

BACKGROUND INFORMATION DOCUMENT

**ENVIRONMENTAL AUTHORISATION AND WATER USE LICENCE
APPLICATION FOR THE WESTERN PLATINUM (PTY) LTD - K4 SHAFT
POLLUTION CONTROL DAM AND WASTE ROCK DUMP GN704
PROJECT, NORTH WEST PROVINCE**



INTRODUCTION AND BACKGROUND

Sibanye-Stillwater (SS) produces Platinum Group Metals (PGMs) such as platinum (Pt), palladium (Pd), rhodium (Rh), iridium (Ir), ruthenium (Ru), osmium (Os) and gold (Au). The South African (SA) Platinum Group Metals (PGM) operations comprise the Rustenburg, Kroondal and Marikana operations, respectively, located in the northwest province of South Africa.

The Marikana operations (Western Platinum (Pty) Ltd (WPL) and Eastern Platinum (Pty) Ltd (EPL)) are located in the Marikana district, 40km to the east of the town of Rustenburg in the North West province of the Republic of South Africa. The lease area covers approximately 214 km² and is in excess of 30km from east to west and 15km from north to south. The Marikana Operations were acquired by Sibanye-Stillwater following the acquisition of Lonmin in June 2019.

The K4 Shaft was placed under care and maintenance for a period of 6 years but will be ramped up to be fully operational in the year 2024 extending the Life of Mine (LOM) with approximately 30 years.

The current Waste Rock Dump (WRD) is located on the farm Rooikoppies portion 36, 37, 38, 39 and 147 owned by SS has been established and initiated by the previous owner. The existing authorised footprint for the waste rock Storage facility will be used to place the waste rock.

WPL has the following approved licences:

- Water use Licence: Licence number, 01/A21K/ABCEFGIHIJ/4620
- Environmental Management Programme: Reference NW30/5/1/2/3/2/2/105 EM

PURPOSE OF THIS DOCUMENT

This Background Information Document (BID) provides Interested and Affected Parties (I&APs) with information about the proposed project, the regulatory process and how to become involved in this process.

Alta van Dyk Environmental Consultants cc (AVDE) has been appointed as the independent Environmental Assessment Practitioner (EAP) for this project to undertake the Environmental Authorisation process, the Water Use Licence application and associated public participation process.

You are invited to register as an Interested and Affected Party(I&AP) for this project and to comment or raise any issues of concern. To register for the proposed project and receive additional notifications, please complete the enclosed registration form, and send to:

Lenaldi Görgens
Alta van Dyk Environmental Consultants cc (AVDE)
Email: lenaldi@avde.co.za
Tel: 012 940 9457; Fax: 086 634 3967
Postal address: Private Bag X 1007, Lyttelton, 0140

LOCATION OF THE PROPOSED PROJECT

The K4 Shaft is situated approximately 23 km East of Rustenburg and 7 km North West of town of Marikana, in the North West Province. The mine is in the jurisdiction of the Rustenburg Local Municipality and in the Bojanala Platinum District Municipality.

The new proposed infrastructure is situated on various portions of the Farm Zwartkoppies 296 JQ as well as on various portions of the Farm Rooikoppies 297 JQ. These portions include: Portion 32, 33, 34, and 115 of the Farm Zwartkoppies 296 JQ as well as Portion 35, 36, 37, 38, 39, 40, 41, 48, 54, 147, 153, 157 ,164 and 222 of the Farm Rooikoppies 297 JQ.

A project Locality Map is shown in Figure 1.

PROJECT DESCRIPTION

K4 Shaft at Western Platinum (Pty) Ltd is a largely pre-developed and equipped, high return project, which will access both the Merensky and UG2 reefs to produce on average, approximately 250,000 4Eoz per annum at a steady state over a 50-year life. Ore will be processed at the K4 concentrator which is already fully operational with a nameplate capacity of approximately 130,000tpm (tonnes per month) of UG2 and Merensky reef.

Excess waste rock from underground mining works is deposited on waste rock dumps at WPL. The waste rock is transported to the waste rock dumps via an underground loco transport to the shafts where it is brought up to the surface. It is then taken to the various waste rock dumps via a spreader belt. Waste rock material will be stored onto the existing approved K4 Shaft Waste Rock Dump.

Stormwater run-off from the Waste Rock Dump needs to be contained in accordance with the requirements of GN704.

GN704 requires:

- The effective separation of clean and dirty water on site – therefore all contaminated run-off from the waste rock disposal area needs to be captured (berm and V-drain);
- Containment of dirty water run-off – a dedicated stormwater management facility will be constructed for the containment of the dirty water run-off and the use thereof in process.
- Capacity Requirement – the containment facility will need to be able to manage the run-off generated during a 1:50 year 24-hour storm event above its normal operating capacity whilst still maintaining the 0,8m freeboard – the PCD has been designed with a storage capacity of 35 203 m³.

Social

K4 Shaft will create significant value for all stakeholders for many decades, providing more than 4,000 direct jobs over its operating life and meaningful opportunities for local businesses, developing small and medium enterprises, as well as ensuring significant local economic development and skills transfer for local communities.

Additional infrastructure

WPL is in the possession of an approved water use licence as well as an approved EMP. A stormwater assessment has been undertaken in 2019 to determine the sufficient management of stormwater in and around the K4 Shaft. It was determined that additional stormwater management infrastructure must be constructed and implemented around the current WRD in order to contain the dirty water runoff. It is the intention of WPL to implement the following stormwater management infrastructure:

- Construction of a V-drain catchment berm
- Construction of a PCD
- Construction of a pipeline from the PCD to the Shaft
- Construction of an emergency spillway at the PCD

The proposed infrastructure is described in the sections below. See Figure 1 for a Locality map and Figure 2 for the final Project Layout

Waste Rock Dump, berm and channels:

A V-drain catchment berm will be constructed around the current WRD. The planned total/final WRD footprint will stretch over an area of 203 830 m² (20,38 ha). This WRD footprint area has already been authorised in the WPL EMPR (reference: NW30/5/1/2/3/2/2/105).

The berm will be 1 353 meters in length and 10.83 meters wide with a total catchment area to accommodate the planned final WRSF footprint area of 203 830 m². The estimated completion of the work is 10 years – for phase 1 only. The berm length West of the WRD will be 550 m, and the berm Length East of the WRD will be 600 m in length with an average width of 10.83 m throughout the entire V-drain channel.

Pollution control dam

A Pollution control dam (PCD) will be constructed north of the current WRD and will be constructed to have a total capacity of 35 203 m³ with a maximum height of 3 m from the floor of the dam. Since the function of the PCD is to contain all the dirty water runoff from the WRD, the PCD will be lined with a Class C liner in order to prevent the seepage of the dirt water to the underground.

The V-drain will discharge via 2 legs into the PCD through gravitational flow. The trapezoidal channels at the PCD will have a maximum flow of 6 452 l/s from the East leg. This is to accommodate the 1:100-year storm event and an emergency spillway will be constructed should the PCD overflow. Both Channels where the V-drain discharges into the PCD, will have an estimated flow of 2 500 l/s/ leg.

Pipelines

A Pipeline will be constructed from the PCD to the Shaft area in order to transport the water in the PCD to existing reservoirs on the shaft for re-use. The pipeline will be 500m in length with a total pump capacity of 60m³/hour, and the pipeline will be a 110 OD HDPE line, sized to empty the dam for a 1:20 year ARI over 14 days of continuous operation.

Specialist assessments

A vegetation assessment has been undertaken by Agreenco and it was determined that approximately 26.2 ha of moderately intact Marikana Thornveld will be affected. Of which 21.70 ha of Critical Biodiversity Areas will be altered. Of this 21.70 ha, of which only 12.94 ha needs new authorisation. The Clearance of the remaining ha of indigenous vegetation for the Waste Rock Dump have already been authorised under the WPL EMPR (NW30/5/1/2/3/2/2/105 EM) The same results of the vegetation study will be used in the impact assessment phase.

In terms of the North West Province classification of CBA's and ESA's, the planned disturbance will have the following impacts on indigenous vegetation:

- PCD – 3.6 ha of CBA 2/ESA 1
- PCD Pipeline – 0.85 ha of CBA 2/ESA 1
- WRD – 8.8 ha of CBA 2/ESA 1
- WRD Channel and berm – 7.72 ha of CBA 2/ESA 1 and 0.78 ha of ESA 2

Although a total of approximately 21.72ha of indigenous vegetation will be affected, only 12.94 ha needs new environmental authorisation

Other

Since the current WRD has been initiated by the previous owner, existing roads are used to maintain and manage activities at the WRD. In order to maintain and implement the proposed infrastructure, no new roads will be developed as existing roads will be used around the WRD.

No new powerlines will be constructed as existing powerlines will be utilised should power be required during the construction activities.

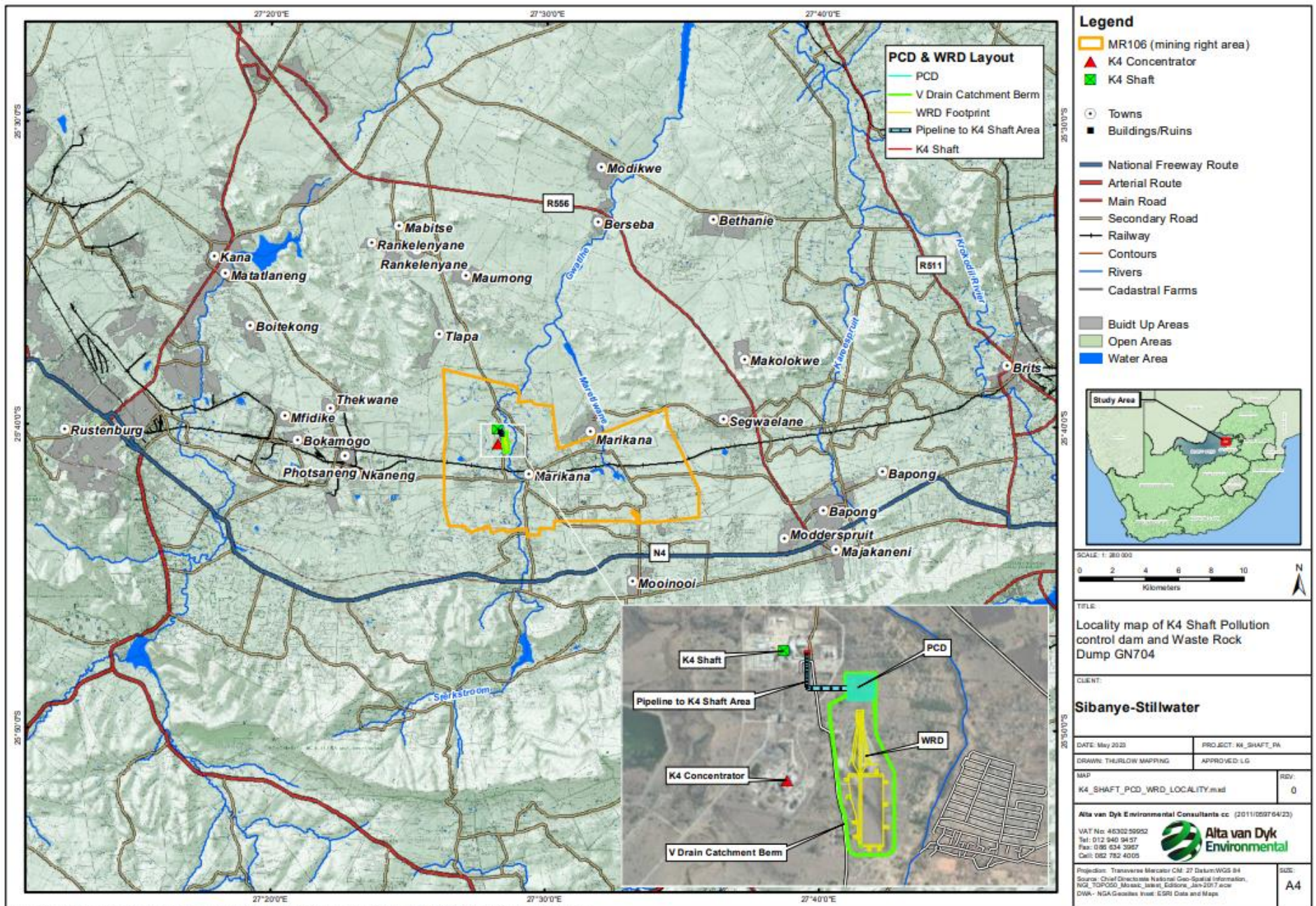


Figure 1: Locality Map of the Proposed Project

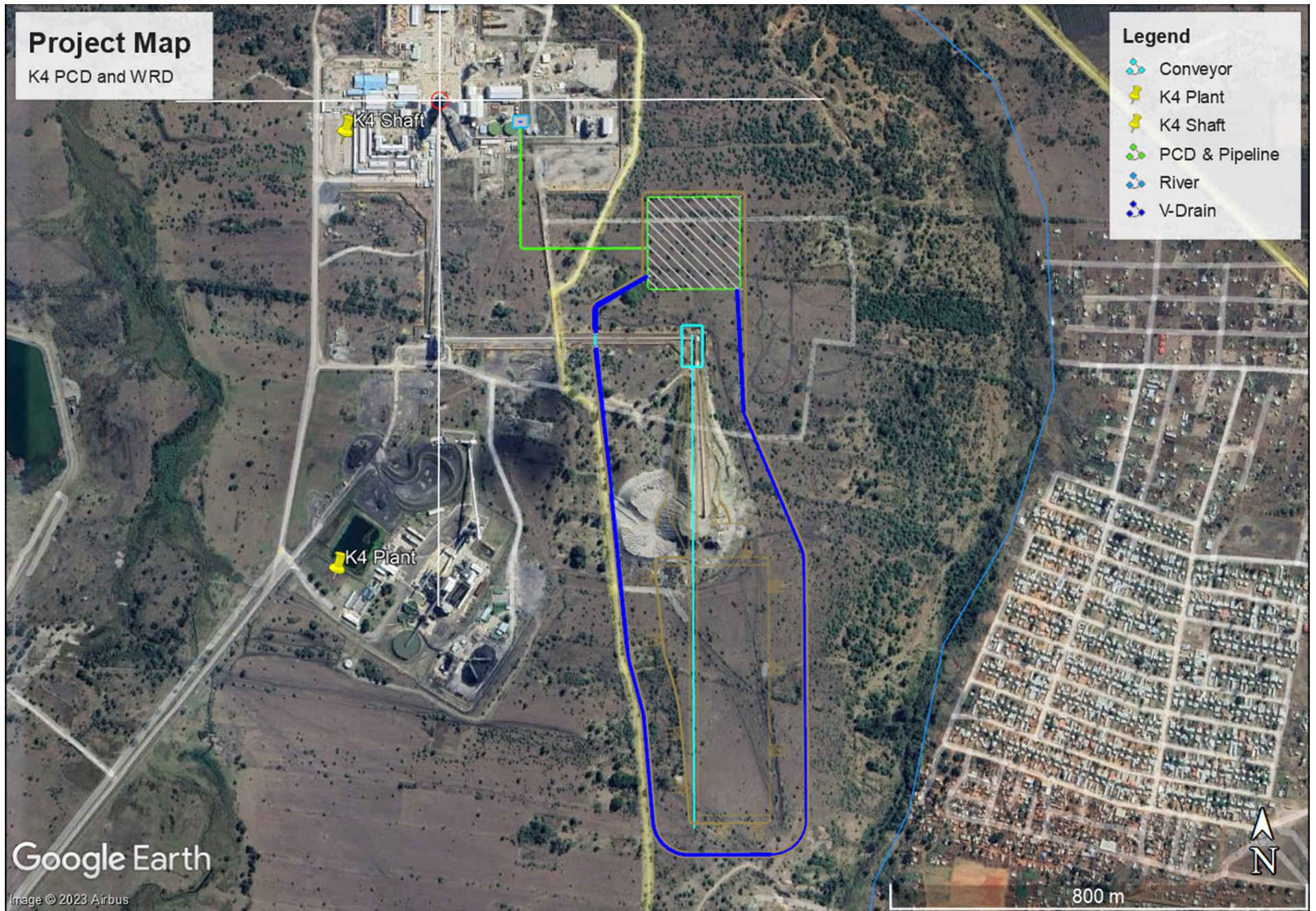


Figure 2: Final Project Layout

LEGISLATIVE REQUIREMENTS

In terms of the section 24(5) read with section 44 of the Act, Environmental Impact Assessment Regulations have been published that provides a list of activities that may require either a Basic Assessment (BA) or a full Scoping and Environmental Impact Assessment (EIA) process to be followed.

- Government Notice No. 983 in Gazette No. 38282 on 4 December 2014, as amended on 7 April 2017 in Gazette No. 40772 as Government Notice No. 327 - Listing Notice 1;
- Government Notice No. 984 in Gazette No. 38282 on 4 December 2014, as amended on 7 April 2017 in Gazette No. 40772 as Government Notice No. 325 – Listing Notice 2; and
- Government Notice No. 985 in Gazette No. 38282 on 4 December 2014, as amended on 7 April 2017 in Gazette No. 40772 as Government Notice No. 324 – Listing Notice 3;

Before Western Platinum may commence with the development of the proposed development and construction of associated infrastructure the following authorisations are required:

- A Full Scoping and Environmental Impact Assessment Environmental Authorisation in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA). The competent authority for this process is the North-West Department of Mineral Resources and Energy (DMRE). (A Full S&EIA process is illustrated in Figure 3)
- A Water Use Licence Application (WULA) in terms of the National Water Act (Act 36 of 1998) (NWA). The competent authority for this process is the North-West Department of Water and Sanitation (DWS).

The Water Use Licence Application process is illustrated in Figure 4.

YOUR COMMENT IS IMPORTANT

Your comments and suggestions on any aspect of the proposed project, including the technical and stakeholder engagement processes, will ultimately assist the authorities in their decision-making process. If you wish to receive further notifications and documentation regarding the proposed K4 Shaft PCD and WRD project, kindly complete the attached registration form, and send to Lenaldi Görgens of Alta van Dyk Environmental Consultants.

Lenaldi Görgens

Alta van Dyk Environmental Consultants cc (AVDE)

Email: lenaldi@avde.co.za

Tel: 012 940 9457

Fax: 086 634 3967

Postal address: Postnet Suite # 745, Private Bag X 1007, Lyttelton, 0140

SCOPING AND ENVIRONMENTAL IMPACT ASSESSMENT APPLICATION

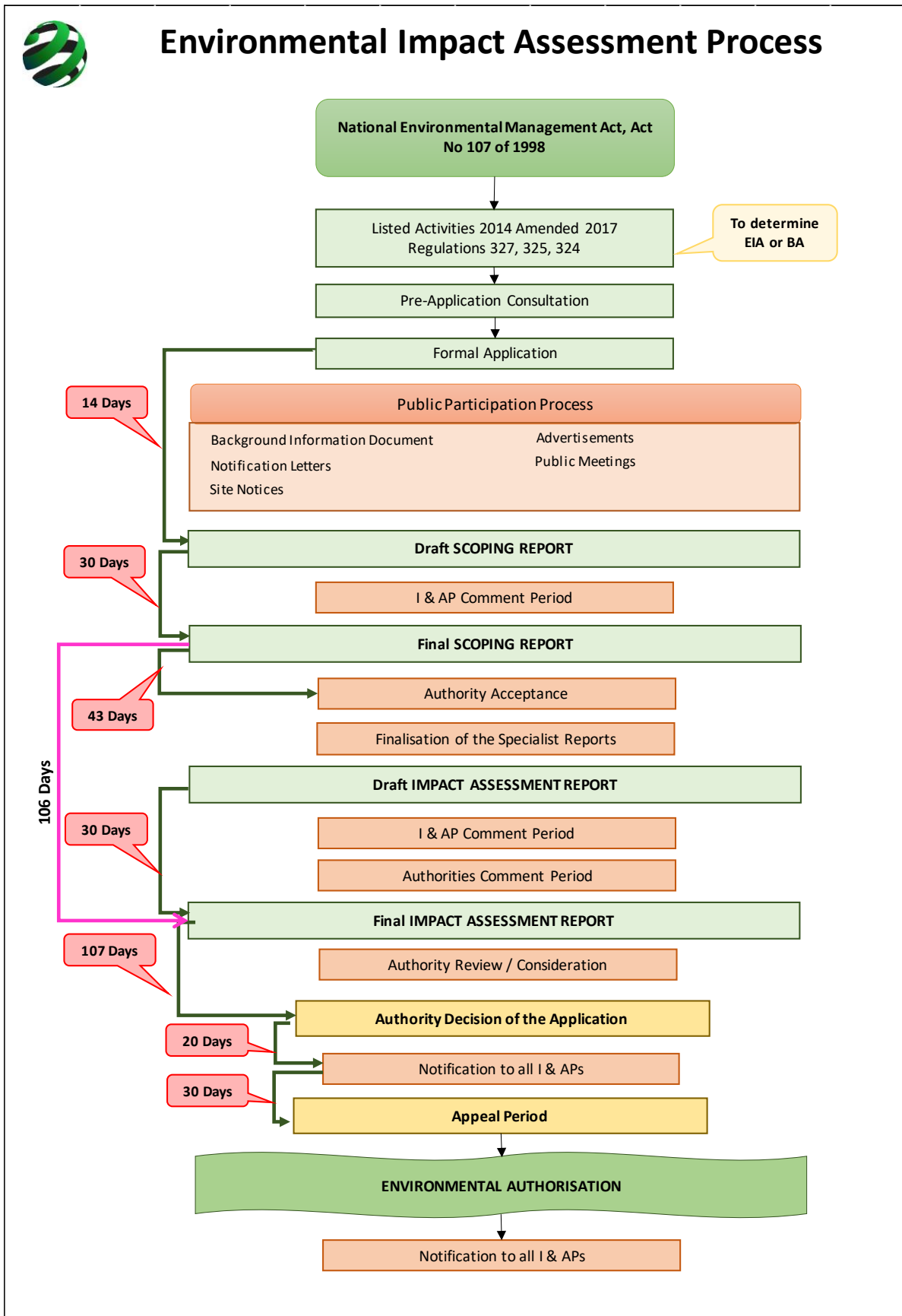


Figure 3: Environmental Impact Assessment Process

WATER USE LICENCE APPLICATION



Water Use Licence / General Authorisation Application Process - e-WULAAS

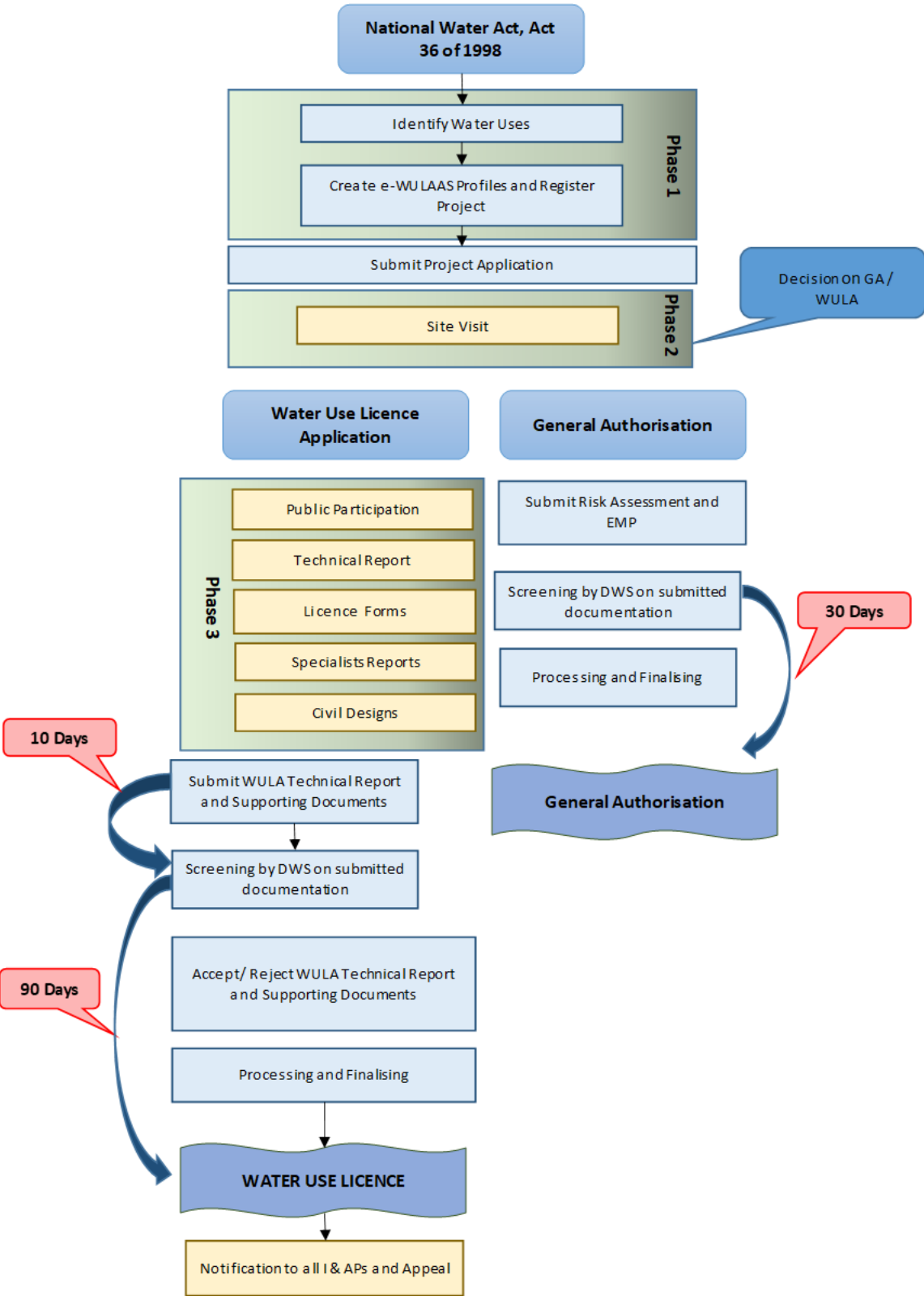


Figure 4: Water Use Licence Application process

REGISTRATION AND COMMENT SHEET
ENVIRONMENTAL AUTHORISATION AND WATER USE LICENCE
APPLICATION FOR THE WESTERN PLATINUM (PTY) LTD - K4 SHAFT
PCD AND WRD GN704 PROJECT, NORTH WEST PROVINCE

Kindly complete this form and return to:
 Lenaldi Görgens at Alta van Dyk Environmental Consultants cc (AVDE)
 Postnet Suite # 745, Private Bag X 1007, Lyttelton, 0140
 Email: lenaldi@avde.co.za
 Tel: 012 940 9457
 Fax: 086 634 3967

YOUR CONTACT DETAILS

In terms of Section 11 of the Protection of Personal Information Act (POPIA), all personal information collected will be processed lawfully and explicitly for the Environmental Authorisation and Water Use Licence Application Processes.

Title		First name	
Initials		Surname	
Organisation			
Postal address			
			Postal code
Landline			Cell
Fax			email

COMMENTS (use a separate sheet if you wish to)
