AGENDA of the
Portfolio Committee : Protection Services
17 November 2020
(Also the agenda for the Mayoral Committee Meeting : 25 November 2020)

3.
REVIEW OF OVERSTRAND MUNICIPALITY FIRE MANAGEMENT PLAN 2021 - 2025

17/8/B
NJ Michaels **Director: Protection Services**
22 October 2020 **(028) 313 8054**

1. Executive Summary

The purpose of the report is to present to Council the Fire Management Plan, for a period of five years, from 2021 – 2025.

2. Service Delivery and Budget Implementation Plan - IGNITE

Directorate: Protection Services
Fire & Rescue, Disaster Management and Security Services

3. Compliance with Strategic Priorities

Provision of democratic, accountable and ethical governance
Provision and maintenance of municipal services
Creation and maintenance of a safe and healthy environment

4. Delegated Authority

None

5. Legal Requirements

The Constitution of the Republic of South Africa, 1996
Disaster Management Act, No 57 of 2002
Fire Brigade Services Act, No 99 of 1987
Local Government: Municipal Systems Act, No 32 of 2000
Local Government: Municipal Structures Act, No 117 pf 1998
Community Fire Safety By-law, P.N. 6454/2007
National Veld and Forest Fire Act, Act 101 of 1998
SANS 10090: Community Protection Against Fires
Occupational Health and Safety Act, No 85 pf 1993
Service Delivery and Budget Implementation Plan (SDBIP) 2020/2021

6. Background/Discussion/Evaluation/Conclusion

Background

The purpose of the report is to inform council of the current status of the Fire &

Rescue, Disaster Management and Security Services capacity in terms of facilities, human resources, vehicles and equipment to enable the establishment of a professional fire service that will overcome modern day fire safety and firefighting challenges.

Discussion

The objective of the Fire Management Plan is to develop the staff component, enhance community fire safety and building capacity of resources according to the prescribed legislation.

7. Financial Implications

Financial implications only when there are acquisitions; acquisitions will be in line with the approved budget.

8. Staff Implications

Staff implications only according to the approved budget for new posts. A five-year implementation plan is set for the Department.

9. Comments from other Departments, Divisions and Administrations

None

10. Annexures

Annexure A: Fire Management Plan

RECOMMENDATION TO THE COUNCIL:

that the Overstrand Municipality Fire Management Plan 2021 - 2025 **be noted**.

RESPONSIBLE OFFICIAL : **NJ MICHAELS**
L. SMITH

TARGET DATE FOR IMPLEMENTATION : **1 DECEMBER 2020**

AGENDA of the
Portfolio Committee: Protection Services
17 November 2020
(Also the agenda for the Mayoral Committee Meeting: 25 November 2020)

3.
REVIEW OF OVERSTRAND MUNICIPALITY FIRE MANAGEMENT PLAN 2021 - 2025

17/8/B
NJ Michaels **Director: Protection Services**
22 October 2020 **(028) 313 8054**

THIS MATTER SERVED BEFORE THE JOINT PORTFOLIO COMMITTEE ON 17 NOVEMBER 2020, WHICH COMMITTEE RECOMMENDED AS FOLLOWS:

RECOMMENDATION TO THE COUNCIL:

that the Overstrand Municipality Fire Management Plan 2021 - 2025 **be noted**.

RESPONSIBLE OFFICIAL :	**NJ MICHAELS** **L SMITH**
TARGET DATE FOR IMPLEMENTATION :	**1 DECEMBER 2020**

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Munisipaliteit • U-Masipala • Municipality

OVERSTRAND

FIRE

RESCUE

FIRE MANAGEMENT PLAN 2021 - 2025

Executive Summary

FIRE SERVICES MANAGEMENT PLAN FOR THE OVERSTRAND MUNICIPALITY

1 PURPOSE OF REPORT

1.1 To inform Council of the current status of the Fire Services Department regarding facilities, human resources, vehicles and equipment;

1.2 To obtain Council approval in principle with the budget allocation for the implementation of the Fire Services Management Plan, subject to recommendations of the Budget Steering Committee and Executive Mayor

2 SCOPE OF PLANNING

This plan is compiled of specific sections which are further split into three sub-sections, namely what is required, current realities and comments.

3 MISSION OVERSTRAND FIRE AND RESCUE SERVICE

To establish a professional fire service that will overcome the modern day fire safety and fire fighting challenges.

4 VISION OF OVERSTRAND FIRE AND RESCUE SERVICES

Overstrand Fire Service, the Fire Service for the Community

5 OBJECTIVES

5.1 Developing of Staff Component

5.1.1 Incident Command System (ICS) Command structure

5.1.2 Training programs (formal and informal) / Succession programs/Mentor programs/Increase of staff compliment

5.1.3 More Permanency

5.2 Enhance Community Safety

5.2.1 PIER Programs (Schools/ Business/ Retirement villages etc.)

5.2.2 Risks/Vulnerabilities/Hazards/Capacity

5.2.3 Fire Breaks Management

5.2.4 Management of Fire Protection Associations

5.3 Building Capacity of Resources & Capacity

5.3.1 Vehicles

5.3.2 Equipment

5.3.3 Staff

6 LEGISLATION

The following concise summary is to reiterate the legal standing concerning the delivery of fire services:

6.1 Constitution of the Republic of South Africa 1996:

6.1.1 Chapter 7, section 152 (1d), objects of local government; to promote a safe and healthy environment.

6.1.2 Section 156 (1a), Powers and functions of Municipalities as listed in Part B of Schedule 4 "Firefighting Services".

6.2 The Fire Brigade Services Act, Act 99 of 1987

Definition for the purpose of fire service and specifies the mandate of the service in the definitions:

`service' means a fire brigade service intended to be employed for-

6.2.1 Preventing the outbreak or spread of a fire;

6.2.2 Fighting or extinguishing a fire;

6.2.3 The protection of life or property against a fire or other threatening danger;

6.2.4 The rescue of life or property from a fire or other danger;

6.2.5 Subject to the provisions of the Health Act, 1977 (Act 63 of 1977), the rendering of an ambulance service as an integral part of the fire brigade service; or

6.2.6 The performance of any other function connected with any of the matters referred to in paragraphs (a) to (e)." (The fire Brigade Services Act, Act 99 of 1987)

6.3 Standard By-law relating to Community Fire Safety P.N. 6454 of 2007

The purpose and scope of the By-law is:

6.3.1 to promote the achievement of a fire-safe environment for the benefit of all persons within the area of jurisdiction of the Municipality;

6.3.2 to repeal all existing relevant by-laws of the Municipality;

6.3.3 to provide for procedures, methods and practices to regulate fire safety within the area of jurisdiction of the Municipality

6.4 The Local Government: Municipal Structures Act, Act 117 of 1998

The definition of fire-fighting services contained in Section 84(1) (j) creates a shared district and local responsibility for rendering of the fire-fighting service.

6.4.1 The following functions are allocated to the District Municipality

"(j) Fire fighting services serving the area of the district municipality as a whole, which includes—

(i) planning, co-ordination and regulation of fire services;

(ii) specialised fire fighting services such as mountain, veld and chemical fire services;

(iii) co-ordination of the standardisation of infrastructure, vehicles, equipment and procedures;

(iv) training of fire officers."

6.4.2 B municipalities were expected to exercise all other the fire- fighting functions excluding the above listed functions as adjusted by the MEC of Local Government. This dividing of functions is not practical for effective services and therefore a service level agreement (SLA) was entered into between the Overstrand Municipality and the Overberg District Municipality. This SLA states that each service will be responsible for the whole spectrum of physical fire-fighting services in predetermined areas in the Overstrand.

6.4.3 The Overstrand Municipality is responsible for the following functions:

6.4.3.1 Fire-fighting of structural fires, field and bush fires and any other fire

6.4.3.2 Fire Safety (the application of the National Building Regulations, Fire codes and municipal by-laws with regard to fire safety);
6.4.3.3 Rescue services;
6.4.3.4 Support services to municipal and other instances,
6.4.3.5 Fire pre-planning and related preparedness plans;
6.4.3.6 Testing and basic maintenance work on emergency vehicles and equipment;
6.4.3.7 Fire communications facilities for the particular service.

7 SANS 10090:2003 COMMUNITY PROTECTION AGAINST FIRE

This standard outlines a system of determining the requirements for the operational and fire safety functions of emergency services rendered to communities. It also recommends certain criteria for water supplies for fire-fighting.
The prescribed standards are the only measurable tool for evaluating fire services in South Africa and many of the standards are not realistic for the majority of areas in South Africa. It must therefore be revised for our specific circumstances.

The most important implications of the Codes are:

7.1 Fire-risk categories (SANS 10090:2003)

The applicable fire risk categories to the Overstrand Municipality:

Category B:	Limited central business districts, smaller commercial or industrial areas normally associated with small towns and decentralized areas of cities and large towns (areas where the risk to life and property due to fire occurrence and spread is likely to be moderate).
Category C:	Residential areas of conventional construction.
Category D:	Rural risk areas of limited buildings and remote from urban areas.
Category E:	Special risk areas. Individual risk areas requiring a pre-determined attendance over and above the predominant risk category in an area. Includes large shopping/entertainment centres, informal settlements, harbours, hospitals, and the extensive urban interface area with a high risk of veld- and mountain fires.

7.2 Fire Brigades Classification (SANS 10090:2003)

7.2.1 The codes specify Fire Brigades into categories based on the following:

Category	Performance Criteria
Category	A brigade with adequate arrangements and provisions in place in relation to the risk dictated by certain parameters according to: • Risk profile of area of jurisdiction; • Weight and speed of response; • Call receipt and processing requirements; • Vehicle/equipment availability and maintenance; • Incident management procedures; • Pre-fire planning and risk visits; • Training/personnel; Water supplies and fire safety functions

7.2.2 Fire Services are categorized from those which are able to meet performance criteria for staff availability per appliance availability, pre-determined attendance (PDA), staffing levels and attendance times, ranging from 35% to 45% of the time to more than 75% of the time measured annually. The categories range from a category 5 (the lowest) to a category 1 (which is the ideal).
The codes state that all brigades should endeavor to fall into a category 1 classification.

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7.2.3 **Current Realities**

According to statistics and the above prescribed standards, the Fire Brigade Service of the Overstrand Municipality falls into category 4. **(Category 4:** A brigade as given in category 5 a) as monitored by relevant performance indicators or statistics, or both, and which is able to meet the performance criteria given for category 5 b) 46 % to 55 % of the time, measured annually).

The major factors that contribute to this classification are:
7.2.3.1 Weight of response
7.2.3.2 Vehicle and equipment standards
7.2.3.3 Staffing
7.2.3.4 Water supply

7.2.4 **Comments**

To improve on our current category classification and to deliver a more effective service to the community the following needs to be addressed:

7.2.4.1 The existing staffing system to be expanded to accommodate a 24 hours shift at fire station level.
7.2.4.2 Acquiring additional vehicles and adopt an effective vehicle replacement policy.
7.2.4.3 Acquiring additional equipment.
7.2.4.4 Establishment of a dedicated Fire Prevention/Safety section
7.2.4.5 Improve the water supply of existing water networks to ensure effective fire flow system.
7.2.4.6 Improve and establish an effective fire hydrant maintenance plan.

7.3 Weight of Response (SANS 10090:2003)

7.3.1 The Weight of response indicates what and who respond to fires in what time:
(The successful control and extinguishing of fires depend on sufficient appliances responding with adequate manpower and arriving within a reasonable time.)

7.3.2 The appliances in service should, when staffed, be sufficient to provide adequate fire protection in the area protected by the brigade.

7.3.3 In brigades which have only one station, the number (see table 1) of appliances shall be sufficient to meet the full demands of a first fire call to the most congested area and to provide at least one pump in reserve to respond to a second fire call.

7.3.4 In the case of brigades which have more than one station, the number (see table 1) of appliances allotted to any particular substation will depend on the fire-risk category in the area assigned to the station.

For the reaction time of the staffed appliances to an emergency situation (see table 2).

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Table 1 – Weight of response at fires per Station (as prescribed by SANS)

Risk Category	Minimum number of pumping units	Minimum staffing level per appliance (vehicle)	Minimum pumping capacity of each unit (L/min)
A	n/a	n/a	3 850
B	2	4	3 850
C	1	4	2 250
D	1	4	2 250
E	As determined by individual risk assessment		
Note: Arrangements for vehicle fires, grass/bush and special services and the need for specialist vehicles such as aerial appliances and water carriers will by determined by local conditions.			

Table 2 Attendance times at fires

1	2	3	4
Risk Category	Maximum call receipt and turn-out time Min	Maximum appliance travel time min	Maximum attendance time Min
A	n/a	n/a	n/a
B	3	7	10
C	3	10	13
D	3	20	23
E	As determined by individual risk assessment		

7.3.5 Current Realities

Overstrand Fire Services' current major appliances fleet (see table 3).
Staffing levels are 60% of prescribed levels. Due to current staffing system consisting of mainly reservist our turn-out time can be 3 to 15 minutes depending on the day and time, currently the fire stations are manned during normal working hours and any other time on duty member's dispatch from home More detailed reporting on appliances and staff matters follow later in this document. Due to the geographical layout of Overstrand the travel time can be more than prescribed.

Table 3: Major Appliances: Prescribe by SANS and own risk identification

1	2	3	4
Appliance type	Min No. required per day	Actual number on the run per day for Overstrand	Shortfall
1. Major pumps (3 000 L/m or more)	3	3	0
2. Medium pumps (1 800 L/min – 3 000 L/min)	3	4	0
3. Other appliances as given in PDA's for special risks:			
• Aerial appliances	1	0	1
• Bush Fire appliances (Heavy to Med.)	6	0	6
• Water tankers / pumpers	3	0	3
• B A Filling Units	1	1	0
• Bush fire Light units 4x4	8	5	3
• Command Vehicle Med	1	0	1
• Command Vehicle Light	1	2	0
• Rescue unit WSAR /Rope Off road	1	1 (light trailer)	1
• Rescue unit Trench / USAR	1	1	0

• HAZMAT Unit	1	0	1
• Utility Vehicles	3	2	1

7.4 Vehicle & Equipment standards as prescribed by SANS 10090

Fire departments should have sufficient rescue vehicles and special appliances to adequately protect the risks within each fire station's area of operation.

7.4.1 Management of the emergency vehicle fleet shall include:

7.4.1.1 Replacement policy;
7.4.1.2 Procurement of additional vehicles;
7.4.1.3 Reserve vehicles; and
7.4.1.4 A maintenance program.

7.4.2 Replacement of vehicles

7.4.2.1 Every fire department should have a documented emergency vehicle replacement programme which will ensure that older and obsolete chassis (cab, pump, gearbox and engine) are replaced systematically.

7.4.2.2 Frontline emergency vehicles should be replaced in accordance with the recommendations of table 4.

Table 4 — Replacement periods

1	2
Type of vehicle/equipment	Period
	Max. number of years service
Pumping appliances	15
Aerial appliances	20
Off-road vehicles	10
Special appliances	20
Light vehicles	8

7.4.2.3 A replacement program should ensure that newer and older vehicles are spread as evenly as possible throughout the fleet to avoid too many ageing emergency vehicles remaining in commission simultaneously.

7.4.2.4 Provision must also be made in the replacement program to replace problematic vehicles sooner than the maximum prescribed period. Such vehicles should include units which have high maintenance and repair costs and vehicles which do not serve the purpose for which they were intended.

7.4.3 Procurement of additional vehicles

7.4.3.1 The Fire Department should assess the suitability of its emergency vehicle fleet on a regular basis to ensure that the department has a fleet which has the capacity, capability and flexibility to meet the needs of the changing and expanding fire risks of the community.
7.4.3.2 Where necessary, the emergency vehicle fleet should be increased by the procurement of suitable, additional vehicles in accordance with a specification compiled by competent persons.
7.4.3.3 The use of refurbished vehicles should not be used for first turnout appliances.
7.4.3.4 Refurbished vehicles used for support functions should be tested and certified annually.

7.4.4 **Reserve fleets**

7.4.4.1 The Fire Department should maintain a reserve emergency vehicle fleet to ensure that the number of vehicles required to attend to an incident, in a particular fire risk area, can be maintained even when frontline emergency vehicles are undergoing maintenance or repair.

7.4.4.2 Reserve emergency vehicles may be utilized by overtime personnel who are called back on-duty when very large or numerous incidents are in progress.

7.4.4.3 The reserve emergency vehicle fleet should comply with the recommendations of table 5.

Table 5 — Number of reserve vehicles

1	2
Type of appliance	Required number
Emergency pumping appliances	One reserve unit in cases where the required fleet consists of five or less pumping appliances. Twenty percent of the required fleet plus one additional reserve unit if the required number of pumping appliances exceeds five
Aerial Appliances	Sufficient reserve units should be available to ensure that the aerial appliance portion of the fleet is not reduced by more than one aerial appliance at any time
Off road vehicles	As per pumping appliances
Special Appliances	Nil – provided that acceptable temporary arrangements can be made while a frontline special appliance is out of commission
Light vehicles	As per special appliances

7.4.4.4 Emergency vehicles which have been taken out of service may be used as reserve vehicles provided that such vehicles are certified to be suitable for reserve purposes by a competent automotive engineer and a competent fire officer (competent in appliances evaluation) annually.

7.4.4.5 No emergency vehicle which has been taken out of service should form part of a reserve fleet for more than five years beyond the maximum number of years of service for that particular category of vehicle.

7.4.5 Vehicle maintenance program

7.4.5.1 All emergency vehicles should be subject to regular, documented maintenance carried out by competent persons.

7.4.5.2 When developing a maintenance program the vehicle manufacturer's requirements and recommendations should be included.

7.4.5.3 Safety checks shall form an integral part of all maintenance programmes.

7.4.5.4 Defects affecting an emergency vehicle's operational ability should be referred to competent maintenance personnel.

7.4.5.5 Where fire pumps, aerial platforms or aerial ladders form part of an emergency vehicle or its equipment, the necessary maintenance, checks and tests, prescribed by the manufacturer, should be carried out and documented.

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7.4.6 Current Realities: Vehicles

7.4.6.1 As per table 6 the Overstrand Municipality's vehicle fleet age is exceeding the prescribed replacement age and no replacement policy for the ageing vehicles exists. As seen in table 3 we do need additional vehicles to address our risks. Vehicles **with** more water capacity are urgently required due to non sufficient fire-flow supply of the water networks (See also report in water supply section).

7.4.6.2 There are no reserve vehicles. We do have a maintenance program for the vehicles with adequate funding.

Table 6 Appliance age and condition (all vehicles forming part of PDA including special risks)

Appliances	Total number	Number < 15 years old	Number > 15 years old	Average age in years	Overall fleet condition
Pumping appliance	7	5	2	11.43	Poor - Good
Aerial appliance	0	0	0	0	0
Special appliance	0	0	0	0	0
Bush fire Appliance	5	5	0	7	Very Good
Tankers	3	3	0	6	Very Good

Table 7 Vehicles details

Type	Reg. No	Model	Condition			Year	Age	Comment
			Poor	Good	V. Good			
COMMAND VEHICLES								
Delta 1	CEM 23400	Nissan Navara 2.5 TD LWB 4x4		X		2015	5	Mobile Command Vehicle
CV 1	CEM 44444	Ford Ranger DC 4x4		X		2018	2	Mobile Command Vehicle
MAJOR PUMPERS								
Engine 1-1	CEM 37463	Mercedes Benze Ateco 1328		X		2014	6	Major Pumper type 1
Engine 2-1	CEM 7532	Iveco (4x4)			X	2019	1	Major Pumper type III
Engine 3-1	CEM 10226	Mercedes Benz Ateco 1328	X			2009	11	Major Pumper type III
PUMPERS								
Pump 1	CEM 30714	Toyota Hino 4x4		X		2018	2	All Terrain Appliance
Pump 3	CEM 2869	Tata 713C 4x4	X			2006	14	All Terrain Appliance
Pump 4	CEM 14827	Mercedes 1617/48 Ecoliner Truck	X			1997	23	All Terrain Appliance
Pump 6	CEM 1626	Mercedes Buffel	X			1982	38	All Terrain Appliance
RESCUE VEHICLE								
Rescue 1	CEM 27756	Ford Ranger 2x2			X	2019	1	Utility Vehicle
SKID UNITS								
Alpha 1	CEM 44284	Toyota Landcruiser			X	2018	2	Skid Unit
Alpha 2	CEM 32828	Toyota Landcruiser		X		2011	9	Skit Unit

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Type	Reg. No	Model	Condition			Year	Age	Comment
			Poor	Good	V. Good			
Alpha 3	CEM 28939	Toyota Landcruiser			X	2019	1	Skid Unit
Alpha 5	CEM 14938	Toyota Hilux 2.7i 4x4	X			2006	14	Skid Unit
Alpha 6	CEM 23784	Nissan Hardbody NP300 4x4		X		2011	9	Skid Unit
SUPPORT VEHICLES								
SV 1	CEM 38562	Volkswagen Polo ViVo 1.4	X			2015	5	
SV 2	CEM 47688	Volkswagen Polo Sedan			X	2019	1	
SV 3	CEM 42054	Nisaan Hardbody		X		2017	3	
SV 4	CEM 30870	Ford Ranger Single Cab			X	2019	1	
SV 5	CEM 20166	Nissan Hardbody 4x4 LDV	X			2007	13	
SV 6	CAM 13012	Nissan Hardbody 2.0 4x2 1-ton LDV	X			2007	13	
SV 7	CAM 22989	Nissan LWB 1-ton 2000CC	X			2007	13	
TRAILERS								
Tango 1	CAM 4600	Trailer – Rope Rescue						
Tango 2	CAM 4601	Trailer – Hazmat						
Tango 3	CAM 1266	Trailer – Portable dam						
Tango 4	CEM 3366	Trailer – Skid unit						
Tango 5	CEM 25651	Trailer – Skid unit						
Tango 6	CAM 30979	Trailer – SCBA compressor						

7.4.7 Comments

7.4.7.1 The Fire Service should have sufficient and reliable vehicles and special appliances to adequately protect the risks within each fire station's area of operation. The fleet's average age is far exceeding the prescribed replacement age. The effectiveness of some of the major appliances is limited due to its design and capabilities. There is currently an urgent need for large water capacity vehicles to address the shortage of water for fire-fighting.

7.4.7.2 The acquiring of additional vehicles will address our shortcomings and establish an effective vehicle replacement policy.

7.4.8 New Vehicles acquisitions

Vehicle type	2016 – 2017	2017 – 2018	2018 – 2019	**2019 - 2020**
10000lt. Tanker / Pumper Vehicles				
Water tanker			1	
Major pumper				**1**
LDV skid units			2	
Command Vehicle Med				
Hazmat Trailer				
Sprinter				
Quantum				

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Support vehicle – admin & Medical response vehicle				
Rescue vehicle with equipment				1
Incident Command Vehicle with Trailer			1	

7.4.9 Upgrading and refurbishing of existing vehicles

Upgrading and refurbishing of existing vehicles can also improve its effectiveness and prolong its service life.

Upgrading	2016 – 2017	2017 – 2018	2018 – 2019	2019 - 2020
Major appliance and other vehicles	R 600 000	R 331 000	R 687 183	**R 1 000 088**

7.5 Equipment

Emergency vehicles should carry a complete range and quantity of equipment suitable for the specific type of vehicle and adequate for use at incidents within the fire risk categories protected.
All equipment should be subject to replacement and procurement policies and testing, examination, checking and maintenance procedures.
All fire department equipment should be subjected to regular, documented examination, testing and maintenance.
Occupational safety and the recommendations of the manufacturer must be included in all examination, testing and maintenance program.

7.5.1 Replacement of equipment

A fire department should regularly assess its equipment to determine whether or not such equipment is obsolete or unserviceable.
A documented annual equipment replacement program must be developed to ensure that obsolete and unserviceable equipment is replaced systematically.

7.5.2 Procurement of additional equipment

All fire department equipment must be assessed regularly to ensure that the equipment is suitable for the changing and expanding fire risks in the community and to keep abreast of developments. Additional equipment should be procured where necessary.

7.5.3 Current Realities: Equipment

Our needs for the necessary equipment for fire-fighting and rescue actions are 65% met.
Some of the existing equipment needs to be replaced in the near future to comply with prescribed standards.
The Municipality has a maintenance program for the equipment with adequate funding.

7.5.4 Comments

To be effective in fire-fighting, rescues and fire safety suitable equipment are needed and maintained. Most of our equipment is system based and our strategy is to purchase these items in phases as to spread the cost over a few budgets, therefore it is essential that a yearly allocation be granted to complete these systems.
Funding is also needed to replace obsolete and unserviceable equipment systematically.

Equipment acquisitions

	2016 – 2017	2017 - 2018	2018 - 2019	2019 - 2020
Equipment	R 60 000	R 175 000	R 800 000	**R 19 090.00**

7.6 Staffing

As per applicable fire risk categories to the Overstrand Municipality, the minimum staffing levels for our service are:

Required per shift at Gansbaai, Hermanus and Kleinmond fire stations at all times

Risk Category	Number of appliances required to meet weight of response	X	Required manning lever per appliance	=	Total Riders Required	COMMENT
A	n/a	X		=		
B	6	X	4	=	24	
C	3	X	4	=	12	
D		X		=		
TOTAL		X		=	36	Excluding posts of Fire Chief and 3x Divisional Commanders
E	Evaluate individual as given in PDA requirements					

All members of the services must be competent and trained to perform duties as fire-fighters. There must be a command structure consisting of Chief Fire Officer, Divisional commanders and Station commanders to manage the fire services with an administrative section.

Although reservists are a recognized method of staffing, it must never be the core component of the service but rather a backup system to a core component of full time professional fire-fighters and officers. To train and issue personal protective equipment for a reservist cost the same for a fulltime official and is therefore only a short term solution to supplement full-time staff.

7.6.1 Current Realities: Staffing

Actual per shift

Risk Category	Number of appliances required to meet weight of response	X	Required manning lever per appliance	=	Total Riders Required	COMMENT
A	n/a	X		=		
B	6	X	3	=	18	
C	2	X	2	=	4	
D		X		=		
TOTAL		X		=	22	Excluding posts of Fire Chief and 3x Divisional Commanders
E	Evaluate individual as given in PDA requirements					

The existing staffing structure of our service consists of a small core of professional fire-fighters (6) and officers (4), with a large component of reservists.

7.6.2 Existing Full-time staff

Designation	Senior Manager	Support Personnel	Gansbaai Fire Station	Hermanus Fire Station	Kleinmond Fire Station
Senior Manager: Fire and Disaster Man. & Security Services	1				
Principle Clerk		1			
Assistant Chiefs				3	
Division Commander				1	
Senior Firefighter			1	1	1
Assistant Disaster Man. Officer		1			
Administrator: DRM		1			
Chief Clerk: DRM Logistic Support		1			
Fire Fighters					1
Learner Fire Fighters			5	22	4

7.6.3 **Reservists System:**

Our reservist staffing system comprise of the following types:

7.6.3.1 8 members made out of Municipal staff and civilians
7.6.3.2 16 members made out of young unemployed people (EPWP)
7.6.3.3 8 members out of the community for specific areas.

These reservists get paid an hourly rate when required for station duties, incident callouts and standby duties except for the volunteer community fire fighters. Community members do not get any form of compensation

7.6.4 **Comments**

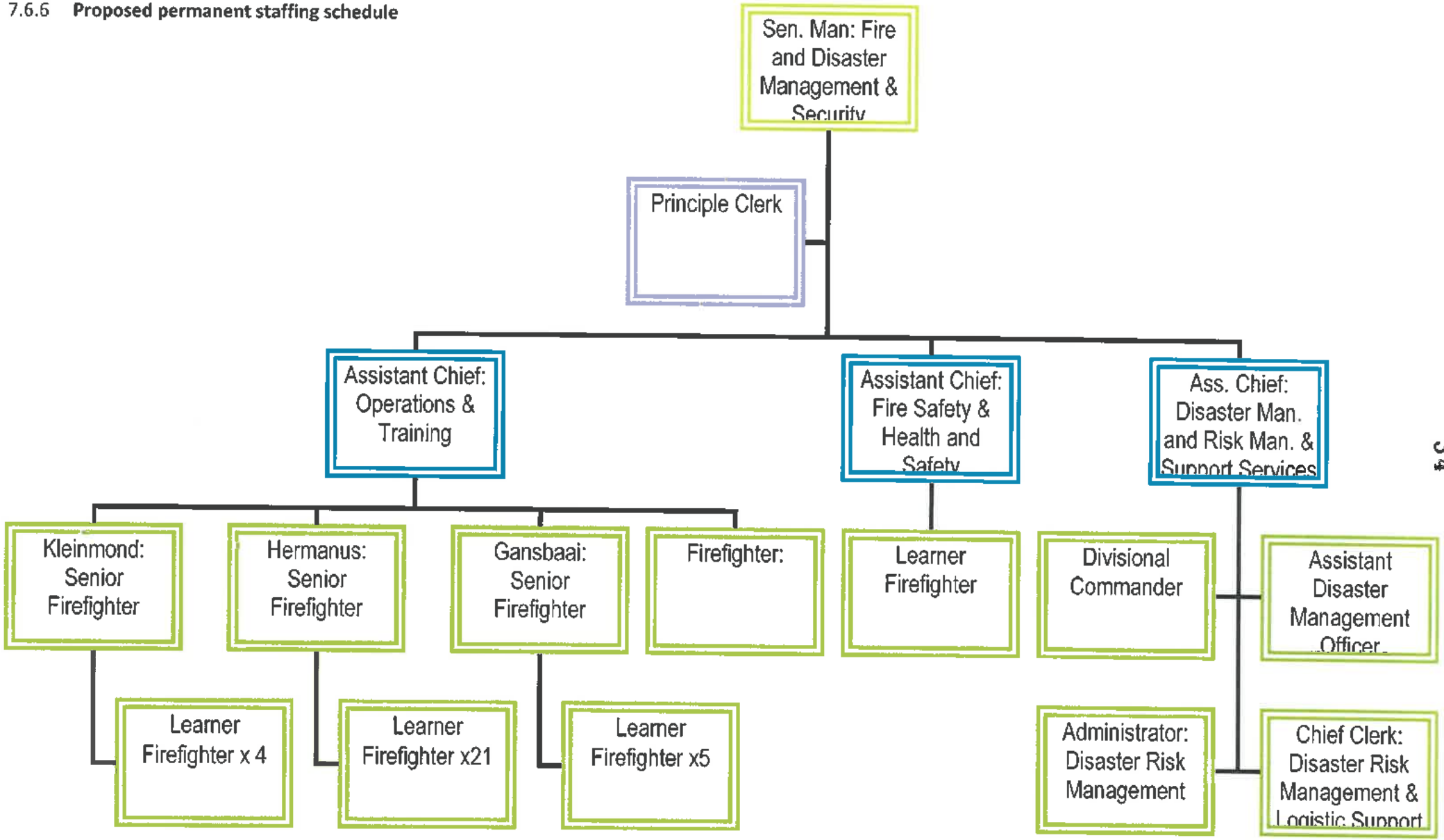
Without suitable staffing levels consisting of competent staff adequately trained to perform functions as required, an effective fire service is not possible.
The existing staffing structure needs to be revised as are a growing service from a totally reservist system a couple of years ago to a professional fire service in the next few years. The current expansion of the fulltime staff has started this movement and with an annual staff growth we can establish a core of fully professional fire-fighters with a backup system of reservist.

7.6.5 **Personnel Acquisition Schedule**

The principle adopted is, due to the fact that Fire Services is a growing service, personnel will be appointed (from the Overstrand Municipal area) at ground level, i.e. Learner Fighter. This will implicate the development of fire services personnel and structure as they acquire the requisite qualifications and experience.

As the department develops and more posts are approved by Council (after annual consideration via the normal budgetary process) the posts will be submitted for the following (more senior) level and after acquiring the requisite qualification an experience requirements, incumbents already in the service will apply for these positions in terms of the relevant Municipal policies. This will create development potential in the department.

7.6.6 **Proposed permanent staffing schedule**



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7.6.7 Reservists

The existing reservist system supplies the Municipality with the manpower numbers but it is not an alternative for full-time staff. It is rather a supplement to our staff due to the fact that they are appointed on a need to basis.

A more formal reservist system with definite outcomes to both parties should be established. Such system will provide more effective training and better skilled members. It will also ensure better results for cost of training and issuing of protection clothing and gear to these members.

7.7 Training

Efficient training of fire-fighting personnel is essential to the effective performance of a fire brigade. NFPA 1201 shall be applied for training requirements. The ability of a brigade to meet the attendance times laid down in table 2 should be tested during exercises. A standard system of training should be adopted throughout the fire service. This would ensure a greater measure of efficiency when neighbouring brigades collaborate in attacking large fires and also when personnel are transferred from one brigade to another.

7.7.1 **Training components**

Service delivery relies extensively on the abilities and competence of staff responding to an incident.

Emergency services should, for the fire extinguishing function and in relation to the risk profile covered, have implemented the following as a minimum recommendation:

7.7.1.1 personnel selection, appointment and advancement criteria detailing qualifications and experience requirements for all posts;
7.7.1.2 suitable provisions, planning and record keeping for initial, continuation, conversion and specialist training for fire-fighters and officers; and
7.7.1.3 Accurate records for all training attended and conducted by subject and staff members.

7.7.2 **Fire-fighter and officer training phases**

7.7.2.1 Initial training
Based on above, it shall include basic training and specialist courses.

7.7.2.2 Continuation training
Continuation training shall be conducted regularly on the station to consolidate and practice knowledge and skills during initial training and help ensure that proficiency is maintained.

7.7.2.3 Conversion training
To update skills and knowledge as a result of the acquisition of new equipment or changes in policies and procedures, conversion training shall be conducted.

7.7.3 **Minimum training requirements**

Recommendations as given in table 8 should be considered as the minimum training requirements.

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Table 8 — **Minimum training requirements**

1	2	3
Training	**Class of personnel**	
	Full or part time	**Volunteer or reservist**
	Duration of training h per month	
Initial (basic) fire-fighter [a](1)	As given in an approved and accredited curriculum in accordance with NQF requirements*	
Continuation [a]	20 hours	4 hours
Conversion [a]	As and when required	
[a] Fire-fighters and officers		

7.7.4 **Current Realities**

7.7.4.1 A training program for the specific groups was identified in conjunction with the Human Resources department and some of the components of this program are already taken place. However we do experience some problems to obtain accredited institutions to train our learner fire-fighters.

7.7.4.2 We are in process of establishing our own practical training grounds and good progress is made with our own day to day training and skills development

7.7.5 **Comments**

7.7.1.1 To be a competent fire-fighter it is necessary to be trained formally with accredited training courses and also to be involved in in-house skills development training.

7.7.1.2 We have to develop a training program whereby we can do the majority of basic training in-house. To do this we have to train our staff as accredited trainers and develop the training facilities to such an accredited level.

7.7.1.3 It is envisaged that all fire fighters are trained to the levels of Fire-fighter I, Fire Fighter II and at least Basic Ambulance Assistant level to equip them with the necessary skills in compliance with health and safety legislation.

7.7.1.4 The plan will be adapted/ updated at least annually to remain abreast with any developments which may affect the service.

7.8 Communications

7.8.1 Each brigade should be equipped with suitable facilities to enable rapid communication between headquarters and units operating at a fire. These shall include the following:

7.8.1.1 A suitable number of telephone lines;

7.8.1.2 Alarm or callout facilities to dispatch crews; and

7.8.1.3 Voice logging on emergency lines and radios with date and time imprint, queuing facilities and, if necessary, trouble signal facilities.

7.8.2 **Control centre operators and or supervisors**

There should be sufficient operators so that calls are answered within 15 s and appropriate response dispatched within 30 s of the call being completed.
It should not take longer than 60 s to take the call once the phone is answered.

7.8.3 **Supervisors**

For up to two operators, access to a supervisor is required. For three or more operators, a supervisor shall be on duty in the control centre.

7.8.4 **Current Realities**

We are in the process of developing a central emergency control room for the fire services where dispatching, incident logging and communications are managed. The existing radio communication system is not up to standard due to complicated network and there are areas with poor or even no reception making incident control difficult. The current staff realities are also not in compliance with the SANS 10090: Community Protection Against Fires.

7.8.5 **Comments**

7.8.5.1 Without an effective communication system, fire services can't operate efficiently and control and command became challenging.

7.8.5.2 The existing radio network is not suitable for emergency services due to:

- 7.8.5.2.1 To many different users on one single frequency
- 7.8.5.2.2 Many frequencies for a single user to cover the whole area.
- 7.8.5.2.3 Vast rural areas with poor reception or even no reception

7.8.5.3 By implementing a single emergency room system for call taking, dispatch and control we can render a much improved service.

7.8.5.4 By expanding the existing digital radio system will lead to much improved coverage.

7.9 **Fire Prevention**

Fire prevention is an important feature of the fire service and it has been proven that in brigades where this division of the service is efficiently organized, fire losses have been reduced by more than 20 %. The purpose of fire prevention measures is to prevent, eliminate, or reduce hazards that contribute to the occurrence and spread of fire.

7.9.1 **Fire safety inspections**

7.9.1.1 Authorities should conduct fire safety inspections in response to complaints or requests or both to assist owners, occupiers, and developers and to satisfy local requirements for scheduled routine inspection of all occupancies other than dwellings as given in by-laws or other applicable legislation.

7.9.1.2 The inspection capacity can be supplemented by the use of suitably trained and experienced operational staff.

7.9.1.3 Effective records of all inspection activities should be maintained. Records should include the name of the inspecting official, the date of inspection, the findings and recommendations and should indicate whether the activity warrants a follow-up.

7.9.1.4 All outstanding activities should be logged as current until abated as required.

7.9.2 **Regulation of hazardous activities**

7.9.2.1 Departments should regulate the storage, transportation, processing sale and handling of flammable liquids and gases and other substances that could lead to the

existence of dangerous conditions that could affect life safety or property loss, or both.

7.9.2.2 Distinction between vehicles and premises should be made in respect of certificates of registration. Certificates shall have a limited period of validity not exceeding 12 months. Suitable records regarding registration should be maintained and be available.

7.9.3 **Reviewing building plans**

7.9.3.1 A suitable system should be in place for the evaluation of building proposals and plans to ensure compliance with sections SANS 10040-T:2020 and SANS 10400-W:2011 or rational designs.

7.9.3.2 A record of all plans or designs received, evaluated and recommendations must be maintained.

7.9.3.3 Fire safety officials must ensure suitable inspections are carried out during construction and prior to occupation to ensure compliance.

7.9.4 **Pre-fire planning**

A formal pre-fire plan should be available for key special risks and other premises as deemed necessary by brigade management. Accurate records should be kept of the latest revisions and details of emergency exercises involving the brigade.

7.9.5 Risk visits

Risk visits to all special risks and other specific industrial or commercial risks scheduled by brigades should be conducted by operational staff for familiarization purposes with regard to the layout of the premises, processes or contents and fire protection features. Risk visits should be a planned function with accurate records of visits conducted and staff involved.

7.9.6 **Current Realities**

Fire prevention strategies and actions are just as important as fire-fighting to promote a safe environment. Currently these tasks are performed on an ad hock basis due to existing staff structure and duties.

7.9.7 **Comments**

A dedicated Fire Safety / Public Education section in the Fire Service must be establish. This function is just as important as fire-fighting. An effective fire safety and public education program can reduce fire losses and promote a fire safe community.

7.10 Occupational Health and Safety (OHS)

7.10.1 Every fire brigade should implement a suitable occupational health and safety program in accordance with NFPA 1500.

7.10.2 The program should include a written policy to provide a safe and healthy work environment for all its members including:

7.10.2.1 Vehicle / appliance design / maintenance;
7.10.2.2 Health and safety education program;
7.10.2.3 Protective clothing/equipment requirements;

7.10.2.4 Emergency operations; and
7.10.2.5 Fire station facilities.

7.10.3 Every brigade shall fully meet the needs of the Occupational Health and Safety Act (Act 85 of 1993) and NFPA 1500.

7.10.4 **Current Realities**

OHS forms part of our daily operations and are addressed by means of standard operational procedures, issuing of personal protective clothing and training.

7.10.5 **Comments**

Fire-fighting is a dangerous profession and therefore members must be issued with effective protection clothing and gear. This gear must comply with the standard prescribed by relevant standard codes.

7.11 Water Supply

7.11.1 Fire flow

The fire flow must be at least equal to that given in table 9 for the appropriate category of risk area.

Table 9 — Minimum fire flow

1	2	3
Risk category	**Possible fire sizes**	**Flow L/min**
A	Non-residential buildings with divisions not greater than 5000 m².	13 000
B	Non-residential buildings having divisions not greater than 2 500 m².	9 000
C	Non- residential premises not greater than 1 250 m².	6 000
D1	Houses > 30 m apart.	1 900
D2	Houses 10,1 to 30 m apart.	2 850
D3	Houses 3 – 10 m apart	3 800
D4	Houses < 3 m apart	5 700
E	As determined by risk assessment.	

Fire flows must include mobile/alternative supplies available within the required attendance time.

The required fire flow must be available to the fire-fighting team on arrival at the fire.

7.11.2 Current Realities

In the majority of area in Overstrand the fire flow does not meet the minimum standards. A report from consultants confirmed this. The estimate cost to upgrade the reticulation system is approx. 90 million rand. This shortage of water supply impacts severely on effective fire-fighting. The existing fire appliances water capacity is not enough and therefore need alternative supply of water.

7.11.3 **Comments**

The shortage of water supply that should be available on arrival for the fire teams at an incident must be addressed. On the long term the networks must be upgraded to comply to the prescribe standards. An alternative for the short to medium term is the acquisition of

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two 10000 lt. fire – fighting vehicles as mentioned under new vehicle acquisitions above. This will also address the shortcomings of our vehicle fleet.

7.12 **Hydrants**

7.12.1 The minimum flow required from each hydrant and the maximum spacing of hydrants should be as given in table 10 for the different risk zones.

Table 10 —Flow and spacing of hydrants

1	2	3
Risk category	**Minimum hydrant flow** L/min	**Max. distance between Hydrants** m
A	2 000	85
B	2 000	120
C	2 000	200
D1 (Houses > 30m apart)	1 200	300
D2 (Houses 10,1 – 30 m apart)	1 200	200
D3 (Houses 3-10 m apart)	1 400	200
D4 (Houses < 3 m apart)	2 000	200

7.12.2 The Operational Department are responsible the maintenance and new installations of fire hydrants, whilst the fire department only conducts regular inspections (testing). The authority having jurisdiction must ensure that hydrants are serviced (and the flow measured for conformity with table 8) at intervals as given in table 10 and shall include the following:

7.12.2.1 Hydrant markings in accordance with NFPA 291;
7.12.2.2 Positions as indicated on water reticulation drawings;
7.12.2.3 Hydrant serviceability including condition, access and operation;
7.12.2.4 Individual flow and pressure tests; and
7.12.2.5 Availability of suitable accurate records

7.12.3 The location of hydrants should be adequately indicated.

Table 10 — Hydrant maintenance intervals

1	2
Risk category	**Interval**
A & E	Annual
B	Biennial
C & D	Triennially

7.12.4 **Current Realities**

According to a survey done by the fire department in certain areas of Overstrand there are critical shortages of hydrants. In some areas hydrants are connected to small diameter supply pipes, making it unsuitable for effective use. Hydrant maintenance needs urgent attention.

7.12.5 **Comments**

An effective hydrant system for fire-fighting is crucial. The following shortcomings need to be addressed:

7.12.5.1 Hydrant maintenance program as prescribed.
7.12.5.2 Additional hydrants for high risk areas, high priority.
7.12.5.3 Additional hydrants where shortage occur.

7.12.5.4 Hydrant marking.

7.13 Fire stations location and facilities:

7.13.1 Fire stations must be designed and housed in a secure and safe environment with adequate space for vehicles and equipment, staff and fulfill the training needs for the service.

7.13.2 **Current Realities**

Our existing fire stations do not conform to the norm for fire stations. The reasons are:

7.13.2.1 Not enough or suitable vehicle and equipment storage space
7.13.2.2 Staff work or office space are inadequate
7.13.2.3 There are no suitable training rooms with suitable equipment

7.13.3 **Comments**

The following infrastructure / additions to infrastructure is urgently needed:

7.13.3.1 Proper / New facilities in Greater Hermanus
7.13.3.2 Additions and alterations for storage of fire-fighting vehicle and equipment at Stanford.
7.13.3.3 Training room with equipment at our training station at Gansbaai.
7.13.3.4 Shift facilities for staff on duty at all stations
7.13.3.5 Completion of Kleinmond fire station
7.13.3.6 Kleinmond and Gansbaai stations are not considered actual Fire Stations, but merely buildings were the emergency vehicles and equipment are stored.

8. AMENDMENTS / UPDATES

New amendments or updates will be added to the Amendments and Updates Listing below and it is the responsibility of the individual to regularly check the currency of their Plan copy.

Proposals for amendment or additions to the text of this Plan should be forwarded to:-
The Senior Manager: Fire & Rescue, Disaster Management and Security Services
L. Smith
Telephone: (028) 313 5041
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DATE OF REVIEW	DETAILS OF PAGE(S) AMENDED OR REPLACED
25 April 2018	
22 October 2020	Standard By-law relating to Community Fire Safety P.N. 6454 of 2002 (Pg 4)

9. CONCLUSION

9.1 The plan is a dynamic document that will need to be adapted in accordance with realities, including further legislative developments and dependence on other role-players in the planning and operational spheres of this function.

9.2 The plan needs to be updated at least annually in order to remain abreast with any developments which may affect the service.

9.3. The availability of funding is a huge factor in executing the plan. MIG funding for expansion of the service and to increase our rating as to comply with SANS 10090 might possibly be an alternative to investigate. Failing this, it is difficult to envisage the establishment of a service that is paramount in the saving of lives and property and which is a right of citizens in terms of the Constitution.