



**LEJWELEPUTSWA**

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**DISTRICT MUNICIPALITY**

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**TERMS OF REFERENCE**

**THE APPOINTMENT OF THE SERVICE PROVIDER WHO WILL ASSIST THE  
LEJWELEPUTSWA DISTRICT MUNICIPALITY WITH THE REVISION OF THE AIR  
QUALITY MANAGEMENT PLAN**

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## **1. PURPOSE**

To appoint a service provider who will assist the Lejweleputswa District Municipality (LDM) with the Revision of the Air Quality Management Plan (AQMP).

## **2. INTRODUCTION AND BACKGROUND**

- 2.1 On 1 July 2011 an Air Quality Management Plan (AQMP) was developed for LDM. The plan provided strategic direction for the implementation of air quality interventions in this area, as well as an essential blueprint for action to reduce emissions in the area. The development of AQMP also includes the compilation of the Baseline Assessment Report.
- 2.2 The AQMP is currently under implementation. A number of challenges identified in the AQMP implementation plan call for a need to review the AQMP.
- 2.3 The 2007 National Framework for the development of Air Quality Management in South Africa, and the 2012 Manual for the development of AQMP in South Africa recommended that AQMP should be reviewed on a five yearly basis. The LDM second generation AQMP will provide a comprehensive assessment of the status of the plan in terms of its effectiveness in producing results that are of sufficient, type and known quality needed for its intended use. It will also take into consideration the recommendations of the original Plan. The Review results will then inform relevant action to be taken and resources to be put in place to ensure that the second generation AQMP is implemented effectively and efficiently to ensure that air quality in the LDM meet the NAAQS and promote healthy living environments.

## **3. OBJECTIVES**

The main aim of the project is to conduct a comprehensive revision of the LDM AQMP in order to:

- (a) Establish the status of the air quality in the LDM post implementation;
- (b) Set new goals to improve the quality of the air and provide a basis for the development of implementation strategies;
- (c) Identify significant gaps and provide recommendations to strengthen the implementation of intervention;
- (d) Redefine the baseline of ambient air quality and set associated objectives for the area.
- (e) Include current and future economic realities and their associated impacts thereof;
- (f) Address the possible need for changes to functional and operational structures, AQM systems, and management objectives in light of poor performances, changing circumstances, the commitment to continual improvement and any other relevant factors;
- (g) Develop interventions/emissions reduction strategies with SMART (Specific, Measurable, Attainable, Reliable and time bound) goals to improve ambient air quality in a cost effective manner; and
- (h) Assess progress made in the implementation of the AQMP since 2011.

## 4. SCOPE AND EXTENT OF WORK

4.1 The role of the Service Providers is to assist LDM with the project to review the LDM AQMP in accordance with the provision of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004).

4.2 The appointed service provider will be required to implement a project that will result in the following:

- (i) Project Process Plan;
- (ii) Baseline Assessment (Emission inventory , Ambient air monitoring and Dispersion modelling);
- (iii) Strategy and scenario development
- (iv) Implementation Plan
- (v) Draft Revised LDM Air Quality Management Plan;
- (vi) Final Revised LDM Air Quality Management Plan;
- (vii) Capacity building; and
- (viii) Participation and Efficient and effective intergovernmental coordination and cooperation.

Given the above, the scope of work will include, but is not limited to, conducting research, meetings, interviews, workshop facilitation, training courses, management and administrative activities required to generate the required project deliverables.

## 5. EXPECTED DELIVERABLES / OUTCOMES

The performance measures for the Revision of the LDM Air Quality Management Plan (AQMP) will be closely monitored by LDM. The Service provider's performance will be measured through the following outputs:

### 5.1 Output A: Project Process Plan

The appointed service provider will carry out all the work required to develop the project process plan for the revision of the 2011 LDM AQMP report. This process plan should include, amongst others:

- (i) A detailed description of how the appointed service provider intends to conduct the revision of the 2011 LDM AQMP;
- (ii) How to develop the Revision of the 2011 LDM AQMP Report in accordance with the project objectives;
- (iii) A Gantt Bar Chart detailing the timing and critical path of key activities and milestones;
- (iv) Develop the capacity building plan as part of the project; and
- (v) Methodology and/or best practice in the field of air quality management planning.

### Table 1: Output A: Project Process Plan Success Indicators

#### Description Verifiable Indicator Means of verification

Output A: LDM AQMP

Process Plan

A clear and unambiguous plan on how the project will be conducted

Process plan approved by the PSC

### 5.2 Outputs B: Baseline Assessment Report

The Service provider will be required to undertake the following Activities aimed at building up the Baseline Assessment Report, namely: Revision of the Background report, compilation of the regional Emission Inventory, Ambient air quality assessment chapters, and conducting the photochemical modelling.

### **5.2.1 Activity B1: Background Assessment**

The appointed service provider will carry out all the required meetings, interviews, literature reviews, data collection, data analysis, etc. required to compile the initial chapter of the Revision of the 2011 LDM Air Quality Management (AQMP), namely, the Baseline Assessment. This assessment should review available information in order to generate a chapter that, among others:

- (i) describes the geographic background of the area (climate, topography, land use, etc.);
- (ii) description of meteorology and climate of the area;
- (iii) population statistics of the area;
- (iv) describes sources of air pollution;
- (v) clearly describes the current ambient air quality in the area and compares this to national standards;
- (vi) describes the cause and effect relationships that give rise to the significant sources of air pollution;
- (vii) provides details on any future threats to air quality in the area; and
- (viii) identify and review recent and current air quality studies in the study area;
- (ix) Available capacities in the different spheres of government; and
- (x) Structures that are available to encourage participatory governance and stakeholder engagements

Please note that some of this information is available in the 2011 LDM AQMP. The role of the service provider is to update this information.

### **5.2.2 Activity B2: Emission Inventory**

The appointed service provider will be required to develop a detailed emission inventory for the LDM as well as for the domain to be used for photochemical modelling, in the regional domain. This regional modelling domain must include entire LDM as a whole in order for the baseline to fully establish the regional dispersion of emissions.

The service provider will be required develop a comprehensive regional emission inventory which covers all major sources, but not limited to:

- Industrial emissions – for this sector, DEA will provide the most recent NAEIS information, and where there are gaps, the service provider will update accordingly.
- Small industrial sources such as small boilers, asphalt plants, charcoal plant etc.;
- Mining activities;
- Vehicle emissions;
- Domestic fuel burning;
- Agriculture and biogenic emissions
- Biomass burning; and
- Waste.

The service provider is expected to conduct a comparative analysis of the current emission and 2011 emission inventory, and provide a narrative of circumstances that may have led to changes in air quality. Following the completion of this emission inventory, the service provider will be required to hand over all documentation, calculations, input data and output data and used in the development of the inventory.

### **5.2.3 Activity B3. Ambient air quality assessment**

The Service Provider will deliver the following:

- (i) clearly describe the current ambient air quality in the area and compares this to national standards, and assess this in relation to pollution sources;
- (ii) Identify information gaps; and
- (iii) analyze monitoring data and establish trends in ambient air quality since the promulgation of the

2011 LDM AQMP. The service provider is expected to make a comparison of the Ambient air quality assessment between the current situation, and the 2011 situation, and provide a narrative of circumstances that may have led to changes in air quality.

Following the completion of the ambient air quality assessment, the service provider will be required to hand over all the input and output data used during the analysis.

#### **5.2.4 Activity B4: Regional Photochemical Modelling**

The Service Provider will be required to use photochemical Modelling at a regional scale approach. However, final decision on the modelling approach should be discussed and approved by LDM prior to any work commencement, and should be in line with the proposed Guideline to Air Dispersion Modelling for Air Quality Management in South Africa, published on the 14 December 2012 (Gazette No. 35981).

The service provider will undertake the photochemical modelling exercise to assess the impact of all emission sources identified; and provide air pollution dispersion modelling results that characterizes the impact of air pollution on ambient air quality in both time and space.

Upon completion of the project the service provider will supply the LDM with copies of all input data, model parameterization and post-processing files.

#### **Table 2: Outputs B: Baseline Assessment Report-Success Indicators**

##### **Description Verifiable Indicator Means of verification**

Output of Activity B: Baseline Assessment Report- Success Indicator - A comprehensive baseline assessment report with verifiable information; plus emission inventory database, ambient air quality data analysis, and dispersion modelling files

A baseline Assessment Report

#### **5.3 Output C: Strategy and scenario development**

##### **5.3.1 Output C1: Scenario development**

The service provider will be required to develop scenarios that depicts changes required to meet the ambient air quality standard. LDM will determined the exact description of the scenarios.

##### **5.3.2 Output C2: Strategy development –Success indicator**

The service provider will be required to conduct two stakeholders' workshops, to develop a strategy that will inform the development of AQMP intervention. LDM will be responsible for the logistics of the two stakeholder's workshops.

#### **Table 3: Output C: Strategy development –Success indicator**

##### **Description Verifiable Indicator Means of verification**

Output of Activity C: Strategy and scenario development –Success indicator - A chapter defining strategies that will inform AQMP interventions, and emission sources scenarios chapter compiled Strategy and scenarios

#### **5.4 Activity D: Implementation plan**

##### **5.4.1 Output D1: Intervention description**

The service provider will be required to work in close collaboration with LDM and stakeholders to develop interventions that will be implemented over a period of time to ensure that air in the LDM meets the NAAQS. The outcomes of the strategy will be used to identify possible intervention required to improve air quality in the area.

The service provider will then carry out all the work required to compile the chapters of the plan that detail these interventions (in the context of AQMP implementation Plan). In this regard, the appointed service provider must participate in any identified bi-lateral meetings with key-stakeholders. Each,

specific intervention should be incorporated into an implementation plan and must describe, among others:

- (i) intervention objective (with details of expected air quality impacts);
  - (ii) activities;
  - (iii) indicators and targets;
  - (iv) inputs required to implement the AQMP (e.g. financial, human and technological resource inputs);
  - (v) timing and responsibilities; and
  - (vi) Financial implications of the interventions
- Evaluate the cost-effectiveness of the identified interventions

#### **5.4.2 Activity D2: Prioritisation of interventions**

The service provider with the assistance of the stakeholders will be required to:

- (i) prioritise interventions based on their potential effectiveness in improving the state of air in the area; and
- (ii) Provide a quantitative and qualitative rationale for prioritising specific interventions using the source apportionment study and the modelling results under output B4.

#### **5.4.3 Activity D3: Compilation of the Implementation plan**

Based on activities D1 – D2 above, the service provider will be required to compile a draft Implementation plan with SMART objectives, clear activity descriptions, clear resource requirements, clear responsibilities and indicators.

#### **Table 4: Output of Activity D: Implementation plan -Success Indicators**

##### **Description Verifiable Indicator Means of verification**

Output D: Implementation plan - success indicator

Implementation plan with SMART objectives, clear activity descriptions, clear resource requirements, clear responsibilities and indicators

Implementation plan

#### **5.5 Output E: Monitoring and Evaluation**

The service provider will be required compile the monitoring and evaluation guideline and template on how the LDM should conduct the monitoring and evaluation for the Revised LDM AQMP.

#### **Table 5: Output of Activity E: Monitoring and Evaluation -Success Indicators**

##### **Description Verifiable Indicator Means of verification**

Output E: Monitoring and Evaluation -success indicator

A well defined Monitoring and Evaluation Guideline for the Revised AQMP Monitoring and Evaluation Guideline and a template

#### **5.6 Output F: Draft LDM Air Quality Management Plan**

The appointed service provider will carry out all the work required to compile a Draft Revised LDM Air Quality Management Plan. The draft plan will be informed by the approved structure, and it should include, mainly:

- (i) Baseline assessment;
- (ii) Strategy and scenario development;
- (iii) Implementation plan; and
- (iv) Monitoring and evaluation.

LDM will be responsible for publishing the draft AQMP, and also compile the stakeholder's comments database thereafter.

**Table 6: Output F: Draft Revised LDM Air Quality Management Plan -Success Indicators**

**Description Verifiable Indicator Means of verification**

Output F: Draft LDM Area Air Quality Management Plan-Success Indicators

A draft AQMP based on current, accurate and relevant information, informed by best practice in the field of air quality management and that provides a clear and practical plan to efficiently and effectively bring air quality in the area into sustainable compliance with national ambient air quality standards within agreed timeframes.

Draft Revised LDM AQMP

**5.7 Output G: Final Revised LDM Air Quality Management Plan**

The appointed service provider will work in collaboration with LDM to respond to stakeholder's comments database, as well as carrying out all the work required to effect changes received from stakeholder's consultation process into the final AQMP.

In order to facilitate approval, the service provider must compile an executive summary of the Revised LDM Air Quality Management Plan and a Power Point presentation that summarizes key elements and interventions contained in the draft plan.

**Table 7: Output G: Final Revised LDM Air Quality Management Plan - Success Indicator Description Verifiable Indicator Means of verification**

Output G: Final Review Air Quality Management Plan -Success Indicator

A plan based on current, accurate and relevant information, informed by best practice in the field of air quality management and that provides a clear and practical plan to efficiently and effectively bring air quality in the area into sustainable compliance with national ambient air quality standards within agreed timeframes.

Final AQMP compiled

Executive summary and power point presentation compiled

**5.8 Output H: Capacity building/ Development**

The service provider must implement a capacity building plan outlined in output 5.1 (iv). The LDM will assign officials to work fulltime on this project. The service provider will be required to engage and involve these departmental personnel in all aspects of the project and provide hands-on training, mentorship and ensure effective skills-transfer.

As part of skills transfer, the service provider also be required to provide a two days training to approximately 10 Authorities responsible for implementing the LDM AQMP. A skills gap analysis should be conducted to inform the type of training required for Authorities, and all logistics for the training will be handled by LDM

**Table 8 :Output H: Capacity development - Success Indicators**

**Description Verifiable Indicator Means of verification**

Output H: Capacity Development – success indicator

Active involvement of departmental staff in the implementation of the project.

Training manual developed

Attendance register

## **6. PERIOD / DURATION OF PROJECT / ASSIGNMENT**

All work associated with this project in terms of the TOR requirements must be completed within a period of six (6) months from the date of contract acceptance or earlier. Proposals must include a work programme, implementation to ensure that project closure is ensured by this date.

## **7. COSTING / COMPREHENSIVE BUDGET**

In preparing the financial proposal, service providers are expected to take into account the requirements and conditions of the Terms of Reference documents. The financial proposal should list all costs associated with the project.

Comprehensive budget must be provided in a separate envelope inclusive of all disbursement costs, expenses and VAT.

## **8. EVALUATION CRITERIA**

**8.1. Functionality Criteria** (To be determine by project management committee (PMC) in line with scope of work)

1. Bidder understands of the brief and the method to be employed. Outline and insight information provided in the bid document (relevance and accuracy)
2. Capability (profiles of key staff and persons to be assigned to the project).  
Experience and track record in :
  - Air Quality Management Planning, especially the development of emission inventory, and photochemical air dispersion Modelling, modelling, etc.)
  - Project team members – submit names and CV- with relevant experience (at least two years) in air quality management planning
3. A proposed plan of action to achieve the objectives.
4. Company's experience: at least two years' experience in the fields of Air Quality Management Planning, especially the development of emission inventory, and Photochemical air dispersion Modelling (attach reference letters)

## **9. SPECIAL CONDITIONS OF CONTRACT**

- 9.1** The performance measures for the delivery of the revision of the 2011 LDM Air Quality Management Plan (AQMP) will be closely monitored by LDM.
- 9.2** The Service Provider/s will submit the monthly and quarterly soft copies progress reports to the LDM, within 4 days after the end of each month and quarter for the duration of the project. Failure to submit the required reports on time will result in penalties.
- 9.3** The LDM shall do the ongoing performance management of the Service agreement.
- 9.4** The Service Provider/s must guarantee the presence of the senior in charge of fieldwork throughout the duration of the contract. Prior to the appointment of a replacement, the LDM must approve such appointment. If the senior has to leave the project, a period of at least a month is required, in which the senior must work parallel with the next person (senior consultant with similar expertise and equal years of experience) appointed able to transfer skills and knowledge.

- 9.5** All the conditions specified in the **General Conditions of Contract ( GCC )** will apply and where the conditions in the special conditions of contract contradicts the conditions in the general conditions of contract the special conditions of contract will prevail.
- 9.6** Please take note that LDM is not bound to select any of the firms submitting proposals. LDM reserves the right not to award any of the bids and not to award the contract to the lowest bidding price.
- 9.7** Bidders must score a minimum of **75%** (The minimum qualifying score that must be obtained for functionality in order for a tender to be considered further should not be generic. It should be determined separately for each tender on a case-by-case basis. The minimum qualifying score must not be prescribed so low that it may jeopardize the quality of the service required nor so high that it may be restrictive to the extent that it jeopardizes the fairness of the SCM system).
- 9.8** The proposal should include, amongst other, the following:  
A proposed plan of action;  
A list of references;  
Ability to ensure continuing of staff on the project.
- 9.9** Comprehensive Curriculum Vitae (CV) of the staff who will be available for the duration of the contract must be attached. In case where bidders submitted CV's of personnel from other companies, bidders must indicate if the personnel is sub-contracted or employed full time or part-time, and indicate the period of the engagement with the bidder. A signed agreement between two parties or an agreement between personnel and a company must be included with the proposal.
- 9.10** The bid proposals should be submitted with all required information containing technical information.
- 9.11** LDM will not be held responsible for any costs incurred by the bidder in the preparation, presentation and submission of the bids.
- 9.12** Travelling costs and time spent or incurred between home and office of consultants and LDM office will not be for the account of LDM.
- 9.13** Intellectual property rights will belong to LDM.

## **10. Payment terms**

- 10.1. LDM undertakes to pay out in full or as per deliverables within 30 (thirty) days all valid claims for work done to its satisfaction upon presentation of a substantiated claim and the required reports stipulated in special conditions. No payment will be made where there is outstanding information/work not submitted by the Service Provider/s until that outstanding information is submitted.

## **11 Technical enquiries**

Should you require any further information in this regard, please do not hesitate to contact:

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