



REPUBLIC OF BOTSWANA

**PERFORMANCE AUDIT  
REPORT No.3 of 2012**

## PERFORMANCE AUDIT REPORT ON MANAGEMENT OF SAND AND GRAVEL MINING OPERATIONS BY THE DEPARTMENT OF MINES



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REPUBLIC OF BOTSWANA

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Honourable O.K. Matambo

13 January 2014

Minister Finance and Development Planning

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Gaborone

Dear Sir

I have undertaken a performance audit on the Management of Sand and Gravel Mining Operations by the Department of Mines pursuant to Section 7 (2) of the Public Audit Act, 2012.

The objective of performance audit is to strengthen accountability process through provision of an objective and independent feedback to the stakeholders on the performance of public sector entities. The aim of this audit is to assist management in streamlining their work by identifying operational and managerial gaps and suggest the steps if taken may improve efficiency and effectiveness of delivery of services by respective organisations.

Accordingly, I submit the Performance Audit Report No.3 of 2012 on Management of the Sand and Gravel Mining Operations by the Department of Mines, to be laid before the National Assembly in accordance with Section 20(1) of the Public Audit Act 2012.

Yours Faithfully

R.B. Sebopeng

## **AUDITING FOR BOTSWANA GOVERNMENT**

The Office of the Auditor General is established in terms of Section 124 of the Constitution and is headed by the Auditor General whose duties are spelt out in the Public Audit Act, 2012. The Auditor General is mandated to undertake performance audit in the public sector with the aim of promoting good governance and accountability. The audit reports are submitted to the Minister of Finance and Development Planning to be laid before the National Assembly, in accordance with Section 20 of the Public Audit Act 2012

The Auditor General's reports are available from the Government's Department of Printing and publishing Services Bookshop.

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## **ABBREVIATIONS**

**CE**- Chief Engineer

**DEA**-Department of Environmental Affairs

**DGS**-Department of Geological surveys

**DoM**- Department of Mines

**EIA**- Environmental Impact Assessment

**EMP**- Environmental Management Plan

**MMA**- Mines and Minerals Act

**MMEWR**- Ministry of Minerals, Energy and Water Resources

**PE**- Principal Engineer

**PEIA**- Pre-Environmental Impact Assessment

**TO**- Technical Officer

## **EXECUTIVE SUMMARY**

In Botswana, river sand mining has manifested itself in rivers around cities and major towns, which include among others, Metsimotlhabe, Mosope and Mahatelo Rivers in the Southern part of the country, while in the Northern part, it occurs around Maun (Thamalakane River tributaries), Motloutse and Shashe Rivers. Gravel has also been extracted in most parts of the country. As such, as river sand resource is limited in the country being controlled by topography and rain, Department of Mines(DOM)is unable to assist all companies and individuals in getting mining licences and mineral permits for it due to this resource constraint. This situation has led the individuals and companies to illegal sand mining which has caused serious damage, in some cases irreparable damage to the environment.

It is on this background that the Office of the Auditor General carried out a performance audit on Management of Sand and Gravel Mining Operations by the Department of Mines to determine mechanisms it employed to curb detrimental mining methods and ensure that sand and gravel mining operations were appropriately managed for sustainable use of the resources. The audit covered financial years 2009/2010 to 2011/2012. The significant observations included; Legislation and Regulatory framework, Demarcation of Lease/Concession areas, Rehabilitation of affected areas, Stakeholders Collaboration, Public Awareness and Monitoring, Illegal Sand and Gravel Mining Strategies and Departmental Capacity.

## **Summary of Key Findings and Recommendations**

### **1. LEGISLATION AND REGULATORY FRAMEWORK**

Sand and gravel mining is mentioned, in three (3) prime legislative frameworks, namely; Mines and Minerals Act (1999), Environmental Impact Assessment Act (2005) as amended in 2011 and Mines, Quarries, Works and Machinery (Cap 44:02) 1978. However, the aforementioned legal frameworks were limited in that illegal sand and gravel mining had not been specifically and holistically addressed therein.

### **Recommendation**

- ❖ The DoM should initiate and liaise with stakeholders to streamline the Acts for effective regulation of sand and gravel mining operations.

### **2. DEMARCATION OF LEASE/CONCESSION AREAS**

Section 54 of Mines and Minerals Act (1999) requires that “the holder of the minerals permit shall, within three (3) months of the issue thereof, demarcate the area covered by such permit in such a manner as may be prescribed”. However, concession areas had not always been demarcated as per the requirement and where they were demarcated they were not always according to the set standards.

### **3. REHABILITATION OF AFFECTED AREAS**

Section 65 (3) of the Mines and Mineral Act requires that, “the holder of a mineral concession shall ensure that his concession area is rehabilitated from time to time and ultimately reclaimed in so far as is practicable and in a manner acceptable to the Director of Mines”. Nevertheless, some applicants had not honoured their obligations in that some leased areas were left unrehabilitated at the closure of the operations.

## **Recommendation**

The DoM should;

- ❖ Rigorously enforce the requirements of the Act for effective regulation and management of the sand and gravel mining industry.
- ❖ Ensure that burrow pits are rehabilitated to make them safe and deter further land degradation practices, thus enforcing Section 65(6) of the Mines and Minerals Act 17 of 1999.

## **4. STAKEHOLDER COLLABORATION, PUBLIC AWARENESS AND MONITORING**

The Joint Action Plans had not been developed during years under review, to enhance collective responsibilities and potential benefits that could be realised to prevent illegal and indiscriminate sand and gravel mining operations. Furthermore, the Technical Committee which was formed in 2010 to coordinate and enhance collaborative efforts to combat illegal mining operations was inactive since its establishment. This might have exacerbated vigorous illegal mining operations that might have been curbed had the Committee met to develop sustainable sand mining methods and strategies or rigorously implemented the identified ones.

## **Recommendation**

The DoM with Stakeholders should develop framework with explicit and defined roles and levels of authority to facilitate the processes with a view to curbing sand and gravel unsustainable and detrimental methods of mining.

## **Public Awareness**

Environmental Management Education was limited amongst both the community and miners as the former had little regard for monitoring the

resource while some of the miners were inconsiderate in the sense that they used indiscriminate and detrimental sand harvesting methods.

### **Recommendation**

The DoM Management should intensify public awareness on sand mining and its implications and augment all the initiatives that are already in place for better management of mining operations.

### **5. ILLEGAL SAND AND GRAVEL MINING STRATEGIES**

The impact of the strategies employed to curb illegal river sand mining had never been assessed, to assure stakeholders that the desired outcome had been achieved as a result.

### **6. DEPARTMENTAL CAPACITY**

The DoM had not been effective in carrying out its core responsibilities of monitoring mining operations, enforcing relevant laws, regulations and guidelines and analysing environmental related data, due to staff and transport constraints. This hamstrung their service delivery efforts and exacerbated illegal mining of sand which had caused serious damage and in some cases irreparable impacts to the environment.

### **Management Overall Comment**

***“We have considered the report and are of the view that most of the issues raised are being addressed through the inter-Ministerial forum composed of Ministries of Minerals, Energy and Water Resources; Lands and Housing; Defence, Justice and Security; Environment, Wildlife and Tourism; Trade and Industry; Transport and Communications; Local Government; Infrastructure, Science and Technology. The Committee has since agreed on measures to address the problem of illegal mining and approached Cabinet for approval as some of the***

*action items will have implication to the economy, we await the Cabinet Directive. We are of the view that in as much as the Department of Mines is mandated to issue Mineral Concessions, collective efforts by stakeholders including the consumers of the commodity is necessary to address the problem, hence the involvement of other Ministries and to change the approach to that of addressing broader sustainability issues of the construction industry taking into consideration the already depleted sand resources within Gaborone area”.*

## **OVERALL CONCLUSION**

Notwithstanding the above adverse comments, the OAG acknowledges and appreciates all the efforts employed by the Department of Mines in mitigating the effects of illegal and detrimental methods of harvesting sand and gravel.

# CHAPTER 1

## 1.0 INTRODUCTION

### 1.1 BACKGROUND

Sand and gravel mining has today become an environmental issue due to rapid growth in the construction industry in most countries. For thousands years sand and gravel have been used for construction of roads, dams and buildings. Today the demand for sand and gravel continues to increase at a geometric dimension due to rapid economic development and subsequent growth of construction activities. Due to this rapid industrialisation, urbanisation and associated developments, the rivers are widely exploited for river bed material which has consequently exerted much pressure on sand resources. In addition, gravel is also extracted for construction purposes. This issue has therefore, emerged in most discussions on environmental issues across the globe as this activity has far reaching impacts on the natural environment.

In recognising the importance of the biodiversity, Botswana became a signatory to and ratified the United Nations Convention on Biological Diversity in 1997. The Convention translates its guiding objectives of conservation, sustainable use and equitable benefits sharing into binding commitments in provisions of its articles. In this context, sand is being conserved, monitored; and measures are put in place to mitigate any negative impacts and promote traditional conservation practices.

In Botswana, too, the need for sand and gravel has been rising drastically during the past few years to meet its ever-increasing demand for construction sector. This has threatened the existence of river ecosystems and entire biodiversity. In addition, sand and gravel harvesting has some severe environmental and socioeconomic effects. The most notable environmental effects of sand and gravel mining in Botswana include irreparable damage to the riverbanks and

river course by machines used for mining, dropping of the water level (drying of aquifers), destruction of wells, and water pollution due to engine oils, loss of riparian habitats resulting in loss of animal and plants species. Socioeconomically, sand and gravel harvesting is a source of livelihood through the provision of income and employment opportunities.

## **1.2 THE DEPARTMENT OF MINES**

In order to respond to the above mentioned negative effects, the Department of Mines (DoM) under the Ministry of Minerals, Energy and Water Resources (MMEWR) was established to provide reliable, effective and efficient administrative services, policies, programmes and legislation for mineral exploitation, prevent mining occupational diseases, injuries and minimise degradation of the environment. The Department also issues mining licenses, monitors the mining operations, collects royalties from mining companies and ensures that proper pollution prevention measures are in place and safety in the work place is always maintained. The Department operates in two (2) Regions throughout the country, namely; Gaborone (Headquarters) and Francistown office.

### **1.2.1 Organisational Set Up**

The DoM is headed by a Director who reports directly to the Permanent Secretary (PS), while the PS reports to the Minister in the Ministry of Minerals, Energy and Water Resources and the Permanent Secretary to the President (PSP. The Director is assisted by two (2) Deputy Directors, one heading the Inspectorate Division while the other heads the Operations & Development Division. (**Refer to Annexure 1**, for Organisational structure). The two (2) Divisions are outlined and further discussed overleaf;

### **1.2.2 Operations and Development Division**

The Operations and Development Division achieves its functions through 4 Sections namely; Finance, Base and Precious Metals, Industrial Minerals, and Metallurgy. The Division among others is responsible for issuing mineral permits, mining and retention licences and collecting lease rentals, blasting licences, diamond cutting licences and Kimberly Process Certification fees. It also conducts inspections and audits mine production and is also responsible for collecting and monitoring royalties, production returns and fines dividends. The Division also monitors illegal mining activities through inspections and audits.

### **1.2.3 The Inspectorate Division**

The Inspectorate Division operates through 5 sections namely; mining, explosives, environment, survey and draughting, and machinery. The Division is responsible for ensuring a safe and healthy working environment. It thus, approves both personal protective equipment and credentials and experience of the mine managers. It also monitors explosives activities in the country by administering "Explosives Regulation, CAP 24:02." Additionally, the Division makes regular inspections to mining operations to ensure compliance with safety and health standards (e.g. mining support & proper ventilation) and also reviews Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP). Moreover, the Inspectorate Division monitors mining operations and analyses environmental related data and ensures that rehabilitation is done accordingly.

## **1.2.4 Vision, Mission and Values**

### **Mission**

“The Department of Mines provides efficient administration services for mineral exploitation in partnership with stakeholders”.

### **Vision**

“The Department of Mines will be a global leader in the provision of services in the mineral sector for national prosperity”.

### **Values**

The following is the Department's values;

- People Motivation
- Results oriented
- Creativity
- Partnership with Stakeholders
- Public and Occupational Health and Safety
- Stewardship of the environment

## **1.3 STAFFING**

The Department of Mines had a staff compliment of 69, at the time of audit in August 2012, that is, both Industrial Class and Permanent and Pensionable Employees(as per the DoM Establishment Register and Staffing list of March, 2012).

## **1.4 FINANCES**

The DoM's funds are provided by the National Assembly appropriation. Therefore, the actual appropriation and expenditure for the three financial years (2009/10 -2011/12), covered by the audit are indicated in Table 1 overleaf;

**Table 1: Budget allocation for the Department of Mines (2009/10-2011/12)**

| <b>Financial Year</b> | <b>Warranted provision<br/>(BW Pula)</b> | <b>Actual Expenditure<br/>(BW Pula)</b> | <b>Variance<br/>(BW Pula)</b> |
|-----------------------|--|---|-------------------------------|
| <b>2009/10</b>        | 9,403,440                                | 8,862,871                               | 518,790                       |
| <b>2010/11</b>        | 11,785,520                               | 11,019,770                              | 691,542                       |
| <b>2011/12</b>        | 13,020,720                               | 9,877,677                               | 2,983,187                     |

**\*\*Source: Extracted from the Annual Statements of Accounts (Ministry of Minerals, Energy and Water Resources)**

## **1.5 STAKEHOLDERS**

The DoM cooperates and collaborates with the following stakeholders in managing sand and mining operations;

- Department of Geological Surveys
- Department of Environmental Affairs
- Department of National Museum, Art Gallery and Monuments
- Botswana Police Services
- Department of Wildlife and National Parks
- Traditional leadership (Dikgosi)
- Land Boards
- Local Community.

## **1.6 MOTIVATION**

Environmental and socioeconomic effects of sand and gravel mining in some parts of the country had raised concern and spurred affected people to call for actions to be taken so that rivers and the entire ecosystem are fully protected. "Sand and gravel mining has been among the most actively discussed topics through various Media Reports such as Local Television, Radio Stations and News

Papers. For instance, the Botswana Daily News dated 25<sup>th</sup> February 2010 and the Botswana Gazette Newspaper dated 23<sup>rd</sup> January 2011 reported concerns by residents of Kumakwane and Thamaga villages (in Kweneng District) over the issue of illegal and unsustainable sand mining activities. According to document review, in some instances illegal sand and gravel mining activities had resulted in some fatalities as were the cases in Malolwane (in Kgatleng District) where two (2) sand miners lost their lives<sup>1</sup>, and burrow pits claimed five (5) lives in the Shakawe Area in 2009<sup>2</sup>; and in 2007, a 17 year old boy drowned in a burrow pit left by illegal miners at the Ditlhakeng farmlands<sup>3</sup>.

This therefore, motivated the Office of the Auditor General to undertake a performance audit to determine whether the Department had effective mechanisms in place to ensure sustainable use of sand and gravel resources. The OAG conducted a preliminary study on management of sand and gravel mining and the results of the study included among others; a limited legal framework, inadequate collaboration between the DoM and key stakeholders which could address issues of sand mining, and non-payment of royalties due to the Government for harvesting of sand and gravel. Moreover, cases of illegal sand mining were observed along the rivers such as Metsimotlhabe, Mosope and Mahatelo which were visited at the time of the preliminary study.

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<sup>1</sup>Internal communiqué (Ministry of Minerals, Energy & Water Resources) Vol. 2 Issue 6 (6<sup>th</sup> September 2010)

<sup>2</sup> DEA/BoD/7/9I IV (164)

<sup>3</sup> Khonani Ontebetse- Sunday Standard 23 January 2011 17.44

## **CHAPTER 2**

### **2.0 AUDIT DESIGN**

#### **2.1 AUDIT STANDARDS**

The audit was conducted in accordance with International Organisation of Supreme Audit Institutions Working Group on Environmental Auditing (INTOSAI/WGEA) Guidelines for Auditing Mining, 2010 and the Office of the Auditor General Performance Audit Manual.

#### **2.2 AUDIT OBJECTIVES**

The overall objective of the audit was to determine mechanisms employed by the DoM to ensure that sand and gravel mining operations were appropriately managed for sustainable use of the resources.

The specific objectives of the audit were;

- To assess the effectiveness of mitigation measures in place to protect the environment from degradation.
- To assess how environmental issues were addressed to mitigate negative impacts and enhance the positive ones
- To determine whether the DoM had capacity to manage sand and gravel operations.

#### **2.3 SCOPE OF THE AUDIT**

The audit was conducted at the Department of Mines focusing on processes, operations, procedures and systems that the Department employed to ensure that small-scale (sand and gravel) mining operations were managed according to the MMA No. 17 of 1999 and the related Regulations and Guidelines to avoid detrimental mining methods and ensure sustainable use of the resources. The

audit covered financial years 2009/10 to 2011/2012. The Southern part (Moshupa, Thamaga, and Metsimotlhabe) of the country was covered during the preliminary study level while the Northern part (Francistown, Maun) was covered during the main audit.

## **2.4 METHODS OF DATA COLLECTION**

Data for the audit was collected through a combination of EIA Act of 2005, interviews, document reviews to determine how sand and gravel mining operations were managed. Additionally, some areas were visited to determine whether burrow pits were rehabilitated and that concession areas were demarcated and the extent of illegal mining on the ground.

### **2.4.1 Document Review**

During the audit, the following documents were reviewed in order to establish how sand and gravel mining activities were managed.

- Mines and Minerals Act (1999)
- Mines, Quarries, Works and Machinery Act and Regulations (1978)
- DoM Establishment Register (2012)
- DoM Financial Statements of Accounts(2008/09-2010/11)
- Environmental Impact Assessment Act(2005)
- Pre-Environmental Impact Assessment (PEIA) Guideline
- Monuments and Relics Act(2001)
- Mineral permits/license holders' files(2008/09-2010/11)
- Department of Mines Annual Report (2009)

### **2.4.2. Interviews**

A total of 32Interviewsincluding eight (8) at the DoM were conducted to get an insight of the operations of the Department as well as roles played by different

stakeholders with regards to sand and gravel mining. (A list of interviewees is depicted at **Annexure 2**).

### **2.4.3 Observations/ field visits**

Field visits were made to the following rivers and burrow pits where sand and gravel were harvested to observe the actual mining operations, harvesting methods used and how the environment thereof was affected.

- Metsimotlhabe River (18/04/12)
- Mahatelo River (18/04/12)
- Mosope River (18/04/12)
- Kopong Burrow Pit (18/04/12)
- Ramokgwebana River (03/08/12)
- Shashe River (06/08/12)
- Tlhalogang River (06/08/12)
- Statunga River(14/08/12)
- Tale Pans Quarry(15/08/12)
- Bothatogo Burrow Pit(15/08/12)
- Toteng Burrow Pits (15/08/12)
- Matsiloje (05.08.12)

## **CHAPTER 3**

### **3.0 DESCRIPTION OF THE AUDIT AREA**

#### **3.1 SAND AND GRAVEL MINING**

Sand mining is an inland activity referring to the actual process of removal of sand from rivers, streams and lakes. In recent years, sand has become a very important mineral for our society due to its different uses among others, making concrete, filling roads and brick making. Individuals and private companies are increasingly demanding sand for construction purposes and this has placed immense pressure on sand resources. In Botswana, river sand mining has manifested itself in rivers around cities and major towns, which include among others, Metsimothabe, Mosope and Mahatelo Rivers in the Southern part of the country, while in the Northern part, it occurs around Maun (Thamalakane River tributaries), Motloutse and Shashe Rivers. Gravel has also been extracted in most parts of the country which has left a considerable number of burrow pits unrehabilitated.

##### **3.1.1 Effects of unsustainable and uncontrolled sand and gravel mining**

The unsustainable and uncontrolled sand and gravel mining operations include inter alia the following;

- Irreparable damage to the river system leading to the degradation of the channel and thus affecting all living things, plants, mammals and the communities living close to the rivers and areas where the resources are mined.
- Sand mining also poses a threat to water security in several ways; for instance, lowering of the water table which, in turn, directly affects groundwater storage capacity as pollution of the water by oils from machinery used to excavate the sand.

- The result of sand mining can also be a loss in habitat including destruction and fragmentation of fragile, endangered ecosystems and may as well reduce species richness.
- Increased erosion rates, especially when mined through unsustainable harvesting methods, (for instance, using heavy duty machinery).
- Extraction of river sand thus, exposing rocks and extending several metres along the river results in the level of sand dropping in the area as a result, water levels have dropped(experienced by Borolong and Shashe Mooke plot owners).
- Damage to the river beds, embankments and water tables (Ntshe River)
- Permanent damage to the area thus endangering lives of people around the area (e.g. Shashe River has been completely damaged due to extraction of sand from the river banks, (Shashe River, Borolong and Shashe Mooke).
- Channels that result from sand extraction diverts all sorts of waste water into the rivers
- Sand Mining Companies along the rivers have no regard to the environment with wholesale destruction of the river banks for pit sand and the extraction of sand to depths of 3 metres exposing rocks.
- Possibility of surface and ground water contamination from oil leakages.

## CHAPTER 4

### 4.0 PROCESS DESCRIPTION

For sustainability, harvesting of natural resources, such as sand and gravel need to be guided and regulated and it is for this reason, that the DoM follows the following processes.

#### 4.1 APPLICATION FOR MINERAL PERMIT FOR SAND/ GRAVEL EXTRACTION

Subject to the provisions of Section 52 of the Mines and Minerals Act No. 17 of 1999, “a person wishing to conduct small scale mining operations may apply for Minerals Permit to conduct such operations. To conduct small scale mining operation an area should not exceed 0.5km<sup>2</sup> per permit, with production of raw ore not exceeding 50 000 tonnes per annum and overall investment in fixed assets not exceeding P1 million”. On this notion, any person wishing to obtain a Minerals Permit “shall apply to the Minister of Minerals, Energy and Water Resources by completing and submitting Form VII of the First Schedule” (**Refer to Annexure 3**)

##### 4.1.1 Completion of Form VII of the First Schedule

For a Mineral Permit, the applicant fills in Form VII and submits to DoM. In order for the application to be considered complete, the applicant has to satisfy the following requirements; a letter of surface rights which includes surveyed coordinates, sketch plan and proposed area from the Land Authority or owner of a privately held land. An Archaeological Clearance Certificate from the Department of National Museum, Monuments and Art Gallery together with a clearance letter from the Department of Wildlife and National Parks (if the area is situated in a game reserve or national park) are attached to Form VII. In addition, according to the DGS “prospecting licence and waiver application requirements” a prospecting licence or waiver is issued by the Department of Geological Surveys and a letter of an approved Environmental Impact

Assessment Report from the Department of Environmental Affairs (DEA) are also prerequisites to application for a mineral permit or mining licence. If the proposed area is within a prospecting, retention or mining licence a letter of consent of the holder is submitted.

#### **4.1.2 Assessment and Evaluation of the Application**

After receiving the application, it is assessed and the Technical Officer (TO) at the DoM checks to ensure that all the requirements have been met. A checklist attached at **Annexure 4** is filled to ascertain the completeness of the items/documents submitted. If all the necessary items have been submitted, the Principal Engineer (PE)/ Chief Engineer (CE) accepts the application and passes it on to TOs for evaluation regarding technical, financial, economic and environmental impact analysis of the project. If any deficiencies are noted, the applicant is informed to rectify such and if the application is complete, it is accepted and PE/CE/TO makes recommendations to the Minister for approval or rejection.

#### **4.1.3 Approval/Rejection of the Application by the Minister**

Upon receipt of the application from the DoM by the Minister, the latter rejects or grants approval of the application. In the event the Minister rejects the application, he/she informs the applicant, but if he/she approves it, the approved licence/permit is returned to DoM who in turn informs the applicant accordingly. In case of approval, the lease holder pays an annual lease fee and collects the Minerals Permit. Upon granting of the permit, the applicant is ready to start mining the aggregate (gravel/ sand) applied for.

## **4.2 MINING / HARVESTING PROCESS**

Section 54 of the MMA No.17 of 1999 requires that within three (3) months of issue thereof, the holder of the Mineral Permit “shall demarcate the area covered by such permit” (refer to **Annexure 5** for the Guidelines to be used for demarcation of small mines lease).The holder of a mineral concession then mines the aggregates according to the mining specifications/ regulations and mining methods as approved by the DoM.

## **4.3 RECLAMATION/ REHABILITATION**

The objective of reclamation/ rehabilitation is to restore the site to an acceptable and satisfactory condition by eliminating unacceptable health hazards and ensuring public safety, removing any contaminated soils, preparing the site to be amenable to support vegetation, restoring the site to a condition that is visually accepted to the community, reclaiming the areas impacted for future use. The holder of a mineral concession therefore, prepares a Reclamation Plan for reclamation of the affected land as required and approved by the Department of Mines. The holder of a mineral concession then ensures that his/her “concession area is rehabilitated from time to time (where possible be carried out concurrently with extraction) and ultimately reclaimed in as far as is practicable in a manner acceptable to the Director of Mines” as per Section 65 of MMA Act. On the lapse of the concession, the mineral concession holder shall fill up, fence, or secure to the satisfaction of the Engineer, all shafts, pits and excavations in such a manner as to prevent persons or stock inadvertently entering them.”According to Regulation 215 of the Mines, Quarries, Works and Machinery Act, the DoM also conducts the rehabilitation inspection to ensure that the affected area has been rehabilitated according to the “Rehabilitation Guidelines for Sand and Gravel Mineral Concession Operators”. The Inspector then records the comments on the Rehabilitation Inspection Checklist (**Refer to Annexure 6** for details).If the area has been

satisfactorily rehabilitated, the DoM awards a Clearance Certificate to the holder of a concession and if not, the holder of a concession is asked to redo the rehabilitation work. Upon completion of mining operations or when the validity period of the Mining Licence/ Permit expires, the holder of mineral concession stops the operations and the concessionaire rehabilitates the affected area or apply for renewal (through application form V(b) )before the expiry of such licence. The Department “shall approve a reclamation (as submitted or modified) only where it finds that it adequately provides for those actions necessary to achieve the purposes and requirements of Section 65 of the MMA No. 17 of 1999 and Regulation 215 of the Mines, Quarries, Works and Machinery Act; and that in addition, the plan meets the following minimum standards;

#### **4.3.1 Burrow Pits Specification**

The DoM Reclamation/Rehabilitation Guidelines, “the final slopes in all excavations in soil, gravel, sand and other unconsolidated material shall be at such an angle as to minimize the possibility of slides and be consistent with the future use of the land. The land shall be cleared of rubbish, surplus materials, temporary structures and equipment, and all parts of the land shall be left in a condition as close as possible to that prior to use. Pits shall be backfilled with clean or inert fill. There shall be no material of deleterious nature (i.e. any material that would be classified as hazardous or waste). “Building rubble may only be used with the approval of the Department of Sanitation and Waste Management”, although the DoM does not allow filling with alien material. Additionally, topsoil stripped from the surface shall be used for final cover to re-contoured slopes where practicable. Non usable material including overburden, screenings and rocks, should be placed in the pit bottom and covered with the previously stripped topsoil. Once the site is reclaimed any fences where they exist shall be removed to permit regeneration. Access and haul roads to the pit

must be restored in a mutually agreeable manner where these are considered unnecessary after extraction has been completed”.

#### **4.3.2 River Sand Specification**

According to the DoM Reclamation Guidelines specification for river sand requires that at the cessation of mining operations, the “Miner shall leave the area from which the sand had been extracted leveled and free of any debris or material. The surface of stockpile and sand processing areas outside the river bed is to be scarified to a depth of 500mm, graded evenly and the topsoil previously restored, returned to its original depth over the area. Sand traps (1m height gabions) at 200mm interval are to be prepared and function as sand traps. Boulders dug out during mining should be used for this purpose. The miner shall close and restore river bank where access ramps have been restored, and ensure that the river channel is not obstructed and that repaired bank is adequately fortified.”

#### **4.4 COLLABORATION WITH STAKEHOLDERS**

According to best practice, there is need for effective collaboration between all stakeholders in sand and gravel mining operations in order to realise shared objectives. Effective collaboration enhances effective monitoring of the sand and gravel resources since each stakeholder has a specific role to play but working collectively to achieve a common goal. In order to achieve their shared mandates, the Department of Mines collaborates with different Stakeholders including inter-alia, the Department of Environmental Affairs, the Land Boards, law enforcement agencies, Dikgosi and Communities residing adjacent to areas where mining is done. Through collaboration with these different stakeholders, the DoM ensures compliance to the legal framework and better management of the environment in which mining is done. The DoM collaborates with stakeholders in two different ways namely; monitoring of the

sand and gravel mining operations and collaboratively conducts public awareness and develops programmes to sensitise the public on best practices, and illegal mining of sand and gravel and their effect on the environment.

#### **4.4.1 Monitoring of Mining Operations**

The DoM monitors mining operations and other related mining activities to ensure that Concession Holders conduct the operations according to the environmental obligations as prescribed in the Mines and Minerals Permit (MMA) or approved Guidelines and any other conditions outlined during issuance of a mineral permit. The “DoM’s authorised Officers” visit sites and report on mining operations thereof. The DoM monitors mining activities through inspections, routine check-ups and spot checks around the urban areas and joint operations with other stakeholders, such as Police Officers and DEA to ensure that sand and gravel resource is only extracted from permitted areas. In their monitoring effort, the DoM and Stakeholders prepare the Joint Action Plan and ensure it is implemented. Meetings are held on monthly basis to draw up monitoring and education programmes; and Progress Reports are issued. The DoM also monitors and inspects the Companies that have been issued Mining Licences and Mineral Permits to look at their production records whereby they check among others; the weigh bill records and measure the voids and prices for sale. (measuring of voids in rivers is unattainable, however, voids are measured in gravel burrow pits). In other instances, the Department is informed by the public residing adjacent to rivers or concerned groups e.g. Francistown Sand Miners Association (Legal Sand Mining Licences).<sup>4</sup>

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<sup>4</sup>[http://: www.dailynews.gov.bw/igv-bin/news.cgi?d=20/000225](http://www.dailynews.gov.bw/igv-bin/news.cgi?d=20/000225)

#### **4.4.2 Public Awareness Programmes**

The DoM develops educational programmes to sensitise the public on the dangers of illegal mining of sand and the associated environmental effects. The Department makes use of the Media (Both the Television and Radio) where the DoM is interviewed for the benefit of the public at large, public gathering at Dikgotla and Land Boards, school programmes, sign and bill boards which are erected in and around sensitive areas countrywide by the rivers , next to bridges and along the cordon fences gates displaying the legalities of illegal sand and gravel mining and brochures to spread the messages on both importance and negative effects of sand and gravel mining on the environment.

#### **4.5 PAYMENT OF ROYALTIES**

Section 66 (1) stipulates that "the holder of a mineral concession shall be liable to pay royalties to the Government on any mineral obtained by him in the course of the exercise of his rights there under at the rates and in a manner prescribed under this section. The royalty payable shall be 3% of the gross market value and payable on monthly basis". In this connection, on a monthly basis, the lease holder submits the computed production returns to the DoM Finance Officer, who in turn checks the computation and processes the payment accordingly.

## CHAPTER 5

### 5.0 AUDIT FINDINGS

#### 5.1 LEGISLATION AND REGULATORY FRAMEWORK

Sand and gravel mining is mentioned, in three (3) prime legislative frameworks, namely; Mines and Minerals Act (1999), Environmental Impact Assessment Act (2005) as amended in 2011 and Mines, Quarries, Works and Machinery (Cap 44:02) 1978. These legislative frameworks provide regulatory controls and measures to manage sand and gravel mining operations.

However, the aforementioned legislative frameworks were limited as they had not holistically addressed the sand and gravel mining issues. This was corroborated by documents review which revealed that, "the Department of Mines reviewed the Mines and Minerals Act in the light of illegal sand mining in the country vis-à-vis the weakness of the legislation framework."<sup>5</sup> Additionally, according to documents reviewed," the present form of the Act is not good enough with regard to illegal mining and rehabilitation;" as the "Definition of illegal mining was said to be missing from the Mines and Minerals Act; and "it was found necessary to add the definition of the illegal mining area in the Mines and Minerals Act"<sup>6</sup>. Furthermore, "some institutions had overlapping mandates in respect to some components of the management of river and pit sand as a resource. For instance, the Department of Mines (DoM) issued mining licences; the Land Boards (LBs) issued surface rights, whilst the Department of Environmental Affairs assessed Environmental Impact Assessments Reports for

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<sup>5</sup>Harvesting of River Sand in Moshupa Area: Vice President's Kgotla Meeting undated.

<sup>6</sup> Minutes of the Sub-group Task Force Meeting on Regulation and Institutional Review on Sand and Pit sand Mining dated 3 December 2008.

proposed river sand extraction activities."<sup>7</sup>These Acts were independent of each other. For instance, the Mines and Minerals Act 1999, the Tribal Land Act 1968 and the Environmental Impact Assessment Act 2005 as amended (2011) were not streamlined to comprehensively address the sand and gravel mining operations and institutional arrangement; and simplify licensing processes.

Furthermore, the Mines and Minerals Act (1999) had inadequate provisions in that it did not give some Stakeholders including inter alia; Mines Temporary Employees, Inspectors, Communities (where illegal sand and gravel mining was rampant), Members of Land Boards and Sand Miners Associations (concerned legal miners), legal powers under its provisions to enforce the requirement therein, and confiscate machinery used in the illegal operations. The issue of engaging Temporary Assistants had some limitation as corroborated by documents review where the DoM vide their MD 34 a (iii) I (34) of 15 May 2009 indicated that, "the temporary assistants have further limitations in that they cannot exercise any legal powers under the provisions of the various mining Acts so they are mainly used in the processing of applications for mining rights for sand and gravel assisting the permanent staff."

According to documents review and interviews, illegal and indiscriminate sand and gravel mining might have been caused by the fact that;

- When the MMA 1999 was promulgated the issues of illegal sand and gravel had not been considered and addressed because at the time they were not as rampant as they are today. This therefore, led to serious environmental damages.
- There was insignificant punitive measures as Section 82 of MMA 1999 had set a meager P200 as penalty for illegal sand and gravel mining.

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<sup>7</sup>SEWT 1/9/51 (117) dated 31 July 2008

- Some companies claiming that they did not understand environmental legislation in the country.<sup>8</sup>
- There were no penalties imposed or provisions that gave DoM powers to impound trucks that were used to haul illegally extracted sand or gravel.
- Lack of awareness of the Mines and Minerals Act by some stakeholders, for example in the Okavango Area.<sup>9</sup>

In view of the above, the OAG considers that weakness of the legislative framework might have exacerbated unsustainable harvesting and detrimental methods of sand and gravel resources, thus having no regard to environment with wholesale destruction of the river banks for river sand. This was corroborated by concerns expressed by the Francistown Legal Sand Miners Licensees, vide their unreferenced letter to the DoM dated 15 August 2011, in which they stated that “The illegal extractions do not comply with the Act and the actual mining of sand is done incorrectly, this will damage the river bed embankments and water levels. This happens in rivers that are not allowed to be mined, for example, the Ntshe River. According to the letter, this will also lead to them not paying royalties.”

In addition, if the legislative framework is limited, there is possibility that the primary role of ensuring sustainable sand and gravel resources for use by future generations may not be achieved. Moreover, absence of a specific framework and effective management of river and pit sand mining may pose serious threat to regulating river and pit sand as a resource.

However, the OAG appreciates that at the time of audit in August 2012, the MMA was under review to strengthen its provisions regarding illegal sand and

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<sup>8</sup>DEA/BoD/7/9/I IV (164)-Follow up Report on Illegal Mining in the Okavango Area

<sup>9</sup>MDF.34(a) ii I (56) dated July 2009

gravel mining; including the issue of confiscating machinery used in such operations.

### **Recommendation**

- ❖ The OAG recommends that the Dom should initiate and liaise with stakeholders to streamline and strengthen the legal framework such that enforceable standards are comprehensive for effective regulation of the sand and gravel mining operations, thus producing the desired results in the long run.

### **Management Comment**

- ***“The issue of fines being too low is correct and this has been taken into consideration on the outgoing drafting of the Bill to amend Mines and Minerals Act.***
- ***The issue of streamlining of Acts is noted, however, since each Act was put in place for a purpose, the Ministerial Committee has agreed on a process to be followed which now requires every applicant to acquire a Prospecting Licence first and do all the necessary evaluations and studies for approval after the mineral resources has been qualified.”***

## **5.2 ILLEGAL SAND AND GRAVEL MINING**

Section 52 (1) of the Mines and Minerals Act (1999) requires that a person wishing to conduct small scale mining operations “may apply for a Mineral Permit to conduct such operations for any mineral other than diamonds over an area not exceeding 0.5km<sup>2</sup> per permit”.

Nonetheless, observations made and interviews with culprits at the places visited (Refer to 2.4.3) indicated cases of illegal mining, where some people harvested the aggregates without Mineral Permits. For instance, the OAG observed that for

the 12 places visited (including rivers and burrow pits), the miners had no Mineral Permits. This is illustrated by the Table 2 overleaf:

**Table 2: Illegal Miners observed at different places with/without licences**

| Place                     | Observation Date | No. of Illegal Miners |            | Total |
|---------------------------|------------------|-----------------------|------------|-------|
|                           |                  | Expired licences      | Unlicensed |       |
| Shashe river(Francistown) | 06.08.12         | 1                     |            | 1     |
| Tlhalogang(Francistown)   | 06.08.12         |                       | 1          | 1     |
| Statunga(Maun)            | 14.08.12         |                       | 2          | 2     |
| Tale Pans (Maun)          | 15.08.12         | 1                     |            | 1     |
| Toteng (Maun)             | 15.08.12         |                       | 2          | 2     |
| Bothatogo (Maun)          | 15.08.12         |                       | 2          | 2     |
| Mosope(Moshupa)           | 15.08.12         |                       | 1          | 1     |
| Matsiloje (Francistown)   | 05.08.12         |                       | 2          | 2     |
| <b>TOTAL</b>              |                  | 2                     | 10         | 12    |

**Source: Observations made by auditors and Officers from DoM at the time of audit**

From the above Table it could be deduced that out of the 12 (twelve) places visited at the time of audit, two (2) illegal sand miners, representing 16.7 % of the illegal miners at the places visited were found to be mining with expired licences at Shashe River and Tale Pans while 10 representing 83.5% of the illegal miners at places visited as illustrated in the above Table were mining without licences. However, it should be noted that this Table depicts only those areas for which the culprits were found in operation. There were other illegal burrow pits that were observed but the perpetrators were not found on sites, hence have not been captured in the Table.

Moreover, documents review revealed instances of illegal mining as corroborated by the following;

- DEA vide their Inspection Report of 2009, indicated that eight (8) Companies in the Okavango Area operated with expired mineral permits (expiry dates not indicated in 2009).
- Boro and Boseja Company which applied for Surface Rights in 2008 (exact date not stipulated) had not been issued with any even on the 9<sup>th</sup> February 2009, as such the company was compelled to mine illegally.
- The DoM vide its letter MDF 34(a) iii I (37), dated 2 September 2010, reported instances of illegal mining by Companies which previously had Mining Rights but had expired.
- Three (3) of the four (4) companies in Shashe Mooke whose licences expired in December 2011 and the other whose permit expired on 24 January 2012 operated without valid Mineral Permits even on 10 February 2012.

The contributing factors for the above instances were;

- The lengthy Surface Rights process that is, delays experienced by applicants to be issued with Surface Rights by the Land Boards.
- Reluctance to acquire Mineral Permits thus, avoiding payment of royalties (MDF.34 (a) ii I(56) dated 9 July 2009.
- Some Land Boards giving contractors mining rights to mine sand and gravel without the DoM's consent.<sup>10</sup>
- Some people having Surface Rights but no Mineral Permits.
- North West District Council and Department of Roads (Government) burrow pits that were not fenced, maintained and monitored.
- Mutual consent between the companies in the Okavango area, that is, some Land Boards giving companies Temporary Lease Agreements

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<sup>10</sup>DEA/BoD/7/9/I IV (164)- Follow up Report on Illegal Mining of Sand (Okavango Area)

which allowed them to dig burrow pits and mine river sand, but without even having Environmental Management Plans nor mining rights.<sup>11</sup>

The OAG considers that this may lead to the environment being decimated due to some unscrupulous miners who continue to harvest sand and gravel even after several warnings and promising to rehabilitate such areas but ultimately disappear.

In addition, the DoM had not developed a comprehensive statistics for those that were mined illegally including mining from burrow pits for the Department of Roads and Councils to show the trend of this activity for the years under review country wide, thus, the Department could only avail data on legal areas and did not capture those that were mined illegally. Illegal mining was also corroborated by observations made during audit in which miners were found mining with expired or without licences in some areas, as evidenced by the pictorial presentations below



**Figure1. Mining at Toteng.**



**Figure2. Mining at Tale Pans**

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<sup>11</sup>REF:DEA/BoD/7/9 iv (100)- Evaluation Report



**Figure 3**An active illegal burrow pit in Maun



**Figure 4**Illegal mining along Shashe River

Figures 1-4 above indicate that illegal miners do not follow the laws and standards, thus leading to environmental degradation. Moreover, documents review highlighted that even some Districts Councils indulged in illegal mining of river and pit sand. This was corroborated by letters written by the DoM to those Institutions stating that “If you as one of the Institutions that is supposed to contribute towards control of illegal mining, is engaged in the act of illegal mining itself how will the Department of Mines be able to convince the public for controlling such acts,”<sup>12</sup> thus contravening Section 58 of MMA, 1999.

### **5.3 DEMARCATION OF LEASE/CONCESSION AREAS**

Section 54 of Mines and Minerals Act (1999) requires that “the holder of the minerals permit shall, within three (3) months of the issue thereof, demarcate the area covered by such permit in such a manner as may be prescribed”. Demarcation of concession areas may help in defining boundaries of the concessions as well as to avoid other related conflicts that may result from illegal mining.

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<sup>12</sup>MD 34(a) 111 III(153) 16 January 2009

Despite this legal requirement as well as the line mark to be used for demarcation of small mines(Annexure 5) developed by the DoM, it was observed during the audit that some holders of the mineral permits had not demarcated their concession areas, for example, concession areas around Mosope and Mahatelo. The ones demarcated were not appropriately done as per the standards, instead they were demarcated in an inconsistent manner. For instance, at Mahatelo River, the demarcation post was unclear and an illegible mark was used, whilst at Mosope River, a metal bar was used and the particulars of the Permit Holder were not engraved thereon; (See pictures below):



**Figure 5** Mahatelo River Demarcation



**Figure 6** Mosope River Demarcation

In addition, documents review revealed that “some people with licences were reluctant to demarcate their plots hence giving them a chance to illegally mine or extend their plots.<sup>13</sup> Additionally, there was no comprehensive information on the extent of demarcation of concession areas as against a total of 493 concessionaires (Refer to Annexure 7). This constituted non-compliance to Section 54 of MMA 1999. The DoM had not adequately enforced this

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<sup>13</sup>MD 34 (a) iii III(155) 16 January 2009- Internal Communiqué-Minutes of Illegal Mining Meeting at Mogoditshane dated August 2010

requirement hence inadvertency on the part of holders of mineral permits to comply accordingly. Moreover, there was lack of documentary evidence to indicate that the DoM made rigorous follow-ups to respective Concessionaires to check compliance and enforcement of the Laws and Regulations during the years under audit. However, information obtained from the DoM indicated that five (5) concession areas were visited between January to March 2012, and only one was demarcated. According to interviews, lack of inspections and follow ups was exacerbated by staff constraints.

Lack of demarcation of concession areas is one factor that had contributed to illegal mining of aggregates as it may be a challenge for both concessioners and the DoM to control or monitor such illegal activities.

### **Recommendation**

The DoM should continually intensify operations to reduce illegal sand and gravel activities and also enforce the requirements of the Act.

### **5.4 REHABILITATION OF AFFECTED AREAS**

Section 65 (3) of the Mines and Mineral Act requires that, “the holder of a mineral concession shall ensure that his concession area is rehabilitated from time to time and ultimately reclaimed in so far as is practicable and in a manner acceptable to the Director of Mines”. Application for a mineral permit or mining licence also requires that an Environmental Impact Assessment or Environmental Management Plans be prepared prior to issuing the permit.

Although rehabilitation and decommissioning plans were prepared and availed by applicants as per requirement, they were not adequately implemented. The applicants had not honoured their obligations which they included in the Environmental Management Plans; hence there were some leased areas that had been left unrehabilitated at the closure of operations. This is supported by

the results of the observations made by the Audit Team at sand and gravel mining sites visited. The number of mining sites visited totalled 16. The total number of mines observed to be abandoned during audit, active and those rehabilitated are depicted in the Table 3 below;

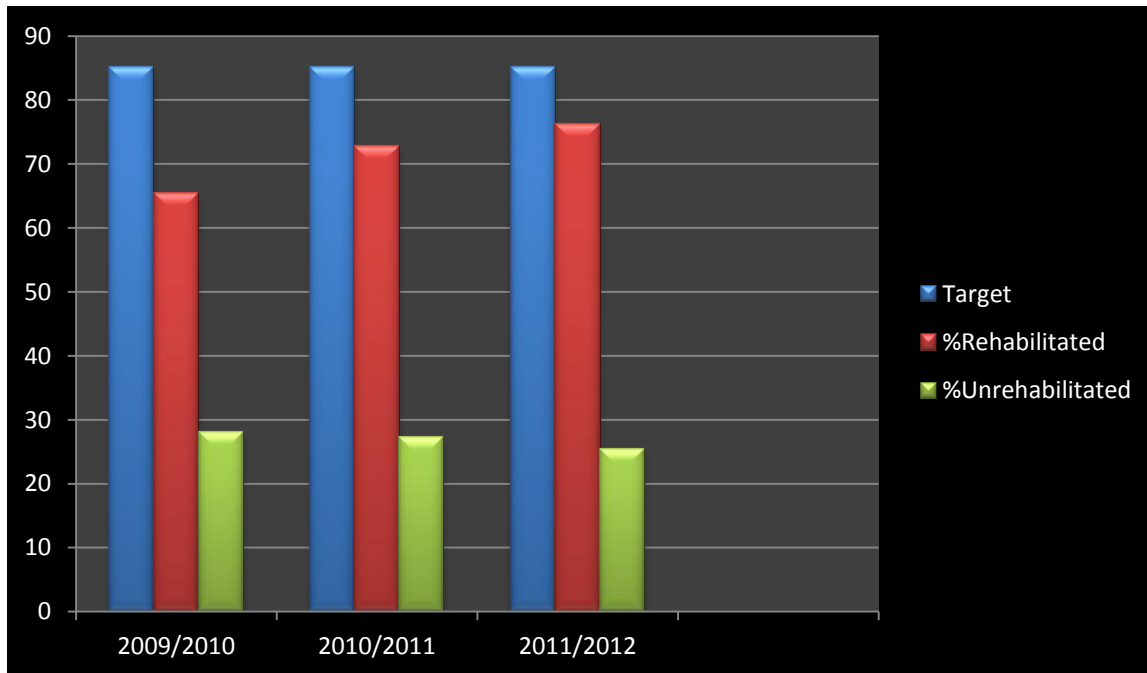
**Table 3: Number and Status of Mining Operations observed at the time of Audit**

| Place Visited | Total No. of Sites | Inactive | Active | Rehabilitated | Unrehabilitated |
|---------------|--------------------|----------|--------|---------------|-----------------|
| Kopong        | 1                  | 1        |        |               | 1               |
| Metsimotlhabe | 1                  | 1        |        |               | 1               |
| Francistown   | 1                  |          | 1      |               |                 |
| Chadibe       | 2                  | 1        | 1      |               | 1               |
| Matsiloje     | 2                  | 1        | 1      |               | 1               |
| Maun          | 4                  | 3        |        | 1             | 3               |
| Toteng        | 1                  |          | 1      |               |                 |
| Bothatogo     | 3                  | 3        | -      | -             | 3               |
| Tale Pan      | 1                  |          | 1      |               |                 |
| TOTAL         | 16                 | 10       | 5      | 1             | 10              |

**Source: Observations made by auditors and Officers from the DoM at the time of audit**

The analysis of the Table indicates that out of the 16 mining sites visited at the time of audit, five (5) were still in operation (active) representing 31.3% of the sites visited, ten (10) representing 62.5 % of the areas that were supposed to have been rehabilitated were inactive. Moreover, the status of rehabilitated sites was corroborated by information from review of DoM documents as illustrated in the graph overleaf;

**Graph A: Rehabilitation State for years 2009/10- 2011-12**



**Source:** DoM Annual Performance Plans and Reports (2009/10-2011/12)

From the above graph, it could be deduced that the DoM had for the years 2009/10, 2010/11 and 2011/12 targeted that 85% of expired concessions would have been rehabilitated. However, this target had not been achieved as 65.44%, 72.79% and 76.2% were rehabilitated respectively. The graph indicates that the state of rehabilitation was progressive. According to interviews and document review not all illegal mining activities were monitored and laws enforced accordingly, hence some Concessionaires were not rehabilitated and thus, had not been reflected on this graph.

Furthermore, according to the Reclamation/Rehabilitation Guidelines for sand and gravel, Mineral Concessions Operations (version 1: October 2005) "topsoil stripped from the surface shall be used for final cover to re-contoured slopes where practicable. Non usable material including overburden, screenings and rocks should be placed in the pit bottom and covered with the previously

stripped topsoil." In addition, removal of the topsoil and vegetation takes place to make way for quality sand and gravel and reserved for use in rehabilitating the areas where mining took place. Notwithstanding, the soil had not been used for the intended purposes, mainly due to the fact that there had been non rehabilitation of the quarried areas. For instance, where the Audit Team made some observations, there were stockpiles of topsoil and destruction of trees through indiscriminate sand and gravel mining by both legal and illegal miners. This is supported by pictorial presentations below:



**Figure 7** An unrehabilitated site at Bothatogo



**Figure 8** Top soil at Statunga River piled on the riverbed



**Figure 9** An access ramp that had not been restored along Metsimothabe River



**Figure 10** Destruction of trees due to illegal pit sand mining captured around Statunga

According to interviews with DoM and DEA Officers at the field, the top soil may be washed away into the surface water carrying with it ecologically valuable seed banks that are critical for regeneration. Removal of the topsoil also

decreases the soil's capacity to absorb contaminants that are necessary to assist it to purify water as it passes through its pores. Furthermore, the effect of unrehabilitated areas is that the abandoned pits may serve as a source of breeding grounds for mosquitoes and the resultant spread of malaria and related diseases. The other effect is that the abandoned pits were often used by unscrupulous people as waste dumping sites (particularly rubbles) and old tyres, and river bed soils contaminated by oils from machinery used by miners, thus polluting the environment and posing hazard to the public. For example, observations made at some places visited, affirms the statement as substantiated by the following photographic presentations



**Figure 11** Rubble from a brick moulding company dumped at Metsimotlhabe River.



**Figure 12** River bed soils contaminated by oils from machines that excavate the sand from Mahatelo River.



**Figure 13** Waste dumped around a mining at Tale Pans.



**Figure 11** Used tyres dumped in one of the burrow pits captured at Statunga.

The OAG opines that environmental impacts caused by the activities associated with sand and gravel mining along the rivers and the environment as a whole need to be assessed to enable formulation of a comprehensive strategy to minimise such adverse impacts.

### **Recommendation**

- ❖ The DoM should initiate the strengthening of the MMA in such a way that it is binding and its enforceable standards and specifications are comprehensive for effective regulation and management of the sand and gravel mining industry.
- ❖ The DoM should also ensure that burrow pits are rehabilitated to make them safe and deter further land degradation practices, thus enforcing Section 65(6) of the MMA 17 of 1999.

### **Management Comment**

***“Regarding the issue of rehabilitation and payment of royalties your observations are noted, however, the main issue is that most of the defaulters are not traceable which makes it impossible to pursue the legal route to recover the money”.***

### **5.5 PAYMENT OF ROYALTIES**

Section 66 (1) of the MMA Act of 1999 stipulates that “the holder of a mineral concession shall be liable to pay royalties to the Government on any mineral obtained by him in the course of the exercise of his rights there under at the rates and in a manner prescribed under this section. The royalty payable shall be 3% of the gross market value and payable on monthly basis”.

Nevertheless, the review of documents and interviews revealed instances of non compliance to the law in that concessionaires had not paid the royalties on monthly basis as required by the Act. It was therefore, a challenge for the DoM

to establish the levels of production declared by concessionaires due to the fact that they were not always reporting as required. According to the DoM, holders of mineral concessions had not advanced valid reasons why they had not paid the royalties as required by the Act. Furthermore, interviews and documents review revealed that concessionaires had not submitted the monthly production returns for computation of the royalties due to the Government. On the other hand, those who paid had done so after being followed up by the DoM. Moreover, the DoM could not verify whether the amounts of royalties paid by concessionaires were correct as the DoM relied on information provided by concessionaires to compute the royalties. This was a challenge which was exacerbated by inadequate capacity in terms of personnel and transport.

Non-payment of royalties by concessionaires may constrain the Government coffers. Therefore, it is critical for the Department to collect royalties so that the revenue could be used for the benefit of the country especially at the period when the country is recovering from the economic down turn.

### **Recommendation**

The DoM Management should foster effective measures to regularise payment of royalties.

## **5.6 STAKEHOLDERS COLLABORATION, PUBLIC AWARENESS AND MONITORING**

### **5.6.1 Stakeholder Collaboration**

According to best practices it is imperative that the DoM demonstrate good governance through collaboration with stakeholders that are directly or indirectly affected by mining of aggregates. Well coordinated sand mining activities will assist in better management of mining operations.

However, interviews with different stakeholders such as Land Boards and DEA Officials, highlighted that there was limited collaborative and participatory

approaches to sand and gravel mining activities to enable effective planning and implementation of sand and gravel programmes(if any). According to interviews, the Land Boards and DEA were only involved at the initial stage of licensing, after which the DoM had not given a formal feedback regarding the actual operations, and on how they would affect other stakeholders, hence devise measures to counteract the associated risks.

At the time of audit the OAG noted that the joint operations/inspections conducted by the DoM and the Police in an effort to minimise illegal mining of sand, were reinforced around major cities, for instance, Greater Gaborone and Francistown and other areas hard hit by illegal mining. Nonetheless, the Joint Action Plans had not been developed during years under review, to enhance collective responsibilities and potential benefits that could be realised to prevent illegal and indiscriminate sand and gravel mining operations. Furthermore, effective management of sand and gravel resource initiatives require involvement of all stakeholders; as responsibilities for managing sand and gravel operations is spread across broad spectrum of institutions. For instance, MMEWR through the DoM issues mining licences, Land Boards issue Surface Rights and MEWT through the Department of Environmental Affairs assesses the EIA Reports for the proposed river and pit sand extraction activities. Hence, the need for buy in from Stakeholders/Institutions and all other participatory parties including inter-alia; the Government institutions, the Civil Society, Private Sector, Land Boards, Dikgosi and the Communities(Village Development Committees and Community Based Organisations).

Moreover, according to documents reviewed, “communities felt left out of the whole sand mining process, as they are never consulted nor involved in determining where sand mining activities should or should not take place.” Furthermore, the Technical Committee which was formed in 2010 to coordinate and enhance collaborative efforts to combat illegal mining operations was

inactive since its establishment. The Committee was supposed to meet on monthly basis to develop monitoring and public awareness programmes. However, documents review highlighted that the Committee was inactive for two (2) years; until September 2012 where it met to prepare for the Ministers' Meeting which was to be held on 3 October 2012.

### **Recommendation**

The DoM Management should;

- ❖ Engage in a participatory approach with all relevant stakeholders in sand and gravel mining operations.
- ❖ With Stakeholders develop framework with explicit and defined roles and levels of authority to facilitate the processes with a view to curb sand and gravel unsustainable and detrimental methods of mining.

This will enhance ownership of the resource, hence improving monitoring of utilisation by different Stakeholders. The collaborative efforts will also enhance capabilities of all Stakeholders; and enable them to perform their different responsibilities and enforce the available policies including Bye-Laws and Communities' rules where applicable.

### **Management Comment**

***“Though the Committee could not meet as frequently as desired, it came up with initiatives such as engagement of Green Scorpion and Joint operations/inspections between the Department of Mines and Botswana Police, as measures to fight illegal mining.”***

### 5.6.2 Public Awareness

Public awareness on the importance of safeguarding the environment during mining operations need not be underestimated. The environment as well as its intrinsic value is vital, therefore, it is imperative to ensure its sustainability. In this regard, communities and miners need to be educated on the importance of licensing mining operations and possible impacts of sand mining on the environment. Furthermore, documents review revealed that the DoM had undertaken public awareness on illegal mining in several ways “attending different meetings involving organisations, VDCs, Land Boards and Dikgosi to sensitise different institutions and the public about concerned law of the land and implications of illegal mining, mainly those related to environmental damages. Also continual Radio and TV interviews are being made by the DoM for the benefit of the public at large. Further, sign boards in and around sensitive areas around the country have been and are being posted, displaying the legalities and penalties of illegal sand mining.”<sup>14</sup>

Nonetheless, public awareness which is a key element in informing and guiding people's behaviour and promoting partnership with communities was limited. For instance, documents review highlighted that, “members of the community who wanted to indulge in sand and gravel mining confused the Surface Rights with the Mining Permit.” Nevertheless, the principle in this regard is that “applying for Surface Rights does not automatically grant applicants permits to mine sand and gravel” (DEA/BOD/7/9 IV(171) dated 5 June 2009). Furthermore, inspection Report by DEA Officers vide their REF DEA/BOD/7/9I IV(164) indicated that companies in the Okavango Area in 2009, “claimed not to understand environmental legislation in the country. They think applying for Surface Rights

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<sup>14</sup>Harvesting of River Sand in Moshupa Area: Vice President's Kgotla Meeting undated

from the Land Board gives them mining rights automatically."In addition, the Okavango Sub Land Board also indicated that the Main Land Board could, "either give permission to the applicant to mine or regret."This was in contravention with the Mines and Minerals Act 1999 which states that, "the only authority to grant mining rights in Botswana is the Department of Mines". The above instances are clear indication of limited public awareness even among Stakeholders.

Additionally, it transpired that environmental management education was limited amongst both the community and the miners as the former had little regard for monitoring the resource while the latter were inconsiderate in the sense that they used indiscriminate and detrimental sand harvesting methods. For instance, irrespective of the DoM's effort to use different strategies such as kgotla fora and sign boards bearing messages that prohibited mining in non-mining zones, it was still prominent that the public appeared not to take cognisance of such warnings. (See pictures overleaf)



**Figure 15** A sign board installed along Ntshe River



**Figure 15** Sand mining activities in a non-mining zone along Ntshe River

Involving organisations and communities in environmental protection and enforcement would create a sense of stewardship towards the environment and provide a forum for new ideas and participation.

## **Recommendation**

The DoM Management should intensify public awareness on sand mining and its implications and augment all the initiatives that are already in place for better management of mining operations.

### **5.6.3 Monitoring**

Monitoring of sand mining operations is vital in ensuring that the activities pertaining to sand and gravel are executed as per the requirements of the processes and set standards to curb environmental effects that may occur as a result of detrimental sand and gravel mining methods. It also ensures that sustainable harvesting methods are used to ensure recuperation of the resource for future use.

However, it transpired from documents review that the DoM had not effectively monitored the mining operations across the country. Although, the Department conducted joint inspections with stakeholders such as the Police, the inspections revolved around major cities and in areas where illegal mining was prevalent, for example; the Greater Gaborone and Francistown. Due to the alarming rate of illegal sand mining practices country-wide and its multi faceted nature, the Department found spot checks to be more ideal than scheduled inspections as the latter would alert the perpetrators of their visits to the sites. This therefore, had left some areas in the country not covered by these inspections to check if sand mining operations were carried out appropriately and prevent illegal mining of the resources. In most areas, where the DoM had issued mineral permits, the Department had not adequately followed up, to observe how the actual operations were done. This situation was observed in areas around Maun and its surroundings, where some miners continued to mine with expired licences. According to interviews conducted with the DoM and review of documents, it was not easy to monitor all the mining operations in the country due to human and transport constraints.

Lack of intensive inspections had resulted in unsustainable exploitation of sand and other aggregates since the operations were not done according to

harvesting guidelines. This may in the long run damage the river systems, hence threatened the lives of the people depending on these rivers.

### **Guidelines for Monitoring Small Scale Mining**

The Environmental Impact Assessment serves as a guidance tool to ensure that sand and gravel miners comply with the environmental requirements and directives under the Mines and Mineral Act No.17 of 1999 and other relevant statutory legislative frameworks.

However, the OAG noticed that the EIA Guidelines were comprehensive as they provided a list of items to be addressed in drawing up an EIA and guided how new projects should be implemented to address the potential environmental effects that might arise due to proposed mining activities that is, assessment of potential effects of a project on the pre-mining environment. Nonetheless, the Guidelines had not covered the activities of small scale mining operations including inter-alia; brick making businesses and community based projects. The OAG is of the view that absence of such guidelines may exacerbate environmental degradation and detrimental harvesting methods.

There was also lack of documentary evidence that the DoM received the sand and gravel mining notifications which would enable the Department to assess whether closure had been done as outlined in the Environmental Management Plans and in accordance with relevant legal requirements. Moreover, the DEA submitted the EMPs as per the requirement, but it was a challenge for the DoM to monitor the extent to which they were implemented and their enforcement. According to interviews, the Department lacked the monitoring capacity to ensure compliance with relevant legislative frameworks and Guidelines.

Lack of monitoring capacity may lead to rampant illegal sand and gravel mining operations throughout the country that may affect compliance with

environmental requirements. Additionally, the inadequate monitoring of sand and gravel mining operations has implications for the success of the strategies that have been formulated to curb illegal sand and gravel mining.

### **Site Inspection**

According to the DoM site inspections at the concession areas are conducted regularly to check the mining practices on the ground, mining permits and the production records for ultimate payment of royalties.

Nonetheless, the inspections were intermittent. There was lack of documentary evidence to substantiate the extent of inspections conducted during the years under audit. Additionally, the DoM had not developed inspections plans, which will assist the Officers to cover the concession areas appropriately. The DoM highlighted that the anomaly occurred because the monitoring staff suffered lack of transport and as such were unable to perform monitoring activities as expected.

The OAG is of the view that, inadequate inspections may exacerbate illegal mining where concessionaires may continue harvesting sand and gravel even when their mining permits have expired thus evading payment of royalties or even extending their concession areas without complying with the applicable regulations. There is therefore, need for periodic field inspections to prevent any illegal operations, enforce environmental obligations and verify accuracy of impact prediction.

### **Recommendation**

The OAG recommends that the DoM should establish consistent practices across the organisation and promote greater adherence to those practices to ensure an overall consistent approach. This will assist the Department to achieve its targets with the limited resources available.

## **Management Comment**

***“Due to limited resources and personnel, follow up on issued mining licences had not been easy but where possible these are done even before these concessions are issued”.***

### **5.7 ILLEGAL SAND AND GRAVEL MINING STRATEGIES**

Illegal sand and gravel mining strategies are initiatives identified to enable the DoM and Stakeholders to prevent environmental degradation resulting from unsustainable use of sand and gravel resources. Furthermore, documents review highlighted that the Technical Committee identified four (4) strategies that could contribute significantly towards addressing matters pertaining to adverse environmental impact mainly associated with river sand mined illegally.”<sup>15</sup>Such strategies were;

- Utilisation of alternative sources of construction materials to sand.
- Legislation and Institutional Review.
- Zoning of Land Use for sourcing of aggregate supply
- Monitoring and Public Awareness

Notwithstanding, the OAG noticed that the strategies were specifically for river sand mining rather than comprehensive and all encompassing river and pitsand and gravel mining protocol. It was therefore, not clear whether this meant that the pit and gravel resources mining had no adverse impact on environmental degradation. Additionally, there was no documentary evidence to the effect that there had ever been assessment of the impact of strategies employed to curb illegal river sand mining in order to assure Stakeholders that the desired outcome had been achieved as a result. The assessment would have provided

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<sup>15</sup> MD 34 a(iii)I (34) of 15 May 2009

information on the effectiveness of the strategies and enabled their revisit where there were inadequacies.

In view of the national concerns about environmental damages associated with river and pitsand and gravel mining there is need to have developed an overarching strategy which would have also included among others;

- Thresholds for undertaking environmental assessment on continual basis.
- Determination of the levels of extraction.
- The roles of Communities and local institutions in the management and control including; monitoring of sand and gravel mining activities at the local levels.

## **5.8 DEPARTMENTAL CAPACITY**

### **5.8.1 Human Resources**

The DoM's human resource is a means for achieving its strategic direction. Therefore, the key tools to achieve the DoM's mission is to have adequate capacity in terms of number and expertise, in order to be successful in delivering services and ensuring that sand and gravel mining operations are appropriately managed and controlled, to prevent or mitigate the damages to the rivers' ecosystems and the environment as a whole, caused by indiscriminate practices.

Nonetheless, the DoM had not been effective in carrying out its operational responsibilities such as; monitoring, inspections and audits of concessionaires to ascertain compliance with relevant Acts and Environmental Standards; enforcement of demarcation of mining leases and rehabilitation of burrow pits. This was substantiated by document review which indicated that, "it is hard fact that manpower is a constraint in monitoring illegal mining. On one hand there is a high demand for construction material which is not enough in the country; on

the other hand we have to restrict mining activities for sand due to environmental degradation. This situation has resulted in more illegal river sand mining compared to previous years. So we are constrained in effectively controlling the illegal river sand due to these twin constraints-shortage of manpower and increased illegal river sand mining,"<sup>16</sup>

Additionally, documents reviewed highlighted that the DoM's staff complement stood at 69 Officers during the years under audit, out of which nine(9) of them representing 13% of the total number of staff were involved in sand and gravel mining operations and covering a wide geographical area. Two (2) out of the nine(9) Officers were specifically involved in monitoring for both illegal mining and concession areas, that is, one (1) covering Southern Region (Gaborone up to Kgalagadi and Ghantsi) and the other in the Northern Region (Dibete up to Kasane and Maun). However, in realising the constraint the DoM in 2009 estimated that at least an additional 10 (ten) Technical Officers would be required to enable the Department to effectively monitor and control sand and gravel extraction throughout the country. According to interviews, the DoM could not succeed in their effort to have Officers in all the Districts, as envisaged.

Given that the DoM's core responsibilities are to; monitor mining operations, enforce relevant Laws, Regulations and Guidelines and analyse environmental related data, in a vast and geographically dispersed areas, with the already existing staff inadequacy, there is a likelihood that the Department will not achieve its mandate in the near future. This will therefore, hamstring its effort to curb the ever increasing illegal mining of both gravel and river and pit sands due to the boom in construction industries , thus leading to pollution and more

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<sup>16</sup> MD 34 a(iii) I(34) dated 15 January 2009

and more environmental degradation, resulting from unsustainable use of the resources.

### **5.8.2Transport**

Adequate transport is an abler to assist the DoM perform its responsibilities effectively given the expanse of the country and difficult terrains in some parts of the country. Notwithstanding, it transpired from interviews with the DoM's Management that the Department had inadequate transport as such it had hamstrung their efficiency and effectiveness to perform its operational responsibilities. For instance, the **Table 4** depicted at **Annexure 8** indicates that the Department had eight (8) usable vehicles; six (6) in Gaborone and two(2) in Francistown whilst the other two(2) had been boarded in January 2012 and May 2012 respectively. According to Management, one of the available vehicles (Kia Sorento registered BX 06 26 02) was old and spent most of the time in the garage. For instance, this vehicle had spent a period ranging between one day to approximately 3 months in the garage during the years2009 and 2010 as evidenced by the sequence of maintenance activities. (Refer to Annexure 9fordetails). Interview and document review highlighted that the desirable fleet for the Department needed to have been at least 15 vehicles, that is, ten (10) and five (5) for Gaborone and Francistown respectively. However, this had not been possible due to economic slowdown.

The OAG considers that inadequate transport may inhibit service delivery and exacerbate illegal mining which had caused serious damage and in some cases irreparable impacts to the environment at places where there is boom in construction industries and infrastructure development.

## **5.9 SAND AND GRAVEL MINING MANAGEMENT INFORMATION**

Management information plays an important role in the DoM's operations, as management of its various records remains a critical function and without it, its corporate memory would be lost. Furthermore, it is a management tool to enable the DoM to plan future work priorities and monitor progress to holistically address sand and gravel mining issues. If such information is maintained, it will assist the DoM in its endeavour of assessing the nature and extent of the environmental and natural resources risks; posed by sand and gravel mining, option for mitigation and advice on the future of appropriate sand and gravel management, thus making informed decisions.

Nevertheless, at the time of audit in August 2012, the DoM had not maintained a database that contained a comprehensive data for sand and gravel that could provide management information for use over time. The information was abstract and could not make informed decisions. For instance, there had not been scientific and holistic quantification of the magnitude of both river and gravel extractions to provide insight into impacts of current sand and gravel mining practices throughout the country for informed decisions.

Notwithstanding the adverse comment, the OAG appreciates that the DoM had conducted Environmental Impact Assessment Studies for Metsimotlhabe, Shashe, Mahalapye Rivers and Ditlhakane Pit Sand Mining Sites in 2004, that is, some 8 years ago.

Moreover, although the DoM, had records on the number of licensed concession areas, the number of illegal burrow pits could not be known unless reported, hence some illegal burrow pits that belonged to District Councils and the Department of Roads were not known. Information on the number of demarcated concession areas against the total number of concessionaires country-wide was also not easily accessible. There was also lack of information

on the extent to which the DoM conducted inspections and followed-up Concessionaires to enforce demarcation of mining lease areas and rehabilitation of affected areas, monitor rehabilitated sites stability as well as monitoring mining operations and analysis of environmental data for informed decisions. According to interviews and document review, the DoM was challenged to ensure that its mandate was achieved due to lack of capacity in terms of number to cover all its areas of responsibility.

Without well maintained sand and gravel management information there is a danger such information may be lost or overlooked when functions are deployed or management may use sand and gravel decisions on the basis of inadequate or unknown information. The OAG therefore, opines that the DoM would have benefited from management information system that allowed staff at all levels to continually record and maintain easily accessible information for informed decisions. Such information would have also assisted the Department to follow-up different culprits that had absconded instead of rehabilitating the burrow pits as required by Mines and Minerals Act Section 65.

### **Recommendation**

The OAG recommends that the DoM should liaise with all stakeholders to ensure that information is shared on a continuous basis, to enable the Department to have a comprehensive database on sand and gravel mining issues.

### **Management Overall Comment**

***“We have considered the report and are of the view that most of the issues raised are being addressed through the inter-Ministerial forum composed of Ministries of Minerals, Energy and Water Resources; Lands and Housing; Defence,***

*Justice and Security; Environment, Wildlife and Tourism; Trade and Industry; Transport and Communications; Local Government; Infrastructure, Science and Technology. The Committee has since agreed on measures to address the problem of illegal mining and approached Cabinet for approval as some of the action items will have implication to the economy, we await the Cabinet Directive. We are of the view that in as much as the Department of Mines is mandated to issue Mineral Concessions, collective efforts by stakeholders including the consumers of the commodity is necessary to address the problem, hence the involvement of other Ministries and to change the approach to that of addressing broader sustainability issues of the construction industry taking into consideration the already depleted sand resources within Greater Gaborone”.*

## **OVERALL CONCLUSION**

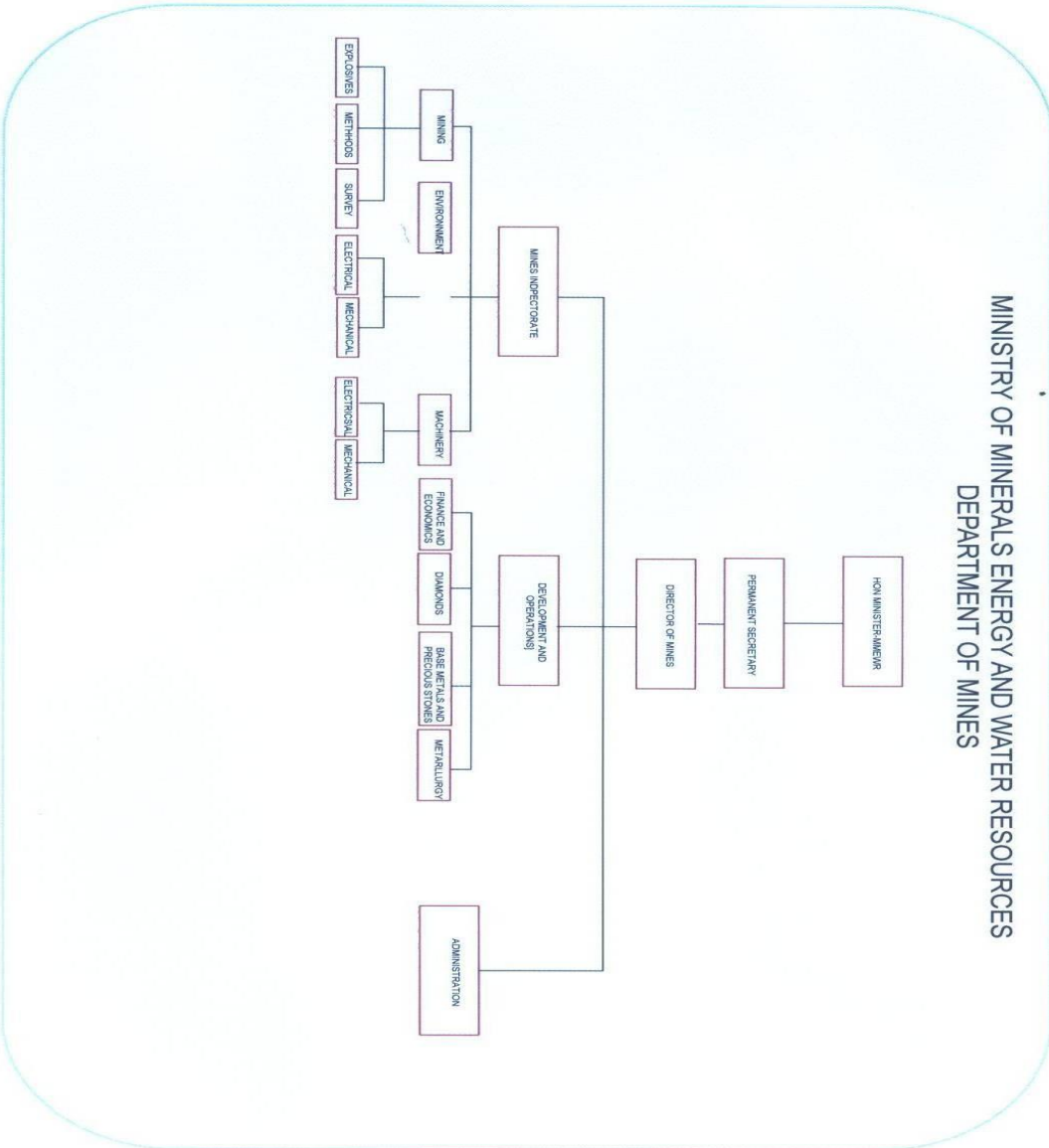
Sand mining has increased manifolds in recent years due to boom in construction industries. This has therefore, increased demand for river and pit sands and gravel. A higher demand for sand has exerted considerable pressure on sand resources such that it calls for concerted efforts by all parties in order to contain the situation. The DoM as the leading agency in managing mining operations in the country is responsible for ensuring protection and sustainable use of sand resources.

Notwithstanding, the DoM's initiatives in managing sand and gravel mining operations, the Department was faced with challenges which included inter-alia; weak legislative framework as the MMA has not holistically addressed sand and gravel mining issues, that exacerbated unsustainable harvesting and detrimental methods of sand and gravel resources; limited enforcement of the available frameworks attributed to by inadequate monitoring, public awareness, thus resulting in illegal mining; lack of rehabilitation of affected areas and demarcation of some concession areas, and non-payment of royalties by concessionaires, thus constraining Government coffers. Additionally, lack of all encompassing sound environmental management strategies has left much for the Department, considering the effects of sand mining operations on the environment. It is therefore, imperative for the DoM to collaborate with other stakeholders in order to enhance collective responsibilities and potential benefits that could be realised to prevent illegal and indiscriminate sand and gravel mining operations.

Notwithstanding the above adverse comments, the OAG acknowledges and appreciates all the efforts employed by the DoM in mitigating the effects of illegal and detrimental methods of harvesting sand and gravel.

# ANNEXURES

## Annexure 1



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## **Annexure 2**

### **Interviews**

#### **INTERVIEWS AT THE DoM**

- Acting Director
- Deputy Director
- Technical Officers (6)

#### **INTERVIEWS WITH DIFFERENT STAKEHOLDERS**

- Station Commander( Mogoditshane Police Station)
- Station Officer (Moshupa Police Station)
- Director – Department of Museum, Monuments and Art Gallery
- Board Secretary-Ngwaketse Land Board
- Board Secretary-Kweneng Land Board
- Board Secretary-Tawana Land Board
- Director-Department of Geological Surveys
- Director-Department of Environmental Affairs
- Acting District Coordinating Officer- DEA (Maun)
- District Coordinating Officer-DEA (Francistown)
- Sand Miners(10)
- Village Elders/Dikgosi (6)

**Annexure 3**



REPUBLIC OF BOTSWANA

**FORM VII**

Minerals Permit Application Form (Issue/Renewal)  
This Application is in terms of section 52 of the Mines and Minerals Act  
(attach additional sheets or documents where necessary)

|   |                     |
|---|---------------------|
| 1. Name of applicant (in case of company attach copy of certificate of incorporation)   | Address in Botswana |
| 2. Full Name(s) of partners/directors/members of association  | Nationalities       |
| 3. Name(s) of Shareholders  | Nationalities       |
| 4. Description of area applied for (attach plan and coordinates)  |                     |
| 5. Particulars of the minerals for which permit is sought   |                     |
| 6. Period for which permit is sought  |                     |
| 7. Attach proposed programme of working as in Annexure 1  |                     |
| 8. Disclose any other information/material relevant to this application   |                     |
| 9. I .....being duly authorised, declare that the applicant and its partners/directors/members/shareholders are persons qualified in terms of section 6 of the Mines and Minerals Act to hold a minerals permit and that the information contained herein is true and correct |                     |
| Signed..... Capacity.....   |                     |
| Date ..... Place.....   |                     |

**Annexure 1**

**PROPOSED PROGRAMME OF WORKING**

- (a) Details of mineral deposit (including all known, proven, indicated and inferred ore reserves and mining conditions)
- (b) Proposed programme of mining operations including:
  - (i) estimated date by which applicant intends to work for profit
  - (ii) estimated capacity of production and scale of operations
  - (iii) nature of product
  - (iv) envisaged marketing arrangements for sale of mineral product(s)
  - (v) Brief environmental impact assessment study
  - (vi) Brief environmental reclamation programme

**Annexure 4**

**CHECKLIST FOR ACCEPTANCE OF ML/MP APPLICATIONS**

**Applicant's Name:** \_\_\_\_\_

| Items Checked  | Yes                      | No                       |
|--|--------------------------|--------------------------|
| 1. Filled in application form submitted (form V(a), V(b), (VII)              | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Stamped surface rights  | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Stamped coordinates from land Authority                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Certified copies of identities( Omang) of directors and shareholders      | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Copy of company registration certificate or certificate of incorporation  | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Archeological clearance from Department of National Museum                | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Prospecting Licence with accepted final report or Waiver with coordinates | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Environmental Impact Assessment Report/ Environmental Management Plan     | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Consent Letter from concerned PL holders                                  | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Wildlife Clearance where applicable                                      | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Work Plan (mining programme) submitted                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Whether Defaulter  | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Comments</b>  |                          |                          |
| .....  |                          |                          |
| .....  |                          |                          |
| .....  |                          |                          |
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| .....  |                          |                          |

**(i) Submitted by:**

.....  
(Name)

.....  
(Designation)

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(Signature)

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(Date)

**(ii) Checked by:**

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(Name)

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(Designation)

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(Signature)

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(Date)

**(iii) Accepted by:**

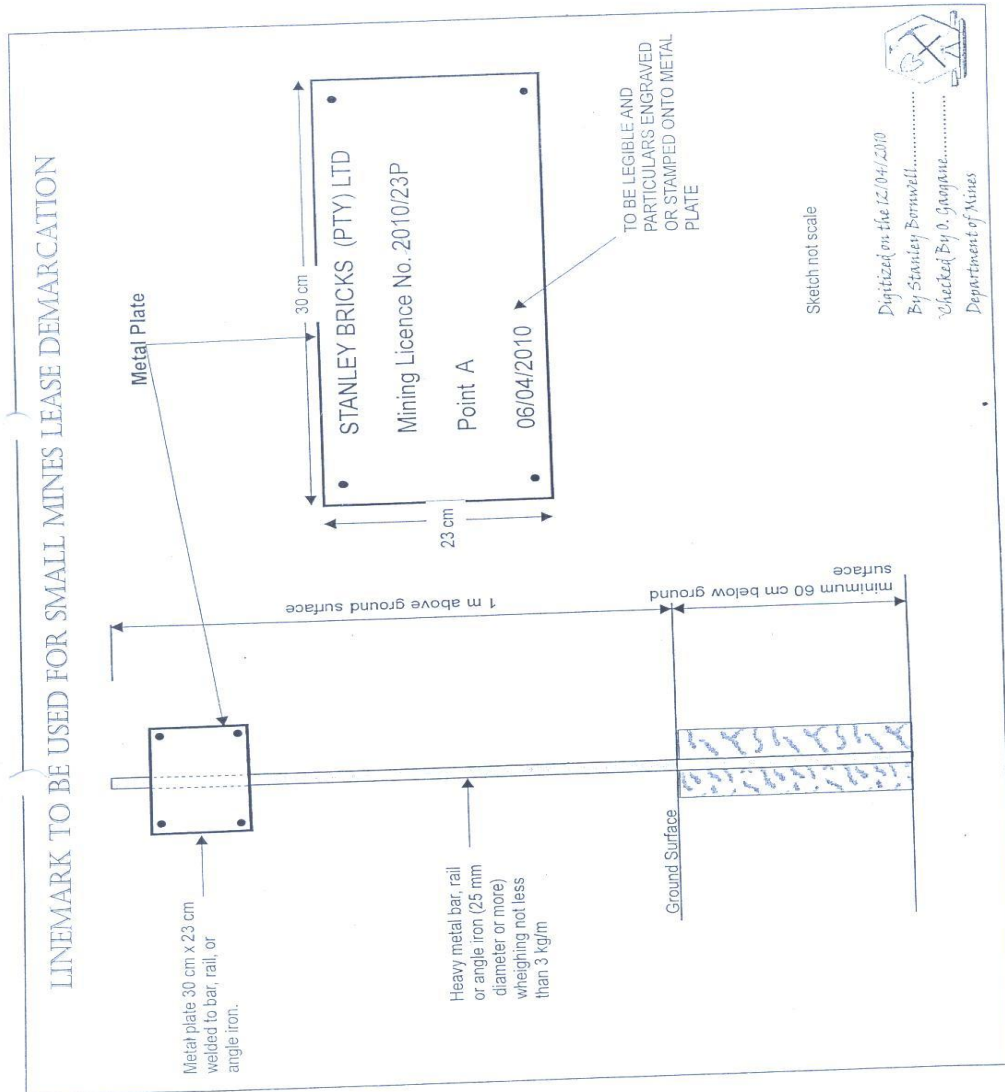
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**Annexure 5**



## Annexure 6

**Rehabilitation Inspection Checklist:**

Lease Number:

Holder:

Date:

INSPECTOR:

| OBJECTIVE   | INDICATORS   | IMPROVEMENTS REQUIRED | COMMENTS |
|---|--|-----------------------|----------|
| Mining proceeded in line with rehabilitation plan?              | Rehabilitation Plan approved before mining commences.                            |                       |          |
| Surface reshaped to obtain stability                            | Land stability restored  |                       |          |
| Surface reshaped to provide for adequate drainage               | Drainage restored<br>Surface not prone to erosion                                |                       |          |
| Surface reshaped to give suitable slopes for targeted land use. | Surface suitable for future intended use   |                       |          |
| Long term visual impacts minimized                              | Surface blends into surrounding environment                                      |                       |          |
| All waste removed to licensed landfill                          | Lease area free of waste   |                       |          |
| Reclaim Access and haul roads                                   | i)Roads reclaimed where not needed for future access.<br>ii)Access ramps removed |                       |          |
| Site restored to a safe condition                               | Site safe to humans and animals  |                       |          |
| Overburden and spoil restored to pit                            | Overburden and spoil restored  |                       |          |
| Fences removed, and in such a way                               | Fences removed, and in such a way  |                       |          |

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|                              |                              |  |  |
|------------------------------|------------------------------|--|--|
| as to permit<br>revegetation | as to permit<br>revegetation |  |  |
|------------------------------|------------------------------|--|--|

Signed: Inspector: \_\_\_\_\_

Holder: Name: \_\_\_\_\_ Designation: \_\_\_\_\_

Signature: \_\_\_\_\_

## Annexure 7 -List of Concessionaires

| Licence_No | Company  | Mineral  | IssueDate | ExpiryDate | Area            |
|------------|--|----------|-----------|------------|-----------------|
| 2010/5L    | Zhong Gan Engineering & Construction (PTY) Ltd | Gravel   | 19-Oct-10 | 18-Oct-11  | 67695.362 sq m  |
| 2009/15L   | Zhong Gan Engineering & Construction (PTY) Ltd | Gravel   | 13-Feb-09 | 12-Feb-12  | 890.955 sq m    |
| 2009/14L   | Zhong Gan Engineering & Construction (PTY) Ltd | Gravel   | 13-Feb-09 | 12-Feb-12  | 21314.777 sq m  |
| 2009/13L   | Zhong Gan Engineering & Construction (PTY) Ltd | Gravel   | 13-Feb-09 | 12-Feb-12  | 37333.120 sq m  |
| 2009/12L   | Zhong Gan Engineering & Construction (PTY) Ltd | Gravel   | 13-Feb-09 | 12-Feb-12  | 10459.164 sq m  |
| 2009/11L   | Zhong Gan Engineering & Construction (PTY) Ltd | Gravel   | 13-Feb-09 | 12-Feb-12  | 26972.916 sq m  |
| 2009/10L   | Zhong Gan Engineering & Construction (PTY) Ltd | Gravel   | 13-Feb-09 | 12-Feb-12  | 133054.752 sq m |
| 2009/41P   | Webex Holdings (PTY) Ltd                       | Gravel   | 21-Apr-09 | 20-Apr-11  | 9721.230 sq m   |
| 2009/109P  | Weaver Bird Holdings (PTY) Ltd                 | Gravel   | 25-Sep-09 | 24-Mar-10  | 56714.896 sq m  |
| 2010/34P   | Wagon Construction (PTY) Ltd                   | Gravel   | 17-May-10 | 16-Aug-10  | 15706.461 sq m  |
| 2008/45L   | Van Truckhire (PTY) Ltd                        | Gravel   | 12-May-08 | 11-May-10  | 30919.112 sq m  |
| 2009/55P   | V & S Transporters Contractors (PTY) Ltd       | Gravel   | 7-May-09  | 6-Aug-09   | 20524.390 sq m  |
| 2009/54P   | V & S Transporters Contractors (PTY) Ltd       | Gravel   | 7-May-09  | 6-Aug-09   | 18059.703 sq m  |
| 2009/35L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 24-Apr-09 | 23-Apr-12  | 11965.696 sq m  |
| 2010/56L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 35383.374 sq m  |
| 2010/5P    | Dithapelo Moronko                              | R/Sand   | 4-Feb-10  | 5-Feb-11   | 12484.301 sq m  |
| 2010/29L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 6209.533 sq m   |
| 2010/25L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 78225.755 sq m  |
| 2010/24L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 74543.972 sq m  |
| 2010/23L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 39567.060 sq m  |
| 2010/22L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 95168.423 sq m  |
| 2010/21L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 69605.786 sq m  |
| 2010/20L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 91206.945 sq m  |
| 2010/19L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 81031.905 sq m  |
| 2009/98L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 43873.880 sq m  |
| 2009/97L   | Unik Construction Engineering (PTY) Ltd        | Gravel   | 12-Mar-10 | 4-Mar-12   | 21946.192 sq m  |
| 2008/44L   | Unik Construction Engineering                  | Gravel   | 18-Apr-08 | 17-Apr-11  | 21507.582 sq m  |
| 2010/12P   | Tshepo Tile Products (PTY) Ltd                 | Gravel   | 24-Feb-10 | 23-Feb-11  | 41271.247 sq m  |
| 2010/11P   | Tshepo Tile Products (PTY) Ltd                 | Gravel   | 24-Feb-10 | 23-Feb-11  | 10135.602 sq m  |
| 2009/108P  | Tshepo Tile Products (PTY) Ltd                 | Gravel   | 16-Sep-09 | 15-Dec-09  | 4692.851 sq m   |
| 2009/70P   | Tshaba Security                                | Gravel   | 20-Jun-09 | 19-Sep-09  | 6803.969 sq m   |
| 2009/60P   | Tsabong Building Construction (PTY) Ltd        | Gravel   | 20-May-09 | 19-May-10  | 2790.389 sq m   |
| 2009/23P   | Tsabong Building Construction (PTY) Ltd        | Pit Sand | 11-Mar-09 | 10-Mar-10  | 11341.960 sq m  |
| 2009/42L   | Trust Construction & Engineering (PTY) Ltd     | Gravel   | 6-May-09  | 5-May-11   | 2674.500 sq m   |
| 2010/48L   | Van & Truck Hire (PTY) Ltd                     | Gravel   | 8-Jul-10  | 7-Jul-11   | 13675.670 sq m  |
| 2009/18P   | Tihongbotho Holdings (PTY) Ltd                 | Gravel   | 11-Mar-09 | 10-Mar-11  | 16478.117 sq m  |
| 2009/128P  | Tihalerwa & Sons Transport (PTY) Ltd           | R/Sand   | 17-Dec-09 | 16-Dec-10  | 10301.303 sq m  |
| 2009/73P   | Tic-Mas Investment (PTY) Ltd                   | Gravel   | 4-Jun-09  | 3-Jun-10   | 1923.766 sq m   |
| 2008/55P   | Tihite Rubble Screeners (PTY) Ltd              | Gravel   | 23-Dec-08 | 22-Oct-09  | 18658.642 sq m  |
| 2009/95P   | Thapelo Kgosiyang                              | Gravel   | 19-Aug-09 | 18-Aug-10  | 4508.910 sq m   |
| 2010/38P   | Thamaga Movement Construction (PTY) Ltd        | R/Sand   | 27-Oct-10 | 26-Oct-11  | 3275.000 sq m   |
| 2009/126P  | Temodi Works (PTY) Ltd                         | Gravel   | 2-Dec-09  | 1-Mar-10   | 13761.000 sq m  |
| 2009/103P  | Tau Grading & Building Construction (PTY) Ltd  | Gravel   | 16-Sep-09 | 15-Sep-11  | 40249.309 sq m  |
| 2009/136P  | Sylish Plant Hire (PTY) Ltd                    | R/Sand   | 6-Apr-10  | 5-Apr-11   | 4938.456 sq m   |
| 2009/122P  | Sylish Plant Hire (PTY) LTD                    | Gravel   | 6-Apr-10  | 5-Apr-11   | 4938.149 sq m   |
| 2009/77P   | SVM Roadworks (PTY) Ltd                        | Gravel   | 4-Jun-09  | 3-Dec-09   | 2072.558 sq m   |
| 2008/11P   | Super Technical Services (PTY) Ltd             | R/Sand   | 25-Apr-08 | 24-Apr-09  | 18891.234 sq m  |
| 2009/14P   | Super Carpentry & Bricks                       | R/Sand   | 31-Mar-09 | 30-Mar-11  | 1702.494 sq m   |
| 2009/9P    | Star Wars Enterprises (PTY) Ltd                | Gravel   | 6-Mar-09  | 5-Mar-11   | 18882.931 sq m  |
| 2009/8P    | Star Wars Enterprises (PTY) Ltd                | Gravel   | 6-Mar-09  | 5-Mar-11   | 5428.353 sq m   |
| 2009/11P   | Star Wars Enterprises (PTY) Ltd                | Gravel   | 6-Mar-09  | 5-Mar-11   | 7274.074 sq m   |
| 2009/10P   | Star Wars Enterprises (PTY) Ltd                | Gravel   | 6-Mar-09  | 5-Mar-11   | 4697.047 sq m   |
| 2009/114P  | Southern District Council                      | Gravel   | 27-Oct-09 | 26-Oct-10  | 23132.702 sq m  |
| 2009/113P  | Southern District Council                      | Gravel   | 27-Oct-09 | 26-Oct-10  | 18857.967 sq m  |
| 2009/112P  | Southern District Council                      | Gravel   | 27-Oct-09 | 26-Oct-10  | 9927.445 sq m   |
| 2008/80L   | Southern District Council                      | Gravel   | 26-Nov-08 | 25-Nov-10  | 10139.920 sq m  |
| 2008/80L   | Southern District Council                      | Gravel   | 26-Nov-08 | 25-Nov-10  | 10087.155 sq m  |

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| 58.  | 2010/27L  | South East District Council              | Gravel        | 9-Apr-09  | 8-Apr-10  | 37545.617 sq m   |
| 59.  | 2009/32P  | South East District Council              | Gravel        | 29-Jun-09 | 28-Jun-11 | 17126.095 sq m   |
| 60.  | 2010/50L  | Sladden International Botswana (PTY) Ltd | Gravel        | 16-Jul-09 | 16-Jul-10 | 4538.151 sq m    |
| 61.  | 2009/64L  | Sladden International Botswana (PTY) Ltd | Gravel        | 29-Jun-09 | 28-Jun-11 | 14898.946 sq m   |
| 62.  | 2009/63L  | Sladden International Botswana (PTY) Ltd | Gravel        | 29-Jun-09 | 28-Jun-11 | 34751.020 sq m   |
| 63.  | 2009/62L  | Sladden International Botswana (PTY) Ltd | Gravel        | 29-Jun-09 | 28-Jun-11 | 29793.812 sq m   |
| 64.  | 2009/61L  | Sladden International Botswana (PTY) Ltd | Gravel        | 29-Jun-09 | 28-Jun-11 | 13162.673 sq m   |
| 65.  | 2009/60L  | Sladden International Botswana (PTY) Ltd | Gravel        | 29-Jun-09 | 28-Jun-11 | 21985.742 sq m   |
| 66.  | 2009/59L  | Sladden International Botswana (PTY) Ltd | Gravel        | 29-Jun-09 | 28-Jun-11 | 7590.623 sq m    |
| 67.  | 2009/9L   | Sladden International Botswana (PTY) Ltd | Gravel        | 29-Jun-09 | 28-Jun-11 | 133334.441 sq m  |
| 68.  | 2010/52L  | Siwi Investments (PTY) Ltd               | Granite       | 26-May-10 | 25-May-15 | 33747.223 sq m   |
| 69.  | 2010/51L  | Siwi Investments (PTY) Ltd               | Granite       | 7-Jun-10  | 6-Jun-15  | 20033.815 sq m   |
| 70.  | 2010/90L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 23-Sep-10 | 22-Mar-12 | 26907.449 sq m   |
| 71.  | 2010/88L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 23-Sep-10 | 22-Mar-12 | 90788.920 sq m   |
| 72.  | 2010/82L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 23-Sep-10 | 22-Mar-12 | 12325.629 sq m   |
| 73.  | 2010/72L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 23-Sep-10 | 22-Mar-12 | 13159.155 sq m   |
| 74.  | 2010/71L  | Sinohydro Botswana (PTY) Ltd             | Crushed Stone | 10-Nov-09 | 9-Nov-11  | 12890.358 sq m   |
| 75.  | 2010/66L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 23-Sep-10 | 22-Mar-12 | 18481.941 sq m   |
| 76.  | 2010/65L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 23-Sep-10 | 22-Mar-12 | 13616.731 sq m   |
| 77.  | 2010/64L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 23-Sep-10 | 22-Mar-12 | 11715.536 sq m   |
| 78.  | 2010/34L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 23-Sep-10 | 22-Mar-12 | 24326.306 sq m   |
| 79.  | 2010/33L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 23-Sep-10 | 22-Mar-12 | 12224.735 sq m   |
| 80.  | 2010/32L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 23-Sep-10 | 22-Mar-12 | 14420.398 sq m   |
| 81.  | 2010/31L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 19246.165 sq m   |
| 82.  | 2009/91L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 62415.551 sq m   |
| 83.  | 2009/77L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 81816.837 sq m   |
| 84.  | 2009/76L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 53565.751 sq m   |
| 85.  | 2009/75L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 16797.925 sq m   |
| 86.  | 2009/74L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 60304.054 sq m   |
| 87.  | 2009/73L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 201388.127 sq m  |
| 88.  | 2009/66L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 18-Jun-09 | 19-Jun-11 | 451409.470 sq m  |
| 89.  | 2009/47L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 251480.856 sq m  |
| 90.  | 2009/46L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 18-Jun-09 | 19-Jun-11 | 440580.351 sq m  |
| 91.  | 2009/45L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 7369.600 sq m    |
| 92.  | 2009/33L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 8322.729 sq m    |
| 93.  | 2009/32L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 9696.551 sq m    |
| 94.  | 2009/31L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 82532.029 sq m   |
| 95.  | 2009/29L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 19406.206 sq m   |
| 96.  | 2009/28L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 67615.813 sq m   |
| 97.  | 2009/27L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 67160.581 sq m   |
| 98.  | 2009/26L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 68358.418 sq m   |
| 99.  | 2009/25L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 68447.715 sq m   |
| 100. | 2009/24L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 19354.631 sq m   |
| 101. | 2009/23L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 68049.009 sq m   |
| 102. | 2009/23L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 19746.420 sq m   |
| 103. | 2009/22L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 20017.149 sq m   |
| 104. | 2009/21L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 13-Mar-09 | 12-Mar-12 | 67831.312 sq m   |
| 105. | 2009/21L  | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 1083172.047 sq m |
| 106. | 2009/105L | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 255694.289 sq m  |
| 107. | 2009/104L | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 540394.847 sq m  |
| 108. | 2009/103L | Sinohydro Botswana (PTY) Ltd             | Gravel        | 14-Aug-09 | 13-Aug-12 | 120796.830 sq m  |
| 109. | 2009/102L | Sinohydro Botswana (PTY) Ltd             | Gravel        | 30-Dec-09 | 29-Dec-11 | 19375.880 sq m   |
| 110. | 2009/102L | Sinohydro Botswana (PTY) Ltd             | Gravel        | 30-Dec-09 | 29-Dec-11 | 14769.360 sq m   |
| 111. | 2009/102L | Sinohydro Botswana (PTY) Ltd             | Gravel        | 30-Dec-09 | 29-Dec-11 | 23958.142 sq m   |
| 112. | 2009/102L | Sinohydro Botswana (PTY) Ltd             | Gravel        | 24-Jun-08 | 23-Jun-10 | 11698.813 sq m   |
| 113. | 2008/93L  | Sinohydro Corporation Limited            | Gravel        | 22-Jan-09 | 23-Jan-11 | 25598.339 sq m   |
| 114. | 2008/92L  | Sinohydro Corporation Limited            | Gravel        | 24-Jun-08 | 23-Jun-10 | 20800.171 sq m   |
| 115. | 2008/91L  | Sinohydro Corporation Limited            | Gravel        | 24-Jun-08 | 23-Jun-10 | 20800.171 sq m   |

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| 116. | 2008/90L  | Sinohydro Corporation Limited          | Gravel    | 24-Jun-08 | 23-Jun-10 | 17150.019 sq m   |
| 117. | 2008/88L  | Sinohydro Corporation Limited          | Gravel    | 24-Jun-08 | 23-Jun-10 | 38753.050 sq m   |
| 118. | 2008/87L  | Sinohydro Corporation Limited          | Gravel    | 24-Jun-08 | 23-Jun-10 | 28064.462 sq m   |
| 119. | 2008/86L  | Sinohydro Corporation Limited          | Gravel    | 24-Jun-08 | 23-Jun-10 | 24946.153 sq m   |
| 120. | 2008/85L  | Sinohydro Corporation Limited          | Gravel    | 24-Jun-08 | 23-Jun-10 | 33412.599 sq m   |
| 121. | 2008/84L  | Sinohydro Corporation Limited          | Gravel    | 24-Jun-08 | 23-Jun-10 | 25211.380 sq m   |
| 122. | 2008/62L  | Sinohydro Botswana (PTY) Ltd           | Aggregate | 24-Jun-08 | 23-Jun-10 | 628467.226 sq m  |
| 123. | 2008/61L  | Sinohydro Botswana (PTY) Ltd           | Aggregate | 24-Jun-08 | 23-Jun-10 | 1419407.046 sq m |
| 124. | 2009/58P  | Signon (PTY) Ltd                       | Gravel    | 7-May-09  | 6-Nov-09  | 10880.407 sq m   |
| 125. | 2009/47P  | Sibози (PTY) Ltd                       | Gravel    | 6-May-09  | 5-May-10  | 3824.844 sq m    |
| 126. | 2009/52P  | Shumba Projects (PTY) Ltd              | Gravel    | 6-May-09  | 5-May-10  | 51356.181 sq m   |
| 127. | 2009/51P  | Shumba Projects (PTY) Ltd              | Gravel    | 6-May-09  | 5-May-10  | 28455.819 sq m   |
| 128. | 2010/33P  | Shap Enterprises (PTY) Ltd             | Gravel    | 7-Jun-10  | 6-Oct-10  | 4216.825 sq m    |
| 129. | 2009/105P | Sesupo Stanly Mookodi                  | R/Sand    | 2-Sep-09  | 1-Sep-11  | 10291.982 sq m   |
| 130. | 2009/33P  | Senatla Enterprises (PTY) Ltd          | R/Sand    | 2-Sep-09  | 2-Sep-11  | 9939.858 sq m    |
| 131. | 2008/25P  | Senatla Enterprises (PTY) Ltd          | Gravel    | 1-Aug-08  | 31-Jul-10 | 2355.085 sq m    |
| 132. | 2009/62P  | Selete Conctruction (PTY) Ltd          | Gravel    | 20-May-09 | 19-Nov-09 | 8749.430 sq m    |
| 133. | 2009/62P  | Selete Conctruction (PTY) Ltd          | Gravel    | 20-May-09 | 19-Nov-09 | 8749.430 sq m    |
| 134. | 2009/61P  | Selete Conctruction (PTY) Ltd          | Gravel    | 20-May-09 | 19-Nov-09 | 9596.048 sq m    |
| 135. | 2009/118P | Sckgele Mosarwa                        | R/Sand    | 5-Oct-09  | 4-Oct-10  | 3245.500 sq m    |
| 136. | 2009/33P  | Seemise Seabelo (PTY) Ltd              | Gravel    | 4-May-09  | 3-Nov-09  | 11401.585 sq m   |
| 137. | 2009/26P  | Seemise Seabelo Contractors            | Gravel    | 4-May-09  | 3-Nov-09  | 3857.688 sq m    |
| 138. | 2009/27P  | Seemise Seabelo Contractors            | Gravel    | 20-Jun-09 | 21-Dec-09 | 33184.279 sq m   |
| 139. | 2009/89P  | Sediegeng Harrigan Kgamane             | R/Sand    | 14-Jul-09 | 13-Jan-11 | 25436.935 sq m   |
| 140. | 2010/2P   | Samuel Nong                            | R/Sand    | 21-Jan-10 | 20-Jan-11 | 1841.335 sq m    |
| 141. | 2009/31P  | Richard Sanda                          | Gravel    | 3-Apr-09  | 2-Apr-11  | 11448.502 sq m   |
| 142. | 2010/61L  | Remlap (PTY) Ltd                       | Gravel    | 16-Aug-10 | 15-Aug-12 | 151548.778 sq m  |
| 143. | 2009/100P | Ramshakes Holdings (PTY) Ltd           | R/Sand    | 21-Aug-09 | 20-Aug-11 | 13291.129 sq m   |
| 144. | 2009/87L  | Quarrablast Investment (PTY) Ltd       | Granite   | 14-Aug-09 | 13-Aug-14 | 77585.435 sq m   |
| 145. | 2010/69L  | Powacom Engineering (PTY) Ltd          | Gravel    | 2-Sep-10  | 1-Dec-10  | 18523.317 sq m   |
| 146. | 2009/127P | Pivotal Contracting Services (PTY) Ltd | Gravel    | 15-Dec-09 | 14-Dec-10 | 15389.589 sq m   |
| 147. | 2009/127P | Pivotal Contracting Services (PTY) Ltd | Gravel    | 15-Dec-09 | 14-Dec-10 | 16150.834 sq m   |
| 148. | 2010/22P  | Phillimon Thamage                      | R/Sand    | 27-Apr-10 | 26-Apr-11 | 16932.014 sq m   |
| 149. | 2009/24P  | Phemelo Investment (PTY) Ltd           | Gravel    | 25-Mar-09 | 24-Sep-09 | 31103.206 sq m   |
| 150. | 2009/124P | Pen - M Contractors                    | Gravel    | 15-Dec-09 | 14-Mar-10 | 5055.058 sq m    |
| 151. | 2009/91P  | Patikwane Civil Engineering            | Gravel    | 13-Jul-09 | 12-Oct-09 | 3435.355 sq m    |
| 152. | 2010/13P  | Ossy & Sons (PTY) Ltd                  | R/Sand    | 26-Mar-10 | 25-Mar-11 | 11746.883 sq m   |
| 153. | 2009/96P  | Glefile Phale                          | R/Sand    | 24-Aug-09 | 23-Aug-11 | 4321.339 sq m    |
| 154. | 2010/6P   | Ofenitse J. Kenosi                     | R/Sand    | 2-Jan-10  | 1-Mar-11  | 1786.780 sq m    |
| 155. | 2010/8P   | Oatlotse Chepete                       | R/Sand    | 2-Mar-10  | 1-Mar-11  | 5862.016 sq m    |
| 156. | 2009/57P  | Oatlotse Chepete                       | R/Sand    | 29-Jun-09 | 28-Jun-11 | 4046.313 sq m    |
| 157. | 2009/78L  | Nortex Management Services (PTY) Ltd   | Clay      | 11-Aug-09 | 10-Aug-22 | 34267.025 sq m   |
| 158. | 2009/34P  | Niëon Enterprises (PTY) Ltd            | Gravel    | 21-Apr-09 | 20-Sep-09 | 5497.535 sq m    |
| 159. | 2008/21P  | Neejoy Enterprises                     | R/Sand    | 11-Jun-08 | 10-Jun-10 | 24527.565 sq m   |
| 160. | 2010/26P  | NAPCOM ENTERPRISES (PTY) LTD           | Gravel    | 7-Jun-10  | 6-Jun-12  | 89287.000 sq m   |
| 161. | 2010/58L  | Namemco Energy (PTY) Ltd               | Dolorite  | 29-Dec-10 | 28-Dec-11 | 127465.655 sq m  |
| 162. | 2007/29P  | Multi Addition (PTY) Ltd               | Gravel    | 31-May-07 | 30-May-09 | 109957.077 sq m  |
| 163. | 2010/17P  | Mr. Mfa                                | R/Sand    | 25-Mar-10 | 25-Mar-11 | 2527.806 sq m    |
| 164. | 2010/16P  | Mr Mfa                                 | R/Sand    | 26-Mar-10 | 25-Mar-11 | 1991.305 sq m    |
| 165. | 2009/67P  | Mphema Construction                    | Gravel    | 4-Jun-09  | 3-Sep-09  | 9152.320 sq m    |
| 166. | 2009/67P  | Mphema (PTY) Ltd                       | Gravel    | 4-Jun-09  | 3-Sep-09  | 7921.480 sq m    |
| 167. | 2009/48P  | Motlhatlosi Kelopang                   | R/Sand    | 6-May-09  | 5-May-10  | 3423.118 sq m    |
| 168. | 2009/106P | Mothibi Nthebe                         | R/Sand    | 2-Sep-09  | 1-Sep-11  | 5416.307 sq m    |
| 169. | 2009/1P   | Motai Botsang                          | R/Sand    | 5-Feb-09  | 4-Feb-10  | 5949.435 sq m    |
| 170. | 2009/28P  | Mosupi Bricks Construction             | Gravel    | 3-Apr-09  | 2-Oct-09  | 3097.813 sq m    |
| 171. | 2008/82L  | Southern District Council              | Gravel    | 26-Nov-08 | 25-Nov-10 | 9481.268 sq m    |
| 172. | 2008/82L  | Southern District Council              | Gravel    | 26-Nov-08 | 25-Nov-10 | 11093.795 sq m   |
| 173. | 2009/80P  | Moses Mangisi                          | R/Sand    | 18-Jun-09 | 18-Jun-10 | 2860.431 sq m    |

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| 176. | 2010/29P  | Mose-Mose (PTY) Ltd                       | Gravel        | 11-May-10 | 10-May-11 | 2730.679 sq m   |
| 177. | 2010/28P  | Mose-Mose (PTY) Ltd                       | Gravel        | 11-May-10 | 10-May-11 | 2730.679 sq m   |
| 178. | 2010/4P   | Moreri Matlhokotsa                        | R/Sand        | 2-Feb-10  | 1-Feb-11  | 6487.613 sq m   |
| 179. | 2009/46P  | Moramusi Building Construction (PTY) Ltd  | Gravel        | 23-Apr-09 | 22-Oct-09 | 7048.611 sq m   |
| 178. | 2009/45P  | Moramusi Building Construction (PTY) Ltd  | Pit Sand      | 23-Apr-09 | 22-Oct-09 | 6210.540 sq m   |
| 129. | 2009/44P  | Moramusi Building Construction (PTY) Ltd  | Pit Sand      | 23-Apr-09 | 22-Oct-09 | 1963.342 sq m   |
| 180. | 2009/79P  | Mont Mara (PTY) Ltd                       | Gravel        | 8-Jun-09  | 7-Dec-09  | 2169.771 sq m   |
| 181. | 2010/3P   | Molwantwa Modipe                          | R/Sand        | 21-Jan-10 | 20-Jan-11 | 1841.335 sq m   |
| 182. | 2009/130P | Molwantwa Modipe                          | R/Sand        | 21-Jan-10 | 20-Jan-11 | 1365.998 sq m   |
| 183. | 2010/45P  | Mod Services (PTY) Ltd                    | Gravel        | 29-Dec-10 | 28-Dec-11 | 3448.383 sq m   |
| 184. | 2009/99P  | Mod Services (PTY) Ltd                    | Gravel        | 19-Aug-09 | 18-Feb-10 | 10788.787 sq m  |
| 185. | 2010/100L | MOD Blue Rock Suppliers (PTY) Ltd         | Granite       | 29-Dec-10 | 28-Dec-15 | 330981.860 sq m |
| 186. | 2008/48P  | Miyako Construction                       | Gravel        | 5-Dec-08  | 4-Dec-09  | 6931.716 sq m   |
| 187. | 2009/81P  | Millennium Holdings (PTY) Ltd             | Gravel        | 29-Jun-09 | 28-Sep-09 | 9959.951 sq m   |
| 188. | 2009/63P  | Millennium Holdings (PTY) Ltd             | Gravel        | 20-May-09 | 19-Oct-09 | 8862.337 sq m   |
| 189. | 2009/36P  | MGTOL Investments                         | R/Sand        | 21-Apr-09 | 20-Dec-09 | 10160.811 sq m  |
| 190. | 2009/35P  | MGTOL Investments                         | R/Sand        | 21-Apr-09 | 20-Dec-09 | 10160.811 sq m  |
| 191. | 2009/68P  | Mi F S Investment (PTY) Ltd               | Gravel        | 29-Jun-09 | 28-Sep-09 | 29308.416 sq m  |
| 192. | 2009/88P  | Mfosi Enterprises T/A Messah              | Gravel        | 4-Aug-09  | 3-Aug-11  | 10073.832 sq m  |
| 193. | 2009/49P  | Maygilip Agencies (PTY) Ltd               | Gravel        | 4-May-09  | 3-Aug-09  | 28848.302 sq m  |
| 194. | 2009/101L | Maun Quarries and Brickfield (PTY) Ltd    | Stone         | 21-Dec-09 | 20-Dec-14 | 560440.103 sq m |
| 195. | 2010/19P  | Matshelamoso Investment                   | Gravel        | 26-Mar-10 | 25-Mar-11 | 6762.549 sq m   |
| 196. | 87/2R     | Makoro Brick & Tile                       | Clay          | 10-Oct-08 | 10-Sep-13 | 14938.104 sq m  |
| 197. | 2010/30L  | Makoro Brick & Tile (PTY) Ltd             | Clay          | 24-Feb-10 | 23-Feb-11 | 106424.708 sq m |
| 198. | 2009/48L  | M.J. Manufacturing Enterprises (PTY) Ltd  | Aggregate     | 2-Jun-09  | 1-Jun-14  | 41053.563 sq m  |
| 199. | 2009/48L  | M.J. Manufacturing Enterprises (PTY) Ltd  | Aggregate     | 2-Jun-09  | 1-Jun-14  | 9351.939 sq m   |
| 200. | 2009/107P | Lucky Z. Tlhaselo                         | R/Sand        | 7-Oct-09  | 6-Oct-10  | 1936.853 sq m   |
| 201. | 2009/2P   | Lotlhakane West VDC                       | R/Sand        | 14-Jan-09 | 13-Jan-11 | 6052.989 sq m   |
| 202. | 2008/41L  | Letsatsi Investment                       | Gravel        | 18-Apr-08 | 17-Apr-09 | 46441.085 sq m  |
| 203. | 2008/42L  | Letsatsi Construction                     | Gravel        | 18-Apr-08 | 17-Apr-09 | 16659.523 sq m  |
| 204. | 2009/16P  | Landscape Solutions (PTY) Ltd             | Gravel        | 27-Feb-09 | 27-Aug-09 | 8337.581 sq m   |
| 205. | 2009/59P  | Landmark Projects (PTY) Ltd               | Gravel        | 7-May-09  | 6-May-10  | 9103.942 sq m   |
| 206. | 2008/51P  | Kyalami Industries                        | Gravel        | 10-Dec-08 | 9-Jun-09  | 3934.630 sq m   |
| 207. | 2009/75P  | Kwenaetsile Lore                          | Gravel        | 18-Jun-09 | 17-Jun-10 | 4904.245 sq m   |
| 208. | 2008/10P  | K'S Transport and Plant Hire (PTY) Ltd    | Gravel        | 8-Apr-08  | 7-Aug-08  | 7096.155 sq m   |
| 209. | 2010/43P  | Koobonye R Kenalemongwe                   | Gravel        | 29-Dec-10 | 28-Dec-11 | 5782.720 sq m   |
| 210. | 2009/133P | Kgotso Road Works (PTY) Ltd               | Gravel        | 30-Dec-09 | 29-Mar-10 | 17874.224 sq m  |
| 211. | 2008/52P  | Kgolagano Building Contractors (PTY) Ltd  | Gravel        | 10-Dec-08 | 9-Jun-09  | 7111.135 sq m   |
| 212. | 2010/30P  | Kgalagadi Resources Development (PTY) Ltd | Gravel        | 10-Jun-10 | 9-Jun-13  | 11137.950 sq m  |
| 213. | 2010/20P  | Kgabo Civil Works                         | Gravel        | 24-Mar-10 | 25-Mar-11 | 10757.788 sq m  |
| 214. | 2009/71P  | Kgabo Civil Works                         | Gravel        | 20-Jun-09 | 21-Dec-09 | 7502.800 sq m   |
| 215. | 2009/50P  | Kerapetse Ramooki                         | R/Sand        | 6-May-09  | 5-May-10  | 4689.304 sq m   |
| 216. | 2009/78P  | Keikanetswe Kenosi                        | R/Sand        | 11-Jun-09 | 10-Jun-10 | 11518.595 sq m  |
| 217. | 2009/20P  | Keeletse Modise & Tetano Swereki          | R/Sand        | 11-Mar-09 | 10-Mar-10 | 7325.981 sq m   |
| 218. | 2008/56P  | Junction Electrical Services (PTY) Ltd    | Gravel        | 23-Dec-08 | 22-Aug-09 | 10798.972 sq m  |
| 219. | 2009/42P  | Joseph Mazunga                            | R/Sand        | 24-Apr-09 | 23-Apr-10 | 2339.253 sq m   |
| 220. | 2010/27P  | Joseph K. Mosedame                        | Gravel        | 11-May-10 | 10-May-11 | 38919.764 sq m  |
| 221. | 2007/28P  | Joe Linga (PTY) Ltd                       | R/Sand        | 4-Jun-09  | 3-Jun-11  | 8143.774 sq m   |
| 222. | 2009/90P  | Job Bushie Nyathi                         | R/Sand        | 7-Jul-09  | 7-Jul-11  | 18583.067 sq m  |
| 223. | 2010/55L  | JAMAL NBCC (Pty)(Ltd)                     | Gravel        | 10-Jun-10 | 9-Aug-11  | 6503.065 sq m   |
| 224. | 2009/74P  | Isabel Holdings (PTY) Ltd                 | Gravel        | 4-Jun-09  | 3-Jun-10  | 2224.000 sq m   |
| 225. | 2009/69P  | Isabel Holdings (PTY) Ltd                 | Gravel        | 4-Jun-09  | 3-Jun-10  | 1207.397 sq m   |
| 226. | 2009/30P  | Ikanye Brick Force                        | Pit Sand      | 21-Apr-09 | 20-Apr-10 | 2357.000 sq m   |
| 227. | 2010/40P  | Ideal Enterprises                         | Gravel        | 23-Sep-10 | 22-May-11 | 159147.430 sq m |
| 228. | 2010/39P  | Ideal Enterprises                         | Gravel        | 23-Sep-10 | 22-May-11 | 200492.399 sq m |
| 229. | 2009/12P  | Hyper Link (PTY) Ltd                      | Gravel        | 27-Feb-09 | 26-Aug-09 | 2191.756 sq m   |
| 230. | 2010/87L  | Hogan Holdings (PTY) Ltd                  | Crushed stone | 17-Nov-10 | 16-Nov-20 | 600928.783 sq m |
| 231. | 2009/50L  | Hitecon (PTY) Ltd                         | Gravel        | 18-Jun-09 | 18-Jun-10 | 24081.300 sq m  |

|     |           |   |           |           |           |                 |
|-----|-----------|---|-----------|-----------|-----------|-----------------|
| 232 | 2009/49L  | Hitecon (PTY) Ltd                           | Gravel    | 18-Jun-09 | 18-Jun-10 | 18068.605 sq m  |
| 233 | 2008/57P  | Hardtimes Investments                       | Gravel    | 23-Dec-08 | 22-Dec-09 | 5365.894 sq m   |
| 234 | 2010/54L  | Hantec (PTY) Ltd                            | Gravel    | 7-Jul-11  | 6-Jun-12  | 24986.107 sq m  |
| 235 | 2010/46L  | Hantec (PTY) Ltd                            | Gravel    | 22-Jun-10 | 21-Jun-11 | 9171.036 sq m   |
| 236 | 2010/45L  | Hantec (PTY) Ltd                            | Gravel    | 22-Jun-10 | 21-Jun-12 | 11652.569 sq m  |
| 237 | 2010/44L  | Hantec (PTY) Ltd                            | Gravel    | 22-Jun-10 | 21-Jun-12 | 24986.107 sq m  |
| 238 | 2010/45L  | Hantec (PTY) Ltd                            | Gravel    | 22-Jun-10 | 21-Jun-12 | 11541.419 sq m  |
| 239 | 2009/15L  | Hantec (PTY) Ltd                            | Gravel    | 13-Feb-09 | 12-Feb-12 | 79504.715 sq m  |
| 240 | 2009/8L   | Hantec (PTY) Ltd                            | Pit Sand  | 13-Feb-09 | 12-Feb-12 | 104669.605 sq m |
| 241 | 2010/35L  | GSP (PTY) Ltd                               | Gravel    | 12-Apr-10 | 11-Apr-11 | 15013.181 sq m  |
| 242 | 2009/25P  | Ground Energy Systems (PTY) Ltd             | Gravel    | 31-Mar-09 | 30-Mar-11 | 7000.301 sq m   |
| 243 | 2010/9L   | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 56863.458 sq m  |
| 244 | 2010/8L   | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 31846.702 sq m  |
| 245 | 2010/7L   | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 37946.343 sq m  |
| 246 | 2010/6L   | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 55938.017 sq m  |
| 247 | 2010/17L  | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 45559.053 sq m  |
| 248 | 2010/16L  | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 42100.746 sq m  |
| 249 | 2010/15L  | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 29220.038 sq m  |
| 250 | 2010/14L  | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 17108.295 sq m  |
| 251 | 2010/13L  | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 38071.173 sq m  |
| 252 | 2010/12L  | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 39553.690 sq m  |
| 253 | 2010/11L  | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 23185.560 sq m  |
| 254 | 2010/10L  | Grinaker L.T.A. (PTY) Ltd                   | Gravel    | 12-Apr-10 | 11-Apr-12 | 35957.849 sq m  |
| 255 | 2008/23L  | Grinaker L.T.A (PTY) Ltd                    | Gravel    | 12-Apr-10 | 11-Apr-12 | 37007.173 sq m  |
| 256 | 2008/21L  | Grinaker L.T.A (PTY) Ltd                    | Gravel    | 12-Apr-10 | 11-Apr-12 | 44680.417 sq m  |
| 257 | 2008/20L  | Grinaker L.T.A (PTY) Ltd                    | Gravel    | 12-Apr-10 | 11-Apr-12 | 97175.996 sq m  |
| 258 | 2008/19L  | Grinaker L.T.A (PTY) Ltd                    | Gravel    | 12-Apr-10 | 11-Apr-12 | 28580.544 sq m  |
| 259 | 2008/16L  | Grinaker L.T.A (PTY) Ltd                    | Gravel    | 12-Apr-10 | 11-Apr-12 | 54067.609 sq m  |
| 260 | 2008/15L  | Grinaker L.T.A (PTY) Ltd                    | Gravel    | 12-Apr-10 | 11-Apr-12 | 76713.142 sq m  |
| 261 | 2008/22L  | Grinaker L.T.A (PTY) Ltd                    | Gravel    | 12-Apr-10 | 11-Apr-12 | 30181.241 sq m  |
| 262 | 2009/135P | Gorba Investments (PTY) Ltd                 | Gravel    | 30-Dec-09 | 29-Mar-10 | 20897.667 sq m  |
| 263 | 2009/134P | Gerba Investments (PTY) Ltd                 | Gravel    | 30-Dec-09 | 29-Mar-10 | 15098.578 sq m  |
| 264 | 2009/115P | Goodhope Sub District Council               | Gravel    | 27-Oct-09 | 26-Oct-10 | 10104.615 sq m  |
| 265 | 2009/111P | Goodhope Sub District Council               | Gravel    | 27-Oct-09 | 26-Oct-10 | 8240.145 sq m   |
| 266 | 2009/39P  | Golekanye Douglas Matshidiso                | R/Sand    | 23-Apr-09 | 22-Apr-10 | 3102.674 sq m   |
| 267 | 2009/4P   | Gee Zet Construction                        | Gravel    | 4-Feb-09  | 3-Aug-09  | 11529.363 sq m  |
| 268 | 2009/92P  | Goolefufa Malapela Tshenolo                 | R/Sand    | 25-Sep-09 | 24-Sep-11 | 36949.864 sq m  |
| 269 | 2010/9P   | Freddy P. Ntshonono                         | R/Sand    | 16-Mar-10 | 15-Mar-11 | 1746.106 sq m   |
| 270 | 2009/96L  | City of Francistown Council                 | Gravel    | 30-Dec-09 | 29-Dec-11 | 144455.508 sq m |
| 271 | 2010/63L  | Fourways Garage & Filling Station (PTY) Ltd | Basalt    | 13-Jul-10 | 12-Jul-20 | 98969.710 sq m  |
| 272 | 2009/90L  | Fluid Control (PTY) Ltd                     | Gravel    | 21-Aug-09 | 20-Apr-11 | 58121.250 sq m  |
| 273 | 2009/76P  | First Response (PTY) Ltd                    | Gravel    | 4-Jun-09  | 3-Sep-09  | 12647.366 sq m  |
| 274 | 2009/72P  | First Response (PTY) Ltd                    | Gravel    | 4-Jun-09  | 3-Sep-09  | 14513.753 sq m  |
| 275 | 2009/19P  | Figtree (PTY) Ltd                           | Gravel    | 16-Sep-09 | 15-Sep-10 | 1495.000 sq m   |
| 276 | 2009/19P  | Figtree (PTY) Ltd                           | Gravel    | 16-Sep-09 | 15-Sep-10 | 5860.500 sq m   |
| 277 | 2009/19P  | Figtree (PTY) Ltd                           | Gravel    | 16-Sep-09 | 15-Sep-10 | 2120.500 sq m   |
| 278 | 2009/15P  | Felmog                                      | Gravel    | 19-Feb-09 | 18-Jun-09 | 4463.057 sq m   |
| 279 | 2000/1P   | Expressions (PTY) Ltd                       | Aggregate | 2-Dec-09  | 1-Dec-11  | 514755.735 sq m |
| 280 | 2008/9P   | Dynamo Investments                          | Gravel    | 8-Apr-08  | 7-Aug-08  | 1866.122 sq m   |
| 281 | 2010/5P   | Dithapelo Moronko                           | R/Sand    | 4-Feb-10  | 5-Feb-11  | 20578.970 sq m  |
| 282 | 2009/93P  | Disoli's Buildings & Civil Constructors     | Gravel    | 10-Aug-09 | 9-Feb-10  | 3897.000 sq m   |
| 283 | 2008/49P  | Dipogiso Bofelelo                           | R/Sand    | 22-Jan-09 | 21-Jan-11 | 5126.826 sq m   |
| 284 | 2010/36P  | Digital Century (PTY) Ltd                   | Gravel    | 8-Jun-10  | 7-Jun-11  | 39854.942 sq m  |
| 285 | 2010/94L  | Desert Investments (PTY) Ltd                | Silcrete  | 25-Jan-11 | 24-Jan-16 | 63516.626 sq m  |
| 286 | 2010/1L   | Sinohydro Botswana (PTY) Ltd                | Stone     | 15-Jan-10 | 14-Jul-12 | 108624.111 sq m |
| 287 | 2008/38L  | Department of Roads                         | Gravel    | 28-Mar-08 | 27-Mar-10 | 102724.695 sq m |
| 288 | 2008/36L  | Department of Roads                         | Gravel    | 28-Mar-08 | 27-Mar-10 | 15379.661 sq m  |
| 289 | 2008/35L  | Department of Roads                         | Gravel    | 28-Mar-08 | 27-Mar-10 | 8297.329 sq m   |

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|-----|-----------|--|----------|-----------|-----------------|-----------------|
| 290 | 2008/34L  | Department of Roads                                | Gravel   | 28-Mar-08 | 27-Mar-10       | 37137.393 sq m  |
| 291 | 2008/33L  | Department of Roads                                | Gravel   | 28-Mar-08 | 27-Mar-10       | 42049.771 sq m  |
| 292 | 2008/32L  | Department of Roads                                | Gravel   | 28-Mar-08 | 27-Mar-10       | 39480.274 sq m  |
| 293 | 2008/31L  | Department of Roads                                | Gravel   | 28-Mar-08 | 27-Mar-10       | 49946.424 sq m  |
| 294 | 2008/30L  | Department of Roads                                | Gravel   | 28-Mar-08 | 27-Mar-10       | 16534.061 sq m  |
| 295 | 2008/29L  | Department of Roads                                | Gravel   | 28-Mar-08 | 27-Mar-10       | 46919.714 sq m  |
| 296 | 2008/28L  | Department of Roads                                | Gravel   | 28-Mar-08 | 27-Mar-10       | 27914.407 sq m  |
| 297 | 2008/27L  | Department of Roads                                | Gravel   | 28-Mar-08 | 27-Mar-10       | 19310.339 sq m  |
| 298 | 2008/25L  | Department of Roads                                | Gravel   | 28-Mar-08 | 27-Mar-10       | 27162.317 sq m  |
| 299 | 2009/56P  | Denn-Inn Projects (PTY) Ltd                        | Gravel   | 8-Apr-08  | 7-Oct-08        | 9636.639 sq m   |
| 300 | 2008/14P  | Dawnline Construction                              | Gravel   | 23-Dec-08 | 22-Dec-09       | 3499.978 sq m   |
| 301 | 2008/54P  | David Mapiitse's Transport                         | R/Sand   | 23-Dec-08 | 22-Dec-09       | 1264.000 sq m   |
| 302 | 2009/58L  | CSC & EC (PTY) Ltd                                 | Gravel   | 3-Jul-09  | 3-Jul-11        | 68861.358 sq m  |
| 303 | 2009/57L  | CSC & EC (PTY) Ltd                                 | Gravel   | 3-Jul-09  | 3-Jul-11        | 36323.360 sq m  |
| 304 | 2009/107L | Covec Excavator Hire JV (PTY) Ltd                  | Pit Sand | 15-Jan-10 | 14-Jan-12       | 11101.229 sq m  |
| 305 | 2009/100L | Covec Excavator Hire JV (PTY) Ltd                  | Gravel   | 7-Dec-09  | 6-Dec-11        | 38966.304 sq m  |
| 306 | 2009/99L  | Covec Excavator Hire JV (PTY) Ltd                  | Gravel   | 7-Dec-09  | 6-Dec-11        | 57491.086 sq m  |
| 307 | 2010/6P   | Construction Engineers and Builders (PTY) Ltd      | Gravel   | 7-Jun-10  | 6-Nov-11        | 32116.167 sq m  |
| 308 | 2009/5L   | Consolidated Contractors Company                   | Gravel   | 13-Feb-09 | 12-Feb-10       | 45390.222 sq m  |
| 309 | 2009/4L   | Consolidated Contractors Company                   | Gravel   | 13-Feb-09 | 12-Feb-10       | 10552.991 sq m  |
| 310 | 2009/3L   | Consolidated Contractors Company                   | Gravel   | 13-Feb-09 | 12-Feb-10       | 25262.365 sq m  |
| 311 | 2009/1L   | Consolidated Contractors Company                   | Gravel   | 13-Feb-09 | 12-Feb-10       | 57890.006 sq m  |
| 312 | 2010/6P   | Consolidated Contractors Group S.A.L PTY LTD       | Gravel   | 7-Jun-10  | 6-Nov-11        | 151278.447 sq m |
| 313 | 2010/43L  | Consolidated Contractors Group S.A.L               | Gravel   | 7-Jun-10  | 6-Nov-11        | 41576.154 sq m  |
| 314 | 2010/42L  | Consolidated Contractors Group S.A.L               | Gravel   | 7-Jun-10  | 6-Nov-11        | 41547.312 sq m  |
| 315 | 2010/41L  | Consolidated Contractors Group S.A.L               | Gravel   | 7-Jun-10  | 6-Nov-11        | 41526.882 sq m  |
| 316 | 2010/40L  | Consolidated Contractors Group S.A.L               | Gravel   | 7-Jun-10  | 6-Nov-11        | 41512.152 sq m  |
| 317 | 2010/39L  | Consolidated Contractors Group S.A.L               | Gravel   | 7-Jun-10  | 6-Nov-11        | 31367.281 sq m  |
| 318 | 2010/38L  | Consolidated Contractors Group S.A.L               | Gravel   | 7-Jun-10  | 6-Nov-11        | 39997.155 sq m  |
| 319 | 2010/37L  | Consolidated Contractors Group S.A.L               | Gravel   | 7-Jun-10  | 6-Nov-11        | 40017.510 sq m  |
| 320 | 2010/36L  | Consolidated Contractors Group S.A.L               | Gravel   | 7-Jun-10  | 6-Nov-11        | 42196.849 sq m  |
| 321 | 2010/76L  | Consolidated Contractors Company PTY (LTD)         | Gravel   | 7-Jun-10  | 6-Nov-11        | 10288.352 sq m  |
| 322 | 2009/69L  | Consolidated Contractors Company                   | Gravel   | 13-Feb-09 | 12-Feb-10       | 10287.978 sq m  |
| 323 | 2009/68L  | Consolidated Contractors Company                   | Gravel   | 13-Feb-09 | 12-Feb-10       | 58777.329 sq m  |
| 324 | 2009/68L  | Consolidated Contractors Company                   | Gravel   | 13-Feb-09 | 12-Feb-10       | 27843.000 sq m  |
| 325 | 2009/43L  | Consolidated Contractors Company                   | Gravel   | 13-Feb-09 | 12-Feb-10       | 27843.000 sq m  |
| 326 | 2009/7L   | Conduril Construtora Duriense SA                   | Gravel   | 5-Feb-09  | 4-Feb-12        | 86015.946 sq m  |
| 327 | 2009/6L   | Conduril Construtora Duriense SA                   | Gravel   | 5-Feb-09  | 4-Feb-12        | 80920.702 sq m  |
| 328 | 2009/36L  | Conduril Construtora Duriense SA                   | Gravel   | 23-Apr-09 | 22-Apr-12       | 196955.598 sq m |
| 329 | 2009/71L  | China Railways Seventh Group                       | Gravel   | 5-Oct-11  | 145675.647 sq m |                 |
| 330 | 2008/3L   | China State Construction & Engineering Corporation | Gravel   | 10-Aug-10 | 9-Aug-11        | 15003.492 sq m  |
| 331 | 2010/18L  | China Railways Seventh Group                       | Gravel   | 10-Aug-09 | 9-Aug-11        | 28587.408 sq m  |
| 332 | 2009/88L  | China Railways-Seventh Group                       | Gravel   | 10-Aug-09 | 9-Aug-11        | 44653.579 sq m  |
| 333 | 2009/71L  | China Railways Seventh Group                       | Gravel   | 10-Aug-09 | 9-Aug-11        | 14216.149 sq m  |
| 334 | 2009/71L  | China Railways Seventh Group                       | Gravel   | 10-Aug-09 | 9-Aug-11        | 14216.149 sq m  |
| 335 | 2009/70L  | China Railways-Seventh Group                       | Gravel   | 10-Aug-09 | 9-Aug-11        | 62208.250 sq m  |
| 336 | 2009/70L  | China Railways-Seventh Group                       | Gravel   | 10-Aug-09 | 9-Aug-11        | 62208.250 sq m  |
| 337 | 2009/89L  | Zhong Gan Engineering (PTY) Ltd                    | Gravel   | 2-Sep-09  | 1-Sep-12        | 83493.990 sq m  |
| 338 | 2009/67L  | Zhong Gan Engineering & Construction (PTY) Ltd     | Gravel   | 10-Aug-09 | 9-Aug-11        | 28554.569 sq m  |
| 339 | 2009/44L  | China Jiangxi International (PTY) Ltd              | Gravel   | 4-Jun-09  | 3-Jun-12        | 61673.012 sq m  |
| 340 | 2009/39L  | China Jiangxi Corporation Company                  | Gravel   | 24-Apr-09 | 23-Apr-11       | 68432.288 sq m  |
| 341 | 2009/91L  | China Jiangsu International (PTY) Ltd              | Gravel   | 10-Sep-09 | 9-Sep-10        | 13390.309 sq m  |
| 342 | 2009/91L  | China Jiangsu International (PTY) Ltd              | Gravel   | 14-Jul-09 | 13-Jul-11       | 951.166 sq m    |
| 343 | 2009/55L  | China Jiangsu International (PTY) Ltd              | Gravel   | 14-Jul-09 | 13-Jul-11       | 16624.413 sq m  |
| 344 | 2009/54L  | China Jiangsu International (PTY) Ltd              | Gravel   | 14-Jul-09 | 13-Jul-11       | 16624.413 sq m  |
| 345 | 2010/47L  | China Civil Engineering (PTY) Ltd                  | Gravel   | 26-May-10 | 25-Nov-10       | 70673.156 sq m  |
| 346 | 2010/47L  | China Civil Engineering (PTY) Ltd                  | Gravel   | 26-May-10 | 25-Nov-10       | 70673.156 sq m  |
| 347 | 2010/3L   | China Civil Engineering Construction (PTY) Ltd     | Gravel   | 26-May-10 | 25-Jan-11       | 22289.907 sq m  |
| 348 | 2010/2L   | China Civil Engineering Construction (PTY) Ltd     | Gravel   | 16-Mar-10 | 15-Mar-11       | 43212.738 sq m  |
| 349 | 2009/92L  | CCTW Joint Venture                                 | Gravel   | 16-Nov-09 | 15-Nov-11       | 26129.141 sq m  |
| 350 | 2009/86L  | China Civil Engineering Construction (PTY) Ltd     | Gravel   | 14-Aug-09 | 13-Aug-11       | 72367.352 sq m  |
| 351 | 2009/86L  | China Civil Engineering Construction (PTY) Ltd     | Gravel   | 14-Aug-09 | 13-Aug-11       | 72367.352 sq m  |
| 352 | 2009/85L  | China Civil Engineering Construction (PTY) Ltd     | Gravel   | 14-Aug-09 | 13-Aug-11       | 63754.107 sq m  |

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|-----|-----------|--|-----------|-----------|-----------|------------------|
| 368 | 2009/84L  | China Civil Engineering Construction (PTY) Ltd | Gravel    | 14-Aug-09 | 15-Aug-11 | 33423.207 sq m   |
| 369 | 2009/83L  | China Civil Engineering Construction (PTY) Ltd | Gravel    | 14-Aug-09 | 13-Aug-11 | 14382.965 sq m   |
| 370 | 2009/82L  | China Civil Engineering Construction (PTY) Ltd | Gravel    | 14-Aug-09 | 13-Aug-11 | 33474.634 sq m   |
| 371 | 2009/81L  | China Civil Engineering Construction (PTY) Ltd | Gravel    | 14-Aug-09 | 13-Aug-11 | 38593.434 sq m   |
| 372 | 2009/80L  | China Civil Engineering Construction (PTY) Ltd | Gravel    | 14-Aug-09 | 13-Aug-11 | 56953.206 sq m   |
| 373 | 2009/79L  | China Civil Engineering Construction (PTY) Ltd | Gravel    | 14-Aug-09 | 13-Aug-11 | 41538.250 sq m   |
| 374 | 2009/65L  | China Civil Engineering Construction (PTY) Ltd | Gravel    | 6-Aug-09  | 5-Aug-11  | 9456.732 sq m    |
| 375 | 2009/56L  | China Civil Engineering (PTY) Ltd              | Gravel    | 23-Jun-09 | 23-Jun-11 | 59544.536 sq m   |
| 376 | 2009/53L  | China Civil Engineering Construction           | Gravel    | 8-Jun-09  | 7-Jun-11  | 8874.665 sq m    |
| 377 | 2009/52L  | China Civil Engineering Construction           | Gravel    | 8-Jun-09  | 7-Jun-11  | 30367.527 sq m   |
| 378 | 2009/52L  | China Civil Engineering Construction           | Gravel    | 8-Jun-09  | 7-Jun-11  | 44838.320 sq m   |
| 379 | 2009/50L  | China Civil Engineering (PTY) Ltd              | Gravel    | 8-Jun-09  | 7-Jun-11  | 81503.789 sq m   |
| 380 | 2009/49L  | China Civil Engineering (PTY) Ltd              | Gravel    | 8-Jun-09  | 7-Jun-11  | 27542.577 sq m   |
| 381 | 2009/16L  | China Civil Engineering (PTY) Ltd              | Gravel    | 26-Feb-09 | 25-Feb-10 | 5197.618 sq m    |
| 382 | 2010/21P  | Champion Construction                          | Gravel    | 27-Apr-10 | 26-Apr-11 | 2377.862 sq m    |
| 383 | 2009/131P | Champion Construction (PTY) Ltd                | R/Sand    | 15-Dec-09 | 14-Dec-10 | 1324.783 sq m    |
| 384 | 2010/53L  | CGC Botswana (PTY) Ltd                         | Gravel    | 7-Jun-10  | 6-Jun-11  | 20986.602 sq m   |
| 385 | 2010/28L  | CGC Botswana (PTY) Ltd                         | Gravel    | 26-Mar-10 | 25-Mar-11 | 29050.885 sq m   |
| 386 | 2010/28L  | CGC Botswana (PTY) Ltd                         | Gravel    | 26-Mar-10 | 25-Mar-11 | 34589.277 sq m   |
| 387 | 2009/17P  | Thiite Rubble Screeners (PTY) Ltd              | Gravel    | 13-Mar-09 | 12-Oct-09 | 2392.894 sq m    |
| 388 | 2009/20L  | CSC & EC (PTY) Ltd                             | Gravel    | 3-Jul-09  | 3-Jul-11  | 33611.235 sq m   |
| 389 | 2009/19L  | Central District Coucil                        | Gravel    | 10-Mar-09 | 9-Mar-12  | 7256.818 sq m    |
| 390 | 2009/18L  | Central District Coucil                        | Gravel    | 10-Mar-09 | 9-Mar-12  | 12024.917 sq m   |
| 391 | 2009/95L  | CCTW Joint Venture                             | Gravel    | 16-Nov-09 | 15-Nov-11 | 13992.043 sq m   |
| 392 | 2009/94L  | CCTW Joint Venture                             | Gravel    | 16-Nov-09 | 15-Nov-11 | 60205.245 sq m   |
| 393 | 2009/93L  | CCTW Joint Venture                             | Gravel    | 16-Nov-09 | 15-Nov-11 | 9751.141 sq m    |
| 394 | 2009/21L  | Consolidated Contractors Company (PTY) Ltd     | Gravel    | 13-Feb-09 | 12-Feb-10 | 24917.500 sq m   |
| 395 | 2010/44P  | Calvin Thomelang                               | R/Sand    | 29-Dec-10 | 28-Dec-11 | 6811.819 sq m    |
| 396 | 2010/42P  | C. N Transport and Plant Hire (Pty)Ltd         | R/Sand    | 25-Jan-11 | 24-Jan-12 | 8792.141 sq m    |
| 397 | 2009/5P   | Bulk Earth (PTY) Ltd                           | R/Sand    | 19-Feb-09 | 18-Feb-11 | 22804.736 sq m   |
| 398 | 2009/53P  | BSA Constructipon (PTY) Ltd                    | Pit Sand  | 13-Jul-09 | 12-Jul-10 | 1137.261 sq m    |
| 399 | 2010/70L  | Bokaa Enterprises (PTY) Ltd                    | Aggregate | 9-Sep-10  | 8-Sep-20  | 322362.098 sq m  |
| 400 | 2010/1P   | Boitumelo Mompe                                | R/Sand    | 21-Jan-10 | 20-Jan-11 | 11463.399 sq m   |
| 401 | 2009/2P   | Biki M. Letsholo                               | Gravel    | 14-Jan-09 | 13-Jan-11 | 53984.000 sq m   |
| 402 | 2008/78L  | BDC  | Silica    | 26-Nov-08 | 25-Nov-33 | 2414770.198 sq m |
| 403 | 2010/4L   | Bcl Limited (PTY)Ltd                           | R/Sand    | 2-Feb-10  | 1-Feb-12  | 324280.797 sq m  |
| 404 | 2008/38P  | Bathusi Babutsi                                | R/Sand    | 22-Jan-09 | 21-Jan-11 | 5333.557 sq m    |
| 405 | 2009/97P  | Basimane Oepeng                                | R/Sand    | 12-Aug-09 | 11-Aug-10 | 1648.500 sq m    |
| 406 | 2009/87L  | Bash Carriers (PTY) Ltd                        | Gravel    | 8-Jul-09  | 8-Jul-11  | 38960.388 sq m   |
| 407 | 2009/86L  | Bash Carriers (PTY) Ltd                        | Gravel    | 8-Jul-09  | 8-Jul-11  | 30769.175 sq m   |
| 408 | 2009/85L  | Bash Carriers (PTY) Ltd                        | Gravel    | 8-Jul-09  | 8-Jul-11  | 36577.412 sq m   |
| 409 | 2009/84P  | Bash Carriers (PTY) Ltd                        | Gravel    | 8-Jul-09  | 8-Jul-11  | 38686.577 sq m   |
| 410 | 2009/12P  | Bash Carriers (PTY) Ltd                        | Gravel    | 8-Jul-09  | 8-Jul-11  | 51435.027 sq m   |
| 411 | 2009/117P | Baraka Investment (PTY) Ltd                    | Gravel    | 6-May-10  | 5-Feb-11  | 5606.712 sq m    |
| 412 | 2009/65P  | Bango Trading (PTY) Ltd                        | Gravel    | 20-May-09 | 19-Jan-10 | 9545.986 sq m    |
| 413 | 2009/95P  | Thapelo Kgosiayang                             | Gravel    | 19-Aug-09 | 18-Aug-10 | 4508.910 sq m    |
| 414 | 2009/64P  | Bango Trading (PTY) Ltd                        | Gravel    | 20-May-09 | 19-Jan-10 | 40360.723 sq m   |
| 415 | 2009/101P | Banco Enterprises (PTY) Ltd                    | Gravel    | 25-Sep-09 | 24-Mar-10 | 22701.491 sq m   |
| 416 | 2008/53P  | Banabolthe Keloneilwe                          | R/Sand    | 22-Jan-09 | 21-Jan-11 | 5823.765 sq m    |
| 417 | 2009/22P  | Badisa Jonny Morake                            | Pit Sand  | 11-Mar-09 | 10-Mar-10 | 3042.000 sq m    |
| 418 | 2009/82P  | Arcturus Products (PTY) Ltd                    | Gravel    | 29-Jun-09 | 28-Jun-11 | 44794.189 sq m   |
| 419 | 2009/83P  | Arcturus Products (PTY) Ltd                    | Gravel    | 29-Jun-09 | 28-Jun-11 | 13392.168 sq m   |
| 420 | 2009/13P  | Amogelang Investment (PTY) Ltd                 | Gravel    | 27-Feb-09 | 26-Aug-09 | 14614.774 sq m   |
| 421 | 2010/15P  | Agang Holdings (PTY) Ltd                       | R/Sand    | 11-Apr-11 | 11-Apr-11 | 12434.528 sq m   |
| 422 | 2006/13P  | Ideal Enterprises                              | Gravel    | 6-Apr-10  | 1-Sep-08  | 72734.909 sq m   |
| 423 | 2008/8P   | Mod Services (PTY) Ltd                         | Gravel    | 1-Sep-08  | 31-Aug-09 | 72734.909 sq m   |
| 424 | 2008/48L  | Sinohydro Botswana (PTY) Ltd                   | Gravel    | 20-Mar-08 | 19-Mar-08 | 18026.218 sq m   |
| 425 | 2008/49L  | Sinohydro Botswana (PTY) Ltd                   | Gravel    | 28-May-08 | 27-May-13 | 2345427.433 sq m |
|     |           |  |           | 24-Jun-08 | 23-Jun-10 | 644781.299 sq m  |

|     |          |  |             |           |           |                  |
|-----|----------|--|-------------|-----------|-----------|------------------|
| 426 | 2008/46L | Sinohydro Botswana (PTY) Ltd             | Gravel      | 24-Jun-08 | 23-Jun-10 | 317796.00/ sq m  |
| 427 | 2008/47L | Sinohydro Botswana (PTY) Ltd             | Gravel      | 24-Jun-08 | 23-Jun-10 | 557070.055 sq m  |
| 428 | 2004/13P | Kgolagano Building Contractors           | Gravel      | 7-Jun-04  | 6-Jun-05  | 12662.487 sq m   |
| 429 | 2008/43L | Unik Construction Engineering            | Gravel      | 18-Apr-08 | 17-Apr-11 | 51723.699 sq m   |
| 430 | 2008/74L | Invaders Building Construction           | Gravel      | 1-Sep-08  | 31-Aug-09 | 4739.832 sq m    |
| 431 | 91/3R    | Kalahari Floor Tiles                     | Ground Sand | 11-Sep-07 | 10-Sep-12 | 69048.732 sq m   |
| 432 | 2006/51L | Makoro Brick & Tile                      | Granite     | 6-Dec-07  | 6-Dec-12  | 67445.029 sq m   |
| 433 | 2006/51L | Makoro Brick & Tile                      | Granite     | 6-Dec-07  | 6-Dec-12  | 1313076.634 sq m |
| 434 | 2005/20P | Botlhokwa Products                       | R/Sand      | 8-Aug-05  | 7-Aug-07  | 18897.534 sq m   |
| 435 | 2009/27P | Seemise Seabelo Contractors              | R/Sand      | 20-Jun-09 | 21-Dec-09 | 11219.282 sq m   |
| 436 | 2008/69L | Devre Trans                              | R/Sand      | 10-Sep-09 | 9-Sep-10  | 8829.352 sq m    |
| 437 | 2004/36L | China Jiangsu International Botswana     | R/Sand      | 14-Mar-06 | 13-Mar-07 | 8853.658 sq m    |
| 438 | 2009/40P | Consolidated Contractors Company         | R/Sand      | 28-Mar-08 | 27-Mar-10 | 28895.866 sq m   |
| 439 | 2007/32L | Consolidated Contractors Company         | Gravel      | 28-Mar-08 | 27-Mar-10 | 155399.624 sq m  |
| 440 | 2004/35L | China Jiangsu International Botswana     | Gravel      | 14-Mar-06 | 13-Mar-10 | 48845.596 sq m   |
| 441 | 2003/45P | Bash Carriers (PTY) Ltd                  | Gravel      | 26-Aug-03 | 30-Nov-03 | 2839.429 sq m    |
| 442 | 2004/29L | Complant Botswana                        | Gravel      | 20-Sep-04 | 19-Sep-03 | 17876.963 sq m   |
| 443 | 2005/13P | Mahalapye Sub District Council           | Gravel      | 12-May-05 | 11-May-06 | 6810.177 sq m    |
| 444 | 2005/4P  | Warthog Civil Engineering                | Gravel      | 14-Feb-05 | 13-Feb-06 | 3405.102 sq m    |
| 445 | 2009/27P | Seemise Seabelo Contractors              | Gravel      | 20-Jun-09 | 21-Dec-09 | 22463.480 sq m   |
| 446 | 2009/69P | Isabel Holdings (PTY) Ltd                | Gravel      | 3-Apr-09  | 2-Sep-09  | 15329.672 sq m   |
| 447 | 2011/9P  | Mopati Masoloko                          | R/Sand      | 4-May-11  | 3-May-12  | 4196.202 sq m    |
| 448 | 2011/6P  | Luke Gaonewe                             | R/Sand      | 4-Feb-11  | 3-Feb-12  | 5267.755 sq m    |
| 449 | 2011/8P  | Sands and Soil Investments               | R/Sand      | 15-Mar-11 | 14-Mar-12 | 7686.650 sq m    |
| 450 | 2011/5P  | Joseph Kelerile                          | R/Sand      | 4-Feb-11  | 3-Feb-12  | 5492.834 sq m    |
| 451 | 2011/4P  | Kagiso Kesetse                           | R/Sand      | 11-Feb-11 | 10-Feb-12 | 4870.210 sq m    |
| 452 | 2011/3P  | Leloba V. Kalane                         | R/Sand      | 11-Feb-11 | 10-Feb-12 | 4000.859 sq m    |
| 453 | 2011/10P | Mary Mokadinyana                         | R/Sand      | 11-Apr-11 | 10-Apr-12 | 4013.556 sq m    |
| 454 | 2011/12P | Keatametse Sampisi                       | R/Sand      | 20-Jun-11 | 19-Jun-12 | 3083.785 sq m    |
| 455 | 2011/13P | Thagaphoka (PTY) Ltd                     | R/Sand      | 27-Apr-11 | 26-Apr-12 | 1868.803 sq m    |
| 456 | 2009/22L | Sinohydro Botswana (PTY) Ltd             | Gravel      | 13-Mar-09 | 12-Mar-12 | 56954.758 sq m   |
| 457 | 2009/59L | Sladden International Botswana (PTY) Ltd | Gravel      | 29-Jun-09 | 28-Jun-11 | 78954.271 sq m   |
| 458 | 2011/2L  | Sladden International Botswana (PTY) Ltd | Gravel      | 6-Jun-11  | 5-Aug-12  | 39809.454 sq m   |
| 459 | 2010/94L | Desert Investment (PTY) Ltd              | Aggregate   | 25-Jan-11 | 24-Jan-16 | 63516.626 sq m   |
| 460 | 2004/32L | Panda Quarry                             | Aggregate   | 2-Dec-09  | 1-Dec-14  | 1387132.487 sq m |
| 461 | 2008/63L | TEC (PTY) Ltd                            | Gravel      | 11-Jun-08 | 10-Jun-10 | 1559569.971 sq m |
| 462 | 99/1R    | Nortex Management Services               | Aggregate   | 15-Jul-99 | 14-Jul-14 | 543077.486 sq m  |
| 463 | 2004/6L  | Quarries of Botswana (PTY) Ltd           | Granite     | 13-Feb-04 | 12-Feb-24 | 283309.856 sq m  |
| 464 | 2005/51L | Earthmovers (PTY) Ltd                    | Gravel      | 22-Sep-05 | 21-Sep-06 | 4147.571 sq m    |
| 465 | 2005/56L | Gaborone City Council                    | Pit Sand    | 12-Dec-05 | 11-Dec-06 | 44572.495 sq m   |
| 466 | 2003/69P | Millenium Estate Agents (PTY) Ltd        | Gravel      | 23-Dec-03 | 29-Feb-04 | 2858.446 sq m    |
| 467 | 2006/9P  | DHB Transport (PTY) Ltd                  | Gravel      | 9-Jun-06  | 8-Jun-07  | 9497.058 sq m    |
| 468 | 2003/32L | Belabela Quarry                          | Aggregate   | 14-Oct-03 | 13-Oct-09 | 237841.339 sq m  |
| 469 | 2004/39P | Mr. G.N Morapedi                         | Gravel      | 15-Nov-05 | 14-Nov-07 | 113187.762 sq m  |
| 470 | 91/3R    | Kalahari Floor Tiles                     | Ground Sand | 11-Sep-07 | 10-Sep-12 | 29653.221 sq m   |
| 471 | 2005/43L | Arab Contractors Botswana (PTY) Ltd      | Siltstone   | 28-Jul-05 | 27-Jul-08 | 32610.254 sq m   |
| 472 | 2005/29L | Arab Contractors Botswana (PTY) Ltd      | Gravel      | 28-Jul-05 | 27-Jul-08 | 46591.042 sq m   |
| 473 | 2005/47L | Arab Contractors Botswana (PTY) Ltd      | Gravel      | 31-Aug-05 | 30-Aug-08 | 21455.496 sq m   |
| 474 | 2006/28L | Arab Contractors Botswana (PTY) Ltd      | Gravel      | 28-Jul-05 | 27-Jul-08 | 52261.419 sq m   |
| 475 | 2005/33L | Arab Contractors Botswana (PTY) Ltd      | Gravel      | 28-Jul-05 | 27-Jul-08 | 30242.983 sq m   |
| 476 | 2005/48L | Arab Contractors Botswana (PTY) Ltd      | Gravel      | 31-Aug-05 | 30-Aug-08 | 69058.483 sq m   |
| 477 | 2005/43L | Arab Contractors Botswana (PTY) Ltd      | Gravel      | 28-Jul-05 | 27-Jul-08 | 123086.965 sq m  |
| 478 | 2005/46L | Arab Contractors Botswana (PTY) Ltd      | Gravel      | 31-Aug-05 | 30-Aug-08 | 107787.122 sq m  |
| 479 | 2009/73P | Tic-Mas Investment                       | Gravel      | 4-Jun-09  | 3-Jun-10  | 1923.906 sq m    |
| 480 | 2011/16P | Lorato Moletsane Mosata                  | Gravel      | 4-Jul-11  | 3-Jul-13  | 10219.315 sq m   |
| 481 | 2011/14P | Hard Times Investment                    | Gravel      | 8-Jul-11  | 7-Jul-12  | 7814.752 sq m    |
| 482 | 2011/8L  | CGC Botswana (PTY) Ltd                   | Gravel      | 16-May-11 | 15-May-13 | 36556.654 sq m   |
| 483 | 2011/3L  | Sladden International Botswana (PTY) Ltd | Gravel      | 6-Jun-11  | 5-Jun-12  | 28621.885 sq m   |

|      |          |                              |        |           |           |                 |
|------|----------|------------------------------|--------|-----------|-----------|-----------------|
| 2434 | 2011/11P | Keaieboga Mphetolang         | R/Sand | 11-Apr-11 | 10-Apr-12 | 4074.229 sq m   |
| 435  | 2011/2P  | Lilian Mmasadi Kalane        | R/Sand | 11-Feb-11 | 10-Feb-12 | 2992.997 sq m   |
| 436  | 2011/17P | David Mapitse                | R/Sand | 8-Jul-11  | 7-Dec-11  | 3228.000 sq m   |
| 437  | 2011/15P | Deborah Mapitse              | R/Sand | 4-Jul-11  | 7-Nov-11  | 2292.500 sq m   |
| 438  | 2011/18P | Mosalagae M. Sesupeng        | Gravel | 3-Jul-11  | 4-Jul-13  | 19581.753 sq m  |
| 439  | 2011/19P | Sunrise Industries (PTY) Ltd | Gravel | 24-Jul-11 | 23-Jul-12 | 18365.325 sq m  |
| 440  | 2011/12L | Unik Construction (PTY) Ltd  | Gravel |           |           | 64781.575 sq m  |
| 441  | 2011/11L | Sinohydro Botswana (PTY) Ltd | Gravel |           |           | 13002.311 sq m  |
| 442  | 2001/13L | Landwards (PTY) Ltd          | Stone  |           |           | 542547.401 sq m |
| 443  | 2010/79L | DTD (PTY) Ltd                | Gravel |           |           | 163180.874 sq m |

## Annexure 8

**TABLE:4**

| Total No. of vehicles |   | No. of vehicles available & usable | Desirable fleet for the Department | Boarded vehicles                | Last batch of new vehicles & No. | Accidents in the past 2 years   |
|-----------------------|---|------------------------------------|------------------------------------|---------------------------------|----------------------------------|---|
| Gabs                  | 8   | 6                                  | 10                                 | 1-Camry BX 036621 (in Jan 2012) | 2                                | <ul style="list-style-type: none"> <li>• Mahindra BX 118 144 (intending to board it)</li> <li>• Kia BX 10793501 (April 2011)</li> </ul> |
| F/Town                | 3 (most of the time in the garage, in Nov 2012) | 2                                  | 5                                  | 1-Nissan BX 0510                | 1                                |   |
| <b>Total</b>          | <b>11</b>                                       | <b>8</b>                           | <b>15</b>                          | <b>2- (on 16.05.12)</b>         | <b>3</b>                         |   |

Source: DoM's records

**ANNEXURE 9**

**KIA SORENTO BX 06 26 02**

| VEHICLE     | REGISTRATION NUMBER | DATE IN  | DATE OUT | TOTAL NO. OF DAYS TAKEN IN WORKSHOP | REASON                                     |
|-------------|---------------------|----------|----------|-------------------------------------|--|
| KIA SORENTO | BX 062602           | 07.04.09 | 07.05.09 | 31                                  | Starting problem                           |
|             |                     | 22.07.09 | 22.07.09 | 1                                   | General service                            |
|             |                     | 06.08.09 | 06.08.09 | 1                                   | Secure battery                             |
|             |                     | 03.09.09 | 03.09.09 | 1                                   | Replace left head lamp                     |
|             |                     | 03.09.09 | 10.09.09 | 8                                   | General service                            |
|             |                     | 21.09.09 | 21.09.09 | 1                                   | Replace front number plate                 |
|             |                     | 10.10.09 | 10.10.09 | 1                                   | General service                            |
|             |                     | 01.04.10 | 07.04.10 | 7                                   | General service                            |
|             |                     | 26.04.10 | 14.06.10 | 81(2months,20 days)                 | Attending to clutch system                 |
|             |                     | 27.07.10 | 28.07.10 |                                     |  |
|             |                     | 01.11.10 | 03.11.10 | 3 days                              | Check battery condition<br>General service |
|             |                     | 15.11.10 | 15.11.10 | 1                                   | Battery replacement                        |
|             |                     | 30.11.10 | 06.12.10 | 7                                   | General service                            |

Source: Vehicle log books (2009-2010)