ArcelorMittal South Africa (Pty) Ltd / Bidvest Port Operations (Pty) Ltd

PROPOSED LOGISTICS HUB AT SALDANHA STEEL FACILITY - PHASE 2

Social Impact Assessment

AMSA BIDVEST LOGISTICS HUB
JANUARY 2024

CONFIDENTIAL

ArcelorMittal South Africa (Pty) Ltd / Bidvest Port Operations (Pty) Ltd

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Acronym	Definition
AEL	Atmospheric Emissions Licence
AMSA	ArcelorMittal South Africa (Pty) Ltd
ARV	Antiretroviral
BA	Basic Assessment
BPO	Bidfreight Port Operations (Pty) Ltd
CLPA	Child Labour Programme of Action
CSI	Corporate Social Investment
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EIA	Environmental Impact Assessment
ECO	Environmental Compliance Officer
FPIC	Free, Prior, and Informed Consent
GDP	Gross Domestic Product
HIV	Human immunodeficiency virus
IDP	Integrated Development Plan
IFC	International Finance Corporation
OAN	Open access network
IDZ	Industrial Development Zone
RDP	Reconstruction and Development Programme
SBLM	Saldanha Bay Local Municipality
SDP	Site Development Plan
SIA	Social Impact Assessment
TB	Tuberculosis
WCDM	West Coast District Municipality

1 INTRODUCTION

The purpose of this document is to provide the Social Impact Assessment (SIA) for the proposed Project. This SIA will inform the Basic Assessment (BA) Process required to obtain an Environmental Authorisation (EA) for the proposed Project. The EA will be required for the National Environmental Management Act (Act 107 of 1998) (NEMA). In addition, an amendment to the Atmospheric Emissions Licence (AEL) must be submitted and approved.

The primary objective of the SIA is to:

- Assist with identifying and assessing the potential social impacts and influences relating to the proposed Project and
- Recommend measures to avoid, eliminate, and reduce impacts and enhance any positive effects the Project may have.

The relevant activity listed in terms of the National Environmental Management Act, 1998 (Act No.107 of 1998), under Environmental Impact Assessment (EIA) regulations that require the BA is as follows:

- Activity 34, Listing Notice 1 of GNR327: *The expansion of existing facilities or infrastructure for any process or activity where such expansion will result in the need for a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the release of emissions, effluent or pollution*.

The proposed development and operation of a Logistic Hub requires an amendment to the existing AEL and is an expansion of the existing facilities and modification of existing operations on site; therefore, a Basic Assessment process will be followed as outlined in Regulation 19 of the EIA Regulations, 2014 (as amended). The applicant for the EA is ArcelorMittal South Africa (Pty) Ltd (AMSA). WSP Group Africa (Pty) Ltd has been appointed as the independent Environmental Assessment Practitioner (EAP) to manage and undertake the BA process on behalf of AMSA.

1.1 ARCELORMITTAL SOUTH AFRICA & BIDFREIGHT PORT OPERATIONS

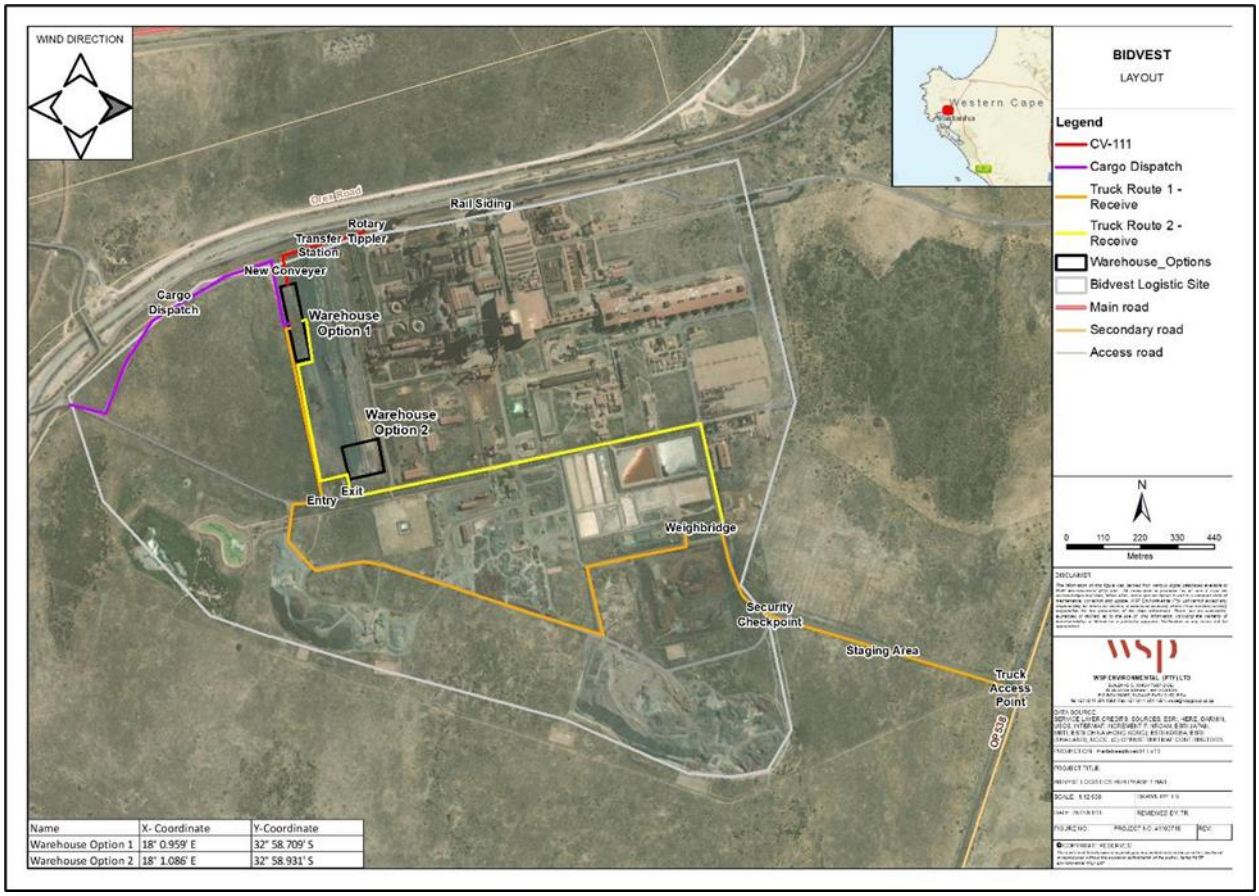
AMSA, in partnership with Bidfreight Port Operations (Pty) Ltd, hereafter BPO, proposes to develop and operate a Logistic Hub at the AMSA Saldanha Steel Facility, Saldanha. BPO was formed in 2004 due to the merger of two of South Africa's leading portside companies, Rennies Cargo Terminals and South African Stevedores. These two companies previously existed independently within the Bidvest stable. BPO is one of the largest providers of in-port logistics in South Africa, with operations in every commercial cargo port in South Africa. BPO is a member of the Bidvest Group Limited and forms part of the Bidvest Freight division. BPO specialises in warehousing, stevedoring, transportation and terminal operating services.

2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The proposed logistics hub (Phase 2) is to be located on the remainder of farm 1132 on the border of the Port of Saldanha in the Saldanha Bay Local Municipality within the Western Cape. The map **(Figure 2.1)** below illustrates the proposed logistics hub (Phase 2).

Figure 2-1 - Proposed Logistics Hub Location Plan



2.2 THE PROPOSED PROJECT

The Saldanha Logistics Hub will receive material from two transport modes, including road and rail, connected to an overland conveyor with a Rotary Tippler. The Logistic Hub operations entail the receiving, handling and distributing various bulk commodities for local and export purposes. The proposed Logistic Hub envisions handling a maximum of 5 million tons of bulk commodities per annum, including Manganese Ore, Phosphate Concentrate, Lead concentrate, Copper concentrate, Zinc Concentrate, Garnet sand, and Zircon sand. The development and operation of the Hub will in no way impact the potential restart of the Saldanha Steel plant. The Hub shall operate independently of Saldanha Steel itself, such that the re-commissioning of Saldanha Steel is not hampered.

It is envisaged that the existing and available Rail and Rotary Tippler infrastructure will be primarily used to receive cargo. However, road receipts will continue. The Rotary Tippler connects to the

stockpiling areas through conveyor networks and stackers/reclaimers. The facility will use the existing infrastructure with newly designed bulk commodity receiving, handling, stockpiling and storage facilities. A new warehouse will be constructed to house the environmentally and weather-sensitive cargo, which will be linked to existing handling and conveyancing systems. The size of the warehouse will be 14,000 m^2, excluding associated infrastructure, i.e., Tipplers, rail siding, conveyance systems and transfer stations.

3 SOCIAL IMPACT ASSESSMENT METHODOLOGY

To understand the socio-economic baseline conditions of the project-affected areas and the socio-economic implications of the proposed Project on the receiving environment, WSP conducted secondary desktop data collection (desktop review)—primary data collection, which included focus group meetings.

3.1 DATA COLLECTION

The desktop review and primary data collection are elaborated on further in the following section.

3.1.1 DESKTOP REVIEW

To develop the social baseline for the SIA, WSP reviewed available documents to obtain information regarding the socio-economic conditions in the study area. The documents reviewed include the following:

- The Integrated Development Plans (IDPs) and Spatial Development Frameworks of the affected Saldanha Bay Local Municipality and West Coast District Municipality;
- Socio-economic and demographic statistics (sourced from Statistics South Africa's 2011 census data, municipal reports, provincial data, and the 2016 community survey);
- Documents concerning the proposed Project, which included the project description document;
- SIAs conducted in the area and
- Available maps and satellite imagery.

3.1.2 PRIMARY RESEARCH

Sustainable Futures undertook focus group meetings and WSP with the following stakeholders:

- The Aikonese Cochoqua Khoi Tribal Council;
- Environmental organisations;
- Businesses surrounding the project site and
- Ratepayers and homeowners' associations,

4 SOUTH AFRICAN LEGISLATION

4.1 LEGAL FRAMEWORK

The following section discusses the legislative requirements that need to be considered regarding the Project's social impacts.

4.1.1 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA

Section 24 of the Constitution of South Africa (Act No. 108 of 1996) states the following concerning the environment:
"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."

The Project will be undertaken so that these rights will not be infringed upon.

The legislation briefly described in the sections below has been promulgated in response to this constitutional right.

4.1.2 THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998

According to the National Environmental Management Act (Act 107 of 1998) (NEMA), sustainable development requires the integration of social, economic, and environmental factors in the planning, implementing, and evaluating decisions to ensure that developments serve present and future generations. The Project will be undertaken in such a way as to further sustainability.

4.1.3 NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT, 2004

National Environmental Management: Air Quality Act (Act 39 of 2004) (NEM: AQA) and National Dust Control Regulations were published in 2013. The regulations aimed to prescribe measures to control dust in environments where dust is generated, including this instance where dust will be generated at the logistics hub. The regulations set out acceptable dust fall rates and acceptable methods for measuring dustfall rates. Dust which the logistics hub will produce must be managed per the requirements on dust control in terms of the NEM: AQA.

4.1.4 THE ENVIRONMENT CONSERVATION ACT, 1989

Noise Control Regulations are provided in Section 25 of The Environment Conservation Act, 1989 (Act No. 73 Of 1989. The act provides the legislative framework for integrating good environmental management practices into all development activities in South Africa. The act has a specific focus on acceptable noise quality to avoid nuisance to the sensitive receptors. The construction, and operational activities of the logistics hub include activities that produce noise in the environment and would therefore need to consider the acceptable measurable to avoid nuisance noise.

5 SOCIAL BASELINE

5.1 WESTERN CAPE PROVINCE

The Western Cape province is situated at the south-western tip of the African continent and is in the south-western part of South Africa **(Figure 5-1)**. The Northern Cape and the Eastern Cape Province are neighbouring provinces to the Western Cape. (Western Cape Government, 2023).

Figure 5-1 - South African regional map (Western Cape Government, 2023)

Western Cape Province covers an area of 129 462 km^{2,} the 4th largest province in land area. (South Africa Gateway, 2023). The province has a population of approximately 7.2 million. The province has one (1) metropolitan municipality, the City of Cape Town, and five (5) district municipalities, further broken down into 24 municipalities. The 5 district municipalities are Cape Winelands District Municipality, Central Karoo District Municipality, Garden Route District Municipality (formerly Eden District Municipality), Overberg District Municipality and West Coast District Municipality **(Figure 5-2)**.

The capital city of the Western Cape is Cape Town, and other major cities and towns include George, Knysna, Paarl, Swellendam, Oudtshoorn, Stellenbosch, Worcester, Mossel Bay and Strand (Municipalities of South Africa, n.d.). The proposed development is in the Saldanha Bay Local Municipality, and Saldanha Bay Municipality falls under the West Coast District Municipality.

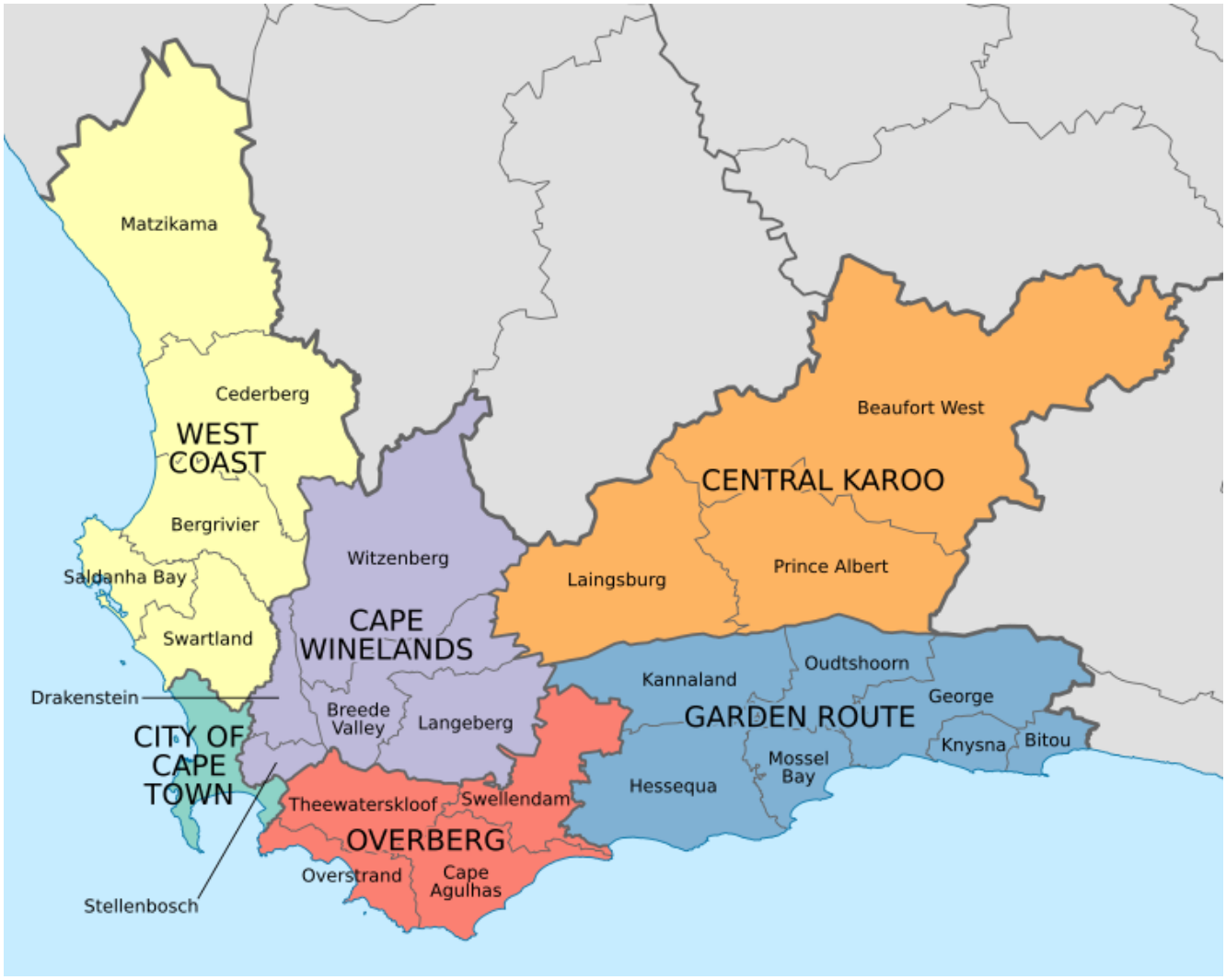


Figure 5-2 – Western Cape Province Municipalities West Coast District Municipality

The West Coast District is mainly the Cape's lowland municipal region extending from the coast north of Cape Town to Namaqualand, situated along the Atlantic coast of the Western Cape (Department of Cooperative Government and Traditional Affairs, 2020). West Coast District Municipality (WCDM) is the 2nd largest district in the Western Cape, covering a total area of 31 099 km^2 (West Coast District Municipality, 2023).WCDM recorded a population of 467 175 in 2021, making it the third most populated district outside of the metro in the Western Cape province (West Coast District Municipality, 2021).

The WCDM has municipal executive and legislative authority in an area that includes five (5) municipalities, making it a Category C municipality in the Western Cape province (Municipalities of South Africa, n.d.). The WCDM is headquartered in Moorreesburg, 90km north of Cape Town. The five local municipalities under the West Coast District Municipality are Bergrivier Local Municipality, Cederberg Local Municipality, Matzikama Local Municipality, Saldanha Bay Local Municipality and Swartland Local Municipality. The largest towns in the district are Vredendal and Saldanha Bay on the Cape Columbine Peninsula, Malmesbury in the Swartland and Vredendal in the Olifants River Valley (Department of Cooperative Government and Traditional Affairs, 2020). The proposed development is in Saldanha Bay.

Figure 5-3 - West Coast District Local municipalities (Municipalities of South Africa, n.d.)

5.2 SALDANHA BAY LOCAL MUNICIPALITY

The Saldanha Bay Local Municipality (SBLM) is one of five local municipalities under the West Coast District Municipality. The Swartland Municipality borders the municipality south by the Atlantic Ocean, north by the Bergriver Municipality and east **(Figure 5-2)**. SBM constitutes 6.4% of the entire West Coast geographical land with a total area of 2 015 $km^{2,}$ making it the smallest municipal area in the district (Saldanha Bay Municipality, 2022). The area is predominantly urban and includes the towns of Hopefield, Langebaan, Saldanha Bay, Jacobs Bay, Vredenburg, Paternoster and St Helena Bay **(Figure 5-4)** (Saldanha Bay Municipality, 2023).

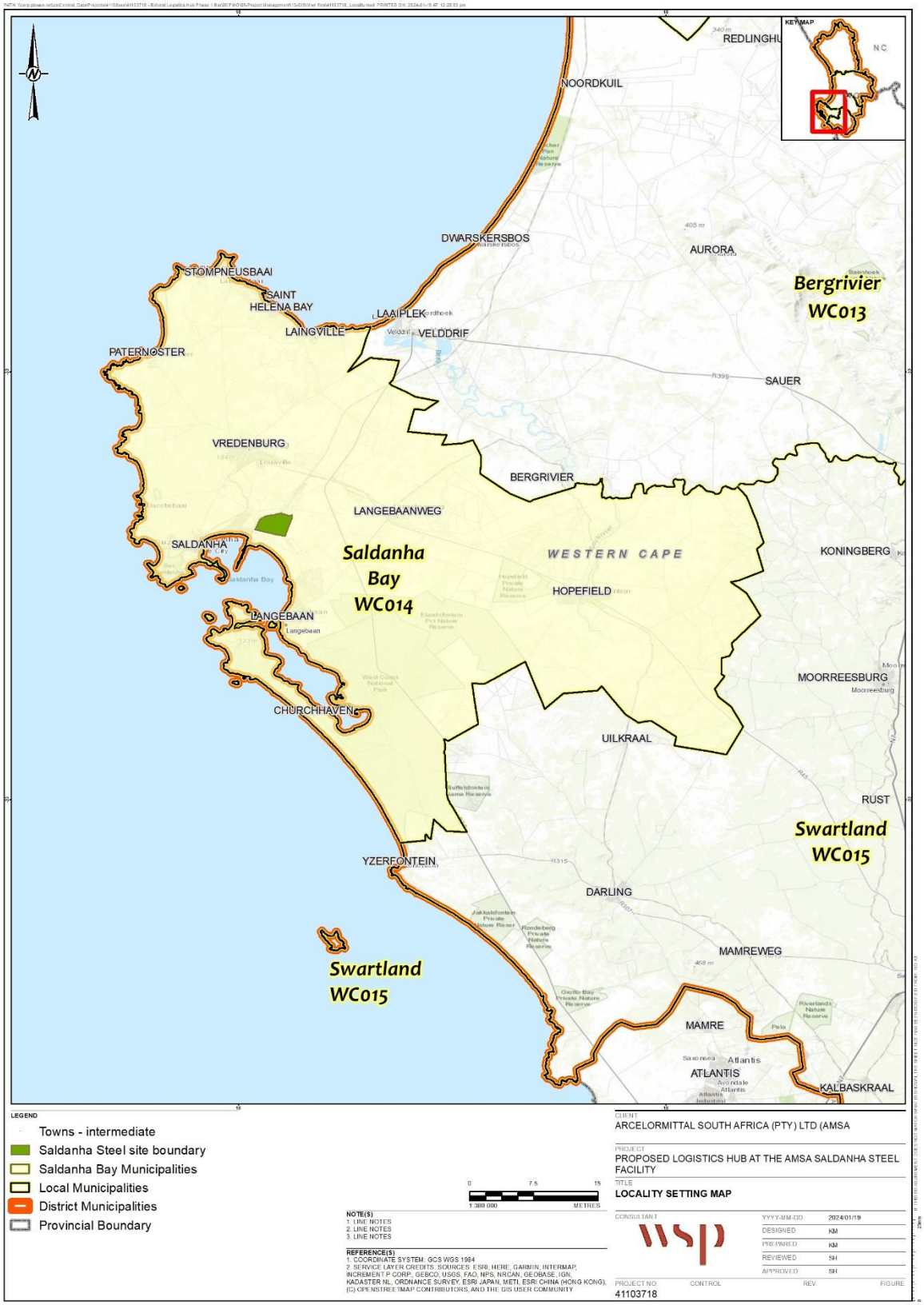


Figure 5-4 - Saldanha Bay Local Municipality

5.2.1 POPULATION

The census conducted by Stats SA in 2011 and the community survey in 2016 indicated a population percentage change of 12.1% as SBLM's population increased to 111,173 in 2016.

In 2022, SBLM was ranked as the second most populated municipality on the West Coast District, with over 125,000 people in the 5th Generation Integrated Development Plan (IDP) (Saldanha Bay Municipality, 2023). The 2022 Socio-economic Profile indicated that 26% of the West Coast Districts' population was reported to reside in the Saldanha Bay municipal area (Saldanha Bay Municipality, 2022). The population of SBLM is estimated to grow to 136,611 persons by 2026. The growth equates to an estimated average annual growth rate of 2.1% for 2022-2026. Therefore, Saldanha Bay's estimated population growth rate is 0.4% more than the estimated average annual population growth rate of the West Coast District at 1.7%.

The gender distribution of 50.2%(females) to 49.8% (males) indicated more females than males in SBLM. In 2022, an age cohort 15-64 was estimated to be 87,987, representing 70% of the population (Saldanha Bay Municipality, 2022). The dependency ratio was 42.8 in 2022 and is estimated to drop to 42.3 in 2024 and 2026.

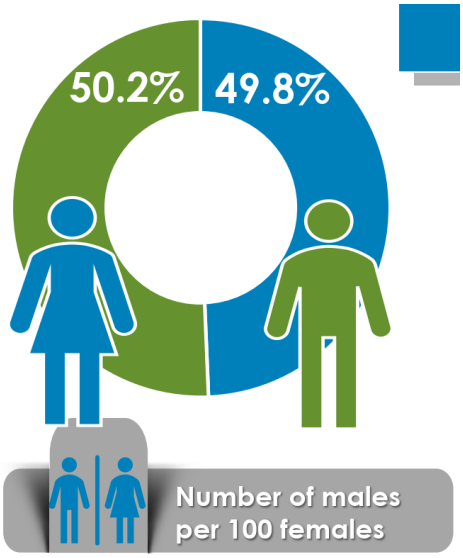


Figure 5-5 - SBLM gender distribution (Saldanha Bay Municipality, 2022)

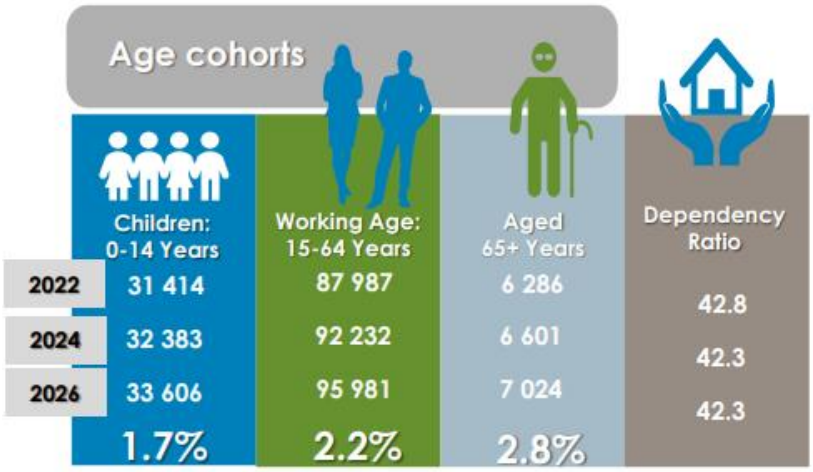


Figure 5-6 - Saldanha Bay age cohorts (Saldanha Bay Municipality, 2022)

5.2.2 ETHNICITY AND LANGUAGE

Almost 55% of the municipality is represented by people identifying as Coloured, followed by Black African people with 33.2%, and smaller portions represent the remaining ethnicities, as shown in **Table 5-1**.

Table 5-1 – Distribution of Saldanha Bay Local Municipality by population groups (Statistics South Africa , 2016)

Group	Number	Percentage
Black African	36 889	33.2%
Coloureds	60 558	54.5%
Indian/ Asian	178	0.2%
White	13 548	12.1%

Afrikaans is the most spoken language in the municipality, followed by IsiXhosa, English, and others in smaller proportions, as shown in **Table 5-2**.

Table 5-2 – Distribution of Saldanha Bay Local Municipality by language spoken (Statistics South Africa , 2023)

Language	Percentage
Afrikaans	70,8%
English	6,5%
IsiNdebele	0,3%
IsiXhosa	16%
IsiZulu	0,4%
Sepedi	0,1%
Sesotho	1,2%
Setswana	0,7%
Sign Language	0,2%
SiSwati	0%
Tshivenda	0,2%
Xitsonga	0,3%
Other	1%
Not Applicable	2,4%

5.2.3 EDUCATION

In 2016, 42% of children between 0 and 5 years had access to early childhood development in the SBLM (Statistics South Africa , 2016). An increase in numbers in the population aged 5-24 years attending school was from 61.1% in 2011 to 65% in 2016. 19 976 learners were enrolled in SBLM, accounting for 29.8 % of all learners across the West Coast District in 2021 (Saldanha Bay Municipality, 2022).

In 2011, of the population aged 20 years and older, 6,4% had completed primary school, 41,9% had some secondary education, 28,5% had completed matric, and 9,3% had some form of higher education, while 2,4% of those aged 20 years and older have no form of schooling. **Table 5-3** shows the levels of education represented in the municipality.

Table 5-3 - Distribution of the levels of education represented in Saldanha Bay Municipality

Group	South Africa	Saldanha Bay Municipality
No Schooling	6,6%	3,2%
Completed Primary	63,1%	6,2%
Some Secondary		34,8%
Completed Secondary	27,6%	12,4%
Higher Education	2,7%	1,4%
Not Applicable	-	2,9%

5.2.4 VULNERABLE GROUPS

Vulnerable groups include girls and women, refugees and migrants, persons with disabilities, minority groups and indigenous people (UNESCO, 2023). The poor, racial and ethnic minorities, the uninsured, low-income children, the elderly, the homeless, those with human immunodeficiency virus (HIV), and those with other chronic health conditions, including severe mental illness, are also considered vulnerable groups (AJMC, 2006).

According to the Urban Econ report, it is estimated that the majority of the population within the Saldanha Bay Local Municipality are low-income earners (48.6 per cent), which is followed by middle-income earners (43.3 per cent) and high-income earners (8.1 per cent). When compared to the West Coast District Municipality and the Northern Cape, they are both predominantly low-income earners (51.4 per cent and 62.4 per cent, respectively), followed by middle-income earners (41.8 per cent and 32.4 per cent, respectively) and high-income earners (6.8 per cent and 5.2 per cent respectively). **Table 5-4** summarises the household income in the areas mentioned above.

Table 5-4 - Summary of Annual Household Income (2022)

Income Category	West Coast District Municipality	Saldanha Bay Local Municipality	Northern Cape
Low Income (R0- R71 977)	51,4%	48,6%	62,4%
Medium Income (R71 978 – R575 819)	41,8	43,3%	32,4%
High Income (R575 820 – R4 606 551 plus)	6,8%	8,1%	5,2%

(Urban-Econ Via Quantec (EasyData), 2023)

5.2.5 INDIGENOUS PEOPLE

The International Finance Corporation (IFC) cites indigenous people as a group that identifies as a group or community linked to distinct habitats or ancestral territories and the natural resources therein (International Finance Corporation, 2012). Communities or groups that have lost collective attachment to distinct habitats or ancestral territories in the project area, occurring within the concerned group members lifetime because of forced severance, conflict, government resettlement

programmes, dispossession of their lands, natural disasters, or incorporation of such territories into an urban area are also regarded as indigenous people (International Finance Corporation, 2012).

For this Project, the term indigenous people is used in a generic sense to refer to a distinct, vulnerable, social, and cultural group which possesses the following characteristics in varying degrees:

- Self-identification as a member of a distinct indigenous cultural group and recognition of this identity by others
- Collective attachment to geographically distinct habitats or ancestral territories in the Project area and the natural resources in these habitats and territories
- Customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
- An indigenous language is often different from the official language of the country or region.

The screening was undertaken to determine whether indigenous peoples are present or have a collective attachment to the project area. The Aikonese Cochoqua Khoi Tribal Council self-identifies as an indigenous people. This group was engaged as part of the heritage impact assessment.

5.2.6 EMPLOYMENT

In 2011, 23.4% of the SBLM's population was unemployed; 30.4% were youth aged 15-34 (Statistics South Africa , 2023). Recent trends in the Gross Domestic Product (GDP) and labour market performance estimated that Saldanha Bay's total employed persons amounted to 46 868 workers in 2021 (Saldanha Bay Municipality, 2022). 82.5% are employed in the formal sector, and 17.5% are employed in the informal sector. An annual average increase of 0.1% in the formal sector was recorded between 2016 and 2020. The informal sector regressed from 25.2% of total employment in 2016 to an anticipated 20.4% in 2020 (Saldanha Bay Municipality, 2022).

The 2020 recession substantially reduced the average unemployment growth rate over the period. Other challenges contributing to job losses were load shedding, the drought within the Province and COVID-19. In 2021 alone 1, 570 jobs were lost, most job losses in the agriculture sector.

Despite the anticipated economic recovery predicted about 6% in 2021, the economy continued to shed jobs, with an estimated 1,570 net jobs lost. These job losses were primarily driven by job losses in the wholesale, retail trade, catering accommodation (-360 jobs), manufacturing (-157 jobs), and agriculture, forestry, and fishing (-924) sectors, reflecting that employment creation is lagging the improved GDP upswing in key sectors (Saldanha Bay Municipality, 2022).

Table 5-5 – Average household income in Saldanha Bay Municipality (Statistics South Africa , 2023)

Income	Percentage
No income	13,9%
R1 - R4,800	2,4%
R4,801 - R9,600	4%
R9,601 - R19,600	10,7%
R19,601 - R38,200	17,4%
R38,201 - R76,4000	16,7%
R76,401 - R153,800	15,2%
R153,801 - R307,600	11,5%
R307,601 - R614,400	6,1%
R614,001 - R1,228,800	1,5%
R1,228,801 - R2,457,600	0,4%
R2,457,601+	0,3%

The primary sector comprising agriculture, forestry and fishing contributed the most to employment with 35.8%, followed by wholesale and retail trade, catering and accommodation with 16.20%, community, social and personal services with 14.8% and other groups as indicated in **(Figure 5-7)**.

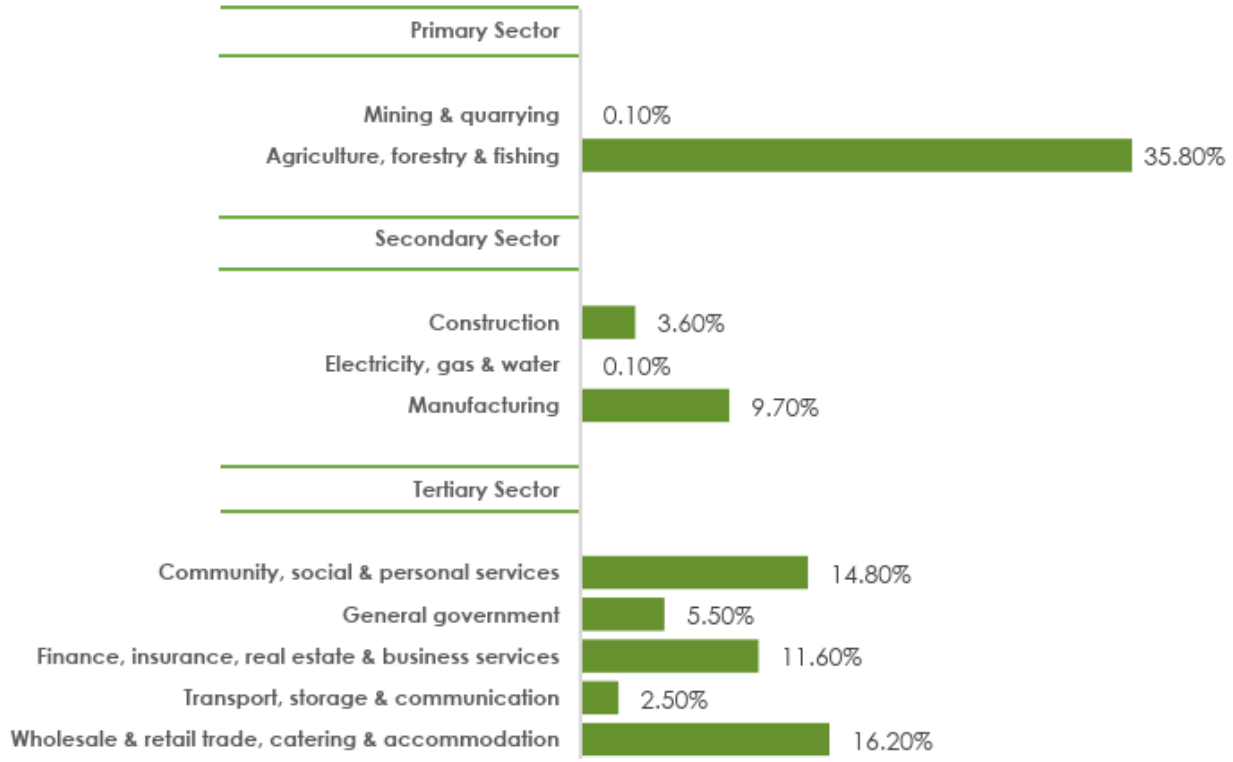


Figure 5-7 - Sectoral Employment Contribution 2020 (Saldanha Bay Municipality, 2022)

5.2.7 AGRICULTURAL LANDS

Agriculture, forestry, and fishing are the most significant contributing sectors to the GDP of the SBLM **(Figure 5-7)**. Agriculture is the 2nd most important contributor to the economy in the primary sector.

The SBLM area is characterised by the centrally located "Sandveld saaigebied" with medium potential agricultural land and higher potential agricultural land in the higher-lying Koppiesveld to the north and to the southeast of Hopefield ("Middel Swartland saaigebied, and the higher rainfall saaigebied). Challenges to agricultural production are low rainfall, indigenous vegetation and load-shedding.

5.2.8 LABOUR

The formal employment labour force of SBLM in 2021 comprised 7,831 skilled labourers, 15,213 of the semi-skilled group, and 15,613 low-skilled labourers (Saldanha Bay Municipality, 2022).

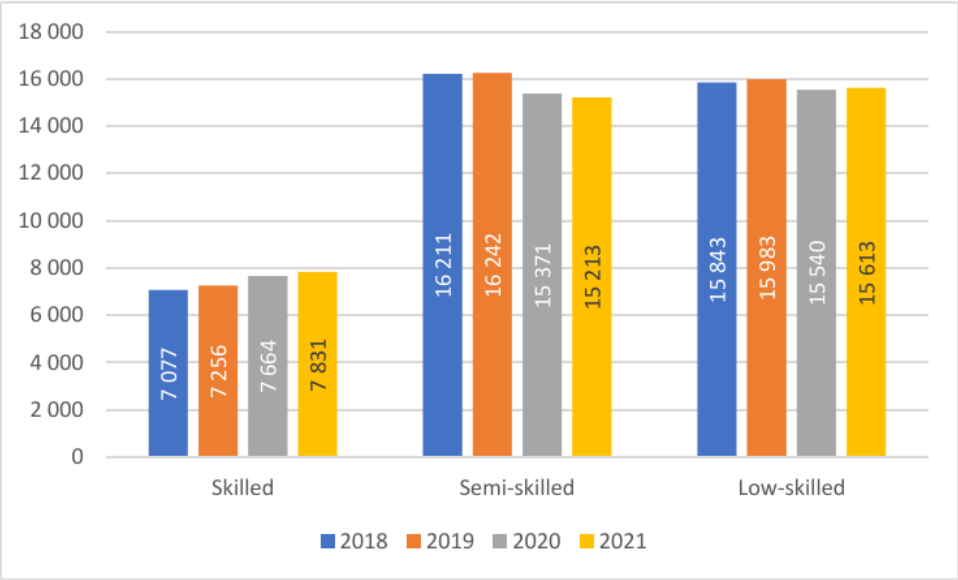


Figure 5-8 - Employed people by skill level in Saldanha Bay Municipality (Saldanha Bay Municipality, 2023)

5.2.9 CHILD LABOUR

Child labour is work by children under 18 years which is exploitative, hazardous, inappropriate for their age, and detrimental to their schooling or social, physical, mental, spiritual or moral development as defined by South Africa's Child Labour Programme of Action (CLPA). Banning of child labour is supported by the following legal and international frameworks:

- Basic Conditions of Employment Act (75 of 1997) as amended
- South African Schools Acts (84 of 1996)
- Children's Act 38 of 2005
- ILO Convention 182, Worst Forms of Child Labour, 1999
- ILO Convention C138 – Minimum Age Convention 1973 (No138)

AMSA will not employ child labour in the construction or the operation of the facilities.

5.2.10 HOUSING

The number of households in the Western Cape increased from 1,6 million in 2011 to 1,9 million in 2016. Saldanha Bay, with a population of 111 173, had 35 550 households, with 3.1 as the average household size in 2016 (Saldanha Bay Municipality, 2023). In 2022, household size increased to 3.3. Formal dwelling households comprised 74.8%, followed by 22.1% of informal dwellings. The remaining percentage included traditional and other dwelling types in the community survey conducted by Statistics SA 2016. Reconstruction and Development Programme (RDP) and government-subsidised dwellings contributed 32.6% of the formal dwelling type in SBLM (Saldanha Bay Municipality, 2023).

5.2.11 HEALTH

There were 4,094 patients in the municipality receiving antiretroviral treatment (ARV) for HIV/AIDS in 2021/2022. The number of committed antiretroviral patients increased by 142 patients. The number of new patients receiving ARVs decreased from 635 in 2020/2021 to 471 in 2021/2022 **Table 5-6**.

Table 5-6 - Number of patients receiving antiretroviral treatment for HIV/AIDS between 2020 and 2022 (Saldanha Bay Municipality, 2022)

	Total registered patients receiving ART	Number of new ART patients
2020/2021	3 952	635
2021/2022	4 094	471

The number of patients receiving tuberculosis (TB) treatment was the highest between 2017/2018, with 897 patients Figure 5-9. In 2021/2022, 665 patients were on treatment, indicating an annual increase of 3.8% between 2020/2021 (655) and 2021/2022 (680) in the number of registered patients receiving TB treatment in the municipal area.

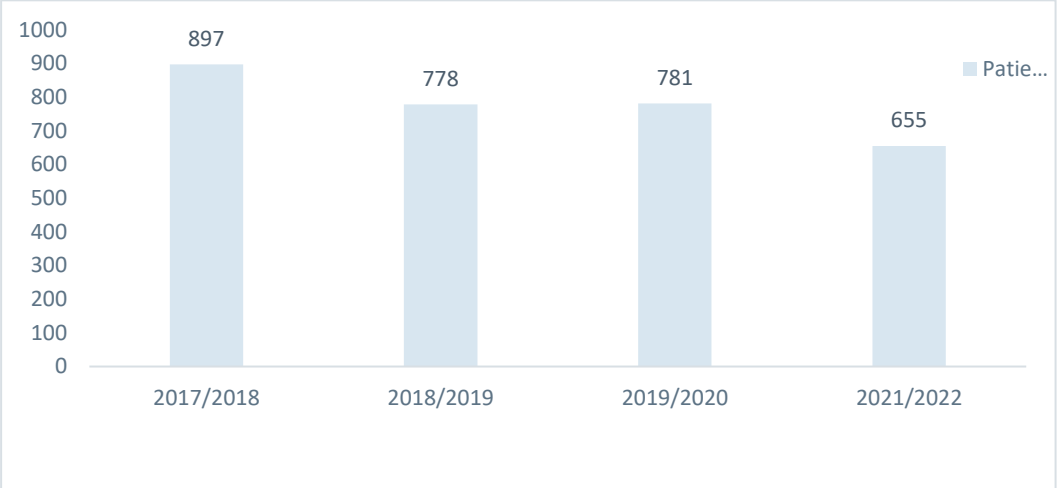


Figure 5-9 - Number of patients receiving treatment for TB (Saldanha Bay Municipality, 2020)& (Saldanha Bay Municipality, 2022)

SBLM last recorded maternal deaths in 2019 with 124.8. Between 2019 and 2022, zero maternal deaths were recorded (Saldanha Bay Municipality, 2020). A percentage of 13.2% of all pregnancies were to children and young women between the ages of 10 – 19 years (teenage pregnancies). The number of adolescent pregnancies and termination rate of 0.8% remained constant compared to 2020/2021.

Immunisation rates amongst children in the municipal area declined marginally from 61.2% in 2020/2021 to 59.5% in 2021/2022. There were no recorded cases of malnourished children under five in 2021. The neonatal mortality rate per 1,000 live births increased from 4.4 in 2020/2021 to 7.0 in 2021/2022.

5.2.12 SECURITY AND SAFETY

Residential burglaries were the most committed offence over the five years and were highest in 2019/2020 with 1262 cases. Burglary cases within the Saldanha Bay area decreased by 129 from 1048 in 2020/2021 to 919 in 2021/2022. Drug-related offences ranked the 2nd highest; most cases were reported in 2018/2019 with 1114 offences. The trend in murder and sexual crimes followed the residential burglary trend from 2020/2021 with a reduction of 5 and 10, respectively. Drug-related offences increased by 98 over the same period. The number of individuals driving under the influence decreased by over 50% from 111 cases in 2020/2021 to 67 cases in 2021/2022 **(Figure 5-10)**. Road user fatalities in the Saldanha Bay area decreased from 29 in 2020/2021 to 23 in 2021/22, while the number of fatal crashes followed a similar trend, declining from 18 to 15 for the same period (Saldanha Bay Municipality, 2023).

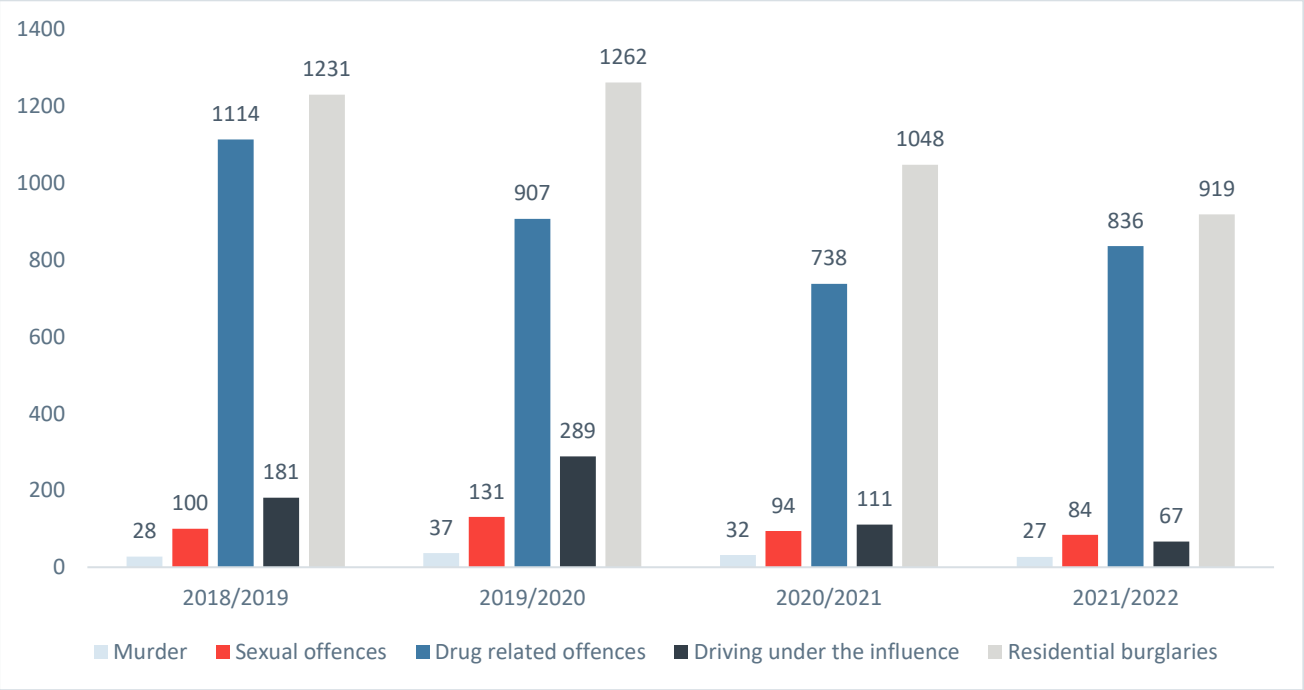


Figure 5-10 - Number of offences in Saldanha Bay Municipality between 2018 and 2022 (Saldanha Bay Municipality, 2023)

5.2.13 GENDER-BASED VIOLENCE

Regarding gender-based violence (GBV), i.e. rape, sexual assault, and contact sexual offences, 84 cases were reported to the South Africa Police in 2021/2022. This number of crimes reported in 2019/2020 was 131 and declined to 94 in 2020/2021 (Saldanha Bay Municipality, 2022).

SBLM has Thusong centres in Hopefield, Langebaan and a mobile service in Witteklip (Ward 2). Thusong, centres serve as a service point for the Provincial Department of Social Development to render social welfare services. Siyabonga Shelter for abused women and children accommodates women and their children safely.

5.3 SOCIAL AND PHYSICAL INFRASTRUCTURE

5.3.1 SCHOOLS

In 2021, the number of schools in the SBLM was recorded to be 23 and 56.5% of these schools are no-fee. Schools with libraries in the SBLM were 14, making up a proportion of 61%.

In 2021, 19 976 learners were enrolled in the SBLM, accounting for 29.8% of all learners across the West Coast District. The learner-teacher ratio in 2021 was 31.6 learners per teacher, which was below the recommended range of 35:1 to 40:1, indicating acceptable classroom sizes in terms of the learner-teacher ratio.

The learner retention rate improved from 64.3% in 2020 to 75.6% in 2021; however, more than 20% of the learners still need to complete their grade 12 certificate successfully (Saldanha Bay Municipality, 2022).

5.3.2 HEALTHCARE

Saldanha Bay has eleven primary health care clinics, eight fixed and three mobile. There is also a district hospital, Vredenburg Provincial Hospital, in the SBLM. There are five operational public sector ambulances, for a ratio of approximately 0.4 ambulances per 10,000 people. Individuals can access 11 TB clinics and 7 ART treatment sites for TB and ART patients.

5.3.3 WATER AND SANITATION

The number of households (formal and informal) receiving minimum levels of service for water was above 90% (Saldanha Bay Municipality, 2022). Approximately 24% of households in SBLM have access to piped water inside the yard. Of the 35,974 households under the SBLM recorded in 2022, 10,000 have access to free basic services. This figure increased from 6,000 households in 2018 **(Figure 5-12)**.

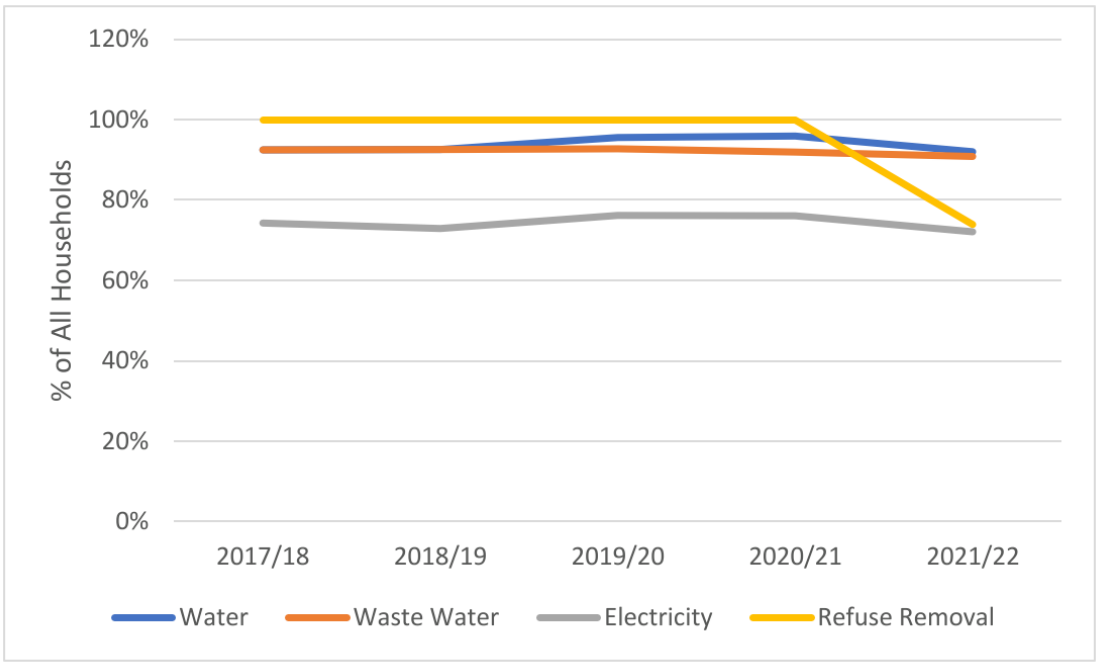


Figure 5-11 - Households receiving minimum levels of service (Saldanha Bay Municipality, 2023)

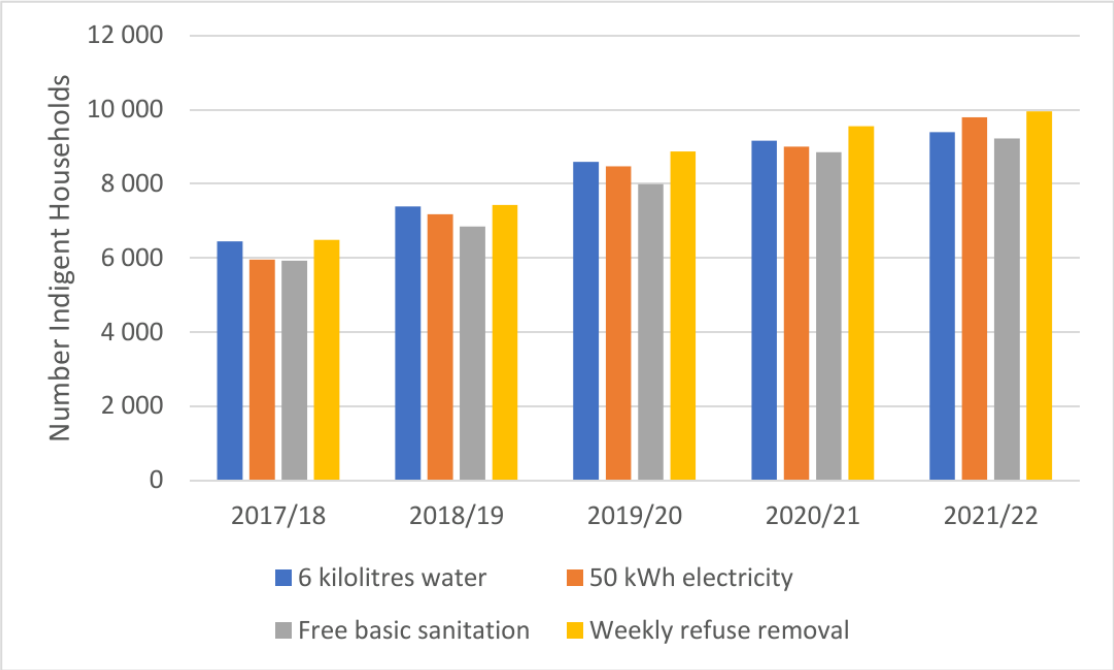


Figure 5-12 - Households with access to free basic services (Saldanha Bay Municipality, 2023)

5.3.4 ELECTRICITY

Approximately 75% of all households in the municipality have access to electricity at the minimum service level of 20 Ampere. This excludes the 3,500 households served directly by Eskom.

The number of households with access to free basic electricity has been increasing from 2017/2018 till 2021/2021, as indicated in **(Figure 5-12)**.

5.3.5 ACCESS TO SANITATION AND ACCESS TO WASTE REMOVAL

Over 98% of households in the SBLM have access to flush/chemical toilets (Saldanha Bay Municipality, 2022). Waste collection outperformed all other basic services until 2021, when waste collection dropped from 100% to 74% in 2022 **(Figure 5-11)**. This was due to the end of the door-to-door collection of refuse bags in the George Kerridge informal settlement and the closure of the swop shops in Middelpos and Laingville (Saldanha Bay Municipality, 2023).

5.3.6 TELECOMMUNICATIONS

The Baobab open access network (OAN) fibre project was formally initiated on 6 December 2021. The purpose of the fibre project was to roll out the installation of a singular master open-access network and enable all SBLM residents and businesses the freedom of choice to contract with and make use of the value-added services on offer (data, content, bundle services, and municipal utility management) (Saldanha Bay Municipality, 2023). Four local Internet Service Providers were contracted and onboarded onto the Zoom Fibre network.

5.3.7 PUBLIC TRANSPORT

The main reason for the use of transportation by 66% of the population in SBLM in 2017 was people travelling to educational facilities (47%), work (43%), and shopping (8%) (Western Cape Government, 2017). Of persons travelling to educational facilities, 63% walked all the way, 16% travelled by car, 14% travelled by bus and 7% travelled by minibus taxi. For those travelling to work, 44% were using private vehicles, 30% walked all the way, 15% travelled by minibus taxi and 11% travelled by bus.

6 PRIMARY RESEARCH

Focus group meetings were held with key stakeholders to inform the SIA. These meetings took place outside of the legislative process.

6.1 FOCUS GROUP MEETINGS

Four focus group meetings were undertaken as part of the primary data collection. These were with:

- The Aikonese Cochoqua Khoi Tribal Council – 29 October 2023;
- Environmental organisations – 12 November 2023;
- Businesses surrounding the project site – 12 November 2023; and
- Ratepayers and homeowners associations – 12 November 2023.

6.1.1 AIKONESE COCHOQUA KHOI TRIBAL COUNCIL

A focus group meeting and site walkover were held with the Aikonese Cochoqua Khoi Tribal Council on 29 October 2023. Heritage Western Cape requested this engagement for the heritage impact assessment application. This group identifies itself as a First Nations Group.

The following issues were raised during the site visit, focus group meeting, and subsequent email correspondence.:

- The group raised concerns about the health dangers of manganese and its potential health impact on the community.
- They indicated that the area is being developed without their involvement and consent.
- They commented that the current economic development, community investment models and the local Saldanha economy's value chain do not benefit the Greater Saldanha's First Nations Groups.
- The Aikonese Cochoqua Khoi Tribal Council said they are eager to determine the community's share in the development.
- The Aikonese Cochoqua Khoi Tribal Council emphasised that the leadership should have a say in how a company's Corporate Social Investment (CSI) is spent.
- They recommended a minimum of 5% of Host Community Equity be allocated to the local Khoisan Tribal Council. They further explained the allocation should be at least 5% non-transferable carried interest or a minimum 5% equity equivalent benefit.
- They suggested that the Project include one or two tribal members to be part of a committee that oversees the Project and its ongoing roll-out.
- The council indicated that the Free, Prior, and Informed Consent (FPIC) principle should be upheld, allowing communities to make informed decisions about the Project.
- It was recommended that an independent environmental company, which is local, be contracted to protect their people from environmental hazards.
- They indicated that a comprehensive impact assessment process must be conducted to identify and assess environmental impacts.
- Mitigation strategies on the long-term effects on the health of communities must be considered.
- Biodiversity and preservation should be prioritised.
- The suggestion was made that emissions and dust will have to be controlled by the best systems.
- The council said revenue sharing should be ensured, whereby a portion of the profits generated from development projects directly benefit the affected First Nation Communities.

- They advocate for the full inclusion of First Nation people.
- They would like to encourage the development of a partnership agreement between the parties regarding the Project, clearly outlining the roles, responsibilities and benefits to all parties.
- It was suggested that the project sponsor cultural tourism, for example, by developing an Eco Park to preserve heritage and language, serving as an arts and culture centre.
- They asserted that as the host nation of Saldanha, they, as the Khoi nation, have an interest in the Project that is currently being planned.
- They also advocated for the protection and respectful handling of burial sites.

The details of the issues and comments raised by the Aikonese Cochoqua Khoi Tribal Council are included in the heritage impact assessment report.

6.1.2 ENVIRONMENTAL ORGANISATIONS

Environmental organisations raised the following issues:

- Air quality concerns were raised in terms of the dust that the operations will generate.
- The number of trucks using the West Coast road R27 to access the site is a concern. The comment was made that this road cannot currently manage the number of vehicles and that the Project will add more traffic.
- Concern was raised around the health impacts of manganese, particularly the long-term effect of manganese on people's health.
- Attention was drawn to the fact that the train bringing the manganese would pass through Lowville and Verdenburg, densely populated areas, and the dust from train wagons could impact these people's health.
- It was commented that the job opportunities created by the Project are favourable for the area as there are limited employment opportunities.
- It was recommended that the conveyors should be enclosed to lessen the dust impact.
- The recommendation was made that the Project should use local companies as far as possible to enhance the local economic opportunities the Project will bring to the area.

6.1.3 SURROUNDING BUSINESSES

The surrounding businesses made the following comments and recommendations:

- It was indicated that the prevailing wind is from West to East, which needs to be considered in the air quality models.
- An Environmental Management Programme (EMPr) will be necessary for managing and mitigating dust impacts. The comment was made that the Project must be managed according to the EMP.
- The health impacts of manganese are a concern, particularly in people's lungs.
- The comment was made that the Project is positive, but the health impacts are a genuine concern.
- Participants indicated that job creation during construction and operations has a positive impact.
- The concern was raised that the trains would pass through Lowville, and this community could have dust impacts from the wagons carrying manganese.
- The suggestion was made that the Project should happen in the Port as there are already dust impacts.
- The comment was made having all the impacts in one place. The Port would be better.

- The recommendation was made that the community of Saldana should benefit from the Project.
- The comment was made that people would rather see the steel plant reopened than this Project.
- Why the Project does not use the free port Industrial Development Zone was asked.
- The Port's capacity to handle more ships was raised as a concern.
- Concern was raised about the health of people working in the loading warehouse, particularly the workers handling manganese.

6.1.4 RATEPAYERS' AND HOMEOWNERS' ASSOCIATIONS

The ratepayers' and homeowners' associations raised the following issues:

- The comment was made that it would be challenging to separate the commodities in the warehouse and prevent cross-contamination.
- Attention was drawn to the fact that a phosphate mine has been approved, which could have dust impacts on the proposed logistics hub.
- Significant concerns exist about the amount of traffic the Project will generate during construction and operations. It was mentioned that the risk of accidents increases in winter when there is dense fog.
- The participants wanted clarity on the number of jobs the Project will create during construction and operations.
- The impact of manganese on health was raised as a concern. It was stated that a manganese export project was stopped in Port Elizabeth due to health concerns.
- The recommendation was made that the health of workers loading the manganese must be carefully monitored. It was said that workers must use specialist personal protective equipment to prevent them from inhaling the manganese dust.
- The recommendation was made that conveyors transporting the manganese must be covered to prevent dust pollution.
- It was said that the ore stockpiles would need to be kept wet, or dust a-cide would need to be used to prevent dust.

7 PROJECT ZONE OF INFLUENCE

The project Zone of Influence refers to the area affected by the Project. It can be defined geographically or as an area affected by the Project's activities. The project zone of influence includes the broader social environment in which the Project is implemented. Defining the Zone of influence helps identify the Project's potential positive and negative effects. Understanding the Zone of influence also assists in the management of impacts and the development of mitigation measures.

Figure 7-1 provides a spatial representation of potential social receptors within 3 and 5 km of the project site.

The predominate land use within the 3 and 5km area is open land with some industrial land uses, including the non-operational Saldanha Steel Works and the Saldanha Port. Outside the 5km, the land use changes to some residential areas. Within the 5km radius, some residential areas are included in the southwest, the outskirts of Saldanha Bay, the southeast, and the outskirts of Langebaan, including what appears to be small holdings. In the north, Vredenburg is outside the 5 km radius. There are no residences within the 3 km radius. It is important to note that the logistics hub is within the Saldanha Industrial Development Zone, which is zoned for industrial use.

Features of the Project that fall outside these radiuses include the railway line, which will bring ore into the logistics hub and the road network, which will also bring in construction materials during the construction phase and ore during the operational phase.

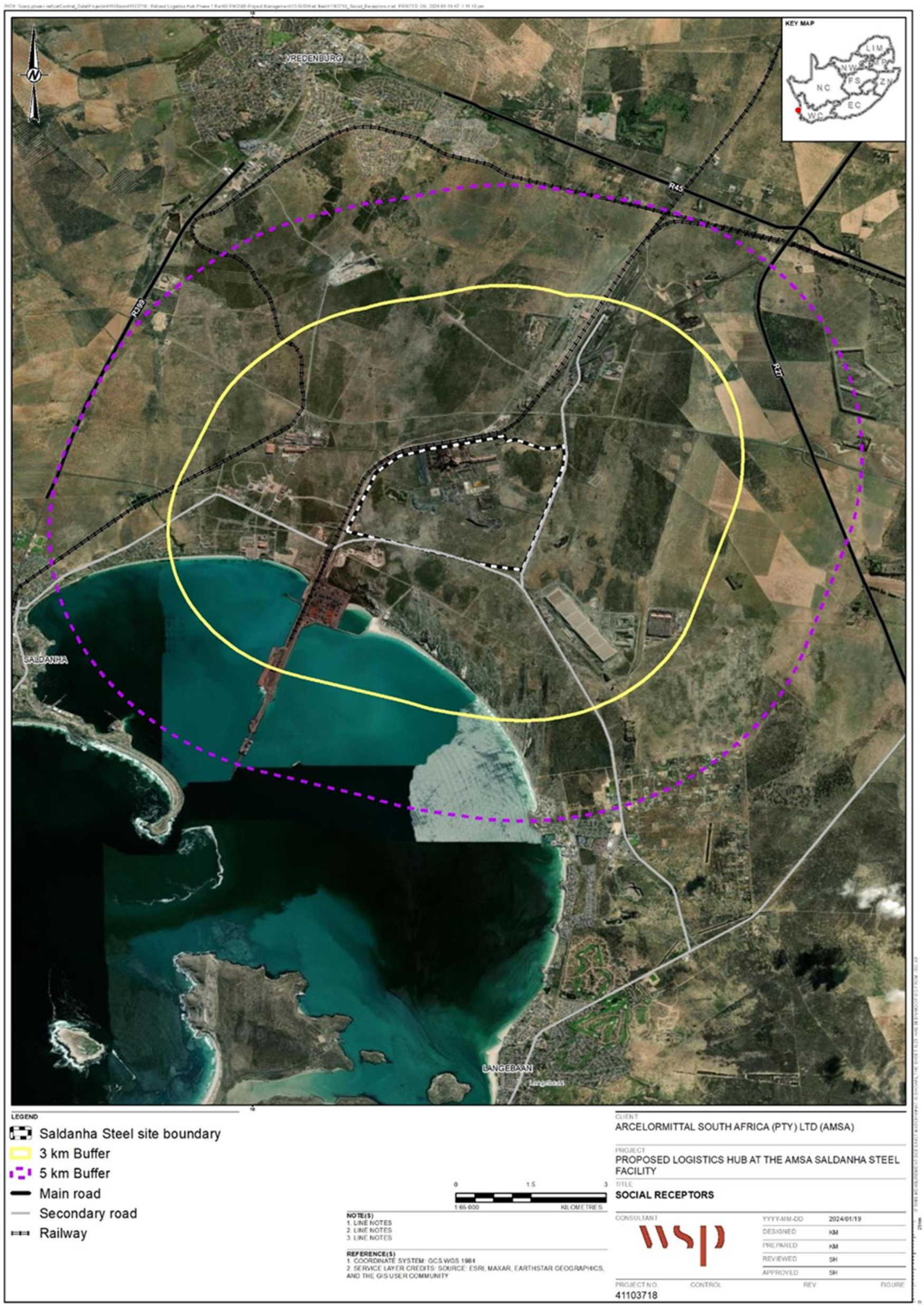


Figure 7-1 - Zone of Influence

8 IMPACT ASSESSMENT METHODOLOGY

The assessment of impacts and mitigation evaluates the likely extent and significance of the potential impacts on identified receptors and resources against defined assessment criteria to develop and describe measures that will be taken to avoid, minimise or compensate for any adverse environmental impacts, to enhance positive impacts, and to report the significance of residual impacts that occur following mitigation.

The key objectives of the risk assessment methodology are to identify any potential environmental and social issues and associated impacts likely to arise from the proposed Project and propose a significance ranking. Issues/aspects will be reviewed and ranked against a series of significance criteria to identify and record interactions between activities, aspects, resources, and receptors to provide a detailed discussion of impacts. The assessment considers direct[1], indirect[2], secondary[3], and cumulative[4] impacts.

A standard risk assessment methodology ranks the identified environmental impacts pre- and post-mitigation (i.e., residual impact). The significance of environmental and social aspects is determined and ranked by considering the criteria[5] presented in **Table 8-1**.

Table 8-1 - Impact Assessment Criteria and Scoring System

CRITERIA	SCORE 1	SCORE 2	SCORE 3	SCORE 4	SCORE 5
Impact Magnitude (M) The degree of alteration of the affected environmental or social receptor	Very low: No impact on receptor	Low: There is a slight impact on the receptor	Medium: Receptor social processes continue but in a modified way	High: Receptor social processes temporarily cease	Very High: Permanent cessation of social receptor processes
Impact Extent (E) The geographical extent of the impact on a given environmental or social receptor	Site: Site only	Local: Inside activity area	Regional: Outside activity area	National: National scope or level	International: Across borders or boundaries
Impact Reversibility (R) The ability of the environmental receptor to rehabilitate or restore after the activity has	Reversible: Recovery without rehabilitation		Recoverable: Recovery with rehabilitation		Irreversible: Not possible despite the action

[1] Impacts that arise directly from activities that form an integral part of the Project.
[2] Impacts that arise indirectly from activities not explicitly forming part of the Project.
[3] Secondary or induced impacts caused by a change in the Project environment.
[4] Impacts are those impacts arising from the combination of multiple impacts from existing projects, the Project and/or future projects
[5] The definitions given are for guidance only, and not all the definitions will apply to all the environmental receptors and resources being assessed. Impact significance was assessed with and without mitigation measures in place.

caused environmental or social change					
Impact Duration (D) The length of permanence of the impact on the environmental or social receptor	Immediate: On impact	Short term: 0-5 years	Medium-term: 5-15 years	Long-term: Project life	Permanent: Indefinite
Probability of Occurrence (P) The likelihood of an impact occurring in the absence of pertinent environmental and social management measures or mitigation	Improbable	Low Probability	Probable	Highly Probability	Definite
Significance (S) is determined by combining the above criteria in the following formula:	$[\boldsymbol{S} = (\boldsymbol{E} + \boldsymbol{D} + \boldsymbol{R} + \boldsymbol{M}) \times \boldsymbol{P}]$ $\boldsymbol{Significance} = (\boldsymbol{Extent} + \boldsymbol{Duration} + \boldsymbol{Reversibility} + \boldsymbol{Magnitude}) \times \boldsymbol{Probability}$				
IMPACT SIGNIFICANCE RATING					
Total Score	4 to 15	16 to 30	31 to 60	61 to 80	81 to 100
Environmental or Social Significance Rating (Negative (-))	Very low	Low	Moderate	High	Very High
Environmental or Social Significance Rating (Positive (+))	Very low	Low	Moderate	High	Very High

8.1 IMPACT MITIGATION

The mitigation measures chosen are based on the mitigation sequence/hierarchy, which allows for consideration of five (5) levels, including avoid/prevent, minimise, rehabilitate/restore, offset and no-go, in that order. The idea is that when project impacts are considered, the first option is to avoid or prevent the impacts from occurring in the first place. However, this is only sometimes feasible. If this is not attainable, the results can be allowed. However, they must be minimised as far as possible by considering reducing the development footprint, for example, so that minor damage is encountered. If impacts are unavoidable, the next goal is to rehabilitate or restore the impacted areas to their original form or as close to the original conditions as possible after project completion. Offsets are considered if all the other measures described above fail to remedy high/significant residual negative impacts. Suppose no offsets can be achieved on a potential impact, such as destroying any ecosystem. In that case, the no-go option is considered so that another activity or location is considered in place of the original plan.

The mitigation sequence/hierarchy is shown in **Figure 8-1** below.

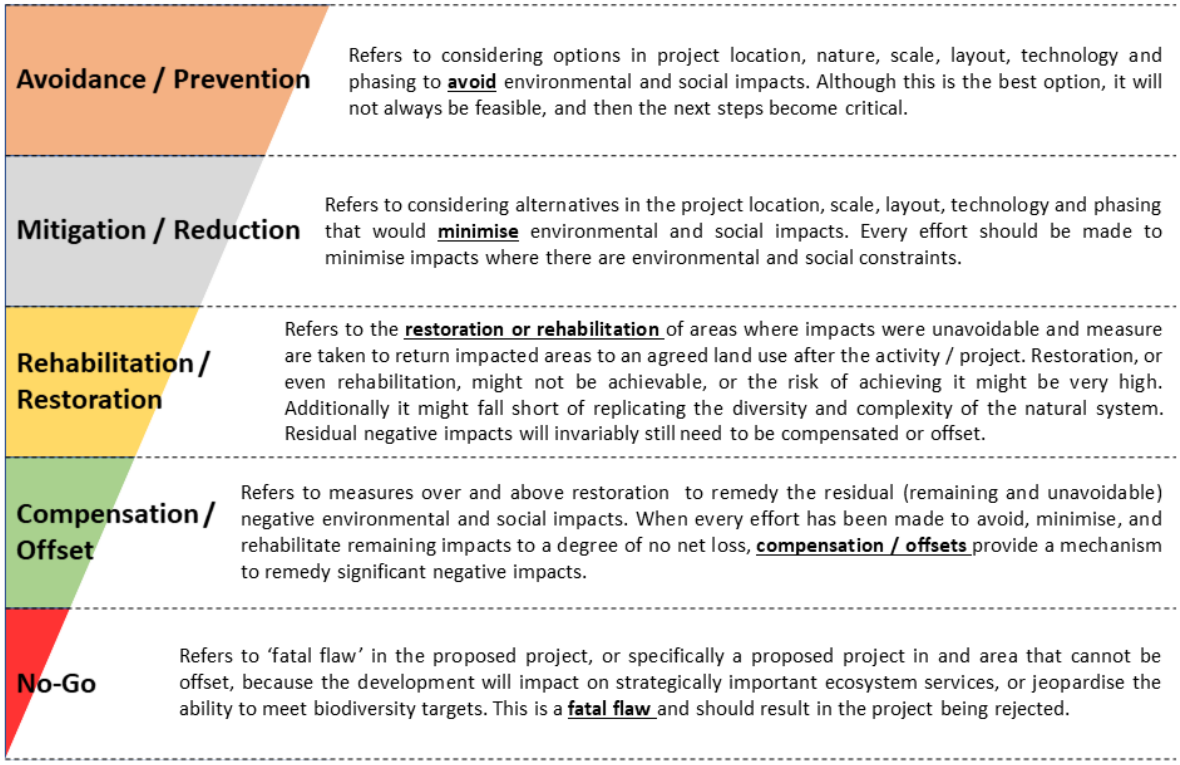


Figure 8-1 - Mitigation Sequence/Hierarchy

9 IDENTIFICATION OF IMPACTS

Impacts were identified for the construction, operation and decommissioning phases of the Project. Impacts are scored for significance before and after the implementation of mitigation measures. Where relevant, reference is made to applicable specialist studies in which more comprehensive information is provided.

9.1 CONSTRUCTION PHASE

The construction phase impacts will occur during the construction of the logistics hub and include:

- Economic development
- Employment and household income
- Traffic
- Dust nuisance
- Noise nuisance
- Cultural heritage impacts
- Influx of jobseekers

9.1.1 ECONOMIC DEVELOPMENT

The logistics hub construction will positively impact the local GDP. Goods and services will need to be sourced locally. According to the economic impact assessment, the proposed Project will contribute to the Gross Domestic Product during the construction phase because of increased investment due to increased demand for products and services leading to increased business sales for local businesses in the area. An increase in business productivity will lead to an increase in economic activity. The Project will also create jobs that provide salaries that will, in turn, support the local economy. The proposed Logistics Hub will, therefore, contribute to both local and national Gross Domestic Product during the construction as a direct result of increased investment in the local economy, which would result in an improved GDP contribution within the Saldanha Bay Local Municipality, especially considering the loss of GDP that resulted in the closure of the Saldanha Bay Steel Works that occurred in 2020 (Urban-Econ, 2023).

Enhancements

- AMSA should engage with local authorities and business organisations to investigate the possibility of procuring construction materials, goods and products from local suppliers were feasible.

Significance

The significance rating is **highly positive** and remains **highly positive** post mitigations.

9.1.2 EMPLOYMENT

The economic modelling has confirmed that eighty-nine (89) direct employment opportunities will be created during construction, increasing household incomes by R48.1 million. (Urban-Econ, 2023) Creating 626 direct, indirect, and induced Full-Time Equivalent employment positions during construction will temporarily increase affected households' income to R110.0 million in 2023. Approximately 43.7% of this will be earned by households whose members will be working at the

project site itself. Most of this direct income households earn is anticipated to remain in the local municipality. Additionally, an improvement in the standard of living of the benefiting households will occur, albeit temporarily.

Enhancements

- It is suggested that non-locals should only be hired when specialist skills, which are unavailable locally, are required. The following aspects in this regard should receive priority:
  - Residents and communities should be employed wherever possible;
  - Local construction companies should be used whenever possible, especially for unskilled and semi-skilled work and
  - Local workers should be used and mentored as far as possible.

Significance

The significance of employment is rated as **medium Positive** before mitigation and **high Positive** post-mitigation.

9.1.3 TRAFFIC

There will be an increase in traffic during the construction of the logistics hub, but this will be minimal and only during the construction period. Increased traffic can lead to social nuisances such as increased safety risks, air quality, and noise impacts. The following mitigation measures are proposed to reduce these impacts.

Mitigations

- Trucks will be fitted with tracking devices to maintain speed limits and improve safety by monitoring driver behaviour.
- A complaints register should be available to any stakeholder who might want to complain about construction vehicles.
- A toll-free number should be provided on construction trucks, allowing road users to report bad driving.
- The gravel roads must be kept wet when trucks access the site to reduce dust.
- Vehicles must be regularly serviced to reduce exhaust emissions.
- Introduce sufficient and appropriate traffic signals at intersections to manage traffic flow.
- The site is zoned for industrial use, and only trucks coming to the logistics hub will access the site.

Significance

The traffic impact is rated as a **medium negative** and, after mitigation, a **low negative**.

9.1.4 DUST AND EXHAUST EMISSIONS

Some dust will be generated during construction due to foundation excavation, and earth-moving activities will be limited to the construction site and road haulage on-site and near the site. They will not fall out on sensitive social receptors. More information is available in the air quality impact assessment. The following mitigation measures are recommended.

Mitigations

- Exposed areas created by the construction activities will be kept wet during construction to minimise dust emissions from the site activities.
- Strict speed limits on dust roads will be enforced to prevent dust.
- A complaints register will be available to stakeholders to report any dust complaints.
- Construction material stockpiles will be restricted to designated areas where these can be managed.
- No waste burning will be permitted, such as plastic bags, cement bags, and litter.
- All materials to the site must be transported so they do not fall off the construction vehicle. It may be necessary to cover or wet construction materials.
- Vehicles and machines must be maintained to minimise exhaust emissions.

Significance

The significance of dust and exhaust emissions is rated as **medium negative** before mitigation and **low negative** after mitigation.

9.1.5 NOISE

Construction activities have the potential to generate noise for construction workers and sensitive social receptors. However, all social receptors are considered sufficiently far from the construction site as it is in an industrial zone. As such, the noise impacts on social receptors are considered negligible. The primary noise impacts associated with the logistics hub are occupational.

Mitigations

The following mitigation measures are recommended to reduce noise:

- Occupational health surveys will be conducted to ensure that the noise emissions do not exceed the acceptable occupational health limits (85 dBA) for construction workers.
- Workers will be provided hearing protection should they work in environments that exceed the acceptable occupational limits.
- Workers will be made aware of a complaints register should they wish to report noise issues.
- Construction activities will be planned so that the most significant potential actions that could generate noise are scheduled during periods that will result in the least disturbance, for instance, restricting construction activities to daytime.
- Ensuring equipment is well-maintained to avoid additional noise generation.
- A maximum speed of 40 km/h will be set on all unpaved roads.
- Receiving construction materials will be planned for during non-peak traffic hours to avoid additional traffic and associated noise.
- Construction vehicles and equipment will be regularly serviced to reduce noise generated from these.

Significance

Due to the site being far from sensitive receptors, the noise impacts are rated at **medium negative** pre-mitigation and **low negative** post-mitigation measures.

9.1.6 CULTURAL HERITAGE

No archaeological or heritage resources were identified within or near the areas proposed for development during the archaeological field assessment. Therefore, no impact on archaeological heritage resources is anticipated due to the complete transformation of the area through past industrial developments. The results of this field assessment corroborate the findings of previous assessments, which note that the site in the Saldanha Bay Industrial Development Zone (IDZ) is located away from the sensitive coastal area and has Low sensitivity for impacts on archaeological heritage. (Lavin, 2023)

Regarding living cultural heritage, the Aikonese Cochoqua Khoi Tribal Council have requested that they benefit directly from the development of the logistics hub, both in a profit share and from CSI projects and spending.

Mitigations

- If archaeological resources are uncovered during excavation, work must cease near the find, and the Environmental Compliance Officer (ECO) must contact Heritage Western Cape to determine the best way forward.
- AMSA is a publicly listed company and is responsible to its shareholders. Everyone has an opportunity to benefit from the Project by purchasing shares in the company.
- AMSA will not target one community or organisation for benefit above another.
- AMSA will follow a fair process to identify CSI initiatives it will support.

Significance

The impact of living cultural heritage is rated as **low negative** pre-mitigation and remains **low negative** post-mitigation measures.

9.1.7 INFLUX OF JOBSEEKERS

As news of the development of the logistics hub spreads, there is a potential for an influx of job seekers looking for jobs during the construction phase. The influx is expected to be low but should still be managed. Not all job seekers will find work, which might increase the area's unemployment rate.

The increased number of unemployed people may lead to increased social ills such as crime, alcohol abuse, gender-based violence, and growing pressure on local resources, infrastructure and social services. Construction labourers are generally men who will be away from home, which may lead to increased prostitution.

Mitigations

- As part of onboarding construction workers, training should be provided on preventing Gender Based Violence, Sexual Assault and Sexual Harassment.
- The Project must engage with communities using a dedicated community liaison officer and have an effective stakeholder engagement plan, including a grievance mechanism for communities to access and lodge complaints.
- Local employment should be a priority for the construction contractor to lessen the number of men away from their homes.

- No recruitment should occur at the Project gate to prevent informal settlements around the Project site.
- Increased security in the Project area should be provided to regulate access to the site and prevent informal settlements.

Significance rating

As a negative impact, the impact's significance decreases from **Low** before mitigation to **Very Low** after mitigation.

9.1.8 CONSTRUCTION PHASE SUMMARY OF IMPACTS

Table 9-1 summarises the impacts of the construction phase.

Table 9-1 - Construction Phase Summary of Impacts

Impact	Character	Pre-Mitigation							Post-Mitigation						
		(M+	E+	R+	D)x	P=	S	Rating	(M+	E+	R+	D)x	P=	S	Rating
Economic Development	Positive	3	3	3	4	5	**65**	**P3**	4	3	3	4	5	**70**	**P3**
	Significance	**P3 - High**							**P3 - High**						
Employment	Positive	4	3	3	2	4	**48**	**P2**	5	3	5	4	4	**68**	**P3**
	Significance	**P2 - Medium**							**P3 - High**						
Traffic	Negative	4	2	3	3	5	**60**	**N2**	3	2	2	2	3	**27**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Dust and Exhaust Emissions	Negative	2	2	3	3	4	**40**	**N2**	2	1	3	2	3	**24**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Noise Emissions	Negative	2	2	3	2	4	**36**	**N2**	1	1	3	2	3	**21**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Living Cultural Heritage	Negative	1	1	3	2	3	**21**	**N1**	2	2	3	2	3	**27**	**N1**
	Significance	**N1 - Low**							**N1 - Low**						
Influx of jobseekers	Negative	2	1	3	2	3	**24**	**N1**	1	1	2	1	2	**10**	**N1**
	Significance	**N1 - Low**							**N1 - Low**						

9.2 OPERATIONAL PHASE

The following impacts will likely occur during the operational phase:

- Traffic
- Noise
- Dust
- Health
- Employment an
- Economy

9.2.1 TRAFFIC

It is estimated that between 10 and 16 trucks per hour will be added to the roads. A Traffic Impact Assessment is required when vehicles exceed 50 additional vehicle trips per hour. There is also no change in the land use; the area and surrounds are zoned for industrial use. The logistics hub does not require a Site Development Plan (SDP). Therefore, a Site Traffic assessment/statement is not required. Stakeholders have raised the issue of additional traffic, and the following mitigations are recommended.

Mitigations

- Trucks will be fitted with tracking devices to maintain speed limits and improve safety by monitoring driver behaviour.
- A complaints register will be available to any stakeholder who might want to complain about trucks.
- A toll-free number will be provided on trucks, allowing drivers to report bad driving.
- The gravel roads will be kept wet when trucks access the site to reduce dust.
- Vehicles will be regularly serviced to reduce exhaust emissions.
- Where necessary, the existing roads will be widened, or new lanes will be added to increase road capacity.
- Turning lanes will be provided when trucks coming to the logistics hub must turn off public roads.
- Appropriate traffic signals at intersections to manage traffic flow will be introduced.
- The site is zoned for industrial use, and only trucks coming to the logistics hub will access the site.

Significance

The impact of traffic is rated as **medium negative** before mitigation and remains **medium negative** after mitigation.

9.2.2 NOISE

The transporting and handling of the commodities will generate noise, which must be mitigated for workers and members of the public. The site is within an industrial zone, and sensitive social receptors are far from noise-generating activities. However, noise impacts still need to be managed.

Mitigations

- Conduct occupational health surveys to ensure noise emissions do not exceed the acceptable occupational limits (85 dBA).
- Workers will be provided hearing protection should they work in environments that exceed the acceptable occupational limits.
- Workers will be made aware of a complaints register should they wish to report noise issues.
- All vehicles and machines must be adequately maintained to minimise potential noise emissions.
- Machinery will be retrofitted with silencers that emit noise higher than the acceptable emissions limits.
- The public will be aware of the complaints register where they can register noise-related complaints.

Significance

The noise impacts are rated as having a **medium negative** impact before mitigations and a **low negative** impact after mitigation measures.

9.2.3 DUST

Dust will be generated by transporting the commodities by rail and road. Further dust will be generated when loading and offloading the commodities and transporting these by conveyor belts. Workers and the public could be exposed to dust impacts. The Atmospheric Impact Assessment found that dust concentrations associated with the Logistics Hub operations are predicted to exceed the 24-hour average of PM10 NAAQS past the Saldanha Steel fence line, extending towards the east. However, these concentrations do not impact residential sensitive receptors, with all sensitive receptor concentrations predicted to remain low. Concentrations associated with the Logistics Hub operations are predicted to remain well below respective international guidelines, with no impacts on sensitive receptors or the receiving environment. Dust concentrations associated with the Logistics Hub operations are predicted to remain well below respective international guidelines, with no impacts on sensitive receptors or the receiving environment. (WSP, 2023)

Sensitive receptors or the receiving environment will not be impacted by dust. However, workers handling the commodities at the site will be exposed to dust, and mitigation measures are recommended to mitigate this exposure.

Mitigations

- Conduct occupational health surveys to ensure dust emissions do not exceed the acceptable occupational health limits.
- Provide workers with dust masks and, where appropriate, ventilators where dust emissions exceed the acceptable occupational health limits.
- Workers will be made aware of a complaints register should they wish to report dust issues.
- Strict speed limits on dust roads will be enforced to prevent dust generated by trucks.
- Truckload beds will be covered with tarpaulin to prevent dust from these areas.
- Train wagons carrying manganese will be covered to prevent dust.
- A complaints register will be available to stakeholders to report any dust complaints.
- Any commodities stockpiles will be restricted to designated areas where these can be managed, such as the warehouse.
- Manganese stockpiles will be kept wet or treated with a dust-a-cide to reduce and manage dust.
- Conveyor belts will be covered where possible to reduce dust.

Significance

Dust impacts will have a **medium negative** impact before mitigation and a **low negative** impact post-mitigation measure.

9.2.4 HEALTH IMPACTS

Several stakeholders raised concerns about the potential health impacts of manganese exposure. The primary health problem is manganese dust. The adverse effects of exposure are associated with the inhalation of manganese dust, which can result in toxicity symptoms that may appear slowly

over months and years. Manganese toxicity can result in a permanent neurological disorder known as manganism, with symptoms that include tremors, difficulty walking, and facial muscle spasms. (Agency for Toxic Substances and Disease Registry, 2023). The literature reviewed indicated that workers are most likely exposed to health risks associated with Manganese dust. Not on sensitive receptors in the receiving environment. (The National Institute for Occupational Safety and Health , 2023)

Mitigations

- The mitigation measures mentioned for dust impacts must be implemented to manage and reduce dust impacts.
- Workers working with manganese must be regularly monitored for health impacts caused by exposure to manganese dust. They should be monitored long-term to identify any impacts from long-term extended exposures to manganese dust.

Significance

Health impacts due to the risk of manganese poisoning are rated as a **high negative** impact without mitigation measures and a **medium negative** impact with mitigation measures.

9.2.5 EMPLOYMENT AND HOUSEHOLD INCOMES

Three hundred and ninety-one (391) direct employment opportunities will be created during operations, increasing household incomes by R42.0 million annually. Of the 391,139 are expected to be direct jobs. A further 114 jobs are expected to materialise through second-round suppliers. These jobs occur when suppliers of new goods and services to the appointed companies (first-round suppliers) experience larger markets and the potential to expand. The increased income in these households, employed directly or indirectly through the operations of the proposed development, will result in additional expenditure in the economy, stimulating growth and spurring additional employment. It is estimated that 138 jobs will be induced through the Operational Phase of the proposed development. (Urban-Econ, 2023) More information can be found in the Economic Impact Assessment report.

Enhancement measures

- It is suggested that non-locals should only be hired when specialist skills, which are unavailable locally, are required. The following aspects in this regard should receive priority:
  - Residents and communities should be employed wherever possible;
  - Local companies should be used whenever possible, especially for unskilled and semi-skilled work.
  - Local workers should be used and mentored as far as possible.
  - Rigorous and transparent recruitment processes should be followed, and regular audits should be undertaken to establish whether workers are locals.

Significance

The Project's impact on employment and household incomes will be **medium positive** before enhancements and **highly positive** after enhancement measures.

9.2.6 ECONOMY

The local economy will benefit from supplying goods and services to the Project during the operational phase. The proposed Logistics Hub will contribute to local and national gross domestic product during the operational phase of development, resulting from the operational expenditure. This would result in an improved GDP contribution within the Saldanha Bay Local Municipality, especially considering the loss of GDP that resulted in the closure of the Saldanha Bay Steel Works that occurred in 2020. Additionally, improved exports through the Port of Saldanha would result in economic contribution (GDP) within the Saldanha Bay Local Municipality. Furthermore, the potential expansion of mining operations, which may result from the improved storage capacity of commodities at the Port of Saldanha, would enable an improved GDP contribution and growth within the Northern Cape. (Urban-Econ, 2023)

Enhancement measures

- AMSA should engage with local authorities and business organisations to investigate the possibility of procuring materials, goods and products from local suppliers was feasible.

Significance

The impact on the economy of the Project is rated as **medium positive** before enhancement measures and **high positive** post enhancements.

9.2.7 OPERATIONAL PHASE SUMMARY OF IMPACTS

Table 9-2 presents a summary of the operational phase impacts.

Table 9-2 - Operational Phase Summary of Impacts

Impact	Character	Pre-Mitigation							Post-Mitigation						
		(M+	E+	R+	D)x	P=	S		(M+	E+	R+	D)x	P=	S	
Traffic	Negative	4	3	3	4	4	**56**	**N2**	4	3	3	4	3	**42**	**N2**
	Significance	**N2 - Medium**							**N2 - Medium**						
Noise	Negative	1	1	3	4	4	**36**	**N2**	1	1	2	3	2	**14**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Dust and Exhaust Emissions	Negative	3	3	3	4	4	**52**	**N2**	2	3	3	4	2	**24**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Health	Negative	4	2	5	5	4	**64**	**N3**	4	1	3	4	3	**36**	**N2**
	Significance	**N3 - High**							**N2 - Medium**						
Employment	Positive	4	3	3	4	4	**56**	**P2**	4	3	3	4	5	**70**	**P3**
	Significance	**P2 - Medium**							**P3 - High**						
Economy	Positive	4	3	3	4	4	**56**	**P2**	4	3	3	4	5	**70**	**P3**
	Significance	**P2 - Medium**							**P3 - High**						

9.3 DECOMMISSIONING PHASE

The main impacts that could be expected during the decommissioning of the logistics hub are:

- Job losses

- Local economy
- Dust and noise during the demolition of infrastructure.

9.3.1 JOB LOSSES

Typically, the most significant consequences of the decommissioning phase are associated with the loss of jobs and income of workers and their families. The loss of income has implications for the households directly affected, the communities in which they live, and the local economy. Given the number of people employed during the operational phase 391, the social impacts of decommissioning at a community level will be significant.

Mitigations

- A downscaling and retrenchment plan must be developed before the operation enters the decommissioning phase.
- Reskilling should be offered to workers so they can find alternative jobs.
- Workers should be assisted in accessing the Unemployment Insurance Fund.
- Local social services should know that the operation will be closing and that workers will need assistance.

Significance

The significance of job losses is rated as **high negative** pre-mitigation measures and **medium negative** post-mitigation measures.

9.3.2 LOCAL ECONOMY

Over the time the Project is operational, the local economy will become dependent on the income provided by the Project. Upon decommissioning, the revenue generated from the Project will cease, and this will affect the local economy.

Mitigations

- Engagements should happen with the local authorities to inform them that the operations will be closing.
- A closure plan should be developed to transition businesses which will have become dependent on the logistics hub to other economic opportunities.

Significance

The significance of the impact on the local economy is rated as **high negative** before mitigations and **medium negative** after mitigations.

9.3.3 DUST

Dust will be generated from the decommissioning activities.

Mitigations

The same dust mitigation measures should be implemented during the construction phase.

Significance

The significance of dust impacts during decommissioning is rated as **medium negative** before mitigations and **low negative** after implementing mitigation measures.

9.3.4 NOISE

During the decommissioning phase, noise will be generated from the deconstruction of the facilities.

Mitigations

The same noise mitigation measures outlined in the construction will be used to mitigate noise impacts in the decommissioning phase.

Significance

The significance of noise impacts during decommissioning is rated as **medium negative** before mitigations and **low negative** after implementing mitigation measures.

9.3.5 SUMMARY OF DECOMMISSIONING PHASE IMPACTS

Table 9-3 summarises the impacts of the decommissioning phase.

Table 9-3 - Summary of decommissioning phase impacts

Impact	Character	Pre-Mitigation							Post-Mitigation						
		(M+	E+	R+	D)x	P=	S		(M+	E+	R+	D)x	P=	S	
Job losses	Negative	5	4	3	5	4	**68**	**N3**	3	3	3	4	4	**52**	**N2**
	Significance	**N3 - High**							**N2 - Medium**						
Economy	Negative	5	4	3	5	4	**68**	**N3**	3	3	3	4	4	**52**	**N2**
	Significance	**N3 - High**							**N2 - Medium**						
Dust	Negative	3	2	3	2	4	**40**	**N2**	3	2	3	1	3	**27**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Noise Emissions	Negative	3	2	3	2	4	**40**	**N2**	3	2	3	1	3	**27**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						

9.4 CUMULATIVE IMPACTS

Cumulative impacts refer to the combined effects of the Project with other aspects of the social environment, which together may contribute to social and economic impacts.

9.4.1 INSUFICENT SALDANHA PORT CAPACITY

During the engagement with surrounding businesses, it was mentioned that the Saldhanha Port may be unable to handle the additional commodities. It indicated that the Port is already under pressure to accommodate its existing customers.

Mitigations

AMSA should ensure that the Port can accommodate the additional commodities.

Significance

The significance of the cumulative impact is rated as medium negative before mitigations and low negative after implementing mitigation measures.

9.4.2 ADDED PRESSURE ON THE SALDANHA MUNICIPALITY

The Saldhana Municipal area has experienced significant growth as people from the cities have moved to the area. The municipality is already stretched to serve these people. Depending on the influx that might occur because of the Project, this could put added pressure on the municipality to provide services.

Mitigations

- AMSA should inform the municipality of the Project and the potential for an influx of people looking for jobs so that the municipality can prepare for this.
- Should the Project go ahead, AMSA will pay additional rates and taxes, which should offset some of the negative effects of the potential influx.

Significance

The significance of this cumulative impact is rated as medium negative before mitigations and low negative after implementing mitigation measures.

9.4.3 SUMMARY OF DECOMMISSIONING PHASE IMPACTS

Table 9-4 summarises the cumulative impacts.

Table 9-4 – Summary of cumulative impacts

Receptor	Character	Pre-Mitigation							Post-Mitigation						
		(M+	E+	R+	D)x	P=	S		(M+	E+	R+	D)x	P=	S	
Insufficient Port Infrastructure	Negative	4	3	3	4	3	**42**	**N2**	3	2	2	3	2	**20**	**N1**
Significance		**N2 - Medium**							**N1 - Low**						
Pressure on the Saldanha Municipality	Negative	5	2	2	3	3	**36**	**N2**	4	2	2	4	2	**24**	**N1**
Significance		**N2 - Medium**							**N1 - Low**						

9.5 CONCLUSION

The development of the proposed logistics hub will offset some of the negative impacts of the closure of Saldanha Steel. The Project will create employment, training, and business opportunities during the construction and operation. As detailed above, the potential negative impacts of the construction and operation phases can be mitigated.

Some unfavourable impacts such as the potential impact on workers health have been rated as highly negative and significant. Other impacts on the construction, operation, and decommissioning phases have been rated as medium negative and medium positive, respectively. As shown in **Table 9-5** below, if mitigation measures are implemented, it is anticipated that the consequence and probability of the negative impacts will be reduced. Given the above, it is strongly recommended that the mitigation measures described in this report be incorporated into the proposed Project's

Environmental and Social Management Plan. Additionally, measures must be put in place to monitor and assess the implementation of these mitigation measures and take corrective action where necessary. WSP believes that the development should proceed as negative impacts can be mitigated to acceptable levels.

Table 9-5 - Summary of All Phases Impacts

Construction														
Impact	**Character**	**Pre-Mitigation**							**Post-Mitigation**					
		(M+	**E+**	**R+**	**D)x**	**P=**	**S**	**Rating**	**(M+**	**E+**	**R+**	**D)x**	**P=**	**S**	**Rating**
Economic Development	Positive	3	3	3	4	5	**65**	**P3**	4	3	3	4	5	**70**	**P3**
	Significance	**P3 - High**							**P3 - High**						
Employment	Positive	4	3	3	2	4	**48**	**P2**	5	3	5	4	4	**68**	**P3**
	Significance	**P2 - Medium**							**P3 - High**						
Traffic	Negative	4	2	3	3	5	**60**	**N2**	3	2	2	2	3	**27**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Dust and Exhaust Emissions	Negative	2	2	3	3	4	**40**	**N2**	2	1	3	2	3	**24**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Noise Emissions	Negative	2	2	3	2	4	**36**	**N2**	1	1	3	2	3	**21**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Living Cultural Heritage	Negative	1	1	3	2	3	**21**	**N1**	2	2	3	2	3	**27**	**N1**
Significance		**N1 - Low**							**N1 - Low**						
Influx of jobseekers	Negative	2	1	3	2	3	**24**	**N1**	1	1	2	1	2	**10**	**N1**
Significance		**N1 - Low**							**N1 - Low**						
Operations															
Impact	**Character**	**Pre-Mitigation**							**Post-Mitigation**						
		(M+	**E+**	**R+**	**D)x**	**P=**	**S**		**(M+**	**E+**	**R+**	**D)x**	**P=**	**S**	
Traffic	Negative	4	3	3	4	4	**56**	**N2**	4	3	3	4	3	**42**	**N2**
	Significance	**N2 - Medium**							**N2 - Medium**						
Noise	Negative	1	1	3	4	4	**36**	**N2**	1	1	2	3	2	**14**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Dust and Emissions	Negative	3	3	3	4	4	**52**	**N2**	2	3	3	4	2	**24**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Health	Negative	4	2	5	5	4	**64**	**N3**	4	1	3	4	3	**36**	**N2**
	Significance	**N3 - High**							**N2 - Medium**						
Employment	Positive	4	3	3	4	4	**56**	**P2**	4	3	3	4	5	**70**	**P3**
	Significance	**P2 - Medium**							**P3 - High**						
Economy	Positive	4	3	3	4	4	**56**	**P2**	4	3	3	4	5	**70**	**P3**
	Significance	**P2 - Medium**							**P3 - High**						

Decommissioning														
Impact	**Character**	**Pre-Mitigation**							**Post-Mitigation**						
		(M+	**E+**	**R+**	**D)x**	**P=**	**S**		**(M+**	**E+**	**R+**	**D)x**	**P=**	**S**	
Job losses	Negative	5	4	3	5	4	**68**	**N3**	3	3	3	4	4	**52**	**N2**
	Significance	**N3 - High**							**N2 - Medium**						
Economy	Negative	5	4	3	5	4	**68**	**N3**	3	3	3	4	4	**52**	**N2**
	Significance	**N3 - High**							**N2 - Medium**						
Dust	Negative	3	2	3	2	4	**40**	**N2**	3	2	3	1	3	**27**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Noise Emissions	Negative	3	2	3	2	4	**40**	**N2**	3	2	3	1	3	**27**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						
Cumulative Impacts															
Receptor	**Character**	**Pre-Mitigation**							**Post-Mitigation**						
		(M+	**E+**	**R+**	**D)x**	**P=**	**S**		**(M+**	**E+**	**R+**	**D)x**	**P=**	**S**	
Insufficient Port Infrastructure	Negative	4	3	3	4	3	**42**	**N2**	3	2	2	3	2	**20**	**N1**
Significance		**N2 - Medium**							**N1 - Low**						
Pressure on the Saldanha Municipality	Negative	5	2	2	3	3	**36**	**N2**	4	2	2	4	2	**24**	**N1**
	Significance	**N2 - Medium**							**N1 - Low**						

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CAREER SUMMARY

Steve has worked in the social sciences since 1998 (26 years) in the mining, oil and gas, renewable energy and agricultural sectors. Expertise includes social impact assessments, development of mitigation measures, social management plans, community and stakeholder engagement, resettlement action plans, livelihood restoration plans, social baseline studies, grievance mechanisms, social due diligence, high conservation value assessments and indigenous peoples plans.

Steve has experience locally, in South Africa, and internationally, working in compliance with International Finance Corporation (IFC) social performance standards. He has worked in 17 African countries, including Angola, Botswana, Cameroon, the Democratic Republic of Congo, Djibouti, Ethiopia, Gabon, Ivory Coast, Kenya, Mali, Malawi, Mozambique, Nigeria, São Tome, Sierra Leone, South Africa and Tanzania. Steve's experience is supported by a Masters Degree (Environmental and Social Science) from the University of Pretoria (UP), an Honours Degree in Development Studies from the University of South Africa (UNISA), a BA Degree in Anthropology, UP, Managers Development Programme (MDP) (University of Stellenbosch), Certificate in Public Participation from the International Association of Public Participation Practitioners.

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Managers Development Programme (MDP), University of Stellenbosch, South Africa	2009
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UNISA, Dept of Development, Administration,	1996 – 1998
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Social Impact Assessments

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Rand Gold, Digby Wells, Social Impact Assessment Lead, Doko- Aru road development, Democratic Republic of Congo 2010 - 2011

Wesizwe Platinum Mine, TWP, Perisseuo Consulting, Social Impact Assessment Lead, IFC and World Bank standards, South Africa (North West Province) 2007-2008

BKS, Perisseuo Consulting, Preliminary Environmental, Social and Transition Management Assessments Lead, South Africa (Pretoria, Gauteng) 2007 - 2008

Digby Wells, Perisseuo Consulting, Social Impact Assessment Lead, Sand dump reclamation 3/A/1, South Africa (Gauteng) 1998

Tavistock Collieries, Digby Wells, Perisseuo Consulting, Social Impact Assessment Lead, South Africa (Ogies) 1999

Tselentis Colliery, Digby Wells, Perisseuo Consulting, Social Impact Assessment Lead, South Africa (Mpumalanga) 1999

Winning Business Systems, Woman's Development Bank, Perisseuo Consulting Socio-Economic Impact Assessment Lead, (Boipatong, Daveyton, Katlehong) South Africa, 1999

Resettlement Action Planning

Globeleq, WSP, Resettlement and Livelihood Restoration Policy Framework Lead, Namaacha Wind Energy Facility, Mozambique, 2023

Genmin Pty Ltd, WSP, Resettlement and Livelihood Restoration Policy Framework Lead, Baniaka Iron Ore Mining Project, Gabon 2022-2023

Pensana PLC, HCV Africa, Longonjo Ndpr Mining Project, Resettlement Action Plan Development Lead, International Finance Corporation (IFC) standard, Angola, 2021-2022

Glencore, WSP, Tweefontein Relocation Action Plan Lead, IFC standard, South Africa, (Mpumalanga) 2022-2023

Total Energy, Professional Grave Solutions, Mozambique Gas Development Project, Resettlement Action Plan, Implementation of Stakeholder Engagement Process Lead for Grave Relocations - Mozambique Gas Development, Mozambique 2018 – 2021

Tselentis Colliery, Digby Wells, Perisseuo Consulting, Resettlement Action Plan Lead, South Africa, (Mpumalanga) 2004

High Conservation Value (HCV) assessments

Agripalma, Retrocession of concession areas, Stakeholder Engagement and Participatory Process of ceding parts of the palm oil concession back to the government of São Tome, Project Lead, São Tome 2021

Socapalm, HCV Africa, High Conservation Value (HCV) assessments, Social Sciences Lead, Cameroon 2021

Socapalm Palm Oil Plantations, High Conservation Value (HCV) Monitoring: HCVs 4,5 and 6, Monitoring Lead Monitoring and Management Plan Development, Cameroon 2021

Socapalm, HCV Africa, High Conservation Value Assessment, Social Sciences Lead, Cameroon and São Tome 2018 - 2021

SOGB palm oil plantation, HCV Africa, High Conservation Value Assessment, Social Sciences Lead, Ivory Coast 2019

Indigenous Peoples Plan

Genmin Pty Ltd, WSP, Indigenous Peoples Plan Lead, Baniaka Iron Ore Mining Project, Gabon, 2022-2023

Eskom Holdings SOC Ltd, WSP, Indigenous Peoples Plan inputs for the proposed Mier Rietfontein Solar PV and Battery Storage Project, Khoi-San Peoples, South Africa, Kalahari, (Northern Cape Province), 2022

Stakeholder Engagement (International)

Sasol Pty (Ltd), WSP, Stakeholder Mapping and Pre-Consultation Approach Development team member for the proposed Boegoebaai Green Hydrogen and Green Derivatives Project, South Africa (Northern Cape) 2022

Genmin Pty Ltd, WSP, Stakeholder Engagement Lead, Baniaka Iron Ore Mining Project, Gabon 2022-2023

Minbos, HCV Africa, Social Impact Assessment and Stakeholder Engagement Cácata Phosphate Mine Project, Angola (Cabinda Province) 2021

Pensana PLC, HCV Africa, Longonjo Ndpr Project Stakeholder Engagement Lead, Angola, 2019 - 2021

Total Energies, Professional Grave Solutions, Grave Relocation Action Plan (GRAP) Development, Stakeholder Engagement Process Lead, (Mozambique), 2016 -2020

Mkango Resources, Digby Wells, Stakeholder Engagement Lead, Environmental and Social Impact Assessment (EISA) to IFC standard, Rare Earth project, (Malawi), 2014 - 2015

Aurecon, Bridge over the Niger River, Stakeholder Engagement Lead, ESIA, IFC, (Nigeria), 2013 -2014

Platreef Resources, Digby Wells, Proposed Platinum Mine, Stakeholder Engagement Lead, South Africa (Limpopo) 2013 -2014

Randgold, Hydro Power Stations on the Kibali River, Stakeholder Engagement Lead, ESIA, RAP, IFC requirements, (Democratic Republic of Congo) 2013

Randgold, Life of Mine Kibali Gold Project, Stakeholder Engagement Plan Lead, (Democratic Republic of Congo) (DRC) 2012

Randgold, Stakeholder Engagement Lead, Hydro Power Developments ESIA, Kibali Gold Project, (DRC) 2012

Taurus Gold, Stakeholder Engagement Process Independent Review Afema Gold project Ivory Coast 2012

Randgold, Stakeholder Engagement Lead, Updating of ESIA to IFC, Lolo Mine, (Mali) 2011

Randgold, Public Consultation and Disclosure Lead, ESIA, Resettlement Action Plan (RAP) engagements to IFC standard, (DRC) 2010 - 2012

Koidu Holdings, Digby Wells, Public Consultation and Disclosure, ESIA, IFC, Sierra Leone 2010 - 2011

Randgold, Digby Wells, Public Consultation and Disclosure: Nzoro Road Upgrade ESIA, IFC, DRC 2010 – 2011

CIC Energy, Digby Wells Public Consultation and Disclosure Lead, Serorome Parshalt, Mamabula Project ESIA IFC, Botswana, 2008

Due Diligence

International lenders, Independent Environmental and Social Monitoring, Social Sciences Lead, 4 international airports and 3 domestic airports, Cape Verde, 2024

Standard Bank, Review of Stakeholder Engagement Plan and Grievance Redress Mechanism, for the Grinrod Matola Coal Terminal, Social Sciences, Lead reviewer, Mozambique, 2024

Solarcentury, Review of Action Plan for the Implementation of Resettlement Project for the Construction of the Chimuara Photovoltaic Power Plant, lead Social Sciences reviewer, Mozambique, 2023

ASGC, WSP, Lenders Due Diligence, Project Strada-Senegal roads project, Human Rights Methodology Review, Lead, Senegal, 2023

ASGC, WSP, Lenders Due Diligence, Project Strada-Senegal roads project, Resettlement Action Plan (RAP) Methodology Review, Lead, Senegal, 2023

ASGC, Kidepo, WSP, IFC Due Diligence Tourism Road Project, RAP Methodology Review, Lead, Uganda, 2023

Maridain, WSP, IFC Due Diligence, Wind Energy Facility, Social Sciences Lead, Kenya, 2022

Confidential client, WSP, IFC Due Diligence, Railway Project, Social Sciences Lead, Ethiopia 2022

Confidential client, WSP, IFC Due Diligence, Gold Tailings Reclamation Project, Social Sciences Lead, South Africa 2022-2023

Confidential Client, WSP, Environmental and Social Impact Assessment (ESIA) Review and Gap Analysis of a 100MW Gas to Power Plant, Mozambique 2022

Uranex Nachu Graphite Mine, Stakeholder Engagement Process Review, Environmental and Social Impact Assessment (ESIA), International Finance Corporation (IFC), Tanzania 2013

Banro Corporation, Digby Wells, IMC independent IFC Review, Bankable Feasibility Study, DRC, 2009

Price Waterhouse Coopers, Perisseuo Consulting, Feasibility Study, Mankwe Campus University of the North West, South Africa (North West) 2004

Policy Development

Mulilo, WSP, Policy Author, Local Employment and Procurement Policies for the Du Plessis Dam Solar PV Project South Africa (Northern Cape) 2024

Public Participation (South Africa)

Glencore, Kongiwe Environmental, Public Participation Process Lead, Leslie 1 Coal Mining Project, Leslie South Africa (Mpumalanga) 2018

Glencore, Kongiwe Environmental Public Participation Process Lead, eMakhazeni Coal Mining Project, Belfast, South Africa (Mpumalanga) 2018

Glencore, Kongiwe Environmental, Lephalale Coal and Power Project, Public Participation process Lead, Lephalale, South Africa (Limpopo) 2017

AECOM, Digby Wells, Public Participation Process Lead, EIA Sludge Storage Facility and Pipeline Associated with the Treatment of Acid Mine Drainage in the Eastern Basin of Witwatersrand Gold Fields, South Africa (Springs) 2014 - 2015

Sasol Mining, Digby Wells Public Participation Process Lead, Environmental Regulatory Processes for Proposed Syferfontein Block 4 Mine Expansion Project, South Africa, (Trichardt) 2014-2015

Northern Coal, Digby Wells Environmental, Belfast, Public Participation Process Lead, Environmental Authorisation for Listed Activities Associated with a Proposed Open Pit Coal Mine on the Farm Weltevreden 381 JT, South Africa, (Mpumalanga Province) 2014 – 2015

Xstrata Coal, Digby Wells Public Participation Process Lead, Zandbaken Mine, EIA Green Fields Project, South Africa, (Mpumalanga) 2012

Mincorp, Digby Wells, Public Participation Lead, Prospecting Right Application, South Africa, (KwaZulu Natal) 2011

Temo Coal, Digby Wells Public Participation Lead, Mining Right Application, South Africa, (Limpopo) 2011

Mashala Resources, Digby Wells Public Consultation Lead, Geluk Closure Plan, South Africa, (KwaZulu Natal) 2010-2011

DRD Gold, Digby Wells, Public Participation Process Lead, Crown Ergo Pipeline Project, South Africa, (Gauteng) 2010-2011

Xstrata Alloys, Digby Wells, Public Meetings Facilitation Lead, Lesedi Power Station, South Africa, (Mpumalanga) 2010

HCI Khusela, Digby Wells, Public Participation Process Lead, Palesa Colliery Expansion, EIA EMP amendment, South Africa, (Mpumalanga), 2010

HCI Khusela, Digby Wells, Public Participation Process Lead, Mbali Mine EMP amendment, South Africa (Mpumalanga) 2009

Marafe Resources, Digby Wells, Public Participation Process Lead, Bankfontein Mining Right Application, South Africa, (Mpumalanga) 2009

Crown Gold Recoveries, Digby Wells, Public Consultation Lead, Topstar Dump Reclamation, South Africa, (Gauteng) 2008-2011

Exxaro, Digby Wells, Public Participation Process Lead, Arnot Coal EIA/EMP amendment, South Africa, (Mpumalanga) 2008-2010

Bakgaga Mining, Digby Wells, Public Consultation Lead, Prospecting Right Application, South Africa, (Limpopo) 2008

Mincorp, Digby Wells, Public Participation Process Lead Schoongezicht, Mining Right Application, South Africa, (Mpumalanga) 2008

Pomodzi Gold, Digby Wells Public Participation Process Lead, Environmental Management Plan Amendment, South Africa, (North West) 2008

Vista Resources, Digby Wells, Consultation Process Lead, Prospecting Right Application, South Africa, (Makhado Local Municipality, Limpopo Province) 2008

TWP Perisseuo Consulting Public Participation Process Lead, IFC and World Bank standards Proposed ConRoast Platinum Smelter, South Africa (North West), 2008

Mintails, Umsizi, Perisseuo Consulting Public Participation Process Lead, Super Dump, EIA, South Africa, (Gauteng) 2008

Black Mountain Mine, Umsizi, Perisseuo Consulting, Public Participation Process Lead, Closure Plan, South Africa, (Northern Cape) 2007-2008

Taba Romana Granite, CT Environmental, Perisseuo Consulting, Public Participation Process Lead, South Africa, (Britz, North West) 2006

CT Environmental, Perisseuo Consulting Public Participation Process Lead for the conversion of the old order mining rights: extension of existing opencast mining operations, construction of a river diversion and application for an integrated water use licence on the farm Halfgewonnen 190 IS, South Africa (Mpumalanga) 2006

Xstrata Coal, Digby Wells, Perisseuo Consulting Public Participation Process Lead, Spitzkop Colliery (EMPR amendment), South Africa (Ermelo, Mpumalanga) 2005

CT Environmental, Perisseuo Consulting, Public Participation Process Lead, Environmental Management Plan (EMP) new coal mine development Boschmanskop, South Africa, (Mpumalanga) 2005

Xstrata Coal, Digby Wells, Perisseuo Consulting Preliminary Public Participation Lead, EMP new coal mine development, Boschmanskop, South Africa, (Mpumalanga) 2004

Xstrata Coal, Digby Wells, Perisseuo Consulting, Public Participation, Spitzkop Colliery, EMPR amendment, South Africa, (Mpumalanga) 2003

Etruscan, Digby Wells, Perisseuo Consulting, Public Participation Process Lead, EMP and Water License Application new diamond mining development, South Africa, (North West) 2003

Digby Wells, Perisseuo Consulting, Public Participation Process Lead, EMP, Diamond Mining Development, South Africa, (Vaal River) 2003

Social and Labour Plans

Northern Coal, Digby Wells, Social and Labour Plan Audit Lead, Jaglust Colliery, South Africa, (Mpumalanga) 2011

Sylvania, Digby Wells, Social and Labour Plan Lead, Vollspruit Mine, South Africa, (Steelpoort Valley Limpopo) 2011

Zyl Limited, Digby Wells, Social and Labour Plan Lead, Kangwane, South Africa, (KwaZulu Natal) 2011

HCI Kusela, Digby Wells, Social and Labour Plan Lead, Palesa Colliery, South Africa, (Gauteng) 2011

Xstrata Coal, Digby Wells, Social and Labour Plan Lead, Easternplats Kenidies Vale & Spitzkop, South Africa, (Limpopo) 2011

Eastplats, Digby Wells, Social and Labour Plan Audit Lead, Crocodile River Operations, South Africa, (North West) 2010

Xstrata Coal, Digby Wells, Social and Labour Plan Lead, Local Economic Feasibility Assessment, South Africa, (Mpumalanga) 2010

Tyax, Digby Wells, Social and Labour Plan Lead, Agnus Mine Tyax Trading Mining Right Conversion, South Africa, (Mpumalanga) 2009

Universal Coal, Digby Wells, Social and Labour Plan Lead, Kangala Mining Right Application, South Africa, (Mpumalanga) 2009

Chemwes Recovery Operation, Digby Wells, Perisseuo Consulting Social and Labour Plan Development Lead, South Africa (North West) 2004

Social Development Planning and Facilitation

Palabora Copper, Social Closure Plan Framework Development Lead, South Africa, (Limpopo), 2022

Talmar, Sustainable Developments, Social Development Facilitation Lead, Namakwa Irrigation Scheme, Onseepkans, South Africa,(Northern Cape).2018 -2021

LMJ Consulting, Magalies Water, Social Development Lead, Maboloka-Letlhabile Ground Water Supply Project, South Africa, (Brits) 2016

BHP Billiton, Digby Wells, Perisseuo Consulting Social Development Plan Development, South Africa, (Revilo North West) 2004-2005

Community Baselines

Xstrata Coal Operations, Digby Wells, Community Baseline Survey Lead, South Africa, (Mpumalanga) 2009-2010

BHP Billiton, Digby Wells Community Baseline Survey Lead, Kutala Southern Access Project, South Africa, (Mpumalanga) 2009

Department of Public Works, Bigin Africa, Perisseuo Consulting Special Intervention Programme Team Member, Data Management Specialist, Free Basic Water Implementation, South Africa, (National) 2008

Department of Water Affairs and Forestry WRP, Perisseuo Consulting, Consumer Survey Team Member, Water Services Regulation, South Africa, (National) 2008

Department of Water Affairs and Forestry, Perisseuo Consulting Business Intelligence Team Member, Water Services Planning and Information, National Census, South Africa, (National) 2005 -2008

Environmental Impact Assessments

Universal Coal, Digby Wells, Environmental Impact Assessment Lead, Mining Right Application, South Africa, (Mpumalanga) 2009-2011

CT Environmental, Perisseuo Consulting, Environmental Impact Assessment (EIA) and Environmental Management Programme (EMP) for Boschmanskop Coal Mine, South Africa, (Mpumalanga) 2006

Department of Water Affairs and Forestry, Project Coordinator, Strategic Environmental Assessment: Usutu – Mhaltuze Water Management Area, South Africa, (Kwa-Zulu Natal) 2000-2003

Monitoring and Evaluation

Department of Provincial and Local Government, Focus BI, Perisseuo Consulting, Monitoring and Evaluation Framework, Team Member, South Africa (National) 2006

Department of Water Affairs and Forestry, Coastal & Environmental Services, Perisseuo Consulting, Socio-Economic Profiling Lead, Kromme, Seekoei Catchments, Reserve Determination, South Africa (Eastern Cape), 2006

Training and Facilitation

Department of Agriculture, Social Development Facilitation, Namakwa Irrigation Scheme, Talmar Sustainable Developments, South Africa, Onseepkans, (Northern Cape) 2017-2021

Total Energy, Professional Grave Solutions, Lead trainer, training Community Liaison Officers for the relocation of approximately 1000 graves in northern Mozambique 2017-2020

Kongiwe Environmental, Chairing and Facilitation, Public and Stakeholder Meetings, 2018-2020

Digby Wells Environmental, Chairing and facilitation: Public and Stakeholder Meetings, 2008-2015

Perisseuo Consulting, Workshop facilitation, Chair public and stakeholder meetings, various projects, 1998-2008

Department of Water Affairs and Forestry, Workshop facilitation and chairing meetings: for the Strategic Environmental Assessment (SEA) Usutu to Mhlatuze Water Management Area (WMA), 2000-2003

Winning Business Systems Skills Accel / South Atlantic Plastics, Training and workshop facilitation for small business development, (Gauteng) 1998

Client BKS / Consultbro, Workshop facilitation and training in small business development, 1998

The University of South Africa (UNISA), Coordinator, Centre for Development Administration, Teaching Programme in Community Based Development, UNISA 1998-2000

The University of South Africa, Teaching Participatory Development Management during attendance sessions, 1998-2000

The University of South Africa, Junior lecturer: Development Administration first year, teaching first-year Development Administration 1998-2000

Stellenbosch University, Project trainer, MA Political Science, Managing simulation game Exaction, 1999

Atlas Aviation Company, Project trainer, Air Traffic Controllers, managing simulation game Green Revolution, 1999

BKS Consultburo, Consulting Engineers, Perisseuo Consulting, Kyalami Community Health Education Programme for the Kyalami Metropolitan Council, South Africa, (Gauteng Province) 1998

South African Defence Force, South African Medical Services, Medical Phase Instructor, Teaching the Operational Medical Orderly Course, South Africa (National) 1990

Anthropological Research

Chizumulu Island, Lake Malawi, 1996

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