CEDERBERG
Cederberg Municipality

CEDERBERG MUNICIPALITY AIR QUALITY MANAGEMENT PLAN 2026

Contents

EXECUTIVE SUMMARY

INTRODUCTION

Air pollution is a growing concern across South Africa as a result of ongoing industrialization. The continuous increase of industrial development is important for economic growth, however emissions can be harmful to human health and the environment. It is therefore necessary to regulate industrial emissions that a ect air quality. The National Environmental Management: Air Quality Act (39) of 2004 and Air Quality Management Plans (AQMP) are the primary tools used by National and Provincial Government and Municipalities to regulate air quality. There is growing understanding of the relationship between the air quality and climate change highlighting the importance of interlinking the two issues in terms of management in order to achieve a clean and safe environment.

The developmental framework used in the second generation AQMP was based on the Department of Environmental A airs (DEA) Manual for Air Quality Management Planning (2012). The AQMP considered the vision and mission statements of the Cederberg Municipality and the Constitution of South Africa, 1996.

LEGISLATION

The National Environmental Management: Air Quality Act 39 of 2004 (NEM: AQA) replaced the repealed Atmospheric Pollution Prevention Act 45 of 1965 (APPA) in South Africa. National government has implemented NEM: AQA through a number of regulations and policies. This Cederberg Municipality AQMP aims to meet these national policies. Furthermore, the AQMP makes provision for climate change mitigation measures and adaptive strategies as part of inherent strategies and intervention plans. NEM: AQA provides the national norms and standards for air quality and makes provision for declared controlled emitters. Municipal By-laws are used to manage local air and noise related pollution. All other relevant policies, programs and plans that were reviewed during the compilation of this report are listed under this section.

Air Quality Management tools: A review of the air quality management tools entailed a review of the human resources, governance, emissions inventory, ambient air monitoring networks and air quality monitoring.

Air Quality O icers: There is an appointed Air Quality O icer for Cederberg Municipal area.

Governance: Working Groups and Environmental Management Inspectors (EMIs) were established to undertake the compliance issues. Three Working Groups have been established namely: the West Coast Air Quality Working Group (WCAQWG), the Industrial Stakeholder's Forums and the Joint Municipal Air Quality Working Group (JMAQWG).

Ambient Air Monitoring Stations. Five ambient air monitoring stations have been established within the West Coast District Municipal area. These stations have been situated in Malmesbury, St Helena, Velddrif, Saldanha Bay and Vredenburg.

Air Quality Monitoring Results: The reported annual averages from the ambient air quality measurements, across the five stations with the set National Ambient Air Quality Standards (NAAQS).

Emissions Inventory: There is an updated emissions inventory for the Cederberg Municipal area.

GAP ANALYSIS

Certain implementation gaps were identified during the review of the AQMP 2011. These identified gaps were used as the basis to inform the goals and objectives of the second generation AQMP, 2019. Some specific gaps identified include a lack of financial resources, skills and knowledge of air quality, the need to have air quality as core function within local municipalities. Further, an expansion of the current monitoring networks is needed.

SECOND GENERATION AS ALIGNED WITH THIS AQMP GOALS

The second generation as aligned with this AQMP highlights the need to focus on expanding the current human resources capacity, air quality management tools, creating awareness, and interlinking air quality management with climate change. The implementation strategies and indicators for this AQMP are outlined with set timeframes.

ACRONYMS:

AEL	Atmospheric Emission License
AQ	Air Quality
AQMP	Air Quality Management Plan
AQO	Air Quality O icer
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CH_4	Methane
DEA	Department of Environmental A airs
DEA&DP	Department of Environmental A airs and Development Planning
EMI	Environmental Management Inspector
GHG	Greenhouse Gas
GN	Government Notice
H_2S	Hydrogen Sulphide
IDP	Integrated Development Plan
IDZ	Industrial Development Zone
IA&Ps	Interested and A ected Parties
MEC	Member of the Executive Council
MoU	Memorandum of Understanding
NAAQS	South African National Ambient Air Quality Standards
NDC	Nationally Determined Contributions
NAEIS	National Atmospheric Emissions Inventory System

NEM: AQA	National Environmental Management: Air Quality Act 39 of 2004
NEMA	National Environmental Management Act 107 of 1998
NO	Nitric Oxide
NO_2	Nitrogen dioxide
NO_x	Oxides of nitrogen
NH_3	Ozone
O_3	Ammonia
PM_{10}	Particulate matter with an aerodynamic diameter of 10 µm or less
SAAQIS	South African Air Quality Information System
UNFCCC	United Nations Framework Convention on Climate Change

INTRODUCTION

Background

Industrialization has played a major role in the economic growth of most developing countries including South Africa. Industries serve as source of employment for many low and middle income earners. The presence of industries and employment promotes the standard of living for many families. However, the continuous increase of industrial development in South Africa has brought in a great concern regarding the deterioration of air quality within the country. Hence, there is a growing need to regulate sources of emissions that a ect air quality, in South Africa.

Section 24 (Bill of Rights) of the Constitution of the Republic of South Africa (1996) states that everyone has the right to an environment that is not harmful to their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. Included under section 24 of Bill of Rights contained in the constitution of South Africa, the National Environmental Management: Air Quality Act (39) of 2004 provides a paradigm shift from source-based air pollution to a holistic and integrated air quality management, thus:

- Decentralizing air quality management responsibilities.
- Setting ambient air quality targets as goals designed to drive emission reductions.
- Requiring all significant sources to be identified, quantified, and addressed.
- Recognizing source-based (command and control) measures in addition to alternative measures, market incentives and disincentives, voluntary programmes, and education and awareness-raising.
- Promoting cost-optimized mitigation and management measures.
- Stipulating air quality management planning by authorities, and emission reduction and management planning by sources.
- Promoting access to air quality information and public consultation during air quality management processes.

Mandated by the National Environmental Management: Air Quality Act 39 of 2004 (NEM: AQA), municipalities are required to include an Air Quality Management Plan (AQMP) as part of its Integrated Development Plan (IDP) as per Chapter 5 of the Municipal Systems Act. The West Coast District Municipality adopted an Air Quality Management Plan in 2011 and within its capacity has taken the process of implementing the roles and responsibilities of air quality management, as outlined under the NEM: AQA and as spelt out in the National Air Quality Management Framework 2007, which was amended in 2012 (DEA, 2012). It has been eight (8) years since the AQMP went into implementation stage within the district. In 2018/2019, the AQMP 2011 was reviewed with the objective of establishing an updated understanding of the current state of air quality in WCDM and its five local municipalities and further, to inform updated strategies which will form the basis of the second generation AQMP.

Review and update of this AQMP 2026

In order to ensure full compliance with section 16(1) of NEM: AQA, a comprehensive review of the AQMP 2011 was conducted to:

- Assess progress made in air quality management in the West Coast District Municipal area.
- Establish whether the previously identified goals and targets have been effectively implemented and achieved.
- Establish whether the goals and targets are still valid in terms of new developments and economic growth in the West Coast District Municipal area.
- Identify potential air quality risks and interventions that can be translated into new goals and objectives, where required.

The findings of the review of the AQMP 2011 informed the compiling of second generation AQMP2019-2024.

The second generation is aligned with this Air Quality Management Plan 2026.

The goals for the second generation AQMP as aligned with this AQMP were informed by the findings as discussed under gap analysis in this report.

Vision

To attain and maintain good air quality for the benefit of all inhabitants and the natural environmental ecosystems within the Cederberg Municipal area.

Mission

- To ensure the maintenance of good air quality through proactive and e ective management principles that take into account the need for sustainable development into the future.
- To work in partnership with communities and stakeholders to ensure the air is healthy to breathe and is not detrimental to the well-being of persons in the Municipal area.
- To ensure that future developments (transportation, housing, etc.) incorporate strategies to minimize air quality impacts.
- To reduce the potential for damage to sensitive natural environmental systems from air pollution, both in the short and long-term.
- To facilitate intergovernmental communication at the Local, Provincial and National levels in order to ensure e ective air quality management.

This AQMP aims to establish revised strategies and intervention plans, based on a clear understanding of the current status, that will aid in further improvement and compliance within the area. National government has implemented NEM: AQA through a number of regulations and policies. This AQMP aims to meet these national policies. Furthermore, this AQMP makes provision for climate change mitigation measures and adaptive strategies as part of inherent strategies and intervention plans.

Air Quality and Climate Change

Historically, air pollution and climate change have been treated as two separate issues. For a long period the focus has been on extensive control of atmospheric pollutants and little to no attention was paid to greenhouse gases and climate change; as a result greenhouse gas (GHGs) emissions increased. While the two aspects were treated as independent it is evident that both GHGs and air pollutants emanate from the same sources, thus interlinking air quality and climate change. It is therefore beneficial to simultaneously promote the use of clean technology and to adopt strategies towards a green economy, which will aid in a reduction of air emissions and GHGs.

On 13 December 2015, South Africa was amongst the 195 nations that reached a historic agreement at the 21st Conference of the Parties (COP21). This meeting was held in Paris under the United Nations Framework Convention on Climate Change (UNFCCC) now known popularly as the Paris Agreement (DEA, 2016). The Paris Agreement commits all countries to contribute to an ambitious global GHG emissions reduction goal, and associated global goals for finance and adaptation, communicated through Nationally Determined Contributions (NDC). South Africa submitted its intended NDC goals to the UNFCCC in September 2015 (DEA, 2016).

To fulfil the Paris Agreement commitment, the South African Department of Environmental A airs (DEA) is mandated with both air quality management and climate change matters. This is managed through two distinct branches: Air Quality Management and Climate Change and is responsible for developing and implementing legislation in this regard. All spheres of government are tasked with air quality management and climate change adaptation and mitigation related-matters through the NEM: AQA and the Municipal Systems Act (Act No. 32 of 2000).

Air Quality strategies, climate change adaptation and mitigations actions are addressed within the Cederberg Municipality Climate Change Plan 2025 as aligned with the Municipal IDP.

Report Layout

The second generation AQMP as aligned with this AQMP is compiled as per the Department of Environmental A airs (DEA) Manual for Air Quality Management Planning (2012).

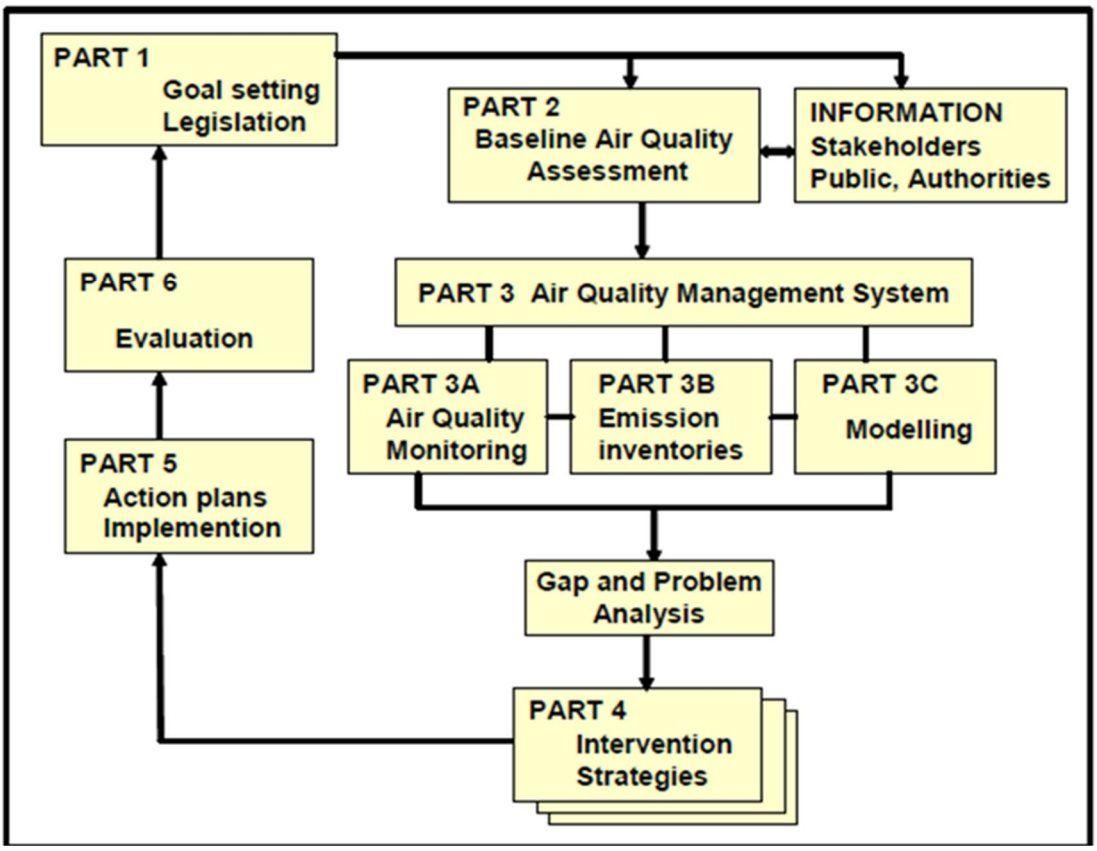

Figure 1: AQMP process (DEA Manual for Air Quality Management Plan, 2012).

LEGISLATION

National Environmental Management: Air Quality Act (Act No. 39 of 2004)

National Environmental Management: Air Quality Act (Act No. 39 of 2004) commenced on the 11th of September 2005 and replaced the previous repealed Air Pollution Prevention Act of 1965. The National Framework is the underpinning document to NEM: AQA, providing national norms and standards and policies and procedures for air quality management to ensure compliance. After its initial publication under Notice No. 30284 of 11 September 2007 in terms of section 7 of NEM: AQA, the National Framework has subsequently been updated twice, once in 2013 (Notice No. 36161 of 13 February 2013) and in 2018 (Notice No. 41650 of 25 May 2018). The NEM: AQA also makes provision for the declaration of controlled emitters. Municipal By-laws manage air and noise related pollution and dust within the area of the municipality's jurisdiction.

The sections below summarizes the legal and regulatory requirements based on current NEM: AQA.

National Ambient Air Quality Standards

The National Ambient Air Quality Standards (NAAQS) are set based on international best practice for criteria pollutants. These are based on pollutants that are most commonly emitted from di erent industrial sources and have proven detrimental health e ects during exposure.

National Dust Control Regulations

The National Dust Control Regulations (NDCR) were gazetted on 1 November 2013 (Notice No. 36974), with an updated draft published on 25 May 2018 (Notice No. 41650). The purpose of the regulations is to outline the e ective measures for the control of dust in all areas including residential and light commercial.

Section 21 – Listed activities

The section 21 listed activities as per NEM: AQA are classified into ten categories (and sub-categories) in the Government Gazette No.: 37054 (2013):

- Category 1: Combustion Installations.
- Category 2: Petroleum Industry, the production of gaseous and liquid fuels as well as petrochemicals from crude oil, coal gas or biomass.
- Category 3: Carbonization and Coal Gasification.
- Category 4: Metallurgical Industry.
- Category 5: Mineral Processing, Storage and Handling.
- Category 6: Organic Chemicals Industry.
- Category 7: Inorganic Chemicals Industry.
- Category 8: Thermal Treatment of Hazardous and General Waste.
- Category 9: Pulp and Paper Manufacturing Activities, Including By-Products Recovery.
- Category 10: Animal Matter Processing.

Section 23 -Controlled Emitters

Controlled emitters, as per Section 23(1) of NEM: AQA, include:

- Any small boiler with a design capacity exceeding 10 MW but less than 50 MW net heat input per unit, based on the lower calorific value used.
- Any temporary asphalt plants producing mixtures of aggregate and tar (or bitumen) for road surfacing purposes.
- Any small-scale char or charcoal plants.

Air Quality Management Plan Implementation

The DEA Manual for Air Quality Management Planning (2012) recommends that, in addition to the NEM: AQA, the following legislation be consulted in the goal setting processes of developing an AQMP:

- The Constitution of the Republic of South Africa, 1996.
- National Environmental Management Act (No. 107 of 1998).
- National Health Act 61 of 2003.
- Municipal Structure Act 117 of 1998 – Powers of (Executive) Mayors.
- Municipal Systems Act 32 of 2000.
- The National Framework for Air Quality Management in the Republic of South Africa as published in terms of Section 7 of NEM: AQA.

Climate Change Regulations and Policies

National Climate Change Response White Paper 18 October 2011

Carbon Tax Act 15 of 2019

Climate Change Act 22 of 2024

National Environmental Management: Air quality Act 39 of 2004. Declaration of Greenhouses gases as priority air pollutants - 08January 2016

National Pollution Prevention Plans Regulations - 21 July 2017

Amendments to the National Greenhouse Gas Emission Reporting Regulations 11 September 2020

Cederberg Municipality Climate Change Plan, 2025

Cederberg Municipality Integrated Development Plan, 2024-2025

Cederberg Municipality Air Quality By-Law, 9 June 2025

Cederberg Municipality Spatial Development Framework, 2023-2027

Area Description: West Coast District Municipal area

The West Coast District Municipality is a Category C municipality located in the Western Cape Province. The municipalities adjacent to the West Coast District are the Namakwa District Municipality to the north and north-east, City of Cape Town to the south and Cape Winelands District Municipality to the south-east. It is also bordered by the Atlantic Ocean to the west. It is comprised of five local municipalities: Swartland, with Malmesbury as the administrative centre; Bergrivier, with Piketberg as the administrative centre; Matzikama, with Vredendal as the administrative centre; Cederberg, with Clanwilliam as the administrative centre; and Saldanha Bay, with Vredenburg as the administrative centre. Moorreesburg is the seat of the district (municipalities.co.za. 2019).

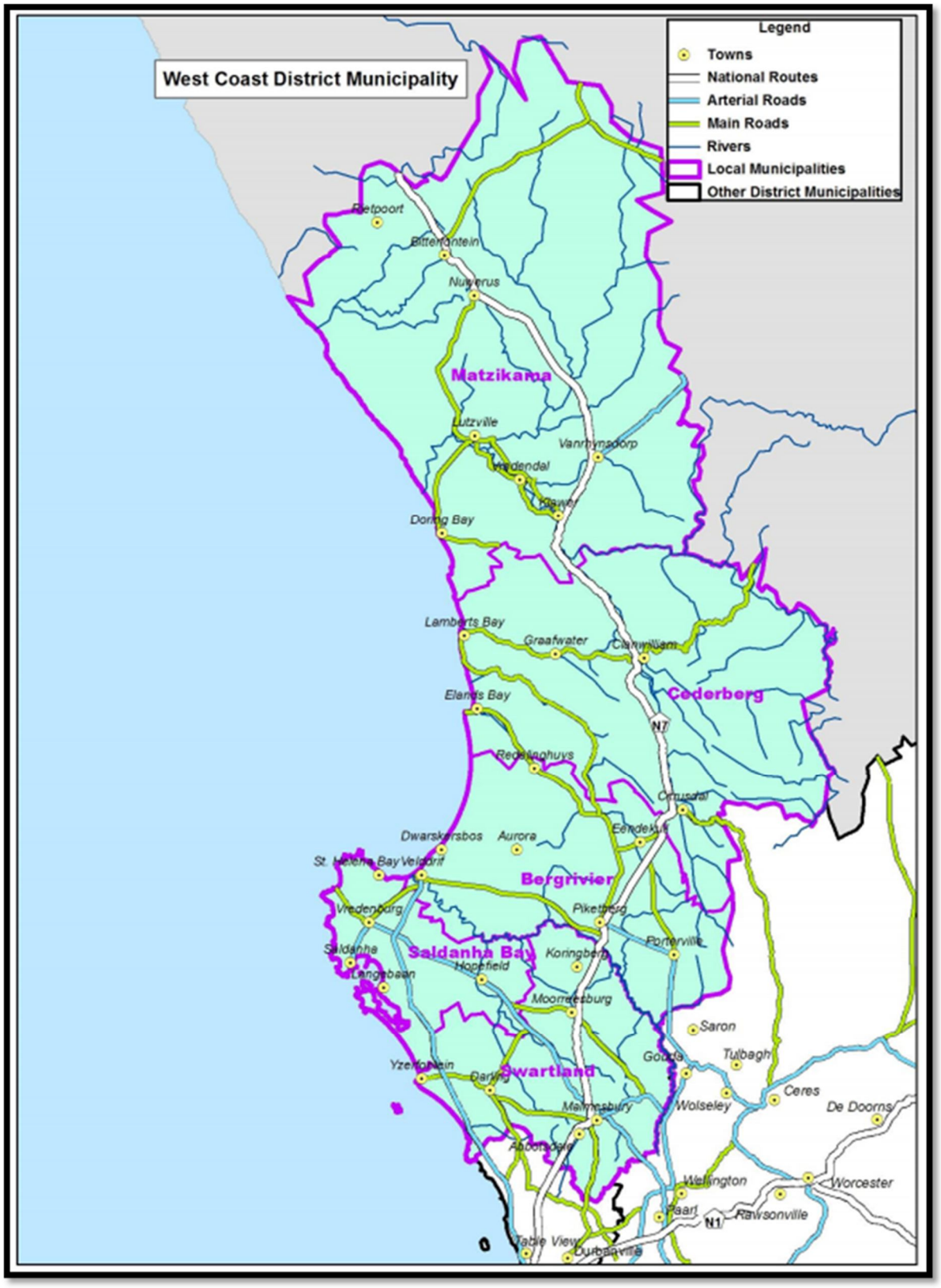

Figure 2: Locality Map of the WCMD and the five local municipalities (WCDM IDP, 2022 - 2027).

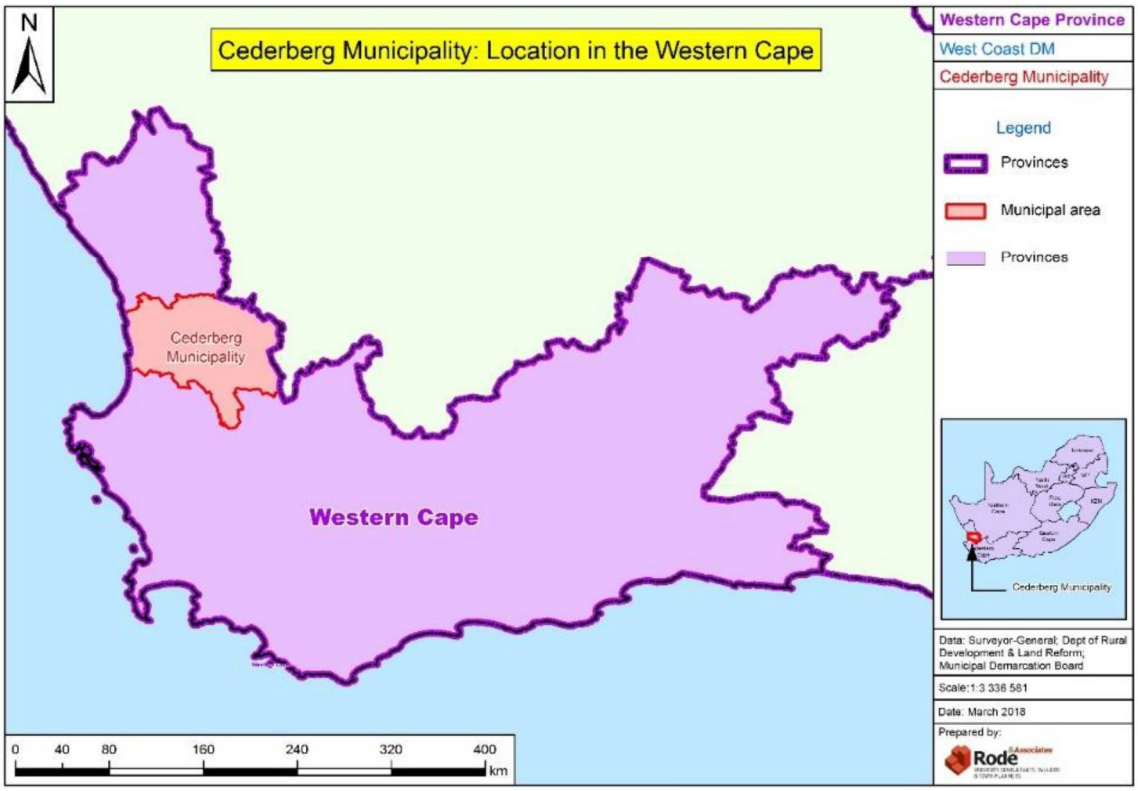

Figure 3: Locality Map of the Cederberg Municipality within the Western Cape Province (Cederberg Integrated Development Plan, 2024 -2025).

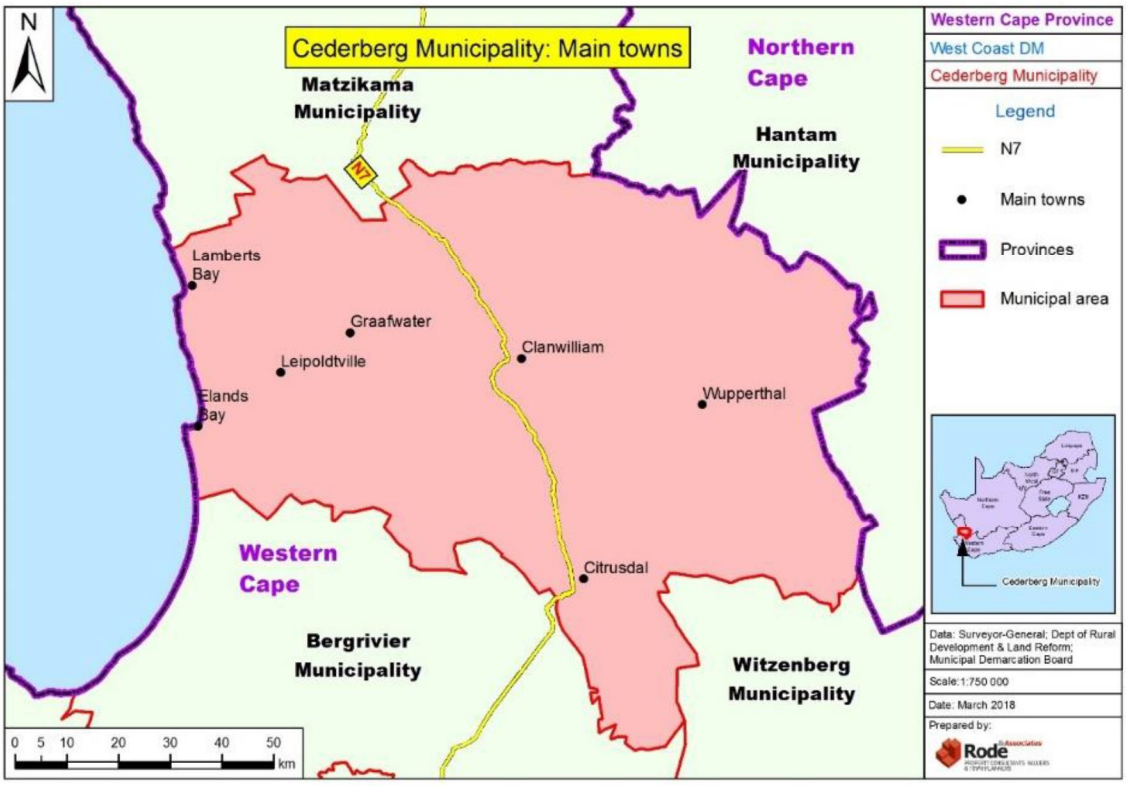

Figure 4: Map of Cederberg Municipality (Cederberg Integrated Development Plan 2024-2025)

The jurisdiction of the Cederberg Municipality covers an area of 8 007 km², which constitutes 26% of the total area (viz. 31 119 km²) of the West Coast District Municipality within which it is located. The Cederberg Municipality is situated in the northern segment of the district and wedged between the Matzikama Municipality (to the north) and the Bergrivier Municipality (to the south). It is bordered to the east by the Hantam Municipality in the Northern Cape Province. Clanwilliam is the main town and is located more or less in the middle of the municipal area. The other settlements are Citrusdal, Graafwater, Leipoldtville, Wupperthal, Algeria, Leipoldtville, and the coastal towns of Elands Bay and Lamberts Bay.

The landscapes of the Cederberg, routinely described as spectacular and rugged, make it a haven for hikers, rock climbers and outdoor enthusiasts. Clanwilliam, the largest town in the municipal area, is famous for its annual wildflower displays and the rare Clanwilliam cedar tree, which is found exclusively in this region. The town also serves as a gateway to the majestic Cederberg mountains. Clanwilliam Dam is a critical resource for local farmers. Citrusdal, surrounded by orchards, is celebrated for its exceptional citrus produce, while Graafwater is home to the Heerenlogement cave, which served as a welcome respite for travellers as early as 1661. Wupperthal, a picturesque and historically significant town, is renowned for its traditional thatched-roof houses, rooibos tea and leather products.

The above maps show the location of the Municipality in the province and the regional location with the main towns.

Assessment of Air Quality Management

This section evaluates the progress made towards the implementation of the strategies outlined in the AQMP. This section further gives an assessment in terms of compliance with regards to the air quality standards, noise and o ensive odours.

The municipalities are tasked with responsibilities in-line with the level of government. These responsibilities are outlined below.

- **District Municipalities:**

Metropolitan and District Municipalities are charged with implementing the atmospheric emission licensing system in terms of Chapter 5 of NEM: AQA. For this purpose the Metropolitan and District Municipalities must perform the functions of licencing authority, as set out in this chapter. The AEL tasks relate only to Section 21 Listed Activities and Section 23 Controlled Emitters.

- **Local Municipalities:**

Section 84(2) of the National Framework for Air Quality Management (2017) then states that local municipalities have the functions and powers in Schedule 4 Part B and Schedule 5 Part B as listed in the Constitution, excluding those functions and powers vested in terms of section 84(1) in the District Municipality in whose area it falls.

The DEA manual for air quality management planning (2012) makes a provision for other parties such as research institutions, consultants and industry to form part of the air quality management process. DEA&DP, WCDM and Saldanha Bay Local Municipality undertake ambient air monitoring.

Governance

This section assesses the cooperative governance between authorities and industries, ensuring the compliance and enforcement of legislated air quality management requirements. Such compliance and enforcement tools include establishment of air quality working groups including enforcement task teams (EMIs) and By-laws.

- **Working Groups**

The 2017 National Framework for Air Quality Management in the Republic of South Africa (2018) states that every province needs to establish a Provincial–Municipal Air Quality O icers' Forum and to convene quarterly forum meetings. In order to facilitate the e icient, e ective and cohesive functioning of these forums, the National Department provided all provincial AQOs with generic terms of reference for such forums. The following working groups have been established in WCDM.

- **West Coast Air Quality Working Group (WCAQWG):** This working group is chaired by the WCDM Manager Air Quality and compromises of representatives from industry and authorities within the area of jurisdiction of the West Coast District Municipality.
- **Industrial Stakeholder's Forums:** As per AEL conditions it is required from industry to establish communication forums with members of public they impact on. The licensing authority as well as the AQO of the local municipality, in whose area the industry is operating, attends such meeting.
- **Joint Municipal Air Quality Working Group (JMAQWG):** In order to improve communication and cooperation between District and Local Municipal Air Quality O icers a communication platform has been established on 17 February 2015. In view of the above, a memorandum of understanding (MoU) has been established.
- **Environmental Management Inspectors**

In terms of Chapter 7 of the NEMA, the functions of the Environmental Management Inspectors (EMIs) are to monitor compliance with, and enforce the NEMA and specific environmental management legislation, known as "specific environmental management acts". The MEC designates o icials to be EMIs.

O icials designated as EMIs in terms of the NEMA are able to enforce the AQA. EMIs are given a range of powers that include rights of inspection, investigation, gathering of evidence and enforcement, to enable them to fulfil their duties.

- **By-laws**

Section 156 of the Constitution of the Republic of South Africa, 1996, provides for the powers and functions of municipalities. Section 156(1)(a) of the Constitution of the Republic of South Africa states that: "A municipality has executive authority in respect of and has the right to administer the local government matters listed in Part B of Schedule 4 and Part B of Schedule 5".

Section 156(2) of the Constitution of the Republic of South Africa, (1996) states: "A municipality may make and administer By-laws for the e ective administration of the matters which it has the right to administer".

- **Complaints Management.**

Cederberg municipality investigates and records complaints when received.

Emissions source inventories

The WCDM emissions inventory list gives a quantifiable number of the different emission sources including section 21 Listed Activities, and section 23 Controlled Emitters operating on the facilities holding AELs. The local municipal inventory list will include non-listed activities. Below is a list of emissions sources as identified in the West Coast District Municipal area.

A total of 21 Listed Activities as per section 21 of NEM: AQA were identified within the WCDM (Table 1).

Local Municipality	Totals
Saldanha Bay	12
Swartland	3
Bergrivier	2
Matzikama	4
Cederberg	0
Totals	**21**

Table 1: Total Number of Listed Activities per Local Municipality.

Non-Listed Activities

Local municipalities are mandated by NEM: AQA and their By-laws to undertake management and compliance monitoring of non-listed activities. During the compilation of this document, no inventory list of non-listed activities was available. Below is the list of potential non-listed emission source inventory.

- ***Agricultural activities***

Agricultural activities are one of the main drivers of the WCDM and Cederberg Municipal economy. Emissions from agricultural activities such as pesticides spraying and dust generation during ploughing and harvesting seasons should be quantified.

- ***Biomass burning (farmlands and veld fires),***

The burning of farmlands occurs in a controlled manner particularly in April and May once a permit has been obtained from the West Coast District Municipal area. The local municipal fire marshal and AQO are also informed once the permit is issued.

- ***Domestic fuel burning (particularly, wood and para in),***

  Domestic fuel burning refers to fuel combustion for energy use such as para in, gas and coal in the domestic environments (residential areas). Emissions released form the use of the above-mentioned fuels include CO, NO_2 and SO_2, hydrocarbons and inhalable particulates. The West Coast District Municipality Integrated Development Plan 2022 – 2027 indicates that around 90 % of WCDM has access to electricity. Data collection on use of fossil fuel is required within the West Coast Municipal Area is required. This will aid in computing emission from the used of fossil fuel in domestic setting, thus modelling can be applied.

- ***Mobile source emissions (aircraft, trains and vehicles)***

Tailpipes and engines can emit various pollutants into the atmosphere including SO_2, NOx, PM_{10} and CO. The concentrations of these pollutants are regulated in South Africa through the NAAQS. Emissions from mobiles sources can be summarized in terms of public, commercial and private transport. According to the WCDM Integrated Transport Plan 2015-2020, motorized means of transport accounts for 51.3 % of the total transport, while the remaining 42.7 % is composed of mainly non-motorized transport.

In order to quantify the emissions from tailpipe sources, vehicle emissions testing and dispersion modelling should be carried out. This will require thorough tra ic counts of vehicles across all roads.

- ***Waste treatment and disposal (landfills and wastewater treatment facilities),***

Landfill emissions due to decomposition consist primarily of CO_2, methane (CH_4), and non-methane volatile organic compounds. Due to limited data availability, an estimate of emissions was not computed for the purpose of this assessment. Currently, there are reported cases of illegal landfill burning activities. In the event where waste burning does occur, the local municipalities will address the issue. Wastewater treatment facilities are likely to result in emissions of CO_2, methane (CH_4), non-methane volatile organic compounds; and potentially odorous compounds such as hydrogen sulphide (H_2S) and ammonia (NH_3).

Air Quality Monitoring Networks

Municipalities are required as per section 8 of NEM: AQA to carry out ambient air quality monitoring. There are currently five ambient air quality monitoring stations within the West Coast District Municipal area found at: Malmesbury, St Helena, Velddrif, Vredenburg and Saldanha Bay. The monitoring stations are managed by Western Cape Province (DEA&DP), WCDM and Saldanha Bay Municipality. In addition to the five stations are the seven dust monitoring stations commissioned by the Saldanha Bay Local Municipality. The Velddrif station is located within the Bergrivier Municipal area and managed by the WCDM. Additional monitoring is done by industries as part of their compliance with the conditions of the AELs.

Below is an outline of the representation of monitoring network as commissioned by local municipalities.

- **Cederberg Municipality**

Currently no monitoring stations have been commissioned in this local municipality. It is suggested that a service provider be appointed to conduct passive monitoring within the Cederberg municipality. There are no section 21 listed activities in the Cederberg municipality, however, there are definitely non-listed activities that need to be monitored within Clanwilliam and Lambert's Bay. It is suggested that passive H_2S monitoring be conducted in Lambert's Bay, considering the concerns raised regarding the smell linked to a factory in the town.

GAP ANALYSIS AND RECOMMENDATIONS

A gap analysis was conducted to evaluate the areas of concern as per the baseline assessment. The identified gaps have been moulded into goals and objectives of the AQMP, 2019 and the Cederberg Municipality AQMP 2026.

Gaps Identified	WCDM	Local Municipality
Human Resources	**Description of the Gap Identified and Recommendations**	
Limited Expertise and Resources	With an increase in industries within the WCDM, the designated AQO and Manager AQ will not be able to carry out their responsibilities, therefore there is a need for additional AQOs within the WCDM.	• There is a need to appoint AQO qualified in the area of air quality. • Appointed AQO within the local municipalities should be provided with ongoing training in the field of air quality. • The roles and responsibilities of AQOs are often taken in conjunction with other roles within the municipalities. • Air quality management is not a primary role of the designated AQO. Support from District, Provincial and National will improve the air quality function at local level. • There is a lack of educational resources for AQ
Funding constraints	There is a need for funding for the following: • Environmental and health related studies.	There is a need for funding for the following: • Environmental and air quality related studies, at relevant local authorities.

	• Materials for awareness campaigns. • Maintenance of existing ambient air monitoring station located in Velddrif. • Passive sampling, dust fallout monitoring and dispersion modelling within the West Coast District Municipal area. • Additional human capacity.	• Materials for awareness campaigns. • Additional capacity building. • Maintenance of existing ambient air monitoring station, at relevant local authorities in conjunction with WCDM, if applicable.
Air Quality Management Tools	**Description of the Gap Identified and Recommendations**	
Monitoring	• Passive sampling, dust fallout monitoring and dispersion modelling within the West Coast District Municipal area.	• Establish dust monitoring network, if applicable.
Emissions Inventory	• WCDM: To maintain an Inventory list of section 21 Listed Activities and section 23 controlled emitters.	• Establish and maintain an inventory list of non-listed activities.
Compliance and Enforcements	**Description of the Gap Identified and Recommendations**	
Compliance	• Review of WCDM and Local Municipality By-laws. • Implement a fine system for all non-compliant air quality related matters.	
Complaints Management	• Establish and maintain complaints database.	
Stakeholder engagement	**Description of the Gap Identified and Recommendations**	
Communication and Governance	• Awareness raising. • Communication amongst all spheres. • Cooperative governance with all spheres of government.	

Table 2: Gap Analysis within the Cederberg Municipal area.

THE CEDERBERG MUNICIPALITY AQMP GOALS

This section focuses on the vision, missions and goals for the Cederberg Municipality AQMP. The Cederberg Municipality has adopted the vision and mission as per the AQMP 2019.

Goals and Objectives

To achieve the current vision and mission, new goals and objectives have been set for Cederberg Municipal area:

- Improve compliance enforcement and management of air quality within the Cederberg Municipal area.
- Improve awareness with respect to air quality management.
- Improve the current air quality management tools.
- Invest in adequate human and financial recourses to ensure effective implementation and management of air quality.
- Integrate Climate Change and Air Quality Management

IMPLEMENTATION OF INTERVENTION STRATEGIES

The objective is to:

- Implement the control strategies, including financing the control measures and setting timeframes.
- Identify how to implement the intervention strategies / action plans.
- Enforce the policies and regulations needed to implement the strategies.

The timeframe for the implementation of the intervention strategies may vary from Short term, Medium-term, Long term and continuous:

- Short term (1-2 years)
- Medium-term (2-3 years)
- Long term (3-5 years)

The implementation strategies towards the Cederberg Municipality AQMP are outlined in the table below.

Goal and Objective	strategy	indicator	Responsibility	Time frame
Goal 1: Improve compliance enforcement and management of air quality within Cederberg Municipal area	Keep the complaints database updated	Complaints database in place and updated.	Cederberg Municipality	Continuous
	Handle complaints received by municipality as soon as they are presented	Records of complaints managed and proof of measures used to address complaints	Cederberg Municipality	Continuous
Objective1: Ensure compliance enforcement and monitoring of air quality within the Cederberg municipal area	Implement fine system for non-compliant entities	A working fine system in place	Cederberg Municipality	Long term-Continuous
	Promote and maintain a more user-friendly platform for public to lodge air quality complaints.	Established user-friendly platforms for public to lodge their complains	Cederberg Municipality	Long term
	Establishment and review of By-law to amend where needed.	Establishment of By-law and ad hoc review to amend when needed.	Cederberg Municipality	Long term-Continuous
Goal 2: Establish and maintain air quality management tool within Cederberg Municipal area	Establish and maintain dust monitoring network within Cederberg Municipal area	Establishment of dust monitoring network owned by Cederberg Municipality	Cederberg Municipality	Continuous
Objective 1: Ensure sufficient air quality management tools within Cederberg Municipal area.	Establish inventory list of non-listed activities within Cederberg Municipal area	Establishment of non-listed activities within Cederberg Municipal area	Cederberg Municipality	Continuous

	Cederberg Municipality must keep an inventory list of boilers with a MW heat input of less than 10MW and other fuel burning appliances as well as the types of industry within their area.	An inventory list of of boilers with a MW heat input of less than 10MW and other fuel burning appliances as well as the types of industry within their area.	Cederberg Municipality	Continuos
Goal 3: Improve awareness with respect to air quality management	Engage with schools to have create awareness on AQ.	School talks on AQ	Cederberg Municipality	Continuous
Objective 1: Ensure awareness on AQ matters within Cederberg Municipal Area	Make use of Environment Day as awareness day on environmental matters including AQ	Awareness activities on environment day	Cederberg Municipality	Continuous
	Make use of media and websites to give notices on new AQ legislation	Awareness uploads and post on both media platforms and Cederberg municipality websites	Cederberg Municipality	Continuous
Goal 4 : Expand human capacity for effective implementation and management of air quality	Make provisions to employ AQO qualified in the area of Air Quality with Air Quality as a core function	Appointment of qualified AQO with Air Quality as a core function	Cederberg Municipality	Long Term
	Invest in training needs of AQO as part of growth development	Attended trainings by AQO	Cederberg Municipality	Medium term-continuous

Objective 1: Sufficient human resource, skills capacity and financial resources to undertake the responsibilities of air quality management.	Engage with service providers to provide training on technical skills relating to air quality management and climate change response	Number of air quality officers and EMIs undertaking formal training for skills development	Cederberg Municipality	Continuous
	Source funding from external sources to carry out the responsibilities of air quality management plan such as training, awareness, monitoring and establishment of monitoring stations.	Funding allocated for AQ in Cederberg Municipality	Cederberg Municipality	Medium term-continuous
Goal 5: Integrate Climate Change and Air Quality Management.	Explore training opportunities for Municipal Traffic officials to perform vehicle emission tests.	Reduction in emissions from the industries	Cederberg Municipality	Continuous
Goal 6: Promote cooperate governance and stakeholder engagement	Engage with department of agriculture to promote environmentally friendly means of farming.	Working together with department of agriculture to achieve environmentally friendly methods of farming.	Cederberg Municipality	Continuous
	Promote collaborative effort with other related spheres of governments to ensure effective air quality management.	Collaborative efforts towards clean air.	Cederberg Municipality	Continuous

Objective 1: Ensure effective communication and engagement with all spheres of government	Work with department of agriculture and department health to create awareness on the effects of using pesticides near the residential areas.	Collaborative efforts towards awareness campaigns	Cederberg Municipality	Continuous

Table 3: Implementation strategies towards the Cederberg Municipality AQMP

EVALUATION OF THIS AQMP

Ongoing evaluation is an essential element of the AQMP implementation as it allows for a thorough assessment of the AQMP, including the shortcomings and strengths evident in implementation.

The evaluation process asses AQMP implementation outcomes, which are based on the indicators. This evaluation is done on a continuous basis each year to assess the progress on the identified intervention strategies. After 5 years, the AQMP will be revisited and the goals realigned and the AQMP reviewed.

Annual reporting of the AQMP implementation is recommended as a minimum timeframe and will be incorporated into the Annual State of Air Quality Management Report. Section 7.2 of the National Framework highlights the requirements of the Air Quality O icers' annual report and the reporting requirements in terms of the AQMP. Further to this, section 5.3.2.4 of the National Framework notes the timeframes for submission of the annual reports at each level of government, i.e. Municipal and Provincial . During the reporting and monitoring of the AQMP for annual reporting, a number of actions will be undertaken such as:

- Development and operations of monitoring programs.
- Reporting and assessment of changes in air quality.
- Preparing and updating action plans.
- Updating actions and control options.
- Arranging workshops and seminars.
- Involving stakeholders.
- Identifying gaps and challenges.
- Informing the public.

CONCLUSION

Air quality is crucial to ensure clean, healthy air for all human and animal life depending on oxygen for survival. Illegal fires and burning of waste are detrimental to the well-being of the atmosphere leading to dark smoke emissions causing increased carbon dioxide and harmful chemicals released into the atmosphere.

The AQMP highlights the need to focus on expanding the current human resources capacity, air quality management tools, creating awareness, and interlinking air quality management with climate change. The vision of the AQMP is to attain and maintain good air quality for the benefit of all inhabitants and the natural environmental ecosystems within the Cederberg Municipal area.

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