

PART 1: LEGISLATIVE ASPECTS

The purpose of this part of the EMP¹ (incl. EIA²) is to provide a broad overview of the legislation that is applicable to the purchase agreement and new or changed activities associated with De Beers Kimberley Mines. More specifically to illustrate where the information required according to the MPRDA³ (2002), the MPRDR⁴ (2004) and related DMR⁵ Guideline are addressed in this EMP (incl. EIA).

Several portions of De Beers Kimberley Mines' surface right areas, including all infrastructures associated with these areas, and mining rights was sold to Crown Resources (Pty) Ltd.: Kimberley Underground Mines Joint Venture. The sale consisted of two phases, namely; Phase 1 and Phase 2. Phase 1 was completed in 2010 and the Phase 2 of sale has recently been completed.

It is therefore the intention of this EMP (incl. EIA) (which has been compiled in terms of the MPRDA (2002)) to provide the necessary information regarding the purchase agreement and new or changed activities associated with the De Beers Kimberley Mines, as required in terms of the MPRDR (2004), under the MPRDA (2002).

1.1 REGULATORY REQUIREMENTS

1.1.1 THE MPRDA (2002)

With reference to the DMR's guideline titled: "*Guideline for the compilation of an Environmental Impact Assessment and an Environmental Management Programme to be submitted with applications for a mining right in terms of the Mineral and Petroleum Resources Development Act, 2002, (Act No. 28 of 2002)*", this document is referred to as the EMP (incl. EIA) for the De Beers Kimberley Mines. However, it is important to note that information pertaining to the EIA conducted for the De Beers Kimberly Mines has also been included in this EMP. This document is therefore a combined document, containing both the EMP and the EIA for the De Beers Kimberley Mines. Refer to Part 1.4 below for an indication as to where information as required by the MPRDA (2002), MPRDR (2004) and the related DMR Guideline have been included in this EMP (incl. EIA).

It is the intention of this EMP (incl. EIA) to provide the necessary information regarding the Phase 2 purchase agreement and new activities associated with the De Beers Kimberley Mines, as required in terms of the MPRDR (2004) and the MPRDA (2002).

1.1.2 OTHER LEGISLATION

Table 1.1 below provides an indication of legislation, policies and / or guidelines applicable to this EMP (incl.EIA). This table is intended to only list the main applicable legislation as a guide towards the compilation of the EMP (incl.EIA). Additional legislation will still be applicable to this EMP (incl. EIA) and this list should thus not be interpreted as the only applicable legislation.

¹ EMP: Environmental Management Programme.

² EIA: Environmental Impact Assessment.

³ MPRDA: Mineral and Petroleum Resources Development Act, Act No. 28 of 2002.

⁴ MPRDR: Mineral and Petroleum Resource Development Regulations (R.527), dated 23 April 2004.

⁵ DMR: Department of Mineral Resources.

Table 1.1: Applicable legislation, policies and / or guidelines

Title of legislation, policy or guideline	Administering authority:	Date
DWAF ⁶ best practice guidelines and operation guidelines.	DWA ⁷	-
General authorisations under the NWA ⁸ (1998): GN ⁹ 1199, dated December 2009.	DWA	December 2009
General authorisations under the NWA (1998): GN 399, dated March 2004.	DWA	March 2004
GN 704, dated June 1999, under the NWA (1998).	DWA	June 1999
MHSA ¹⁰ (2006).	DMR	Act 29 of 2006
MPRDA (2002).	DMR	Act 28 of 2002
MPRDR (2004).	DMR	R. 527 of April 2004
NEMA ¹¹ (1998).	EANC ¹²	Act 107 of 1998
NEM:WA ¹³ (2008)	EANC	Act 59 of 2008
NEM:AQA ¹⁴ (2004)	EANC	Act 39 of 2004
NHRA ¹⁵ (1999)	SAHRA ¹⁶	Act 25 of 1999
NWA (1998).	DWA	Act 36 of 1998
NWSA ¹⁷ (1997)	DWA	Act 108 of June 1997
OHS ¹⁸ (1993).	DL ¹⁹	Act 85 of 1993
The Constitution of the Republic of South Africa, Act 108 of 1996.	-	Act 108 of 1996

1.2 MINING AND ENVIRONMENTAL AUTHORISATIONS

De Beers Kimberley Mines is a division of De Beers Consolidated Mines Limited. Although De Beers Kimberley Mines use to operate three underground mines (i.e. Bultfontein Mine, Du Toitspan Mine and Wesselton Mine), no surface or underground mining activities are currently taking place at the mine. Tailings resource recovery methods, however, are currently in operation. De Beers Kimberley Mines is also responsible for De Beers Mine and Kimberley Mine which are both dormant mines.

⁶ DWAF: Department of Water Affairs and Forestry.

⁷ DWA: Department of Water Affairs.

⁸ NWA: National Water Act, Act 36 of 1998.

⁹ GN: Government Notice.

¹⁰ MHSA: Mine Health and Safety Act, Act No. 29 of 2006.

¹¹ NEMA: National Environmental Management Act, Act 107 of 1998.

¹² EANC: Environmental Affairs and Nature Conservation.

¹³ NEM: WA: National Environmental Management: Waste Act 59 of 2008.

¹⁴ NEM: AQA: National Environmental Management: Air Quality Act 39 of 2004.

¹⁵ NHRA: Natural Heritage Resources Act, Act 25 of 1999.

¹⁶ SAHRA: South African Heritage Resources Agency.

¹⁷ NWSA: The National Water Services Act, Act 108 of 1997.

¹⁸ OHS: Occupational Health and Safety Act, Act 85 of 1993.

¹⁹ DL: Department of Labour.

The purpose of this EMP (incl. EIA) is to update the existing approved EMP of the mine, and subsequent approved addenda thereto, to accommodate the Phase 2 purchase agreement and include new activities associated with De Beers Kimberley Mines, to comply with the most recent legislative requirements. The approved EMPs and related addenda include the following:

- “*De Beers Consolidated Mines Limited: Kimberley Mines (Division of Central Mines), Environmental Management Programme Report, Volume I*”, dated October 1999, and approved in August 2000. This report will hereafter for reference purposes be referred to as the approved EMP, dated October 1999.
- “*De Beers Consolidated Mines Limited: Kimberley Mines (Division of Central Mines), Environmental Management Programme Report, Volume II: Title deed description and mining area*”, dated October 1999, and approved in August 2000. This report will hereafter for reference purposes be referred to as the approved EMP, dated October 1999.
- “*De Beers Consolidated Mines Limited: Kimberley Mines (Division of Central Mines), Environmental Management Programme Report, Volume III*”, dated October 1999, and approved in August 2000. This report will hereafter for reference purposes be referred to as the approved EMP, dated October 1999.
- “*De Beers Consolidated Mines Limited: Kimberley Mines, EMP Amendment for a new combined Diamond Treatment Plant at Kimberley Mines*”, dated February 2000, compiled by Metago Environmental Engineers (Pty) Ltd. and approved in August 2000. This report will hereafter for reference purposes be referred to as the approved EMP, dated February 2000.
- “*De Beers Consolidated Mines Limited: Kimberley Mines, Environmental Management Programme Report, Proposed slimes by-pass and disposal facilities for the Combined Treatment Plant*”, dated March 2001, compiled by DJ Brand (Environmental Management, Kimberley Mines) and approved in August 2001. This report will hereafter for reference purposes be referred to as the approved EMP, dated March 2001.
- “*De Beers Consolidated Mines Limited: Kimberley Mines, EMP Addendum, Emergency slimes holding facility*”, dated November 2002, compiled by Kimberley Mines. This report will hereafter for reference purposes be referred to as the EMP addendum, dated November 2002.
- “*De Beers Consolidated Mines Limited: Kimberley Mines, Kimberley Small Mining, Detailed design for short-term slimes disposal facility*”, dated September 2002, compiled by Environmental, Civil and Mining Projects (Pty) Ltd. This report will hereafter for reference purposes be referred to as the Design Report, dated September 2002.
- “*De Beers Consolidated Mines Limited: Kimberley Mines, EMP Addendum, Kimberley Mines, Bulk sampling Plant*”, dated February 2003, compiled by Kimberley Mines. This report will hereafter for reference purposes be referred to as the EMP addendum, dated February 2003.
- “*De Beers Consolidated Mines Limited: Kimberley Mines, EMP Addendum for Slimes Spillage Reservoir at the Combined Treatment Plant*”, dated February 2004. This

report will hereafter for reference purposes be referred to as the EMP addendum, dated February 2004.

- “De Beers Consolidated Mines Limited: Kimberley Mines, EMP”, dated February 2008. This report will hereafter for reference purposes be referred to as the approved EMP, dated February 2008.

1.3 PROCESS

1.3.1 EIA AND EMP PROCESS

It is also the intention of this EMP (incl. EIA) to provide the information as required in terms of the MPRDR (2004) under the MPRDA (2002). This EMP (incl. EIA) takes into consideration all components of the De Beers Kimberley Mines, and addresses the current and potential impacts for all existing and new mining and related activities which occur within the De Beers Kimberley Mines mining area associated with the Phase 2 purchase agreement into a single document that can be used for the environmental management of the mine.

Therefore, the objectives of this EMP (including EIA) are to:

- Provide the Regulatory Authorities with sufficient information to inform decision-making with regards to the Phase 2 purchase agreement.
- Develop an integrated document for implementation at the De Beers Kimberley Mines that will aim at efficient environmental management, including the management of possible long-term impacts and the carrying out of rehabilitation-, mitigation- and management measures in such a manner to ensure the long-term sustainability of the rehabilitated areas with the aim of achieving closure objectives.

The process to be followed will entail the following:

- An EMP (incl. EIA) will be compiled by the EAP²⁰ (CSEC²¹) in terms of the requirements of the MPRDA (2002) and the Regulations there under.
- The EMP (incl. EIA) will be made available for a public comment for a period of 30 days, providing I&APs²² more detail pertaining to the Phase 2 purchase agreement. I&APs will have the opportunity to provide their input on the report.
- A public meeting and an authorities meeting will be held to inform I&APs and relevant authorities of the details pertaining to the project as well as to summarise the impacts and proposed mitigation measures.
- Comments received from the public and from the authorities will be submitted to the DMR.

1.4 CONTENT OF THE EMP (INCL EIA) IN TERMS OF THE MPRDA (2002) AND MPRDR (2004)

Section 39 of the MPRDA (2002) describes what should be included in an EMP (incl. EIA). **Table 1.2** below lists the relevant sections of the MPRDA (2002), and provides the parts

²⁰ EAP: Environmental Assessment Practitioner.

²¹ CSEC: Clean Stream Environmental Consultants.

²² I&P's: Interested and Affected Parties

of this EMP (incl. EIA) in which the information required by the relevant legislation are included.

Table 1.2: Content of the EMP (incl. EIA) in terms of the MPRDA, 2002

SECTION NO:		DESCRIPTION	EMP PART	
Section 39(1)		Every person who has applied for a mining right in terms of Section 22 must conduct an Environmental Impact Assessment and submit an Environmental Management Programme within 180 days of the date on which he or she is notified by the Regional Manager to do so.	This EMP (incl. EIA) was compiled in terms of Section 102	
Section 39(3)	(a)	Establish baseline information concerning the affected environment to determine protection, remedial measures and environmental management objectives.	Part 4	
	(b)	(i)	Investigate, assess and evaluate the impact of the proposed prospecting or mining operations on the - The environment.	Part 7
(ii)		The socio-economic conditions of any person who might be directly affected by the prospecting or mining operation.		
Section 39(3)	(b)	(iii)	Any national estate referred to in Section 3(2) of the National Heritage Resources Act, 1999 (Act 25 of 1999), with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of the act.	Part 10
		(c)	Develop an environmental awareness plan describing the manner in which the applicant intends to inform its employees of any environmental risks, which may result from their work and the manner in which the risks must be dealt with in order to avoid pollution of the degradation of the environment.	
	(d)	(i)	Describe the manner in which it is intended to - Modify, remedy, control or stop and action, activity, or process which causes pollution or environmental degradation.	Part 7
		(ii)	Contain or remedy the cause of pollution or degradation and mitigation of pollutants.	
		(iii)	Comply with any prescribed waste standard or management standards or practices.	
Section 41(1)		An applicant for the prospecting right, mining right or mining permit must, before the minister approves the environmental management plan or environmental management programme in terms of Section 39(4), make the prescribed financial provision for the rehabilitation or management of negative environmental impacts.	Part 7	
Section 39(4)	(a) (ii)	The applicant had the capacity, or has provided for the capacity to rehabilitate and manage the negative impacts on the environment.	Part 7	

Regulation 50 of the MPRDR (2004) describes what information should be included in an EIA report. As required by the DMR, the EIA has been included as part of the EMP, and as such, **Table 1.3** below lists the relevant sections of the MPRDR(2004), and provides the parts of this EMP in which the information required by the relevant legislation are included.

Table 1.3: Content of the EMP in terms of Regulation 50 of the MPRDR (2004), under the MPRDA (2002)

REGULATION NO:	DESCRIPTION	EMP PART
Regulation 50(a)	An assessment of the environment likely to be affected by the proposed mining operation, including cumulative environmental impacts.	Part 4
Regulation 50(b)	An assessment of the environment likely to be affected by the identified alternative land use or developments, including cumulative environmental impacts.	Part 7
Regulation 50(c)	An assessment of the nature, extent, duration, probability and significance of the identified environmental, social and cultural impacts of the proposed mining operation, including the cumulative environmental impacts.	Part 7
Regulation 50(d)	A comparative assessment of the identified land use and development alternatives and their potential environmental, social and cultural aspects.	Part 6
Regulation 50(e)	Determine the appropriate mitigatory measures for each significant impact of the proposed mining operation.	Part 7
Regulation 50(f)	Details of the engagement process of the interested and affected persons following/during the course of the assessment and an indication of how the issues raised by interested and affected persons have been addressed.	Part 5
Regulation 50(g)	Identify knowledge gaps and report on the adequacy of predictive methods, underlying assumptions and uncertainties encountered in compiling the required information.	Part 11
Regulation 50(h)	Description of the arrangements for monitoring and management of environmental impacts.	Part 8
Regulation 50(i)	Inclusion of technical and supporting information as appendices if any.	Appendices

Regulation 51 of the MPRDR (2004) describes what should be included in an EMP in terms of Section 39 of the MPRDA (2002). **Table 1.4** below lists the relevant sections of the MPRDR (2004), and provides the parts of this EMP report in which the information required by the relevant legislation can be found.

Table 1.4: Content of the EMP in terms of Regulation 51 of the MPRDR (2004), under the MPRDA (2002)

REGULATION NO:	DESCRIPTION	EMP PART
Regulation 51(a)	A description of the environmental objectives and specific goals that need to be achieved	Part 7
	(i) Mine Closure.	
	(ii) The management of identified environmental impacts emanating from the proposed mining operation.	
Regulation 51(a)	(iii) The socio-economic conditions as identified in the social and labour plan.	Part 7

REGULATION NO:		DESCRIPTION	EMP PART
	(iv)	Historical and cultural aspects if applicable.	
Regulation 51(b)	An outline of the implementation programme which must include -		Part 7
	(i)	A description of the appropriate technical and management options chosen for each environmental impact, socio-economic condition including historical and cultural aspects for each phase of the mining operation.	
	(ii)	Action plans to achieve the objectives and specific goals contemplated in paragraph (a) which must include a time schedule of actions to be undertaken to implement mitigatory measure for the prevention, management and remediation of each environmental impact, socio-economic condition and historical and cultural aspects for each phase of the mining operation.	Part 7
	(iii)	Procedures for environmental related emergencies and remediation.	Part 9
	(iv)	Planned monitoring and environmental management programme performance assessment.	Part 8
	v	Financial provision in relation to the execution of the environmental management programme which must include:	Part 7
Regulation 51(b)	v	(aa) The determination of the quantum of the financial provision contemplated in Regulation 54.	Part 7
	v	(bb) Details of the method of providing financial provision contemplated in Regulation 53.	
	(vi)	An environmental awareness plan contemplated in Section 39(3)(c) of the Act.	Part 10
	(vii)	All supporting information and specialist reports that must be attached as appendices to the environmental management programme.	Refer to all Appendices
	(viii)	An undertaking by the applicant to comply with the provisions of the act and regulations thereto.	In front of this EMP

1.4.1 THE GUIDELINE FOR THE COMPILATION OF AN EIA AND AN EMP

The guideline for the compilation of an EIA and EMP published by the DMR describes in detail what information should be included as part of the EIA and EMP document. **Table 1.5** below lists the requirements of the DMR's Guideline, and provides the parts of this EMP in which the information required has been included.

Table 1.5: Content of the EMP in terms of the DMR's Guideline for the compilation of an EIA and EMP

Section / no	Description	EMP Part
Preamble	The applicant is required to include (at the beginning of the Environmental Management Programme) a duplicate of all the information contained in Parts A and C of Form B, Annexure I of the application for a mining right. The applicant must ensure that the contact person and correspondence address for the application are those of an authorised representative of the company who can be officially correspond with in terms of the compliance during the application process and, where applicable, after a right has been granted.	This EMP (incl. EIA) was compiled in terms of Section 102, Part 2 and Table 1.2
Section 1: Environmental Impact Assessment	Section 39 (3) (a) and (b) of the Act, read together with Regulation 50, requires the establishment of baseline information concerning the affected environment, and an investigation, assessment and evaluation of the impact of the proposed mining operation on the environment, on the socio-economic conditions of any persons who may be directly affected thereby, and on any national estate referred to in section 3(2) of the National heritage resources Act, 1999 (Act 25 of 1999).	Part 4, Part 7 and Table 1.2
Section 1: Regulation 50(a)	This provision clearly requires an understanding of three elements, namely (1) the baseline environment, (2) the proposed mining operation, and (3) the identification of potential impacts that the said actions, activities or processes will have on the environment. The applicant must therefore provide a description of:-	Part 4, Part 3, Part 7 and Table 1.3

Section / no		Description	EMP Part
	1	The baseline environment – Read together with section 39 (3) (a) the intention of this description is to determine protection, remedial measures and environmental management objectives. To this end the applicant must specifically in this section:-	Part 4
	1.1	Provide a concise description of the environment on site relative to the environment in the surrounding area.	Part 4
	1.2	Provide a concise description of each of the existing environmental aspects both on the site applied for and in the surrounding area which may require protection or remediation.	Part 4
	1.3	Provide a concise description of the specific land uses, cultural and heritage aspects and infrastructure on the site and neighbouring properties/farms in respect of which the potential exists for the socio-economic conditions of other parties to be affected by the proposed mining operation.	Part 4
	1.4	Include an annotated map showing the spatial locality and aerial extent of all environmental, cultural/heritage, infrastructure and land use features identified on site and on the neighbouring properties and farms.	Appendix A
	2	The proposed mining operation – The applicant must specifically in this section:-	Part 3
	2.1	Specify the mineral to be mined.	Part 3
	2.2	Specify the mining method to be employed at the level of opencast, underground, stoping, stooping, total extraction, bord and pillar, block caving, shrinking, dredging, pumping, monitoring, etc. and provide a concise description of the intended magnitude thereof, in terms of volumes, depth and aerial extent.	Part 3
	2.3	provide a list of all the main mining actions, activities, or processes, such as, but not limited to, access roads, shafts, pits, workshops and stores, processing plant, residue deposition sites, topsoil storage sites, stockpiles, waste dumps, access roads dams, and any other basic mine design features.	Part 3

Section / no		Description	EMP Part
	2.4	Provide a plan showing the location and aerial extent of the aforesaid main mining actions, activities, or processes as required to calculate the financial provision in accordance with the Department's published guideline. (Reg. 51 (b) (v)).	Appendix A
	2.5	Provide a list any listed activities (in terms of the NEMA EIA regulations) which will be occurring within the proposed project.	Part 7
	2.6	Provide an indication of the phases (construction, operational, decommissioning) and estimated time frames in relation to the implementation of these actions, activities or processes and infrastructure.	Part 7
	3	The potential impacts – The applicant must specifically in this section, and in the relevant phases:-	Part 7
	3.1	Provide a list of the potential impacts, including acid mine drainage and/ or groundwater contamination where applicable, on environmental aspects separately in respect of each of the aforesaid main mining actions, activities, processes, and activities listed in the NEMA EIA regulations.	Part 7
	3.2	Include into the aforesaid list, the potential impacts of the mining operation on any cultural and/ or heritage resources which may be applicable. In cases where such features are not applicable the applicant must still include the item in the list and describe it as not applicable.	Part 7
	3.3	Provide a list of all impacts that may potentially emanate from each activity, present on site, which is listed in terms of the NEMA EIA regulations.	Part 7
	3.4	Provide a list of all potential cumulative environmental impacts.	Part 7

Section / no		Description	EMP Part
	3.5	State specifically whether or not there is a risk of acid mine drainage or potential groundwater contamination associated with the mineral to be mined, and if such a risk is associated with the mineral to be mined provide a summary of the findings and recommendations of a specialist geo-hydrological report in that regard.	Part 7
	Regulation 50 (b)	This provision, requires an understanding of two additional elements, namely (1) the alternative land uses or developments that may be affected by the proposed mining operation, and (2) the identification of potential impacts that the said alternative land uses or developments will have on the environment, including cumulative impacts. The applicant must therefore provide a description of:-	Part 7, Part 6 and Table 1.3
	4	The alternative land use or developments that may be affected – The applicant must specifically in this section:-	Part 6
	4.1.	Provide a concise description of the alternative land use of the area in which the mine is proposed to operate.	Part 6
	4.2.	Provide a list and description of all the main features and infrastructure related to the alternative land uses or developments.	Part 6
	4.3.	Provide a plan showing the location and aerial extent of the aforesaid main features of the alternative land use and infrastructure related to the alternative land development.	Appendix A
	5	The potential impacts of the alternative land use or development – The applicant must specifically in this section:-	Part 6
	5.1.	Provide a list of the potential impacts of each of the aforesaid main features and infrastructure related to the alternative land use or development and related listed activities.	Part 6
	5.2.	Describe all potential cumulative impacts of the main features and infrastructure related to the alternative land use or development.	Part 6

Section / no		Description	EMP Part
	Regulation 50 (c)	This Regulation, read together with Section 39 (3) (b) (ii) and (iii) of the Act and with Regulations 50 (d) and 51 (a) (iii), requires an assessment and evaluation of the impact of the proposed mining operation on the environment, the socio-economic conditions of directly affected persons, and any national estate referred to in section 3 (2) of the National heritage Resources Act, 1999 (Act 25 of 1999). <i>Firstly</i> , in order to meet these requirements the social and cultural impacts must also be identified, and <i>secondly</i> , the potential impacts must be evaluated. The applicant must therefore provide:-	Part 7 and Table 1.3
	6	An identification of potential social and cultural impacts. The applicant must specifically in this section:-	Part 7
	6.1	provide a list of potential impacts of the proposed mining operation on the socio economic conditions of other parties' land use activities both on the site and on adjacent and nonadjacent properties and farms to the extent that their socio economic conditions may be directly affected. If no such impacts are identified this must be specifically stated together with a clear explanation why this is not the case.	Part 7
	6.2	Include into the aforesaid list, the potential impacts of the mining operation on any cultural and/ or heritage resources which may be applicable. In cases where such features are not applicable the applicant must still include the item in the list and describe it as not applicable.	Part 7
	6.3	In cases where cultural impacts have been identified, describe the cultural aspect that will potentially be affected, and describe the potential impact on such cultural aspect.	Part7
	6.4	In Cases where heritage features have been identified, describe such heritage feature and describe the potential impact on such heritage feature.	Part 7

Section / no		Description	EMP Part
	6.5	Quantify the impact on the socio-economic conditions of directly affected persons, as determined by the findings and recommendations of a specialist report in that regard.	Part 7
	6.5.1	State the amount, of the quantified potential impact expressed in terms of the loss in value of property or infrastructural assets that will potentially be impacted upon as a result of the mining activity	Part 7
	6.5.2	State the amount, of the quantified potential impact expressed in terms of the loss in net present value of commercial, economic or business activity which will be impacted upon as a result of the mining activity.	Part 7
	6.5.3	State, the sum of the amounts, referred to in paragraphs 6.6.1 and 6.6.2 above.	Part 7
	7	An assessment and evaluation of potential impacts.- The applicant must specifically in this section:-	
	7.1	Provide a complete list of each potential impact identified in paragraphs 3 and 6 above. The applicant must:-	Part 7
	7.1.1	Ensure that the list of impacts listed in paragraph 7.1 above includes (incompliance with the provisions of section 39 (3) (d) (i) of the Act) the list of all potential environmental impacts that may emanate separately from the main mining actions, activities, processes, and activities listed in the NEMA EIA regulations.	Part 7
	7.1.2	Ensure that the list of impacts listed in paragraph 7.1 above includes the risk of acid mine drainage and groundwater contamination. If the potential for acid mine drainage does not apply, the item must still be listed and then be dealt with as not applicable.	Part 7
	7.1.3	Ensure that the list of impacts listed in paragraph 7.1 above includes the list of all the potential environmental impacts on cultural and heritage resources in the area.	Part 7

Section / no		Description	EMP Part
	7.1.4	Ensure that the list of impacts rated includes the list of potential impacts on the socio-economic conditions of other parties who may be directly affected by the proposed mining operation.	Part 7
	7.1.5	Ensure that the list of impacts rated includes the list of potential cumulative environmental impacts.	Part 7
	7.2	Provide a complete concomitant impact rating for each potential impact listed in paragraph 7.1 above in terms of its nature, extent, duration, probability and significance.	Part 7
	7.3	Provide a definition of the criteria used for each of the variables used for rating potential impacts. In this regard the applicant must:-	Part 7
	7.3.1	Ensure that the potential impacts are rated specifically with the assumption that no mitigation measures are applied.	Part 7
	7.4	Provide an indication of the phases (construction, operational, decommissioning) and estimated time frames in relation to the potential impacts rated.	Part 7
	Regulation 50 (d)	This provision requires a comparative assessment of the identified land use and development alternatives and their potential environmental, social and cultural impacts. The applicant is required to:-	Table 1.3, Part 6 and 7.
	8	identify the alternative land uses which will be impacted upon, which identification must;	Part 6 and Part 7
	8.1	Indicate whether the proposed mining will impede the land use, or whether it will prevent the land use.	Part 7
	8.2.	Indicate whether the said land uses will be impeded or prevented permanently or temporarily.	Part 7
	8.3	Indicate the period for which the land use will be impeded or prevented, in cases where the alternative land use will be impeded temporarily.	Part 7

Section / no		Description	EMP Part
	9	Provide, in listed format, the results of a specialist study, which study must be conducted in accordance with generally accepted principles of sustainable development by integrating social, economic and environmental factors into a comparison of the costs and benefits of the alternative land uses with those of the mining operation on an equitable basis.	Part 11
	10	Attach the specialist study as an annexure.	Appendices
	Regulation 50 (e)	This regulation requires the applicant to determine the appropriate mitigation measures for each significant impact of the proposed mining operation. This requirement is not intended to be a duplication of Regulation 51 (b), which requires the description of the mitigation measures in detail. It is only intended to determine the appropriate type of mitigatory measure to be applied in the Environmental Management Programme. Under this regulation, therefore, the applicant is required to:-	Table 1.3 and Part 7
	11	Provide a list of all the significant impacts as identified in the assessment conducted in terms of Regulation 50 (c) and	Part 7
	11.1	Include into the list, the source of the impact by specifying the relevant action, activity or process from which the potential impact emanates.	Part 7
	11.2	Ensure that the impacts relating to post closure management of mine sites, cumulative impacts, and acid mine drainage or ground water contamination are also dealt with.	Part 7

Section / no		Description	EMP Part
	Regulation 50 (f)	This Regulation requires the provision of details of the engagement process of interested and affected persons followed during the course of the assessment and an indication of how the issues raised by interested and affected persons have been addressed. This requires that the applicant <i>firstly</i> , indicates how the interested persons were identified, <i>secondly</i> confirms the details of the engagement process with the affected parties, and <i>thirdly</i> how the issues raised by the interested parties were addressed. The applicant is required to provide information on:-	Part 5 and Table 1.3
	12	The identification of interested and affected parties:- the applicant must	Part 4
	12.1	List the names of the landowners and other affected persons in respect of the land uses which have been identified on the property and on adjacent and non adjacent farms that may be affected by the proposed mining operation.	Part 4
	12.2	List the relevant Local Government, Provincial Government Departments, Land Claims Commissioner and Traditional Authorities that were consulted.	Part 4
	12.3	List the relevant Government agencies and institutions responsible for the various aspects of the environment and for infrastructure that were consulted.	Part 1 and 4
	12.4	List the relevant local communities that were consulted.	Part 4 and 5
	13	The details of the engagement process. The applicant must:-	Part 5
	13.1	Confirm that both the Local Government and the Provincial Government have been consulted with regard to any economic development plans or proclaimed nature reserves in the area, and provide detail in that regard.	Part 5
	13.2	Confirm that the land claims commissioner has been consulted with regard to any land claims in the area	Part 5

Section / no		Description	EMP Part
	13.3	Confirm that the nature and scope of the mining project and the typical impacts of such a mining operation on the environment have been fully explained to the interested and affected parties, including the affected landowners, SARHA and the communities concerned and that they have been consulted with regard to how they will be affected.	Part 5
	13.4	Confirm which specialists, knowledgeable persons and knowledgeable institutions have been consulted and indicate in what regard.	Part 11
	14	Details regarding the manner in which the issues raised were addressed. The applicant must:-	Part 5
	14.1	Confirm specifically in this section whether or not the description of the environment under Regulation 50 (a) has been compiled with the participation of the landowner, interested and affected parties, and the communities concerned.	Part 5
	14.2	Confirm specifically in this section whether or not the list of potential impacts under Regulation 50 (a) has been compiled with the participation of the landowner and interested and affected parties,	Part 5
	14.3	Confirm specifically in this section whether or not the list of potential impacts related to social and cultural impacts under Regulation 50 (c) has been compiled with the participation of the parties who may be directly affected.	Part 5
	14.4	Provide a list, of the issues raised by the interested and affected parties referred to in paragraph 13 above, and indicate where they have been accommodated in this document.	Part 5

Section / no		Description	EMP Part
	Regulation 50 (g)	This regulation requires the applicant to identify knowledge gaps and report on the adequacy of predictive methods underlying assumptions and uncertainties encountered in compiling the required information. The specialist studies must give an indication of the accuracy of the methods and tools utilised. The duration and scope of these investigations must be reflective of the nature of the aspect under investigation. The applicant must:-	Table 1.3 and Part 7
	15	The appropriate mitigatory measures for each significant impact of the proposed mining operation. The applicant must:-	Part 7
	15.1	Report on the adequacy of predictive methods utilised.	Part 7
	15.2	report on the adequacy of underlying assumptions	Part 7
	15.3	Report on uncertainties in the information provided.	Part 7
	Regulation 50 (h)		Part 8 and Table 1.3
	16	Description of the arrangements for monitoring and management of environmental impacts. The applicant must:-	Part 8
	16.1	Provide a list of identified impacts which will require monitoring programmes.	Part 8
	16.2	specify the functional requirements for the said monitoring programmes	Part 8
	16.3	define the roles and responsibilities for the execution of the monitoring programmes and	Part 8
	16.4	Specify the time frames for monitoring and reporting.	Part 8

Section / no		Description	EMP Part
	Regulation 50 (i)	This regulation requires the inclusion of technical and supporting information as appendices. The contents of the EIA must be a clear and concise description of the findings, interpretation and conclusions of the applicant, or the findings and recommendations of specialist reports. Supporting information must therefore not be included in the EIA, but when relevant it must be provided as appendices to the EIA. The following information is required as appendices:-	Table 1.3 and Appendices
	17	Inclusion of technical and supporting information. The applicant must:-	Appendices
	17.1	Attach a specialist report regarding the investigation, assessment and evaluation of cultural and heritage resources, in consultation with regional organs of state e.g. SAHRA, tasked with a cultural and heritage mandate and in cognisance of local knowledge (community and landowner).	Appendices
	17.2	Attach a specialist report with regard to the determination and description of the base line environment.	Appendices
	17.3	Attach a specialist geo-hydrological report in cases where the mineral commodity to be mined has the potential to generate acid mine drainage or result in the contamination of groundwater.	Appendices
	17.4	Attach a specialist report on the impact of the proposed mining operation on the socio economic conditions of directly affected parties.	Appendices
	17.5	Attach a specialist study informing the comparative land use assessment referred to in paragraph 9 herein, and the information in paragraph 6.5 herein, which study must be conducted in accordance with generally accepted principles of sustainable development by integrating social, economic and environmental factors into a comparison of the costs and benefits of the alternative land uses with those of the mining operation on an equitable basis.	Appendices
	17.6	Attach any other specialist reports that may be required.	Appendices

Section / no		Description	EMP Part	
Section 2: Environmental Management Programme		The Environmental Management Programme contemplated in section 39 (1) of the Act requires the submission of information that complies with the provisions of section 39 (4) (a) of the Act, and meets the requirements of Regulation 51. The said regulation has two parts, referring (a) to the description of environmental objectives, and (b) to an outline of the implementation programme.		
		Regulation 51 (a)	This regulation requires a description of the environmental objectives and specific goals for mine closure, the management of identified environmental impacts emanating from the mining operation, the socio economic conditions as identified in the social and labour plan, and historical and cultural impacts, if applicable.	Part 4 and Table 1.4
		1	Description of environmental objectives and specific goals for mine closure. The applicant is required to modify, remedy, control or stop any action, activity or process that could impact negatively on the socio-economic conditions of the persons concerned.	Part 4 and Part 7
		1.1	Provide a list of environmental aspects that describe the pre-mining environment as informed by the description of the baseline environment contained in the foregoing environmental impact assessment that will serve to guide the setting of environmental objectives for mine closure.	Part 4
		1.2	Provide a list of the measures required to contain or remedy any causes of pollution or degradation or the migration of pollutants, both for closure of the mine and post-closure.	Part 7
2	Description of environmental objectives and specific goals for the management of identified environmental impacts emanating from the proposed mining operation. This description must be informed by the information provided in the EIA in terms of Regulation 50 (h). The applicant is required to:-	Part 7		

Section / no		Description	EMP Part
	2.1	Provide a list of identified impacts which will require monitoring programmes.	Part 7
	2.2	Provide a list of the source activities that are the cause of the impacts which require to be managed.	Part 7
	2.3	List those management activities which, where applicable, will be conducted daily, weekly, monthly, quarterly, annually or periodically as the case may be in order to control any action, activity or process which causes pollution or environmental degradation.	Part 7 and 8
	2.4	Define the roles and responsibilities for the execution of the monitoring and management programmes.	Part 8
	3	Description of environmental objectives and specific goals for the socio-economic conditions as identified in the social and labour plan. The applicant must:-	Part 7
	3.1	Provide a list describing various aspects of the socio-economic conditions in the vicinity of the mine, as identified in the Social and Labour plan.	Part 4
	3.2	Provide a list describing specific environmental objectives and goals to control, remedy or stop potential impacts emanating from the mine such as noise air quality, blasting vibrations, access roads, safety, etc. which may impact on communities and interested and affected parties identified in the social and labour plan.	Part 7
	4	Description of environmental objectives and specific goals for historical and cultural aspects.	Part 7
	4.1	Provide a list of stated environmental objectives and goals in respect of historical and cultural aspects identified in specialist studies conducted during the EIA phase.	Part 7

Section / no		Description	EMP Part
	<i>Regulation 51 (b) – Outline of the implementation programme</i>	This Regulation read with the provisions of section 39 (3) (d) (i) of the Act requires a description of the technical and management option chosen (a) in respect of each action, activity or process which causes pollution or environmental degradation for (b) each environmental impact, socio economic condition, and historic and cultural aspect and (c) for each phase of the mining operation. The applicant is required to:-	Part 7, Part 8, Part 9 and Table 1.4
	5	Describe the appropriate technical and management options chosen for each environmental impact, socio-economic condition and historical and cultural aspect in each phase of the mining operation, as follows;	Part 7
	5.1	Provide a list for each phase (construction, operational, closure and post closure) of the mining operation, describing each action, activity or process, including any NEMA EIA Regulation listed activity, which causes pollution or environmental degradation that will be conducted during that phase.	Part 7
	5.1.1	Indicate which of the aforesaid actions, activities or processes will cause significant impacts on the environment, the socio-economic conditions of directly affected persons, and on historical and cultural aspects, as identified in accordance with Regulation 50 (c).	Part 7
	5.2	Provide a concomitant list describing the appropriate technical or management options chosen to modify, remedy, control or stop any action, activity, or process which will cause significant impacts on the environment, socio-economic conditions and historical and cultural aspects as identified.	Part 7
	5.2.1	Each technical or management option must be further described in detail, in suitably cross referenced format and where necessary, appendices must be attached.	Part 7
	6	Provide Action plans to achieve the objectives and specific goals contemplated in Regulation 50 (a).	Part 7

Section / no		Description	EMP Part
	6.1	Provide concomitant time schedules that describe in detail the deadlines for each action to be undertaken to implement each technical or management option chosen to prevent, manage and remediate each environmental impact, socio-economic condition and historical and cultural aspect, as identified. The time schedules must indicate:-	Part 7
	6.1.1	Specific timeframes during which each technical or management options chosen for the prevention of impacts will be in place such as, but not limited to the construction of clean and dirty water systems, access control during blasting, etc.	Part 7
	6.1.2	Specific timeframes for the implementation of each technical or management option chosen to remediate impacts such as, but not limited to, the various stages of rehabilitation work during the various phases of the mining operation, arrangements to remedy socio-economic or cultural impacts, etc	Part 7
	6.1.3	Specific timeframes for the management of environmental impacts such as, but not limited to dust suppression, noise control, environmental monitoring, etc.	Part 7
	6.1.4	Provide detail of those management activities which, where applicable, will be conducted daily, weekly, monthly, quarterly, annually or periodically as the case may be in order to manage the identified impacts effectively.	Part 7 and Part 8
	7	Procedures for environmentally related emergencies and remediation	Part 9
	7.1	Provide an Environmental Emergency plan, which plan must include	Part 9
	7.1.1	A description of the ongoing monitoring and management measures to be implemented, to provide the early warning systems necessary to avoid environmental emergencies.	Part 9
	7.1.2	a description of procedures that will be in place in cases of environmental related emergencies,	Part 9

Section / no		Description	EMP Part
	7.1.3	The technical, management and financial options that will be in place to deal with the remediation of impacts in cases of environmental emergencies.	Part 9
	8	Planned monitoring and environmental management programme performance assessment.	Part 8
	8.1	Provide a description of planned monitoring of the aspects of the environment which may be impacted upon. Such description must include;	Part 8
	8.1.1	A list of the environmental aspects that will be monitored.	Part 8
	8.1.2	A description of the manner in which the monitoring will be conducted, and the location where each monitoring activity will be carried out.	Part 8
	8.1.3	A description of the various standards that must be maintained, which standards must meet the requirements of the regulatory authority concerned, or the relevant SABS standard as the case may be.	Part 8
	8.1.4	A description of the frequency of the monitoring to be conducted in each specific case.	Part 8
	8.1.5	A description of the analysis to be conducted, the frequency thereof, and the records to be kept.	Part 8
	8.1.6	A description of the standard procedures for cases where the results of monitoring indicate non-compliance with the relevant standards.	Part 8
	8.2	Provide a description as to how the implementation of the action plans contemplated in regulation 51 (b) (ii) as described will be monitored as described in paragraph 6 of the EMP will be monitored.	Part 8
	8.3	State the frequency that the performance is proposed to be reported on for assessment purposes.	Part 8
	9	Financial provision in relation to the execution of the environmental management programme:- The applicant is required to-	Part 7

Section / no		Description	EMP Part
	9.1	Provide a plan showing the location and aerial extent of the aforesaid main mining actions, activities, or processes anticipated to be conducted until the resource is depleted, as required to calculate the financial provision in accordance with the Department's published guideline. This plan must show the annual progress of the mining operation relative to the overall plan.	Appendix A
	9.1.1	Ensure that the rehabilitation plan is compatible with the closure objectives determined in accordance with the baseline study as prescribed.	Appendix A
	9.1.2	Refer to Regulation 54(1) 2 and complete the standard guideline document developed for financial provision. Complete the standard guideline in respect of all the main mining actions activities or processes anticipated to be conducted until the resource is depleted.	Part 7
	9.2	Complete 10 forecasts (one for each of the first 10 years of operation) and to then determine the progressive total in year 10 (excluding concurrent rehabilitation). The progressive total determined for Year 10 must be specifically stated.	Part 7
	9.3	Confirm the amount that will be provided should the right be granted.	Part 7
	9.4	Provide details of the method of providing financial provision contemplated in Regulation 53.	Part 7
	10	Environmental Awareness Plan (Section 39 (3) (c)) The applicant must in this section include an environmental awareness plan in accordance with Section 39 (3) (c). This Plan must:-	Part 10
	10.1	Describe how the applicant intends to inform his or her employees of any environmental risk which may result from their work, and pollution or degradation of the environment.	Part 10
	10.2	Describe the manner in which the risk must be dealt with in order to avoid	Part 10

Section / no		Description	EMP Part
	10.3	Describe the general environmental awareness training and training on dealing with emergency situations and remediation measures for such emergencies.	Part 10
	11	Attachment of specialist reports, technical and supporting information.	Appendices
	11.1	All supporting information that remains necessary to submit, and specialist reports not already attached in terms of the EIA should be attached as appendices	Appendices
	12	Section 39 (4) (a) (iii), Capacity to manage and rehabilitate the environment Section 39 (4) (a) (iii) of the Act, read together with section 37 (2) of the Act, requires that the applicant will have the capacity, or have provided for the capacity, to rehabilitate and manage negative impacts on the environment. This requirement is not the same as that for financial provision, which concerns the financial risk to the State and, which may not necessarily be accessible to the applicant to fund rehabilitation or manage the environment. The applicant is required to:-	Table 1.2 and Part 7
	12.1	State the amount it requires to both manage and rehabilitate the environment, and provide a detailed explanation as to how the amount was derived; which amount should not be less than the sum of the amounts reflected in paragraph 9.1.3 herein, and the amount reflected in paragraph 6.5.3 of the EIA.	Part 7
	12.2	Specifically confirm that the stated amount has been adequately provided for in the corresponding budget reflected in the Mining Work Programme as required in Accordance with Regulation 11 (1) (g) (iv).	Part 7

Section / no		Description	EMP Part
Undertaking	13.1	The Environmental Management Programme will, should it comply with the provisions of section 39 (4) (a) of the Act and the right be granted, be approved and become an obligation in terms of the right issued. As part of the proposed Environmental Management Programme, the applicant is required to provide an undertaking that it will be executed as approved and that the provisions of the Act and regulations thereto will be complied with.	Table 1.4 and front of this EMP