



Mossel Bay Fire and Disaster Management Services

The harbour town of Mossel Bay is situated on the beautiful Garden Route in the Southern Cape, South Africa. Mossel Bay is local municipality within the Eden District with a population of 140 000 and spreading across 2007 square kilometres. It is an important tourism and farming region of the Western Cape Province. The town's economy relied heavily on farming, fishing and its commercial harbour, which is the smallest in the Transnet Port Authority's stable of South African commercial harbours, until the 1969 discovery of natural offshore gas fields led to the development of the gas-to-liquids refinery operated by PetroSA. Tourism is another driver of Mossel Bay's economy.

Although it is today best known as the place at which the first Europeans landed on South African soil (Bartolomeu Dias and his crew arrived on 3 February 1488), Mossel Bay's human history can, as local archaeological deposits have revealed, be traced back more than 164 000 years.

The Bartolomeu Dias Museum Complex is the largest of the museums in Mossel Bay. Originally designed to celebrate the arrival of Bartolomeu Dias and his crew on 3 February 1488 and to protect the Post Office Tree, the complex now offers a wider look at the history of Mossel Bay from environmental, archaeological and cultural perspectives. It houses a number of fire fighting memorabilia preserving the rich history of fire fighting in Mossel Bay. It is also home to the famous 500 year old Post Office Tree and the Dias Cross, which marks the place of where the first religious building in South Africa was built.

The Port of Mossel Bay is the smallest commercial harbour on the South African coast. It caters mostly for the oil industry (off-shore gas was discovered in late 1980s) and for a small fishing fleet.

Fire service

Mossel Bay Fire and Disaster Management Service was established in 1987 and has a capital budget of R2 355 000 and an operating budget of R23 060 072. The service operates from the main fire station situated in the heart of Mossel Bay with a substation located in Great Brakriver. Fire and Rescue International met with Chief fire officer Joseph Johnston, senior manager for fire and disaster management services at Mossel Bay to provide insight into the history, structure, risk profile, training and infrastructure of this dedicated fire service.



Chief Joseph (Joey) Johnstone

With an operational area of 2007 square kilometres, the fire service has been serving the Mossel Bay community for 30 years and has been in its current location for ▶



Mossel Bay falls within Eden District Municipality



- ▶ approximately 23 years. The service ensues a good working relationship with its local disaster management centre and fire protection association. The regional fire protection officer is Eden District Fire Services' chief fire officer, Freddie Thaver.

History

Chief Johnston provided some history saying, "The fire department function was initially a service rendered by volunteer members of Mossel Bay's technical department. Six fire department staff were appointed in 1987 when the fire service was officially established. These members only worked day shifts and responded from their home when emergency calls were received after hours. Four additional staff members were appointed six months after the establishment of the service."

During 1990, the fire service evolved to a full time fire service with a three-shift system, which is the current shift system. The fire service offices were located at the main municipal offices and the vehicles were based at the municipal stores. The vehicle fleet consisted of one pumper (still in use), one rescue vehicle and one service vehicle.

In 1993 the fire station was relocated to its current location, which was a mechanical workshop owned by Eden District Municipality and then converted to a fire station.

"This fire service has only had four chief fire officers since it was established," said Johnston. "The service has expanded in staff levels, vehicles and equipment as from 1990 up to the current status today."

Challenges

Some of the challenges faced by the service are the limited number of staff, number and size of fire stations and resources that they currently have for their area of responsibility as per SANS 10090, as well as budgetary constraints faced by the municipality.

We asked Chief Johnston how the service keeps up to date with the evolving fire industry to which he replied, "We are currently informed of changes in legislation and industrial practices either from our legal services or the chief fire officer, Brian Oliver of the designated fire service at PetroSA. Our staff members of the fire safety/prevention section attend training courses at the Fire Protection Association of South Africa (FPASA) College in Boksburg to keep abreast with industry changes. The knowledge gained at this type of training is then filtered back to the crews on shift by the station commander, Kobus van der Mescht. Operational officers and fire fighters attend regular specialised training courses in conjunction with the provincial fire brigade services at the Wolwekloof Training Academy, other fire services and provincial and national departments such as PetroSA Emergency Services, Metro EMS, National Sea Rescue Institute (NSRI), Southern Cape Fire Protection Association (SCFPA) and the South African Police Service (SAPS).

Risk profile

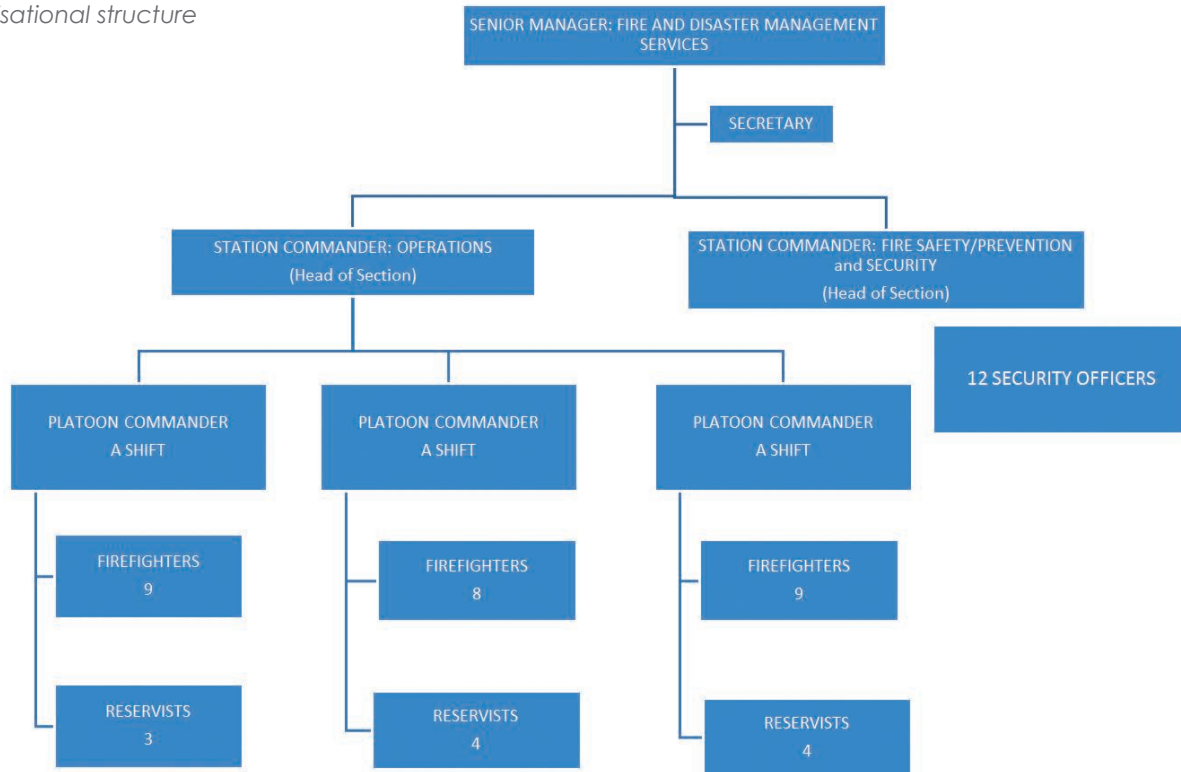
Mossel Bay Fire and Disaster Management Service, although a fairly small service, has quite a large risk profile, which includes the transportation of dangerous goods on the N2 freeway between Port Elizabeth and George and



The fire service has been serving the Mossel Bay community for 30 years



Organisational structure



transportation of hazardous materials and fuel from PetroSA site via major roads. It also has a number of major hazardous installations such as the PetroSA plant at Mossdustryia, the fuel tank storage area at Voorbaai, fuel stations, cold storage facilities, the fuel distribution and filling facility at Voorbaai and the fuel storage facilities at Mossel Bay Port.

Other risks include a number of informal settlements, high-rise buildings, small to large commercial and industrial premises, Mossel Bay Port, Mossel Bay Airfield and old age homes. Large rural areas with indigenous vegetation also test the service's capabilities while the area is also prone to floods and landslips.

Operations

In order to align itself with its risk profile, the operational shift has been divided into sections where the more senior members perform functions such as fire safety/prevention, public education and farm visits. All of the staff members on duty for the specific shift will respond to any emergency when called upon. The system leaves very little staff members at the fire station as most members of the shift are out in the field at any given time except at night when public education is done by the entire crew at shebeens and taverns to educate adults on fire safety.

"On specific days as identified by the shift platoon commander and the station commander operations, Ann Supra-Vertue, the operational staff is deployed throughout the area to do inspections and familiarisation of high risk areas, which enables us to preplan responses for emergency incidents," added Johnston.

"We have a three-shift system in place. Day shift is from 08h00 to 16h00, night shift from 16h00 to 08h00 and on Saturday and Sunday we have a 24-hour shift from 08h00 to 08h00. The staff works a day shift, a night shift the following day and then a day off.

Mossel Bay Fire and Disaster Management Service's areas of expertise include:

- Structural fires
- Vegetation fires
- Industrial fires
- Petrochemical fires
- Extrication
- Wilderness search and rescue (WSAR)
- Hazmat
- Swift water rescue
- High angle rescue
- Confined space rescue
- Wood and iron structure fires

Chief Johnston added, "We source in PetroSA when attending hazmat incidents seeing as they have all the equipment necessary to deal with such incidents. We also source in hazardous waste disposal companies when we need to disposed of such materials."

The service most commonly responds to motor vehicle accidents, structural fires, wood and iron structure fires, vegetation fires, drownings and floods.

We asked Chief Johnston what the equipment or apparatus shortfalls are within the service. He replied, "The biggest shortage is that of operational staff members. We have insufficient funding to employ more staff members and not enough funds for specialised training. We don't have any aerial appliances, self-contained breathing apparatus (SCBA) vehicles nor a command and control vehicle.

Incidents

The largest incidents attended to by the fire service includes numerous large vegetation fires, floods, petrochemical fires, rail transportation fires, industrial fires (factory fires) and helicopter and aircraft crashes



Platoon commander Audrey Gelderblom, station commander Ann Supra-Vertue, CFO Joseph Johnston and station commander Marthinus van der Mescht



Fire fighter Adrian Cairns, "There is always a teddy to calm children during an incident"

▶ The most unusual incident attended to by the service was a vegetation fire that broke out at Gondwana Game lodge just outside Mossel Bay enroute to Herbertsdale. This is one of the largest game reserves in the area where some of the big five are kept. "Upon arrival, the crew members did what they had to do, extinguish the fire as fire fighters do, just to discover that they were inside the lion's den. In all haste the crew jumped back into the vehicle and made off like a rocket to the closest game ranger who calmly informed them that the lions were moved from that area before their arrival. They returned to extinguish the remainder of the fire area with great caution," recalled Johnston.

Equipment

As with the majority of local municipality fire services, there is a shortage of equipment and apparatus. "For our area of responsibility in accordance with the SANS 10090 requirements, we do not have sufficient apparatus and equipment," said Johnston. The total combined mileage of the vehicles is 1 804 523 kms.

Make	Year	Age	Mileage
Skid units			
Ford Ranger 2,5 diesel LWB	2000	16 years	245 190
Isuzu double cab	2014	2 years	111 698
Nissan Hardbody NP300	2014	2 years	22 188
Light pumper (specialised application)			
Toyota Land Cruiser	2009	7 years	96 019
Medium pumpers			
Mercedes Benz 1528/54 Atego	2007	9 years	47 911
Mercedes Benz	1988	28 years	160 219
MAN	2011	5 years	40 712
Water tankers			
Volvo FL 6-18 4X2	1997	19 years	947 787
Iveco Tracker	2013	3 years	16 378
Large bush vehicle			
One Samil 20	1986	30 years	N/A
Swift water rescue			
Rubber duck with Yamaha 50hp engine	2007	9 years	N/A

Two trailers with 500 litre tanks and pumps

Skid units for remote area applications
2011 5 years

Service vehicles

Toyota hi-ace 13 seater	2007	9 years	245 190
Volkswagen Polo Playa 1,6	2009	7 years	369 354
Isuzu KB200i Fleetside	2007	9 Years	224 868
Chevrolet Avio	2015	1 Year	33 114

Rescue vehicles

Ford Ranger 2,5 diesel LWB	2014	2 Years	41 369
Isuzu KB 2,5 diesel LWB Fleetside	2008	8 Years	55 526

Staff

The total staff complement at the service includes five administrative staff members, 33 permanent staff members, 11 reservist fire fighters and eight volunteer fire fighters. Of those three fire fighters, two platoon commanders and one station commander: operations are female. Johnston added, "One can never have enough staff but we definitely do the best we can with what we have.

He detailed the staff recruitment policy, "If we have a vacant position, it is advertised and the persons that meet the requirements are shortlisted. These persons are then required to write a competency test and are interviewed."

The competencies below reflect the permanent staff's qualifications.

Qualification	Number of competent staff
Basic Fire fighting	4
Fire Fighter 1	10
Fire Fighter 2	11
Higher Certificate in Fire Technology (or equivalent)	2
Diploma in Fire Technology (or equivalent)	2
Higher Diploma in Fire Technology (or equivalent)	2
National Diploma: Fire Services Technology	1
Hazmat technician	10
High angle rescue	13
Advance high angle rescue	3
Wilderness search and rescue (WSAR)	5
Basic ambulance assistant (BAA)	18
Trench rescue	4
Confined space rescue	7
Swift water rescue	30
Incident command system (ICS) 100/200	11
Incident command system (ICS) 300/400	5



- Advance fire prevention 4
- Fire prevention strategies 5
- Fire investigation 4
- Peace officer (law enforcement officer) 13
- Skippers 7
- 4x4 off road driving 6
- Advance driving techniques 22
- Snake handling 7
- Vehicle extrication 10
- Advance petrochemical fire fighting 29
- Fire instructor 2
- SAMTRAC through NOSA 2
- Overhead crane operator 6
- Fire appliance reconditioning 1

- High angle rescue 4
- Advance high angle rescue 5
- Confined space rescue 4
- Swift water rescue 13
- ICS 100/200 7
- ICS 300/400 6
- Hazmat technician 22
- WSAR 7
- BAA 10
- Trench rescue 29
- Fire prevention strategies 2
- Advance fire prevention 2
- Fire investigation 6
- Peace officer 1
- Skipper's license
- 4x4 driving course
- Advance driving course
- Snake handling course
- Vehicle extrication
- Structural collapse
- Advance petrochemical firefighting
- Fire instructor

Training

"We do internal training on a daily basis on shift," said Johnston. "We also send our staff to other fire services, Wolwekloof Training Academy and other departments for specialised training. Mossel Bay Fire and Disaster Management Service also presents a basic fire fighting course on demand to assist the community. We support Petro SA Fire Training when required for assistance to present training courses. Combined training exercises are also performed with the National Sea Rescue Institute (NSRI), Metro EMS, South African Police Service (SAPS), provincial and municipal traffic as well as Prison Services and the National Port Authority.

Basic fire fighting training is done inhouse. The following training is outsourced:

- Firefighter I
- Firefighter II

Fire safety

Mossel Bay Fire and Disaster Management Service has a very proactive approach to fire safety. As part of the service's fire safety programme, they present the 'Learn Not To Burn' campaign. "We have a crèche, schools and old age homes public education outreach programme where we visit the various pre-schools, schools and old aged homes to bring the message across of fire safety. We allow pre-schools and schools to visit the fire station and present the 'Learn Not To



We were treated to a demonstration of skills



Fire fighter Marius Barnard, volunteer fire fighter Koos Brand and fire fighter Mario Meyer



Fire fighter Adrian Cairns and reservist fire fighter Shaun Ray-Michaels at the Great Brakriver substation



Medium pumper built by FES on a MAN TGM18 20 4x2 chassis

- ▶ Burn' package to them," said Johnston. The service likewise forms part of the Child Protection Week hosted by Social Services Department of the municipality.

He added, "We have a training programme for the teachers of the crèches as well as the nursing staff at the old age homes and care facilities. A basic fire fighting course is presented to the teachers."

They also have an 'Adopt-a-Community' programme where each shift adopts a community in one of the high risk areas. General fire safety education is presented via a door-to-door campaign. "We regularly visit the various taverns/shebeens in our area. The fire fighters discuss fire safety related matters with the patrons."

Fire prevention inspections are done on a daily basis to ensure that persons adhere to the requirements as well as to educate the public on fire safety related matters.

The 'Learn Not To Burn' literature can be accessed on the municipal website under the dropdown 'How do I – prevent fires and injuries in my community'. Beach safety tips can be accessed on the municipal website under the dropdown 'How do I – Ensure beach and other water safety'.

Some of the operational fire fighting staff is used to perform part of the fire prevention function under the guidance of station commander Kobus van der Mescht and they may not always be available to perform these duties because of operational requirements. These staff members received training at the Fire Protection Association of Southern Africa (FPASA) College in Boksburg to equip them to perform the functions as required. All of the staff members have been trained as peace officers, which enable them to do by-law and legislative enforcement as per the delegation of the chief fire officer under the Fire Brigade Services Act.

"There is currently a vacant platoon commander post on the organogram that I hope to fill in the next financial year if the council approve it, which would lighten the burden on the operational staff members," added Johnston.

Statistics

1. Population: Plus minus 140 000
 2. Size of area covered: 2007 square kilometres
 3. Emergency calls: 1 075
 4. Incidents
 - Number of MVAs: 286
 - Total number of fires:
 - Structural fires (formal): 34
 - Structural fires (informal): 66
 - Industrial fires: 4
 - Wildfires fires: 246
 - Vehicle fires: 16
 - Hazmat incidents: 4
 - Swift water rescues: 6
 - Aviation incidents: 5
 - Structural collapse: 2
 - Special services/rescues (catch and release of snakes): 228
 - Other: 117
- These calls include the following: water delivery, cleaning of roads, humanitarian services, floods, etc.

In his interview, Chief Johnston offered the following advice, "Stand strong against the challenges that we, as emergency services members, have to face on a daily basis, either from the members of the community or the municipality we work for and serve. Nobody is an island and, as the saying goes, we make miracles happen by means of begging, borrowing and stealing (ideas) to get to our objectives and goals. Keep abreast with changes in legislation and try your utmost to become part and parcel of solutions to the challenges that municipalities and fire services face." 