



## Final Report

# Study to Identify and Assess the Resource and Operational System Requirements for the Delivery of an Effective Air Quality Management Service to the Sedibeng Region By the Sedibeng District Municipality



By:

**GONDWANA**   
ENVIRONMENTAL SOLUTIONS

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AUTHORS	SDM PSC

Gondwana Environmental Solutions (Pty) Ltd  
562 Ontdekkers road, Florida  
P.O Box 158  
1716, Florida Hills  
Tel: +27 11 472 3112  
Fax: +27 11 674 3705  
E-mail: [info@gesza.co.za](mailto:info@gesza.co.za)  
Web: [www.gondwanagroup.co.za](http://www.gondwanagroup.co.za)

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## List of Abbreviations

AAAS:	American Association for the Advancement of Science
AEL:	Atmospheric Emission Licence
AIR:	Atmospheric Impact Report
APPA:	Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965)
AQA:	National Environmental Management: Air Quality Act, 2004 (Act No.39 of 2004)
AQMP:	Air Quality Management Plan
AQO:	Air Quality Officer
CAPCO:	Chief Air Pollution Control Officer
CAPEX:	Capital Expenditure
CBD:	Central Business District
DANIDA:	Danish International Development Agency
DBSA:	Development Bank of South Africa
DEAT:	Department of Environmental Affairs and Tourism (replaced by DWEA)
DKK:	Danish Krone (currency)
DME:	Department of Minerals and Energy
DWEA:	Department of Water and Environmental Affairs
ECA:	Environment Conservation Act, 1989 (Act No. 73 of 1989)
EHP's:	Environmental Health Practitioners
EIA:	Environmental Impact assessment
EMI's:	Environmental Management Inspectors
GDACE:	Gauteng Department of Agriculture Conservation and Environment
GPS:	Global Positioning System
IDP:	Integrated Development Plan
JD's:	Job Descriptions
KMCSS:	Knowledge Management and Civil Society Support
LM:	Local Municipality
NAQAC:	National Air Quality Advisory Committee
NEAF:	National Environmental Advisory Forum
NEMA:	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NGO:	Non-Governmental Organisation
OPEX:	Operational Expenditure

PC:	Personal Computer (desktop)
PPE:	Personal Protective Equipment
PSC:	Project Steering Committee
RC:	Registration Certificates
RoD:	Record of Decision relating to the EIA process
SAAQIS:	South African Air Quality Information System
SAWS:	South African Weather Service
SDM AQM:	Sedibeng District Municipality Sub-directorate of Air Quality Management
SDM:	Sedibeng District Municipality
SEA:	Strategic Environmental Assessment
UEMP:	The Urban Environmental Management Programme projects
VTAPA:	Vaal Triangle Airshed Priority Area

## **Purpose of the Study**

### ***Background***

In terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (the AQA) the three spheres of government (National, Provincial and Local Governments) will share the responsibilities for air quality management in the Republic.

The national department is responsible for the national policy development and oversight, and implementation support to Provinces and Municipalities. The AQA makes provision for the development of national ambient air quality standards and listed activities and associated national minimum emission standards. The national department will be responsible for such standards. In addition, on 11 September 2007, the National Framework for Air Quality Management in South Africa was promulgated, which sets out norms and standards for various air quality management components (i.e. air quality – monitoring; -management planning; -information management etc.) to ensure compliance is achieved with national ambient air quality standards.

The Provinces will be responsible for provincial policy development and oversight, implementation support to municipalities and implementation of the atmospheric emission licensing system.

The main responsibility for municipalities is the implementation of the AQA. The AQA provides metropolitan, district and local municipalities with certain responsibilities such as, ambient air quality monitoring, development of air quality management plans and the implementation of atmospheric emission licensing. In order to fulfil these functions, municipalities must appoint a dedicated Air Quality Officer. In a situation where a local municipality do not have the capacity for air quality management, such functions may be delegated to the district municipality.

For the above functions, the SDM has embarked on this project to establish a sub-directorate for air quality management to fulfil its mandate (as a District municipality) in terms of the AQA. Sedibeng is one of the first district municipalities to undertake such a study to ensure they have capacity to fulfil their mandate in terms of the AQA. By being

one of the first municipalities to undertake such a study, SDM's implementation plans and procedures may be used as a guideline for other municipalities.

### ***Technical Overview***

The project's intention is to assist the SDM in accurately identifying the scope of the Air Quality management service it should be providing to the Sedibeng region and determining the resource requirements for delivering such a service.

The main objective is to provide a full range of air quality services. The project has three objectives to accomplish this:

1. The detailed identification and assessment of the resource and operational indications for the SDM to deliver an effective Air Quality Management service;
  - This includes clarification of the legal mandates for the spheres of government in terms of the AQA;
  - Effective organisational designs including its development of an AQ sub-directorate within SDM;
  - Focus on the post structuring, design, profiling;
  - Skill requirements of persons to fulfil the posts; and
  - Remuneration structures, etc.
2. To support the SDM's project manager in terms of managing the project efficiently and ensuring effective participation of all key stakeholders/participants;
3. The development of a guideline to support other institutions undertaking similar studies.

### ***Purpose of the Draft Report Document***

The purpose of the Draft Report is to provide an overview of the project as a whole and to lay out the various options for consideration by the stakeholders in terms of SDM delivering an effective air quality management service to the Sedibeng region.

## **Executive Summary**

The main responsibility for municipalities in terms of air quality management is the implementation of the AQA. The AQA provides metropolitan, district and local municipalities with certain responsibilities such as, ambient air quality monitoring, development of air quality management plans and the implementation of the atmospheric emission licensing.

SDM thus embarked on a project to accurately identifying the scope of the Air Quality management service it should be providing to the Sedibeng region and determining the resource requirements for delivering such a service

### ***Optimal Air Quality Management Service Definition***

In order for SDM to provide an optimal air quality management service (in alignment with the optimal air quality management service definition) to the Sedibeng region they will have to provide a full suite of air quality management services to include but not limited to the following:

- Atmospheric emission licensing (Act as the atmospheric emission licensing authority for the region),
- Monitor ambient air quality and point, non-point and mobile source emissions,
- Undertake compliance, monitoring and enforcement activities in regards to air quality management issues (including, permitting, licensing, EIA compliance, directive compliance etc) for the Sedibeng region,
- Responding to air quality complaints, and
- Undertaking any other air quality management related activities for the Sedibeng region.

### ***Gap analysis***

The full suite of AQM services (optimum services) is currently not being undertaken by the SDM, nor have these services been undertaken previously. There is an insufficient skills base (very few capacitated staff) within SDM to fulfil the new mandated functions. Furthermore there is no specific structured unit within the SDM to deal with the new

functions. Thus the SDM will have to expand their structure, capacity and asset base to allow for these new and additional functions to be undertaken.

The gap analysis also highlighted that the following processes still require completion:

- The Section 77 and 78 processes.
- The Section 80 processes need to be completed (agreements between SDM and the three local municipalities on SDM fulfilling the Local municipalities mandated functions)

### ***Analysis of the workload***

All industries with scheduled processes will have to be licenses by the AEL authority. In the Sedibeng region the following number of permits were encountered:

- SDM has 51 industries in total
- Emfuleni local municipality has 28 industries
- Midvaal local municipality has 17 industries
- Lesedi local municipality has 6 industries

Industries which are not scheduled processes will also have to be permitted however this will be undertaken via section 23 and 26 of AQA as controlled emitters. There is no quantification of the number of controlled emitters in the SDM region thus the exact workload cannot be calculated. Appeals to the AEL's will also form part of the workload, similarly these can't be quantified. Nevertheless, it is unlikely that the workload will be viable for each individual municipality to have their own full air quality unit. Rather it is envisaged sufficient workload to support one consolidated unit serving all three local municipalities and the SDM itself.

### ***Capacity assessment***

Currently the SDM does not have the capacity to absorb these new functions for the following reasons:

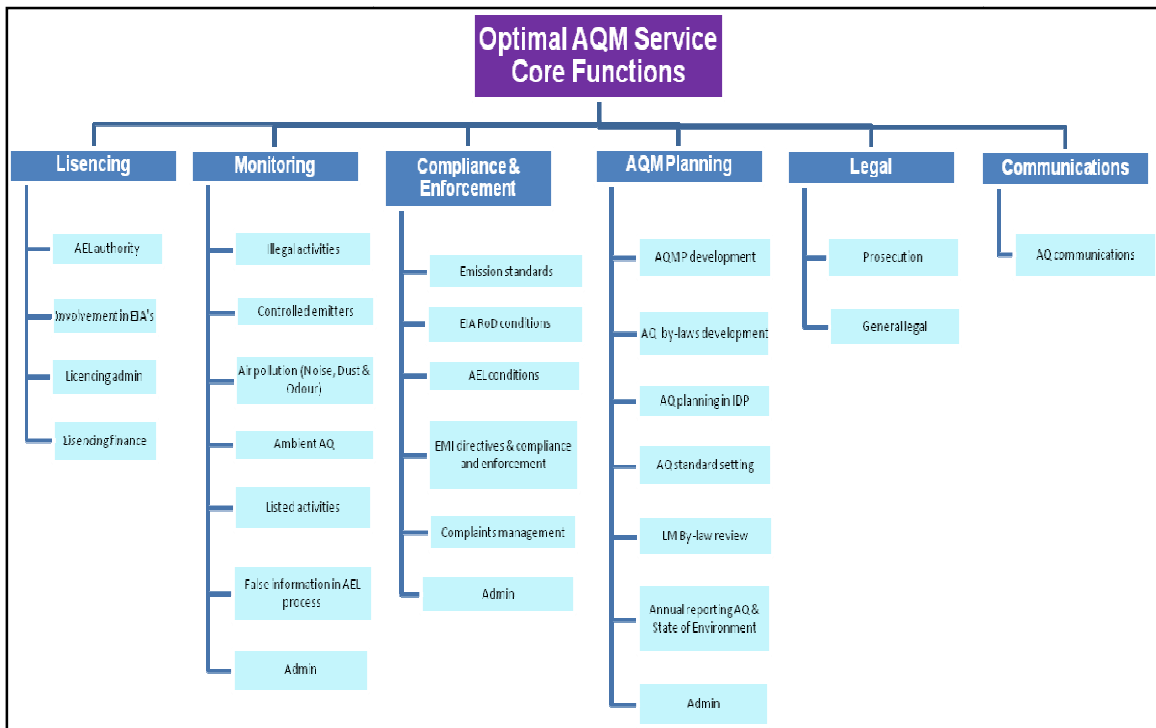
- There is only one person appointed to deal specifically with the AQM issues within SDM - Manager AQ.
- Insufficient capacitated and available staff in SDM with the required AQM skills
- No calibrations trained personnel are available for undertaking the calibrations and maintenance of the air quality monitoring stations. These activities will have to be outsourced until internal capacity is built.

- No allowance for easy addition new required posts in the current SDM organogramme
- A complete new sub-directorate dealing AQ will need to be inserted into the SDM current organogramme.
- By taking on these new mandated AQM functions, the SDM's current capacity and resources will be stretched even further
- By taking on certain new AQM functions, the local municipalities current capacity and resources will be stretched even further

Crucial that the SDM and the local municipalities expand their structures, capacity and asset base to allow for these new and additional functions to be undertaken.

**Core functional areas**

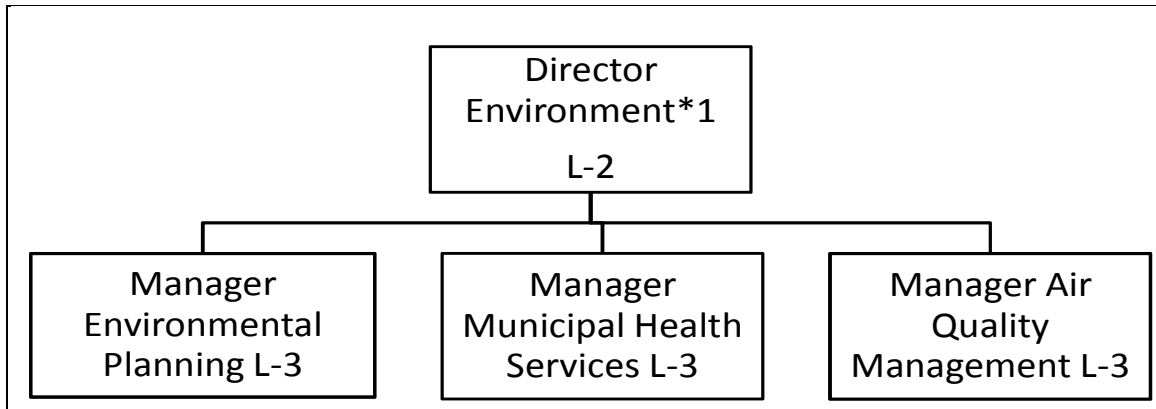
The following core functional areas were identified:



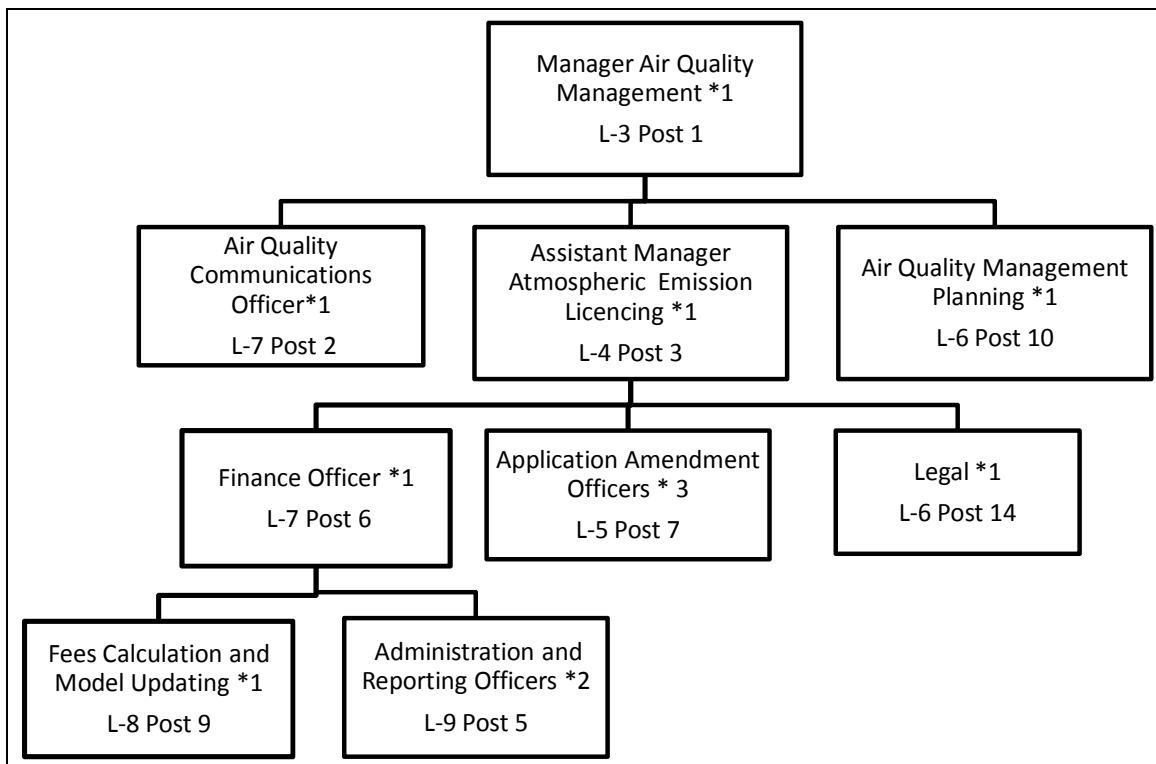
**Proposed organogramme options**

Based on the legal requirements in terms of executable, mandated functions, the following proposed organogrammes were developed for the respective unit options:

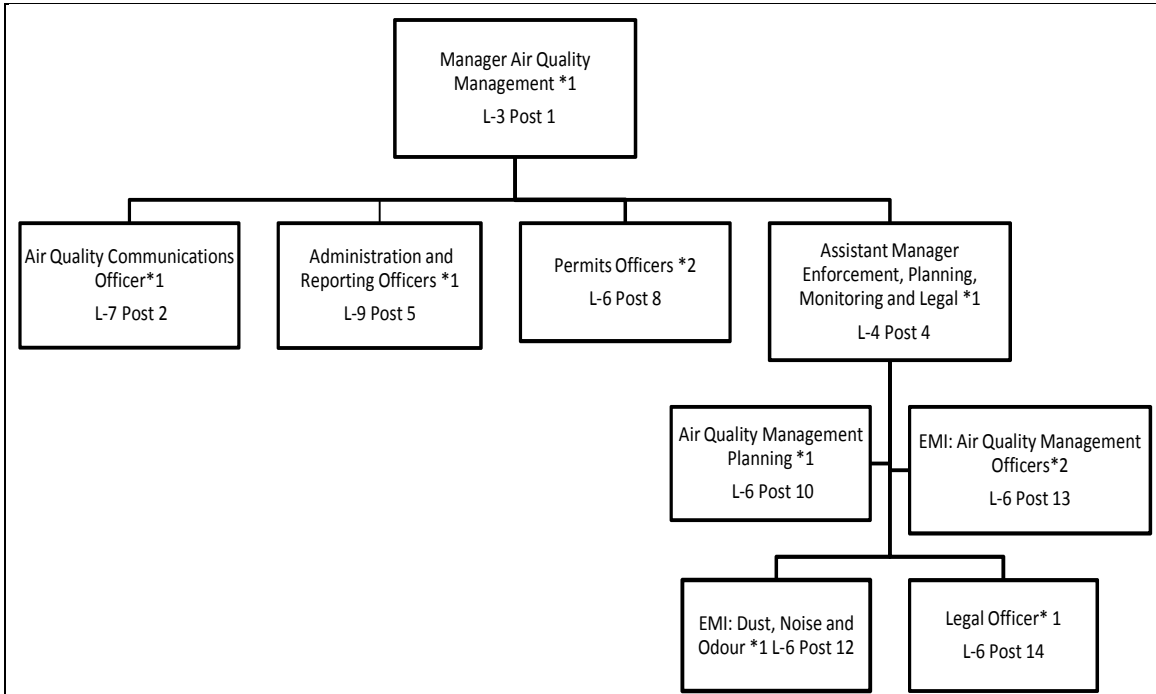
- Location of the proposed SDM Sub-directorate of Air quality management in the SDM structure



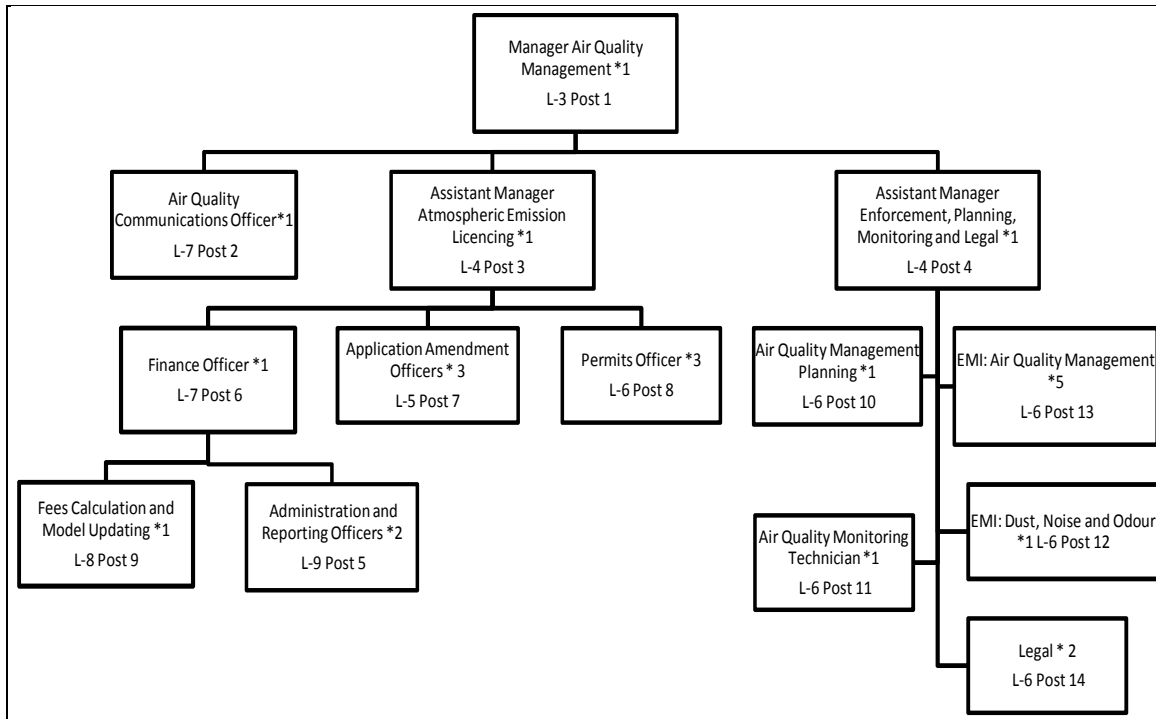
- Proposed option for SDM to undertake licensing only



- Proposed option for the local municipalities to undertake the general AQ services, licensing excluded.



- Proposed option for a multijurisdictional unit to undertake the general AQ services and licensing.



*Note: Dust, noise, odour issues are typically nuisance complaints. These may be allocated to the local municipalities if a memorandum of understanding is established between the SDM and the local municipalities.*

### **Estimation of income**

An estimate of the potential income was calculated via the DWEA license fee calculator's application with the current available information, which included the following:

- DWEA license fee calculator
- DWEA's estimate of the numbers of facilities throughout South Africa that will fall into the various licensing fee bands
- A review of the number of APPA permits in SDM region
- The permits and industries were determined from the APPA data base
- The assumption made is that the data on the database is valid and current

Based on this assessment, it was determined that irrespective of the organogramme option selected, the AQ unit/s will have to be funded via mechanisms other than the license fee calculator, as the fees generated through this mechanism will only become available in three years and furthermore, the fees generated will not be sufficient for the unit/s to be sustained.

### ***Recommendations***

Through the analysis and review of various sets of legislation, and considering the definition of the optimal air quality management service it is recommended that the SDM establish a multi-jurisdictional service utility for the Sedibeng region. It is also recommended that this multi-jurisdictional service utility be structured within the current SDM structure to form the SDM Sub-directorate of Air Quality Management (SDM AQM). However in order for this to be constitutionally compliant, the SDM will have to establish agreements with the local municipalities, thus allowing the SDM AQM to fulfill the legal mandate of the local municipalities as well as those for the SDM.

In terms of the recommendations it is clear that the SDM AQM will have to be funded via several mechanisms including the following:

- Municipal budgeting on a local and district level,
- Atmospheric emission license fees. However the fees generated through this mechanism will only become available in three years and furthermore, the fees will only supplement those as budgeted for under the municipal budgeting process,
- Any fees determined via the registration of controlled emitters, and
- Fees generated via any legal imposed fines on industries for noncompliance with the AEL's.

# **1. Introduction**

## **1.1 *Why is air quality and air quality management important***

Air quality can be defined as: the composition of air with respect to quantities of pollutants therein; used most frequently in connection with "standards" against which the contribution of the particular source can be compared. The air quality is evaluated and monitored in order to determine the extent of pollution in an area and, therefore, measures to reduce levels of pollutants in the air and improving the quality of the air.

Air quality and its management is important as it affects factors of life: the environment and the health of its inhabitants. For example acid deposition, eutrophication, smog, atmospheric ozone loss and the much aired greenhouse effect are some of the drastic effects of air pollution and poor air quality on the environment.

The human health effects of poor air quality are far reaching, but principally affect the body's respiratory system and the cardiovascular system. Individual reactions to air pollutants depend on the type of pollutant a person is exposed to, the degree of exposure, the individual's health status and genetics. The health effects caused by air pollutants may range from subtle biochemical and physiological changes to difficulty breathing, wheezing, coughing and aggravation of existing respiratory and cardiac conditions. These effects can result in increased medication use, increased doctor or emergency room visits, more hospital admissions and even premature death.

Air quality management is thus crucial as it is primarily the minimisation, management and prevention of air pollution, which aims to improve areas with poor air quality and maintain good air quality throughout.

## **1.2 *The Transition from APPA to AQA***

The approach to air quality management in South Africa was informed and regulated by the Atmospheric Pollution Prevention Act, 1965 (Act No. 45 of 1965) (APPA). For many years, this Act has been regarded as being outdated for a number of reasons:

- It cannot accommodate the constitutional allocation of functions in respect of the role of provincial and local government;

- It has inadequate compliance and enforcement mechanisms to implement the Act effectively; and
- Lack of transparency in decision-making.

The National Environment Management: Air Quality Act (Act No. 39 of 2004) (AQA) must be interpreted and applied in accordance with its framework legislation, namely National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). The AQA will repeal the APPA and other legislation dealing with air pollution. In terms of the AQA, the Department of Water and Environment Affairs, the provincial environmental departments and municipalities are independently and jointly responsible for the implementation and enforcement of certain sections of the AQA. Each of these spheres of government is obliged to appoint an air quality officer. They are also required to co-operate with each other and co-ordinate their activities through mechanisms provided for in the NEMA.

## **2. Background**

### **2.1 *The Sedibeng region***

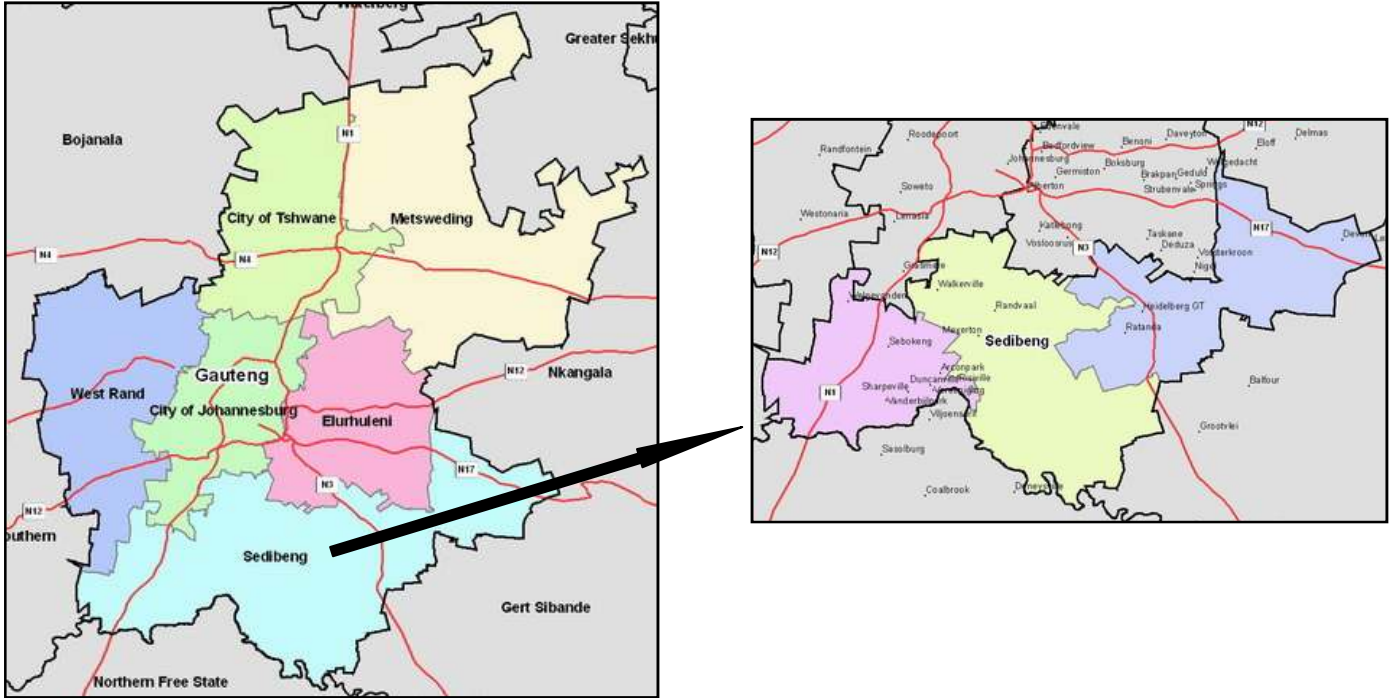
Sedibeng is situated in the southern-most part of the Gauteng Province (Figure 1), and includes the historic towns of Sharpeville and Vereeniging. Sedibeng covers the entire southern area of Gauteng Province, extending along 120 km axis from east to west. The geographical area of the municipality is approximately 4630km<sup>2</sup> (SDM IDP 2008/2009).

The Sedibeng District Municipality (SDM) comprises of three local municipalities namely:

- Emfuleni;
- Lesedi; and
- Midvaal.

The 2007-2011 IDP estimated the total population at approximately 843 006 for the SDM. According to Development Bank of South Africa (DBSA) (2006), the total population for SDM is 861 475 people based on Statistics SA Census 2001 projections. The population distribution in Sedibeng is skewed (Figure 2). Approximately 84% of the population lives in the Emfuleni Local Municipality which comprises approximately 28%

of the Sedibeng district. Lesedi Local Municipality has an approximate 9% of the population and comprises approximately 23% of the Sedibeng district. The Midvaal Local Municipality has the lowest population (approximately 7%) and comprises approximately 50% of the Sedibeng District.



**Figure 1: Locality of the Sedibeng region within the Gauteng province and locations of the three local municipalities (Emfuleni = pink, Lesedi = blue & Midvaal = yellow) within the SDM (Source: [www.demarcation.org.za](http://www.demarcation.org.za))**

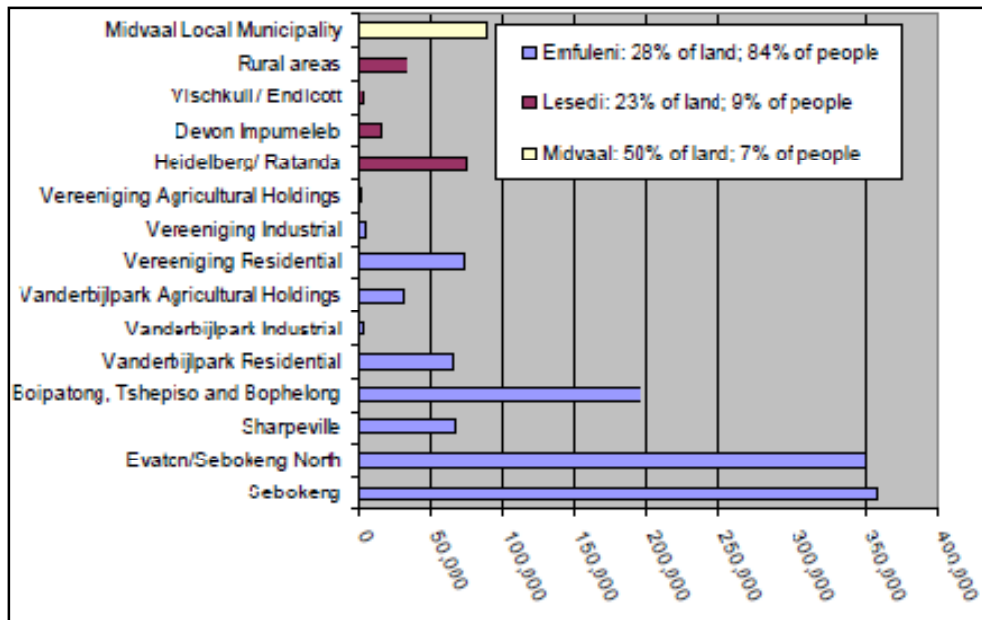


Figure 2: Population distribution in Sedibeng (SDM IDP 2008/2009)

## 2.2 Overview of Air Quality in the Sedibeng Region

Most of the Sedibeng District Municipality is located within the Vaal Triangle Airshed Priority Area (VTAPA) (Figure 3). The VTAPA was declared as a priority area due to the concern of elevated atmospheric pollutant concentrations within the area, specifically fine particulate matter.

Poor air quality in the region represents a key environmental challenge facing the Sedibeng District Municipality. Sources of emission include vehicle tailpipe emissions, domestic fuel combustion products, industrial releases, waste disposal related emissions, biomass burning emissions and fugitive dust emissions from vehicle-entrainment, materials handling and agricultural activities.

The impact of atmospheric emissions emanating from sources within the SDM have not only local but also regional and possible global implications. Local scale effects include impacts on human health and the biophysical environment due to exposures within the municipality. Atmospheric emissions from local sources however also impact on the air quality of neighbouring district municipalities (for example the Gert Sibanda and Northern Free State District Municipalities). The SDM may thus be considered a contributor to background air pollution concentrations within the Vaal Triangle region.

### ***2.3 SDM taking the lead in terms of their AQA Mandate***

The SDM is one of the first district municipalities to undertake a study to ensure they have capacity to fulfil their mandate in terms of the AQA. By being one of the first district municipalities to undertake such a study, Sedibeng's implementation plans and procedures may be used as a set of guidelines for other municipalities who embark on a similar process.

### ***2.4 Current Air Quality Initiatives in or impacting on the Sedibeng Region***

#### ***2.4.1 APPA Review Project***

DWEA is responsible for regulating all industries and other enterprises undertaking so-called "scheduled processes", i.e. processes, listed in the second schedule to the APPA which have the potential to release significant quantities of pollutants to the atmosphere. Industries are regulated through a system of Registration Certificates (RC), with RCs being regarded as authorisation to undertake scheduled processes and the operators of such processes required to comply with RC conditions.

The administration of RCs issued by DWEA in terms of the APPA will be replaced by the administration of Atmospheric Emissions Licenses for Listed Activities under the AQA. Atmospheric Emissions Licenses will be administered by the licensing authorities, namely, metropolitan and district municipalities, unless those municipalities have delegated their licensing function to the provincial environmental department or the metropolitan or district municipality is the operator of the listed activity.

The APPA, on 11 September 2009, will be repealed, in its entirety, by the AQA. On 11 September 2005 certain sections of the AQA came into operation, with the exclusion of the sections dealing with the licensing of listed activities.

Various stakeholders raised concerns regarding the efficacy of air quality management during the transition period from the current legislative regime, namely from APPA to AQA. Two of the main concerns relate to:

- the unacceptable time-lag in the tightening up of licenses in respect of significant polluters due to the handover of the licensing function from national to provincial and local government; and
- a fear that little, if any capacity exists within the provincial and local government to efficiently and effectively tighten up licenses in respect of significant polluters.

To address these concerns and facilitate a smooth and seamless transition from APPA to AQA, DWEA is implementing the APPA Review Project. The immediate project objectives are as follows:

*Objective A – Registration Certificate Information collection and collation*

*Objective B – Prioritisation of Registration Certificates for Review*

*Objective C – Review of Prioritised Registration Certificates*

*Objective D – Amendment of Prioritised Registration Certificates*

*Objective E – License Fee Protocol Development*

*Objective F – Capacity Development*

The project identified and prioritized seven industrial sectors. These include:

- Brickworks;
- Primary Aluminium;
- Ferro Alloys;
- Pulp & Paper;
- Iron & Steel;
- Petrochemical; and
- Coal-fired power stations.

The RCs of the seven sectors are currently being reviewed and amended by DWEA in conjunction with the future licensing authorities. Another important output of the project is the development of the atmospheric emission licence fee calculator by DWEA. The national department is currently finalising the licence fee calculator, supporting protocol and regulations. The main intention for developing the licence fee calculator at the national department is to provide for an administrative fees system that is fair, uniform and consistent across the Republic. The policy objective of the licence fee calculator is to give effect to the polluter pays principle as set out in section 2 of the NEMA. The

licence fee calculator will assist the licensing authorities in performing their licensing function effectively and efficiently. This licence fee calculator will be in place when APPA is repealed (11 September 2009).

#### **2.4.2 Vaal Triangle Airshed Priority Area AQMP Development Project**

The Minister of DEAT, now replaced by DWEA, declared the Vaal Triangle Airshed as the first national priority area in terms of section 18(1) of the AQA. The declaration was published under *Gazette No. 28732*, Notice No. 365 of 21 April 2006 (as amended by Notice No. 711 of 17 August 2007 as published in *Gazette No. 30164*). The Vaal Triangle Airshed Priority Area (VTAPA) was declared as a priority area due to the concern of elevated atmospheric pollutant concentrations within the area, specifically fine particulate matter. The geographical location of the VTAPA is provided in Figure 3.

In accordance with section 19 of the AQA, once the Minister declares an area as a priority area, the national air quality officer must prepare an Air Quality Management Plan (AQMP) for the area within a specific timeframe. The national air quality officer is required to prepare the AQMP after consulting the air quality officers of any affected province and municipalities. The main objective of the project was thus the development of an AQMP for the VTAPA and once implemented, the AQMP will be to bring the air quality of the area into sustainable compliance with national ambient air quality standards.

In terms of section 15(2) of the AQA each municipality is required to develop an AQMP. Such AQMP must be included in the municipality's integrated development plan (IDP) as contemplated in Chapter 5 of the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000) (Municipal Systems Act). SDM must thus prepare an AQMP for their region. Sedibeng's AQMP will thus have to achieve the following goals:

- improve ambient air quality;
- reduce negative impacts on human health and the environment;
- address the effects of domestic fuel burning;
- address the effects of emissions from industrial sources;
- address effects from emissions from any point or non-point sources of air pollution;

- implement the republic's obligations in respect of international agreements; and,
- give effect to best practice in air quality management.

Furthermore as the SDM is located within the VTAPA, its AQMP will have to be in alignment with the goals of the VTAPA AQMP.



Figure 3: The location of the VTAPA, which includes large portions of the Sedibeng region (VTAPA draft AQMP, 2008)

### ***2.4.3 National Listing of Activities and its Associated Minimum Emission Standards Setting Project***

In terms of section 21 of the AQA, the Minister has a legal obligation to publish a list of activities and associated minimum emission standards. These are the activities that will replace the scheduled processes identified in the Second Schedule to the APPA. The national listing of activities and associated minimum emission standards is critical to the licensing of listed activities, hence sections 21 and 22 and chapter 5 of the AQA are not yet in operation. For the following reason, the DWEA is currently developing and finalising the national list of activities and associated minimum emission standards. The national list of activities and associated minimum emission standards will be in place by 11 September 2009 (when APPA is repealed).

This project is intended to develop a nation wide list of activities and associated minimum emission standards. The list will include all the scheduled processes currently under APPA and any additional activities. The focus is on significant polluters that emit high levels of criteria pollutants, as set out in Table 23 of the National Framework for Air Quality Management in the Republic of South Africa. The criteria pollutants include namely, sulphur dioxide, nitrogen dioxide, ozone, carbon monoxide, lead, particulate matter and benzene.

The licensing authorities, including SDM, will rely heavily on this national list of activities and associated minimum emission standards when implementing the licensing function. As SDM is in the VTAPA, it is likely that they may have to include stricter emission standards in the licences of most of the industries operating at the priority area.

### ***2.4.4 Project Refinery and the Ferro Alloys Project***

This is a national environmental compliance monitoring campaign, focusing on the iron and steel and ferroalloy industries. The APPA Registration Certificate Review team is working closely with the Operation Ferro team regarding findings at site visits.

The projects are driven by the Chief Directorate: Regulatory Services, known as Environmental Management Inspectors (EMI) at DWEA. The focus is to identify any non-compliance with environment permits conditions (including air quality permits). Where non-compliance is identified, then enforcement mechanisms are initiated. Therefore, the

objectives are to monitor compliance and capacity building in compliance monitoring and enforcement at the provinces and municipalities. Site visits to industries are joint operations with provinces and municipalities officials. In addition, quarterly project meetings are held between the Chief Directorates Regulatory Services and Air Quality Management where certain air quality related findings from site inspections are discussed. SDM, if currently not involved in the project, should become involved on this committee as there are several iron and steel and ferroalloy industries within Sedibeng.

#### ***2.4.5 Model Air Quality Management By-Law Project***

DWEA, in response to requests by several municipalities, have identified the need to develop a model air quality management by-law for easy adoption and adaptation by municipalities. The main objective of this by-law is to ensure uniformity across the country in terms of air quality governance.

The model by-law is developed in line with the objectives and principles of the Constitution of the Republic of South Africa Act, 1996 (Act No. 108 of 1996), the NEMA and the AQA. They also cascade down to the municipalities functions in terms of the AQA in a clear and detailed manner. SDM will thus have to take cognisance of this model by-law in order to adopt and adapt them in terms of section 156(2) of the Constitution, to form a set of “tailor made” by-laws relevant to the SDM.

#### ***2.4.6 Manual for Air Quality Management Planning in South Africa Project***

The DWEA developed guidelines for the development of AQMPs in South Africa. The main purpose of this project was to develop a guideline document that can be used by national departments (including DWEA), provinces and municipalities in developing AQMPs. This project was completed in 2008 and the guideline document is available in one of DWEA’s Publication Series C: The Governance Information Series. The guideline document is thus important to the SDM as they are required to develop an AQMP for the Sedibeng region.

SDM’s AQMP must be aligned with the VTAPA AQMP. In addition, air quality management planning is a required chapter in an IDP. Furthermore, IDPs are submitted to the province for review and funding and thus it is crucial for the SDM to develop an AQMP for inclusion in their IDP as soon as possible.

#### **2.4.7 Air Quality Monitoring Project in the VTAPA with DWEA**

Air quality monitoring in the VTAPA is currently being undertaken by DWEA with six ambient air quality monitoring stations (industries monitoring stations excluded). The monitoring stations are (Figure 4):

❖ Diepkloof – Fons Luminus Secondary School

The Diepkloof monitoring station is located in close proximity to the Diepkloof interchange in Soweto. This site was selected primarily to determine the contribution to ambient air pollution from various air pollution sources such as domestic fuel burning, transportation related emissions (mainly from the N1 and N12) and mining activities. When southerly winds predominate, trans-boundary flow of pollutants from the Emfuleni Local Municipality to Soweto is expected.

❖ Sebokeng – Saul Tsotetsi Sport & Recreation Centre

The Sebokeng monitoring station is located in the northern parts of Sebokeng. This site was selected due to the extensive use of alternative energy sources for heating and cooking purposes. This site will be representative of pollutant concentrations associated with domestic fuel burning and give an indication of the potential human health impacts. Additionally, the impact of industries to the south may be accounted for at this site when southerly winds predominate.

❖ Sharpeville – Thutho Lore Secondary School

The Sharpeville monitoring station is located in Sharpeville. Domestic fuel burning is anticipated to be a significant source of emissions in the area. Also, Sharpeville is located between Vereeniging CBD and Vanderbijlpark, both of which have significant industrial areas.

❖ Kliprivier – Kliprivier Police Station

An additional monitoring station (the Kliprivier monitoring station) in Kliprivier has been identified on the boundary of the Midvaal Local Municipality and the Ekurhuleni Metropolitan Municipality. Alrode in Ekurhuleni is a major industrial area and emissions are anticipated to be transported across the Municipal

boundary. This site has been selected to be representative of trans-boundary pollution transport.

❖ Three Rivers – Riverside High School

Emissions from industries in the Vereeniging central business district are anticipated to be transported towards Three Rivers when winds originate from the north-west and south-west. The Three Rivers monitoring station can also serve as a reference site to determine trends in pollution levels in an area that is not highly influenced by domestic fuel burning emissions.

❖ Zamdela – Iketsetseng Secondary School

The Zamdela monitoring station is located to the south of Sasol in Zamdela. Emissions from industries in Zamdela as well as domestic fuel burning are anticipated to influence the air quality in this region. Significant sources of air pollution include Sasol Chemical Industries Complex, NATREF, Omnia Fertiliser, Karbochem, Safripol and Sigma Colliery, as well as the Wonderwater strip-mining operations.

Of the six monitoring stations, the SDM may be expected to take over the reins from DWEA for the Kliprivier, Sebokeng, Three Rivers and Sharpeville monitoring stations, as these stations fall within the SDM municipal boundaries. The SDM may thus become responsible for funding of these four stations to ensure that the data management, maintenance and calibrations are carried out after DWEA has handed the stations over.

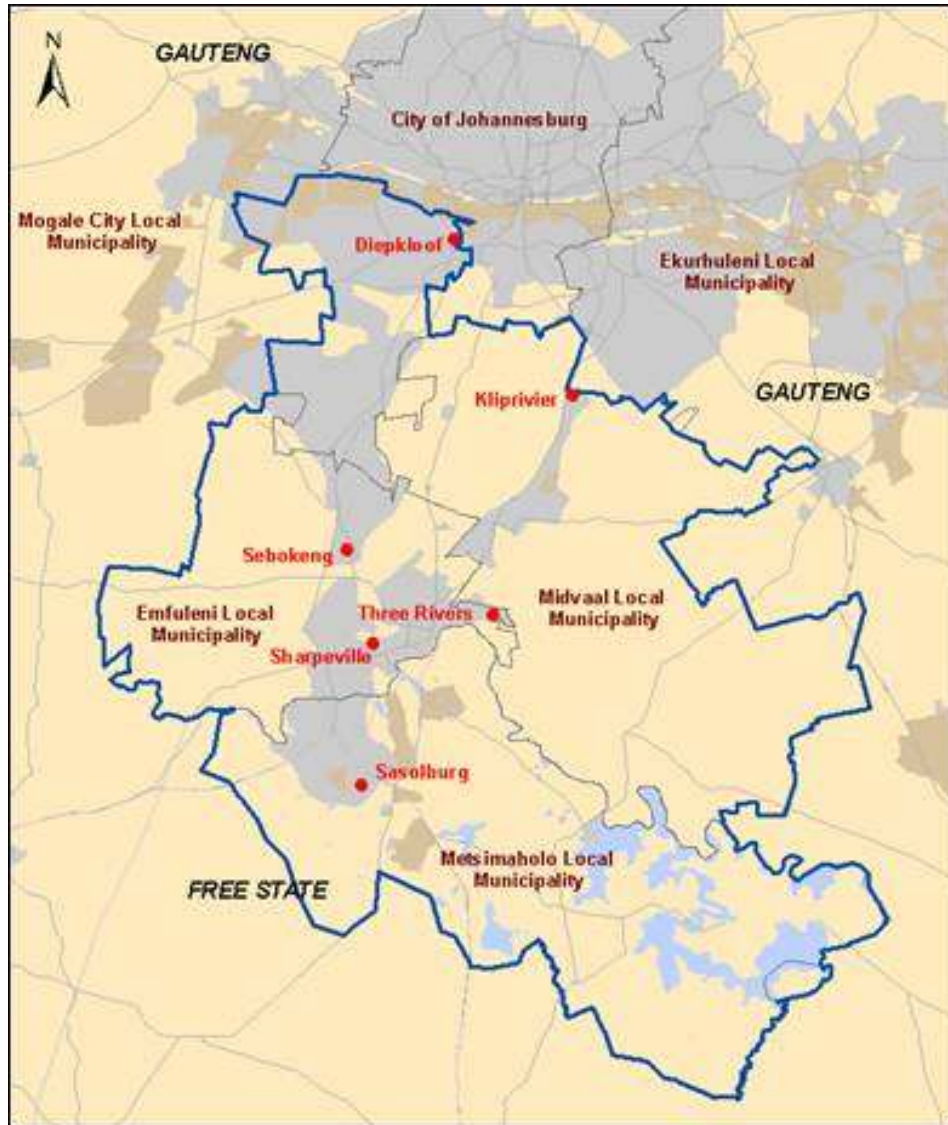


Figure 4: Location of the DWEA air quality monitoring stations within the VTAPA

#### ***2.4.8 South African Air Quality Information System (SAAQIS)***

DWEA and the South African Weather Service (SAWS) have initiated the development of the first national South African Air Quality Information System (SAAQIS). This partnership aims to ensure that the national and international obligations of government in respect of air quality are realised through the integration of all available air quality databases into a single database. SAWS have been appointed as the custodian of SAAQIS.

Their main objective is to implement a national air quality information system that provides accurate, current, relevant, complete and accessible information for informed decision-making that goes beyond compliance with national and international information management requirements and commitments. SAAQIS is intended to be used by a wide variety of stakeholders, including those who provide the air quality information and those who access it, such as the three spheres of government, environmental consulting companies, industry, non-governmental organisations (NGO's) and academic institutions, to name a few. SAAQIS will eventually provide a one-stop site for users to get an overview of what air quality information exists.

SAAQIS is a system that allows companies with emission licenses to log in their ambient and emissions data. The data is then validated and verified in terms of completeness, correctness and compliance.

Private citizens are able to access the air quality information about their area (the air quality Index and Health Alert – both providing information regarding the latest pollutant levels) and log/lodge incidents and any photographs supporting these incidents. The district from which the incidents are received, in this case Sedibeng, are then able to investigate the incident and if applicable check the emissions levels of the licensee at which the incident occurred.

#### ***2.4.9 Mintech Working Group II Meetings***

These forum meetings are part of the standing inter-governmental reporting and co-ordination structures between the three spheres of government. The DWEA meets with provincial air quality officer on a quarterly basis to discuss governance issues. Provinces are expected to meet with municipal air quality officers to discuss air quality governance issues. SDM is part of the Gauteng Province and should continue attending those Provincial-Municipalities Air Quality Officers Forums.

#### ***2.4.10 VTAPA AQMP Implementation Committee***

The VTAPA AQMP, establishes an implementation committee to monitor compliance with the AQMP. The two structures, namely, the VTAPA Multi-Stakeholder Reference Group and Air Quality Officers Forum are converted to establish the implementation

committee. As the SDM is part of the air quality officers' forum, it is essential that the SDM should always be involved in the activities of the implementation committee.

#### ***2.4.11 Integrated Action Plan to Address Air Quality in Dense, Low-income Communities - Development Project***

Air pollution in dense, low-income communities results largely from domestic fuel burning of coal, paraffin and wood for cooking and space-heating. This is a unique problem in comparison to industrial sources of atmospheric emission as the "victim" of the pollution in most cases is also the polluter. People living and working in these areas are thus often exposed to high levels of atmospheric pollution, which have adverse impacts on their health.

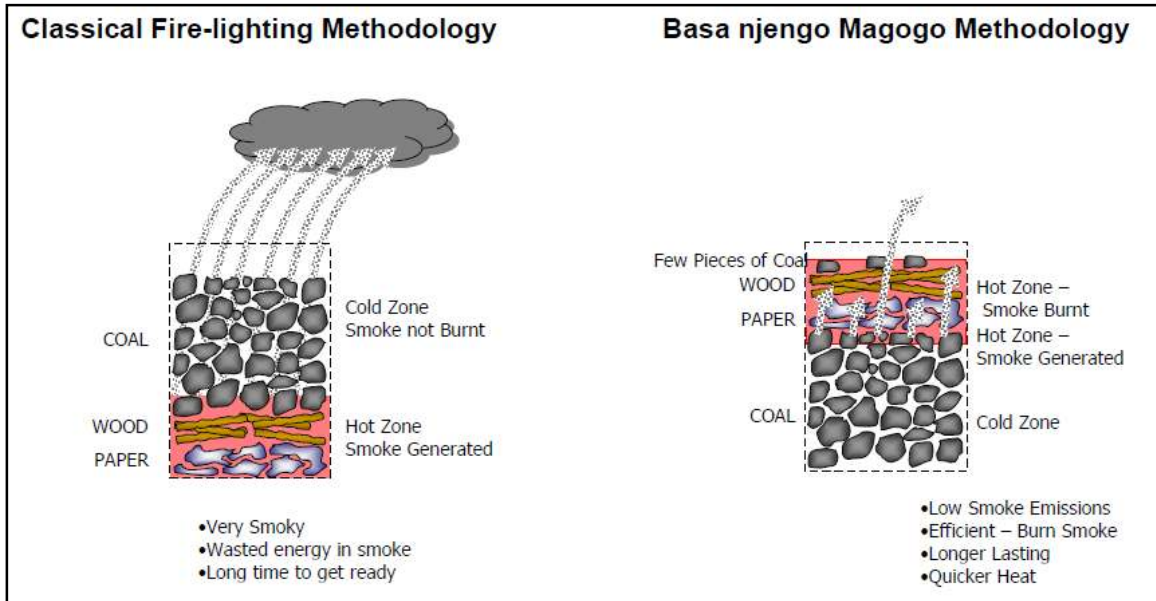
In order to effectively address this issue, all three spheres of government will have to work together and also potentially involve numerous other national departments including, for example:

- The Department of Health – indoor air quality;
- The Department of Minerals and Energy – cleaner fuels;
- The Department of Science and technology – cleaner, more efficient, fuel conversion technologies; and
- The Department of Housing – better insulation of low cost housing to reduce energy demand

Initially, no department was identified as the lead agent to facilitate and coordinate an integrated approach to dealing with this issue. In March 2007 DWEA lead a brainstorming session to develop an implementation strategy and action plans to address the issue of air pollution in dense, low-income communities. From this brainstorming session, DWEA, with its specific air quality management mandate, was selected to coordinate the development and implementation of the strategy and action plan.

One of the strategies and implementation plans which developed via this process was the "Clean Fires Campaign". This campaign focused on alternative fire lighting techniques such as the Basa Njengo Magogo method. The Basa Njengo Magogo fire lighting method dramatically reduced the generation of smoke and particulates from

domestic cooking and heating fires (Figure 5). The reduction of these emissions will improve both the indoor and ambient air quality and thus people’s health may be improved.



**Figure 5: Two alternative fire lighting techniques.**

The Sedibeng region does experience fairly high levels of domestic fuel burning and thus this integrated action plan to address air quality in dense, low-income communities is highly relevant to the SDM. The SDM, together with the local municipalities, must thus be a crucial role player in regards to this project and needs to work hand in hand with DWEA in this regard.

#### **2.4.12 Gauteng AQMP**

The Gauteng provincial government is currently involved in a project to develop the Gauteng AQMP. As the Sedibeng region falls within Gauteng, the SDM will have to take cognisance of this AQMP and the possible impact of this AQMP on the SDM.

It is strongly recommended that the SDM become involved in this project (if currently not involved) with the Gauteng provincial government due to the potential impacts on the SDM

#### **2.4.13 Management and maintenance of two Air Quality Monitoring Stations donated by GDACE**

The Gauteng Department of Agriculture, Conservation and Environment (GDACE) procured seven air quality monitoring stations of which two were donated to the Sedibeng District Municipality. These stations were commissioned with the assistance of Midvaal and Emfuleni in the respective municipalities. The assets were transferred to the SDM who is responsible for the management and maintenance of the stations.

These stations are currently operational but the staff responsible for the day to day management at the respective local municipalities are not skilled and do not have the capacity to maintain the stations in accordance with the specifications. They are currently unable to supply GDACE with the data on a monthly basis as originally agreed. These stations need to be incorporated into the monitoring network within the Sedibeng region.

### **3. Legal overview**

#### **3.1 Legal Review - Terms of Reference & Scope of Review**

In order to assist the SDM in accurately identifying the scope of the Air Quality management service it should be providing to the Sedibeng region, a legal review of several bodies of legislation was conducted to clarify the mandates for the various spheres of government. The legal review thus specific focussed on the following:

- The identity and nature of the district and local municipalities and their roles and functions. In this regard particular advise was requested in relation to:
  - The two services to be introduced, which should as a matter of law, properly fall within areas of competence of district and local municipalities respectively; and
  - How a district municipality may be empowered to render all the services that will make up an air quality management service as “air pollution” is

constitutionally and legislatively an exclusive local municipality area of competence.

- Guidance on how, district and local municipalities should comply with Part 2 of Chapter 8 of the Municipal Systems Act and in particular with sections 76 to 80. Reasons for undertaking this review are because there are compelling reasons why the district municipality may be required to render municipal services on behalf of its constituent local municipalities that are within local municipalities' exclusive areas of competence.
- Advice as how the provision of the Municipal Systems Act may be applied to empower and enable a district municipality to render an effective air quality management service.
- What a district municipality will be required to do in order to fulfil its role as an atmospheric emissions licensing authority.
- What constitutes and makes up an efficient air quality management service.
- How may an efficient air quality management service be rendered.

From the original written terms of reference from SDM, several deliverables in terms of the legal review are also stipulated. These include the following:

- A discussion of the requirements of sections 77 and 78 of the Municipal Systems Act as compliance therewith is mandatory.
- Clear identification of what at law an optimal air quality management service offered by a district municipality should be. This identification is directed based on:


- Legislation and other sources (the Constitution, the National Framework for Air Quality Management in the Republic of South Africa, the SAAQIS project etc); and
- Other activities and initiatives being implemented in the region etc.
- A clear identification and legal definition of what an air quality management service for the Sedibeng region would be.

### ***3.2 Constitutional Authority and Legal obligations analysis in terms of the Air Quality Act***

The legal analysis in terms of accurately identifying the scope of the air quality management service the SDM should be providing to the Sedibeng region is a fairly complex process. The process is complicated further due to several projects within the Sedibeng region (i.e. the VTAPA AQMP and Gauteng AQMP etc.), which also have legal requirements which must be met by the SDM in terms of providing air quality management service.

Please kindly refer to the legal review in Appendix A. Table 1 is the summary of the legal mandate in terms of the three spheres of government.

**Table 1: Legal Mandates Summary**

Legal Mandates Summary Table 							
Mandate	Source of mandate	Responsibility			Implications		Current services available
		DEAT	SDM	Local	Outputs	Activities	
AQA binds local and national government	AQA sect 4(2)(a)	X	X	X			
National Framework binding on local government	AQA sect 7(3)(a)		X	X	Must give effect to National Framework		None
Monitoring standards	AQA sect 8(a)	X	X	X	Compliant monitoring Standards	Air quality monitoring	None
Set local standards	AQA sect 11(a) & (b)		X	X	Optional bylaw standards	Drawing bylaw	None
Measurement methods	AQA sect 12	X	X	X	Methods	Execution	None
Appointment of an Air quality officer (AQO)	AQA sect 14(1),(2), &(3)	X	X	X	Designation of an AQO	Making of Designation	Appointment pending
AQMP in IDP	AQA sect 15(2)		X	X	AQMP	Prep & adoption of AQMP	Default
AQMP reports	Systems Act		X	X	Reports	Prep of Reports	Default
Input on priority AQMP	AQA sect 19(1)(a)		X	X	Comment on Priority AQMP	Making of Comment	None
Policing of list compliance	AQA sect 22	X	X	X	Initiation of complaints & prosecution	Civil & criminal proceedings	None as not in force
Controlled fuel compliance	AQA Sect 26	X	X	X	Initiation of complaints & prosecution	Civil & criminal proceedings	None as not in force
Monitoring of pollution	AQA Sect 29	X	X	X	Reports and complaints	Civil & criminal proceedings	None as no pollution preventions plans put in place by National or Province government
AQO asking AIRs	AQA Sect 30	X	X	X	AIRs from Atmospheric Emission License Holders	AIRs	None as AQO not yet mandated by SDM of Local Municipalities
Dust control	AQA Sect 32 & Municipal Bylaws	X	X	X	Compliance proceedings	Civil & Criminal action against offenders	None

**Table 1: Continued**

Dust control on mine	AQA Sect 33	X	X	X	Compliance Proceedings	Civil & Criminal action against offenders	None as Minister & MEC not acted in terms of sect
Dust & Noise Control	AQA sects 34 & 35 & Municipal Bylaws	X	X	X	Compliance Proceedings	Civil & Criminal action against offenders	None in terms of AQA
Listed Activity licensing system	Sect 22 of AQA & Chapter 5 of AQA		X		Establishment of Admin & employment of Staff	An operational unit	In progress
Appointment of Emission Control Officers	AQA Sect 48	X	X		AQO utilising section 48 to cause holder of emission license to appoint an Emission Control Officers	Appointment of an Emission Control Officers by Atmospheric Emission License Holder	None yet
Prosecution of Offenders ito of AQA sect 51	AQA Sect 51 and Common Law	X	X	X	Investigations, complaints & laying of charges	Criminal prosecutions by the National Prosecuting Authority	None yet
Use of transitional provs in sect 62 of AQA to convert APPA permits to AQA licenses	Sect 62 of AQA as read with AQA Chapter 5	X	X		Issue of AQA licenses	Invocation of review sects of AQA	In progress
Securing compliance with sect 24 of NEMA	NEMA & Sect 38(2) of AQA	X	X	X	Refusal or Grant of Environmental Authorisations after compliance	Compliance with AQA & NEMA	Part of functions of new service
Review of old bylaws & model bylaw project	NEMA, Systems & Structures Acts & the Constitution	X	X	X	New Environmental Bylaws	An efficient Air Quality Management Service that implements AQA	In progress
Establishment by Sedibeng District Municipality of Air Quality Service for the district	Sects 76 - 80 of Systems Act		X	X	An efficient Air Quality Management Service that implements AQA	Compliance with Systems Act procedures in sects	In progress
Promotion of a safe & health environment	Sect 152 of Constitution		X	X	Bylaw drafting & procedures	Passing and implementation of bylaws	In progress
Air pollution matters	Sect 156 of Constitution			X			
Implementation of matters listed in sect 16(a) of AQA (Contents of an AQMP)	Sects 35 & 36 of the Municipal Systems Act as read with AQA		X	X	Implementation and execution of activities adopted in AQMP as part of IDP	Inclusion of AQMP in IDPs	Default
Adoption of a framework for integrated development planning for Sedibeng district that includes AQMP requirements & AQA compliance	Chapter 5 of the Municipal Systems Act		X	X	AQMPs included in all IDPs and linked to performance indicators and reporting on matters in AQMP	Implementation and execution of integrated AQMPs of District & Local munis in whole of Sedibeng that give effect to AQA & National Framework	To be considered
Realisation of Environmental Rights to good ambient air quality	The Constitution as read with the Municipal Systems & Structures Acts	X	X	X	Creation of Sedibeng Municipal Air Quality Management Service	Procedures and actions set out above	In progress

### **3.2.1 Summary of Responsibilities in Terms of AQA**

The SDM's functions as a district municipality in alignment with the legal review are to:

- Perform its role as an atmospheric licensing authority; and
- As a municipality prepare an AQMP and incorporate it into its IDP.
- Do what is asked for in section 27 of the Municipal Systems Act by: -
  - including AQMPs and their specific content in the consultative process with its local municipalities regarding their framework for IDP planning in their area; and
  - identifying in the IDP framework the AQMP matters that must be aligned in the IDP plans of all four municipalities (district & the three local municipalities); and
  - identifying in the IDP Framework the development and modification of the model air quality management by-law developed by the DWEA for easy adoption and adaptation by municipalities.
- Ensure that systems and mechanisms for the delivery of a range of services and activities described in the review that make up an air quality management service are provided for in SDM's and the local municipalities' AQMPs as included and adopted in the various IDPs.
- Carry out the assessments required in terms of sections 78 and 80 of the Municipal Services Act so that a proper decision may be made regarding whether an internal mechanism within Sedibeng Municipality's administration or a multi-jurisdictional service utility (which is a municipal entity and an external mechanism) may be used for the service. The participation of the local municipalities is essential in this regard.
- Coordinate a review of the district municipality's by-laws so as to ensure that new by-laws are put in place which cover issues as required under the AQMP.

- Coordinate a review of each of the local municipalities' by-laws so as to ensure that their by-laws are consistent with District's by-laws and plans and issues as required under the AQMP are covered in their by-laws.
- If, after the assessments, it is decided that a municipal entity will be used for the service, coordinate the passing of pass by-laws in each municipality will need to be undertaken.
- Appoint an air quality officer (AQO) to coordinate air quality matters in the SDM as required in terms of section 14 of the AQA.
- Cause its AQO to be designated an environmental management inspector (EMI) in terms of section 31D of NEMA for the purposes of both NEMA and AQA and in due course the National Environmental Management: Waste Bill once it is assented to by the President.
- Request each local municipality to appoint an AQO.

### ***3.3 Obligations analysis in terms of the National Framework for Air Quality Management in South Africa***

In terms of the National Framework for Air quality Management in South Africa, the SDM has a number of responsibilities within the governance cycle which is described in Chapter 4.2 of the framework document (Appendix B). In terms of these responsibilities, they are divided into two main categories, those that are the principal responsibility of the municipality and those whereby input is required only. The SDM thus has several principal responsibilities as summarised below:

In this regard, the SDM municipality must:

- Designate a municipal Air Quality Officer from its administration.
- Develop an Air Quality Management Plan for inclusion in its Integrated Development Plan (IDP) in accordance with Chapter Five of the Municipal Systems Act.

- Prepare an annual report including progress regarding the implementation of the Air Quality Management Plan and compliance with the plan.
- Monitor ambient air quality and point, non-point and mobile source emissions.
- In terms of Environmental Impact Assessments (EIA's), the SDM should be involved in the decision making process with provincial government since the use of EIAs is inextricably linked to the AQA's atmospheric emission licensing process. The linkage is via reference to impact management in a number of sections of the AQA including:
  - An AQO may require any person to submit an Atmospheric Impact Report if it is reasonably believed that the person has contravened or failed to comply with the AQA or any conditions of a license and the contravention has had, or may have, a detrimental effect on the environment (Section 30(a));
  - An AQO may require any person to submit an Atmospheric Impact Report if a review of a license is undertaken (Section 30(b));
  - The application for an AEL, when the effect or likely effect of the pollution emitted or likely to be emitted by a Listed Activity on the environment must be considered (Section 39(b)); and,
  - Significant trans-boundary impacts require management through preventative, control or corrective measures (Section 50(2)).
- Monitoring potential illegal listed activities
- Undertake compliance monitoring with the emission standards in respect of the manufacture, sale or use any appliance or conducting of an activity declared as a controlled emitter
- Undertake compliance monitoring in respect to reasonable steps to prevent the emission of any offensive odour caused by any activity
- Monitor compliance with directives to submit an atmospheric impact report
- Monitor compliance with the conditions or requirements of the atmospheric emission licence
- Monitoring any applications for an atmospheric emission licences, or for the transfer, variation or renewal of such licenses to ensure that it does not contain false or misleading information.
- Monitoring of any information provided to an AQO to ensure that it does not contain false or misleading information

The municipality may also:

- Set local standards for emissions from point, non-point and mobile sources if a municipality, in terms of its by-laws, identifies a substance or mixtures of substances in ambient air which through ambient concentrations, bioaccumulation, deposition or any other way, presents a threat to health or well-being or the environment, or which the municipality reasonably believes presents such a threat. (National Framework for Air quality Management in South Africa, 2007)
- Require the appointment of an Emission Control Officer by any company (Section 48 of AQA), thereby extending the powers of the authority by ensuring that the Emission Control Officer is responsible for the company applying the correct measures to minimise emissions.

In addition District Municipalities (and Metropolitan municipalities) must:

- Implement the atmospheric emission licensing system, and carry out the responsibility for performing the functions of the licensing authority as set out in Chapter 5 of the AQA.

The three local municipalities within the greater SDM also have several principal responsibilities as summarised below:

- Monitor ambient air quality and point, non-point and mobile source emissions.
- Develop an Air Quality Management Plan for inclusion in its Integrated Development Plan (IDP) in accordance with Chapter Five of the Municipal Systems Act.
- As for district municipalities, local municipalities in terms of Environmental Impact Assessments (EIA's), should be involved in the decision making process with provincial government since the use of EIAs is inextricably linked to the AQA's atmospheric emission licensing process.
- Undertake compliance monitoring in respect to reasonable steps to prevent the emission of any offensive odour caused by any activity
- Monitor compliance with directives to submit an atmospheric impact report

The local municipalities may also:

- Set local standards for emissions from point, non-point and mobile sources if a municipality, in terms of its by-laws, identifies a substance or mixtures of substances in ambient air which through ambient concentrations, bioaccumulation, deposition or any other way, presents a threat to health or well-being or the environment, or which the municipality reasonably believes presents such a threat. (National Framework for Air quality Management in South Africa, 2007)

### ***3.4 National Health Act (Act. No. 61 of 2003) Act and AQA***

The National Health Act, Section 21 requires national departments to facilitate the provision of indoor and outdoor environmental pollution control services. This facilitation is to include the provision of environmental pollution control services from a provincial department level as per Section 25 of the Act.

In terms of Section 31, every metropolitan and district municipality must ensure that appropriate municipal health services are effectively and equitably provided in their respective areas. In order to achieve this, the members of the Executive Council must assign such health services to a municipality (normally a local municipality) in his/her province as contemplated in section 156(4) of the Constitution. This assignment may be done via the establishment of a service level agreement between the metropolitan/district municipality and the local municipalities.

The definition of these municipal health services in the act includes environmental pollution control. Municipalities with such service level agreements are thus compelled to deal with the identification, evaluation, monitoring and prevention of land, soil, water, noise and air pollution (dust and odours) issues. It is understood that SDM and the three local municipalities have these established service level agreements. For this reason the three local municipalities within the SDM are compelled to undertake such environmental pollution control activities in term of both the AQA and the National Health Act as these two bodies of legislation are in alignment with one another.

### **3.5 Recommendations and Optimal AQM Service Definition**

#### **3.5.1 Optimal AQM Services Definition**

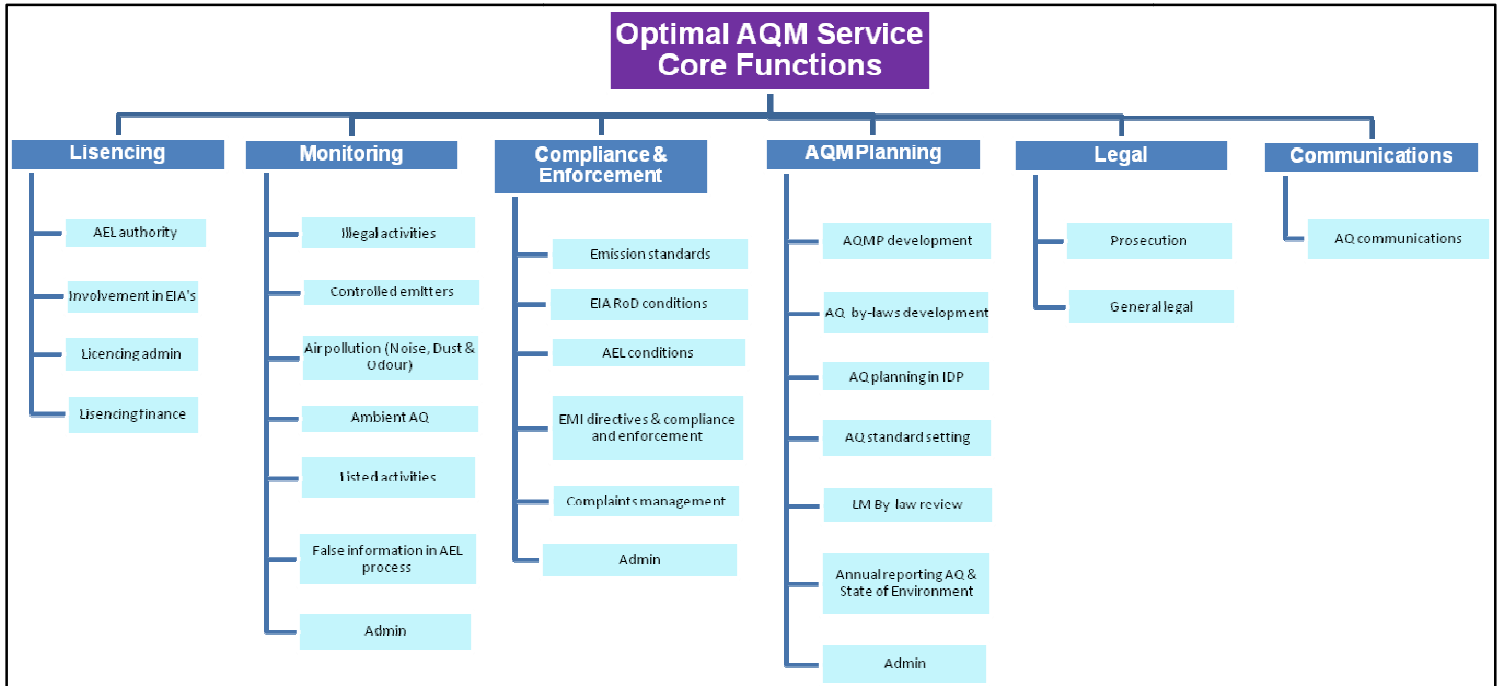
In order to provide an optimal air quality management service to the Sedibeng region it is crucial to define what is viewed as an optimal air quality management service.

The legal analysis (Summarized in Section 3.1 to 3.3 above and Appendix A) clearly lays out what is mandated in terms of SDM's and the local municipalities roles and functions in the provision of an air quality management service. However, legislation does not always consider the best, most practical and cost effective option. Taking this into consideration, the ***optimal air quality management service to be provided by SDM is thus defined as follows:***

*The provision of all air quality management services to include but not limited to the following:*

- *Atmospheric emission licensing (Act as the atmospheric emission licensing authority for the region),*
- *Monitor ambient air quality and point, non-point and mobile source emissions,*
- *Undertake compliance, monitoring and enforcement activities in regards to air quality management issues (including, permitting, licensing, EIA compliance, directive compliance etc) for the Sedibeng region,*
- *Responding to air quality complaints, and*
- *Undertaking any other air quality management related activities for the Sedibeng region.*

Under this definition the following core functional areas are identified (Figure 6).



**Figure 6: Optimal air quality services core functions**

### 3.5.2 Recommendations

Through the analysis and review of various sets of legislation, and considering the definition of the optimal air quality management service it is recommended that the SDM establish a multi-jurisdictional service utility for the Sedibeng region. It is also recommended that this multi-jurisdictional service utility be structured within the current SDM structure to form the SDM Sub-directorate of Air Quality Management (SDM AQM). However in order for this to be constitutionally compliant, the SDM will have to establish agreements with the local municipalities, thus allowing the SDM AQM to fulfill the legal mandate of the local municipalities as well as those for the SDM.

Reasons supporting this recommendation include the following:

- It is believed not to be financially viable or effective for the SDM and each of the three local municipalities to provide separate air quality services.
- SDM undertaking the atmospheric emission licensing functions only, is not in alignment with the definition of an optimal air quality management service for the Sedibeng region.

- The use of a single service utility, having jurisdiction and functional areas of competence resolves uncertainties regarding what either category of municipality may or may not do (i.e. district versus local functions). The utility will have the combined competences of both categories. It is irregular for a district municipality to encroach on a local municipality's exclusive areas. It will not be irregular for a district municipality to have joint control with the local municipalities of a multi-jurisdictional service utility. Such a multi-jurisdictional service utility could include all the local municipalities under the SDM. What is important is that the utility be properly mandated by by-laws enacted by at least the SDM, in consultation with the affected local municipalities and affected Province and/or Provinces. The objects of this are to:
  - empower the utility to have the necessary competences;
  - prevent the air quality management service from being tainted by the jurisdictional limitations inherent in district municipalities; and
  - ensure that a district municipality's coordinating, monitoring, supervisory and facilitating roles are given effect to.
  
- The Constitution, NEMA, the National Health Act, 2003 (Act No. 61 of 2003) (the National Health Act), the Local Government: Municipal Structures Act, 1998 (Act No. 117 of 1998) (the Municipal Structures Act), the Municipal Systems Act and AQA enable district and local municipalities to provide services relevant to air quality management, air pollution monitoring, pollution monitoring in general and integrated environmental management in general. The National Environmental Management: Waste Act (Act No. 59 of 2008) (Government Gazette No. 32000 dated 10 January 2009), once the commencement date has been proclaimed will create additional municipal duties and functions. A multi-jurisdictional service utility is a mechanism that may be utilised for the provision of all these services and functions within a district municipality's area.
  
- A multi-jurisdictional service utility that is properly enabled would have the combined areas of competence of both district and local municipalities.

- Inter municipality cooperation and coordination is needed. The Vaal Priority Area includes a portion of the Metropolitan City of Johannesburg and the Metsimaholo Local Municipality which is a part of the Free State Province's Fezile Dabi District Municipality. A multi-jurisdictional service utility may in terms of the participating municipality's by-laws be empowered to provide air pollution and air quality management services for all the district and local municipalities involved.
- Whether the service is to be provided through the SDM's administration (i.e. an internal mechanism) or through an external mechanism, it mandatory for the procedures set out in section 78 of the Municipal Systems Act be applied.
- If an external mechanism is selected by SDM and the local municipalities, the assessments asked for in section 80 of the Municipal Systems Act should also be performed so as to enable the use of an external mechanism.

These recommendations, as above, are purely recommendations made from the analysis of the legal review and from the definition of an optimal air quality service. The decision on whether to implement these recommendations or other alternative options is the sole responsibility of all stakeholders involved in this project. The final decision to be made will thus require substantial cooperative governance from four fronts:

- SDM,
- The three local municipalities,
- The National Department (DWEA), and from the
- Political level.

## **4. Technical overview**

### ***4.1 Analysis of current level of air quality management services***

#### ***4.1.1 District Municipal Level***

Currently in the SDM, air quality issues and functions are handled within the Municipal Health Services section under the National Health Act. The Municipal Health Services

section provides a basket of various environmental services under the banner of Environmental Pollution Control, which deals with the identification, evaluation, monitoring and prevention of land, soil, water, noise and air pollution issues. These include:

- **Noise Pollution Control**

*Mandates include:*

- Complaint investigation.
- Law enforcement by serving compliance notices or if deemed necessary by issuing "summonses to appear in Court" notices (Section 56 of Criminal Procedures Act, 1977 (Act No. 51 of 1977)).
- Compliance monitoring in terms of legislative requirements and provisions and instituting remedial and preventative measures.
- Health promotion and training.
- Input into Environmental Impact Assessments.
- Referral of Occupational Health and Safety - as well as other violations to the appropriate authorities as far as practicable as well as inter-sectoral collaboration.
- Ensure that tenders, contracts and procurement specifications in this regard comply with Health requirements.

- **Air Pollution Control and Air Quality Management**

*Mandates include:*

- Complaint investigation.
- Identification and monitoring of sources of air pollution and instituting remedial or preventative measures to improve health and wellbeing (health focused).
- Identification of premises with poor indoor air quality and instituting remedial or preventative measures.
- Law enforcement by serving compliance notices or if deemed necessary by issuing "summonses to appear in Court" notices (Section 56 of Criminal Procedures Act. (Act No. 51 of 1977)).
- Compliance monitoring in terms of legislative requirements and provisions and instituting remedial and preventative measures.
- Health promotion and training.

- Input into Environmental Impact Assessments.
- Referral of Occupational Health and Safety - as well as other violations to the appropriate authorities as far as practicable as well as inter-sectoral collaboration.
- Ensure that tenders, contracts and procurement specifications in this ~ regard comply with Health requirements.

- **Water Pollution Control and Water Quality Management**

*Mandates include:*

- Complaint investigation.
- Monitoring of water reticulation systems and other sources of water supply.
- Ensuring that potable and an adequate supply of water is provided.
- Identification and monitoring of sources of water pollution and instituting remedial or preventative measures.
- Identification and making safe of dangerous wells, boreholes and excavations.
- Monitoring and control of storm water runoff from premises which may impact on public health Ensuring that proper systems are in place for the disposal and containment of waste water.
- Water sampling for bacteriological and chemical analysis Compliance monitoring in terms of legislative requirements and provisions and instituting remedial and preventative measures.
- Law enforcement by serving compliance notices or if deemed necessary by issuing "summonses to appear in Court" notices (Sect 56 of Criminal Procedures Act. (Act No. 51 of 1977)).
- Health promotion and training.
- Input into Environmental Impact Assessments.
- Referral of Occupational Health and Safety - as well as other violations to the appropriate authorities as far as practicable as well as inter-sectoral collaboration.
- Ensure that tenders, contracts and procurement specifications in this regard comply with Health requirements.

- **Land and Soil Pollution**

*Mandates include:*

- Complaint investigation.
- Identification and monitoring of all land to ensure that no health nuisances, risks or hazards occur on such premises and ensure institution of corrective measures where such nuisances, risks or hazards occur.
- Monitoring and control of illegal dumping / littering.
- Law enforcement by serving compliance notices or if deemed necessary by issuing "summons to appear in Court" notices (Sect 56 of Criminal Procedures Act, 1977).
- Compliance monitoring in terms of legislative requirements and provisions and instituting remedial and preventative measures.
- Health promotion and training.
- Input into Environmental Impact Assessments.
- Referral of Occupational Health and Safety - as well as other violations to the appropriate authorities as far as practicable as well as inter-sectoral collaboration.
- Ensure that tenders, contracts and procurement specifications in this regard comply with Health requirements.

Currently the SDM does not have sufficient capacity nor capacitated staff to fulfill all the mandated line functions under the banner of Environmental Pollution Control in terms of the National Health Act. Some of these services, such as air pollution control and air quality management have thus been subcontracted out to the local municipal level. Similarly to the SDM, the three local municipalities do not have sufficient capacity nor capacitated staff to fulfill these functions under the banner of Environmental Pollution Control. Nevertheless the Environmental Health Practitioners (EHP's) from the three local municipalities in the Sedibeng region are trying to full this role for the SDM.

The full suite of air quality management services under the definition of an optimum air quality management service is currently not being undertaken by the SDM. By taking on these new mandated functions, the SDM's current capacity and resources will be

stretched even further. It is thus crucial that the SDM expand their structure, capacity and asset base to allow for these new and additional functions to be undertaken.

#### ***4.1.2 Local Municipal Level***

As discussed in Section 4.1.1 above, the Environmental Health Practitioners (EHP's) from the three local municipalities are fulfilling the role for the SDM by undertaking the mandated functions for the district in terms of the National Health Act (Act No. 61 of 2003) (not in terms of the AQA).

The legally mandated air quality management services (Refer to the summary table 1) are currently not being undertaken by the local municipalities as there is very little to no air quality capacity within the local municipalities. Currently the local municipalities are only undertaking complaints management.

By taking on these new air quality mandated functions, the local municipalities current capacity and resources will be stretched even further. It is thus crucial that the local municipalities expand their structures, capacity and asset bases to allow for these new and additional functions to be undertaken. The SDM has however, with the development of the new air quality sub-directorate committed to assisting the local municipality with undertaking the local municipality mandated functions.

#### ***4.2 Gap analysis in terms of the AQ services SDM is to provide from the legal review***

The full suite of air quality management services under the definition of an optimum air quality management service is currently not being undertaken by the SDM, nor have these services been undertaken previously.

By taking on these new mandated functions, the SDM's current capacity and resources will be stretched even further. It is thus crucial that the SDM expand their structure, capacity and asset base to allow for these new and additional functions to be undertaken.

The following gaps (other than those highlighted in table 1) are identified in terms of the provision of an optimum air quality management service by SDM:

- These new mandated functions currently are not/have not previously been undertaken by the SDM.
- The Section 77 processes need to be completed.
- The Section 78 processes need to be completed.
- The Section 80 processes need to be completed (agreements between SDM and the three local municipalities on SDM fulfilling the Local municipalities mandated functions)
- There is no specific structured unit within the SDM to deal with the new mandated air quality functions. However SDM have realized that they will be required to fulfill the new air quality functions and thus have made the decision to form a new air quality sub-directorate. As part of this process they have appointed a Manager: Air Quality Management.
- Insufficient skills base (very few capacitated staff) within SDM to fulfil the new mandated functions.

The following challenges are identified in terms of the provision of the optimum air quality management service by SDM:

- The provision of these services currently has not been budgeted for by the SDM
- General lack of capacity in terms of air quality management skills in South Africa, hence the SDM will have to offer salary packages which are competitive with those of industry to be able to attract the required, competent personal to fulfil the various posts. The SDM may thus need to offer a scarce skills allowance as part of the packages to be offered to potential candidates.
- There is uncertainty in the availability of competent air quality trained persons in South Africa, and considering that each municipality (both local & district) will require competent personnel, it is unlikely that there will be sufficient persons in South Africa to fulfil the posts.
- Time constraints as the SDM unit is to be operational by 01 September 2009.

### ***4.3 Analysis of application numbers, compliance monitoring and workload***

According to the APPA database there are 1645 industries in South Africa with APPA permits. These permits will have to be reviewed as part of the new atmospheric emission licensing process.

The industries that will have to be managed or permitted by SDM are limited to those that are currently referred to as scheduled processes with APPA registration certificates. SDM has 51 industries within its jurisdiction with the APPA permits. On a local municipal level, the Emfuleni local municipality has 28 industries with APPA permits, Midvaal local municipality has 17 industries with APPA permits and the Lesedi local municipality has six industries with APPA permits. The total number of permits in the SDM is only 3.1% of the total for the whole of South Africa. This percentage is fairly low however some of the industries are highly complex and will require substantial amounts of reviewing, assessment and compliance monitoring.

Furthermore, all industries with atmospheric emissions, which are not captured as scheduled processes will have to be permitted as part of a holistic reduction strategy (section 23 & 26 AQA as controlled emitters). Within the SDM region there is no quantification of the number of industries which fall into this category. For the above two reasons the exact workload cannot be calculated.

In consideration of the numbers of possible applications (specifically application renewals), and compliance monitoring activities, it is unlikely that there would be a viable workload for each individual municipality to have their own full air quality unit. Rather it is envisaged that the workload would be sufficient to support one consolidated unit serving all three local municipalities and the SDM itself.

For this reason units structure must be designed in such a manner as to be highly flexible so that should more staff be required, they may be easily added to the staff complement. Similarly should the staff complement be too large, staff could be allocated to fulfil other functions or retrenched if needs be.

### **4.3.1 Appeals**

Part of the envisaged workload would also include appeals to the issued atmospheric emission licenses (AEL's).

If an industry is not happy with the granted AEL, they may appeal the AEL via the minister. The minister will request the AEL to be reviewed by the Chief Air Pollution Officer. The reviewing and re-assessment of the AEL may be handled internally by a panel/appeals board by the AEL authority (Note this is not mandated in the legislation but could be used to review the applications in an appeals process). It is envisaged that the panel/board (if used) will be established only as and when needed. If the AEL decision is upheld, then the industry may take the matter to the high court (process external of the licensing authority) for a final decision.

### **4.4 Review of Sedibeng's organisation structure**

Based on the legal requirements in terms of executable, mandated functions, the following proposed organogrammes were developed for the respective unit options (Figures 7 to 9).

*Note: These are designed to be considered in conjunction with Appendix C.*

# SDM Licencing Function Only

## Air Quality Management Directorate

### Draft Organisation Structure

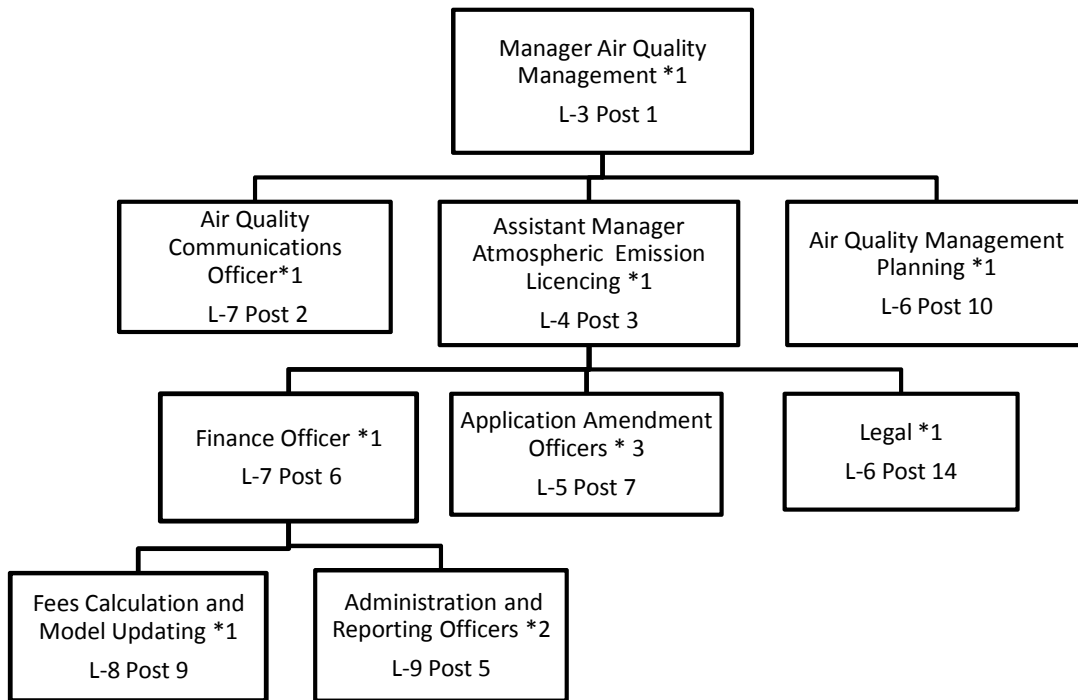
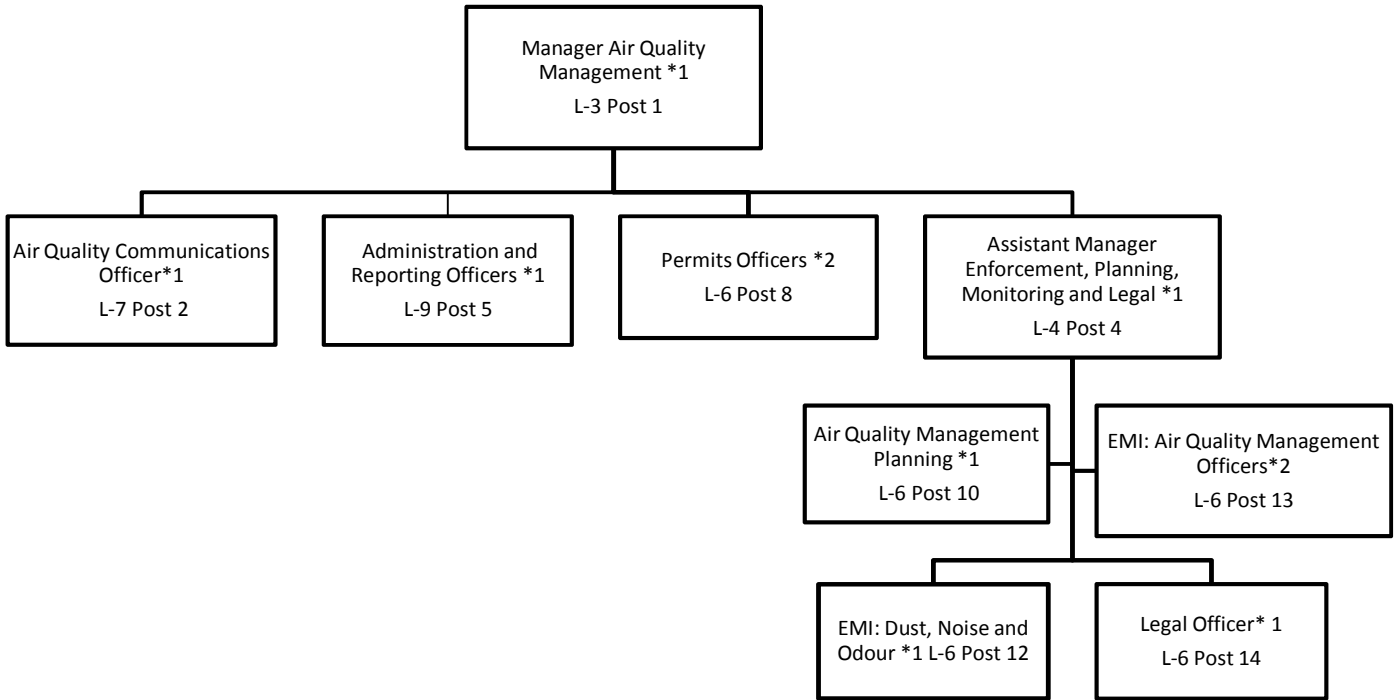


Figure 7: SDM draft organogram, licencing function only.

# Local Authorities

## Air Quality Management Directorate

### Draft Organisation Structure

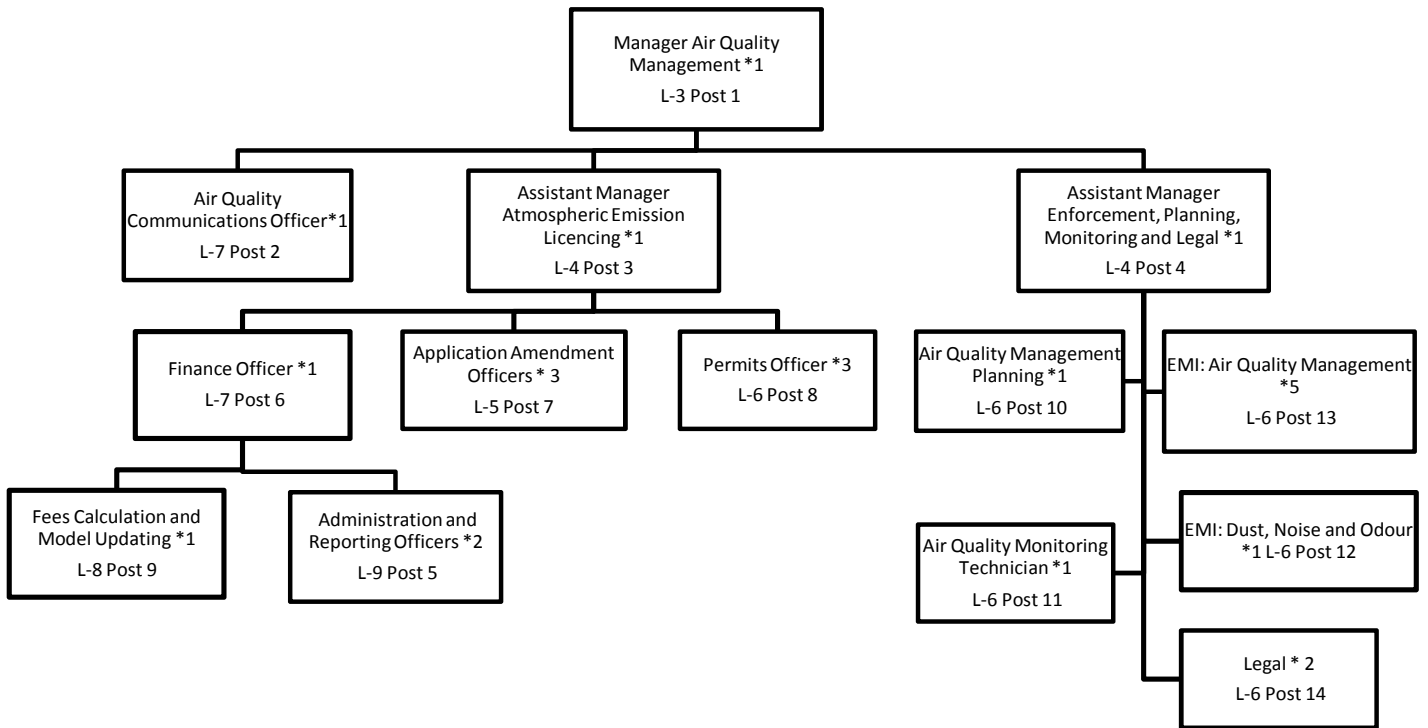


**Figure 8: Local Municipality draft organogram, general AQ services no licensing**

# Multiple Jurisdictional Entity

## Air Quality Management Directorate

### Draft Organisation Structure



**Figure 9: Multijurisdictional unit draft organogramme, general AQ services and licensing**

*Note: Dust, noise, odour issues are typically nuisance complaints. These may be allocated to the local municipalities if a memorandum of understanding is established between the SDM and the local municipalities*

#### **4.5 Capacity assessment**

Currently SDM does not have the capacity to absorb these new functions for the following reasons:

- Only one person is appointed to deal specifically with the air quality management issues within SDM in the post of Manager Air Quality.

- There is insufficient capacitated and available staff in SDM with the required skills in terms of air quality management.
- No calibrations trained personnel available, thus monitoring and station management cannot be undertaken by SDM and will have to be outsourced until capacitated personnel become available.
- SDM organogramme (in its current format) does not allow for the easy addition of appropriate posts required to form a suitably capacitated unit to fulfil the new air quality services mandate. A complete new sub-directorate dealing with air quality will need to be inserted into the SDM current organogramme.
- By taking on these new mandated air quality management functions, the SDM's current capacity and resources will be stretched even further.
- By taking on certain new air quality management functions, the local municipalities current capacity and resources will be stretched even further.

It is thus crucial that the SDM and the local municipalities expand their structures, capacity and asset base to allow for these new and additional functions to be undertaken. As part of the project several organogramme options (As above, Figures 7 to 9) were developed for this to be accomplished.

## ***4.6 Resource requirements assessment***

### ***4.6.1 Proposed sub-directorate structure***

Through the analysis and review of various sets of legislation, it is recommended that SDM establish a multi-jurisdictional service utility (Figure 9) within the SDM organogramme structure for the Sedibeng region (Figure 10) (kindly refer to the Draft Discussion Document recommendations (Section 3.2.2 Pages 32 to 34).

Further reasons supporting these recommendations in the Draft Discussion Document include the following:

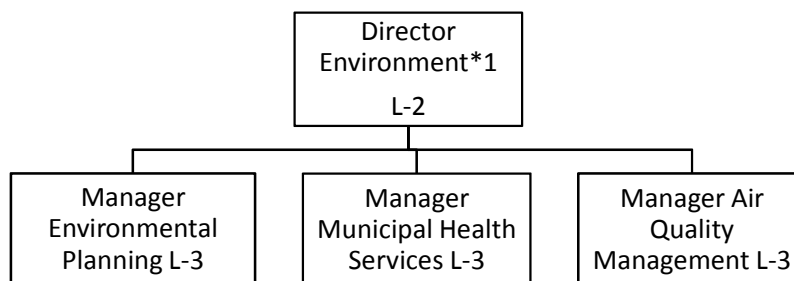
- It is shown via the estimated budgets (Refer to the Business Section, Section 5) not to be financially viable or effective for the SDM and each of the three local

municipalities to provide separate air quality services as proved in the estimated budgets. The best , most practical option would be one consolidated unit (i.e. Multi- jurisdictional unit)

- Income for the multi-jurisdictional unit is expected to be higher than that of the SDM or any of the local municipalities on their own since the Multi-jurisdictional unit would have the capability of servicing areas outside the three local municipalities and SDM itself. The potential base of income would thus be larger than that of the SDM. However it is understood that the SDM will focus on the Sedibeng district only, nevertheless the option would stand should the SDM wish to expand their income base.

## SEDIBENG DISTRICT MUNICIPALITY

Environment Directorate - High Level  
Draft Organisation Structure



**Figure 10: Proposed location of the SDM Sub-directorate of Air quality management in the SDM structure**

These proposed structures, if accepted by SDM would allow SDM to fulfil the new air quality mandate and allow SDM to provide the optimal air quality service to the Sedibeng and surrounding regions.

### **4.6.2 Staff skills levels required**

Please kindly refer to Appendix C.

### **4.6.3 JD's**

Please kindly refer to Appendix D

#### 4.6.4 Training requirements

Please kindly refer to Appendix C.

#### 4.6.5 Remuneration / salary scales and benefits

Below are the typical salary levels expected. These estimates exclude a scarce skills allowance. Table 2 displays the typical salary levels expected for the SDM (undertaking the licensing function only). Table 3 is the typical salary levels expected for each of the local municipalities. Table 4 displays the cumulative salary burden of having the functions fulfilled by the SDM and the three local municipalities. Table 5 displays the typical salary levels expected for the multi-jurisdictional unit.

**Table 2: Estimated salaries at SDM, licensing only**

<b>SDM Licencing Function Only</b>					
<b>Position</b>	<b>Post Number</b>	<b>Grade</b>	<b>Number of Posts</b>	<b>Package TCTC 2009/2010</b>	<b>Salary Costs</b>
Manager Air Quality Management	1	L3	1	R 560,000.00	R 560,000.00
Air Quality Communications Officer	2	L7	1	R 257,600.00	R 257,600.00
Assistant Manager Administration, Registration and Finance	3	L4	1	R 351,680.00	R 351,680.00
Administration and Reporting Officers(2 posts)	5	L9	2	R 201,600.00	R 403,200.00
Finance Officer	6	L7	1	R 257,600.00	R 257,600.00
Applications, Amendments Transfers Officers (3 posts)	7	L5	3	R 315,840.00	R 947,520.00
Fees Calculation and Model Updating	9	L8	1	R 230,720.00	R 230,720.00
Air Quality Management Planning Officer	10	L6	1	R 280,000.00	R 280,000.00
Legal Officer	14	L6	1	R 280,000.00	R 280,000.00
<b>Totals Costs</b>			<b>12</b>		<b>R 3,568,320.00</b>
<b>NOTES:</b>					
Estimates of salary bands from 2008/2009 plus 12%					
No job grading has been completed					

**Table 3: Estimated salaries at each of the Local Municipalities**

<b>Local Authorities</b>					
<b>Position</b>	<b>Post Number</b>	<b>Grade</b>	<b>Number of Posts</b>	<b>Package TCTC 2009/2010</b>	<b>Salary Costs</b>
Manager Air Quality Management	1	L3	1	R 560,000.00	R 560,000.00
Air Quality Communications Officer	2	L7	1	R 257,600.00	R 257,600.00
Assistant Manager Enforcement, Planning, Monitoring and Legal Administration and Reporting Officer	4	L4	1	R 351,680.00	R 351,680.00
Permits Officer (2 posts)	8	L6	2	R 280,000.00	R 560,000.00
Air Quality Management Planning Officer	10	L6	1	R 280,000.00	R 280,000.00
EMI: Dust, Noise, Odour Officer	12	L6	1	R 280,000.00	R 280,000.00
EMI: Air Quality Management Officers (2 posts)	13	L6	2	R 280,000.00	R 560,000.00
Legal Officer	14	L6	1	R 280,000.00	R 280,000.00
<b>Totals Costs</b>			<b>11</b>		<b>R 3,330,880.00</b>
<b>NOTES:</b>					
Estimates of salary bands from 2008/2009 plus 12%					
No job grading has been completed					

**Table 4: Cumulative salary burden of three Local Municipalities and the SDM**

<b>Total cost</b>				
<b>Name</b>	<b>Number of units</b>	<b>Number of posts</b>	<b>Package TCTC 2009/2010</b>	<b>Salary Costs</b>
Sedibeng District Municipality	1	12	R 3,568,320.00	R 3,568,320.00
Local Municipalities	3	33	R 3,330,880.00	R 9,992,640.00
<b>Total Cost</b>		<b>45</b>		<b>R 13,560,960.00</b>

**Table 5: Estimated salaries for the Multi-jurisdictional unit**

<b>Single Multi-Jurisdictional all functions</b>					
<b>Position</b>	<b>Post Number</b>	<b>Grade</b>	<b>Number of Posts</b>	<b>Package TCTC 2009/2010</b>	<b>Salary Costs</b>
Manager Air Quality Management	1	L3	1	R 560,000.00	R 560,000.00
Air Quality Communications Officer	2	L7	1	R 257,600.00	R 257,600.00
Assistant Manager Administration, Registration and Finance	3	L4	1	R 351,680.00	R 351,680.00
Assistant Manager Enforcement, Planning, Monitoring and Legal	4	L4	1	R 351,680.00	R 351,680.00
Administration and Reporting Officers(2 posts)	5	L9	2	R 201,600.00	R 403,200.00
Finance Officer	6	L7	1	R 257,600.00	R 257,600.00
Applications, Amendments Transfers Officers (3 posts)	7	L5	3	R 315,840.00	R 947,520.00
Permits Officer (3 posts)	8	L6	3	R 280,000.00	R 840,000.00
Fees Calculation and Model Updating	9	L8	1	R 230,720.00	R 230,720.00
Air Quality Management Planning Officer	10	L6	1	R 280,000.00	R 280,000.00
Air Quality Monitoring Technician	11	L6	1	R 280,000.00	R 280,000.00
EMI: Dust, Noise, Odour Officer	12	L6	1	R 280,000.00	R 280,000.00
EMI: Air Quality Management Officers (5 posts)	13	L6	5	R 280,000.00	R 1,400,000.00
Legal Officer (2 posts)	14	L6	2	R 280,000.00	R 560,000.00
<b>Totals Costs</b>			<b>24</b>		<b>R 7,000,000.00</b>
<b>NOTES:</b>					
Estimates of salary bands from 2008/2009 plus 12%					
No job grading has been completed					

## **4.7 Operational requirements**

### **4.7.1 Station maintenance and calibrations**

SDM will be taking over the operation, maintenance and calibration of four DWEA stations which are located within the district. The stations are located in Klipriver, Sebokeng, Three rivers and Sharpville. A further two stations, one in Meyerton and one in Vanderbijlpark will also be included in the SDM air quality monitoring network. SDM will thus be responsible for the operation, maintenance and calibration of six air quality monitoring stations.

In order for SDM to be able to operate, maintain and calibrate these six stations they will need to have the following as a minimum:

- A calibrations trained person, with a minimum of 2-3 years experience of undertaking calibrations of trace gas analysers and meteorological sensors

- A vehicle suitable for carrying the required maintenance and calibration equipment.
- Personal protective equipment (PPE)
- Calibration equipment (Calibrators) for the trace gas analysers and meteorological sensors
- Calibration gasses and calibration gas standards.
- Analyser consumables (operational gasses, filters, filter tapes etc...)
- Gardening equipment for station surrounding maintenance (Spades, forks, brush cutters etc...)
- Full toolset (including both metric and English sized tools)

In term of maintenance and calibrations of the six monitoring stations, SDM must (As a minimum) maintain and calibrate the stations in alignment with SANAS R 07-01 (Appendix E).

SDM should also consider the outsourcing of these functions to a suitably qualified and experiences service provider until such time that SDM has built up the required equipment and capacitated staff.

#### **4.7.2 Assets for the Sub-directorate**

As thus unit will be a brand new unit a substantial quantity of new assets will be required. The following will be envisaged for the unit, based on the unit being a multi-jurisdictional unit within the SDM:

*Note: number in brackets denotes the number of sets/units required*

- Personal protective equipment (PPE) (including Hard hats, safety boots, ear protection, eye protection, respiratory protection (dust masks) field hats, warm jackets, raincoat, highly visible jacket, carry bags for all PPE) [21]
- Emergency medical kits [21];
- GPS [7];
- Cameras [7];
- Cellular phones [10];
- Office printers [1 A4-colour, 1 A4 black & white];

- Laptops with remote access and connectivity [10];
- Desktop PC's [14]
- Office chairs and desks [24];
- White board [1];
- Notice board [1];
- Filing cabinets [34];
- Lockable storage cabinets [2];
- Mobile flash chart [1];
- Normal office/business stationery [24];
- Applicable PC software for project management, word processing and data capturing [18]; and
- Offices [24];
- Archiving storage room [1]
- 4x4 double cab vehicle - pool vehicle [1]
- Passenger vehicles - pool cars [2]
- Monitoring station calibrations vehicle i.e. VW caddy [1 allocated to SDM calibrations person]
- Trace gas analyser calibrator [1]
- Set of meteorological sensor calibrators [1]
- Gardening equipment for station surrounding maintenance (Spades, forks, brush cutters etc...) [1 set]
- Full toolset (including both metric and English sized tools) [1 set]

## **5. Business section**

### ***5.1 Current budget status***

The nine provinces of South Africa are subdivided into 52 districts with 6 metropolitan and 46 district municipalities. The 46 district municipalities are further subdivided into 231 local municipalities. The district municipalities also contain 20 district management areas that are directly governed by the district municipalities.

An examination of the national budget establishes that funds have not been allocated or budgeted for fulfilling these functions as under discussion.

Currently it seems that the implementation of the licensing system at district level has not been budgeted for. From discussions with SDM, it is clear that there is no surplus budget in the SDM which could be used to get this unit of the ground. Furthermore, in terms of the potential income to be generated through the license fee calculator, no income for the first 3 years will be generated.

In order to have an idea of the cost implications, a costing exercise was undertaken.

This exercise focused on and considered the following:

- What a typical district municipality may spend to establish and run an atmospheric emission licensing service/authority for its district,
- What a typical municipality may spend to establish and run an effective air quality management service, and
- What a combined atmospheric emission licensing and air quality management service would cost to establish and operate.
- Salary costs as per the draft organogrammes
- Estimate on the scarce skills allowance

## 5.2 Five year Business Plan

BUSINESS PLAN 2010 TO 2014			
Name of unit	SEDIBENG DISTRICT MUNICIPALITY SUB-DIRECTORATE OF AIR QUALITY MANAGEMENT		
Project Name	THE ESTABLISHMENT AND OPERATION OF THE SDM AIR QUALITY MANAGEMENT SUB- DIRECTORATE FOR THE DELIVERY OF AN OPTIMAL AIR QUALITY MANAGEMENT SERVICE FOR THE SEDIBENG REGION 2010 TO 2014.		
Date	22/05/2009	SDM Project Manager	Musa Mahlatji – Manager Air Quality SDM
Compiled by	SDM PSC		
Reviewed by	SDM PSC		

SCHEDULE OF TASKS						
PROJECT PHASE	PROJECT KEY ACTIVITIES	DELIVERABLES	PLANNED DATE		Responsibility	% status
			Start	End		
<b>Task 1: Project initiation and management</b>	Appointment of a project manager by SDM – Manager Air Quality Sub-Directorate	Appointed Manager Air Quality Sub-Directorate			Manager Air Quality Sub-Directorate	
	Drafting of the units mission and vision statement	Mission and vision statement			Manager Air Quality Sub-Directorate	
	Drafting of the Air Quality Management sub-directorate value in alignment with the SDM's values of conducting business	SDM Air Quality Management sub-directorate values statement			Manager Air Quality Sub-Directorate	
	Listing of the full scope of services to be provided in alignment with the legislated mandate	List of services			Manager Air Quality Sub-Directorate	

SCHEDULE OF TASKS						
PROJECT PHASE	PROJECT KEY ACTIVITIES	DELIVERABLES	PLANNED DATE		Responsibility	% status
			Start	End		
<b>Task 2: Legal mandate resolutions and negotiations</b>	Completion of the Section 77 process in terms of the Municipal Systems Act	Section 77 process completed			Manager Air Quality Sub-Directorate	
	Completion of the Section 78 process in terms of the Municipal Systems Act	Section 78 process completed			Manager Air Quality Sub-Directorate	
	Finalise the outcomes of the Section 77 and 78 processes.	Decision as to the provision of the Air quality management services			Manager Air Quality Sub-Directorate	
	Establishment of agreements between the SDM and three local municipalities to allow SDM to provide the optimal air quality management service  Completion of the Section 80 process in terms of the Municipal Systems Act	Written, signed agreements between SDM and the three local municipalities.  Resolution of the constitutionality of the SDM fulfilling the air quality management functions for the Local Municipalities  Section 80 process completed			SDM municipal manager  SDM Manager Air Quality Sub-Directorate  Municipal managers of the three local municipalities	

SCHEDULE OF TASKS						
PROJECT PHASE	PROJECT KEY ACTIVITIES	DELIVERABLES	PLANNED DATE		Responsibility	% status
			Start	End		
<b>Task 3 : SDM restructuring</b>	SDM to undergo a restructuring process to allow for the establishment of the SDM Air Quality Management sub-directorate within SDM's current structure	New SDM structure to include the SDM Air Quality Management sub-directorate			SDM municipal manager	
	Job description reviewing and finalization (job description development in alignment with the study to identify and assess the resource and operational system requirements for the delivery of an effective air quality management service for the Sedibeng District Municipality)	Finalized job descriptions			SDM Manager Air Quality Sub-Directorate	
	SDM Job evaluation and grading process to be undertaken to verify post levels	Evaluated and graded job posts			SDM HR	

SCHEDULE OF TASKS						
PROJECT PHASE	PROJECT KEY ACTIVITIES	DELIVERABLES	PLANNED DATE		Responsibility	% status
			Start	End		
<b>Task 4 : Funding securing for 2010 to 2014</b>	Source funding for the new SDM Air Quality Management sub-directorate through the IDP process for 2010 to 2014	Secured funds for the SDM Air Quality Management sub-directorate for 2010 to 2014			SDM Manager Air Quality Sub-Directorate	
	Source funding for the new SDM Air Quality Management sub-directorate through any other mechanism possible for 2010 to 2014					

SCHEDULE OF TASKS						
PROJECT PHASE	PROJECT KEY ACTIVITIES	DELIVERABLES	PLANNED DATE		Responsibility	% status
			Start	End		
<b>Task 5 : Recruitment</b>	Recruitment of staff for the SDM Air Quality Management sub-directorate	Staff complement as per the SDM Air Quality Management sub-directorate organogram			SDM HR  SDM Manager Air Quality Sub-Directorate	

SCHEDULE OF TASKS						
PROJECT PHASE	PROJECT KEY ACTIVITIES	DELIVERABLES	PLANNED DATE		Responsibility	% status
			Start	End		
<b>Task 6 : Staff capacity training</b>	<p>Staff training for the various posts as per the SDM Air Quality Management sub-directorate organogram:</p> <p>Special attention and training will have to be paid to the following persons:</p> <ul style="list-style-type: none"> <li>• Air quality officers (AQO's)</li> <li>• Environmental management inspectors (EMI's)</li> <li>• Compliance and enforcement personnel</li> <li>• Legal personnel</li> <li>• Staff involved in the licensing process</li> </ul>	Capacitated, competent personnel for each post			SDM Manager Air Quality Sub-Directorate	

SCHEDULE OF TASKS						
PROJECT PHASE	PROJECT KEY ACTIVITIES	DELIVERABLES	PLANNED DATE		Responsibility	% status
			Start	End		
<b>Task 7 : Provision of optimal air quality management services for the Sedibeng region for 2010 to 2014</b>	Atmospheric emission licensing for 2010 to 2014 (Act as the atmospheric emission licensing authority for the region),	Provision of optimal air quality management services for the Sedibeng region			SDM Manager Air Quality Sub-Directorate	
	Undertake compliance, monitoring and enforcement activities for the Sedibeng region for 2010 to 2014					
	Responding to air quality complaints for 2010 to 2014					
	Undertaking any other air quality management related activities for the Sedibeng region for 2010 to 2014					

ISSUES AND ACTION ITEMS :					
Issue Identification and Action Plan					
	Issue/Risk	Action Required	Action Responsible	Due date	Status of action taken
	SDM Air Quality Management sub-directorate not open for business on 01 September 2009-04-22	SDM Manager Air Quality Sub-Directorate	SDM Manager Air Quality Sub-Directorate		
	Delay in completion of the Sections 77, 78 and 80 processes	SDM Manager Air Quality Sub-Directorate	SDM Manager Air Quality Sub-Directorate		
	Delay in the establishment of agreements between the SDM and three local municipalities to allow SDM to provide the optimal air quality		SDM municipal manager  SDM Manager Air Quality Sub-		

	management service		Directorate Municipal managers of the three local municipalities		
	Poor structuring of unit could lead to inefficiencies in the unit	SDM Manager Air Quality Sub-Directorate SDM HR	SDM Manager Air Quality Sub-Directorate SDM HR		
	Lack of funding, leading to the SDM Air Quality Management sub-directorate not being financially viable	SDM Manager Air Quality Sub-Directorate	SDM Manager Air Quality Sub-Directorate		
	Lack of post filling due to insufficient available capacitated personnel in South Africa in the air quality management field	SDM Manager Air Quality Sub-Directorate Training of staff	SDM Manager Air Quality Sub-Directorate		

### **5.3 Five year Income Estimate**

An estimate of the potential income was calculated via the DWEA license fee calculator's application with the current available information, which included the following:

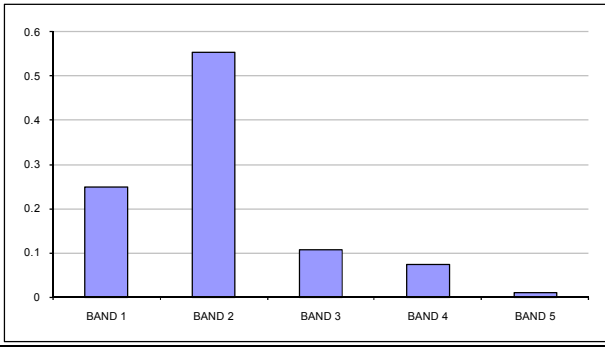
- DWEA license fee calculator
- DWEA license fee calculator – DWEA's estimate of the numbers of facilities throughout South Africa that will fall into the various licensing fee bands (Table 6)
- A review of the number of industries within the regional boundaries of the three local municipalities which have APPA permits. The permits and industries were determined from the APPA data base. The assumption made is that the data on the database is valid and current. (Tables 7 to 12)

**Table 6: DWEA's estimate of the numbers of facilities throughout South Africa that will fall into the various licensing fee bands**

Industry Type	Min Score in Sector	Ave Score in Sector	Max Score in Sector	No of Operations	Cumulative	Band	Nominal Band	No in Band
Primary metal production (gold)	4	11	23	26	26	2	BAND 1	
Secondary metal production (magnesium)	8	12	15	4	30	2		
Coal mining & cleaning	7	13	17	4	34	1		
Brake Shoe Debonding	10	14	21	9	43	1		
Explosives industry	8	14	19	5	48	2		
Food, feed, fish	4	14	25	43	91	1		
Power generation (coal, boilers)	11	14	25	13	104	1		
Silicon smelting	8	14	32	12	116	1		
Bulk materials storage	4	15	25	6	122	1		
Casting and fabrication	14	15	16	4	126	2		
Drum cleaning / reclamation	11	15	22	12	138	1		
Incineration (medical, animal, crematorium, mun.)	4	15	46	217	355	2		
Lead battery	12	15	17	10	365	2		
Leather products / tanning	2	15	36	6	371	2		
Lube oil refining	10	15	21	12	383	1		
Metallurgical (various)	4	15	31	60	443	1		
Mineral products (various, clay, lime, gypsum)	5	15	21	20	463	1		
Other / unclassified	8	15	46	66	529	1		
Power generation (coal, power stations)	8	15	25	21	550	4		
Primary metal production (zinc)	4	15	25	17	567	2		
Cement	6	16	32	25	592	4		
Chemical storage	14	16	17	3	595	1		
Petroleum Products - Not Classified	12	16	21	5	600	1		
Power generation (other)	13	16	22	3	603	2		
Sawmills	5	16	36	112	715	1		
Secondary metal production (lead)	13	16	22	34	749	2		
Abattoir	7	17	38	16	765	1		
Aluminium (secondary)	7	17	34	49	814	2		
Chemical manufacture (inorganic)	9	17	33	48	862	3		
Chemical manufacture (organic)	5	17	36	70	932	3		
Chemical manufacturing (organic, tyres)	13	17	20	9	941	3		
Primary metal production (PGM)	8	17	21	12	953	2		
Secondary metal production (iron)	7	17	30	127	1080	2		
Wood products industry (miscellaneous)	6	17	25	14	1094	2		
Chemical manufacture (inorganic, fertiliser)	10	18	33	22	1116	4		
Coke manufacture	12	18	31	15	1131	1		
Incineration (other)	11	18	24	25	1156	3		
Secondary metal production (copper)	15	18	28	11	1167	2		
Textile	13	18	28	3	1170	1		1170
Gasoline blending	15	19	27	8	1178	2		
Glass manufacture	16	19	28	11	1189	2		
Mineral processing (various)	7	19	51	11	1200	2		
Asphalt processing	12	22	30	91	1291	2		
Brickworks	11	22	39	233	1524	2		
Chemical manufacture (pesticides)	20	22	25	6	1530	4		
Primary metal production (lead)	21	22	22	2	1532	3		
Sugar refinery	16	23	32	18	1550	2		
Aluminium (primary)	10	24	50	3	1553	3	383	
Pulp and paper	13	33	56	16	1569	3		
Waste Oil Regeneration	23	33	40	6	1575	3		
Iron and steel	25	39	59	18	1593	4		
Ferro-alloy (chrome)	12	40	48	19	1612	4	59	
Ferro-alloy (manganese, silica)	29	44	55	10	1622	4		
Petroleum Industry (gas to liquid)	39	44	49	2	1624	5		
Vanadium	42	45	53	4	1628	4	16	
Crude oil refining	45	47	48	5	1633	5		
Petroleum Refinery	40	53	70	12	1645	5	17	

BAND 1	BAND 2	BAND 3	BAND 4	BAND 5	BAND 6	BAND 7	TOTAL
1	2	3	4	5	6	7	
411	911	179	125	19	0	0	1645
25%	55%	11%	8%	1%	0%	0%	
42							
5							
8.4							

**NOTE:** the model has been setup for 5 bands. It can be adjusted to accommodate more or fewer bands but this is not done automatically.



**Table 7: License fee bands**

APPLICATION BANDS	APPLICATION FEE	DESCRIPTION			
BAND 1	R 15,000.00	Simple and routine application with low ongoing monitoring implications and applicant falls into categories supported by government policy			
BAND 2	R 60,000.00	Relatively routine application with relatively low ongoing monitoring and compliance responsibilities			
BAND 3	R 150,000.00	Moderately complex application or moderately onerous ongoing monitoring and compliance responsibilities			
BAND 4	R 275,000.00	Highly complex application with high ongoing monitoring and compliance responsibilities			
BAND 5	R 650,000.00	Very high complexity and non routine application with high workload and high ongoing compliance and monitoring responsibilities			
	Period Payable	% of New	Rands		
	Yrs	Application	Fee	Annual Fee	
NEW APPLICATION	5	100.00%			
RENEWAL	5	40.00%			
TRANSFER	1	10.00%			
VARIATION	1	20.00%			
TRADE	1	1.00%			
Annual interest rate	15%	Interest rate to be applied established by DEAT annually (Benchmark: SA Reserve Bank - current prime rate)			



**Table 8: Fees calculation for the Emfuleni Local Municipality**

 <b>Emfuleni Local Municipality</b> 			
APPA Reg. No.	Company Name	Industry Type in alignment with DEAT's estimated banding	Estimated Banding Classification in alignment with DEAT's estimated banding
409	African Cables Limited	Secondary metal production (lead)	2
509	African Detinning (Pty) Ltd	Metallurgical (various)	1
411	Apex Foundry (Pty) Ltd	Iron and steel	4
521	Collet-A-Can	Drum cleaning / reclamation	1
1118	Consolidated Wire Industries Ltd	Metallurgical (various)	1
1311	Dav Steel (Pty) Ltd	Iron and steel	4
1131	Dav steel(Pty)Ltd	Iron and steel	4
1037	Donaventa Holdings (Pty) Ltd (Dixon Batteries)	Lead battery	2
2639	Highland Night Investments No. 21 (Pty) Ltd <i>Trading name : Clay Fusion Technologies (Pty) Ltd</i>	Mineral products (various, clay, lime, gypsum)	1
89	Mittal Steel Vanderbijlpark	Iron and steel	4
548	Mittal Steel Vereeniging	Iron and steel	4
2002	Multi Construction Chemicals (Pty) Ltd	Chemical manufacture (Organic/Inorganic)	3
2069	Non Ferrous Cast Products	Casting and fabrication/Aluminium (secondary)	2
435	Nordberg Manufacturing	Other / unclassified	1
1282	Rand Water Vereeniging Pumping Station	Power generation (coal, boilers)	1
402	Scaw Metals Ltd (Vereeniging)	Iron and steel	4
464	Sharon Wire Mill Corp (Pty) Ltd	Metallurgical (various)	1
704	Slagment Limited (Vanderbijlpark)	Cement	4
383	South African Roll Company (Pty) Ltd (previously Dorbyl Heavy Engineering, also Vecor)	Metallurgical (various) / Other / unclassified	1
2226	Steel Serve (Pty) Ltd	Iron and steel	4
1604	Superior Casting Suppliers&Patternmakers (Pty)Ltd	Other / unclassified	1
1010	Suprachem, Division of Mittal Steel	Chemical manufacture (Inorganic)	3
2361	Vaal Brass Foundry	Secondary metal production	2
1773	Vereeniging Abattoir (Pty) Ltd	Abattoir	1
558	Vereeniging Foundries	Iron and steel	4
232	Vereeniging Refractories (Pty) Ltd	Brickworks	2
815	Vitro Building Products	Brickworks	2
575	Vlakfontein Steenmakery (Pty) Ltd	Brickworks	2

Band	Number of industries in band	Application fee (100% of application fee)	Annual fees (paid over 5 years)
Band 1	10	R 150,000.00	R 38,910.70
Band 2	7	R 420,000.00	R 108,950.03
Band 3	2	R 300,000.00	R 77,821.44
Band 4	9	R 2,475,000.00	R 642,026.97
Band 5	0	R 0.00	R 0.00
<b>Totals</b>		<b>R 3,345,000.00</b>	<b>R 867,709.14</b>

**Table 9: Fees calculation for the Lesedi Local Municipality**

 Lesedi Local Municipality 			
APPA Reg. No.	Company Name	Industry Type in alignment with DEAT's estimated banding	Estimated Banding Classification in alignment with DEAT's estimated banding
1558	Brick-A-Crete	Brickworks	2
2325	Eskort Bacon	Other / unclassified	1
2540	Kayalami Bricks	Brickworks	2
296	Poortjies Stene - Heidelberg	Brickworks	2
417	Prebo (Pty) Ltd	Brickworks	2
287	Ratanda Brickworks	Brickworks	2


Band	Number of industries in band	Application fee (100% of application fee)	Annual fees (paid over 5 years)
Band 1	1	R 15,000.00	R 3,891.07
Band 2	5	R 300,000.00	R 77,821.45
Band 3	0	R 0.00	R 0.00
Band 4	0	R 0.00	R 0.00
Band 5	0	R 0.00	R 0.00
<b>Totals</b>		<b>R 315,000.00</b>	<b>R 81,712.52</b>

**Table 10: Fees calculation for the Midvaal Local Municipality**

 Midvaal Local Municipality 			
APPA Reg. No.	Company Name	Industry Type in alignment with DEAT's estimated banding	Estimated Banding Classification in alignment with DEAT's estimated banding
2350	ACA (Pty) Ltd	Brake Shoe Debonding	1
2066	African Brick(Pty)Ltd	Brickworks	1
706	Albras Foundry (Pty) Ltd	Secondary metal production	2
2076	Ambijo Lounges (Pty) Ltd	Incineration (other)	3
1606	Delta Chemicals (Pty) Ltd	Chemical manufacture (Organic/Inorganic)	3
1809	Drumcor S.A. (Pty) Ltd	Drum cleaning / reclamation	1
228	Everite Limited	Mineral processing (various)	2
1460	Flexilube (Pty) Ltd	Lube oil refining	1
515	Meyerton Brick and Tile (Pty) Ltd	Brickworks	1
2086	Meyerton Galvanizing CC	Metallurgical (various)	1
1960	Miloy Engineering	Metallurgical (various) / Other / unclassified	1
1600	Ovon Stene (Edms) Bpk	Brickworks	1
48	Samancor (Meyerton)	Ferro-alloy (manganese)	4
1132	Samancor Ltd	Ferro-alloy (chrome)	4
1129	Sasol Polyfos	Chemical manufacture (Organic/Inorganic)	3
551	UCAR South Africa (Pty) Ltd	Metallurgical (various) / Other / unclassified	1
970	Vaal Potteries LTD	Brickworks	1

Band	Number of industries in band	Application fee (100% of application fee)	Annual fees (paid over 5 years)
Band 1	10	R 150,000.00	R 38,910.70
Band 2	2	R 120,000.00	R 31,128.58
Band 3	3	R 450,000.00	R 116,732.16
Band 4	2	R 550,000.00	R 142,672.66
Band 5	0	R 0.00	R 0.00
<b>Totals</b>		<b>R 1,270,000.00</b>	<b>R 329,444.10</b>

**Table 11: Fees calculation for the SDM (Licensing only)**

 <b>Sedibeng District Municipality</b>			
APPA Reg. No.	Company Name	Industry Type in alignment with DEAT's estimated banding	Estimated Banding Classification in alignment with DEAT's estimated banding
409	African Cables Limited	Secondary metal production (lead)	2
509	African Detinning (Pty) Ltd	Metallurgical (various)	1
411	Apex Foundry (Pty) Ltd	Iron and steel	4
521	Collet-A-Can	Drum cleaning / reclamation	1
1118	Consolidated Wire Industries Ltd	Metallurgical (various)	1
1311	Dav Steel (Pty) Ltd	Iron and steel	4
1131	Dav steel(Pty)Ltd	Iron and steel	4
1037	Donaventa Holdings (Pty) Ltd (Dixon Batteries)	Lead battery	2
2639	Highland Night Investments No. 21 (Pty) Ltd Trading name : Clay Fusion Technologies (Pty) Ltd	Mineral products (various, clay, lime, gypsum)	1
89	Mittal Steel Vanderbijlpark	Iron and steel	4
548	Mittal Steel Vereeniging	Iron and steel	4
2002	Multi Construction Chemicals (Pty) Ltd	Chemical manufacture (Organic/Inorganic)	3
2069	Non Ferrous Cast Products	Casting and fabrication/Aluminium (secondary)	2
435	Nordberg Manufacturing	Other / unclassified	1
1282	Rand Water Vereeniging Pumping Station	Power generation (coal, boilers)	1
402	Scaw Metals Ltd (Vereeniging)	Iron and steel	4
464	Sharon Wire Mill Corp (Pty) Ltd	Metallurgical (various)	1
704	Slagment Limited (Vanderbijlpark)	Cement	4
383	South African Roll Company (Pty) Ltd (previously Dorbyl Heavy Engineering, also Vecor)	Metallurgical (various) / Other / unclassified	1
2226	Steel Serve (Pty) Ltd	Iron and steel	4
1604	Superior Casting Suppliers&Patternmakers (Pty)Ltd	Other / unclassified	1
1010	Suprachem, Division of Mittal Steel	Chemical manufacture (Inorganic)	3
2361	Vaal Brass Foundry	Secondary metal production	2
1773	Vereeniging Abattoir (Pty) Ltd	Abattoir	1
558	Vereeniging Foundries	Iron and steel	4
232	Vereeniging Refractories (Pty) Ltd	Brickworks	2
815	Vitro Building Products	Brickworks	2
575	Vlakkfontein Steenmakery (Pty) Ltd	Brickworks	2
1558	Brick-A-Crete	Brickworks	2
2325	Eskort Bacon	Other / unclassified	1
2540	Kayalami Bricks	Brickworks	2
296	Poortjies Stene - Heidelberg	Brickworks	2
417	Prebo (Pty) Ltd	Brickworks	2
287	Ratanda Brickworks	Brickworks	2
2350	ACA (Pty) Ltd	Brake Shoe Debonding	1
2066	African Brick(Pty)Ltd	Brickworks	1
706	Albras Foundry (Pty) Ltd	Secondary metal production	2
2076	Ambijo Lounges (Pty) Ltd	Incineration (other)	3
1606	Delta Chemicals (Pty) Ltd	Chemical manufacture (Organic/Inorganic)	3
1809	Drumcor S.A. (Pty) Ltd	Drum cleaning / reclamation	1
228	Everite Limited	Mineral processing (various)	2
1460	Flexilube (Pty) Ltd	Lube oil refining	1
515	Meyerton Brick and Tile (Pty) Ltd	Brickworks	1
2086	Meyerton Galvanizing CC	Metallurgical (various)	1
1960	Miloy Engineering	Metallurgical (various) / Other / unclassified	1
1600	Ovon Stene (Edms) Bpk	Brickworks	1
48	Samancor (Meyerton)	Ferro-alloy (manganese)	4
1132	Samancor Ltd	Ferro-alloy (chrome)	4
1129	Sasol Polyfos	Chemical manufacture (Organic/Inorganic)	3
551	UCAR South Africa (Pty) Ltd	Metallurgical (various) / Other / unclassified	1
970	Vaal Potteries LTD	Brickworks	1

	Emfuleni Local Municipality
	Lesedi Local Municipality
	Midvaal Local Municipality

Band	Number of industries in band	Application fee (100% of application fee)	Annual fees (paid over 5 years)
Band 1	21	R 315,000.00	R 81,712.47
Band 2	14	R 840,000.00	R 217,900.06
Band 3	5	R 750,000.00	R 194,553.60
Band 4	11	R 3,025,000.00	R 784,699.63
Band 5	0	R 0.00	R 0.00
<b>Totals</b>	<b>51</b>	<b>R 4,930,000.00</b>	<b>R 1,278,865.76</b>

**Table 12: Fees calculation for the Multi-Jurisdictional unit**

Multi- Jurisdictional Unit			
APPA Reg. No.	Company Name	Industry Type in alignment with DEAT's estimated banding	Estimated Banding Classification in alignment with DEAT's estimated banding
409	African Cables Limited	Secondary metal production (lead)	2
509	African Detinning (Pty) Ltd	Metallurgical (various)	1
411	Apex Foundry (Pty) Ltd	Iron and steel	4
521	Collet-A-Can	Drum cleaning / reclamation	1
1118	Consolidated Wire Industries Ltd	Metallurgical (various)	1
1311	Dav Steel (Pty) Ltd	Iron and steel	4
1131	Dav steel(Pty)Ltd	Iron and steel	4
1037	Donaventa Holdings (Pty) Ltd (Dixon Batteries)	Lead battery	2
2639	Highland Night Investments No. 21 (Pty) Ltd Trading name : Clay Fusion Technologies (Pty) Ltd	Mineral products (various, clay, lime, gypsum)	1
89	Mittal Steel Vanderbijlpark	Iron and steel	4
548	Mittal Steel Vereeniging	Iron and steel	4
2002	Multi Construction Chemicals (Pty) Ltd	Chemical manufacture (Organic/Inorganic)	3
2069	Non Ferrous Cast Products	Casting and fabrication/Aluminium (secondary)	2
435	Nordberg Manufacturing	Other / unclassified	1
1282	Rand Water Vereeniging Pumping Station	Power generation (coal, boilers)	1
402	Scaw Metals Ltd (Vereeniging)	Iron and steel	4
464	Sharon Wire Mill Corp (Pty) Ltd	Metallurgical (various)	1
704	Slagment Limited (Vanderbijlpark)	Cement	4
383	South African Roll Company (Pty) Ltd (previously Dorbyl Heavy Engineering, also Vecor)	Metallurgical (various) / Other / unclassified	1
2226	Steel Serve (Pty) Ltd	Iron and steel	4
1604	Superior Casting Suppliers&Pattermakers (Pty)Ltd	Other / unclassified	1
1010	Suprachem, Division of Mittal Steel	Chemical manufacture (Inorganic)	3
2361	Vaal Brass Foundry	Secondary metal production	2
1773	Vereeniging Abattoir (Pty) Ltd	Abattoir	1
558	Vereeniging Foundries	Iron and steel	4
232	Vereeniging Refractories (Pty) Ltd	Brickworks	2
815	Vitro Building Products	Brickworks	2
575	Vlaktefontein Steenmakery (Pty) Ltd	Brickworks	2
1558	Brick-A-Crete	Brickworks	2
2325	Eskort Bacon	Other / unclassified	1
2540	Kayalami Bricks	Brickworks	2
296	Poortjies Stene - Heidelberg	Brickworks	2
417	Prebo (Pty) Ltd	Brickworks	2
287	Ratanda Brickworks	Brickworks	2
2350	ACA (Pty) Ltd	Brake Shoe Debonding	1
2066	African Brick(Pty)Ltd	Brickworks	1
706	Albras Foundry (Pty) Ltd	Secondary metal production	2
2076	Ambijo Lounges (Pty) Ltd	Incineration (other)	3
1606	Delta Chemicals (Pty) Ltd	Chemical manufacture (Organic/Inorganic)	3
1809	Drumcor S.A. (Pty) Ltd	Drum cleaning / reclamation	1
228	Everite Limited	Mineral processing (various)	2
1460	Flexilube (Pty) Ltd	Lube oil refining	1
515	Meyerton Brick and Tile (Pty) Ltd	Brickworks	1
2086	Meyerton Galvanizing CC	Metallurgical (various)	1
1960	Miloy Engineering	Metallurgical (various) / Other / unclassified	1
1600	Ovon Stene (Edms) Bpk	Brickworks	1
48	Samancor (Meyerton)	Ferro-alloy (manganese)	4
1132	Samancor Ltd	Ferro-alloy (chrome)	4
1129	Sasol Polyfos	Chemical manufacture (Organic/Inorganic)	3
551	UCAR South Africa (Pty) Ltd	Metallurgical (various) / Other / unclassified	1
970	Vaal Potteries LTD	Brickworks	1

	Emfuleni Local Municipality
	Lesedi Local Municipality
	Midvaal Local Municipality

Band	Number of industries in band	Application fee (100% of application fee)	Annual fees (paid over 5 years)
Band 1	21	R 315,000.00	R 81,712.47
Band 2	14	R 840,000.00	R 217,900.06
Band 3	5	R 750,000.00	R 194,553.60
Band 4	11	R 3,025,000.00	R 784,699.63
Band 5	0	R 0.00	R 0.00
<b>Totals</b>	<b>51</b>	<b>R 4,930,000.00</b>	<b>R 1,278,865.76</b>

**Note:** the income for the multi-jurisdictional unit is expected to be higher than that of the SDM (licensing only) as the Multi-jurisdictional unit would have the capability of servicing areas outside the three local municipalities and SDM itself. The base of income would thus be larger than that of the SDM.

The cost estimate for the Multi- jurisdictional unit as per table 12 should thus be viewed as the minimum estimated income potential.

### 5.4 Five year Capex Budget

Once the salary estimated budgets were developed, detailed budgetary costing was undertaken to reflect the estimated total CAPEX budget costs for the various unit options for the financial period of 2010 to 2014 (Tables 13 to 17).

**Table 13: Estimated CAPEX budget for the three options for the financial year 2010**

Financial year	2010					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>Setup costs</b>						
Computer Expenses	150,000.00		600,000.00		300,000.00	
Vehicle purchases/replacements	875,000.00		3,500,000.00		1,312,500.00	
Furniture & office equipment	250,000.00		1,000,000.00		500,000.00	
Purchase office & archiving space	3,550,000.00		14,200,000.00		5,325,000.00	
Compliance monitoring equipment	1,500,000.00		6,000,000.00		2,250,000.00	
<b>Budget totals</b>	<b>6,325,000.00</b>	<b>0.00</b>	<b>25,300,000.00</b>	<b>0.00</b>	<b>9,687,500.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>-6,325,000.00</b>		<b>-25,300,000.00</b>		<b>-9,687,500.00</b>	

**Table 14: Estimated CAPEX budget for the three options for the financial year 2011**

Financial year	2011					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>Setup costs</b>						
Computer Expenses	-	-	-	-	-	-
Vehicle purchases/replacements	-	-	-	-	-	-
Furniture & office equipment	-	-	-	-	-	-
Purchase office & archiving space	-	-	-	-	-	-
Compliance monitoring equipment	-	-	-	-	-	-
<b>Budget totals</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>0.00</b>		<b>0.00</b>		<b>0.00</b>	

**Table 15: Estimated CAPEX budget for the three options for the financial year 2012**

Financial year	2012					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>Setup costs</b>						
Computer Expenses	-	-	-	-	-	-
Vehicle purchases/replacements	-	-	-	-	-	-
Furniture & office equipment	-	-	-	-	-	-
Purchase office & archiving space	-	-	-	-	-	-
Compliance monitoring equipment	-	-	-	-	-	-
<b>Budget totals</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>0.00</b>		<b>0.00</b>		<b>0.00</b>	

**Table 16: Estimated CAPEX budget for the three options for the financial year 2013**

Financial year	2013					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>Setup costs</b>						
Computer Expenses	-	-	-	-	-	-
Vehicle purchases/replacements	1,137,500.00	-	4,550,000.00	-	1,706,250.00	-
Furniture & office equipment	-	-	-	-	-	-
Purchase office & archiving space	-	-	-	-	-	-
Compliance monitoring equipment	-	-	-	-	-	-
<b>Budget totals</b>	<b>1,137,500.00</b>	<b>0.00</b>	<b>4,550,000.00</b>	<b>0.00</b>	<b>1,706,250.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>-1,137,500.00</b>		<b>-4,550,000.00</b>		<b>-1,706,250.00</b>	

**Table 17: Estimated CAPEX budget for the three options for the financial year 2014**

Financial year	2014					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>Setup costs</b>						
Computer Expenses	-	-	-	-	-	-
Vehicle purchases/replacements	-	-	-	-	-	-
Furniture & office equipment	-	-	-	-	-	-
Purchase office & archiving space	-	-	-	-	-	-
Compliance monitoring equipment	-	-	-	-	-	-
<b>Budget totals</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>0.00</b>		<b>0.00</b>		<b>0.00</b>	

### **5.5 Five Year Opex budget**

Once the CAPEX estimated budgets were developed, detailed budgetary costing was undertaken to reflect the estimated total OPEX budget costs for the various unit options for the financial period of 2010 to 2014 (Tables 18 to 22).

**Table 18: Estimated OPEX budget for the three options for the financial year 2010**

Financial year	2010					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>General Expenses</b>						
Data maps literature	15,000.00		60,000.00		15,000.00	
Refreshments, snacks for meetings	7,500.00		30,000.00		7,500.00	
Reimbursable	8,000.00		32,000.00		8,000.00	
Office decor	4,500.00		18,000.00		6,500.00	
Advertising for staff	65,000.00		260,000.00		85,000.00	
Security	65,000.00		260,000.00		65,000.00	
Staff Training	180,000.00		675,000.00		360,000.00	
Telephone & Fax	75,000.00		300,000.00		150,000.00	
Travel & Accommodation (incl. S&T)	460,000.00		1,840,000.00		690,000.00	
Insurance	45,000.00		180,000.00		67,500.00	
Legal Fees	60,000.00		240,000.00		60,000.00	
Printing & Stationery	75,000.00		300,000.00		112,500.00	
Levies	45,000.00		180,000.00		67,500.00	
Accounting & Audit Fees	65,000.00		260,000.00		65,000.00	
Bank Charges	15,000.00		60,000.00		15,000.00	
Cleaning	7,500.00		30,000.00		11,250.00	
Computer Expenses	50,000.00		200,000.00		100,000.00	
Furniture & office equipment	12,500.00		50,000.00		25,000.00	
Courier & Postage	10,000.00		40,000.00		15,000.00	
Electricity & Water Rates	30,000.00		120,000.00		45,000.00	
Finance Charges	10,000.00		40,000.00		10,000.00	
Fixed Assets < R5000	30,000.00		120,000.00		60,000.00	
Interest Paid	170,000.00		680,000.00		255,000.00	
Repairs & Maintenance	25,000.00		100,000.00		37,500.00	
Monitoring stations Maint. & Cal.	1,500,000.00		1,500,000.00		1,500,000.00	
Compliance monitoring equipment Maint. & Cal.	50,000.00		150,000.00		75,000.00	
External consulting fees	1,500,000.00		6,000,000.00		1,500,000.00	
<b>Motor Vehicle Expenses</b>						
Fuel/Oil and toll fees	250,000.00		1,000,000.00		375,000.00	
Repairs & Maint.	50,000.00		200,000.00		75,000.00	
Insurance & Licence	50,000.00		200,000.00		75,000.00	
Parking	2,500.00		10,000.00		3,750.00	
<b>Salaries &amp; Wages</b>						
Permenant Staff Salary	2,676,240.00		10,170,720.00		5,250,000.00	
PAYE	892,080.00		3,390,240.00		1,750,000.00	
SDL	36,000.00		135,600.00		70,000.00	
UIF	13,800.00		51,750.00		27,600.00	
Pension Fund	640,000.00		2,440,972.80		1,260,000.00	
Medical Aid contributions	216,000.00		810,000.00		432,000.00	
<i>Special Skills allowance (Based on 20% of total salaries)</i>	<i>713,664.00</i>		<i>2,712,192.00</i>		<i>1,400,000.00</i>	
<b>Budget totals</b>	<b>10,120,284.00</b>	<b>0.00</b>	<b>34,846,474.80</b>	<b>0.00</b>	<b>16,126,600.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>-10,120,284.00</b>		<b>-34,846,474.80</b>		<b>-16,126,600.00</b>	

**Table 19: Estimated OPEX budget for the three options for the financial year 2011**

Financial year	2011					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>General Expenses</b>						
Data maps literature	16,500.00		66,000.00		16,500.00	
Refreshments, snacks for meetings	8,250.00		33,000.00		8,250.00	
Reimbursable	8,800.00		35,200.00		8,800.00	
Office decor	4,950.00		19,800.00		7,150.00	
Advertising for staff	71,500.00		286,000.00		93,500.00	
Security	71,500.00		286,000.00		71,500.00	
Staff Training	198,000.00		742,500.00		396,000.00	
Telephone & Fax	82,500.00		330,000.00		165,000.00	
Travel & Accommodation (incl. S&T)	506,000.00		2,024,000.00		759,000.00	
Insurance	49,500.00		198,000.00		74,250.00	
Legal Fees	66,000.00		264,000.00		66,000.00	
Printing & Stationery	82,500.00		330,000.00		123,750.00	
Levies	49,500.00		198,000.00		74,250.00	
Accounting & Audit Fees	71,500.00		286,000.00		71,500.00	
Bank Charges	16,500.00		66,000.00		16,500.00	
Cleaning	8,250.00		33,000.00		12,375.00	
Computer Expenses	55,000.00		220,000.00		110,000.00	
Furniture & office equipment	13,750.00		55,000.00		27,500.00	
Courier & Postage	11,000.00		44,000.00		16,500.00	
Electricity & Water Rates	33,000.00		132,000.00		49,500.00	
Finance Charges	11,000.00		44,000.00		11,000.00	
Fixed Assets < R5000	33,000.00		132,000.00		66,000.00	
Interest Paid	187,000.00		748,000.00		280,500.00	
Repairs & Maintenance	27,500.00		110,000.00		41,250.00	
Monitoring stations Maint. & Cal.	1,650,000.00		1,650,000.00		1,650,000.00	
Compliance monitoring equipment Maint. & Cal.	55,000.00		165,000.00		82,500.00	
External consulting fees	1,650,000.00		6,600,000.00		1,650,000.00	
<b>Motor Vehicle Expenses</b>						
Fuel/Oil and toll fees	275,000.00		1,100,000.00		412,500.00	
Repairs & Maint.	55,000.00		220,000.00		82,500.00	
Insurance & Licence	55,000.00		220,000.00		82,500.00	
Parking	2,750.00		11,000.00		4,125.00	
<b>Salaries &amp; Wages</b>						
Permenant Staff Salary	2,943,864.00		11,187,792.00		5,775,000.00	
PAYE	981,288.00		3,729,264.00		1,925,000.00	
SDL	39,600.00		149,160.00		77,000.00	
UIF	15,180.00		56,925.00		30,360.00	
Pension Fund	704,000.00		2,685,070.08		1,386,000.00	
Medical Aid contributions	237,600.00		891,000.00		475,200.00	
<i>Special Skills allowance (Based on 20% of total salaries)</i>	<b>785,030.40</b>		<b>2,983,411.20</b>		<b>1,540,000.00</b>	
<b>Budget totals</b>	<b>11,132,312.40</b>	<b>0.00</b>	<b>38,331,122.28</b>	<b>0.00</b>	<b>17,739,260.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>-11,132,312.40</b>		<b>-38,331,122.28</b>		<b>-17,739,260.00</b>	

**Table 20: Estimated OPEX budget for the three options for the financial year 2012**

Financial year	2012					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>General Expenses</b>						
Data maps literature	18,150.00		72,600.00		18,150.00	
Refreshments, snacks for meetings	9,075.00		36,300.00		9,075.00	
Reimbursable	9,680.00		38,720.00		9,680.00	
Office decor	5,445.00		21,780.00		7,865.00	
Advertising for staff	78,650.00		314,600.00		102,850.00	
Security	78,650.00		314,600.00		78,650.00	
Staff Training	217,800.00		816,750.00		435,600.00	
Telephone & Fax	90,750.00		363,000.00		181,500.00	
Travel & Accommodation (incl. S&T)	556,600.00		2,226,400.00		834,900.00	
Insurance	54,450.00		217,800.00		81,675.00	
Legal Fees	72,600.00		290,400.00		72,600.00	
Printing & Stationery	90,750.00		363,000.00		136,125.00	
Levies	54,450.00		217,800.00		81,675.00	
Accounting & Audit Fees	78,650.00		314,600.00		78,650.00	
Bank Charges	18,150.00		72,600.00		18,150.00	
Cleaning	9,075.00		36,300.00		13,612.50	
Computer Expenses	60,500.00		242,000.00		121,000.00	
Furniture & office equipment	15,125.00		60,500.00		30,250.00	
Courier & Postage	12,100.00		48,400.00		18,150.00	
Electricity & Water Rates	36,300.00		145,200.00		54,450.00	
Finance Charges	12,100.00		48,400.00		12,100.00	
Fixed Assets < R5000	36,300.00		145,200.00		72,600.00	
Interest Paid	205,700.00		822,800.00		308,550.00	
Repairs & Maintenance	30,250.00		121,000.00		45,375.00	
Monitoring stations Maint. & Cal.	1,815,000.00		1,815,000.00		1,815,000.00	
Compliance monitoring equipment Maint. & Cal.	60,500.00		181,500.00		90,750.00	
External consulting fees	1,815,000.00		7,260,000.00		1,815,000.00	
<b>Motor Vehicle Expenses</b>						
Fuel/Oil and toll fees	302,500.00		1,210,000.00		453,750.00	
Repairs & Maint.	60,500.00		242,000.00		90,750.00	
Insurance & Licence	60,500.00		242,000.00		90,750.00	
Parking	3,025.00		12,100.00		4,537.50	
<b>Salaries &amp; Wages</b>						
Permenant Staff Salary	3,238,250.40		12,306,571.20		6,352,500.00	
PAYE	1,079,416.80		4,102,190.40		2,117,500.00	
SDL	43,560.00		164,076.00		84,700.00	
UIF	16,698.00		62,617.50		33,396.00	
Pension Fund	774,400.00		2,953,577.09		1,524,600.00	
Medical Aid contributions	261,360.00		980,100.00		522,720.00	
<i>Special Skills allowance (Based on 20% of total salaries)</i>	<b>863,533.44</b>		<b>3,281,752.32</b>		<b>1,694,000.00</b>	
<b>Budget totals</b>	<b>12,245,543.64</b>	<b>0.00</b>	<b>42,164,234.51</b>	<b>0.00</b>	<b>19,513,186.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>-12,245,543.64</b>		<b>-42,164,234.51</b>		<b>-19,513,186.00</b>	

**Table 21: Estimated OPEX budget for the three options for the financial year 2013**

Financial year	2013					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>General Expenses</b>						
Data maps literature	19,965.00		79,860.00		19,965.00	
Refreshments, snacks for meetings	9,982.50		39,930.00		9,982.50	
Reimbursable	10,648.00		42,592.00		10,648.00	
Office decor	5,989.50		23,958.00		8,651.50	
Advertising for staff	86,515.00		346,060.00		113,135.00	
Security	86,515.00		346,060.00		86,515.00	
Staff Training	239,580.00		898,425.00		479,160.00	
Telephone & Fax	99,825.00		399,300.00		199,650.00	
Travel & Accommodation (incl. S&T)	612,260.00		2,449,040.00		918,390.00	
Insurance	59,895.00		239,580.00		89,842.50	
Legal Fees	79,860.00		319,440.00		79,860.00	
Printing & Stationery	99,825.00		399,300.00		149,737.50	
Levies	59,895.00		239,580.00		89,842.50	
Accounting & Audit Fees	86,515.00		346,060.00		86,515.00	
Bank Charges	19,965.00		79,860.00		19,965.00	
Cleaning	9,982.50		39,930.00		14,973.75	
Computer Expenses	66,550.00		266,200.00		133,100.00	
Furniture & office equipment	16,637.50		66,550.00		33,275.00	
Courier & Postage	13,310.00		53,240.00		19,965.00	
Electricity & Water Rates	39,930.00		159,720.00		59,895.00	
Finance Charges	13,310.00		53,240.00		13,310.00	
Fixed Assets < R5000	39,930.00		159,720.00		79,860.00	
Interest Paid	226,270.00		905,080.00		339,405.00	
Repairs & Maintenance	33,275.00		133,100.00		49,912.50	
Monitoring stations Maint. & Cal.	1,996,500.00		1,996,500.00		1,996,500.00	
Compliance monitoring equipment Maint. & Cal.	66,550.00		199,650.00		99,825.00	
External consulting fees	1,996,500.00		7,986,000.00		1,996,500.00	
<b>Motor Vehicle Expenses</b>						
Fuel/Oil and toll fees	332,750.00		1,331,000.00		499,125.00	
Repairs & Maint.	66,550.00		266,200.00		99,825.00	
Insurance & Licence	66,550.00		266,200.00		99,825.00	
Parking	3,327.50		13,310.00		4,991.25	
<b>Salaries &amp; Wages</b>						
Permenant Staff Salary	3,562,075.44		13,537,228.32		6,987,750.00	
PAYE	1,187,358.48		4,512,409.44		2,329,250.00	
SDL	47,916.00		180,483.60		93,170.00	
UIF	18,367.80		68,879.25		36,735.60	
Pension Fund	851,840.00		3,248,934.80		1,677,060.00	
Medical Aid contributions	287,496.00		1,078,110.00		574,992.00	
<i>Special Skills allowance (Based on 20% of total salaries)</i>	<i>949,886.78</i>		<i>3,609,927.55</i>		<i>1,863,400.00</i>	
<b>Budget totals</b>	<b>13,470,098.00</b>	<b>0.00</b>	<b>46,380,657.96</b>	<b>0.00</b>	<b>21,464,504.60</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>-13,470,098.00</b>		<b>-46,380,657.96</b>		<b>-21,464,504.60</b>	

**Table 22: Estimated OPEX budget for the three options for the financial year 2014**

Financial year	2014					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>General Expenses</b>						
Data maps literature	21,961.50		87,846.00		21,961.50	
Refreshments, snacks for meetings	10,980.75		43,923.00		10,980.75	
Reimbursable	11,712.80		46,851.20		11,712.80	
Office decor	6,588.45		26,353.80		9,516.65	
Advertising for staff	95,166.50		380,666.00		124,448.50	
Security	95,166.50		380,666.00		95,166.50	
Staff Training	263,538.00		988,267.50		527,076.00	
Telephone & Fax	109,807.50		439,230.00		219,615.00	
Travel & Accommodation (incl. S&T)	673,486.00		2,693,944.00		1,010,229.00	
Insurance	65,884.50		263,538.00		98,826.75	
Legal Fees	87,846.00		351,384.00		87,846.00	
Printing & Stationery	109,807.50		439,230.00		164,711.25	
Levies	65,884.50		263,538.00		98,826.75	
Accounting & Audit Fees	95,166.50		380,666.00		95,166.50	
Bank Charges	21,961.50		87,846.00		21,961.50	
Cleaning	10,980.75		43,923.00		16,471.13	
Computer Expenses	73,205.00		292,820.00		146,410.00	
Furniture & office equipment	18,301.25		73,205.00		36,602.50	
Courier & Postage	14,641.00		58,564.00		21,961.50	
Electricity & Water Rates	43,923.00		175,692.00		65,884.50	
Finance Charges	14,641.00		58,564.00		14,641.00	
Fixed Assets < R5000	43,923.00		175,692.00		87,846.00	
Interest Paid	248,897.00		995,588.00		373,345.50	
Repairs & Maintenance	36,602.50		146,410.00		54,903.75	
Monitoring stations Maint. & Cal.	2,196,150.00		2,196,150.00		2,196,150.00	
Compliance monitoring equipment Maint. & Cal.	73,205.00		219,615.00		109,807.50	
External consulting fees	2,196,150.00		8,784,600.00		2,196,150.00	
<b>Motor Vehicle Expenses</b>						
Fuel/Oil and toll fees	366,025.00		1,464,100.00		549,037.50	
Repairs & Maint.	73,205.00		292,820.00		109,807.50	
Insurance & Licence	73,205.00		292,820.00		109,807.50	
Parking	3,660.25		14,641.00		5,490.38	
<b>Salaries &amp; Wages</b>						
Permenant Staff Salary	3,918,282.98		14,890,951.15		7,686,525.00	
PAYE	1,306,094.33		4,963,650.38		2,562,175.00	
SDL	52,707.60		198,531.96		102,487.00	
UIF	20,204.58		75,767.18		40,409.16	
Pension Fund	937,024.00		3,573,828.28		1,844,766.00	
Medical Aid contributions	316,245.60		1,185,921.00		632,491.20	
<i>Special Skills allowance (Based on 20% of total salaries)</i>	<b>1,044,875.46</b>		<b>3,970,920.31</b>		<b>2,049,740.00</b>	
<b>Budget totals</b>	<b>14,817,107.80</b>	<b>0.00</b>	<b>51,018,723.75</b>	<b>0.00</b>	<b>23,610,955.06</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>-14,817,107.80</b>		<b>-51,018,723.75</b>		<b>-23,610,955.06</b>	

## 5.6 Five Year budget summary

Once the income, CAPEX and OPEX estimated budgets were developed, a budget summary was formulated to reflect the estimated total budget costs for the various unit options for the financial period of 2010 to 2014 (Tables 23 to 27).

**Table 23: Estimated summary budget for the three options for the financial year 2010**

Financial year	2010					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>Income</b>						
Emissions licencing fees (Annual application fees over 5 years)		0.00		0.00		0.00
Budget allocated from central treasury		0.00		0.00		0.00
Interest received		0.00		0.00		0.00
CAPEX Budget	6,325,000.00	0.00	25,300,000.00	0.00	9,687,500.00	0.00
OPEX Budget	10,120,284.00	0.00	34,846,474.80	0.00	16,126,600.00	0.00
<b>Budget totals</b>	<b>16,445,284.00</b>	<b>0.00</b>	<b>60,146,474.80</b>	<b>0.00</b>	<b>25,814,100.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>-16,445,284.00</b>		<b>-60,146,474.80</b>		<b>-25,814,100.00</b>	

**Table 24: Estimated summary budget for the three options for the financial year 2011**

Financial year	2011					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>Income</b>						
Emissions licencing fees (Annual application fees over 5 years)		0.00		0.00		0.00
Budget allocated from central treasury		0.00		0.00		0.00
Interest received		0.00		0.00		0.00
CAPEX Budget	0.00	0.00	0.00	0.00	0.00	0.00
OPEX Budget	11,132,312.40	0.00	38,331,122.28	0.00	17,739,260.00	0.00
<b>Budget totals</b>	<b>11,132,312.40</b>	<b>0.00</b>	<b>38,331,122.28</b>	<b>0.00</b>	<b>17,739,260.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>-11,132,312.40</b>		<b>-38,331,122.28</b>		<b>-17,739,260.00</b>	

**Table 25: Estimated summary budget for the three options for the financial year 2012**

Financial year	2012					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>Income</b>						
Emissions licencing fees (Annual application fees over 5 years)		0.00		0.00		0.00
Budget allocated from central treasury		0.00		0.00		0.00
Interest received		0.00		0.00		0.00
CAPEX Budget	0.00	0.00	0.00	0.00	0.00	0.00
OPEX Budget	12,245,543.64	0.00	42,164,234.51	0.00	19,513,186.00	0.00
<b>Budget totals</b>	<b>12,245,543.64</b>	<b>0.00</b>	<b>42,164,234.51</b>	<b>0.00</b>	<b>19,513,186.00</b>	<b>0.00</b>
<b>Budget shortfall</b>	<b>-12,245,543.64</b>		<b>-42,164,234.51</b>		<b>-19,513,186.00</b>	

**Table 26: Estimated summary budget for the three options for the financial year 2013**

Financial year	2013					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>Income</b>						
Emissions licencing fees (Annual application fees over 5 years)		1,278,865.76		1,278,865.76		1,278,865.76
Budget allocated from central treasury		0.00		0.00		0.00
Interest received		0.00		0.00		0.00
CAPEX Budget	1,137,500.00	0.00	4,550,000.00	0.00	1,706,250.00	0.00
OPEX Budget	13,470,098.00	0.00	46,380,657.96	0.00	21,464,504.60	0.00
<b>Budget totals</b>	<b>14,607,598.00</b>	<b>1,278,865.76</b>	<b>50,930,657.96</b>	<b>1,278,865.76</b>	<b>23,170,754.60</b>	<b>1,278,865.76</b>
<b>Budget shortfall</b>	<b>-13,328,732.24</b>		<b>-49,651,792.20</b>		<b>-21,891,888.84</b>	

**Table 27: Estimated summary budget for the three options for the financial year 2014**

Financial year	2014					
	SDM Unit (licencing only)		Four separate units (SDM+3x LM's)		Multi Jurisdictional unit (SDM AQ sub-directorate)	
	DR	CR	DR	CR	DR	CR
<b>Income</b>						
Emissions licencing fees (Annual application fees over 5 years)		1,278,865.76		1,278,865.76		1,278,865.76
Budget allocated from central treasury		0.00		0.00		0.00
Interest received		0.00		0.00		0.00
CAPEX Budget	0.00	0.00	0.00	0.00	0.00	0.00
OPEX Budget	14,817,107.80	0.00	51,018,723.75	0.00	23,610,955.06	0.00
<b>Budget totals</b>	<b>14,817,107.80</b>	<b>1,278,865.76</b>	<b>51,018,723.75</b>	<b>1,278,865.76</b>	<b>23,610,955.06</b>	<b>1,278,865.76</b>
<b>Budget shortfall</b>	<b>-13,538,242.04</b>		<b>-49,739,857.99</b>		<b>-22,332,089.30</b>	

## 6. Implementation plan

### 6.1 Prioritisation analysis

In terms of the implementation of this new SDM air quality management sub- directorate for the Sedibeng region, this can be only achieved with the rigorous implementation of the units business plan (Section 5.2 above).

This business plan was structured in such a manner that the tasks to be completed form a list of priorities. Once these tasks (in order of priority) are completed, the unit will become functional. Failure in any one of these tasks by the SDM and or the local municipalities will likely lead to the unit not being financially viable, nor will the unit be functional.

In summary the main prioritized tasks are listed below:

- Task 1: Project initiation and management
- Task 2: Legal mandate resolutions and negotiations
- Task 3 : SDM restructuring
- Task 4 : Funding securing for 2010 to 2014
- Task 5 : Recruitment
- Task 6 : Staff capacity training
- Task 7 : Provision of optimal air quality management services for the Sedibeng region for 2010 to 2014

## **7. Conclusion**

In order for SDM to provide an optimal air quality management service to the Sedibeng region they will have to provide a full suite of air quality management services to include but not limited to the following:

- Atmospheric emission licensing (Act as the atmospheric emission licensing authority for the region),
- Undertake compliance, monitoring and enforcement activities for the Sedibeng region,
- Responding to air quality complaints, and
- Undertaking any other air quality management related activities for the Sedibeng region.

Through the analysis and review of various sets of legislation, and considering the definition of the optimal air quality management service it is recommended that the SDM establish a multi-jurisdictional service utility for the Sedibeng region. It is also recommended that this multi-jurisdictional service utility be structured within the current SDM structure to form the SDM Sub-directorate of Air Quality Management (SDM AQM). However in order for this to be constitutionally compliant, the SDM will have to establish agreements with the local municipalities, thus allowing the SDM AQM to fulfill the legal mandate of the local municipalities as well as those for the SDM.

Further reasons supporting these recommendations include the following:

- It is shown via the estimated budgets not to be financially viable or effective for the SDM and each of the three local municipalities to provide separate air quality services as proved in the estimated budgets. The best, most practical option would be one consolidated unit (i.e. Multi- jurisdictional unit)
- Income for the multi-jurisdictional unit is expected to be higher than that of the SDM or any of the local municipalities on their own since the Multi-jurisdictional unit would have the capability of servicing areas outside the three local municipalities and SDM itself. The potential base of income would thus be larger than that of the SDM. However it is understood that the SDM will focus on the Sedibeng district only, nevertheless the option would stand should the SDM wish to expand their income base.

In terms of these recommendations it is clear that the SDM AQM will have to be funded via several mechanisms including the following:

- Municipal budgeting on a local and district level,
- Atmospheric emission license fees. However the fees generated through this mechanism will only become available in three years and furthermore, the fees will only supplement those as budgeted for under the municipal budgeting process,
- Any fees determined via the registration of controlled emitters, and
- Fees generated via any legal imposed fines on industries for noncompliance with the AEL's.

## References

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## **Appendix A: Legal review**

**Appendix B: Chapter 4.2 of the National Framework for Air  
Quality Management in South Africa**

## **Appendix C: Function overview: Staff Functions, Skills and Training for the Organogram Options**

### **1. Manager Air Quality Management**

#### **a. Functions**

- Manage sub directorate resources and provide strategic leadership
- Develops operational plans and associated budget for the department
- Provides input into the preparation of the IDP relating to air quality
- Ensure an effective licencing process is in place
- Ensure a compliance and enforcement programme is in place
- Implement the required monitoring and reporting systems
- Oversee the preparation of the Air Quality Management Plan and to ensure this is coordinated with the local authorities
- Ensure effective communication of all air quality matters to all stakeholders
- Establish and coordinate the application appeals panel
- Review appeals board documentation
- Liaise with DWEA on all air quality matters
- Assist DWEA and SDM with the setting of licence and permit fee levels
- Identification of new emission types to be controlled
- Provide regular reports on air quality management to Council
- Keep abreast of air quality legislation both locally and internationally

#### **b. Skill Level**

- Good interpersonal skills.
- Good planning and organizational skills.
- Familiarity with all computer packages used in the government system.
- Good understanding of the roles, benefits and challenges of information management systems in supporting environmental management and specifically air quality management.
- Good leadership skills.
- Good verbal and written communication skills.

- Good strategic development skills

c. Training Requirements

- Masters Degree in Environmental Management, Biophysical Sciences, Environmental Health, Environmental Engineering, Environmental Planning or equivalent qualification and specifically air quality management
- Air Quality Management Qualification.
- Must be professionally registered with the South African Council for Natural Scientific Professionals (SACNASP)
- Training in environmental management systems.
- Training in environmental law.
- Training in cleaner production.
- EMI Accreditation.
- Work experience of at least 5 years in the field of air quality management and/or environmental science. Two years should preferably be at a management level.

## 2. Air Quality Communications Officer

### a. Functions

- Responsible for the liaison with all stakeholders on air quality matters
- Production of media releases on air quality matters
- Liaise with the local Municipalities on IDP matters
- Responsible for air quality related event management
- Public awareness training on air quality matters
- Air quality campaigns throughout the region
- Liaison with, and briefing of, politicians on air quality matters
- Responsible for all stakeholder communication and engagement
- Manage Air Quality Management web site

### b. Skill Level

- Excellent verbal and written communication skills
- Practiced with press releases and dealing with the media
- Good interpersonal skills.
- Good planning and organizational skills.
- Familiarity with all aspects of air quality management.
- Good understanding of the information management systems in supporting environmental management.

### c. Training Requirements

- Degree in communications
- Training qualification
- Public Relations and Accredited member of Public Relations Institute of South Africa (PRISA).
- Content Management System knowledge
- Website Design techniques

### 3. Assistant Manager Administration, Registration and Finance

#### a. Functions

- Manage sub directorate resources and provide leadership
- Responsible for the performance management of staff
- Review of all licences prior to issue
- Review of all permits prior to issue
- Sign off on all new, amended, renewed and transferred licences
- Liaise with DWEA on the operation of the fees model, make suggestions for improvement
- Design local enhancements, parameter settings of the fees model
- Receive training from DWEA in the model and in turn train SDM staff in the use of the model
- Review the financial budget for the department and presents to the Manager Air Quality Management
- Receives and handles objections to licencing matters

#### b. Skill Level

- Good interpersonal skills.
- Good planning and organizational skills.
- Familiarity with computer packages used in the SDM.
- Good understanding of the roles, benefits and challenges of information management systems in supporting environmental management.
- Good verbal and written communication skills
- Overview of the requirements of the PFMA
- Good leadership skills.

#### c. Training Requirements

- Bachelors Degree in either Environmental Management, Biophysical Sciences, Environmental Health, Environmental Engineering, Environmental Planning or equivalent qualification and specifically air quality management.
- Must be professionally registered with the South African Council for Natural Scientific Professionals (SACNASP)
- Training in environmental management systems.

- Training in environmental law.
- Training in cleaner production.
- Post graduate qualification in accounting or management principles
- Air Quality Management Qualification.

#### 4. Assistant Manager Enforcement, Planning Monitoring and Legal

##### a. Functions

- Manage sub directorate resources and provide leadership
- Responsible for the performance management of staff
- Receives and handles objections to licencing and permit matters
- Review of all monitoring reports and initiate action if required
- Review all enforcement cases and liaise with SAPS
- Prepare an air quality report monthly for DWEA
- Oversees the handling of all legal matters. Refers to external expertise if required
- Keeps abreast of all technical developments in the field of air quality monitoring
- Receives and handles objections to air quality matters
- Ensure that all objections are finalised and agreed actions followed through
- Provides input to the AQMP and provides a final quality control review
- Reviewing of EIA application where atmospheric emissions may be of a concern. Also responsible for interdepartmental liaison in this regard
- Liaises with other Local Municipalities on the AQMP and the air quality component of the IDP
- Set local standards for emissions

##### b. Skill Level

- Good interpersonal skills.
- Good planning and organizational skills.
- Familiarity with computer packages used in the SDM.
- Good understanding of the roles, benefits and challenges of information management systems in supporting environmental management.
- Good verbal and written communication skills
- Technical knowledge of monitoring systems
- Good leadership skills.

c. Training Requirements

- Bachelors Degree in either Environmental Management, Biophysical Sciences, Environmental Health, Environmental Engineering, Environmental Planning or equivalent qualification.
- Must be professionally registered with the South African Council for Natural Scientific Professionals (SACNASP)
- Training in environmental management systems.
- Training in environmental law.
- Training in cleaner production.
- Post graduate qualification in legal studies
- Diploma in Local Government
- EMI Accreditation.

## 5. Administration and Reporting Officer

### a. Functions

- Secretarial support for the sub directorate
- Maintaining an index of all directorate records and files
- Filing current files
- Archiving files
- Retrieval and control of all files
- Register of application forms issued
- Recording ongoing status of all applications
- Recording of other relevant directorate data/information
- Keep a reference library of all air quality management publications
- Issue letters of acknowledgement of application
- Meeting agendas and minutes
- Responding to queries from the public or passing the query to the appropriate person
- Performing low level data management

### b. Skill Level

- Good interpersonal skills.
- Good organisational skills.
- Good knowledge of Microsoft office suite of programs
- Good understanding of the roles, benefits and challenges of information management systems in supporting environmental management
- Good verbal and written communication skills
- Overview of the requirements of the PFMA
- Remain in touch with latest computer literacy technology

### c. Training Requirements

- Matric on higher grade
- Diploma in financial management
- Attend secretarial workshops/conferences
- Time management
- Secretarial qualification.

## 6. Finance Officer

### a. Functions

- Preparation of directorate budget
- Ongoing monitoring of budget versus actual income and expenditure
- Approval of all expenditure
- Sign off on payments
- Issue invoices for licences and permits
- Issue invoices on an annual basis
- Billing for licences and permits
- Production of the licence and permit certificates
- Revoking of licence/permit due to non-payment
- Follow up on cash collection, withdraw of licence for non-payment if necessary
- Production of monthly directorate financial results and presentation to Manager Air Quality Management
- Financial record keeping for the directorate
- Responsible for petty cash
- Responsible for asset recording and tagging
- Issue of invoices for fee on application

### b. Skill Level

- Good interpersonal skills.
- Good planning and organizational skills.
- Familiarity with computer packages used in the Municipality
- Good knowledge of Microsoft office suite of programs
- Good knowledge of the PFMA
- Good understanding of the roles, benefits and challenges of providing quality financial information systems in supporting environmental management.
- Good verbal and written communication skills.

### c. Training Requirements

- Bachelors Degree in Commerce or Finance
- Post graduate qualification in finance and accounting.

## 7. Applications, Amendments, Transfers Officer

### a. Functions

- The issuing of application forms
- Assistance with the completion of application forms
- Acceptance and recording of the application
- Issue letters of acknowledgement
- Check for completeness of application and that emissions are listed activities
- Issue public notices
- Verification of the contents of the application
- Handle objections
- Provide information to the appeals board
- Notify objectors of the outcome of the objection and why
- Determine if application is successful
- Check licence certificate
- Review Environmental Impact Assessments in terms of air quality considerations
- Issue records of decision in terms of the Environmental Impact Assessment

### b. Skill Level

- Good interpersonal skills.
- Good organizational skills.
- Good investigative skills
- Excellent understanding of the fee calculation model
- Excellent understanding of all aspects that make up the components to be assessed when issuing a licence
- Good understanding of the Microsoft Office and other computer packages used at SDM.
- Good understanding of the roles, benefits and challenges of information management systems in supporting environmental management.
- Good verbal and written communication skills.

c. Training Requirements

- Masters Degree in Environmental Management, Biophysical Sciences, Environmental Health, Environmental Engineering, Environmental Planning or equivalent qualification.
- Must be professionally registered with the South African Council for Natural Scientific Professionals (SACNASP)
- Air Quality Management Qualification.
- Training in environmental management systems.
- Training in environmental law.
- Training in cleaner production.

## 8. Permits Officer

### a. Functions

- The issuing of application forms
- Assistance with the completion of application forms
- Acceptance and recording of the application
- Issue letters of acknowledgement
- Check for completeness of application and that emissions are listed activities
- Issue public notices
- Verification of the contents of the application
- Handle objections
- Provide information to the appeals board
- Notify objectors of the outcome of the objection and why
- Determine if application is successful
- Check permit certificate

### b. Skill Level

- Good interpersonal skills.
- Good organizational skills.
- Good investigative skills
- Excellent understanding of the fee calculation model
- Good understanding of all aspects that make up the components to be assessed when issuing a permit
- Good understanding of the Microsoft Office and other computer packages used at SDM.
- Good understanding of the roles, benefits and challenges of information management systems in supporting environmental management.
- Good verbal and written communication skills.

### c. Training Requirements

- Masters Degree in Environmental Management, Biophysical Sciences, Environmental Health, Environmental Engineering, Environmental Planning or equivalent qualification.

- Must be professionally registered with the South African Council for Natural Scientific Professionals (SACNASP)
- Training in environmental management systems.
- Training in environmental law.
- Training in cleaner production
- Air Quality Management Qualification.

## 9. Fees Calculation and Model Updating Officer

### a. Functions

- Liaise with DWEA regarding the functionality and use of the model
- Apply updates to the model as supplied by DWEA
- Construct the model as per the needs of SDM in parameter settings
- Assist the finance Officer in the production of invoices for the licence or permit
- Assist the Application officer with the use of the model
- Scoring of applications in line with the fee calculation model

### b. Skill Level

- Good interpersonal skills.
- Good planning and organisational skills.
- Excellent experience in Microsoft Excel and the use of modelling techniques
- Familiarity with financial computer packages used at SDM.
- Good understanding of all aspects that make up the components to be assessed when issuing a licence
- Good understanding of the roles, benefits and challenges of information management systems in supporting environmental management.
- Good verbal and written communication skills.

### c. Training Requirements

- Degree in Environmental Management, Biophysical Sciences, Environmental Health, Environmental Engineering, Environmental Planning or equivalent qualification.
- Air Quality Management Qualification.
- Must be professionally registered with the South African Council for Natural Scientific Professionals (SACNASP)
- Training in environmental management systems.
- Training in environmental law.
- Training in cleaner production
- Microsoft office

## 10. Air Quality Management Planning Officer

### a. Functions

- Responsible for the preparation of the Air Quality Management Plan
- Responsible for the Air Quality component of the IDP
- Responsible for providing assistance and guidance to the implementation of the AQMP
- Monitoring progress of the implementation of the AQMP
- Ensure the local Municipality AQMP is aligned to the SDM AQMP
- Regular communication with the local municipalities regarding the preparation and implementation of the IDP and AQMP
- Review the national framework for AQMP and determine its use within the local framework
- Dispersion modeling
- Reviewing of EIA application where atmospheric emissions may be of a concern. Also responsible for interdepartmental liaison in this regard.
- Review impact of AQM on climate change
- Keep abreast of air quality management issues on an international scale
- Custodian of all air quality data in the Directorate

### b. Skill Level

- Good interpersonal skills.
- Good planning and organisational skills.
- Good understanding of the components of an IDP and AQMP
- Excellent experience in Microsoft Office and the use of modelling techniques
- Familiarity with financial computer packages used at SDM.
- Good understanding of the roles, benefits and challenges of information management systems in supporting environmental management.
- Good verbal and written communication skills.

### c. Training Requirements

- Degree in Environmental Management, Biophysical Sciences, Environmental Health, Environmental Engineering, Environmental Planning or equivalent qualification.
- Air Quality Management Qualification.
- Diploma in Local Government planning
- Must be professionally registered with the South African Council for Natural Scientific Professionals (SACNASP)
- Training in environmental management systems.
- Training in environmental law.
- Training in cleaner production
- Must competent in using atmospheric dispersion modelling software
- Must competent in using Geographic Information Systems (GIS) software

## 11. Air Quality Monitoring Technician

### a. Functions

- Calibration, maintenance and management of the monitoring stations
- Set up measurement facilities for air quality emissions
- Identification of emissions from point and non-point sources
- Noise and dust fall out monitoring
- Set up and establishment of air quality monitoring networks
- Ensure maintenance of data collection and management channels and ensure is in operation
- Policing of compliance of licence and permit holders
- Any other air quality monitoring work required

### b. Skill Level

- Technical skill in setting up and maintenance of monitoring functions
- Good planning and organisational skills.
- Good understanding of the roles, benefits and challenges of information management systems in supporting environmental management
- Data analysis and evaluation
- Wide range practical of knowledge of air quality monitoring instrumentation including operation, maintenance and calibrations of equipment.

### c. Training Requirements

- A Matric on higher grade as a minimum
- Qualification in electronics or equivalent qualification beneficial.
- Technical aspects of air quality monitoring systems
- Work experience of at least 3 years in the field as an air quality monitoring technician.

## 12. EMI: Dust and Noise Officer

### a. Functions

- Specific focus on the impact of noise and dust on the environment
- Liaise with SAPS regarding enforcement and prosecution
- Collect evidence of contraventions
- Ensure corrective action is taken against transgressors
- Assist EMI: Air Quality Management where appropriate and when required
- Liaise with the Department of Minerals and Energy regarding dust fall out
- Reviewing of EIA application where atmospheric emissions may be of a concern. Also responsible for interdepartmental liaison in this regard.
- Follow up complaints, investigate, set up monitoring capabilities and communicate results
- To liaise with industry to determine if they are adhering to dust fallout guidelines (to become legislation in the near future) and noise legislation

### b. Skill Level

- Excellent experience in Microsoft Office and the use of modelling techniques
- Air quality dispersion modelling (beneficial, but not essential)
- Regulatory applicability analysis
- Excellent knowledge of environmental laws

### c. Training Requirements

- Degree in Environmental Management, Biophysical Sciences, Environmental Health, Environmental Engineering, Environmental Planning or equivalent qualification.
- Must be professionally registered with the South African Council for Natural Scientific Professionals (SACNASP)
- Noise Monitoring and Management Qualifications.
- Air Quality Management Qualification.
- Technical aspects of the monitoring systems

- EMI Accreditation
- Work experience of at least 3 years in the field of compliance, monitoring and enforcement

### 13. EMI: Air Quality Management Officer

#### a. Functions

- Responsible for the compliance and monitoring of the licence holders in terms of the emission standards within SDM relating to the air quality legislation
- Ensure that permits and licences are complied with
- To liaise with industry to determine if they are getting into the licencing process and are adhering to legislation
- To determine if companies have a licence or not
- Respond to air pollution complaints and perform investigations
- Involvement in the review of air quality management component of Environmental Impact Assessments
- Responsible for the monitoring, compliance and enforcement of the terms and conditions, in relation to AQM issues as stated in the records of decision for the EIA
- Liaise with SAPS regarding enforcement and prosecution
- Collect evidence of contraventions
- Ensure corrective action is taken against transgressors
- Reviewing of EIA application where atmospheric emissions may be of a concern. Also responsible for interdepartmental liaison in this regard.
- Assist EMI: Dust and Noise Management where appropriate and when required
- Follow up complaints, investigate, set up monitoring capabilities and communicate results

#### b. Skill Level

- Excellent experience in Microsoft Office
- Air quality dispersion modelling (beneficial, but not essential)
- Regulatory applicability analysis

- Excellent knowledge of dust fallout and noise monitoring
- Excellent knowledge of environmental laws

c. Training Requirements

- Degree in Environmental Management, Biophysical Sciences, Environmental Health, Environmental Engineering, Environmental Planning or equivalent qualification.
- Must be professionally registered with the South African Council for Natural Scientific Professionals (SACNASP)
- Air Quality Management Qualification.
- Technical aspects of the monitoring systems
- EMI Accreditation
- Work experience of at least 3 years in the field of compliance, monitoring and enforcement

## 14. Legal Officer

### a. Functions

- Ensure public notices are issued
- Assist with handling objections
- Attend all appeal board hearings
- Represent the unit in appeals for EIA cases
- Reviewing the set of model by-laws and formulating by-laws for SDM and local Municipalities
- Review existing by laws
- Responsible for supporting the control, monitoring and enforcement for EMI in legal representation
- By laws to cover noise, dust and vehicle emissions
- Liaison with SAPS
- Any other legal issues within the AQ Management sub directorate

### b. Skill Level

- Legal consulting, contracts, Local Government legislation, air quality compliance, property and risk, litigation and working with external legal service providers.
- Competency to draft contracts, interpret statutes especially relating to air quality matters.
- Competency to provide extensive briefing on legal matters to services providers.
- Depth of knowledge in litigation proceedings and processes. Ability to assess and evaluate elements of risk in all cases involving SDM.
- Excellent verbal and writing skills to compile reports which involve legal issues. Ability to advice comprehensively on issues of Air Quality Management compliance.
- Understanding and appreciation of Property Law.

### c. Training Requirements

- LLB (Minimum)
- Diploma in Local Government
- Overview of air quality management
- EMI Accreditation

- Work experience of at least 3 years in the field of environmental law

## **Appendix D: Job descriptions.**

## **Appendix E: SANAS R07-01**