	15.2%	4.9%
Transport and communication	8.9%	3.6%	13.2%	3.9%	14.4%	4.3%	14.1%	2.4%
Finance, insurance, and business	21.5%	5.1%	18.8%	5.5%	13.9%	6.7%	13.6%	6.1%
Community services	6.0%	2.6%	6.2%	2.7%	6.1%	2.0%	6.2%	2.4%
General government	17.1%	3.3%	14.8%	3.4%	11.2%	2.3%	12.1%	2.8%
Total	100%	3.4%	100%	3.6%	100%	3.0%	100%	2.1%

6.5.2.2 Sectoral employment structure

Sectoral employment patterns are similar across all sectors with the only difference being the relatively high importance of the agricultural sector in the DM; 7.19% compared with 3.89% and 4.3% in the LM and province, respectively. Within the City of uMhlathuze LM, the greatest contributor towards employment creation is the utilities sector, creating almost a quarter of employment opportunities within the local economy. The manufacturing sector; which comprises 20% of the economy, creates 7.74% of the employment opportunities within the LM's economy. However, this sector, on average, is growing at a rate below that of the other sectors, which is concerning considering that it makes up one fifth of the local economy. Loss of production and employment in the manufacturing sector could, therefore, further impact on the already below average growth rate of the City of uMhlathuze LM's local economy (Urban Econ, 2015).

6.6 Access to basic services

6.6.1 Access to water

Access to piped water improved significantly within the City of uMhlathuze LM between 2001 and 2011, with 92% of all households reported to have access to piped water either within their household or within their yard (StatsSA, 2011). The improvement in access to water is also seen in the reduction of people without access to piped water declining from 11% to 3% (Table 14) (StatsSA, 2011).

Table 14 Access to piped water

	City of uMhlathuze		uThungulu		KZN	
	2001	2011	2001	2011	2001	2011
Piped water inside dwelling/yard	68	92	38	65	49	64
Communal standpipe	20	5	17	19	24	22
No access to piped water	12	3	45	16	27	14

6.6.2 Access to sanitation

Improvements to sanitation have been experienced by households throughout KwaZulu-Natal, within the uThungulu DM and within the City of uMhlathuze LM. This is evident in the reduction in the number of households without access (16% to 7% (KZN), 30% to 13% (uThungulu) and 9% to 4% (City of uMhlathuze)) (StatsSA, 2011). As is the case with access to water, access to sanitation within the City of uMhlathuze LM is above both the district and provincial averages.

Access to flush/chemical toilets has also improved, with access in the City of uMhlathuze LM higher than in the district and province. Of concern is that there has been an increase in the number of households reporting to make use of the bucket system (Table 15).

Table 15 Access to sanitation between 2001 and 2011

	City of uMhlathuze		uThungulu		KZN	
	2001	2011	2001	2011	2001	2011
Flush or chemical toilet	53%	65%	32%	43%	46%	54%
Pit latrine	37%	28%	36%	41%	37%	36%
Bucket latrine	1%	3%	2%	3%	1%	3%
None	9%	4%	30%	13%	16%	7%

6.6.3 Access to electricity

Access to electricity for lighting (the most basic level of access) within the City of uMhlathuze LM is better than access on a district and provincial level. However, noticeable improvements have been seen throughout KwaZulu-Natal between 2001 and 2011 (Table 16) (StatsSA, 2011).

Table 16 Access to electricity for lighting

	Access to Electricity for Lighting	
	2001	2011
City of uMhlathuze LM	86%	94%
uThungulu DM	53%	76%
KZN	61%	78%

6.6.4 Access to healthcare

Primary healthcare within the municipality is provided from two main clinics, one in Richards Bay and one in Empangeni, supported by satellite clinics. The main healthcare conditions reported are hypertension, diabetes and tuberculosis. Sexually transmitted infections are reported to remain a growing concern within the municipality (City of uMhlathuze IDP, 2014-2015).

It is reported that there is a lack of reliable data regarding HIV and AIDS infections at a local municipal level. However, two broad assumptions can be drawn for the municipality. Firstly, due to its location on a major transportation route and as a major provincial node, a large number of people are attracted to the area in search of work. Such a scenario usually implies that a high HIV and AIDS rate will prevail in the area. Secondly, HIV and AIDS prevalence in KwaZulu-Natal is the highest of all the provinces and there is no reason to believe that the City of uMhlathuze would exhibit any different conditions (AECOM, 2014).

7 DESCRIPTION OF FINDINGS – SOCIAL

7.1 Social change processes

“Social change processes are set in motion by project activities or policies. Depending on the characteristics of the local social setting and mitigation processes that are put in place, social change processes can lead to social impacts” (Vanclay, 2003).

This section of the report aims to provide insight into social change processes that are likely to occur as a result of the proposed Richards Bay Port Expansion. The social change processes identified in the following sections are based on an indicative list of processes described by Van Schooten *et al.*, (2003); however, only the social processes relevant to this study have been included. It should be noted that the social change processes discussed below are not social impacts themselves but, as a result of the social change processes taking place, social impacts may occur. The social impacts that are likely to occur as a result of social change processes are detailed in section 7.2.

7.1.1 Demographic processes

Demographic processes relate to the movement and composition of people in the region affected by a project.

7.1.1.1 In-migration

According to the World Bank, the induced population increase associated with a large project is estimated to equal the number of people employed on the project (World Bank, 2001). This movement of people can be attributed to people searching for both direct and indirect economic opportunities associated with a project as well as employees brought into the area to conduct the work. However, the geographical location, social and socio-economic conditions of surrounding areas as well as the type of project taking place need to be considered when anticipating the possible in-migration of people.

Considering that the proposed expansion is expected to take place over an eight year period and that it is anticipated that a large number of formal jobs will be created directly, it is likely that there will be a consistent and significant movement of people in and out of the City of uMhlathuze LM. The majority of people moving into the area in search of work are likely to not only be from the surrounding rural areas which typically hold fewer economic opportunities (secondary study area) but from throughout KwaZulu-Natal and potentially other provinces within South Africa and neighbouring countries such as Swaziland and Mozambique (tertiary study area). The influx of people into the area may lead to social impacts. It also needs to be considered that due to construction activities taking place within a restricted area (the Port of Richards Bay) it will be Richards Bay itself as well as the surrounding peripheral settlements that are most likely to feel the impact of the proposed project.

Table 17 Phases at which demographic processes are relevant

Process	Phase at which Demographic Processes are Relevant			
	Prior to Construction	Construction	Operation	Decommissioning
In-migration	✓	✓	x	✓

7.1.2 Economic processes

Economic processes are those processes that affect the economic activity in a given area. This includes the way people make a living, employment rates as well as macro-economic factors which affect society as a whole (Van Schooten *et al.*, 2003).

7.1.2.1 Waged labour

While a breakdown of anticipated jobs for construction and operation are not available, it is anticipated that a large number of jobs will be created directly as a result of the proposed port expansion. Direct employment opportunities will be created during the construction process while during the operational phase it is anticipated that due to the increased size of the port there will be a demand for more labour resulting in an increase in job opportunities.

7.1.2.2 Indirect economic opportunities

Projects of this nature open up potential economic opportunities for local businesses. Local contractors and SMEs providing required services, such as transport services, material supply, road maintenance, etc, could be employed during construction. The demand for goods and services by workers involved in the project could increase sales for local retailers and business owners in the city and nearby settlements.

Table 18 Phases at which economic processes are relevant

Process	Phase at which Economic Processes are Relevant			
	Prior to Construction	Construction	Operation	Decommissioning
Waged Labour	X	✓	✓	✓
Indirect Economic Opportunities	X	✓	✓	✓

7.1.3 Geographical processes

Geographical processes are those that affect the land use patterns of a society (Van Schooten *et al.*, 2003).

7.1.3.1 Conversion and diversification of land use

Although the areas where the proposed port expansion will be taking place is currently owned by Transnet, there are some sections of land which are currently open to the public. These areas, in particular the area referred to as the 'Casuarinas', is used by local residents for recreation. In the event of the proposed expansion going ahead, access to these areas will be restricted and, in some cases, permanently lost.

7.1.3.2 Enhanced transportation systems

The proposed expansion of the port will result in improved transportation systems including improved shipping and improved rail and road networks, albeit the latter two mostly within the port. An improved transportation system is likely to have various social impacts, in particular, on the investment potential of the area.

Table 19 Phases at which geographic processes are relevant

Process	Phase at which Geographic Processes are Relevant			
	Prior to Construction	Construction	Operation	Decommissioning
Conversion and diversification of land use	X	✓	✓	✓
Enhanced transportation systems	X	✓	✓	✓

7.1.4 Socio-cultural processes

These processes relate to the culture of a society, i.e. the way that people live together (Van Schooten *et al.*, 2003).

7.1.4.1 Deviant social behaviour

Deviant social behaviour refers to behaviour which may be seen as antisocial and destructive or disruptive to society. This may include excessive alcohol consumption, drug use, increased promiscuity and increased prostitution. As a result of a project of this nature, where there will be an influx of construction workers as well as job seekers, it is likely that there will be an increase in deviant social behaviour during construction. This is likely to continue, although to a lesser degree, during the operational phase as there will be an increase in movement of people (truck drivers, port employees, service providers, sailors, etc) moving through the area.

Table 20 Phases at which socio-cultural processes are relevant

Process	Phase at which the Socio-Cultural Processes are Relevant			
	Prior to Construction	Construction	Operation	Decommissioning
Deviant Social Behaviour	X	✓	✓	✓

7.2 Social impacts during the construction phase

The purpose of this section is to identify anticipated social impacts which may occur as a result of the social change processes. Social impacts can be positive or negative, and occur within the context of human behaviour, which is often unpredictable, which varies according to cultures, traditions, political and religious beliefs, and which are influenced by perceptions. It should be noted that all of the social impacts identified and discussed in this section apply to the project in its entirety.

7.2.1 Health and social wellbeing

7.2.1.1 Increased spread of disease

Any development which causes the migration of people has the potential to lead to the spread of disease (HIV and AIDS are of particular concern in the case of Southern Africa). Research suggests that the presence of migrant construction workers leads to socially deviant behaviour such as an increase in activities like prostitution, alcohol abuse and promiscuous behaviour. This could lead to a scenario where infected construction workers migrating into the project area spread various sexually transmitted infections through unprotected intercourse with sex trade workers or local individuals, who, in turn, spread infections locally. Alternatively, an uninfected construction worker could become infected through unprotected intercourse and, on return to his/her place of origin spread the disease there.

An increase in disease has significant indirect social impacts including reduced productivity, increased dependency, an increase in child headed households, reduced school attendance, etc. All off these impacts ultimately result in an increased burden on the state. This is magnified because during construction it is assumed that a large amount of the required materials and construction equipment will be transported via road, rail and sea, all of which will result in a large number of people, traditionally associated with deviant social behaviour, moving temporarily through the project area and surrounds.

Considering the size of the project, the anticipated influx of workers and job seekers and the extended period over which construction will take place, it is anticipated that there will be a relatively significant increase in the spread of disease. However, it also needs to be considered that the receiving environment is not isolated in nature but is already characterised by the movement of people into and through it on a relatively consistent basis; thus, the incidence of disease and in particular HIV and AIDS is already considered significant (section 6.6.4).

7.2.1.2 Reduced road safety

During construction, there will be a significant increase in the volume of traffic making use of public roads, in particular, heavy duty vehicles. The increase in the presence of heavy duty vehicles on the roads is likely to lead to an increased possibility of road traffic accidents and, thus, reduced road safety for all road users. While an increase in vehicle traffic is likely to be noticeable within the primary and secondary study areas (the study site itself as well as Richards Bay) the likelihood of reduced road safety is not thought to be of major significance due to the recently completed upgrades of the John Ross Highway. Of concern, however, is reduced road safety as a result of the increase in the number of heavy duty vehicles on the already congested N2 (particularly to the north of Richards Bay) and other major roads connecting the hinterland and the Richards Bay Port.

It is understood that a traffic specialist study has been conducted as part of the suite of specialist studies. Greater detail regarding road safety is provided in this report.

7.2.1.3 Increase in informal dwellers and/or destitute people

As noted in section 7.1.1 it is anticipated that there will be a significant influx of job seekers into the area during the construction phase of the project. Considering the size of the proposed project and the long period of time over which the proposed expansion will take place, it is likely that a large percentage of job seekers will migrate not only from the secondary study area (surrounding rural areas which are characterised by high levels of poverty) but from throughout KwaZulu-Natal, other provinces in South Africa and potentially other countries, in particular Swaziland and Mozambique. For some of the job seekers moving into the area it is likely that they will not have the financial capability to return to their place of residence if they do not find work. It should be noted that this is a point raised by a representative of Zululand Business Against Crime, stating that, at present, there are an undisclosed number of people living in the bush on the periphery of Richards Bay who arrived from the outlying rural areas in search of work but have not found any and do not have sufficient funds to return to their original homes (Whittaker. D., pers. comm., 2014). These people are likely to set up informal settlements in and around the city which may lead to further social problems such as increased petty crime, reduced property value, health concerns due to a lack of sanitation and drinking water, and ultimately an increased financial burden for local government.

7.2.2 Quality of the living environment

7.2.2.1 Increased noise

Construction activities, especially the construction of the railway and 'rail balloon' due to its close proximity to residential areas and the Tuzi Gazi Water Front, are likely to increase the amount of noise experienced by people in the area. Likely sources of noise include construction machinery, such as jack hammers, earth moving equipment, etc. The increase in noise can be considered a nuisance factor specifically for businesses working from Tuzi Gazi as well as for residents in the upmarket residential complexes adjacent to the small craft harbour. It should be noted that while the area is currently characterised by noise, it is of a very different nature to noise associated with construction activities. It is, however, understood that a noise impact assessment has been conducted which provides greater detail into the impact of noise on sensitive receptors.

7.2.2.2 Increased pressure on road and services infrastructure

During construction, it is likely that there will be an increase in the number of vehicles making use of public roads, in particular heavy duty vehicles. The increase in heavy duty vehicles will place increased pressure on the existing road infrastructure. If not suitably dealt with damage to the road infrastructure may reduce overall road safety for all road users in the area. This impact is likely to occur within the primary study area (port), the secondary study area (Richards Bay and the surrounding DM) and potentially on a national level (tertiary study area) where an increase in heavy duty trucks may damage existing road infrastructure, particularly on small roads.

Within the secondary study area (Richards Bay and the surrounding LM and DM), services such as water, sanitation and electricity, the influx of people into the area (both workers and job seekers) will place increased pressure on an already stretched water and sanitation system. In addition, it is anticipated that during the construction period, the demand for electricity will increase. Considering the current power supply crisis in South Africa, any additional strain on the existing system could cause system failure and increased load shedding events.

7.2.2.3 Increased air emissions and dust

Due to the amount of industry in Richards Bay, air emissions are an issue which is of particular concern to local residents. During the construction process, it is not anticipated that there will be a significant increase in emissions of SO₂ and HF which are understood to be the most problematic emissions in the Richards Bay area. While there may be an increase in CO₂ as a result of increased ship, train and vehicle traffic concentrated around the port, an Air Quality Impact Assessment was conducted which concluded that increases are not believed to be of significance. There is, however, the possibility that during construction there will be an increase in dust, in particular, PM10. The areas of greatest concern are those close to the port, in particular, the Tuzi Gazi Water Front as well as the upmarket residential areas adjacent to the small craft harbour. During times of strong winds from the south-east and south-west, other areas of Richards Bay may also be affected. It should be noted that the perceived increase in dust was identified by local government representatives (S. Govender. S., and Strachan. B., pers. comm., 2015) as well as the Tuzi Gazi Water Front representative as being of concern (Hughes. R., pers. comm., 2015).

7.2.2.4 Increased criminal activity

An increase in criminal activity is often associated with large developments and/or projects where there is likely to be an in-migration of construction workers, job seekers and criminal opportunists.

In the case of the proposed project, the possibility of an increase in crime should not be under-estimated. As noted in section 7.1.1 it is anticipated that there will be a significant movement of people into the area some of whom are likely to be criminal opportunists. While the area immediately adjacent to the port, such as the Tuzi Gazi Water Front and the upmarket residential developments adjacent to the small craft harbour, may be affected by crime it is believed that existing security measures and the police presence in this area should keep possible criminal activity down. As such, it is more likely that the most significantly affected areas will be the secondary study area (Richards Bay and the surrounding LM and DM) in particular the settlements of Esikhalini and Nseleni. It is likely that job seekers and criminal opportunists moving into the area will settle in these less formal areas, with criminal opportunists taking advantage of potential 'soft' targets. While the possibility of increased criminal activity should not be ignored, it should be noted that during discussions with the Zululand Business Against Crime representative it was stated that the potential increase in employment that the proposed project may bring could lead to an overall reduction in petty crime as employed people will have a consistent income (Whittaker. D, pers. comm., 2014).

7.2.2.5 Loss of recreational areas

In the event of the proposed expansion taking place, the area referred to as the 'Casuarinas', which is currently open to and used by the public for recreational purposes, will no longer be available for recreational activities. Presently, the area is utilised by families and individuals from in and around the Richards Bay for fishing, walking, picnicking, etc. (Plates 1 and 2). The loss of the area could potentially lead to opposition from the public who have used the area for an extended period of time. However, it should be noted that no concerns were raised during the public participation process regarding the loss of access to this area, albeit that it seems that greater public consultation is required (Section 7.2.4.1). Also, the public will still have access to other areas around the port, such as Pelican Island and Naval Island.

However, concern was raised by representatives from the City of uMhlatuze LM who noted that the 'Casuarinas' area provides a buffer between the port and the Tuzi Gazi Water Front and upmarket residential developments. It was suggested that if this buffer is lost, these areas would be more exposed to negative impacts from the port, such as noise (S. Govender. S., and Strachan. B., pers. comm., 2015). It should however be noted that in terms of the planned expansion programme being assessed in this study, the 'buffer' will not be lost.

In this regard, it should be noted that the 'Casuarinas' area is located on Transnet land and it is understood that the use by the public has been at the consent of Transnet with no commitment of any type to keep the area for recreational purposes in perpetuity.



Plate 1 People fishing off the beach at the 'Casuarinas'



Plate 2 Woman walking on the beach at 'Casuarinas'

7.2.3 Economic impacts

7.2.3.1 Increased employment opportunities

It has been projected that within the South African economy 9,151 jobs (skilled and unskilled) will be created directly, 3,810 jobs indirectly and 8,198 jobs induced as a result of the proposed port expansion. However, data on how many jobs will be required locally during construction is not available. It is however anticipated that there will be significant direct and indirect employment opportunities created. Considering the high levels of unemployment experienced within the greater study area and region (section 6.4.3) an increase in employment opportunities of this nature are likely to have significant social impacts. As a direct impact of employment, the level of household income in communities will increase as will the amount of disposable income. Indirectly, local businesses will benefit through the increase in household income while the general standard of living of communities should also see an improvement. While it is unclear at this stage how many of the jobs will be required for the entire construction period of eight years, it is likely that some of the jobs will be relatively long-term, thereby prolonging this positive impact. In addition to the financial benefits of employment creation, an increase in employment opportunities will also enable skills development and re-skilling, both of which have the potential to have long-term social benefits.

7.2.3.2 Increased opportunities for local service providers

During construction, various services will be required which can be fulfilled by local service providers. Examples of such services include security, fencing, accommodation, earth moving, refuse removal, transport, etc. The appointment of local service providers will lead to further employment for the local population and, thus, put a greater amount of money into the local economy.

7.2.3.3 Increased investment

During communication with representatives from the Zululand Chamber of Commerce and Industry it was reported that the presence of the port is a significant 'pull factor' for industry into the area (Patterson. M, pers. comm., 2015).

The importance of the port for investment in Richards Bay was also confirmed during discussions with the Richards Bay Industrial Development Zone. It was noted that the construction of the container terminal will assist the IDZ in attracting investors. This is particularly important for industries involved with mineral beneficiation as they require containers to transport processed goods (Ngcamu. S, pers. comm., 2015). Thus, in the event of the port expansion being confirmed and construction commencing, there is an increased likelihood that investors will consider Richards Bay as an area with a competitive advantage. This in turn has numerous secondary impacts such as employment creation.

It needs to be noted that the increase in investment may spread further afield than the primary and secondary study areas. It is possible that the proposed expansion to the port and the existing rail and road networks to the port may make investment in large industry and mining activities inland more viable. Thus, the importance of the port expansion in terms of attracting investment also needs to be considered on a tertiary (provincial and national) scale.

7.2.3.4 Disruption to port activities

It has been confirmed by Transnet Capital Projects that during the expansion programme there is potential for disruption to current port activities. During construction, the utilisation of berths 606, 801 and 804 will be disrupted and it is believed by Transnet that there may be potential navigation difficulties as a result of the extension of the 800 series finger jetty. In addition, the woodchip conveyor will need to be relocated. Such disruptions could have economic impacts for the port itself as the number of vessels it is able to receive may decrease or alternatively the vessel 'turnaround' time may increase which could lead to shipping companies looking at alternative ports. This, in turn, may have implications for local businesses.

It does, however, need to be appreciated that without the expansion occurring, these issues, viz. increased 'turnaround' time, limits to the number of vessels, impacts on local businesses, etc are likely to occur in any event. Considering this, it appears that while disruptions are inevitable, the expansion activities need to take place.

7.2.4 Institutional, legal, political and equity impacts

7.2.4.1 Opposition to the public participation process

During consultation with stakeholders, it emerged that a number of them reported that they felt there had been poor communication during the EIA phase of the project with a lack of feedback on project plans and project progress. Other stakeholders, such as the owner of the Tuzi Gazi Water Front, reported not having been informed of the project at all. While it is understood that significant public consultation was undertaken during the FEL 1 and FEL 2 phases of the project and that the legal requirements of the public participation process have been met, considering the size and the potential strategic importance of the project, possibly greater and wider consultation should be considered. This is a concern raised by the Richards Bay Port Users Committee who note that:

“If the legislated PPP (Public Participation Process) requirement is deemed to have been ‘met’ by the mere posting of an advert in the press, the placing of laminated notices in some random positions around the City of Umhlatuze to solicit I&AP’s registration, followed by a mere 40 day review period of a veritable 473 page DSR, we declare this to fall far short of the spirit of collective engagement”.

Considering the consistent response from key stakeholders regarding the lack of transparent communication and information dissemination, it is believed that in the event of no further consultation taking place, it is likely that the project proponent will be faced with significant opposition and appeals to any authorisation which is likely to prove costly and will slow down the authorisation process. It needs to be considered that delays in the authorisation of the port expansion will not only have implications for the primary and secondary study area but, due to the potential strategic significance of the port, impacts may be felt on a tertiary (provincial and national) level.

7.3 Social impact during operation

This section identifies social impacts which are likely to occur during the operational phase of the proposed Richards Bay Port Expansion.

7.3.1 Health and social wellbeing

7.3.1.1 Reduced road safety

As a result of the expansion, the port will be able to handle a higher volume of cargo. The increase in the handling capacity of the port is likely to increase the number of heavy duty vehicles on roads thereby potentially reducing road safety. The increase in vehicle traffic will not only occur in and around Richards Bay but will extend on major road networks inland as detailed in section 7.2.1.2, i.e. an impact felt within the primary, secondary and tertiary study areas.

An increase in the number of vehicles will bring with it various issues including increased pressure on the existing road infrastructure as well as reduced road safety for all users. It should be added that concerns regarding an increase in traffic were raised during the public participation process and that it was requested that a Specialist Traffic Study be undertaken to determine what the implications are for traffic outside of the port area.

7.3.1.2 Increased air emissions and dust

During the operational phase, it is likely that there will be an increase in the amount of air emissions. Of particular concern, and raised by the Environmental Planning Department from the City of uMhlatuze, is the potential increase in PM10 as a result of an increase in the loading and offloading of vessels within the port (Govender, S., and Strachan, B., pers. comm., 2015). This is of particular concern during times of southerly winds as the particulate matter and dust will be blown towards residential areas of Richards Bay. The port expansion is also expected to lead to an increase in the number of vessels utilising the port, which, in turn, is likely to lead to an increase in CO₂ emissions.

It should, however, be noted that the emissions of greatest concern in the Richards Bay area are SO₂ and HF, both of which are not expected to increase as a direct result of the port

expansion. However, possible indirect impacts should be noted, such as the possibility of the port expansion leading to further industrial development within Richards Bay which may contribute to an increase in air emissions. It is likely that increased air emissions will only affect the primary and secondary study areas (the port, Richards Bay and the surrounding LM and DM), however it is understood that an Air Quality Specialist Study has been undertaken which provides greater insight into potential changes to current ambient levels of different emissions and where the most sensitive receptors are located.

7.3.2 Quality of the living environment

7.3.2.1 Increased noise

As a result of the port expansion there will be an increase in the number of vessels within the port, an increase in the number of vessels being loaded and unloaded and an increase in road traffic within the port. All of these factors are likely to increase the amount of noise being generated by the port. The most likely parties to be affected are within the primary and secondary study areas and particularly those residing in the residential areas close to the small craft harbour as well as businesses based at the Tuzi Gazi Water Front. However, it should be added that during discussions with the owner of the Tuzi Gazi Water Front it was noted that there was little concern over noise created by the port citing water front development of such a nature as being characterised by a certain level of noise (Hughes. R., pers. comm., 2015). In addition, a specialist noise impact assessment has also been conducted for the proposed project which notes that there is a low significance of noise impact during the operational phase of the project (De Jager, 2014).

7.3.2.2 Increased pressure on road and services infrastructure

During the operational phase of the proposed project the increase in road vehicle traffic will lead to increased pressure on road infrastructure. The increase in pressure on road infrastructure, if not planned for, will have secondary impacts including reduced road safety as detailed in section 7.3.1.2.

The proposed project is also likely to bring with it increased investment in the primary and secondary study areas (section 7.3.3.2). This increase in industry, if not planned for, is likely to place increased pressure on existing services such as water and electricity.

7.3.3 Economic impacts

7.3.3.1 Increased employment opportunities

Data on the number of jobs that will be created locally during the operational phase is not available. However, it is anticipated that new jobs will be required as a direct result of the port expansion. Considering the high levels of unemployment displayed by the population in the greater Richards Bay area, the potential for the creation of additional permanent jobs could be significant. However without data detailing the number of jobs likely to be created it is not possible to place the employment opportunities in context.

Due to the demand for various services as a result of the port expansion, indirect employment opportunities will also be created. Opportunities are likely to be created for various service providers while the potential for increased investment (section 7.3.3.2) as a result of the port expansions will result in further employment opportunities.

The increase in employment within the area brings with it various indirect social benefits such as an increase in the general standard of living, increase in expendable income which benefits local business and an increase in tax revenue. The importance of the port in contributing to employment and, in turn, economic development in the region was noted by representatives of the Zululand Chamber of Commerce and Industry.

7.3.3.2 Increased investment

The expansion of the Richards Bay Port is likely to increase the attractiveness of Richards Bay to potential investors, in particular, large industry. The possibility of the port expansion is thought to be of specific significance to the Richards Bay Industrial Development Zone as it will serve as a further 'pull factor' for industry. This was noted by a representative of the Richards Bay Industrial Development Zone, who added that the construction of a functional container terminal is of particular significance (Ngcamu. S, pers. comm., 2015). As noted in section 7.3.3.1, an increase in investment will also assist in the creation of jobs.

7.4 Social impacts during decommissioning

Considering the nature of the project, it is unlikely that the complete decommissioning of the port will take place in the foreseeable future but rather that specific sections may be decommissioned or upgraded overtime. In this regard, it is likely that the social impacts that may occur will be similar in nature to those that occur during construction. However, it is anticipated that the socio-economic conditions prevailing in the project area would have changed significantly by the time decommissioning of port components occurs and, therefore, it is not possible to accurately quantify the significance of identified social impacts.

8 ASSESSMENT OF IMPACTS

This section provides the significance of the social impacts identified in Section 7. All impacts have been assessed using the agreed upon methodology and significance ratings as detailed in Section 4.2.

8.1 Assessment of social impacts during construction

Table 21 Assessment of social impacts during construction

Impact	Mitigated/ Unmitigated	Nature	Extent (Scale)	Duration	Intensity	Probability	Confidence	Significance
Increased spread of disease	Unmitigated	Negative	4	3	6	5	High	65
	Mitigated	Negative	4	3	4	4	High	44
Reduced road safety	Unmitigated	Negative	5	3	6	4	Medium	56
	Mitigated	Negative	5	2	4	3	Medium	33
Increase in informal dwellers and/or destitute people	Unmitigated	Negative	3	3	6	4	Medium	48
	Mitigated	Negative	3	2	4	3	Medium	27
Increased noise	Unmitigated	Negative	3	2	4	5	Medium	45
	Mitigated	Negative	3	2	2	5	Medium	35
Increased pressure on road and services infrastructure	Unmitigated	Negative	3	4	4	3	Medium	33
	Mitigated	Negative	3	1	2	2	Medium	12
Increased air emissions and dust	Unmitigated	Negative	3	2	4	4	Medium	36
	Mitigated	Negative	2	1	2	3	Medium	15
Increased criminal activity	Unmitigated	Negative	3	3	6	3	Medium	36
	Mitigated	Negative	3	2	4	2	Medium	18
Loss of recreational areas	Unmitigated	Negative	2	4	6	5	High	60
	Mitigated	Negative	2	4	4	5	High	50

Impact	Mitigated/ Unmitigated	Nature	Extent (Scale)	Duration	Intensity	Probability	Confidence	Significance
Increased employment opportunities	Unmanaged	Positive	3	2	4	3	Low	27
	Managed	Positive	3	2	6	4	Low	44
Increased opportunities for local service providers	Unmanaged	Positive	3	2	4	3	Low	27
	Managed	Positive	4	2	6	4	Low	48
Increased investment	Unmanaged	Positive	2	3	4	3	Low	27
	Managed	Positive	3	3	6	3	Low	36
Disruption to port activities	Unmitigated	Negative	2	2	8	5	Medium	60
	Mitigated	Negative	1	1	6	5	Medium	40
Opposition to the public participation process	Unmitigated	Negative	3	2	4	5	Medium	45
	Mitigated	Negative	3	1	2	2	Medium	12

The assessment table shows that after mitigation, there are no fatal flaws or impacts of high significance; indeed, the majority of impacts are either of medium or low significance.

8.2 Assessment of social impacts during operation

Table 22 Assessment of social impacts during operation

Impact	Mitigated/ Unmitigated	Nature	Extent (Scale)	Duration	Intensity	Probability	Confidence	Significance
Reduced road safety	Unmitigated	Negative	5	3	6	4	Medium	56
	Mitigated	Negative	5	3	4	3	Medium	36
Perceived increased in air emissions and dust	Unmitigated	Negative	3	3	4	4	Medium	40
	Mitigated	Negative	2	3	2	3	Medium	21
Perceived increased noise	Unmitigated	Negative	3	3	4	5	Medium	50
	Mitigated	Negative	3	3	2	5	Medium	40
Increased pressure on road and services infrastructure	Unmitigated	Negative	3	3	4	3	Medium	30
	Mitigated	Negative	3	1	2	2	Medium	12
Increased employment opportunities	Unmanaged	Positive	3	3	4	3	Low	30
	Managed	Positive	3	3	6	4	Low	48
Increased investment	Unmanaged	Positive	2	3	4	3	Low	27
	Managed	Positive	3	3	6	3	Low	36

The assessment table shows that after mitigation, there are no fatal flaws or impacts of high significance; indeed, the majority of impacts are either of medium or low significance.

9 MITIGATION AND MANAGEMENT OF IMPACTS

9.1 During project planning and construction

The following mitigation and management measures have been identified in order to reduce potential negative social impacts and optimise the benefits of potential positive social impacts during the construction phase of the proposed project. It should be noted that where indicated, mitigation measures should be implemented during project planning.

9.1.1 *Increased spread of disease*

- An HIV and AIDS awareness/education component should be included in the induction programme for all personnel working on the proposed project.
- Ensure there is easy access to HIV and AIDS related information and condoms for all workers involved with the proposed project.
- Encourage voluntary HIV and AIDS counselling and testing.

9.1.2 *Reduced road safety*

- The Traffic Specialist should develop a traffic management plan (for construction and operations) during project planning, which should be implemented throughout all stages of construction.

9.1.3 *Increase in informal dwellers and/or destitute people*

- Prior to construction, the City of uMhlathuze LM should be informed of the possibility of an increase in informal dwellers and/or destitute people so that the necessary planning can be undertaken.
- During project planning, provide clarity in the media regarding the available number of jobs so that there are not raised expectations, which hopefully will reduce population in-migration.

9.1.4 *Increased noise*

- Noise suppression techniques should be used as far as possible.
- Avoid construction before sunrise and after sunset.
- Inform neighbouring residential areas and businesses beforehand if excessively high noise generating activities are going to be taking place.

9.1.5 *Increased pressure on road and services infrastructure*

- Communicate with the relevant authorities regarding water and electrical requirements.
- Follow recommendations provided in the traffic management plan.

9.1.6 *Increased air emissions and dust*

- Ensure that dust suppression techniques are practiced, such as spraying of exposed areas with water to suppress dust.

- Keep exposed surfaces to a minimum and for the shortest possible time.
- Ensure that air emissions are within the required legal limits.

9.1.7 Increased criminal activity

- Construction staff should be clearly identified by wearing uniforms and/or wearing identification cards that should be exhibited in a visible place on their body.
- Instant dismissal and prosecution of any staff caught in criminal activities of any kind.
- Inform local law enforcement agencies of the possibilities of increased criminal activity in the area.

9.1.8 Loss of recreational areas

- During project planning, engage with affected parties to assess their concerns and establish how other recreational areas may be improved.
- Endeavour to improve the facilities (toilets, picnic areas, etc.) at other recreational areas, in particular, Pelican Island and Naval Island.
- Put in place maintenance programmes to keep these recreational areas clean and safe.

9.1.9 Increased employment opportunities

- Endeavour to employ locally based labour as far as possible.
- Ensure that contractors are required, as far as is feasibly possible, to employ local labour.
- Conduct training and upskilling of employees so as to help them find employment after the construction phase of the project.

9.1.10 Increased opportunities for local service providers

- During project planning, in conjunction with local government, develop a database of locally based vendors with the necessary expertise to provide the required services.
- As far as possible employ local service providers.

9.1.11 Increased investment

- Communicate with the RBIDZ regarding planned projects and potential investors.
- Through the media and other public platforms, conduct marketing campaigns regarding the benefits of the proposed port expansions as well as the benefits of investing in the IDZ. It should be noted that this is a programme that can be run in conjunction with the IDZ.

9.1.12 Disruption to port activities

- Phase project stages so as to limit disruptions.
- Inform port users of potential disruptions prior to any disruptions taking place.

9.1.13 Opposition to the public participation process

- Review the existing public participation process.
- Contact existing I&APs as well as additional stakeholders and determine if there is a demand for additional consultation.
- If deemed necessary, undertake additional consultation.

9.2 Mitigation and management of impacts during operation

The following mitigation and management measures have been identified in order to reduce potential negative social impacts and optimise the benefits of potential positive social impacts during the operational phase of the proposed project.

9.2.1 Reduced road safety

- Implement the traffic management plan.

9.2.2 Increased air emissions and dust

- Ensure that air emissions comply with legal requirements.
- Practice dust suppression techniques at all exposed stock piles.

9.2.3 Increased noise

- Comply with recommendations provided in the noise impact assessment.

9.2.4 Increased pressure on road and services infrastructure

- Communicate with the relevant authorities regarding future water and electrical requirements.
- Follow recommendations provided in the traffic management plan.

9.2.5 Increased employment opportunities

- Endeavour to employ locally based labour as far as possible.
- Ensure that contractors are required, as far as is feasibly possible, to employ local labour.

9.2.6 Increased investment

- Communicate with the IDZ regarding potential investors.
- Conduct public awareness and marketing campaigns through the media and other social platforms informing industry and business of the benefits of the expanded port and the IDZ.
- Ensure that all infrastructure (roads, railways, etc.) are maintained and remain competitive with other ports.

10 CONCLUSIONS AND RECOMMENDATIONS

10.1 Conclusions

Transnet has identified the need to expand and recapitalise facilities in the Port of Richards Bay to cater for an increase in demand for rail, road and harbour bound conveyor linked industry over the next ten years. Various different alternatives for the expansion of the port have been investigated, with environmental fatal flaws and commercially unviable alternatives identified. The investigations have since progressed through the pre-feasibility phase during which time a preferred option was identified to be investigated during the feasibility phase. The feasibility phase is inclusive of an application for environmental authorisation and detailed engineering design. Following the completion of scoping, the need for an SIA was identified. In this regard, AECOM appointed ACER to undertake an SIA as documented in this report.

The proposed project, while potentially bringing numerous benefits for Richards Bay and surrounding communities (employment opportunities, increased investment, etc.), is also of strategic importance to KwaZulu-Natal and South Africa. At the completion of the SIA, it can be confirmed that there are no red flags or fatal flaws from a social perspective. Nevertheless, the recommendations described hereunder are relevant.

10.2 Recommendations

In-migration

It is anticipated that as a result of the proposed project there could potentially be a significant in-migration of people to the area. This is inclusive of employees, job seekers and criminal opportunists as well as dependents of these people. In the context of South Africa at present, this in-migration has the potential to create various social impacts including increased criminal activity, an increase in destitute people and informal settlements, increased pressure on existing services, xenophobic attacks, etc. The manner in which these issues will be addressed needs to be included in the planning of the proposed project.

Employment

Data on the approximate number of jobs likely to be created during the construction and operational phases of the proposed project are not available. It has, however, been assumed that considering the size of the project and the extended duration over which it will be taking place, that a relatively significant number of jobs will be created. Considering the high levels of unemployment in the study area, the proposed project is believed to have the ability to make a significant contribution to an improvement in the livelihoods for a relatively significant portion of the population. Therefore, every effort should be made to ensure that as far as possible, local residents and service providers are given priority in terms of employment.

Public participation

During interactions with key stakeholders while undertaking the SIA, it regularly came to the fore that there was concern about the lack of communication with the public regarding the proposed project. While it is understood that significant consultation was undertaken during the FEL 1 and FEL 2 phases of the study and that the legal requirements for public participation have been met, the reported lack of information provided to interested and affected parties, and, in some cases, the exclusion of key stakeholders from the public participation process is of concern. Considering the strategic importance of the proposed project (both nationally and locally) and the benefits which may accrue to local residents, it is suggested that more information regarding the proposed project be placed in the public domain.

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