

CAPE AGULHAS MUNICIPALITY AIR QUALITY MANAGEMENT PLAN

1ST REVIEW 2019



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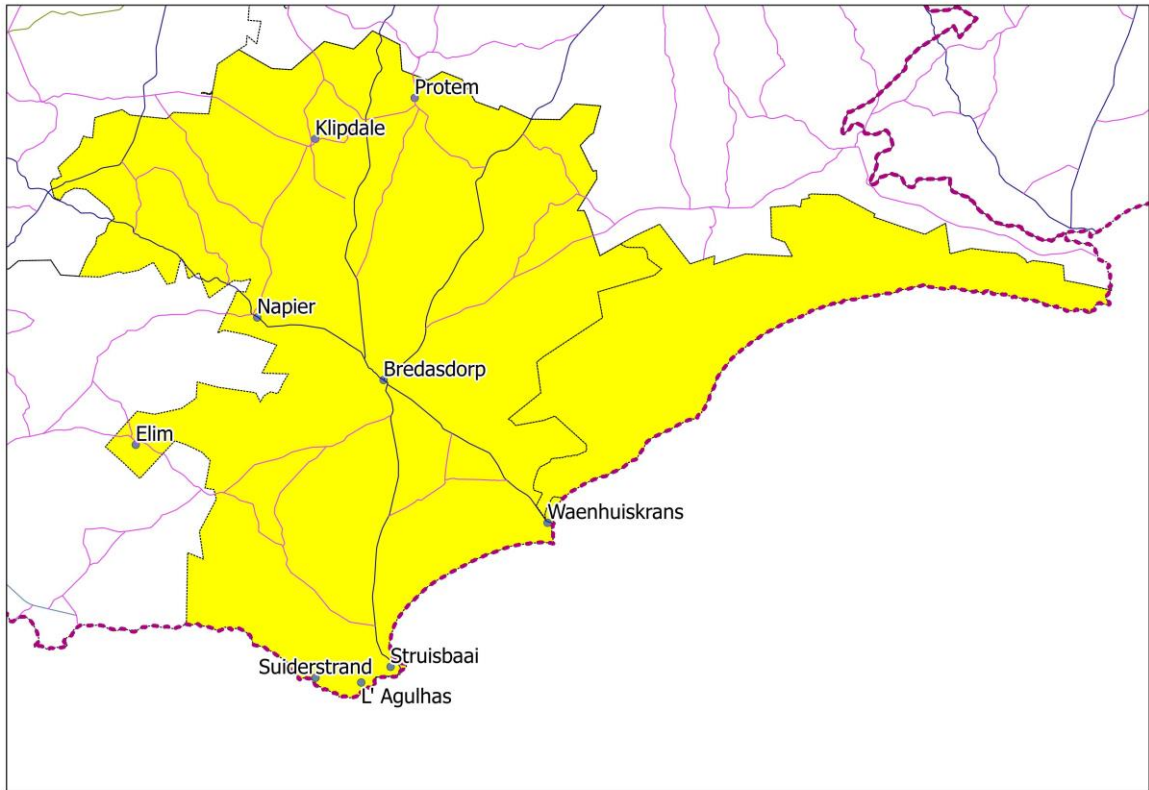
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AIR QUALITY MANAGEMENT: CAPE AGULHAS MUNICIPALITY

FOREWORD

Cape Agulhas Municipality is situated in the Overberg, at the Southern Most Tip of Africa, where the two oceans meet. It is the Southern Most Municipality in South Africa, situated to the east of Cape Town beyond the Hottentots – Holland Mountains along the Western Cape south coast.



The landscape is dominated by gently to moderately undulating hills enclosed by mountains and the ocean. The flat and level coastal plain rises from sea level to 100m.

The area has a strong agricultural sector which comprises 11.6 per cent of all agricultural production in the Western Cape. Table 1 below illustrates the real and projected population growth in the district and municipality for the period 1996 to 2019.

Table 1: Population growth, 1996 – 2015

Area	1996	2001	Rate %	2015	Rate %	2019 Projection	Rate %
Overberg District Total	159 033	205 945	5,9	270 202	1,7	316 411	2,6
Cape Agulhas	22 011	26 715	4,3	33 897	1,5	39 897	2,8

1996 and 2001 Source: Statistic SA

2006 and 2010 Source: Centre for Actuarial Research, UCT

Census 2011

Socio-Economic Profile 2018

Social Development 2018 projections

INTRODUCTION

1.1 PURPOSE OF THE PLAN

Section 15 (1) of the National Environmental Management: Air Quality Act , 39 of 2004, places an obligation on Municipalities to develop Air Quality Management Plans (AQMPs) to manage air quality in there regions. Cape Agulhas Municipality`s 1st Generation AQMP was developed and approved in 2014. This document serves as Cape Agulhas 5 year review and update of the latter. This 2nd Generation Cape Agulhas AQMP is based on the above (2014) plan and is informed by the updated Western Cape AQMP (2016) and the Overberg District Municipality AQMP (2018).

As detailed in the AQA a local municipality has two primary statutory obligations with which it must comply and these obligations are:-

- designate an Air Quality Officer (AQO)
- incorporate an Air Quality Management Plan in its IDP

The Air Quality Management function within the Cape Agulhas Municipality resolves under the Building Control Section of the Structural Services Department, with the Manager Building Control, the Officer designated as the Air Quality Officer for CAM.

This Air Quality Management Plan for Cape Agulhas Municipality has thus been developed to comply with the National Environmental Management: Air Quality Act, 39 of 2004 and more specifically to provide guidance on Air Quality Management in the municipal area. Air quality is defined to include noise, dust and odour and addresses all sources of air pollution, i.e. point, area and mobile sources.

CONTEXT OF THE CAPE AGULHAS MUNICIPALITY AQMP

The Cape Agulhas AQMP was prepared taking into consideration The National, Provincial and local context of air quality management. The various plans, frameworks and policies, applicable are summarized.

NATIONAL LEVEL

National Environmental Management; Air Quality Act (39 of 2004)

National Environmental Management: Air Quality Act. 39 of 2004 (NEMAQA).

1.2 THE AQMP DEVELOPMENT PROCESS

Cape Agulhas Municipality developed an AQMP in 2014. The plan was a strategic document that assist the Municipality to set and achieve air quality management goals in a structured, co-ordinated and measured manner. The 2014 AQMP took into account the roles and responsibilities of the district in respect of air quality management, as outlined in the National Framework for Air Quality Management in South Africa.

2. VISION OF CAPE AGULHAS AQMP

To be a municipality where the constitutional right of all human beings to clean air is maintained to such a standard where economic and social development will flourish without jeopardizing the environment. "Clean and healthy air for all in Cape Agulhas".

3. MISSION OF THE AIR QUALITY MANAGEMENT PLAN

"To ensure the effective and consistent implementation of sustainable air quality management practices, by to progressively achieve and efficiently maintain clean and healthy air in Cape Agulhas". The vision captures the focus of Cape Agulhas Municipality, the community and other stakeholders in the roll out of the AQMP, to ensure to be effective and maintain implementation of sustainable air quality management practices throughout Cape Agulhas to achieve air quality goals.

4. GOALS OF THE VISION AND MISSION

The Four goals of the AQMP to support the vision and mission of Cape Agulhas Municipality, with each goal addressing the different aspects of the vision and are underlined by the objectives to achieve them.

GOAL1: Air quality governance meets requirements to effectively implement the AQMP

This goal addresses the regulatory framework and the institutional capacity required in Cape Agulhas Municipality to carry out the air quality function. This links directly to the goal in AQMP for the Western Cape to 'Ensure effective and constant air quality management' and the goals in the ODM AQMP of 'Effective air quality management'.

Goal 2: Reduce atmospheric emissions of harmful pollutants

The goal aims to manage activities that impact on air quality to reduce the emissions of harmful pollutants and the associated impact on human health and their well-being. It links directly to the Provincial AQMP goal to 'Ensure effective and consistent compliance monitoring and enforcement' and 'To ensure health-based air quality standards are attained and continually met'. This links the ODM AQMP goal of 'Effective air quality management' through an 'Emission reduction strategy'.

GOAL 3: Systems and tools are established to effectively implement AQMP

The goal refers to the systems and tools required for effective AQMP implementation, the cornerstone of which is an Air Quality Management System. The development of an AQMS links directly to the Provincial AQMP goal 'To ensure effective and consistent air quality management' through the development of AQM systems. It also links to the ODM AQMP goal to develop and implement AQMS. An AQMS is the fundamental unit towards the management of air quality in an area, incorporating the necessary technical elements that provide information on the status of air quality.

GOAL 4: Climate Change

This goal aims to improve the understanding of the impact that climate change is likely to have on the municipality, to support climate change protection programmes including and promoting the reduction and of greenhouse gas emissions and to implement measures to mitigate such impact.

1. To ensure effective and consistent air quality management.
2. To continually engage with stakeholders to raise awareness with respect to air quality.
3. To ensure effective and consistent compliance, monitoring and enforcement.
4. To support climate change protection programmes, including promoting the reduction of greenhouse gas emissions

5. SUMMARY OF STATUS QUO OF AIR QUALITY MANAGEMENT IN CAPE AGULHAS

5.1 Current institutional capacity of CAM

At Cape Agulhas Municipality the Building Control section situated within the Structural Services Directorate is responsible for air quality management.

Cape Agulhas Municipality has appointed an Air Quality Officer (Manager Building Control) , and one other member. It is not foreseen that any additional staff structures will have to be established to implement this plan for the immediate future.

5.2 Air pollution sources in the Overberg

- Industrial operations, Lime and Clay Brick manufacturing
- Agricultural activities such as crop burning and spraying
- Biomass burning (veld fires)
- Domestic fuel burning (wood and paraffin)
- Vehicle emissions
- Waste treatment and disposal
- Dust from unpaved roads
- Other fugitive dust sources such as wind erosion of exposed areas
- Lime dust

There are few sources of air pollutants in Cape Agulhas. The ambient air quality is generally good.

Atmospheric Emissions. Industrial and manufacturing emissions from industrial manufacturing processes are typically associated with the combustion of fuel for heat or steam generation. The AEL authority is a District Municipal function and the responsibility of the ODM. However, emissions from industrial boilers are likely to result in local areas of elevated concentrations of air pollutants. Ambient particulate concentrations are likely to be high in low – income residential areas where wood is used as primary fuel source and activities such as refuse burning.

Agricultural emissions. Emissions from agricultural activities are most often associated with greenhouse gas emissions. The drift spray and dust from pesticides applications can expose people, wildlife, and the environment to pesticide residues that can cause health and environmental effects and property damage.

Biomass burning. It is an important source of atmospheric emission, but crop residue burning doesn't take place any more.

Pesticide use. Pesticide spraying of crops are still in use and large amounts are used for different crops. The airborne nature of spray drift from the application of pesticides implies an air quality issue. Spray drift is, however not addressed in NEMAQA.

Motor vehicles. Motor vehicle congestion in holiday towns results in elevated ambient concentrations of particulates and NO_x (Nitrogen Oxides) at times.

Residential fuel burning. The majority of households in CAM use electricity, gas or other sources, such energy use is not associated with air pollution. There are still informal settlements that do not have access to electricity and alternative fuels are used. Collection and disposal at landfill sites. Landfill has the potential to impact many aspects of the

environment, with the main risks to human health are likely to be a consequence of as a potential health hazard. Incidental waste burning are localized sources of air pollution.

Wastewater treatment. Air pollutants associates with waste water includes hydro sulphide, mercaptans and ammonia. Volatile organic compounds form by the volatization of organic compounds in the treatment process are often found in industrial waste.

Wildfires. It occur seasonally in the Overberg. Uncontrolled fires can emit large volumes of particulate matter, courses smuts that deposit on sevicees and are a great nuisance.

5.3 Air Quality monitoring

Air quality monitoring was up to date addressed by Province and the District Municipality. An overall perspective of the sample analysis indicated that the pollution levels are low within Cape Agulhas, and that they will handle it in accordance to the AQMP.

AMBIENT AIR QUALITY STANDARDS

Health based ambient air quality standards have been established for criteria (common) pollutants and one toxic air pollutant in Southe Africa. The limit value is a fixed concentration level aimed at reducing the harmful effects of a pollutant. Compliance with the ambient standards therefore implies that ambient concentrations are below the limit value and does not exceed the permitted tolerance. These standards imply that the ambient concentrations less than the standard do not pose a health risk, while above the standard may pose a health risk. CAM will from 2020 do there own ambient realtime monitoring in Bredasdorp.

6. GAPS AND PROBLEMS

- The ODM will accept responsibility for the licensing of listed activities and the enforcement of legislation will be the local municipality's responsibilities.
- Air quality management requires cooperation from various disciplines within local government which includes amongst others traffic, municipal health, fire and rescue, town planning, engineering, building control etc. The successful implementation of air quality management is thus strongly dependant upon cooperation and communication among all sectors and all local governments within the district.
- Inadequate financial provision specifically earmarked for air quality management by all municipalities within the district.
- The availability of suitably skilled human resources also remains a challenge.

- The idea or perception “Cape Agulhas’s air is clean, so why is air quality management necessary” makes it difficult to gain the attention of decision makers as well as the general public.
- Air Quality by-law has been promulgated.
- Personnel capacity building (EMI course)
- Town planning and road planning do not always consider the impact of developments on air quality.

7. GOALS

- Effective and consistent air quality management
- Promote communication in relation to air quality management
- Effective and consistent compliance monitoring and enforcement
- Develop and maintain institutional arrangement between the district and the local municipalities that support air quality management.
- Achieve and sustain acceptable air quality levels throughout the area
- Minimize the negative impact on human health and well – being and on the environment

8. OBJECTIVES

8.1 EFFECTIVE AIR QUALITY MANAGEMENT

- Build capacity in air quality management within Cape Agulhas Municipality
- To strengthen and build capacity in air quality management
- To promote cooperation amongst all spheres of government, business, industry and civil society
- To ensure adequate funding for the implementation of the AQMP
- To develop comprehensive education and communication mechanisms, strategies and programmes with respect to air quality
- Develop, implement and maintain an Air Quality Management System
- Establish an annual AQMP review process
- To promote environmental best practices and cleaner development technologies amongst all stakeholders
- To improve compliance monitoring and enforcement
- To promote continuous improvement with respect to compliance
- To ensure that health-based air quality standards are attained and continually met
- To reduce ozone depleting substances and greenhouse gas emissions, in line with national and international requirements
- Established an Emission Reduction Strategy
- To develop and implement an effective Atmospheric Emissions Licensing System (will be done by ODM).

8.2 PROMOTE COMMUNICATION IN RELATION TO AIR QUALITY MANAGEMENT

- Establish an Air Quality Forum in order to ensure proper communication between the District municipality, local municipalities, provincial government, business and industry as well as interested and affected parties in Cape Agulhas municipality.

8.3 COMPLIANCE MONITORING

- Establish a compliance monitoring system within the Cape Agulhas municipality.
- Ensure continuous compliance with the Atmospheric Licensing Conditions.(ODM)
- Have a Air Quality by-law in place.

9. MONITORING

Monitoring and reporting on progress with regard to the implementation of the AQMP is a key factor in maintaining momentum for the roll – out of interventions as well as providing a way to update all key stakeholders.

10. EVALUATION

Continuous evaluation is an essential element of the AQMP implementation as it allows for a thorough assessment of the AQMP including the shortcomings and strength evident in implementation. Evaluation is an internal mechanism to measure the performance with regard to the implementation of the AQMP. The evaluation process will assess the AQMP implementation outcomes, which are based on the AQMP indicators. Annual evaluation of the AQMP implementation will be conducted. Monitoring and evaluation.

11. REVIEW

Monitoring and reporting on progress with regard to the implementation of the AQMP is a key factor for maintaining momentum for the roll out of interventions and providing a way to update key stakeholders. This plan is reviewed on a 5 year basis to determine the success of the AQMP implementation, shortcomings and strengths in implementation. This provides the opportunity to adjust the AQMP or parts of it if the desired outcome is not being achieved. The internal revision was communicated to stakeholders through a limited public participation process followed by a further iteration and publication.

Annual reviews are also conducted as part of reporting submittes to the ODM AQO as required in terms of Section 17 of NEMAQA.
The next review will be in 2024.

12. IMPLEMENTATION PLAN

Timeframes: Short-term (6-12 months); Medium-term (1-2 years); Long-term (3-5 years)				
GOALS	OBJECTIVES	TARGETS	ACTIVITIES	TIMEFRAMES
Effective Air Quality Management	Effective Air Quality Management	Build capacity in air quality management within the Building control section	With continuous training and development in air quality management in the Building control section	Continuous
	Develop, implement and maintain an Air Quality Management System	Compilation of a emissions inventory for CAM	Compile an emission inventory of all line sources	Medium
			Compile an emission inventory of all area sources	Medium
			Compile an emission inventory of all industrial sources	Short
	Air Quality monitoring agreement with Province Will do own ambient monitoring	Engagements with Province to assist with air quality monitoring within the CAM To get ambient monitoring equipment.	Short – Long	
			Continuous	
	Establish an annual AQMP review process	Review systems, structures and processes to review progress in relation to the AQMP.	Establish a committee to review the AQMP	Short – Medium
Establish a comprehensive complaints register.			Short	
Establish an emission	Industries	Electronic database of all small industries to be regularly updated	Short – Medium	

	reduction strategy.		Create awareness campaigns around the negative health impacts of domestic fuel burning	Continuous
			Encourage the distribution of alternative forms of domestic energy such as LPG, LSF, gas, methanol, etc	Continuous
		Traffic	Review vehicle emissions database with updated traffic count data as these become available	Long
			Promote comprehensive vehicle emissions monitoring and diesel vehicle testing programmes in congested areas	Continuous
			Compile a detailed assessment of the vehicle fleet in CAM including information on vehicle numbers, type, age and fuel usage.	Long
		Agriculture	Obtain information on the quantity of pesticides used in the District	Continuous
			Promote the safe and responsible use of pesticides throughout the district.	Medium – Long
			Promote safe and responsible agricultural burning practices.	Short – Medium
		Biomass Burning	Liaise with fire services to assist in air pollution control	Short – Medium
			Obtain information from local Fire Departments to maintain and update a database of the locations of veld fires and the extent of the areas burnt	Short – Medium
			Maintain a database for regional scheduled burn areas that are published for agricultural and management fires	Short – Medium
		Waste Treatment and Disposal	Develop an emissions inventory of waste burning sources (incinerators, sewage and waste water treatment works)	Short – Medium
			Ensure all operating incinerators are permitted	Continuous
			Maintain a current database of permitted and non-permitted landfill sites	Continuous

Promote communication in relation to Air Quality Management	Establish an air quality forum in order to ensure proper communication between the Overberg district, Local municipalities, Provincial government, business and industry as well as interested and affected parties in the 4 sub-district of the Overberg district municipality.	A committee/forum at a sub-district level representing all interested and affected parties.	Establishment and management of an Air Quality Officers Committee/ Forum	Short-term
		Clearing up the division of functions between the 4 B municipalities and District Municipality	Discussions on the division of functions between the 4 B municipalities and the Overberg district municipality	Short – Medium
		Regular reporting and discussions on issues of AQM.	Compile a annual state of air report for the district	Annually
Compliance monitoring	Do ambient air quality monitoring.	Build capacity, get own equipment and do AQ monitoring in house.	To get realtime data on Air Quality	Continious
	Develop an Air Quality by-law	Build capacity to ensure Air Quality compliance in the Overberg	Allow EHP's to investigate and maintain a good Air Quality standard	Medium - Long