

The proposed Gamsberg zinc mine and associated infrastructure (hereafter referred to as 'the Project') is subject to legislative and policy requirements at national, provincial and local level, as well as international guidelines and conventions. This chapter provides a broad description of key environmental and social legislation governing the ESIA process and the construction, operation and decommissioning phases of the Project. It specifically focuses on legal requirements related to the environmental authorisation of activities, as well as legal requirements for environmental protection, such as:

- standards for environmental quality control and pollution;
- biodiversity protection; and
- the protection of natural, cultural and historic heritage sites.

In addition to this, it provides a broader policy and planning context within which the Project will take place. This relates to regional and local planning policies and frameworks that are applicable to the Project and finally, a brief summary of applicable International policies and internal Corporate Standards is given. Additional detail on the administrative framework is included in *Annex A*.

2.1 NATIONAL LEGISLATIVE REQUIREMENTS

2.1.1 *The Constitution of the Republic of South Africa (No. 108 of 1996)*

South African law, including environmental law, is strongly influenced by the Constitution (No. 108 of 1996), which promotes specific moral, social and political values. The Constitution is the highest law of the land, and all South African law has to follow the spirit of the Constitution. The Constitution commits to the establishment of a society based on democratic values, social justice and fundamental human rights through improving the quality of life of all citizens and realising the potential of each person. Chapter Two of the Constitution contains the Bill of Rights which is the cornerstone of South African democracy. The Bill of Rights is binding on South African law and courts, all government departments and organisations and all South Africans, not only in terms of the rights, privileges and benefits which it confers, but also in terms of the duty and responsibility which it imposes, namely to implement and protect Constitutional rights and values. Sections 7, 8 and 24 of the Bill of Rights give constitutional force to sustainable development and provide that all people in South Africa have the right to a clean and healthy environment. These sections oblige government to pass reasonable legislation to protect the environment, prevent pollution and ecological degradation, and secure sustainable development.

All mining operations are obliged to operate within the spirit and to the letter of the South African Constitution, as it is the supreme law of South Africa and as such, all other legislation is consistent with its provisions and principles. Furthermore, it is important for such companies to have knowledge of the

Constitution, as an infringement of any of the fundamental rights entrenched in the Constitution may result in civil damage claims.

2.1.2 *National Environmental Management Act (No. 107 of 1998)*

The National Environmental Management Act (NEMA) is a framework Act which embraces three major areas of environmental concern, namely resource conservation and exploitation; pollution control and waste management; and land use planning and development. NEMA is underpinned by the globally accepted principle of sustainable development. Section 2 (4)(b) of NEMA gives effect to the South African Constitution, which states that all South African citizens have a right to an environment that is not harmful to their health or well-being.

The most important provisions set out in terms of NEMA that are applicable to the proposed Project are described in the sections that follow.

NEMA Principles

Key principles of NEMA are described in Chapter 2 of the Act and include the following:

- Development must be socially, environmentally and economically sustainable;
- Environmental management must be integrated;
- Avoidance, minimisation and remediation of ecosystem disturbance and biodiversity loss;
- Waste must be avoided or reduced, reused and recycled;
- Decisions concerning the environment must take into account the needs, interests and values of all Interested and Affected Parties (I&APs);
- Community well-being and empowerment must be promoted through environmental education and awareness, and the sharing of knowledge and experience;
- Specific attention must be given to sensitive, vulnerable and highly dynamic ecosystems;
- Lifecycle responsibility must be ensured; and
- Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with law.

These principles apply alongside other considerations (including socio-economic considerations) and guide the administration and interpretation of environmental management legislation in South Africa.

Environmental Authorisations

Chapter 5 of NEMA requires that the potential impact on the environment, socio-economic conditions, and cultural heritage of activities that require authorisation or permission by law must be considered, investigated and assessed prior to implementation, and reported to the relevant authority.

An EIA Application was submitted to the Department of Environment and Nature Conservation (DENC) to formally initiate the ESIA process on 26 June 2012 (Reference number: NC/EIA/NAM/KHAI/AGG/2012-NCP/EIA/0000155/2012).

The EIA Regulations (R543) promulgated in terms of the NEMA, identifies a suite of activities, which “*could have a substantial detrimental effect on the environment*”. The listed activities identified require an environmental authorisation from the environmental authority, ie the Provincial Department of Environment and Nature Conservation (DENC), prior to commencement of the activity. The proposed zinc mine and associated infrastructure triggers a list of activities, tabulated in *Table 2.1*, *Table 2.2* and *Table 2.3* below. Activities listed in terms of R544 and R546 require a Basic Assessment, while activities listed in R545 require a full Scoping and EIA process. Despite the proposed project triggering the need for a Basic Assessment process, a single Scoping and ESIA process will be undertaken to meet the requirements in terms of NEMA.

Table 2.1 *Listed Activities in Terms of NEMA EIA Regulations*

Government Notice R544 of 2010	Applicability to Project
<p>Activity 2</p> <p>The construction of facilities or infrastructure for the storage of ore or coal that requires an atmospheric emissions license in terms of the National Environmental Management: Air Quality Act (Act No. 39 of 2004).</p>	<p>Construction of open stockpile areas for the storage ore.</p>
<p>Activity 9</p> <p>The construction of facilities or infrastructure exceeding 1000 metres in length for the bulk transportation of water, sewage or storm water -</p> <ul style="list-style-type: none"> i. with an internal diameter of 0,36 metres or more; or ii. with a peak throughput of 120 litres per second or more, <p>excluding where:</p> <ul style="list-style-type: none"> a) such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or b) where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse. 	<p>Construction of an off-take water pipeline (550 mm) from the existing PDWB water pipeline to the Gamsberg mine.</p>

Government Notice R544 of 2010	Applicability to Project
<p>Activity 10</p> <p>The construction of facilities or infrastructure for the transmission and distribution of electricity –</p> <ul style="list-style-type: none"> i. outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or ii. inside urban areas or industrial complexes with a capacity of 275 kilovolts or more. 	<p>Construction of new 66 kV transmission lines and potentially the construction of new 220kV/ 66kV and 66 kV/11kV sub-stations (Option 1).</p>
<p>Activity 11</p> <p>The construction of –</p> <ul style="list-style-type: none"> i. canals; ii. channels; iii. bridges; iv. dams; v. weirs; vi. bulk storm water outlet structures; vii. marinas; viii. jetties exceeding 50 square metres in size; ix. slipways exceeding 50 square metres in size; x. buildings exceeding 50 square metres in size; or xi. infrastructure or structures covering 50 square metres or more, <p>where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p>	<p>Mine infrastructure exceeding 50 m² will be located within 32 m of a watercourse.</p>
<p>Activity 12</p> <p>The construction of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50 000 cubic metres or more, unless such storage falls within the ambit of activity 19 of Notice 545 of 2010.</p>	<p>On-site dams for raw water, potable water and dirty water will be constructed.</p>
<p>Activity 18</p> <p>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock or more than 5 cubic metres from:</p> <ul style="list-style-type: none"> i. a watercourse; ii. the sea; iii. the seashore; iv. the littoral active zone, an estuary or a distance of 100 metres inland of the highwater mark of the sea or an estuary, whichever distance is the greater <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving;</p> <ul style="list-style-type: none"> (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or (b) occurs behind the development setback line. 	<p>Mining infrastructure such as, the open pit, the explosives magazine and the truck workshop will all be constructed within a watercourse. These will require the excavation of more than 5 cubic metres of soil and/or rock.</p> <p>In addition to this, the upgrading of the existing water pipeline (Gamsberg off-take pipeline) may require excavation and infilling into a watercourse that will exceed 5 m³.</p>

Government Notice R544 of 2010	Applicability to Project
<p>Activity 22</p> <p>The construction of a road, outside urban areas –</p> <ul style="list-style-type: none"> i. with a reserve wider than 13,5 meters or; ii. where no reserve exists where the road is wider than 8 metres; or iii. for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Notice 545 of 2010. 	<p>Internal haul roads within the Project area are expected to have a reserve wider than 13.5 m. Service roads with different reserves will also be constructed.</p>
<p>Activity 23</p> <p>The transformation of undeveloped, vacant or derelict land to –</p> <ul style="list-style-type: none"> i. residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares, or ii. residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares; <p>except where such transformation takes place –</p> <ul style="list-style-type: none"> i. for linear activities; or ii. for purposes of agriculture or afforestation, in which case Activity 16 of Notice No. 545 applies. 	<p>The Project area exceeds 5 hectares.</p>
<p>Activity 24</p> <p>The transformation of land bigger than 1000 square metres in size, to residential, retail, commercial, industrial or institutional use, where, at the time of the coming into effect of this Schedule or thereafter such land was zoned open space, conservation or had an equivalent zoning.</p>	<p>The development of the additional staff housing units at Aggeneys and the expansion of the Aggeneys Waste Water Treatment Plant.</p>
<p>Activity 26</p> <p>Any process or activity identified in terms of Section 53 (1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).</p>	<p>The Project will result in removal of and impact on sensitive vegetation, which will potentially constitute a restricted activity in terms of NEMBA.</p>

Government Notice R544 of 2010	Applicability to Project
<p>Activity 37</p> <p>The expansion of facilities or infrastructure for the bulk transportation of water, sewage or storm water where –</p> <ul style="list-style-type: none"> (a) the facility or infrastructure is expanded by more than 1000 metres in length; or (b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more– <p>excluding where such expansion:</p> <ul style="list-style-type: none"> i. relates to transportation of water, sewage or storm water within a road reserve; or ii. where such expansion will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse. 	<p>The expansion of the Aggeneys Waste Water Treatment Plant (WWTP).</p> <p>The construction/expansion of the 5km Gamsberg water off take pipeline from the existing PWB pipeline to the mine.</p>
<p>Activity 41</p> <p>The expansion of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, where the combined capacity will be increased by 50,000 cubic metres or more.</p>	<p>44 ML reservoir (water supply) being constructed to the north of the N14, within the existing mining right area.</p>
<p>Activity 42</p> <p>The expansion of facilities for the storage, or storage and handling, of a dangerous good, where the capacity of such storage facility will be expanded by 80 cubic metres or more.</p>	<p>Loop 10 or possible on site fuel storage.</p>
<p>Activity 47</p> <p>The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre –</p> <ul style="list-style-type: none"> i. where the existing reserve is wider than 13,5 meters; or ii. where no reserve exists, where the existing road is wider than 8 metres excluding widening or lengthening occurring inside urban areas. 	<p>Existing gravel roads within and around the site may need to be widened to accommodate for the traffic flow.</p>

Table 2.2 **Government Notice R545 of 2010 (Full Scoping and EIA)**

Government Notice R545 of 2010	Applicability to project
<p>Activity 3</p> <p>The construction of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic meters.</p>	<p>Proposed storage of fuel on-site that exceeds 500 m³.</p>

Government Notice R545 of 2010	Applicability to project
<p>Activity 5</p> <p>The construction of facilities or infrastructure for any process or activity which requires a permit or license in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent and which is not identified in Notice No. 544 of 2010 or included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case that Act will apply.</p>	<p>The process of concentration will result in the production of effluent.</p>
<p>Activity 15</p> <p>Physical alteration of undeveloped vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more;</p> <p>except where such physical alteration takes place for –</p> <ul style="list-style-type: none"> i. linear development activities; or ii. agriculture or afforestation where activity 16 in this Schedule will apply. 	<p>The Project area exceeds 20 hectares.</p>
<p>Activity 19</p> <p>The construction of a dam, where the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, is 5 metres or higher or where the high-water mark of the dam covers an area of 10 hectares or more.</p>	<p>On-site dams will be constructed that may exceed 5 m in height.</p>
<p>Activity 26</p> <p>Commencing of an activity, which requires an atmospheric emission licence in terms of section 21 of the National Environmental Management: Air Quality Act, 2004 (No. 39 of 2004), except where such commencement requires basic assessment in terms of Notice No. R.544 of 2010.</p>	<p>The bulk storage of liquid fuel above ground, exceeding a capacity of 500 m³ will be required on site.</p>

Table 2.3 *Government Notice R546 of 2010 (Basic Assessment Required for Activities within Specific Geographic Areas)*

Government Notice R.546 of 2010	Applicability to project
<p>Activity 4</p> <p>The construction of a road wider than 4 metres with a reserve less than 13,5 metres.</p> <ul style="list-style-type: none"> i. In an estuary; ii. In a protected area identified in terms of NEMPAA, excluding conservancies; iii. Outside urban areas, in: <ul style="list-style-type: none"> - National Protected Area Expansion Strategy Focus areas; 	<p>Internal road networks will be constructed.</p>

Government Notice R.546 of 2010	Applicability to project
<ul style="list-style-type: none"> - Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; - Sites or areas identified in terms of an International Convention; - Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; - Core areas in biosphere reserves; - Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; and - Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined. 	
<p>Activity 10</p> <p>The construction of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres.</p> <ul style="list-style-type: none"> i. In an estuary; ii. In a protected area identified in terms of NEMPAA, excluding conservancies; iii. Outside urban areas, in: <ul style="list-style-type: none"> - National Protected Area Expansion Strategy Focus areas; - Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; - Sites or areas identified in terms of an International Convention; - Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; - Core areas in biosphere reserves; - Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; and - Areas seawards of the development setback line or within 1 kilometre from the high-water 	<p>The mine bulk storage tank farm is being established within the Gamsberg inselberg, which is a Critical Biodiversity Area (CBA) as identified in the Succulent Karoo Ecosystem Programme (SKEP).</p>

Government Notice R.546 of 2010	Applicability to project
<p>mark of the sea if no such development setback line is determined.</p>	
<p>Activity 12</p> <p>The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.</p> <p>(a) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;</p> <p>(b) Within critical biodiversity areas identified in bioregional plans;</p> <p>(c) Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas.</p>	<p>The proposed establishment of the mine may result in the loss of more than 300 m² of vegetation, with 75% being indigenous.</p>
<p>Activity 13</p> <p>The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for:</p> <p>(1) the undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008), in which case the activity is regarded to be excluded from this list.</p> <p>(2) the undertaking of a linear activity falling below the thresholds mentioned in Listing Notice 1 in terms of GN No. 544 of 2010.</p> <p>In the following areas:</p> <p>(a) Critical biodiversity areas and ecological support areas as identified in systematic biodiversity plans adopted by the competent authority.</p> <p>(b) National Protected Area Expansion Strategy Focus areas.</p> <p>i. In an estuary;</p> <p>ii. Outside urban areas, the following:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p>	<p>The proposed establishment of the mine and associated infrastructure will result in the loss of 1 hectare of vegetation, with more than 75% being indigenous.</p>

Government Notice R.546 of 2010	Applicability to project
<p>(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(dd) Sites or areas identified in terms of an International Convention;</p> <p>(ee) Core areas in biosphere reserves;</p> <p>(ff) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; and</p> <p>(gg) Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined.</p>	
<p>Activity 14</p> <p>The clearance of an area of 5 hectares or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation, except where such removal of vegetation is required for:</p> <ol style="list-style-type: none"> (1) purposes of agriculture or afforestation inside areas identified in spatial instruments adopted by the competent authority for agriculture or afforestation purposes; (2) the undertaking of a process or activity included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the activity is regarded to be excluded from this list; and (3) the undertaking of a linear activity falling below the thresholds in Notice 544 of 2010. <p>Within the following areas:</p> <ol style="list-style-type: none"> i. All areas outside urban areas. 	<p>The proposed establishment of the mine and associated infrastructure may result in the loss of 5 hectares of vegetation, with 75% being indigenous.</p>
<p>Activity 16</p> <p>The construction of:</p> <ol style="list-style-type: none"> i. jetties exceeding 10 square metres in size; ii. slipways exceeding 10 square metres in size; iii. buildings with a footprint exceeding 10 square metres in size; or iv. infrastructure covering 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a 	<p>Infrastructure exceeding 10 m² will be constructed within 32 m of a watercourse, within the Gamsberg inselberg, which located within a critical biodiversity area (CBA) as identified in the Succulent Karoo Ecosystem Programme (SKEP).</p>

Government Notice R.546 of 2010	Applicability to project
<p>watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p> <p>Within the following areas:</p> <ul style="list-style-type: none"> i. In an estuary; ii. In a protected area identified in terms of NEMPAA, excluding conservancies; iii. Outside urban areas, in: <ul style="list-style-type: none"> - National Protected Area Expansion Strategy Focus areas; - Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; - Sites or areas identified in terms of an International Convention; - Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; - Core areas in biosphere reserves; - Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; and - Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined. 	
<p>Activity 19</p> <p>The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.</p> <p>Within the following areas:</p> <ul style="list-style-type: none"> i. In an estuary; ii. In a protected area identified in terms of NEMPAA, excluding conservancies; iii. Outside urban areas, in: <ul style="list-style-type: none"> - National Protected Area Expansion Strategy Focus areas; - Sensitive areas as identified in an environmental management framework as contemplated in 	<p>Existing road networks may need to be widened or lengthened by more than 4 m or 1 km, respectively.</p>

Government Notice R.546 of 2010	Applicability to project
<p>chapter 5 of the Act and as adopted by the competent authority;</p> <ul style="list-style-type: none"> - Sites or areas identified in terms of an International Convention; - Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; - Core areas in biosphere reserves; - Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; and - Areas seawards of the development setback line or within 1 kilometre from the high-water mark of the sea if no such development setback line is determined. 	

Additional requirements of NEMA and the EIA Regulations which are considered important to highlight in the context of the ESIA process are briefly outlined in *Annex A*, these include:

- NEMA ‘duty of care’;
- Emergency incidents;
- Report requirements for an EIA;
- Public participation requirements; and
- Consideration of alternatives.

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

The National Environmental Management: Waste Act (NEMWA) is the major piece of legislation governing waste management in South Africa and is relevant to all aspects of both hazardous and non-hazardous waste management.

It aims to regulate waste management in order to protect human health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development. In this regard, it provides for the following issues related to waste management:

- Institutional arrangements and planning matters;
- National norms and standards for regulating the management of waste;
- Specific waste management measures;
- Licensing and control of waste management activities;
- The remediation of contaminated land;
- A national waste information system; and
- The issue of compliance and enforcement.

Based on the infrastructure requirements, the Project would result in the storage of general and hazardous waste within the proposed Project area. In addition, the Project would also undertake the treatment of waste and wastewater resulting in the generation of effluent.

NEMWA identifies various activities that would require a waste management license (WML) before proceeding. These listed activities are divided into Category A and B activities. Category A activities require a Basic Assessment process to be approved before commencement, while Category B activities require a full Scoping and EIA process.

With regard to the Project, the following Category A and B activities identified in terms of Government Notice 718 are anticipated to be triggered (see *Table 2.5* and *Table 2.6* below):

Table 2.4 *Category A Listed Activities in Terms of NEMWA*

Government Notice 718 - Category A	
Activity 1	The storage, including the temporary storage of general waste at a facility that has the capacity to store in excess of 100m ³ of general waste at any one time, excluding the storage of waste in lagoons.
Activity 2	The storage, excluding the temporary storage, of hazardous waste at a facility that has the capacity to store in excess of 80m ³ of hazardous waste at an one time.
Activity 4	The storage of waste tyres in a storage area exceeding 500m ² .
Activity 5	The sorting, shredding, grinding or bailing of general waste at a facility that has the capacity to process in excess of one ton of general waste per day.
Activity 7	The recycling of general waste at a facility that has an operational area in excess of 500m ² .
Activity 12	The remediation of contaminated land.
Activity 14	The disposal of general waste to land covering an area of more than 50m ² but less than 200m ² and with a cumulative total not exceeding 25 000 tons.
Activity 15	The disposal of general waste to land covering an area of more than 50m ² but less than 200m and with a cumulative total not exceeding 25 000 tons.
Activity 18	The construction of facilities for activities listed in Category A of this Schedule (not in isolation to associated activity).

Table 2.5 *Category B Listed Activities in Terms of NEMWA*

Government Notice 718 - Category B	
Activity 1	The storage, including temporary storage, of hazardous waste in lagoons.
Activity 2	The reuse and recycling of hazardous wastes.
Activity 5	The treatment of hazardous waste using any form of treatment regardless of the size or capacity of such a facility to treat such waste.
Activity 6	The treatment of hazardous wastes in Lagoons.
Activity 7	The treatment of effluent, wastewater or sewage with an annual throughput capacity of 15 000 cubic metres or more.

Government Notice 718 - Category B	
Activity 9	The disposal of any quantity of hazardous waste to land.
Activity 10	The disposal of general waste to land covering an area in excess of 200m ² .
Activity 11	The construction of facilities for activities listed in Category B of this Schedule (not in isolation to associated activity).

A Waste Management License (WML) Application was submitted on 27 June 2012 to the National Department of Environmental (Reference number: 12/9/11/L955/8). A waste mitigation hierarchy will be adopted for the construction, operational and decommissioning phases of the Project.

Other key provisions in terms of NEMWA that will apply to the Project during its construction and operational phases are included in *Annex A*.

2.1.4 *Mineral and Petroleum Resources Development Act (No. 28 of 2002)*

The objectives of the MPRDA, inter alia, is to promote equitable access to the nations minerals and petroleum resources, expand opportunities for previously disadvantaged individuals, promote economic growth and mineral and petroleum resources development (objective), employment opportunities and ensure that the holders of the mining right contribute to the socio-economic development on the surrounding communities.

The MPRDA identifies the state as the official custodian of South Africa's Mineral and Petroleum Resources.

Therefore all activities relating to reconnaissance, prospecting rights, mining rights, mining permits and retention permits are regulated by the State.

An application must be submitted and approved by the National Department of Mineral Resources, before proceeding.

As briefly discussed in Section 1, Black Mountain Mining (Pty) Ltd already has an existing new order mining right and approved Environmental Management Programme (EMPr) for the mining activities that are currently being undertaken within the Project area. In this regard, the existing mining right allows the applicant to mine (using an open pit technique) an area of 9,505 hectares on erf Bloemhoek 61 Portion 1 and Gams 60 Portion 1, Aroams 57 RE. It should be noted however that the existing mining right is applicable to the current mining operations in terms of mining method, volumes and infrastructure scope. Due to the increased ambit of the proposed new development, the existing EMPr (including the social labour plan and associated works programme) will require amendment, specifically in light of the changes to the proposed project description.

In terms of Section 102 of the MPRDA, amendments to an approved EMPr will require an EIA process to be undertaken in terms of NEMA. In addition, Section

49 and 50 of Regulation 527 of the MPRDA outlines specific information requirements for the Scoping and EIA Reports, inter alia, are as follows:

- Stakeholder engagement process;
- Assessment of impacts;
- Assessment of feasible alternatives;
- Development of an environmental management and monitoring plan;
- Provision of maintenance and emergency procedures; and
- Environmental awareness plan.

The amended EMPr will also need to include a revised Social and Labour Plan (SLP), Mine Works Programme (MWP), Closure Plan and Financial Provision for the Rehabilitation of Land Disturbed by Mining Activities.

MPRDA ESIA report and public participation requirements are summarised in *Annex A*.

2.1.5

National Heritage Resources Act (No. 25 of 1999)

The protection and management of South Africa's heritage resources is controlled by the National Heritage Resources Act (NHRA). The objective of the NHRA is to introduce an integrated system for the management of national heritage resources.

Section 38 of the NHRA requires that Heritage Impact Assessments (HIA's) are required for certain kinds of development such as rezoning of land greater than 10,000 m² in extent or exceeding three or more sub-divisions, or for any activity that will alter the character of a site greater than 5,000 m² (see *Box 2.3*). The Western Cape and Kwa-Zulu Natal have functioning Provincial Heritage Authorities, and consequently South African Heritage Resources Agency (SAHRA) administers heritage in the remaining provinces particularly where archaeology and palaeontology are the dominant concerns. Heritage Northern Cape (Ngwao Boswa Kapa Bokoni) deals largely with built environment issues at this stage. SAHRA and Heritage Northern Cape are key commenting authorities in the ESIA process.

The responsible heritage resources authority must, within 14 days of receipt of such a notification if there is reason to believe that heritage resources will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report or notify the person concerned that this section does not apply.

PERMIT APPLICATION SECTION 38 (Ref: NHRA 1999 : 62)

- (a) The construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
 - (b) the construction of a bridge or similar structure exceeding 50 m in length;
 - (c) any development or other activity which will change the character of a site exceeding 5 000 m² in extent; or
 - i. involving three or more existing erven or subdivisions thereof; or
 - ii. involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - iii. the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - (d) the re-zoning of a site exceeding 10 000 m² in extent; or
 - (e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.
-

Archaeology, Palaeontology and Meteorites

According to Section 35 (Archaeology, Palaeontology and Meteorites) and Section 38 (Heritage Resources Management) of the South African National Heritage Resources Act (SAHRA), Paleontological Heritage Impact Assessments (PIAs) and Archaeological Impact Assessments (AIAs) are required by law in the case of developments in areas underlain by potentially fossiliferous (fossil-bearing) rocks, especially where substantial bedrock excavations are envisaged, and where human settlement is known to have occurred during prehistoric and the historic period. Depending on the sensitivity of the fossil and archaeological heritage, and the scale of the development concerned, the paleontological, and archaeological impact assessment required may take the form of (a) a stand-alone desktop study, or (b) a field scoping plus desktop study leading to a consolidated report. In some cases these studies may recommend further paleontological and archaeological mitigation, usually at the construction phase. These recommendations would normally be endorsed by the responsible heritage management authority, Heritage Northern Cape (HNC), to whom the reports are submitted for review.

As part of the EIA, a Heritage Impact Assessment (including both archaeology and palaeontology) will be submitted to HNC to elicit comments. Comments received from HNC will be included in the Comments and Responses Report in the Final ESIA Report.

Box 2.4 outlines when a permit is required depending on the sensitivity of the heritage resources.

Box 2.2***Permitting Requirements for Fossil, Built Environment and Stone Age Archaeology***

PERMIT APPLICATION SECTION 35: FOSSILS, BUILT ENVIRONMENT FEATURES, SHIPWRECKS & STONE AGE ARCHAEOLOGY (Ref : NHRA 1999: 58)

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
 - (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite; or
 - (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite.
-

Burial Grounds and Graves

A Section 36 permit application is made to the South African Heritage Resources Agency (SAHRA) which protects burial grounds and graves that are older than 60 years, and must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit. SAHRA must also identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with these graves and must maintain such memorials. A permit is required under the conditions listed below.

Box 2.3***Permitting Requirements for Burial Grounds and Graves Older than 60 years to Heritage Northern Cape (HNC) and Historic Burials to the South African Heritage Resources Agency (SAHRA)***

PERMIT APPLICATION SECTION 36: BURIAL GROUNDS & GRAVES (REF: NHRA 1999:60)

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
 - (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority;
 - (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals; or
 - (d) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant.
-

2.1.6 National Environmental Management: Air Quality Act, 2008 (No. 39 of 2008)

The aim of the National Environment Management: Air Quality Act (NEMAQA) is to govern the release of pollutants in order to manage air quality parameters, norms and standards within South Africa. Since the repeal of the Atmospheric Pollution Prevention Act (No. 45 of 1965), Regulation GN 248 was promulgated in 2010 (in terms of NEMAQA), which list activities resulting in atmospheric emissions which have or may have a significant detrimental effect on the environment. In light of this Regulation GN248 and the nature of the proposed project, the following activities will be triggered in terms of NEMAQA, and therefore require the submission of an Atmospheric Emissions License Application Form to the Provincial Department of Environment and Nature Conservation (DENC).

Table 2.6 Listed Activities in Terms of NEMAQA

Government Notice 248	
Sub-category 2.2: Storage and Handling of Petroleum Products (exceeding 500m ³)	Petroleum product storage tanks and product transfer facilities, except those used for liquefied petroleum gas.
Sub-category 5.1: Mineral processing, storage and handling	Storage and handling of ore and coal for facilities designed to hold more than 100 000 tons.

2.1.7 National Water Act (No. 36 of 1998)

The National Water Act (NWA) provides for the sustainable and equitable use and protection of water resources. It is founded on the principle that the National Government has overall responsibility for and authority over water resource management, including the equitable allocation and beneficial use of water in the public interest, and that a person can only be entitled to use water if the use is permissible under the NWA. The Department of Water Affairs (herein referred to as DWA) is the delegated custodian of water resources in South Africa. Part of the DWA mandate is to enact and enforce the legal requirements outlined in the NWA.

Section 19 of the NWA deals with pollution prevention, and in particular, the situation where pollution of a water resource occurs or might occur because of activities on land. The Act states that the person who owns, controls, occupies or uses the land is responsible for preventing pollution of the water resources and is also responsible to remedy (correct) the effects of the pollution. If the person responsible does not take measures to prevent pollution, the catchment management agency (or the Minister if there is no catchment management agency in place) may take steps to prevent pollution or to address the effects of pollution. The person or persons responsible for the pollution is also responsible for paying the costs to address the effects of the pollution.

Section 21 sets out general principles for regulating water use. Water use is defined broadly, and includes taking and storing water, activities which reduce

stream flow, waste discharges and disposals, controlled activities (activities which impact detrimentally on a water resource), altering a watercourse, removing water found underground for certain purposes, and recreation. In general a water use must be licensed unless it is listed in schedule I, is an existing lawful use, is permissible under a general authorisation (as listed in GNR 399), or if a responsible authority waives the need for a licence (Section 22). The Minister may limit the amount of water which a responsible authority may allocate (Section 23). In making regulations the Minister may differentiate between different water resources, classes of water resources and geographical areas (Section 26).

Based on potential water uses, the NWA requires that a water user must either register a water use in terms of the General Authorisation or alternatively undertake a full licensing process. In order to distinguish between the need for registration and licensing, the DWA have issued a General Authorisation (Government Notice 1199 of 2009) for water uses in terms of Section 21 (c) and (i) only (see below). However, this General Authorisation is applicable to these specific water uses and contains exclusionary clauses. Should a water use activity fall outside of this General Authorisation or alternatively trigger any exclusionary clauses contained therein, a full license application process would need to be completed, prior to commencement of a water use.

Black Mountain currently has a water use license for numerous activities and a total water allocation of 4,380,000 m³/a (12,000 m³/d) potable water supplied by Pella Drift Water Board. The proposed Project will require additional water provision that may exceed the current allocation volumes. Water supply applications are submitted by the supplier, the Pella Drift Water Board. Although water uses are property dependent, Black Mountain will revise the water supply agreement with Pella Drift Water Board to permanently transfer the required percentage of the total allocated water to the Mine, while retaining the remainder of the water allocation for the existing Black Mountain Mine, the towns of Aggeneys, Pofadder and Pella

The Project will undertake an application for water use activities related to the Project area. Based on the current project description, the following water uses will likely be triggered in terms of Section 21 of the NWA.

-
- (a) taking water from a water resource;
 - (b) storing water;
 - (c) impeding or diverting the flow of water in a watercourse;
 - (d) engaging in a stream flow reduction activity contemplated in section 36;
 - (e) engaging in a controlled activity identified as such in section 37 (1) or declared under section 38 (1);
 - (f) discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit;
 - (g) disposing of waste in a manner which may detrimentally impact on a water resource;
 - (h) disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;
 - (i) altering the bed, banks, course or characteristics of a watercourse;
 - (j) removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and
 - (k) using water for recreational purposes.
-

Tailings facilities will be constructed for the Project that will require dam safety clearance. In accordance with section 121 of the NWA the following factors need to be considered in declaring or category of dams with safety risk:

- the manner in which that dam is designed, constructed, altered, repaired, operated, inspected, maintained or abandoned;
- the person by whom that dam is designed, constructed, altered, repaired, operated, inspected, maintained or abandoned; and
- the manner in which the water is contained, stored or impounded in that dam.

Cognisance will be taken of other applicable Regulations which have been published in terms of the NWA, including the Dam Safety Regulations and the regulations relating to measures aimed at the prevention of water pollution resulting from mining and related activities (published on 4 June 1999 in terms of GNR704). In terms of GNR704:

- Restrictions are imposed on the locality of certain infrastructure like residue deposits, dams, boreholes, sanitary conveniences, fuel deposits as well as the carrying out of mining or other activities within certain distances of water resources.

- A duty is imposed to confine clean water to a clean water system and dirty water to a dirty water system which must be designed so as not to spill into the clean water system more than once in 50 years.
- Regulation 7 imposes various requirements regarding the protection of water resources.

To the extent that these Regulations apply to the Project, compliance therewith will be sought. Finally, the general duty of care provisions of the NWA will be considered and applied.

2.1.8 *The National Environmental Management: Biodiversity Act, 2008 (No. 10 of 2004)*

The National Environmental Management: Biodiversity Act (NEMBA) serves to provide a framework for the management and conservation of South African biodiversity, under the auspices of the NEMA. This legislation promotes the sustainable use of natural biological resources, ensuring equitable access and sharing of benefits arising from the use of biological resources. In terms of Section 56(1) of NEMBA a person may not carry out a restricted activity involving a specimen of a listed threatened or protected species without a permit issued in terms of Chapter 7. These threatened and protected species have been listed in terms of GNR.151 of 2007: Publication of lists of critically endangered, endangered, vulnerable and protected species. A restricted activity in relation to a specimen of a listed threatened or protected species means:

- hunting, catching, capturing or killing any living specimen of a listed threatened or protected species by any means, method or device whatsoever, including searching, pursuing, driving, lying in wait, luring, alluring, discharging a missile or injuring with intent to hunt, catch, capture or kill any such specimen;
- gathering, collecting or plucking any specimen of a listed threatened or protected species;
- picking parts of, or cutting, chopping off, uprooting, damaging or destroying, any specimen of a listed threatened or protected species;
- importing into the Republic, including introducing from the sea, any specimen of a listed threatened or protected species;
- exporting from the Republic, including re-exporting from the Republic, any specimen of a listed threatened or protected species;
- having in possession or exercising physical control over any specimen of a listed threatened or protected species;
- growing, breeding or in any other way propagating any specimen of a listed threatened or protected species, or causing it to multiply;

- conveying, moving or otherwise translocating any specimen of a listed threatened or protected species;
- selling or otherwise trading in, buying, receiving, giving, donating or accepting as a gift, or in any way acquiring or disposing of any specimen of a listed threatened or protected species; or
- any other prescribed activity which involves a specimen of a listed threatened or protected species.

Should a project result in the loss of biodiversity identified in terms of GN 151 of 2010, a permit application will need to be submitted to the Provincial Department of Environment and Nature Conservation for approval, before proceeding with the activity. A specialist botanical impacts assessment will be undertaken as part of the ESIA phase of the Project. Additional aspects of NEMBA related to the listing of threatened ecosystems, alien species, invasive species and duty of care are included in *Annex A*.

2.1.9 *Integrated Legislative Processes*

Due to nature of the Project, a suite of environmental legislation will be applicable, as described above. In order to meet the various legislative requirements, ERM intends to run a single integrated ESIA process, which will also meet the requirements in terms of the following laws:

- NEMA;
- NEMWA;
- MPRDA;
- NEMAQA;
- NHRA;
- NWA; and
- NEMBA.

Table 2.7 *Summary of Legislative Applications and Relevant Authorities*

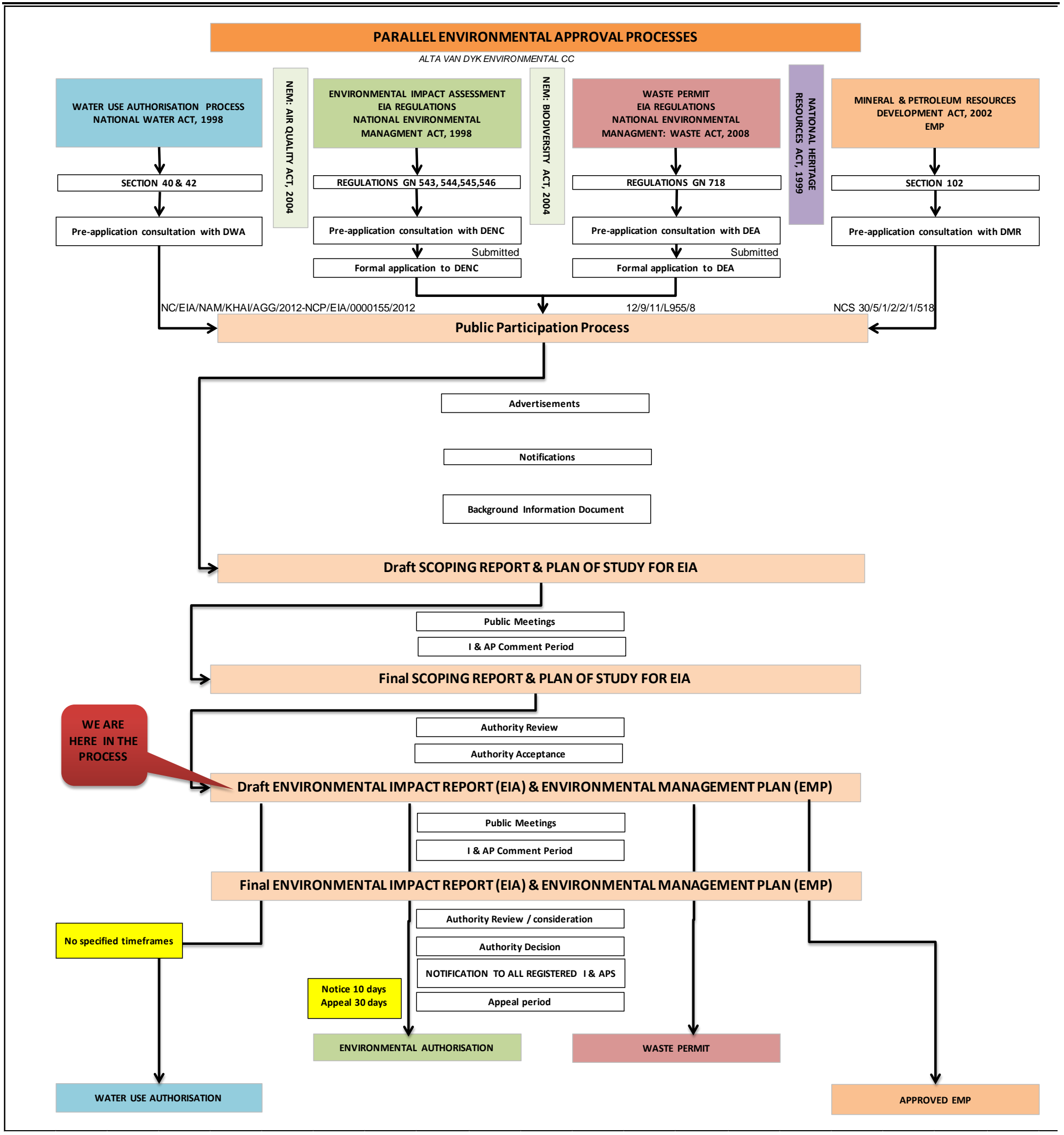
Law	Permit(s) / Application(s)	Competent Authority
NEMA	<ul style="list-style-type: none"> • Environmental and Social Impact Assessment. 	Provincial Department of Environment and Nature Conservation.
NEMWA	<ul style="list-style-type: none"> • Waste Management License Application. 	National Department of Environmental Affairs (Waste Directorate).
NEMAQA	<ul style="list-style-type: none"> • Atmospheric Emissions License Application. 	Provincial Department of Environment and Nature Conservation (Air Quality and Climate Change Directorate).
NWA	<ul style="list-style-type: none"> • Water Use Licence Application. • Authorisation for stream flow reduction activities or 'controlled activities'. • License for construction of dam. • General authorisation. 	Department of Water Affairs (DWA).

Law	Permit(s) / Application(s)	Competent Authority
NHRA	<ul style="list-style-type: none"> • Notice of Intent to Develop and Phase 1 Heritage Impact Assessment. • Authorisation for disturbing buildings older than 60 years. • Authorisation for disturbing archaeological and palaeontological sites and materials and meteorites. • Authorisation for disturbing significant graves and all graves which are older than 60 years and not in a cemetery. 	<p>South African Heritage Resources Agency.</p> <p>Heritage Northern Cape (Ngwao Boswa Kapa Bokoni).</p>
MPRDA	<ul style="list-style-type: none"> • Application for amendment to existing Environmental Management Programme. 	Department of Mineral Resources.
NEMBA	<ul style="list-style-type: none"> • Permit to undertake restricted activities involving listed threatened or protected species. 	Provincial Department of Environment and Nature Conservation.

The proposed ESIA process will be undertaken in terms of NEMA and the associated EIA Regulations of 2010 (as amended). The requirements for the WML and AEL Application can be met as part of the ESIA process. The public participation requirements in terms NEMWA and NEMAQA will be met through the EIA Regulations requirement for public participation.

Based on the existing new order mining right for Gamsberg, the existing EMPr will need to be amended in accordance with the project description and proposed activities. The amended EMPr will be produced during the ESIA phase of the project, and will fulfil the requirements in terms of the MPRDA and the associated Government Notice 527 of 2004. The public participation requirements for an amendment to an existing EMPr will be undertaken in line with the ESIA requirements. The legislative requirements in terms of the NHRA will be fulfilled through the completion of a comprehensive heritage impact assessment, with the documents made available for public comment during the ESIA phase.

Figure 2.1 Integrated Flow Diagram of ESIA Process



Based on the identification of the potential water uses, an Integrated Water Use License Application (IWULA) will also be compiled and upon completion of the ESIA process including public participation, the IWULA will be submitted to the DWA for review and decision-making.

2.2 BROADER POLICY AND PLANNING CONTEXT

This Section briefly describes the broader policy and planning context within which the Project will take place. The strategies and planning documents are briefly summarised below with an expanded explanation included in *Annex A*.

2.2.1 Northern Cape Provincial Growth and Development Strategy (2011)

The Northern Cape Provincial Growth and Development Strategy (NCPGDS) (2011) plays a vital role in achieving efficacy in delivery of the overall strategic development objectives of Northern Cape.

From the plethora of societal challenges that are prevalent in South Africa, the NCPGDS identifies the following aspects that require attention:

- Reducing the backlog of basic needs such as water, sanitation and housing;
- Improving and increasing access to health, education and social services;
- Decreasing the prevalence rate of TB, HIV and AIDS;
- Creating opportunities for employment;
- Reducing contact crime; and
- Targeting vulnerable groups.

The strategy identifies long-term sustainable economic growth and development as an effective means to target the key societal concerns. Mining is identified as an important economic sector to promote such growth, as well as agriculture and tourism.

2.2.2 The Northern Cape Provincial Spatial Development Framework (2012)

Spatial Development Frameworks attempt to guide overall development in a direction that local and provincial authorities see as being desirable. They also aim to specify the spatial implications of Integrated Development Plans (IDPs) that are designed to optimise economic opportunities.

Amongst other things, the Northern Cape Provincial Spatial Development Framework (2012) recognises the importance of the mining sector, as a driver behind the region's economic growth. Nevertheless, it also identifies that economic development often has a detrimental impact on the environment which, in turn, often manifests in a negative impact on human-wellbeing and on tourism in the region. As such, the NCPSPDF sets out the following objectives and policies to address such concerns:

- Offsetting direct detrimental impacts of resource use.

- Providing measures to cater for indirect impacts or impacts that may in the long-term emerge as a result of resource use.
- Unlocking the latent benefits and synergies vested in the resource use in order to create a positive socio-economic legacy once the initial resource use has reached its productive life cycle.

Similarly, but at a slightly lower level, the Namakwa District SDF (2012) addresses key trends in the area (*Figure 2.2* shows the composite map produced in the Namakwa District SDF). In addition to the provisions made in the NCPSTDF, it proposes a conceptual Solar Corridor consisting of a roughly 30km wide strip of land with the N14 at its centre encompassing Aggeneys, as well as Pofadder and surrounds.

2.2.3 *Namakwa District Municipality Local Economic Development Strategy (2007)*

A Local Economic Development (LED) Strategy is a government funded initiative that attempts to improve the economic environment of all District Municipalities (DMs) and Local Municipalities (LMs) through the implementation of various projects.

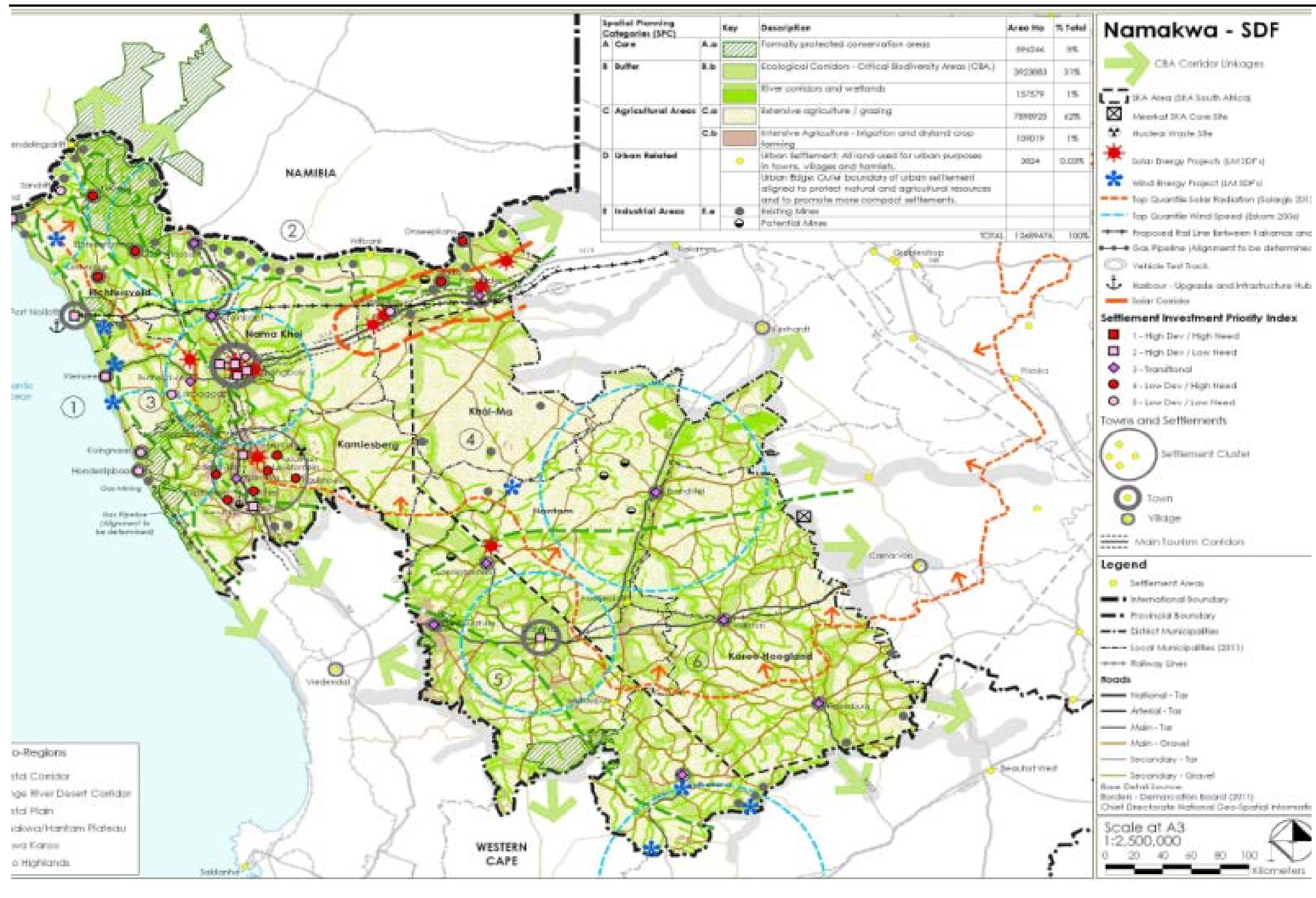
The Local Economic Development strategy (2007) for the Namakwa District Municipality identifies a suite of sectors that are seen to play a critical role in the economic growth of the District. With respect to this the strategy advocates the following major activities:

- Agricultural development in selected group of targeted areas namely hydroponic and organic crop production next to the Orange River, mariculture and cultivation of the hoodia plant for medicinal purposes;
- Copper beneficiation as well as diamond cutting and processing;
- Recycled manufacturing;
- Cultural, science and nature tourism;
- Infrastructure upgrades; and
- Alternative energy production.

Also identifies the mining sector as one of the key potential development sectors within the District Municipality. In this regard, there is a drive to encourage processing and manufacturing of minerals into final product, as this will result in increased economic development as well as additional employment opportunities.

Finally, the strategy refers to a “One-Stop Mining Centre”. This is envisaged as a facilitation centre where information and guidance on business opportunities will be made available, as well as assist with formulating business plans, proposals and tenders related to the local mining industry.

Figure 2.2 Namakwa District Municipality Spatial Development Framework Composite Map (2012)



2.2.4

Khai Ma Integrated Development Plan (2006-2011)

The Integrated Development Plan (IDP) constitutes the blueprint with respect to Khai Ma Municipality's strategies in addressing the socio-economic development needs of local communities (Local Government: Municipal Systems Act, Act 32 of 2000). As such, it reflects the key development focus areas agreed upon with communities and stakeholders in the Khai Ma municipality.

The following issues are highlighted in the Khai Ma IDP (2006-2011) as local development areas that need specific attention/intervention:

- Increasing unemployment rates;
- No rent is paid and no management or maintenance is undertaken by small upcoming farmers on farms allocated to them by government;
- Lack of land for livestock farming and irrigation farming;
- Need for housing; and
- Backlogs in relation to the provision of basic services.

In terms of the vision and mission set out in the IDP, the Local Municipality aims to utilise its limited resources in improving the quality of life of its residents by striving to provide improved basic services and create an environment conducive to investment through strengthening local economic development.

Gamsberg is identified in the IDP as being a significant potential growth point for the Municipality. Furthermore, one of the priority projects in the Local Municipality is supporting sustainable mining development at Gamsberg.

2.2.5

Khai Ma Rural Spatial Development Framework Plan (2010)

The Khai Ma Spatial Development Framework (SDF) guides and informs land development and management in the region. Three key aspects transpire from the SDF in relation to what is required in order to achieve its vision. These include the following:

- Improve living standards;
- Ensure health and safety; and
- Strengthen local economic development.

The mining, agricultural and tourism sectors are again highlighted as important sectors to drive local economic growth in the area. The Khai Ma SDF also recognises the importance of Pella and its surroundings for potential tourism activities in the area and identifies two primary tourism corridors between Pofadder and Witbank (along the Klein Pella Road) and between Pofadder and Onseepkans (refer to *Figure 2.3* below). In general, the SDF places particular emphasis on the protection of tourism assets and the development of tourism in areas north of the N14, along the Orange River and the mountainous areas relatively close to the Orange River.

Finally, the SDF recognises that mining activities could present a significant threat to local biodiversity in the area, particularly with respect to the proposed development of an opencast mine at Gamsberg. As such, mining development in areas with sensitive biodiversity is earmarked as an area that should require specific policy intervention. With respect to this, the compilation of an Environmental Management Plan for mining and agricultural activities in the municipality is recommended in order to protect environmental conservation corridors and zones.

Alignment with Regional Planning Policies

Given the above, it is clear that the Project achieves in-principle compatibility with the key thrusts of planning documents for the province, district and local municipality. These documents also do, however, call for caution regarding the conservation status of the Project site in particular. Further discussion on the Projects alignment with applicable regional and local planning and land-use policies/frameworks is discussed in the following section, which provides a background to the 'Need and Desirability' guidelines developed by the Western Cape Department of Environmental Affairs and Development Planning (2010).

2.2.6 *Need and Desirability Guidelines*

The 'Need and Desirability' guidelines (2010) have been developed by the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) to guide the appropriate selection of projects (ie the need and desirability of a development) through assessing them against applicable regional and local policy/planning criteria. This includes sustainable development vision, goals and objectives formulated in, and the desired spatial form and pattern of land use reflected in the selected area's IDP's, SDF's and EMF's. This serves to provide an indication as to whether or not the proposed land-use/activity is the best practicable use for the land or the most sustainable use for the site.

A set of questions have been set out in the guidelines to prompt responses, which provide information as to the suitability of alternatives for the site, including the option of not proceeding with the development. Responses to these questions are listed in *Table 1.6* and *Table 1.7* in *Annex A*.

2.3 *INTERNATIONAL GUIDELINES*

2.3.1 *IFC Performance Indicators for Sustainability*

The International Finance Corporation (IFC) have developed a set of performance standards that are directed towards providing guidance on how to identify risks and impacts and measures to avoid, mitigate and manage risks and impacts. The performance indicators also promote stakeholder engagement at various stages of the project lifecycle.

In the case of direct investments for the IFC (including project and corporate finance provided through financial intermediaries), the IFC requires that its clients

apply eight established Performance Standards to manage associated environmental and social risks and impacts (IFC, 2012). These fall under the following categories listed below:

- PS 1: Social and Environmental Assessment and Management System;
- PS 2: Labour and Working Conditions;
- PS 3: Pollution Prevention and Abatement;
- PS 4: Community Health, Safety and Security;
- PS 5: Land Acquisition and Involuntary Resettlement (n/a);
- PS 6: Biodiversity Conservation and Sustainable Natural Resource Management;
- PS 7: Indigenous Peoples; and
- PS 8: Cultural Heritage.

Specific details regarding each of the eight listed Performance Standards that developments are measured against are provided in *Annex A*.

2.4 *INTERNAL CORPORATE STANDARDS*

2.4.1 *Vedanta's Corporate Standards*

Vedanta Resources Plc. has developed a suite of environmental policies to guide the company's activities with respect to environmental management. The policies strive to align with IFC Performance Standards (2012), thus achieving international good practice. The following is a list of environmental policies developed and implemented on all developments associated with Vedanta's activities:

- Biodiversity Policy;
- Energy and Carbon Policy;
- HIV/ AID Policy;
- Health, Safety and Environment Policy;
- Human Rights Policy;
- Social Policy; and
- Water Management Policy.

A short summary of the key elements from each of the above categories is provided in *Annex A*.