

COASTAL OIL SPILL CONTINGENCY PLAN



NO. 3: CAPE ZONE



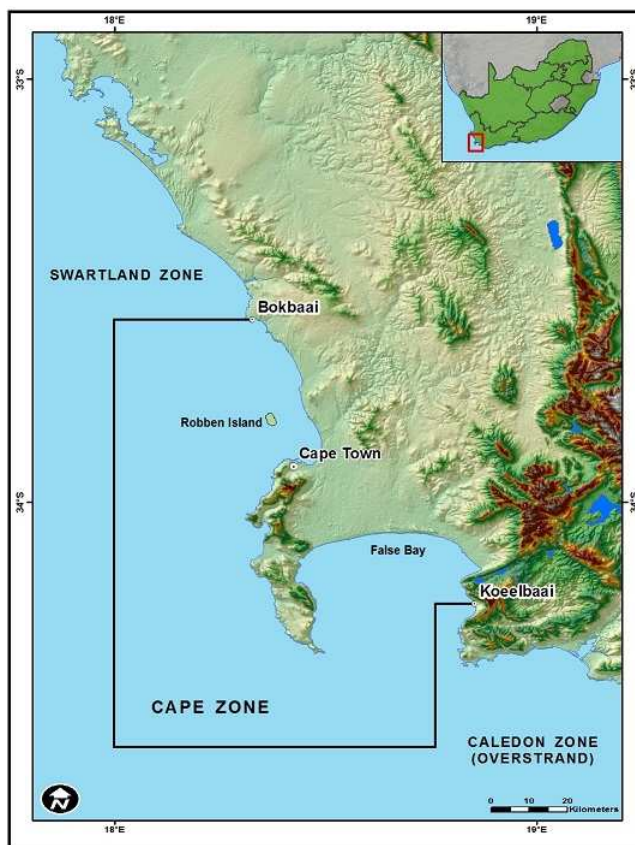
environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Plan No:
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RESPONSIBLE LOCAL AUTHORITIES:

City of Cape Town Metropolitan Municipality	Eskom
South African National Parks	SA Navy
Transnet National Ports Authority	RD Munitions
Robben Island Museum	Heartland Leasing
Granger Bay Academy	V&A Waterfront
Granger Bay Water Club	CapeNature
DAFF: Hout Bay, Kalk Bay and Gordons Bay Fishing Harbours	

Approved after due consultation with all stakeholders and authorities with responsibility to respond to coastal oil spills in terms of this Plan.

.....
Chief Director:
Department of Environmental Affairs
CAPETOWN
Date:



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

ACKNOWLEDGEMENTS

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PREFACE

In terms of the Marine Pollution (Control and Civil Liability) Act 6 of 1981, the Department of Transport is charged with the responsibility of ensuring that the appropriate actions are taken in order to minimise the impact of discharges of harmful substances (e.g. oil) from ships, tankers, or offshore installations. In terms of the South African Maritime Safety Authority Act 5 of 1998, the majority of these responsibilities are transferred to the South African Maritime Safety Authority (SAMSA). Section 52 of the SAMSA Act, however, delegates the responsibility for combating pollution of the sea and shoreline by oil to the Minister of Environmental Affairs (DEA). The implication of this is that the DEA is responsible for protection and clean-up measures to be taken once oil has been released into the sea, while SAMSA's responsibilities are limited to those actions required while the oil is within the confines of the ship.

In effect this means that SAMSA is responsible for:

- overall co-ordination of the prevention and/or combating of an oil spill incident
- control of the technical aspects of shipping casualties
- supervision of oil transshipments
- prosecution of parties guilty of the deliberate discharge of oil
- compilation of contingency plans relating to the control of shipping casualties or potential casualties
- administering the Acts relating to oil pollution
- taking charge of the legal and financial aspects relating to oil spill incidents and casualties
- control of the use of the standby oil pollution prevention tug
- the issuing of pollution safety certificates for offshore installations.

The National Department of Environmental Affairs is responsible for:

- co-ordination and implementation of coastal environmental protection and clean-up measures
- control of the use of the pollution combating vessels and surveillance aircraft
- control of the use of oil spill dispersants and dispersant spraying operations
- maintenance and supply of oil dispersant stocks and other dedicated oil spill equipment
- compilation and maintenance of the DEA Local Coastal Oil Spill Contingency Plans
- the approval of contingency plans for offshore installations, in consultation with SAMSA.

The Provincial Departments of Environmental Affairs shall:

- assist the DEA in updating the Local Coastal Oil Spill Contingency Plans
- provide support in building capacity and awareness in the local authority organisations
- provide support to local authorities in the implementation of the Local Coastal Oil Spill Contingency Plans
- ensure that their MEC is kept informed of progress.

Local Authorities have an important role to play in dealing with oil spills. They are responsible for:

- taking specified measures to prevent or remedy adverse effects of the spill on the coastal environment
- providing assistance in the form of supervision, labour, transport and equipment for the protection and clean-up of their beaches, estuaries and other areas under their jurisdiction
- making arrangements with local Traffic and Police Officers to ensure traffic and crowd control in the vicinity of the impacted area.

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305	Pollution Officer: Marine and Coastal Pollution Management, DEA
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308	Regional Manager: Eastern Region, SAMSA
309	Regional Manager: Western Region: Shipping, SAMSA
310	Principal Officer: Cape Town, SAMSA
311	Regional Manager: Southern Region, SAMSA
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336	Power Station Manager: Koeberg, Private Bag X10, KERNKRAG, 7440
337	Harbour Master: CPUT, Granger Bay, PO Box 2880, CAPE TOWN, 8000 Attn: Wilfred Prince
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AMENDMENT LISTING

No:	Date of issue:	Pages Amended:

AMENDMENTS

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Upon receipt of the amendments, the recipient is to verify its completeness and update his copy of the Plan accordingly, and then mail, or fax, the tear-off slip to the addressee given at the top of the tear-off slip. (See Appendix II)

Holders of the plan are to advise the Deputy Director: Marine and Coastal Pollution Management of any pertinent changes of telephone numbers, organisational structure or other information immediately it comes to their notice.

LIST OF ACRONYMS

AD	-	Assistant Director
CLC	-	Civil Liability Convention for Oil Pollution Damage
CoCT	-	City of Cape Town
CPUT	-	Cape Peninsula University of Technology
CRU	-	Casualty Response Unit of SAMSA
CSRM	-	Catchment, Stormwater and River Management Branch: CoCT
DAFF	-	Department of Agriculture, Forestry and Fisheries
DEA	-	Department of Environmental Affairs
DEA&DP	-	Department of Environmental Affairs and Development Planning (W.Cape)
DD	-	Deputy Director
DMC	-	Disaster Management Centre
DOC	-	Disaster Operations Centre
DOT	-	Department of Transport
EBMO	-	Emergency Barriers from Materials of Opportunity (Report 1985)
ECO	-	Environmental Conservation Officer
EMP	-	Estuary/Environmental Management Plan
EPO	-	Environmental Protection Officer
IOPC	-	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution
JOC	-	Joint Operations Centre
JRC	-	Joint Response Committee
MCM	-	Marine and Coastal Management (now called Oceans and Coast)
MCPM	-	Marine and Coastal Pollution Management (of Oceans and Coast)
O&C	-	Oceans and Coast (DEA), previously MCM
OPCSA-	-	Oil Pollution Control South Africa
OPRC	-	International Convention on Oil Pollution Preparedness, Response and Cooperation
OSC	-	On-Scene Co-ordinator
P&I Club	-	Ship Owners Protection and Indemnity Insurers
PEPSAE	-	Probable Effectiveness of Protection of the SA Estuaries by Oil Booms (Report 1986)
PO	-	Principal Officer (SAMSA)
SAMSA	-	South African Maritime Safety Authority
SANCCOB	-	South African National Foundation for the Conservation of Coastal Birds
SANParks	-	South African National Parks
SCC	-	Shore Control Centre
SLO	-	Shore Logistics Officer
TMNP	-	Table Mountain National Park
TNPA	-	Transnet National Ports Authority
UNCLOS	-	United Nations Convention on Law of the Sea
WWTW	-	Waste Water Treatment Works

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1. INTRODUCTION

This Coastal Oil Spill Contingency Plan covers the area for the Cape Zone, in the Western Cape. This Zone extends from Bokbaai in the north, along the Atlantic seaboard to Cape Point, and the whole of False Bay to Koeelbaai in the east. The entire area falls within the City of Cape Town Metro Municipality, and includes the suburbs of Blouberg, Milnerton, Simonstown and Gordon's Bay. The Port of Cape Town is located in Table Bay, and the V & A Waterfront, Robben Island and the Cape Point Nature Reserve are prime tourist destinations.

The Plan sets out the respective responsibilities of the South African Maritime Safety Authority (SAMSA) and the Department of Environmental Affairs (DEA) relating to an oil spill, the organisation that is to come into effect and the actions required of Local Authorities and other bodies (collectively referred to as Local Authorities for the purpose of this plan) to combat the impact of oil pollution on the shoreline in the event of an oil spill.

All operations will be co-ordinated by the DEA On-Scene Co-ordinator as outlined in Section 8 of this Plan.

2. OBJECTIVE

The primary objective of this Coastal Oil Spill Contingency Plan is to minimise loss of time and hence, environmental damage, in carrying out the appropriate remedial action. This is to be achieved by clearly stating the functions and responsibilities of the various authorities involved, the infrastructure to be set up, and the response required by such authorities for the duration of the incident.

3. INTERFACE WITH OTHER PLANS

South Africa's national oil spill preparedness and response strategy is guided by a suite of oil spill contingency plans; each dealing with a particular aspect of the spill situation. Although each plan is a stand alone document, it should be read in conjunction with the others, in order to ensure a co-ordinated approach. For the Cape Zone, the following Plans are applicable:

a. **“South Africa’s National Contingency Plan for the Prevention and Combating of Pollution from Ships and Offshore Installations”**

This “National Plan” is an overall plan, setting out the policies of the Department of Environmental Affairs and SAMSA, for the Department of Transport towards their responsibilities for preventing and combating pollution of the sea by oil. It provides an overview of the actions to be taken by SAMSA, DEA and other relevant Authorities in preparation for, and in the event or the threat of an oil spill, and outlines the formation of a Joint Response Committee.

b. **The “Coastal Oil Spill Contingency Plans”** detail the actions to be taken when there is a threat of oil impacting the shoreline or an impact has occurred. The coastline from the Orange River mouth to the Mozambique border is divided into a number of zones, each of which has its own specific Local Coastal Plan. The **Cape Zone Plan** is one such Plan and covers the area from Bokbaai to Koeelbaai. The adjacent areas are covered by the West Coast Zone and Caledon (Overstrand) Zone Plans.

c. **The TNPA Oil Spill Contingency Plan for the Port of Cape Town.** This plan outlines the response required by TNPA for Tier 1 (minor) oil spills within the Port, and their role during Tier 2 and 3 oil spills.

d. **The “SANCCOB Contingency Plan for the Capture, Transport, Rehabilitation and Release of Oiled Seabirds Following a Major Oil Spill off the South African Coast.”** This Plan covers all incidents where seabirds are oiled along the South African coastline and adjacent islands, but excludes the KwaZulu Natal coast (where stabilisation is undertaken by CROW etc). However, if requested, SANCCOB will assist with birds from both Namibia and KwaZulu Natal.

e. **Local Authority Disaster Management Plans** for the City of Cape Town Metro, which are linked to the Provincial and National Disaster Management Plans.

f. **SANParks Plans** for the protection, collection and transport of oiled seabirds from the major breeding colonies such as Boulders.

- g. **Plans for Independent Installations** which detail the response actions that are to be undertaken in the event of oil spills at or near specific installations. These installations include offshore oil tanker discharge facilities, oil exploration and exploitation sites, power stations (Koeberg) etc.

The inter-relationship between all the Plans in the Cape Zone is illustrated in the diagram below (Fig. 1).

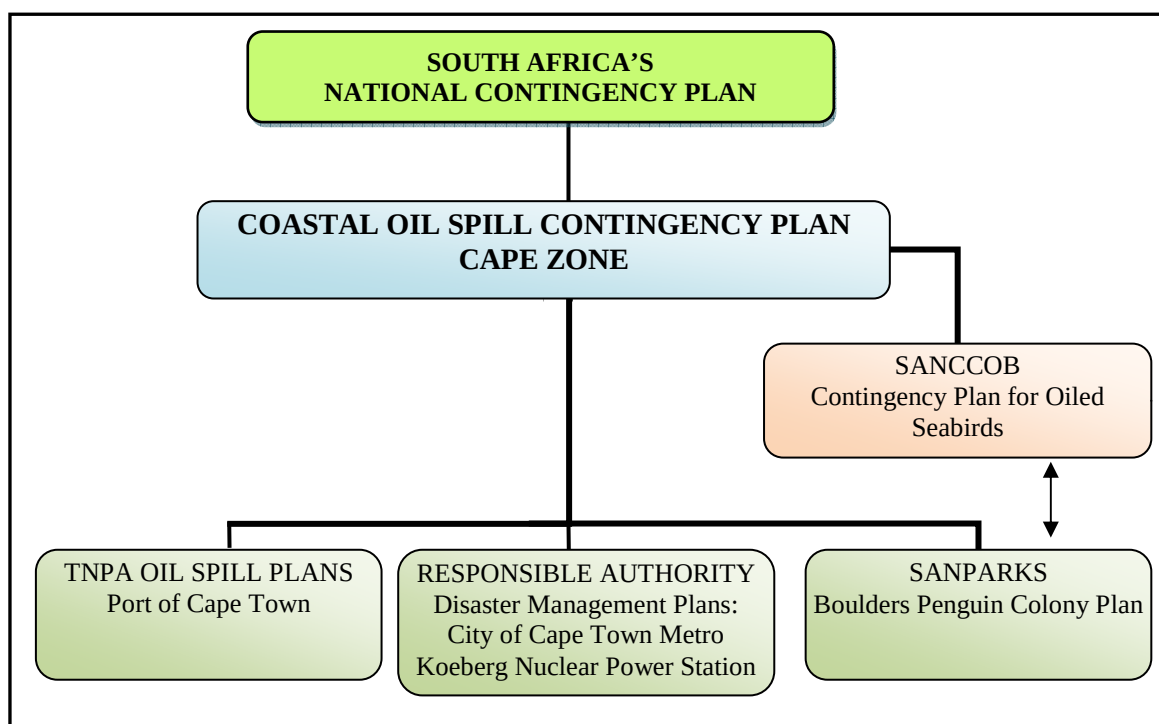


Figure 1: Inter-relationship between all the Oil Spill Contingency Plans in the Cape Zone.

4. ACTS AND AGREEMENTS RELATING TO THE COMBATING OF OIL POLLUTION

International and national legislation, relevant to combating and dealing with oil spills, is summarised below.

4.1 INTERNATIONAL CONVENTIONS (*and related South African Legislation*)

Below, are the main international conventions to which South Africa is a Party. For ease of reference, the conventions have been grouped according to the areas to which they are most relevant, namely, oil pollution, operational requirements in respect of oil pollution and compensation for oil pollution damage. Where applicable, the domestic legislation giving effect to the convention is provided.

4.1.1 Oil Pollution**United Nations Convention on Law of the Sea (UNCLOS)**

UNCLOS is among the conventions ratified by South Africa. UNCLOS imposes a general obligation on states to protect and preserve the marine environment. It further provides that states shall take all measures to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities.

States, acting through the competent international organisation or general diplomatic conference are required to establish international rules and standards to prevent, reduce and control pollution of the marine environment from vessels and promote the adoption of routing systems designed to minimise the threat of accidents which might cause pollution of the marine environment, including the coastline, and pollution damage to the related interests of coastal states. Such rules and standards are required to be re-examined from time to time as necessary.

4.1.2 Compensation for Oil Pollution Damage**International Convention on Civil Liability for Oil Pollution Damage, 1992 (CLC)**

This convention (originally adopted in 1969) aims to ensure that adequate compensation is available to persons exposed to oil pollution damage resulting from maritime casualties involving oil-carrying ships. It applies exclusively to pollution damage caused in the territory, including the territorial sea, of a contracting state and the exclusive economic zone of a contracting state.

It governs the liability of ship owners for oil pollution damage by laying down the principle of strict liability. The onus is on the owner to prove in each case that any of the exceptions should operate.

It also creates a system of compulsory liability insurance. Ships covered by the convention are required to maintain insurance or other financial security in sums equivalent to the owner's total liability for one incident. The ship owner is normally entitled to limit his liability to an amount which is linked to the tonnage of his ship, as stipulated in the Convention.

The convention applies to all sea going vessels actually carrying oil in bulk as cargo but only ships carrying more than two thousand tons of oil are required to maintain insurance in respect of oil pollution damage. An owner shall not be entitled to limit his or her liability if it is proved that the pollution damage resulted from his or her personal act or omission, committed with the intent to commit such damage, or recklessly and with knowledge that such damage would probably result. The 1992 CLC was adopted by South Africa in 2004.

Marine Pollution (Control and Civil Liability) Act 6 of 1981

This Act provides for the protection of the marine environment from pollution by oil and other harmful substances. It goes further than the CLC in that it deals with other harmful substances whereas the CLC is limited to oil pollution damage only. The Act provides for criminal as well as civil liability following a discharge which causes pollution of the sea.

While the Act is administered by the Department of Transport, the administration of the provisions of the Act regarding the combating of pollution of the sea by oil were assigned to the then Minister of Environmental Affairs and Tourism (now Minister of Water and Environmental Affairs) with effect from 20 May 1986. Furthermore, many of the administrative functions were transferred to the South African Maritime Safety Authority (SAMSA) in 1998.

An oil spill caused negligently or intentionally falls within the definition of discharge.

The Act sets out the powers of SAMSA to take steps to prevent the pollution of the sea where a harmful substance is being or is likely to be discharged from a ship or a tanker. Such steps include requiring the master or owner of such ship or tanker to unload the harmful substance from the ship or tanker, to dispose of any harmful substance so unloaded or to move the ship or tanker to a place specified by SAMSA. Where the master or the owner of a ship or tanker is not capable of complying with such requirements or cannot reasonably be expected to comply with these, SAMSA may cause such steps to be taken. Furthermore, where any harmful substance is discharged from a ship or tanker, the authority may cause any pollution of the sea caused thereby to be removed.

The owner of any ship, tanker or off-shore installation shall be liable for any loss or damage caused in the area of the Republic by pollution resulting from the discharge of oil, the cost of any measures taken by SAMSA after an incident has occurred for the purposes of reducing loss or damage caused or any loss or damage caused by measures so taken after a discharge has occurred.

The costs referred to shall include an amount deemed by the Director-General to be sufficient to compensate the South African National Foundation for the Conservation of Coastal Birds or any similar organisation approved by the Minister for expenses incurred in treating and rehabilitating coastal birds polluted by oil that has been discharged.

International Convention on the Establishment of an International Fund for Oil Pollution Damage, 1992 (1992 Fund Convention)

This convention establishes the International Oil Pollution Compensation Fund to provide compensation for pollution damage to the extent that the protection afforded by the 1992 CLC is inadequate. It applies exclusively to pollution damage caused in the territory, including the territorial sea of a contracting state and the exclusive economic zone of a contracting state.

South Africa acceded to the 1992 Fund Protocol which amended the 1972 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage and is accordingly 1 of 103 states for which the 1992 Fund Convention is in force. This Convention has not yet been brought into effect locally. This means that, in monetary terms, South African claimants would be able to recover no more than R 196 million under the present legislation. Once the enabling legislation is passed, a combined total recoverable amount under the two Conventions (CLC and the Fund) would be approximately R 2,85 billion. Therefore it is essential that enabling legislation be passed as soon as possible.

4.1.3 Operational Requirements**The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL)**

South Africa is a signatory to the MARPOL convention which is the main international convention concerning the prevention of pollution of the marine environment from ships by operational or accidental causes. The Convention includes regulations aimed at preventing and minimising pollution from ships and contains 6 technical annexes which set out detailed rules and standards.

Annexure 1 contains regulations for the prevention of pollution by oil and is mandatory for state parties. The discharge into the sea of oil or oily mixtures is prohibited except when certain conditions are satisfied. The Marine Pollution (Prevention of Pollution from Ships) Act 2 of 1986 (discussed below) incorporates the convention and annexure 1 into South African domestic law.

Marine Pollution (Prevention of Pollution from Ships) Act, 2 of 1986 (the MARPOL Act)

The MARPOL Act gives effect to the MARPOL Convention, by providing for the protection of the sea from pollution by oil and other harmful substances discharged from ships. This Act is administered by the Department of Transport.

The Act provides for the Minister to make regulations to give effect to the provisions of the Convention. However this also extends to the Minister making regulations to exempt certain classes of ships from the provisions of the Convention thereby resulting in South Africa not being entirely restricted by the provisions of the Convention.

International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990 (OPRC Convention)

The OPRC Convention is designed to facilitate international cooperation and mutual assistance in preparing for and responding to major oil pollution incidents and to encourage states to develop and maintain an adequate capability to deal with oil pollution emergencies.

Ships flying the flags of contracting states are required to have on board a shipboard oil pollution emergency plan. Operators of offshore units, authorities or operators in charge of sea ports and oil handling facilities must have oil pollution emergency plans or similar arrangements which are coordinated with the national system for responding promptly and effectively to oil pollution incidents.

Ships are required to comply with the oil pollution reporting procedures and the details of the actions to be taken in this regard are set out in the Convention.

The Convention makes provision for parties to cooperate and provide advisory services, technical support and equipment for the purpose of responding to an oil pollution incident and provision is made for the reimbursement of any assistance provided. South Africa has signed this convention, but has not yet brought it into effect locally.

4.2 NATIONAL LEGISLATION (*other than that associated with international conventions*)**Constitution of the Republic of South Africa Act, 1996**

Section 24 of the Constitution states that everyone has a 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

- (i) prevent pollution and ecological degradation;
- (ii) promote conservation; and
- (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

The argument may be made that in order to give effect to this right, especially as it relates to preventing pollution of the marine environment, reasonable measures must be taken to combat oil spills as well as measures to remedy the effects of spills.

National Environmental Management Act, 107 of 1998 (NEMA)

NEMA is administered by the Department of Environmental Affairs and provides for cooperative environmental governance by establishing principles for decision-making on matters affecting the environment.

One of the most important principles relevant to the oil spill contingency plan is that the costs of remedying pollution, environmental degradation and consequent adverse health effects, and

controlling further pollution, environmental damage or adverse health effects must be paid for by those persons responsible for harming the environment.

Section 30 of NEMA is relevant to oil spills as it deals with the control of emergency incidents. An emergency incident is an unexpected sudden occurrence leading to serious danger to the public or potentially serious pollution of or detriment to the environment, whether immediate or delayed.

The responsible person must as soon as reasonably practicable after knowledge of the incident, take all reasonable measures to contain and minimize the effects of the incident, undertake clean up procedures, remedy the effects of the incident and assess the immediate and long term effects of the incident on the environment and public health. A relevant authority (which includes a municipality, a provincial head of department, the Director-General or any other Director-General of a national department) may direct the responsible person to undertake specific measures within a specific time to fulfill his or her obligations in terms of this section.

Should the responsible person fail to comply or inadequately comply with a directive, the relevant authority may take the measures it considers necessary to contain and minimize the effects of the incident, undertake clean-up procedures and remedy the effects of the incident. The relevant authority may claim reimbursement of all reasonable costs incurred in the taking of such measures from every responsible person jointly and severally.

NEMA provides for a Duty of Care that requires reasonable measures to be taken for the prevention of pollution or environmental degradation. This is particularly relevant in dealing with responsibility for oil spill damage. The National Environmental Management: Integrated Coastal Management Act reaffirms this Duty of Care insofar as it relates to the coastal environment. The National Water Act, 36 of 1998 also imposes a similar Duty of Care. Below, we explain the Duty of Care provisions from these acts.

Section 28 of NEMA provides that every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from continuing or in so far as such harm to the environment is authorised by law or cannot be reasonably avoided or stopped, to minimize and rectify such pollution or degradation of the environment.

The steps required by this section include the taking of measures to control any activity causing the pollution, preventing the movement of pollutants, eliminating any source of the pollution or remedying the effects of the pollution.

Where a responsible person fails to take the required measures, the Director-General or a provincial head of department may direct the responsible person to commence taking specific reasonable measures before a given date and to complete them before a specified reasonable date. If the

responsible person fails to comply or inadequately complies with such a directive, the Director-General or provincial head of department responsible for Environmental Affairs may take reasonable measures to remedy the situation or apply to a competent court for appropriate relief. The Director-General or provincial head of department may recover the costs for reasonable remedial measures to be undertaken before such measures are taken and all costs incurred as a result of applying to court for appropriate relief.

Any person may after giving the Director-General or provincial head of department thirty days notice, apply to a competent court for an order directing the Director-General or any provincial head of department to take specific measures for the protection of the environment if the Director-General or provincial head of department fails to inform such person in writing that he or she has directed the person to take such steps.

National Water Act, 36 of 1998

The National Water Act deals with pollution of water resources and also provides for the control of **emergency incidents**. Following an emergency incident such as an accident involving the spilling of a harmful substance that finds or may find its way into a water resource (water resource is defined to include a watercourse, surface water, estuary or aquifer), the responsibility for remedying the situation rests with the person responsible for the incident or the substance involved.

Measures to be taken by such person include taking all reasonable measures to contain and minimise the effects of the incident, undertaking clean-up procedures and remedying the effects of the incident. Where such person fails to act, the relevant catchment management agency may take the necessary steps and recover the costs from every responsible person. The Act is administered by the Department of Water Affairs.

The National Water Act also provides a duty of care similar to that in NEMA. This however deals more specifically with situations where pollution of a water resource occurs as a result of activities on land.

National Environmental Management: Integrated Coastal Management Act, 24 of 2008

Included among the aims of the Act is the control of dumping at sea and pollution in the coastal zone. The Act provides that in fulfilling the rights contained in section 24 of the Constitution, the state through its functionaries and institutions implementing the Act, must act as a trustee of the coastal zone and must in implementing the Act take reasonable measures to achieve the progressive realisation of those rights in the interest of every person.

The state in its capacity as the public trustee of all coastal public property must take whatever reasonable legislative and other measures it considers necessary to conserve and protect coastal public property for the benefit of present and future generations.

The Minister, an MEC or a municipality concerned may institute legal proceedings or take other appropriate measures to prevent damage or recover damages for harm suffered to coastal public property or the coastal environment or to abate nuisances affecting the right of the public in its use and enjoyment of coastal public property. Accordingly, these provisions can extend to damage caused or measures taken to prevent such damage as a result of oil spills.

This Act also provides that section 28 of NEMA applies to any impact caused by any person that has an adverse effect on the coastal environment. The persons to whom section 28 of NEMA apply include any person who produced or discharged a substance which caused, is causing or likely to cause an adverse effect and this may therefore include discharges from ships.

South African Maritime Safety Authority Act 5 of 1998

This Act provides for the establishment of SAMSA whose objectives are to ensure the safety of life and property at sea, to prevent and combat pollution of the marine environment by ships and to promote the Republic's maritime interests.

SAMSA may perform a function itself, in co-operating with another person or by delegating or assigning the power or duty concerned to another person. "Person" includes the state, a province, the government or an agency of the government of a foreign country or any juristic or natural person.

Certain functions of SAMSA are performed by the Department of Environmental Affairs. The responsibility for matters relating to the combating of pollution mentioned in Marine Notice No. 2 of 1996 issued by the Department of Transport on 24 January 1996 is regarded as having been assigned to the Department Environmental Affairs by this Act.

The Health Act, 63 of 1977

The Health Act provides that every local authority shall take all lawful, necessary and reasonably practicable measures to prevent the occurrence, within its district, of any condition which could be harmful or dangerous to the health of any person within its district or the district of any other local authority. Where such nuisance or condition has occurred, the authority must take measures to abate or remedy such condition. Accordingly where an oil spill could be harmful or dangerous to human health, the local authority may take measures to remedy its effects.

The Sea-Shore Act, 21 of 1935

The Sea-Shore Act makes specific provision for the protection of public health. The competent authority to whom the administration of the Health Act has been assigned, may declare that any local authority may exercise, in respect of the sea-shore and the sea situated within its area of jurisdiction or adjoining such area, any of the powers which are conferred by the Health Act on a local authority. This could therefore be extended to include the taking of measures to remedy an oil spill in cases where it could be harmful to human health.

The Minister of Transport may, in terms of this Act, make regulations or authorise any local authority to make regulations concerning the prevention or the regulation of the depositing or the discharging upon the sea-shore or in the sea of offal, rubbish or anything liable to be a nuisance or danger to health.

The Act will be repealed by section 98 of the National Environmental Management: Integrated Coastal Management Act when that section comes into force.

Other Relevant Legislation

The following legislation while not directly applicable in dealing with measures to be taken in cases of oil spills is still of relevance for purposes of the protection of the marine environment from oil spills.

Merchant Shipping Act, 57 of 1951

SAMSA is responsible for the administration of this Act. The Act imposes an obligation on an owner of a ship to secure the seaworthiness of a ship. Unseaworthy ships may be detained and where any ship is detained, it may be inspected by a surveyor who shall report on any supposed defects or deficiencies.

Dumping at Sea Control Act, 73 of 1980

This Act brings into force domestically the provisions of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (the London Convention). It provides for the control of dumping at sea of various substances and structures, including vessels, platforms or other man-made structures.

South Africa is a signatory to the 1996 Protocol, which will eventually replace the current Convention. The Protocol introduces the precautionary and polluter pays principles and expands the objectives of the Convention to include the elimination of pollution where practicable.

The Act is administered by Department of Environmental Affairs. It will however be repealed by section 98 of the National Environmental Management: Integrated Coastal Management Act when that section comes into force.

Marine Pollution (Intervention) Act 64 of 1987:

This Act gives domestic effect to both the Intervention Convention Relating to the Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 as well as the Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil, 1973. It allows the Minister of Transport to make regulations to give effect to the provisions of the Convention and the Protocol.

Disaster Management Act, 57 of 2002

This Act provides for, among others, an integrated and co-ordinated disaster management policy that focuses on preventing or reducing the risks of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post-disaster recovery.

Disaster is defined in Section 1 of the Disaster Management Act, and includes oil spills when this hazard causes or threatens to cause damage to property, infrastructure or the environment, or the disruption of the livelihood of the community, and is of the magnitude that exceeds the ability of those affected by disaster to cope with its effects using only their own resources.

The Act does not however apply to a disaster where such occurrence can be dealt with effectively in terms of other national legislation aimed at reducing the risk, and addressing the consequences of occurrences of that nature and identified by the Minister by notice in the Gazette. Accordingly, this Act would not be of direct application in cases of oil spills as the other Acts related to oil pollution response, provide measures that can be enforced in dealing with oil spills.

In other words, The Disaster Management Act is essentially over-arching and supportive legislation which enables the integration and co-ordination of all role-players in the event of a major incident. All role-players will still function according to their own legislation and mandates at addressing the risks and consequences of any occurrence. Should any situation, including any Coastal Oil Spill, escalate or exceed the local capacities, a local state of disaster may be declared under the Disaster Management Act, which will enable further facilitation and assistance to be obtained.

The Public Finance Management Act, 1 of 1999

This Act regulates financial management in the national government and provincial governments and ensures that all revenue, expenditure, assets and liabilities of these governments are managed efficiently and effectively. It provides for the establishment of a national treasury consisting of the Minister who is the head of treasury and the national department or departments responsible for financial and fiscal matters.

While the Act is not directly relevant to procedures in the event of oil spills, the Minister or MEC for finance in a province may authorize the use of funds from the respective national revenue fund or provinces provincial revenue fund respectively to defray expenditure of an exceptional nature which is not currently provided for and which cannot, without serious prejudice to the public interests be postponed to a future appropriation of funds. Thus in particular circumstances additional budget could possibly be allocated in cases of oil spills that threaten the public interests.

National Ports Acts, 12 of 2005

This Act relates to the establishment of the National Ports Authority and the Ports Regulator; to provide for the administration of certain ports by the National Ports Authority; and to provide for matters connected therewith. The Authority is required in the performance of its functions to ensure that a fair and reasonable balance is achieved between the protection of the environment and the establishment, development and maintenance of ports.

4.3 RESPONSIBLE AUTHORITIES

4.3.1 *South African Maritime Safety Authority (SAMSA)*

SAMSA was established on 1 April 1998 in terms of the South African Maritime Safety Authority Act, 5 of 1998 and it is accountable to the Minister of Transport. Its mission is to promote South Africa's maritime interests and development and position the country as an international maritime centre while ensuring maritime safety, health and environmental protection.

The responsibility for matters relating to the combating of pollution however, mentioned in Marine Notice no. 2 of 1996 issued by the Department of Transport on 24 January 1996, is regarded as having been assigned to the Department of Environmental Affairs by the Act.

Included among the services provided by SAMSA are accident investigations and emergency casualty response, management of the Department of Transport contracted pollution prevention and response capability, statutory surveys and safety certification of ships, inspections of ships and cargos of hazardous goods, casualty investigation and management, oil pollution incident response and investigation, and providing a maritime search and rescue capability in the South African area of responsibility through the management, on behalf of the Department of Transport, of the Maritime Rescue Coordination Centre.

The South African Maritime Safety Authority Act establishes SAMSA as a juristic person. It may perform its functions both within and outside the Republic and it may do so by itself, in cooperation with another person or by delegating or assigning a power or duty concerned to another person (including the state, a province, the government or an agency of the government of a foreign country or a juristic or natural person). SAMSA also has the power to institute and conduct civil proceedings in all matters relating to its functions.

4.3.2 *Transnet National Ports Authority (TNPA)*

The main functions of the TNPA are to own, manage, control and administer ports to ensure their efficient and economic functioning. This includes regulating and controlling pollution and the protection of the environment within the port limits.

The TNPA may give notice to the owner or other person legally responsible for the upkeep of any vessel within port limits to remove or otherwise dispose of such vessel, or part thereof, which is not seaworthy or is likely to become an obstruction, wreck or derelict or a threat to the environment or public safety. It may also recover from that owner or person all costs incurred for the removal or disposal should he or she fail to comply with such notice within the time specified therein.

The Harbour Master is, in respect of the port for which he or she is appointed, the final authority in respect of all matters relating to the movement of vessels within port limits. Accordingly the Harbour Master may give such written or verbal instructions for the detention of a vessel reasonably suspected of causing oil pollution in the port area and ensuring that the total cost of the pollution clean-up operation is recovered, or acceptable guarantees are provided, prior to the vessel being given permission to leave the port.

The TNPA may with the approval of the Minister of Transport make rules for the control and management of ports and for the maintenance of safety, security and good order in ports, in particular regarding the protection of the environment within ports, the cleaning of land and waters of the ports and the prevention of oil, filth, rubbish or any other matter from being thrown into the sea.

Port Rules

The TNPA has developed Port Rules in terms of the National Ports Act, which came into effect on 6 March 2009. Chapter 4 of the port rules deals with the protection of the environment and provides that all persons within a port must take all reasonable steps to prevent, minimize and mitigate pollution or degradation of the environment.

Any person who pollutes or causes damage to the environment will bear the costs associated with the combating and cleaning up of that pollution, damage or degradation and the associated impacts relating thereto.

Furthermore, no oil may be discharged or dumped from a vessel or be allowed to escape from a vessel into any part of the port. The clean up of pollutants, including oil, which is spilled within port limits must be dealt with in accordance with the applicable Port Contingency Plan.

4.3.3 Department of Environmental Affairs

The Marine Pollution Division of the Department of Environmental Affairs is responsible for, among others, combating pollution incidents, and cleaning up of spills. The Department may also issue directives in terms of the NEMA requiring pollution and degradation to be remedied including the undertaking of clean-up procedures.

In terms of the Policy on the Use of Oil Spill Dispersants in South African Waters, the decision to use oil spill dispersants should only be taken by the Department Environmental Affairs. In the event of a spill incident, the Department's on-scene director in consultation with the scientific advisors, should only decide to use oil spill dispersants if such use will minimize the overall environmental impact.

Oceans and Coast (O&C) is one of the four branches of the Department and it is a regulatory authority responsible for managing all marine and coastal activities. O&C has invested in the development of an oil spill response capability. This allows equipment and man-power to be mobilised at short notice to protect beaches, estuaries, bird colonies and other sensitive areas.

Provincial Departments of Environmental Affairs, such as DEDEA and DEA&DP, have concurrent powers with the DEA in terms of environmental responsibilities.

4.3.4 Municipalities / Local Authorities

Municipalities and Local Authorities also have an important role to play in dealing with oil spills. There exist provisions in South African law that can be invoked to enable municipalities to take appropriate measures in dealing with oil spills.

In terms of the provisions of NEMA dealing with emergency incidents, a relevant authority, which includes a municipality, may direct that specific measures be taken. Where the responsible person fails to comply or inadequately complies with a directive or there is an immediate risk of serious danger to the public or potentially serious detriment to the environment, the municipality may take the measures it considers necessary and claim reimbursement of its reasonable costs incurred from the responsible persons. Such measures would include undertaking clean-up procedures and remedying the effects of the incident.

The National Environmental Management: Integrated Coastal Management Act makes provision for a municipality to institute legal proceedings or take other appropriate measures to prevent damage suffered to coastal public property or the coastal environment. The Health Act also requires local authorities to take measures to prevent the occurrence of any condition which could be harmful or dangerous to the health of any person.

A municipality may also be directed to take specified measures to prevent or remedy adverse effects on the coastal environment in terms of the National Environmental Management: Integrated Coastal Management Act. Where the MEC is satisfied that the municipality is not taking adequate measures, he or she may in writing direct a municipality to take specified measures. Where the municipality does not comply with this directive, the MEC may take measures to prevent or remedy the adverse effects.

4.3.5 South African National Parks (SANParks)

The National Environmental Management: Protected Areas Act, 57 of 2003 provides for the continued existence of SANParks which was established by the National Parks Act, 57 of 1976. SANParks manages all existing national parks as well as various types of protected areas including marine protected areas assigned to it by the Minister. Included among SANParks' functions is to protect, conserve and control the national parks and other protected areas assigned to it, including their biological diversity. SANParks functions would be relevant in relation to oil spills insofar as they relate to marine protected areas.

The Table Mountain National Park (TMNP) falls within the Cape Zone Plan. SANParks manages all activities, species and land within the boundaries of the Park, in terms of the National Environmental Management: Protected Areas Act (57/2003) and National Environmental Management: Biodiversity Act (10/2004). Should oil wash ashore within the boundaries of the Park, the Park is responsible for cleaning, or arranging for the cleaning of the affected area. SANParks has a co-management agreement with DEA (O&C) for the TMNP Marine Protected Area (MPA).

4.3.6 Provincial Nature Reserves

Provincial Nature Reserves are managed in accordance with Provincial Ordinances, as well as the National Legislation listed above. Their functions are to protect, conserve and control the protected areas, especially in terms of biological diversity.

5. FINANCIAL ARRANGEMENTS AND COMPENSATION OF COSTS

South Africa's National Contingency Plan for Prevention and Combating of Pollution from Ships states: "Any response arising from a shipping casualty, whether an intervention of sorts, or an actual clean up exercise, can be very costly and the Republic has no dedicated state pollution contingency fund in place. Initially the costs of such operations fall to those involved in the operations and in line with the "polluter pays" principle may subsequently be claimed as costs and damages from the owner. It is however accepted that small service providers cannot be expected to carry the costs of providing services to the state for any (length of) time and SAMSA, as the responsible authority will assist in enabling a response to get under way, by way of underwriting such actions as it considers necessary in the early phases of any response. This undertaking is severely limited and a better arrangement regarding underwriting the costs will have to be made in the event."

If response operations, as covered by this Plan, are centrally co-ordinated, professionally carried out, cost-efficient and effective, well documented and fully integrated with overall response activities, they have a good chance, in principle, to qualify for compensation of costs incurred. Close liaison with insurers, through SAMSA and DEA, from the start of the response operation is essential. So it is imperative that local authorities participate in the discussions of the Joint Response Committee (JRC) which is chaired by SAMSA during a major shipping incident.

South Africa has acceded to the CLC92 and Fund 1992 Conventions, and through SAMSA has access to claiming protocols of up to approximately R 2.85 billion once enabling legislation is passed. Until then the limit is set at approximately R196 million.

Identifiable Source

In many cases the source of the spill will be identified and the vessel will have P&I Club (3rd Party) insurance cover. This will make the recovery of costs and damages a strong probability, especially if the claims are reasonable and any expenditure has been properly audited and controlled. In the event of the source of oil pollution being identified, the Minister of Transport may require the owners/insurers to establish a fund from which claims can be paid. As soon as possible, DEA should provide SAMSA with an estimation of costs for protection and clean-up operations so that this can be included in the guarantee. Local Authorities should inform DEA of any major costs at the outset and they should be kept updated on costs as they are incurred. It is important to bear in mind the limitation of liability regime that is in place in South Africa. This means that the sum total of costs may therefore not be met in full.

It is quite possible however that there might be no response from the owner and any interventions and clean-ups must be carried out nevertheless. These actions need to be tempered, however, with the reality that these costs may not be recoverable from the owner and that the state would need to be approached for compensation. SAMSA will make every effort to secure assets or funds associated with the owner in cases such as this, in order to mitigate the cost to the state.

Source not identified

If the source of the oil spill is not identified, the cost of clean-up may have to be borne by the State, and SAMSA will approach Treasury for an advance of funds. However, if it can be proved that the oil is a crude oil then compensation can be sought through IOPC. It would therefore be necessary for samples of the oil, or oily sand to be collected for analysis. DEA/SAMSA is responsible for undertaking the oil finger printing analysis. The number of samples taken will depend on the extent of the spill and the requirements of the insurers. A guide on the collecting and storing of samples is provided in Addendum E.

5.1 POLICY ON PURCHASING

In normal circumstances prior approval of the Department of Environmental Affairs is required for the purchase or hire of anything by Local Authorities for which recompense is to be sought. However, in the interests of continuity of an operation where the resources of Local Authorities are insufficient to prevent or remove oil pollution, the Area Controllers (see Section 8.4.2) may, within reasonable limits, purchase or hire additional equipment, purchase consumable materials, employ additional labour or engage the services of contractors without such prior approval, but are to advise the DEA Shore Controller or the JRC immediately of such acquisitions. The purchase of capital equipment may, however, only be undertaken after approval through the JRC.

NOTE:

The attention of the Area Controller is drawn to the terms of Sections 5(5) and 5(6) of Act 6 of 1981, entitling the Minister of Transport to enquire into the reasonableness of costs incurred and claims made.

5.2 CLAIMS

The Claims Manual produced by IOPC (April 2005) provides specific information on claiming procedures. The main points are summarised below.

5.2.1 Loss or Damage

All claims for loss or damage shall be submitted to the DEA On-Scene Co-ordinator, who will take the necessary steps to establish that the claim is adequately substantiated and reasonable. Once the details of each claim have been verified, it will be forwarded to the SAMSA Administration Officer for processing.

These claims could include loss or damage to property, grazing lands, livestock, fishing nets, loss of livelihood etc., in the area of the Republic, resulting from the discharge of oil from a ship, tanker or offshore installation and also damage or loss caused by methods used to clean up polluted areas. All claims made must be submitted according to the requirements listed in Appendix I, where an expenditure log sheet template is also provided.

Depending on the nature of the claim, the following information may be required:

- Nature of loss, including evidence that the alleged loss resulted from the contamination.
- Monthly breakdown of income for the period of the loss and over the previous three years. Where possible, monthly breakdown of units (eg kilograms of fish caught and sold or number of hotel rooms let etc) for the period of the loss and over the previous three years.
- Saved overheads or other normal variable expenses.
- Method of calculation of loss.

5.2.2 *Measures Taken*

Claims for costs of measures taken in respect of protection from, and clean-up of oil pollution are to be submitted to the DEA On-Scene Co-ordinator and are to be fully substantiated by detailed time sheets for labour and machinery, and invoices for material and equipment purchased. Justification for the action taken must be included. It is essential that costs are well documented and that stringent records of expenditure are maintained. Claims should answer the questions: **Who? What? Where? When? and Why?** A brief summary report outlining the nature of the incident and the associated activities should be provided with the claims.

The following information should be provided:

- Delineation of area affected, describing the extent of the pollution and identifying those areas most heavily contaminated (maps, charts, photographs and video tapes).
- Analytical or other evidence linking the oil pollution with the ship (chemical analysis, relevant wind, tide and current data, observation and plotting of oil movement).
- Summary of events, including description and justification of work carried out at sea, in coastal waters and on shore, together with an explanation of why the various methods were selected.
- Dates on which work was carried out at each site.
- Labour costs at each site (number and categories of response personnel, name of employer, hours or days worked, regular or overtime rates, and other costs).
- Travel, accommodation and living costs for response personnel.
- Equipment costs at each site (types of equipment used, by whom supplied, rate of hire or cost of purchase, method of calculation of hire rates, quantity used, period of use).
- Cost of replacing damaged equipment beyond reasonable repair (type and age of equipment, original purchase price, and circumstances of damage, supported by photographs etc).
- Consumable materials (description, by whom supplied, quantity, unit cost and where used).
- Any remaining value at the end of the operations, of equipment and materials purchased specifically for the incident.
- Transport costs (number and types of vehicles, vessels or aircraft, number of hours or days operated, rate of hire or operating cost, method of calculating rates).
- Cost of temporary storage and of final disposal of recovered oil and oily material, including quantities disposed, unit cost and method of calculating the claimed rate.

5.2.3 *Claims for environmental reinstatement measures and post spill studies.*

In some instances it is possible to enhance the speed of natural recovery after a spill, through reasonable re-instatement measures. The cost of such measures may be accepted for compensation by the IOPC under certain conditions.

Such measures should:

- accelerate significantly the natural process of recovery;
- seek to prevent further damage as a result of the incident;
- not result in degradation of other habitats or adversely affect other natural or economic resources;
- be technically feasible;
- not result in costs being out of proportion to the extent and duration of the damage and the benefits likely to be achieved.

The IOPC Fund may contribute to the cost of studies to determine the nature and extent of environmental damage caused by an oil spill or to determine whether reinstatement measures are necessary. Usually this would be appropriate for major incidents only, and if the studies are likely to provide reliable and useful information. Strict conditions apply; the IOPC should be consulted at an early stage, and a scientific committee should be established to co-ordinate such studies.

5.2.4 Checklist for oil spill claims procedure

Item	Responsibility	Check
Identification of vessel owner/insurer	SAMSA	
Determine level and details of insurance	SAMSA	
Analysis of spilled oil. Crude oil / bunker oil?	SAMSA, DEA	
Owner/Insurer guarantee secured	SAMSA	
SA Treasury funding request (if no insurance cover)	SAMSA/DEA	
Owner/Insurer requested to attend JRC	SAMSA	
Response activities agreed at JRC	SAMSA, DEA, Owner/Insurer, Stakeholders (local authorities)	
Record of decision signed (template in Appendix V)	SAMSA, DEA (Insurer can be asked to sign, but not essential)	
Keep strict records of all activities undertaken. "Who? What? Where? When? Why?" (see Appendix I)	Each Claimant: SAMSA, DEA, Stakeholders (local authorities and individuals)	
Maintain file of all invoices and receipts	Each Claimant: SAMSA, DEA, Stakeholders (local authorities and individuals)	
Compile summary claim report	All Claimants: SAMSA, DEA, Stakeholders (local authorities and individuals)	
Submit claim to DEA for verification (to include summary report, record of activities and copies of invoices and receipts)	All claimants: Stakeholders (local authorities and individuals)	
Verification of all local authority and individual claims	DEA	
Compilation of summary claim report for environmental response.	DEA	
Approved claims submitted to SAMSA	DEA	
Claims submitted to Owner/Insurer or Treasury	SAMSA	
Negotiations and discussions of claims with Owner/Insurer or Treasury	SAMSA, DEA, Owner/Insurer, Treasury	
Payment of claims	Owner/Insurer, Treasury	

6. PREPARATORY ACTIVITIES

6.1 DEPARTMENT OF ENVIRONMENTAL AFFAIRS

The Deputy Director: Marine and Coastal Pollution Management and his delegated Marine Pollution Officers, marked with an (*) in Section 7.1.3, are responsible for the preparation, improvement and updating of the Local Coastal Plans on an ongoing basis. In addition, they must ensure that the departmental organisation is maintained at a sufficient state of readiness to cope with an incident, and also be available to assist the Local Authorities with training activities when so required. Concurrent powers are held by the Provincial Departments of Environmental Affairs.

6.2 MUNICIPALITIES / LOCAL AUTHORITIES

The Local Authorities in this area have nominated the Head: Disaster Risk Management Centre, City of Cape Town, to act as the Local Authority Co-ordinator, during an oil spill incident in this area (see Section 8.4.1 for job description). In addition to his/her duties during a spill, this officer will be responsible on an ongoing basis for ensuring that the Local Authorities in this Zone are fully prepared to respond to an oil spill incident. He/she therefore has to be fully conversant with this plan, and must ensure that information regarding equipment and material, telephone numbers etc, is kept up to date. His contacts within the Department of Environmental Affairs are the Marine Pollution Officers in Cape Town.

For each of the protection measures set out in Section 10, the relevant Municipality / Local Authority's Line Departments must each compile a plan detailing how the task can be completed in the shortest possible time. The authorisation for the release and allocation of emergency funds is an important factor to be considered during the planning process. Detailed plans are also required for clean-up operations if these are unique. The Department of Environmental Affairs (Marine Pollution Officers) will assess the viability of these proposed plans in relation to the availability, quantity and effectiveness of the materials, equipment and labour readily available, and make recommendations where necessary. The plans, once accepted, will then form part of this Oil Spill Contingency Plan.

6.3 TRAINING AND EXERCISES

The Department of Environmental Affairs is responsible for ensuring that training is undertaken by those bodies involved in carrying out this Contingency Plan. Without such training, the plan has little value. The Marine Pollution officers shall be trained to the relevant levels commensurate with their roles and responsibilities, as recommended in the table below.

Responsible officer	Role	Training
Deputy Director and Assistant Director: Marine and Coastal Pollution Management	On-Scene Co-ordinator	IMO Level 2 – Response to Marine Oil Spills: Course for On-Scene Commanders and Executive Commanders (having completed previous levels).
Pollution Officers	Shore Controller, Env. Liaison Officers	IMO Level 2 – Response to Marine Oil Spills: Course for On-Scene Commanders. Ability to control and put a specific contingency plan into action (having completed previous levels).
Pollution Officers, Pollution Technicians and Artisans	Logistics Officers, Beach supervisors,	IMO Level 1 – Ability to act as shoreline clean-up supervisor/beachmaster. IMO foundation level – Basic use of Tier 1 sorbents, booming and recovery techniques and understanding contingency plans.

Table showing level of training for DEA: Marine Pollution Officers

Local Authorities are required to ensure that persons appointed to the various tasks are familiar with their responsibilities, duties, powers and to whom they will be accountable during the incident. Enquiries regarding training should be addressed to the DEA (Marine Pollution Officers).

Simulated exercises are an excellent way to test the effectiveness of this Plan and train personnel in the emergency roles. In the absence of any large spill, DEA is committed to undertaking a desk-top exercise once a year to ensure that managers and responsible officers are aware of the procedures and response strategies incorporated in this Plan. Exercises will be arranged to test some or all of the following: call out procedures, contact details, equipment supply lists, setting up the response organisation and facilities, communications, media liaison and relationships with other authorities.

DEA will also commit to assist local authorities with training exercises in their respective zones. Bearing in mind that there are 25 Zones, it is prudent for DEA: Marine Pollution Officers to aim towards arranging or participating in training exercises every second year in each of the zones. These could take the form of desk-top exercises, video assisted training or clean-up/boom deployment exercises on the shoreline. By selecting one Zone and its neighbours for one trip, it may be a good idea to undertake a video training event in one Zone, a booming exercise in a neighbouring Zone and a desktop exercise in the other neighbouring Zone. By extending invitations to local authorities in all three zones, role players would have the opportunity to partake in various training events.

The proposed training exercise schedule is provided in the table below.

Time frame	Type of exercise	Participants
Every Year	Desk Top Exercise	DEA:O&C and invited partners
Year 1	Desk Top Exercise or Video Training or Beach cleanup or booming	Local authorities and associates in the following zones: West Coast, Swartland, Cape, Caledon (Overstrand); Humansdorp, Dias, Amathole (including Ciskei), Scottburgh, Amanzimtoti, Durban and Ballito.
Year 2	Desk Top Exercise or Video Training or Beach cleanup or booming	Local authorities and associates in the following zones: Agulhas, Langeberg, Mossel Bay, Knysna, Transkei, Port Edward, Margate, Port Shepstone Pennington, Lower Tugela, Tugela, Richards Bay and St Lucia.
Every 5 years	National exercise in one of the Zones to tie in with major revision of the Contingency Plans.	DEA:O&C, SAMSA, TNPA; and relevant local authorities

Table showing schedule for proposed training exercises.

Full debriefing sessions following the exercises should be undertaken in order to highlight deficiencies, improve or update this Contingency Plan. Lessons learnt should be shared with other local authorities.

An exercise and training template is provided in Appendix III and should be completed accordingly.

7. INITIAL REPORTING AND ACTIVATION OF THE PLAN

The initial procedures during an oil spill incident are of the utmost importance, since they can determine the success or failure of the response operation. It is essential that accurate information is obtained and that key personnel are notified accordingly.

All oil spills at sea are to be reported to SAMSA and DEA Marine and Coastal Pollution Management (MCPM). Oil spills on the shoreline, or oiled penguins must be reported to DEA: MCPM, who in turn will notify SAMSA. If the coastline or seabirds are likely to be effected, MCPM will notify the Local Authorities and SANCCOB accordingly. The notification regime is illustrated in figure 2 below.

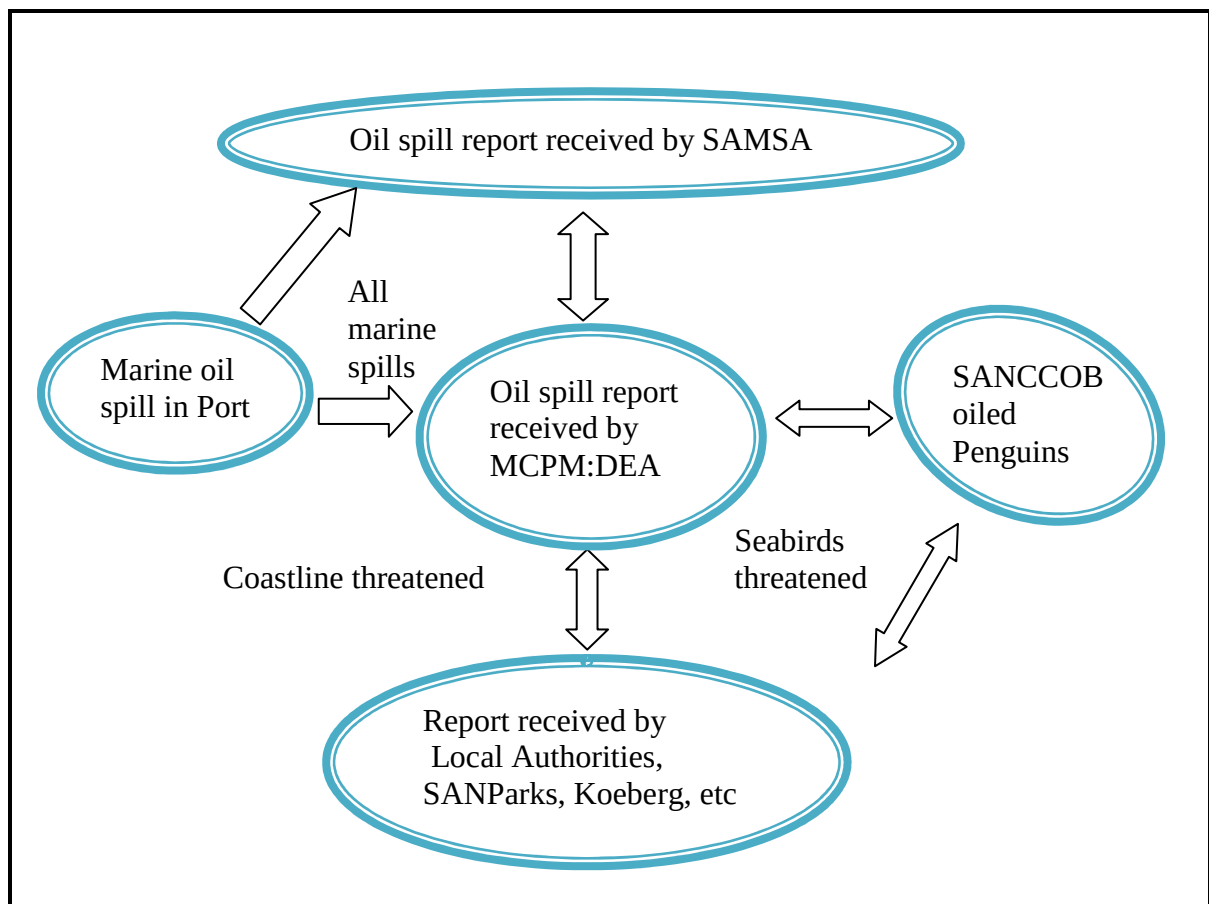


Figure 2: Requirements for initial reporting of oil spills.

7.1 REPORTING OF OIL SPILLS

The first indication of an oil spill may come either from a report from a vessel or the sighting of an oil slick at sea, or from an observation of stranding or stranded oil. Often, the first warning of an oil spill is through the observation of oiled penguins on the colonies, and subsequent reporting through island staff or SANCCOB.

7.1.1 Initial Reports by Local Authorities

Stranding or stranded oil and in some cases a sighting of oil at sea may be reported directly to Local Authorities. On receipt of such a report, the Local Authority should make an immediate investigation to obtain as much information as possible. Having assessed the validity of the report, the Local Authority is to inform the DEA Pollution Officers listed in Section 7.1.3. An incident report form to be used by the local authority is provided below

If contact cannot be made with any of the DEA Pollution Officers, then the Local Authority must make contact with one of the SAMSA Officers following the sequence listed. Failing this the **City of Cape Town's Disaster Operations Centre (DOC)** should be contacted.

LOCAL AUTHORITY OIL SPILL INCIDENT REPORT FORM

Date and Time of Spill, or Spill Sighting.....

Reported by: NAME:..... TEL:

Reported to: NAME..... TEL:

Officer Responding: NAME:..... TEL:

Precise location of where oil was seen: (e.g. name of beach or geographic co-ordinates)

.....

Description of location: (e.g. sandy beach/rocky shore, amenity value, environmental sensitivity etc)

.....

Extent and nature of oiling: (e.g. length, breadth, thickness, % area covered, tar balls, fresh liquid oil, penetration into the sand, colour etc)

.....

Estimated wind speed and direction:

Estimated quantity of oil spill.

less than 50 litres	50 to 100 litres	100 to 1000 litres	1 to 7 tonnes	7t to 70 t	more than 70 t
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Cause of spill (if known):

Response required:

sorbents	booms	skimmers	manpower	beach clean-up, other.....
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Comments:

7.1.2 Initial Reports by Department of Environmental Affairs

In the event of SAMSA or the Department of Environmental Affairs receiving a report from a vessel or a report of a sighting of an oil slick at sea, they will assess the probability of the shoreline being impacted by oil. If such a threat exists the Department of Environmental Affairs will endeavour to determine:

- the stretch of coastline likely to be impacted,
- the probable time of the initial impact,
- the anticipated magnitude of the impact.

In the event of a major spill, the Department of Environmental Affairs will alert the Disaster Operations Centre: City of Cape Town, who in turn will alert all the relevant role-players.. The DEA Pollution Officers should follow up the notification process to ensure that all relevant local authorities have been advised.

The threat situation will be under constant review and the Local Authorities will be advised of each revision, by the DEA Deputy Director: Marine and Coastal Pollution Management, or his delegated officer.

Should the Department of Environmental Affairs receive the initial report of stranded oil, it will either send one of its own officers, or, when there is no such officer in the vicinity, request the appropriate Local Authority to verify such report before proceeding further. If necessary, aerial surveillance will be initiated by the DEA OSC. The initial response actions are illustrated in the diagram below.

(See Figure 3).

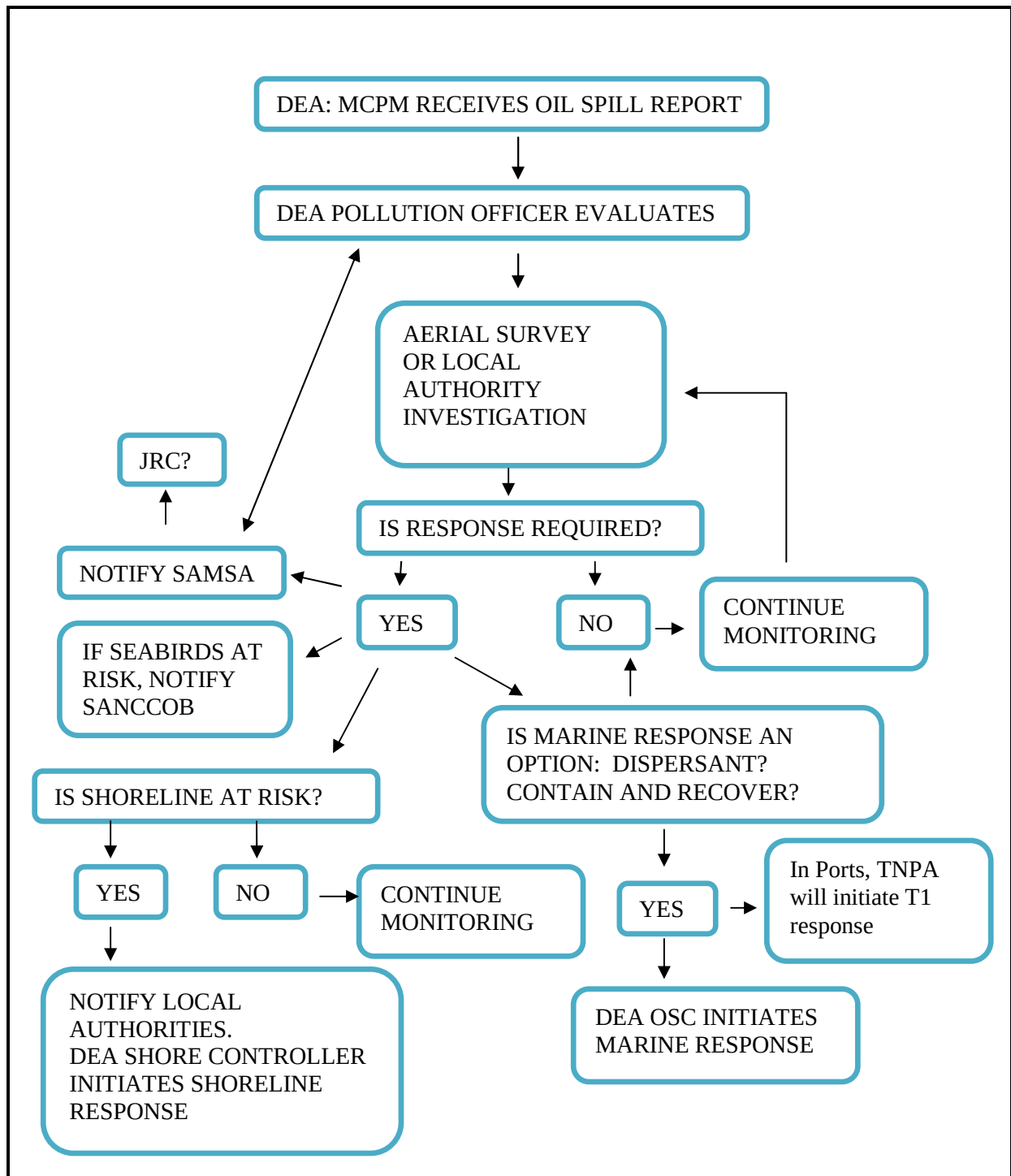


Figure 3: Diagram illustrating initial DEA response actions.

7.1.3 Initial Report Call Numbers**TELEPHONE LIST FOR REPORTING OIL SPILLS**

Organisation	Office Tel	Fax	Cell
DEPARTMENT OF ENVIRONMENTAL AFFAIRS: MCPM			
* Marine Pollution Officers: Dr Yazeed Petersen (DD) Feroza Albertus-Stanley (AD) Marine Pollution Officer	021 819 2450 021 819 2457	021 819 2445 021 819 2445	083 530 3127 072 173 6234
SAMSA			
WESTERN REGION Capt Dave Colly	021 421 6170	021 419 0730	082 812 2997
Cape Town: Capt G Louw	021 421 6170	021 419 0730 086 696 9074	083 227 0721
Saldanha Bay Mr. Martin Slabber	022 714 1612	022 714 3635	082 789 6764
Southern Region Capt N. Campbell	041 582 2138	041 582 2130	083 309 6053
Port Elizabeth: Mr B Colenutt (PO)	041 585 0051	086 616 3205 041 582 1213	082 445 3167
East London Capt P Kroon (PO)	043 722 4120	086 615 8659 043 722 2264	082 445 3166
Mossel Bay Mr. Dave Manley	044 690 4201	086 616 3370 044 691 1206	082 477 1813
EASTERN REGION. Capt. Saroor Ali	031 307 1501	086 616 3205 031 306 4983	071 686 9593
Durban: Mr. Grant Conway	031 307 1501	086 615 7055 031 306 4983	082 449 6350
SAMSA: Maritime Rescue Co-ordination Centre MRCC			
24 Hours Operation 021 938-3300 24 Hours Operation 021 938 -3309 Fax			
Mr A Botes	021 - 938 3310	086 616 4415 021 938 3319	083 254 2944
Head: Centre of Sea Watch Mr. Karl Otto	021 938 3317	086 654 4742 021 938 3319	082 812 2991
Duty Controller (all hours)	021 938 3300	021 938 3309	
City of Cape Town: Disaster Operations Centre (DOC):			
Duty Officer (all hours) Alternate: 107 PEC	0800 911 4357 0800 112 4357 107 (from Telkom line) 021 480 7700(from cell)	021 597 5025	

7.2 LEVELS OF RESPONSE AND ACTIVATION

In this Plan, the combating response shall be organised according to the following levels of response as described in the National Plan and illustrated in the diagram below:

- a) A **Tier 1** response is where the containment, clean-up and rescue of contaminated fauna can be dealt with within the boundaries of the vessel, berth or a small geographical area where the incident has no impact outside the operational area but poses a potential emergency condition. Such an incident covers a small spill that can be contained and cleaned-up by the ship, terminal, port, or local authority staff using their own resources. The most common type of Tier 1 response deals with an incident occasioned during a ship bunkering operation or a small quantity of oil from an unknown source impacting the shoreline.
- b) A **Tier 2** response is where the nature of the incident puts it beyond the containment, clean-up and rescue of contaminated fauna capabilities of the ship, terminal operator or the Local Authority. The containment or clean-up requires the use of some of or all the government and industry resources. It could be near or some distance from operational centres. The incident is usually associated with shipping activities in ports or harbours, coastal waters, pipelines, tank failures or near shore explorations and production operations.
- c) A **Tier 3** response is where the nature of the incident puts it beyond containment, clean-up and rescue of contaminated fauna capabilities of a national or regional response. It is usually a large spill which has the probability of causing severe environmental and human health problems. The response will require assistance from outside the country. Such an incident becomes a major international affair involving a number of aspects of government. When responding to an incident of this nature, strategies outlined in the National Plan should be engaged.

The Tiered Response (from IPIECA)

Large spill			TIER 3
Medium spill		TIER 2	
Small spill	TIER 1		
Response required	Local	Regional/ National	National/International

In reality, spills do not fall into convenient categories. It is therefore important to be prepared to initiate at the higher tier as soon as possible, as it is easier to stand down an alerted system than to try to escalate a response at the last moment.

7.2.1 Department of Environmental Affairs Response

Once the Department of Environmental Affairs has assessed the initial report, and found it necessary to initiate a response, the organisational structure outlined in Fig. 4 (Section 8.1) will come into effect. The functions of the officers concerned are described in Section 8.2.

7.2.2 Local Authorities Response

If, during the evaluation of the spill by the Department of Environmental Affairs, it is established that there is a threat to the coastline, the Department will inform the relevant Local Authorities accordingly. The sequence of steps that will take place and activities required of Local Authority Officers are described below and in Section 8.4. Their relationship to the Department of Environmental Affairs is described in Section 8.3.

ALERT - If a threat is present, but not imminent, the Department of Environmental Affairs will request the Local Authorities to inform their key personnel (i.e. those who may be involved) who are to remain contactable. SAMSA, in consultation with DEA will decide whether it is appropriate to assemble a Joint Response Committee

MOBILISATION - As the threat draws closer, the Local Authorities will be requested to begin moving equipment, materials and labour onto site.

IMPLEMENTATION - As the impact of oil becomes imminent, the Department of Environmental Affairs will authorise the deployment of equipment, labour and materials.

If the Local Authority feels the implementation of specific protection measures cannot be delayed, authority to proceed can be obtained from the Dept. of Environmental Affairs by telephone. It must then be confirmed later by fax or email to the Dept of Environmental Affairs, quoting date, time, person contacted, and action implemented. If difficulty is encountered in contacting the Dept. of Environmental Affairs such requests may be channelled through SAMSA or the Disaster Operations Centre of the City of Cape Town.

REVIEW - Local Authorities are to review the clean-up operations continually, to ensure that the operations being carried out are cost effective. The Department of Environmental Affairs or the Joint Response Committee, will continually review the overall threat situation, re-evaluate the response decisions, and advise the Local Authorities accordingly.

TERMINATION - Once the threat has passed, the Department of Environmental Affairs will decide, through the Joint Response Committee, at what stage the clean-up operations will cease and the protective works that were installed can be removed.

8. ORGANISATION

8.1 DEA and SAMSA ORGANISATION

The DEA Oil Spill Response Organisation and its linkage to SAMSA are presented schematically in Figure 4 below. This organisation is only effective for the duration of an oil spill. Depending on the spill scenario, individual personnel will undertake each of the following functions:

- DEA On-Scene Co-ordinator
- DEA Shore Controller
- DEA Logistics Officer
- DEA Environmental Liaison Officer
- DEA Media Officer
- SAMSA Operations Manager
- SAMSA Administration Officer

For limited spills, the functions above may be combined and undertaken by a smaller number of Departmental Officers. During a spill, this team will meet regularly through the JRC for the purpose of planning, reviewing and managing the operation.

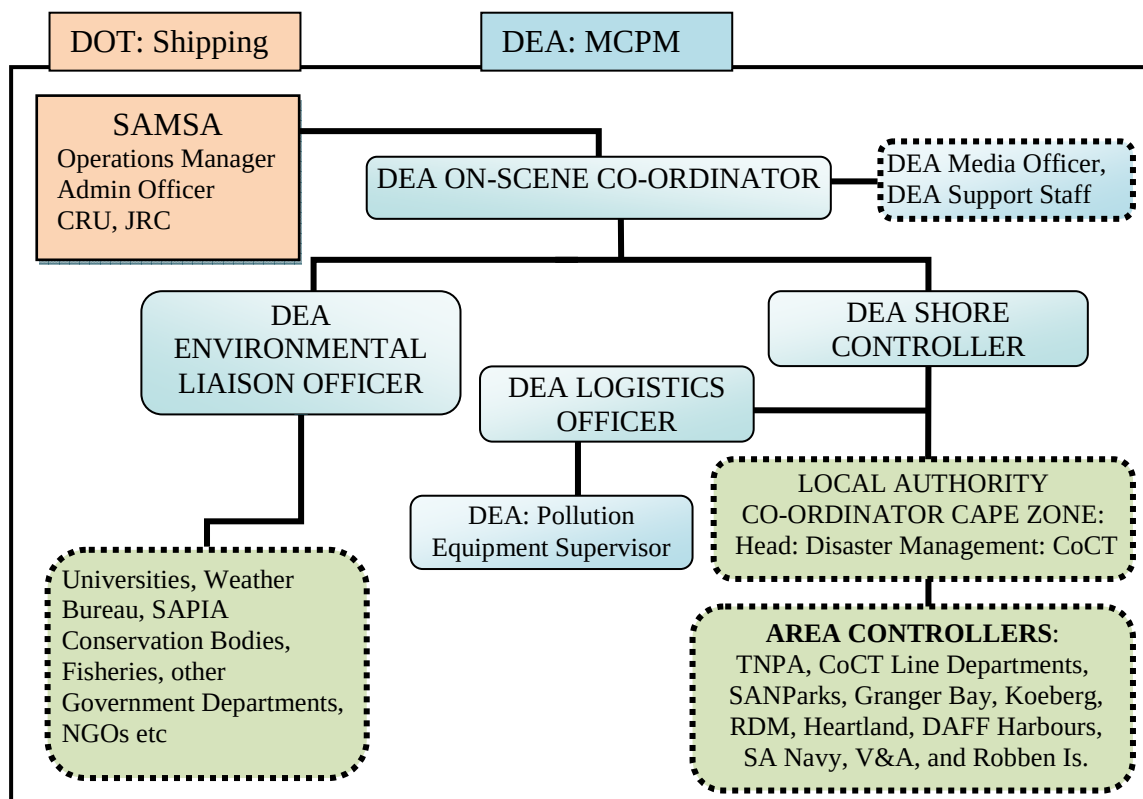


Figure 4: Diagram showing the DEA Response Team and Associated Links

8.1.1 Joint Response Committee (JRC)

The Joint Response Committee is convened on the instruction of the SAMSA Operations Manager, usually for Tier 2 or Tier 3 incidents, after consultation with DEA and other major role players. The JRC is chaired by SAMSA's Operations Manager or, the DEA OSC if no shipping casualty is involved. The role of the JRC is to:

- bring together all major role players to discuss and agree to plans for prevention and combating of oil pollution during the incident;
- co-ordinate all operations and approve expenditure to ensure prompt payment by insurers;
- meet regularly, usually daily, but will decrease as the urgency abates;
- provide a co-ordinated and factual response to the media and arrange press conferences with major stakeholders.

The convening of the JRC and establishing the JOC with communications and facilities will be undertaken by the Casualty Response Unit (CRU) if a shipping incident is involved. Where a CRU is not involved the DEA OSC and/or the SAMSA Operations Manager will establish the JOC.

The protocol for the management of the JRC is provided in the National Plan. A record of decisions taken at the JRC should be provided after each meeting. (See example in Appendix V)

The following representatives will make up the JRC, as relevant:

- SAMSA Operations Manager or delegated Officer (Chair)
- Ships Owner / Insurer
- Independent Auditor
- DEA On Scene Co-ordinator (Alternate Chair)
- DEA Environmental Officer
- SAMSA Admin Officer
- Local Authority Co-ordinator
- TNPA
- Area Controllers
- Media Officers
- SANCCOB representative

8.1.2 Casualty Response Unit (CRU)

In the event of there being a significant maritime involvement resulting from a shipping incident, such as salvage of stricken vessels, SAMSA will establish a Casualty Response Unit. This could either be set up in conjunction with JOC or at another convenient location such as the Port Control Centre located at the Port of Cape Town. This unit will be equipped with the necessary telephones, radios, maps, charts, state boards etc., and will serve as the operational headquarters for the following persons:

- SAMSA Operations Officer
- Senior ship surveyors
- Naval architect
- SAMSA legal officer
- SAMSA administration officer
- TNPA representative (if a Port is involved)

The SAMSA CRU team shall undertake the following actions:

- Determine the name and contact details of the vessel's owner;
- Establish the insurance status of the vessel and the name of the P&I Club, if any;
- Request details of the fuel oils and other harmful substances on board;
- Evaluate the specific threat of the pollution posed by the vessel in respect of her bunkers and/or cargo on board;
- Obtain any additional particulars, calculations or considerations required by the Operations Manager;
- Convene a JRC and establish a JOC with communications and facilities;
- Obtain a cargo manifest for the ship;
- Prepare press releases;
- Inform affected authorities and parties; and
- Where appropriate, represent SAMSA as part of any active intervention aboard the ship casualty.

8.2 JOB DESCRIPTIONS OF DEA AND RELEVANT SAMSA OFFICIALS

For convenience, the following are called Job Descriptions, but are solely to inform Authorities of the pertinent tasks that will be undertaken by the officers assigned these functions for the duration of the incident. For reasons of brevity and clarity, the responsibilities and tasks that fall outside the direct activities for preventing and combating pollution of the shoreline by oil are omitted.

8.2.1 *DEA On-Scene Co-ordinator*

- Determine whether the shoreline is at risk of being impacted by oil.
- Having established that the shoreline is at risk, determine:
 - the probable time and site of the initial impact;
 - the anticipated magnitude of the impact;
 - the probability of a fire hazard;
 - the level of response required: Tier 1, 2 or 3 and the response required by each local authority (ALERT, MOBILISATION or IMPLEMENTATION).
- Inform SAMSA and decide on the requirements of a Joint Response Committee. In light of the above, establish the departmental Response Team and decide on the location for the control centre as set out in Section 8.5.
- Agree on response actions required, with other stakeholders and monitor these activities.
- Decide on deployment of DEA equipment and resources: aerial surveillance, booms, skimmers etc., as required.
- Co-ordinate the subsequent activities of the Response Team, including setting up daily meetings, and representing DEA at the JRC.
- Activate the systems for receipt of air surveillance observations, weather forecasts, satellite imagery and other day-to-day information at the control centre.
- Continually gather facts for re-evaluating the situation, and inform other members of the Response Team and Local Authorities of any changes in the level or approach of response measures.
- Obtain approval for steps where financial implications are involved.
- Ensure that accurate records of events are being kept.
- Arrange for the disposal of collected oil and oily debris after consultation with the relevant authorities.
- Keep Shore Controller informed of all developments at the JRC.

8.2.2 DEA Shore Controller

- Advise the Local Authorities of the levels of response required.
- When necessary, establish a Shore Control Centre.
- Ensure, where possible, that the recommended priority protective measures are implemented timeously. Advise on boom deployment.
- Ensure that the protection and clean-up of the shoreline is commensurate with the minimum of environmental damage.
- Control the shoreline clean-up to achieve maximum cost effectiveness with the resources available.
- Ensure that the Area Controllers (See Section 8.4.2) keep proper and accurate records.
- Keep the DEA OSC and Environmental Liaison Officer informed of all shore-based response operations.

8.2.3 DEA Logistics Officer

- Immediately upon appointment, ascertain the availability of the equipment listed in Section 12 from the Local Authority Co-ordinator for this zone as well as for the adjoining zones and establish requirements for DEA equipment.
- Bring into operation and maintain the communications network at the extent authorised.
- Continually maintain an up-to-date data bank on the availability and deployment of equipment and materials in the zones under threat of impact of oil as well as in the adjoining zones.
- Arrange for procurement of additional materials and equipment as may be required by DEA Shore Controller.
- Within the framework of government policy make all the required arrangements for the transport and accommodation of Departmental Officers.

8.2.4 DEA Environmental Liaison Officer

- Co-ordinate collection of information regarding environmental matters e.g. ecological sensitivity of areas, weather predictions etc and ensure that the JRC remains informed.
- Supply DEA On-Scene Co-ordinator with all relevant information.
- Liaise with environmental experts, NGO's and I&AP's.

8.2.5 DEA Pollution Equipment Supervisor

The DEA pollution equipment is held at the DEA Pollution Store in Paarden Island in Cape Town. The store is manned by one supervisor and two artisans. The supervisor is responsible for:

- Maintaining a register of all equipment;
- Ensuring equipment is well maintained and ready for deployment;
- Adhering to maintenance schedules for all equipment;
- Loading and dispatching equipment when required;
- Assisting with deployment of equipment when required;
- Ensuring staff are adequately trained to handle equipment;
- Keeping records of where and when equipment is deployed;
- Ensuring equipment is cleaned or replaced after each incident.

8.2.6 DEA Media Officer

- Liaise with other organisations in terms of media response.
- Provide press releases, press meetings and photographic opportunities, working through JRC where appropriate.
- Participate in daily operational meetings.
- Ensure Website is maintained and updated.
- Co-ordinate VIP visits.
- Maintain archive of media response for permanent record.

8.2.7 SAMSA Operations Manager

- Where appropriate will set up a Casualty Response Unit.
- Convene a JRC and establish a JOC with all communications and facilities.
- Co-ordinate and supervise all technical activities relating to a shipping casualty.
- Supervise any oil transshipments.
- Co-ordinate legal and financial aspects relating to an incident, in collaboration with Legal Adviser and SAMSA Administration Officer.
- Consult with DEA On-Scene Co-ordinator in matters relating to environmental considerations connected to a potential or actual oil spill.

8.2.8 SAMSA Administration Officer

- When required, with the assistance of the DEA On-Scene Co-ordinator and the SAMSA Operations Manager, negotiate and arrange for guarantees/undertakings to be obtained from owner / agents / insurance representatives.
- Undertake the task of minute's secretary for meetings called by JRC.
- Maintain separate, complete and up to date records of all technical and environmental activities pertaining to the spill incident and of expenditure incurred by all parties involved.
- Attend to the purchase of consumables and capital equipment required by both the SAMSA and Department of Environmental Affairs after having obtained the necessary authorisation.
- Receive and authenticate all claims for loss or damage as envisaged either in Section 9(1)(a) or Section 9(1)(c) of Act No.6 of 1981 and process for payment.
- Receive and authenticate all statements of account for protection measures taken and clean-up costs incurred by Local Authorities and parties contracted to SAMSA or Department of Environmental Affairs and process for payment. (Claims relating to coastal protection and clean-up are to be channelled through the Department of Environmental Affairs before processing.)

8.3 LOCAL AUTHORITIES ORGANISATION

In the event of an oil spill, Local Authorities are required to take certain actions and nominate certain persons in order to be able to respond effectively to the spill.

In this Zone, the Head: Disaster Management Centre of the City of Cape Town will be the Local Authority Co-ordinator (See Section 6.2 and 8.4.1). In addition, when alerted, all Local Authorities concerned must nominate officers from within their organisations to become Area Controllers, Response Officers and Administration Officers for the duration of an incident. The inter-relationships of these officers, whose efforts will be supervised by the DEA Shore Controller, are depicted in the organogram in Figure 5. The Area Controllers (for areas A-H as indicated in Section 10) will co-ordinate the activities of the Site Officers.

In terms of response actions, the Local Authorities will be required to provide assistance in the form of supervision, labour, transport and equipment for the protection and clean-up of their beaches and estuaries as set out in Section 10. They will also be responsible for making arrangements with local Traffic and Police Officers to ensure traffic and crowd control in the vicinity of the impacted area.

8.4 JOB DESCRIPTIONS OF LOCAL AUTHORITY OFFICERS

As in Section 8.2, the Job Descriptions prescribed here include only those tasks to be undertaken by the appointed officers in the event of an oil spill incident.

8.4.1 *Local Authority Co-ordinator*

- Establish and maintain the communications network between DEA Shore Controller and Area Controllers.
- Provide the DEA Logistics Officer with information on the present deployment of equipment in the Zone and the availability of other equipment within the Zone.
- Represent local authorities at JRC if necessary.
- Co-ordinate the supply of equipment between Local Authorities.
- Ensure adequate traffic and crowd control.
- Issue permits to DEA personnel and scientific advisers to allow free access to shoreline.
- Undertake preparatory activities as listed in Section 6.2.

8.4.2 *Area Controller*

- Supervise shoreline protection and clean-up measures and ensure effective control of work parties on site.
- Obtain approval for purchase of capital equipment.
- Procure consumables, labour and machinery hire.
- Ensure that time sheets for charge hands, labour and machinery are kept on an hourly basis.

8.4.3 *Site Officer*

- Supervise clean-up teams.
- Keep log of manpower and equipment used.
- Collect samples.
- Keep Area Controller informed of progress and areas requiring special attention.

8.4.4 *Area Administration Officer*

- Maintain time sheets for charge hands, labour and machinery on an hourly basis and the tasks performed against these time sheets.
- At the end of the incident, provide a full report on the operations undertaken and detailed costing of each operation.

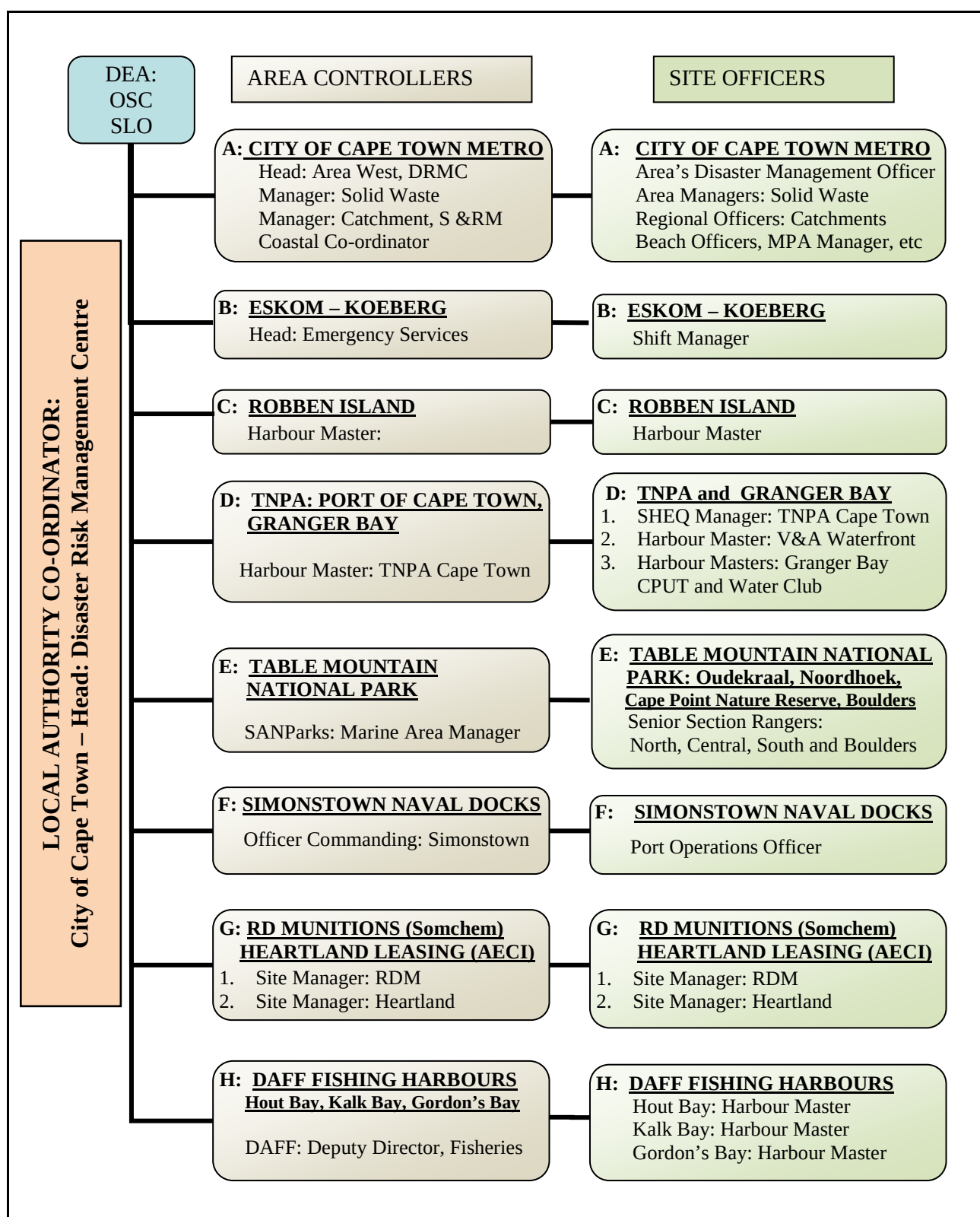


Figure 5. Diagram showing the Local Authority Organisation for Areas A-H (in Section 10)

8.5 FACILITIES

8.5.1 Joint Operations Centre (JOC)

The Joint Response Committee (JRC) which is described in Section 8.1.1 will operate from the Joint Operations Centre (JOC). The JOC will be established at a suitable venue as close as possible to the response operation, to deal with Tier 2 or Tier 3 spills. In the Cape Zone this would usually be the City of Cape Town's Disaster Operations Centre which is located in Goodwood.

The co-ordination of all shoreline protection and clean-up activities will take place from this Centre. The Centre comprises a sophisticated communications room and operations room from where the co-ordination of manpower and resources will be undertaken during a major oil spill situation. In terms of the CoCT Disaster Risk Management Plan, it acts as the centralised link between all Municipal Departments and Local Authorities involved with this plan, as well as numerous other bodies including the SAPS, SANDF, SABC, EMS / METRO etc.

For smaller incidents, other facilities could be used, such as the local municipality offices.

The JOC will provide the communications and facilities required for the Joint Response Committee. This facility will need to be equipped with telephones, fax machines, photocopier, white boards, computer and email facilities, and all conveniences to run meetings. It would also be useful to have a digital projector and screen for relaying photographic information.

8.5.2 Shore Control Centre (SCC)

In the event of large quantities of oil (Tier 2 or Tier 3 spills) impacting, or threatening to impact the shoreline, a Shore Control Centre will be established at a convenient location. Depending on the circumstances and extent of the operation, this Shore Control Centre may either be established in conjunction with the JOC or as a separate entity. Local Disaster Management Centres or Mobile JOC's or even offices or hotels could accommodate this centre. The co-ordination of all shoreline protection and clean-up activities will take place from this Centre. The same facilities as described for the JOC are required.

The following persons will operate from this facility:

- DEA Shore Controller
- DEA Logistics Officer
- Local Authority Co-ordinator (alternatively at JRC)
- Local Authority Area Controllers (alternatively at JRC)
- DEA On-Scene Co-ordinator (alternatively at JRC)
- DEA Environmental Liaison Officer (alternatively at JRC)

8.5.3 Local Shore Control Centres

In the event of lesser spill situations, where oil has impacted or is threatening to impact the shoreline in restricted localised areas, protection and clean-up operations may be co-ordinated from the Local Shore Control Centre to be established at the time. These Centres are in direct contact with the JOC. The number of officers operating from these centres will depend on the size and range of the spill. The City of Cape Town Disaster Management is able to provide these detachment units, as needed, through their logistics department.

8.5.4 Mobile Control Units

The City of Cape Town's Disaster Management has mobile units which can be used for on-site co-ordination. These self-contained vehicles are well equipped with radio and conference facilities, and have access to the computer systems of the traffic control and fire departments. They could accommodate the Shore Logistics Officer, Area Controllers, and Area Administration Officers, depending on the circumstances. One of the vehicles has off road capabilities.

8.6 COMMUNICATIONS

8.6.1 Telephone and Cell Phone

This will be the main form of off-site communications between the control centres and other outside agencies or bodies. During high profile incidents, cell phone networks may become jammed due to extensive use by media and response personnel, and other forms of communications may have to be utilised.

8.6.2 E-mail and Website

E-mails are an effective way of distributing information such as press releases, weather reports and photographic accounts from on-site locations. Distribution groups can be set up in the address list at the beginning of the incident to facilitate circulation. Often, personnel are working remote from their normal offices, and hence receipt of emails should not be taken for granted. It is recommended that receipt of emails be confirmed either through follow up phone calls for urgent matters, or by requesting a "read receipt" option.

A website, managed by DEA, with all the relevant information pertaining to the incident is a useful tool for ensuring that the factual information is relayed correctly to the other stakeholders, the press and members of the public. This could be a website dedicated to oil spill response and contingency planning and could include all the oil spill contingency plans. Such a site would be invaluable in keeping local authorities informed of amendments to their plans and for sharing lessons learned.

8.6.3 Radio

Radio facilities may be utilised for communications among the various agencies involved in the oil spill response:

- DEA Officers may communicate between themselves and with the pollution vessels and aircraft by means of their own VHF sets, using the marine frequencies.
- The City of Cape Town Metro has an extensive radio network and, amongst others, is in communication with all the Local Authorities and neighbouring District Municipalities, the NSRI and skiboats via the Harbour Master. The Mobile JOCs are equipped with similar communication facilities.
- SANParks has a limited number of VHF two-way radios which can be used for communication.

8.6.4 Media Response and VIP Visits

A major oil spill is of immediate interest to the local and international media. It is in the public interest, and the interest of all concerned, to keep the media informed as fully and regularly as possible. Failure to consider the media response at an early stage may have serious implications for the management of the whole incident.

A designated DEA media officer (refer to Section 8.2.6) will arrange press conferences and issue regular news bulletins. Information provided should be consistent with other organisations and as accurate as possible. Good co-operation between all press officers is essential, and combined press conferences will be arranged through the JRC. The media must not be allowed to interfere with the operational activity of the emergency operation.

A strategy for interacting with the media should be developed pro-actively, and daily press conferences and news bulletins should be arranged. A media information pack should be prepared prior to any incident. This will facilitate good media relations during an event. An initial pro-forma press holding statement should be prepared by the media officer. A press release/sitrep template is provided in Appendix VI. A dedicated website will provide a reliable source of information, and should be updated regularly.

Whilst staff cannot be prevented from talking to the media, they should be advised to refer all queries to the media officer. If they are hounded by reporters, they should limit their comments to exactly what they are doing and not be tricked into making assumptions or discussing issues on which they are not fully informed. The media officer should be pro-active in facilitating opportunities for the press to interview response personnel.

It is inevitable that, in the case of a major incident, Ministers or other VIP's will wish to visit the site or response centres. The Media Officer should ensure that these visitors are properly escorted and informed, and should advise management and staff of these visits during the daily meetings.

9. RISK ASSESSMENT AND COASTAL SENSITIVITIES

9.1 IDENTIFICATION OF RISKS

The National Contingency Plan describes the risks associated with high volumes of shipping traffic passing around the South African Coast. All maritime traffic, calling at South African Ports or in transit around the coast, presents a risk of marine pollution resulting from collisions, groundings, oil cargo and bunker transfers, structural failure or other operational spills. Various types of oil from light crude to heavy bunker fuels can be released from these types of casualties.

The table below summarises a few of the major incidents which have occurred in or close to the Cape Zone.

Table 9.1 Some major incidents impacting the South African Coast

YEAR	INCIDENT	OIL SPILLED	ENVIRONMENTAL IMPACT
1968	<i>ESSO ESSEN</i>	15 000 tons crude oil	3 000 oiled penguins 500 oiled gannets Coastline impacted
1971	<i>WAFRA</i>	15 000 tons crude oil	1 200 oiled penguins Coastline badly impacted
1972	Unidentified vessel	unknown	1 700 oiled penguins
1983	<i>CASTILLO DE BELLVER</i>	190 000 tons crude oil	1 800 oiled gannets No coastline impacted
1994	<i>APOLLO SEA</i>	2 400 tons heavy fuel oil	Major beach clean-up operation 10 000 oiled penguins
2000	<i>TREASURE</i>	1 300 tons heavy fuel oil	Major beach clean-up operation 19 000 oiled penguins 19 500 penguins relocated

Casualties involving bulk cargo carriers have resulted in significant spills of heavy fuel oil (Apollo Sea and Treasure) in the Cape Zone. Although such quantities are low by comparison to potential tanker spills, the heavy fuel oil is more persistent than crude oil and has resulted in major impacts on coastal areas and seabird populations. The length of time the oil has been at sea and the types of weathering it has been subjected to, will change its characteristics, and hence the level of response required.

9.2 HEALTH AND SAFETY

The health and safety of the people involved in the response operation is of paramount importance. All personnel should be made aware of the hazards associated with their activities. Often people will be working in unfamiliar surroundings and, where conditions are particularly hazardous, each participating organisation may need its own safety officer. Protective clothing should be provided. Training and exercises can be used to identify health and safety issues.

The following key risks are associated with oil spill response:

- toxic fumes in confined spaces;
- general stress and fatigue of personnel;
- risks associated with equipment handling;
- falling into the sea (hypothermia or drowning);
- slipping on oily decks or oily rocks;
- risks associated with handling oiled wild life;
- sunstroke;
- back injuries from lifting heavy items.

Stakeholders should identify all the health and safety risks associated with their operations and put suitable mitigatory measures in place.

9.3 VULNERABILITY OF THE CAPE COASTLINE

The stretch of coastline covered by this plan falls within a high-risk area in terms of oil pollution. The Cape is a focal point for all ships trading between the Indian and Atlantic Ocean ports and represents a hazardous area for strandings and collisions. The weather is often hazy and, particularly in winter, characterised by rough seas, mist, rain and fog.

The area falls within a “Special Area” as designated under MARPOL Annex 1. The designation was motivated on the basis that the area is “oceanographically unique and hosts a large number of endemic species. Some of these and other species are classified as threatened under the IUCN ‘Red List’ criteria. Significantly this includes the African penguin (now endangered), Cape gannet, and three cormorant species. Operational oil discharges and spills from international and domestic shipping constitute risks to these species and the environment sustaining them.”

Once oil has been spilled at sea, it drifts under the influence of winds, currents and waves. Since most of the surface and inshore currents around the coast of South Africa are themselves strongly influenced by wind direction and speed, a simplistic prediction of oil movement can be based purely on wind data. Oil tends to move at between 2 and 3% of the wind speed, and at a slight angle to the left of the wind direction.

Southerly to south-easterly winds predominate in summer and north to north-westerly winds in winter. South-east winds will cause oil to enter False Bay if the release of oil takes place to the South East of the Zone.

Conversely north-west winds will cause oil to impact the Atlantic seaboard if the release of oil takes place to the north-west of the Zone.

Flotsam at sea is subject to the same influences as oil. Beaches where such material tends to be deposited will therefore also be those where oil is most likely to come ashore.

The coast is known to be treacherous at times. Severe weather conditions, especially in winter when most incidents occur, can severely impede collection and transport of oiled seabirds, from coastal and island habitats. High seas and high energy surf zones increase the risks associated with oiled seabird response. Accessibility to some areas is often limited and this will determine the type of response required.

9.4 COASTAL SENSITIVITY

Detailed information on the environmental sensitivity of the coast to oil pollution can be found in the Coastal Sensitivity Atlas of Southern Africa. This includes:

- Robben Island and Boulders Penguin Colonies, which are breeding sites for endangered and threatened species such as penguins, gannets, cormorants and other sea birds;
- A number of estuaries and lagoons which are important for bait organisms, fish, water birds and recreational amenities;
- Marine reserves and sanctuaries;
- Spawning areas for species such as anchovy and sole;
- False Bay is a calving area for the southern right whales, and otters are common along certain parts of the coast;
- Recreational amenities such as popular beaches, tidal pools, surfing and sailing areas;
- Commercial considerations such as shellfish and seaweed collection, rock lobster catches, demersal and linefish landings.

The whole peninsula area from Green Point to Muizenberg falls within the Table Mountain National Park Marine Protected Area (MPA). The objectives of the declaration of this protected area are to:

- 1) "Protect and conserve marine ecosystems and populations of marine species;
- 2) Protect the reproductive capacity of commercially important species of fish, including abalone, rock lobster and traditional linefish and to allow their populations to recover;
- 3) Promote eco-tourism within the Marine Protected Area."

Included within this MPA are the following restricted zones where no fishing or harvesting of marine resources is permitted:

- Karbonkelberg
- Cape of Good Hope
- Paulsberg
- Castle Rock
- Boulders
- Kalk Bay

The area between the Lourens River and the Eerste River has also been declared as an MPA. All these protected areas are indicated on the map in Section 10.

9.5 PRIORITIES FOR PROTECTION AND CLEAN-UP

The designation as a “Special Area” will create a larger buffer zone where operational releases of oil from tankers should be kept further offshore to protect sensitive resources. Tankers engaged in coastal trade would be required to retain their slops on board for discharge ashore at established Port reception facilities.

In the event of a major oil spill, large stretches of the coastline may be threatened and, ultimately, impacted by oil. The response to such a spill can be divided into two aspects:

- a) Protection
- b) Clean-up

In both cases, the resources available for the operation are generally limited. Thus, areas meriting priority attention will have been identified ahead of time. A list of the top priorities is given in Section 9.6, while priority ratings for all sites are given in Section 10.

Priorities are established on the grounds of vulnerability, environmental sensitivity and socio-economic importance.

9.6 LISTING OF PRIORITIES

Two of the priorities in the Cape Zone are the bathing beaches and the rock lobster sanctuary. These can only be adequately protected by the dispersal of oil at sea. Should the oil enter the near-shore zone before it can be dispersed, these two priorities will come into conflict, as the use of dispersants in shallow water is likely to have adverse effects on the rock lobster population. In these circumstances therefore, it might be necessary to allow the oil to come ashore.

A similar situation might arise in False Bay, which is a spawning ground for various fish and squid. Squid in particular are highly sensitive, and it might not be possible to use chemical dispersants during spawning periods.

Threatened species of seabirds such as penguins, gannets and cormorants are also a priority in this area.

Priorities in the Cape Zone are identified as follows:

9.6.1 *Protection Priorities*

- | | | |
|----|------------|---|
| 1. | Intakes: | Koeberg Power Station |
| 2. | Estuaries: | Milnerton Lagoon |
| 3. | Seabirds: | Robben Island
Boulders Penguin Colony
Noordhoek Tidal Lagoon |
| 4. | Harbours: | Port of Cape Town / V&A Waterfront
Oceana Boat Club
Granger Bay Harbour
Kalk Bay Harbour
Simonstown Harbour
Royal Cape Yacht Club
Hout Bay Yacht Club
Cape Marlin and Tuna Club
False Bay Yacht Club
Gordons Bay Harbour, Yacht Club, Aquatic Club and the
Harbour Island Marina
Murrays Bay (Robben Island) |

9.6.2 *Clean-up Priorities*

Should the protection measures have failed, then:

1. Seabird rescue and rehabilitation
2. Estuaries
3. Amenity beaches (some of which have “Blue Flag” and tidal pools.

9.7 STRATEGY FOR PROTECTION AND CLEAN-UP

In managing the response operation, the aims are prioritised as follows:

- first, to prevent pollution occurring;
- second, to minimise the extent of any pollution that occurs;
- third, to mitigate the effects of that pollution.

The DEA On-Scene Co-ordinator, in consultation with SAMSA and the JRC, will decide on the actions required to mitigate the extent of pollution. Initially the DEA surveillance aircraft will be requested to investigate the situation. Decisions will be made regarding the following methods of response:

- Assessing and monitoring;
- Dispersant spraying operations according to strict policy guidelines;
- Mechanical recovery operations;
- Cargo transfer operations;
- Protection of coastal resources;
- Shoreline clean-up techniques.

The aim of the operation is to minimise the damage (environmental, ecological, amenity or financial). The decisions will be based on the following considerations:

- the severe limitations on the effectiveness of at sea recovery techniques;
- the distance from shore of the casualty;
- the type of oil spilled;
- weather conditions and currents;
- the time needed to deploy equipment and resources to the scene;
- environmental sensitivities in relation to clean-up methods.

Oceanographic conditions off the South African coast are not generally conducive to containment and recovery of oil at sea. International experience has shown that it is unlikely that more than 20% of spilled oil can be recovered at sea. Booms and skimmers should therefore only be used in sheltered ports and coastal areas, unless particularly calm conditions prevail offshore.

Booms and barriers will be used to protect sensitive coastal features such as estuaries, harbours and marinas. Where insufficient booms are available, barriers can be constructed from other materials such as straw. Where resources allow, DEA will assist with the deployment of booms in estuaries.

Manual clean-up measures are generally preferred for sandy beaches, to minimise the amount of sand removed. Mechanical equipment, such as bulldozers may be used in situations where the oil is very thick.

Seabirds are particularly vulnerable to oil pollution. Some species such as penguins and gannets can be successfully rehabilitated. One of the preferred strategies is to contain clean penguins within their colonies until the oil is cleared from the area, or to remove breeding pairs to prevent them from becoming oiled. This may separate them from their young, and so chicks may need to be collected for captive rearing.

Further discussion regarding the use of dispersants needs to be initiated by DEA with the other stakeholders. There may be a pertinent case for the early use of dispersants to protect seabird populations. On the other hand, dispersant should not be used close to the seawater intake basin of the Koeberg Nuclear Power Station as this will increase the chance of the oil being taken up with the cooling water. This is a strategic decision that should be made ahead of time, and is in line with the DEA dispersant policy. Criteria need to be established for the Cape Zone, which will facilitate a prompt resolution during an incident.

9.8 SITE SPECIFIC INSTRUCTIONS FOR PROTECTION AND CLEAN-UP

Specific instructions for protection and clean-up of the coastal features of this Zone are given in geographical sequence predominantly from west to east in Section 10. It should be noted that the use of oil spill dispersants is NOT PERMITTED for treating oil that has impacted the shoreline (see Addendum B). In terms of the “Policy on the use of oil spill dispersants in South African waters”, the use of dispersants can only be undertaken with approval through DEA (see Addendum F). In short, the policy prohibits the use of dispersants in water depths less than 30 metres and within 5 nautical miles of the coast.

Priorities for both protection and clean-up are indicated in Section 10 by means of the words “high”, “medium” and “low” priority ratings.

It will be noticed that in certain areas no clean-up actions are recommended. Exposure to heavy surf action in some areas promotes natural cleansing of both sandy beaches and rocky shores. In addition, there are stretches of the coast which are more or less inaccessible, and clean-up will therefore only be attempted in the event of heavy deposits of oil, from where oil may be refloated and move to estuaries or identified amenity beaches. There may be certain times when it will be necessary to clean beaches which have been assigned a medium or low rating, even if they are only lightly oiled; for example, if an event is to be staged there, or if the beach is used for walking dogs etc.

In some instances, clean-up operations could be more damaging than the oil, and in these instances it might be best to “do nothing.”

A map of the whole Zone appears at the beginning of Section 10. Each stretch of coastline on the map is marked with a letter of the alphabet and is apportioned to the responsible local authority for clean-up. In certain cases, abutting Responsible Authorities may be required to undertake clean-up measures for the neighbouring Local Authority, even though these areas do not fall under their jurisdiction. This may be the case where small stretches of coastline are bordered by large stretches or where certain Local Authorities do not have sufficient resources to undertake the required tasks. These areas are marked with a (+) sign in the margin of Section 10.

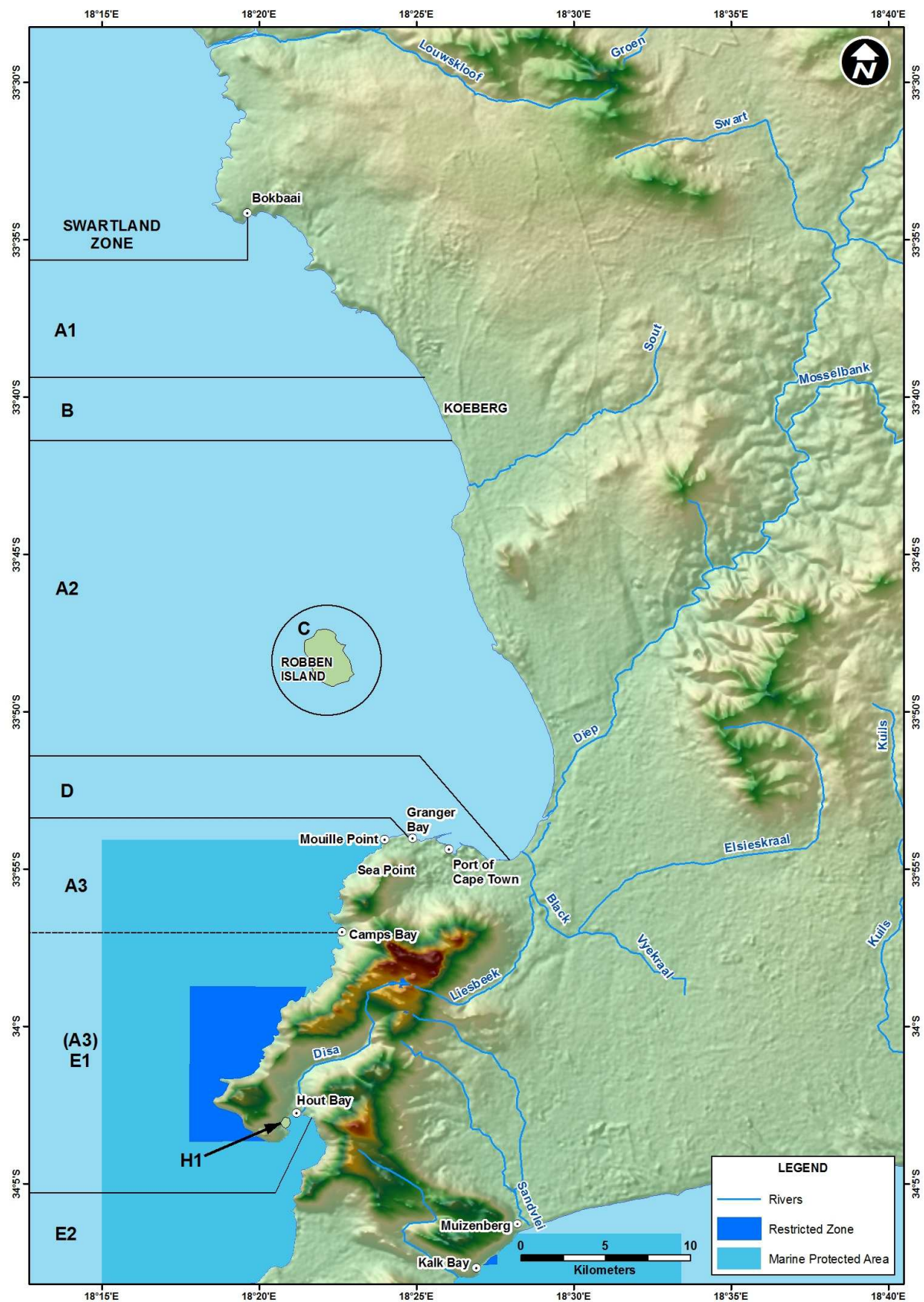
Maps of estuaries, and more detailed instructions referred to under protective action can be found at the end of Section 10. It should be noted that these are the current, recommended procedures and that the linear scales indicated on the estuary maps are approximations only. Should the river mouth conditions have changed, or should the suggested materials not be available, a different approach might have to be adopted.

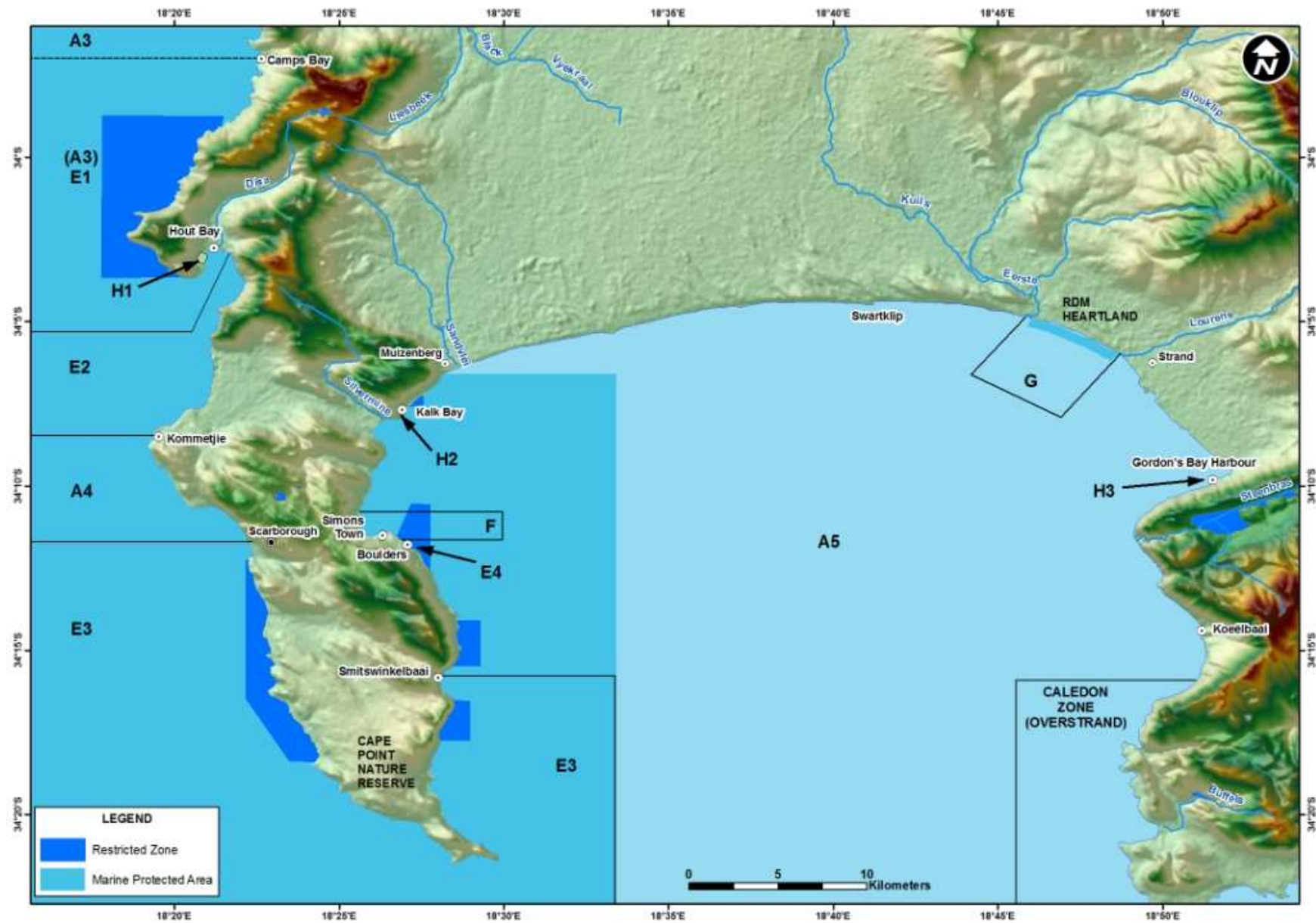
The Catchment, Stormwater and River Management Branch of the City of Cape Town, must be contacted for advice/input in all cases when river mouths/estuaries, within the Cape Zone, are to be closed to prevent movement of oil into these systems. This is to ensure that there will be no unintended consequences such as a backup of water which could cause over-bank flooding and possible damage to private properties or City infrastructure. Systems that receive treated sewage effluent generally flow fairly well throughout the year, with marked increases in flow during winter. The dynamic nature of the mouths of some of these systems could result in a new outlet point forming, thus essentially circumventing temporary installed barriers such as sand berms or hay bales. Floating booms may be a better option in some cases.

A range of possible alternatives can be found in the document titled "Emergency Barriers from Materials of Opportunity" (EBMO), but it might be necessary to fall back on individual ingenuity and initiative. General details of methods for protection and clean-up can be found in Addendum B.

Section 10 sets out the protection measures that are to be put into immediate effect when requested by the DEA Shore Controller as well as the clean-up measures that are to take place if the coastline is impacted by an oil spill.

10. MAPS AND SITE SPECIFIC RESPONSES





10. SITE SPECIFIC RESPONSES

SITE: <u>Responsible Authority</u> Pertinent Detail	<u>PROTECTION</u>		<u>CLEAN-UP</u>	
	Priority Rating	Action	Priority Rating	Action
A to H <u>DEA: OCEANS AND COAST</u> Rock lobster sanctuary (Melkbosstrand to Die Josie) The whole peninsula area from Green Point to Muizenberg is a Marine Protected Area, with the following restricted (no-take) zones: - Karbonkelberg - Cape of Good Hope - Paulsberg - Castle Rock - Boulders - Kalk Bay <u>SANParks</u> manages these MPA's on behalf of DEA. The Helderberg MPA between the Eerste River and Lourens River is managed by the City of Cape Town. Shellfish collection.	High	Attempts will be made to disperse oil if it is far out at sea, but once inshore, dispersant will not be used as this will result in increased exposure of oil to the rock lobster population.	High	Coastal cleanup to be carried out, taking various environmental sensitivities into account. DEA, SANParks, CapeNature and City of Cape Town environmental advisors to be consulted.
A1: <u>BOKBAAI TO KOEBERG</u> <u>City of Cape Town Metro</u> Amenity beach at Silverstroomstrand. Remaining beaches accessible by four-wheel drive vehicles only.			High	Clean amenity beaches all year round. Rocky areas to be cleaned of heavy deposits only.
			Medium	Clean medium to heavy deposits only.

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SITE: <u>Responsible Authority</u> Pertinent Detail	<u>PROTECTION</u>		<u>CLEAN-UP</u>	
	Priority Rating	Action	Priority Rating	Action
C: ROBBEN ISLAND <u>Robben Island Museum</u> Penguins and other seabirds Rocky shoreline with small sandy beaches. Popular tourist destination with harbour for ferry passenger access.	High	SANCCOB and MCPM must be contacted. Implement Island Bird Contingency Plan (not yet available). Where possible penguins to be contained on Island to prevent them from becoming oiled.		
	High	Harbour to be protected using a floating boom or bubble barrier. These are not currently available on the Island and will need to be sourced from DEA. The Harbour should have its own Contingency Plan which would need to be implemented. See Map 3E.	High	Where possible, shoreline to be cleaned of oil at all times, especially on penguin access "highways".
			High	Oil to be contained and removed using skimmers or sorbent materials. Jetties to be cleaned using high pressure seawater jets.
D: PORT OF CAPE TOWN and GRANGER BAY <u>Transnet National Ports Authority</u> Table Bay Harbour, including northern coastal stretch to Black River mouth canal. Includes Royal Cape Yacht Club. Oceana Boat Club <u>+V&A Waterfront Development</u> Victoria and Alfred Waterfront Basins, with marina development. Popular tourist destination.	High	Implement Port Oil Spill Contingency Plan. Yacht basin entrance to be protected by a bubble barrier. See Map 3F.	High	Contain oil by means of booms and remove using skimmers or sorbent materials. If oil enters yacht basin remove floating oil as quickly as possible. Rocky area between NE corner of harbour wall and City boundary to be cleaned of medium to heavy deposits of oil by City of Cape Town.
			High	Clean slipway using high pressure seawater jets, and recover released oil.
	High	Liaise with Port of Cape Town and Waterfront Harbour Master regarding protection of basins.	High	Contain oil by means of booms and remove using skimmers or sorbent materials. Harbour walls and jetties to be cleaned using high pressure seawater jets and released oil to be recovered.

SITE: <u>Responsible Authority</u> Pertinent Detail	<u>PROTECTION</u>		<u>CLEAN-UP</u>	
	Priority Rating	Action	Priority Rating	Action
GRANGER BAY HARBOUR +<u>Cape Peninsula University of</u> +<u>Technology and Water Club</u> Slipway and Marina development with yacht moorings.	High	Implement Harbour Oil Spill Contingency Plan (not currently available). Prevent oil from entering the harbour by means of floating boom or bubble barrier (not available on site). See Map 3G.	High	Contain oil by means of booms and remove using skimmers or sorbent materials. Harbour walls and jetties to be cleaned using high pressure seawater jets, and released oil to be recovered.
A3: MOUILLE POINT TO HOUT BAY (Excluding TMNP see E1) <u>City of Cape Town Metro</u> Amenity beaches at: -Mouille Point beach and tidal pool. -Three Anchor Bay beach and tidal pool. -Rockland's Beach -Milton Road Pool -Broken Baths Beach -Sea Point Pavilion -Sunset Beach and Tidal Pool -Queen's Beach -Saunders Rocks Beach and Tidal Pool			High High High High High High High High High	Amenity beaches to be cleaned all year round. Tidal pools to be cleaned under all circumstances using high pressure seawater jets. Amenity beaches to be cleaned all year round. Tidal pools to be cleaned under all circumstances using high pressure seawater jets. Rocky areas to be cleaned of medium to heavy deposits of oil.

SITE: <u>Responsible Authority</u> Pertinent Detail	<u>PROTECTION</u>		<u>CLEAN-UP</u>	
	Priority Rating	Action	Priority Rating	Action
High amenity beaches and popular tourist areas at: -Clifton: 1st Beach, 2nd Beach, 3rd Beach 4th Beach -Moses Beach -Bachelors Cove -Maidens Cove Tidal Pool -Glen Beach -Camps Bay Beach and Tidal Pool -Llandudno -Sandy Bay -Hout Bay Disa River (Hout Bay), mouth generally closed, but opens during winter months.	High	In the event of high spring tide build barrier at mouth as shown in Map 3H. If open, bulldoze closed. Inform CSRM Branch.	High High High High High High High	Amenity beaches to be cleaned all year round. Tidal pools to be cleaned under all circumstances using high pressure seawater jets, and recovered oil to be contained and removed. Rocky areas to be cleaned of medium to heavy deposits of oil. Amenity beaches to be cleaned all year round. Rocky areas to be cleaned of medium to heavy deposits of oil. Should oil enter the river the DEA Shore Controller must be advised and clean-up should be undertaken under supervision.
E1: CAMPS BAY TO HOUT BAY PART OF TABLE MOUNTAIN NATIONAL PARK <u>SANParks (and City of Cape Town</u> <u>Metro, see A3)</u> Rocky coastline with recreational area at Oudekraal. Includes Karbonkelberg Marine Restricted Zone.			High Medium	Clean amenity areas all year round. Accessible rocky areas to be cleaned of medium to heavy deposits of oil. Inaccessible rocky areas to be left to natural cleaning.

SITE: <u>Responsible Authority</u> Pertinent Detail	<u>PROTECTION</u>		<u>CLEAN-UP</u>	
	Priority Rating	Action	Priority Rating	Action
H1: HOUT BAY HARBOUR <u>DAFF</u> Fishing boats and yachts. Fish Factories Duikereiland supports seal and seabird colonies.	High	Place bubble barrier or floating boom (not available on site) across mouth of harbour as shown in Map 3I. Implement Harbour Oil Spill Contingency Plan (not yet available).	High	Contain oil by means of booms and remove using skimmers or sorbent materials.
	High	Alert fish factory personnel to stop pumping from intakes both inside and outside the harbour.		
	High	SANCCOB and DEA: O&C must be contacted.		
E2: HOUT BAY TO KOMMETJIE PART OF TMNP <u>SANParks</u> Amenity beach at Noordhoek. Rocky coastline. Wildevoelvlei opens at southern end of Noordhoek beach. Tidal lagoons at back of Noordhoek beach.			High Medium	Amenity beaches to be cleaned all year round. Accessible rocky areas to be cleaned of medium to heavy deposits of oil. Inaccessible rocky areas to be left to natural cleaning. Should oil enter the lagoons the DEA Shore Controller must be advised and clean-up should be times undertaken under supervision.
	High	In the event of high spring tide build barrier as shown in Map 3J. Inform CSRM Branch: CoCT.	High	

SITE: <u>Responsible Authority</u> Pertinent Detail	<u>PROTECTION</u>		<u>CLEAN-UP</u>	
	Priority Rating	Action	Priority Rating	Action
A: KOMMETJIE TO SCARBOROUGH <u>City of Cape Town Metro</u> Amenity beaches at: Kommetjie, Witsands and Scarborough. Rocky coastline. Rock lobster processing plant at Witsands. Shusters River (Scarborough), pristine; lagoon popular recreational area.	 High High	 Alert plant personnel. In the event of high spring tide build barrier at mouth as in Map 3K. Inform CSRM Branch: CoCT.	 High High	 Clean amenity beaches all year round. Accessible rocky areas to be cleaned of medium to heavy deposits of oil. Inaccessible rocky areas to be left to natural cleaning. Should oil enter the river the DEA Shore Controller must be advised and clean up should only be undertaken under supervision.
E3: TMNP: SCARBOROUGH TO SMITSWINKEL BAAI CAPE OF GOOD HOPE SECTION <u>SANParks</u> Includes Cape of Good Hope and Paulsberg Marine Restricted Zones. Popular tourist destination. Amenity beaches at Olifantsbos and Buffelsbaai. Rocky coastline, inaccessible in places.			 High Medium	 Clean amenity beaches all year round. Accessible rocky areas to be cleaned of medium to heavy deposits of oil. Inaccessible rocky areas to be left to natural cleaning.
E4: TMNP: BOULDERS <u>SANParks</u> Penguin Colony: popular tourist site. Sandy amenity beach with boulders and rocky areas.	 High	 Implement Penguin Oil Spill Contingency Plan. Where possible penguins to be contained on land to prevent them from becoming oiled. SANCCOB and MCPM should be notified.	 High Medium	 Clean amenity beach all year round. Rocky areas to be cleaned of all deposits of oil, to prevent further oiling of penguins.

SITE: <u>Responsible Authority</u> Pertinent Detail	<u>PROTECTION</u>		<u>CLEAN-UP</u>	
	Priority Rating	Action	Priority Rating	Action
F: SA NAVY, SIMONSTOWN <u>SANDE</u> The following areas fall under the jurisdiction of the SA Navy and are to be cleaned by them: Admirals Beach Cole Point Oil Coast Makrielbaai Offshore rocks; between Seaforth Beach and Boulders; between Hiller Rd and Bellevue Rd (Boulders) and between Windmill Beach and Rocklands Point. Naval docks	High	Navy to place boom across mouth of dockyard according to their standard operating procedure. (See Map 3L).	High High High High Medium Medium	Amenity beaches to be cleaned all year round. Rocky areas to be cleaned of medium to heavy deposits of oil. Navy to contain oil by means of booms and remove oil using skimmers or sorbent material.
H2: KALK BAY HARBOUR <u>DAFF</u> Fishing Harbour	High	Place bubble barrier or boom (not available on site) across mouth of harbour as shown on Map 3M. Implement Harbour Oil Spill Contingency Plan (not yet available).	High	Contain oil by means of booms and remove using skimmers or sorbent material.

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SITE: <u>Responsible Authority</u> Pertinent Detail	<u>PROTECTION</u>		<u>CLEAN-UP</u>	
	Priority Rating	Action	Priority Rating	Action
Amenity beach at: Fish Hoek Rocky coast south of beach. Silvermine River: tidal penetration blocked by weir under road bridge. Flat rocky platforms between Clovelly and Muizenberg. Tidal pools at St. James, Dalebrook, Kalk Bay and Willy's Pool.			High Medium Medium High High	Clean amenity beach all year round. Rocky areas to be cleaned of medium to heavy oil deposits. Lagoon below weir should be cleaned under supervision. Rocky areas to be cleaned of medium to heavy oil deposits. Oily water collecting in pools to be pumped out and separated. Remove oil from tidal pools by means of skimmers and sorbent materials. Clean walls using high pressure seawater jets.
A5: FALSE BAY COASTLINE (cont): MUIZENBERG TO MACASSAR <u>City of Cape Town Metro</u> Long sandy amenity beach between Muizenberg and Kapteinsklip, and from Swartklip to RDM (Somchem) security fence. Popular for walking and fishing. Zandvlei mouth: canalised above beach, sensitive estuarine system. Zeekoei mouth: canalised, outfall of Rondevlei, Zeekoevlei and Cape Flats WWTW.	High Medium	Mouth to be closed as shown in Map 3N. Inform CSRM Branch: CoCT. Mouth to be closed as shown in Map 3(O). Inform CSRM Branch: CoCT.	High High High	Beaches to be cleaned all year round. Should oil enter the river, the DEA Shore Controller must be advised immediately, and clean-up should be undertaken under supervision. Should oil enter the river, the DEA Shore Controller must be advised immediately, and clean-up should be undertaken under supervision.

SITE: <u>Responsible Authority</u> Pertinent Detail	<u>PROTECTION</u>		<u>CLEAN-UP</u>	
	Priority Rating	Action	Priority Rating	Action
Tidal Pool at Strandfontein.	Medium	Place sandbags on tidal pool wall if it is likely that oil will be washed over wall.	High	Tidal pools to be cleaned all year round. Remove oil by means of skimmers and sorbent materials. Clean walls using high pressure seawater jets.
Mnandi amenity beach.			High	Amenity beach to be cleaned all year round.
Seagull sanctuary at Wolfgat.			High	Clean amenity beaches all year round, other areas to be cleaned prior to and during holiday season or if there are medium to heavy deposits of oil.
Beach resort at Macassar.			Medium	Rocky cliffs to be left to natural cleaning.
Sandstone rocky cliffs at Swartklip				
F: SECURITY AREA <u>RD Munitions and Heartland Leasing</u> (previously Somchem and AECI) (Helderberg Marine Protected Area)				
Sandy beach enclosed by security fence. Clearance required prior to entry. Recently designated as a Marine Protected Area managed by the City of Cape Town Metro.			Medium	Clean medium to heavy deposits of oil, under supervision of MPA manager.
Eerste River: mouth opens seasonally	Medium	Mouth to be closed as shown in Map 3P. Inform CSRM Branch: CoCT	Medium	Should oil enter the river, the DEA Shore Controller must be advised and clean-up should be undertaken under supervision.
Lourens River: mouth opens seasonally.	Medium	Mouth to be closed as in Map 3Q. Inform CSRM Branch: CoCT	Medium	Should oil enter the river, the DEA Shore Controller must be advised and clean-up should be undertaken under supervision.

SITE: <u>Responsible Authority</u> <u>Pertinent Detail</u>	Priority Rating	<u>PROTECTION</u> Action	Priority Rating	<u>CLEAN-UP</u> Action
A5: FALSE BAY COASTLINE (cont): STRAND / GORDONS BAY/ KOEELBAAI <u>City of Cape Town Metro</u> Amenity beach between Lourens River mouth and Harmoniestrand with rocky outcrops in places. Popular amenity area at Strand. Harbour Island Marina: managed by Homeowners Association. Slipway managed by City of Cape Town. Amenity beaches on either side of Gordons Bay Harbour with rocks in places on south side. Inaccessible rocky coast between amenity beach and Platbank and Steenbras River Mouth Steenbras River: mouth rocky, tidal, popular fishing area. Rocky coastline. Amenity sandy beaches at Boskloofpunt and Koëlbaai. Tidal pool.	High High High	Place bubble barrier or floating boom (not available on site) across mouth of harbour as shown in Map 3R. Implement Harbour Oil Spill Contingency Plan (not yet available). Mouth to be protected as shown in Map 3T. Inform CSRM Branch: CoCT	High High High Low High Medium High	Clean amenity beaches all year round, other areas to be cleaned prior to and during holiday season or if there are medium to heavy deposits of oil. Rocky cliffs to be left to natural cleaning Contain oil by means of booms and remove using skimmers or sorbent material. Clean amenity beaches all year round. Rocky areas to be cleaned of medium to heavy deposits of oil. Inaccessible rocky areas to be left to natural cleaning. Should oil enter the river, the DEA Shore Controller should be advised immediately and clean-up should be undertaken under supervision. Rocky areas to be left to natural cleaning unless there is a medium to heavy deposit of oil. Amenity beaches and tidal pool to be cleaned all year round.

SITE: <u>Responsible Authority</u> <u>Pertinent Detail</u>	<u>PROTECTION</u> Priority Rating Action		<u>CLEAN-UP</u> Priority Rating Action	
H3: GORDONS BAY HARBOUR DAFF Gordons Bay harbour: contains fishing boats, yachts and Naval Academy	High	Harbour to be protected using bubble barrier or floating boom. (Not available on site, need to be sourced from DEA). See Map 3S. Harbour should have an Oil Spill Contingency Plan which would need to be implemented.	High	Contain oil by means of booms and remove using skimmers or sorbent materials.

MAP 3A

KOEBERG POWER STATION



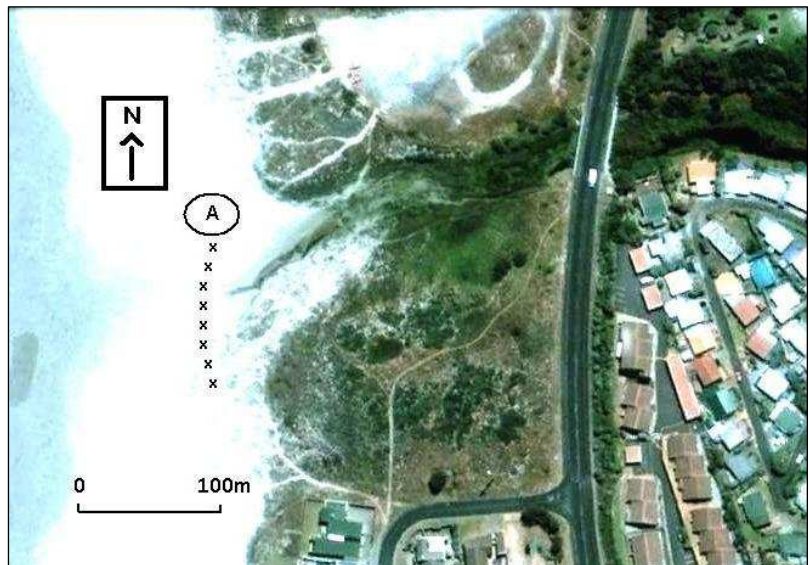
Cooling water for the Koeberg Nuclear Power Station is provided via the intake basin, and is essential for the safe and efficient operation of the power station. Should oil enter the basin, the power plant would have to be shut down.

ESKOM will implement their Oil Spill Contingency Plan, which involves the placement of a floating boom as shown in the figure above. In the event of an oil spill, it is essential that the Power Station be alerted immediately of any threats of pollution.

The Koeberg Nuclear Power Station is a high security restricted area which extends along the beach as well as 2 km out to sea.

MAP 3B**SOUT RIVER (MELKBOS)****MOUTH CONDITONS**

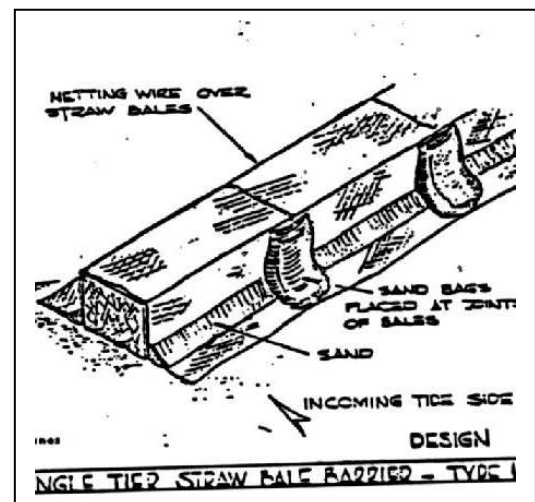
The mouth of this river is usually closed, but could open during heavy winter rains. The Ouskip Caravan Park is located just upstream of the mouth and the road also crosses just above the beach. If the mouth is closed, the height of the sand barrier may have to be raised to prevent overtopping by the sea during high spring tide conditions. In the event of the mouth being open, either of the following procedures will be required.

**CONSTRUCTION OF SAND BARRIER**

Sand should be moved, by means of a front end loader, into the position marked XXX, until a stable sand barrier has been created. Care should be taken not to disturb the vegetated sand dunes on either side of the river.

CONSTRUCTION OF STRAW BALE BARRIER

Lay straw bales tightly end to end, commencing at the middle of the barrier and working outwards. Starting at one end, unroll 1.8m wide 50mm mesh wire netting along the length of the barrier. If more than one roll of wire netting is required, provide a 1m overlap. Place wire netting around bales as in sketch. Place bags filled with sand on the wire netting, on either side of the barrier where the straw bales abut and as close to the bales as possible. The bags can be of plastic or hessian, and can be completely filled. The sand for filling them must not be obtained from vegetated sand dunes. The barrier should be laid in the position marked XXX. While either barrier is in position, it is to be inspected regularly, with any repairs being effected immediately. Alternatively, a shore sealing flotation boom could be deployed if available.

**RESPONSE TIME**

It is estimated that a front-end loader will take 3 hours to raise the sand mound by 0,5m. The straw bale barrier is estimated to take 18 man-hours to construct once all the materials are on site.

MAP 3C

DIEP RIVER (MILNERTON LAGOON)**MOUTH CONDITIONS**

The Milnerton Lagoon is tidal and experiences a strong flow at its mouth. It is permanently open to the sea, due to the increased and permanent treated effluent from the Potsdam Waste Water Treatment Works as well as from the storm water drainage infrastructure in Milnerton. The Woodbridge Island residential development is located in the lagoon area.

BOOM DEPLOYMENT

A possible boom site has been identified between the old and the new road bridge at points AB on the map, where the currents, under normal conditions, are weak enough. This will effectively prevent an oil spill from entering the sensitive upper reaches of the lagoon.

The river is approximately 100 meters wide at this point and has a mudflat bank on its eastern side which extends approximately midway across the river. Both sides of the river banks have suitable slopes to seal contained oil using shore booms.

The use of three 25m sea/port booms and two 10m shore booms will be adequate to span this section of the river. Monitor the tidal conditions so that the booms are deployed on a rising tide or when the tide is high enough to float the boom sections across the river. The mudflats are exposed at low tide and it is impossible to pull the booms across if the tidal conditions are too low.

The river may flow strongly at times during the winter season. In this case it is not advisable to deploy booms until the flooding has subsided. The continuous downstream flow will prevent any oil from penetrating the lagoon mouth. Monitor these conditions closely as it may be necessary to deploy the equipment once the flow has subsided. There is adequate space on both sides of the lagoon to set up skimming and storage facilities if required.

MAP 3D**BLACK RIVER****MOUTH CONDITIONS**

This river is canalised and the mouth is usually open as a result of urban stormwater and final effluent from the Athlone WWTW. The river is polluted and protection measures are not a high priority.

PROTECTION MEASURES

If resources are available, it is suggested that a floating barrier be placed across the canal in the vicinity of the road bridge.

MAP 3E

ROBBEN ISLAND HARBOUR



A floating boom or bubble barrier should be deployed across the entrance to the harbour. These are not currently available on the Island and will need to be sourced from DEA. The Harbour should have its own Contingency Plan which would need to be implemented.

Oil should be contained using booms, and removed using skimmers or sorbent materials. Harbour walls and jetties to be cleaned using high pressure seawater jets, and the released oil to be recovered.

MAP 3F

TABLE BAY HARBOUR



A Tier 1 oil spill occurring within the Port of Cape Town and approaches will be dealt with in accordance with the TNPA Oil Spill Contingency Plan for Port of Cape Town. The Port Plan lists the actions that are to be taken and the Port has equipment in the form of booms, skimmers etc to initiate clean-up. If the response is beyond the capability of the Port, a Tier 2 or Tier 3 response will be initiated through SAMSA and DEA. TNPA requires that all persons within a port must take all reasonable steps to prevent, minimise, mitigate and combat any oil pollution or damage to the environment.

A series of bubble barriers is permanently in place across the entrances to the various basins. Refer to the TNPA Oil Spill Contingency Plan for the Port of Cape Town.

MAP 3G

GRANGER BAY HARBOUR



In the event of a threat of oil entering the harbour, a floating boom or bubble barrier is to be installed across the entrance. An air compressor(s) which will feed a perforated submarine air hose, is to be positioned at the end of the western breakwater. This air hose is to be secured in the position marked on the map.

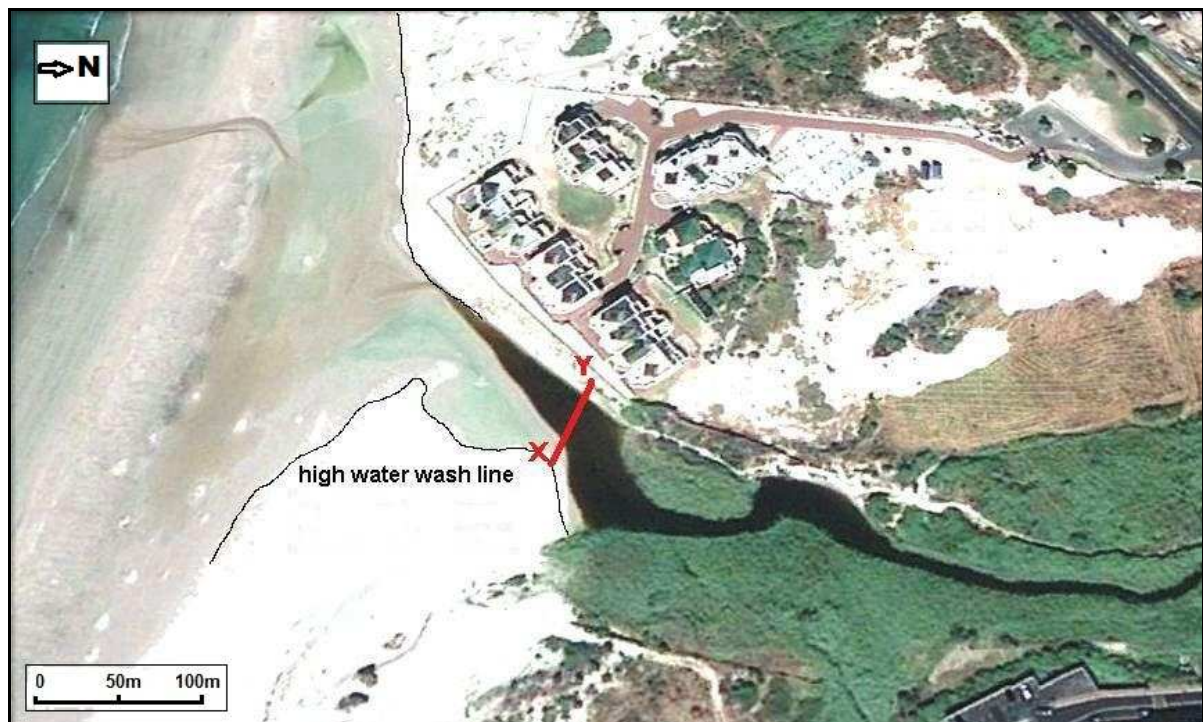
At present, there is no boom or bubble barrier available on site. A boom will need to be sourced from DEA or another service provider.

A joint Oil Spill Contingency Plan for the Granger Bay Harbour should be compiled by the two operators within the Harbour, namely the Cape Peninsula University of Technology (CPUT) and the Marina Water Club.

CPUT has indicated that in the absence of any protection for the harbour, they would protect their basin and slipway with a boom positioned at XY marked on the map.

MAP 3H

DISA RIVER (HOUT BAY)



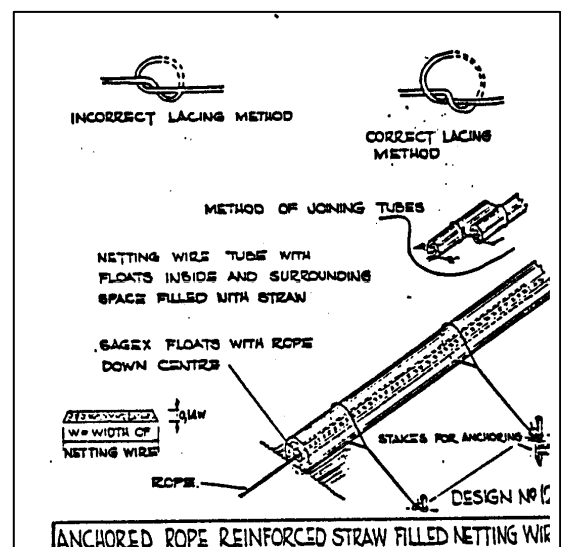
MOUTH CONDITIONS

The mouth of this river is usually open during winter and closed in the summer months, with overwash occurring during high spring tides. If available, a boom can be placed at position XY, or a straw bale barrier can be erected as illustrated below.

ASSEMBLY OF STRAW FILLED NETTING WIRE TUBE BARRIER

Roll out 50m of 1.8m wide 50mm mesh netting wire. Place bales of straw at 1.3m spacing on netting wire. Roll out 60m of 20mm diameter rope and thread purse seine net floats on rope for 40m. Starting at centre of barrier and working outwards, cut first bale of straw open and spread it to cover the full width of netting wire and 1.3m along its length. Similarly cut open a further two bales of straw on either side, and spread straw. Place rope with floatation attached on top of pile of straw. At centre bring edges of netting wire together, ensuring that the floatation is in the centre of the tube and lace with 2mm cordage using the correct lacing method.

A netting needle (tattooing shuttle) made from a piece of box wood will make lacing easier. Continue as before and



when ends are reached, lace them closed. If correctly packed, barrier will be about 40m long. The sequence of operations is suggested to limit the amount of straw that may be blown away by the wind, if present.

ERECTION OF BARRIER

Select end anchor points for the barrier and drive in a stake until really firm, on or above the high water overwash line at the location shown by XY in on the map, and make each end of the anchor rope of the barrier fast to these stakes, allowing a small amount of slack (to limit excessive tension). If barrier does not span the distance between the high water overwash lines on each bank, a mound of sand can be shovelled into position to prevent water washing around the ends of the barrier.

The barrier is to be continually inspected and any repairs needed, to be effected immediately.

RESPONSE TIME

With all materials on site the barrier will take 6 man-hours to assemble. Once assembled, the barrier can be deployed within minutes. Actual deployment should be delayed until the last hours. This is recommended as the straw becomes saturated with water in time, thus losing its oil absorption capability.

MAP 3I

HOUT BAY HARBOUR



In the event of a threat of oil entering the harbour, a bubble barrier is to be installed across the entrance. An air compressor(s), which will feed a perforated submarine air hose, is to be positioned at the end of the northern breakwater, at point C. This air hose is to be secured in the position marked on the map. The harbour is to implement their Oil Spill Contingency Plan, which has yet to be compiled.

At present, there is no bubble barrier available on site. An alternative option is to place a floating boom across the entrance to the harbour. This will need to be sourced from DEA or another service provider.

MAP 3J

NOORDHOEK/WILDEVOELVLEI

**MOUTH CONDITIONS**

This system receives moderate daily volumes of final treated effluent from the Wildevoelvlei WWTW, so the mouth is frequently open to the sea. Shallow backshore tidal lagoons occur along the Noordhoek Beach. These are generally inundated during spring tides and winter storms and possibly from groundwater seepage entering the lagoons from the landward end of the beach. Due to their sensitivity, it is important that mitigation measures do not result in the flow from the Wildevoelvlei outlet entering these lagoons.

BARRIER LOCATION

The objective is to build a single, tier, straw bale barrier at the position marked XY to prevent the possibility of oil being washed into the tidal lagoons at the back of the beach.

CONSTRUCTION OF SINGLE TIER STRAW BALE BARRIER

Lay straw bales tightly end to end, approximately along the average spring tide high water line denoted by the XXX's in the sketch. Unroll lengths of 1.8m wide 50mm mesh wire netting, allowing 1m overlap at the start of each new roll. Place wire netting around bales as in sketch (pg 69). Place bags filled with sand on the wire netting on either side of the barrier where the straw bales abut and as close to the bales as possible. These bags should be plastic or hessian and can be filled with sand taken from the sea side of the barrier location. While the barrier is in position it is to be continually inspected and repairs needed, are to be effected immediately.

RESPONSE TIME

The recommended barrier is 3350m in length and is likely to take 400 man-hours to erect, once all materials are on site.

MAP 3K

SHUSTER RIVER (SCARBOROUGH)**MOUTH CONDITIONS**

This is a virtually pristine stream which must be protected from oil spill impacts. It dries out for virtually 6 months of the year (summer), but overwash may take place into the lagoon. The lagoon area is used by beachgoers.

BARRIER LOCATION

The objective is to build a straw bale barrier in position XY, to prevent the possibility of oil being washed into less dynamic sections of the estuary.

CONSTRUCTION OF STRAW BALE BARRIERS

Lay straw bales tightly end to end, commencing at the middle of the barrier and working outwards. Starting at one end, unroll 1.8m wide 50mm mesh wire netting along the length of the barrier. If more than one roll of wire netting is required provide a 1m overlap. Place wire netting around bales as in sketch (pg 69). Place bags filled with sand on the wire netting on either side of the barrier where the straw bales abut and as close to the bales as possible. The bags can be of plastic or hessian, and can be completely filled. The sand for filling them must not be obtained from vegetated sand dunes.

OUTFLOW PIPES

No outflow pipes will be required. Should the river level rise, the excess water can be allowed to escape, preferably around the south-west end of the barrier to prevent erosion of the vegetated sand dune at the north-east end. The barrier is to be continually inspected and any repairs to be effected immediately.

RESPONSE TIME

The recommended barrier is 60m in length and is likely to take 10 man-hours to erect, once all materials are on site.

MAP 3L

SIMONSTOWN NAVAL DOCKS



In order to prevent large quantities of oil entering the Docks, the South African Navy will deploy their boom across the entrance. Any oil spill occurring within the harbour will be contained and removed using skimmers or sorbent material. These actions will be undertaken according to their standard operating procedures.

The Naval, Cape Marlin and Tuna Club and False Bay Yacht Club anchorage in the bay west of the Naval Docks will be impossible to protect under normal prevailing sea conditions. Where possible, remove boats from water. Under calm conditions, it may be possible to deploy deflection booms.

MAP 3M

KALK BAY HARBOUR



In the event of a threat of oil entering the harbour, a bubble barrier is to be installed across the entrance. An air compressor(s), which will feed a perforated submarine air hose, is to be positioned at the end of the northern breakwater. This air hose is to be secured in the position marked on the map. The harbour is to implement their Oil Spill Contingency Plan, which has yet to be compiled.

At present, there is no bubble barrier available on site. An alternative option is to place a floating boom across the entrance to the harbour. This will need to be sourced from DEA or another service provider.

MAP 3N

ZANDVLEI CANAL**MOUTH CONDITIONS**

This estuarine system is ecologically sensitive and is also used for recreation purposes. The mouth is manipulated by the City (Roads and Stormwater operational staff under the guidance of the Catchment, Stormwater and River Management Branch) by creating/removing a large sand barrier in front of the mouth. In this way water levels are balanced to ensure saline intrusion into the estuary, to provide adequate depth for recreational users (e.g. sailors) and to prevent flooding of shoreline properties in the Marina da Gama area.

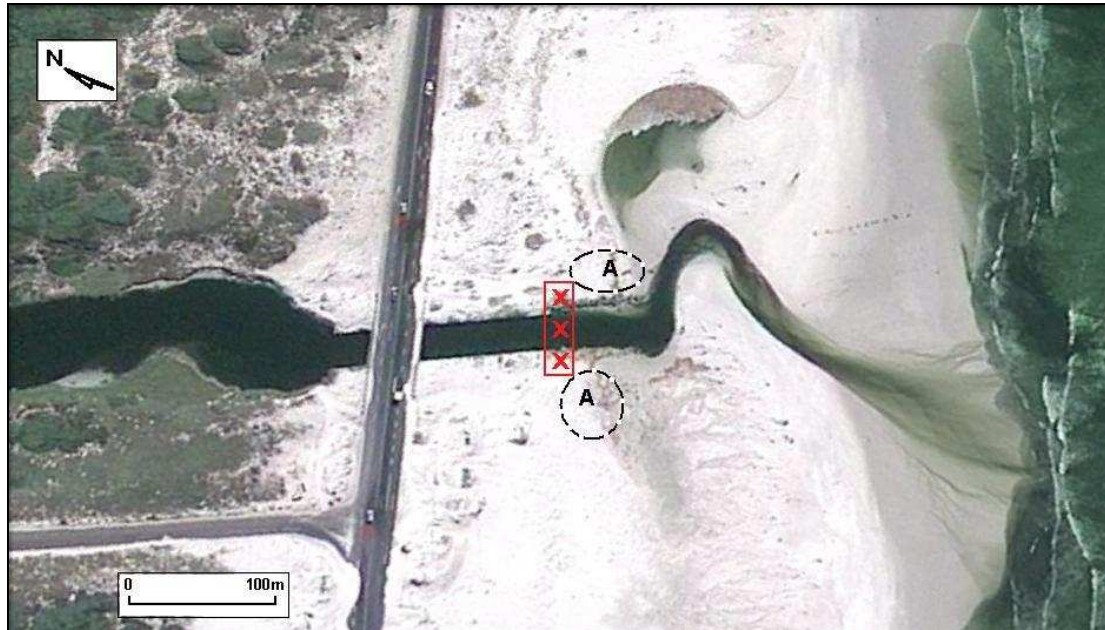
Strong winter flows from three major rivers feeding the estuary necessitate careful management of this mouth. When the mouth is open, spring tides wash strongly into the system, and this could easily carry oil into the estuary. While a berm in front of the mouth would certainly be effective in preventing this pollution, it would require careful management to avoid flooding of the low-lying properties.

CONSTRUCTION OF SAND BARRIER

Using a front-end loader, move sand from position A into the position marked XXX, until a stable barrier has been created. Care should be taken not to disturb the vegetated sand dune to the east of the mouth. If, during high flow conditions, the water level rises to unacceptable levels in the vlei area, overflow pipes must be positioned in the barrier in order to release some of this water. While the barrier is in position, it is to be inspected regularly, with any repairs being effected immediately. At certain times of the year, there may not be enough sand available, in which case a floating barrier should be deployed.

RESPONSE TIME

It is estimated that a front-end loader will take 2 1/2 hours to raise the sand barrier by 1m.

MAP 3(O)**ZEEKOEIVLEI CANAL****MOUTH CONDITIONS**

The canal mouth is usually open due to large daily volumes of final treated effluent from Cape Flats WWTW. Outlet to the sea has shown considerable westerly migration, and Baden Powell Drive, which is located very close to the outlet, is critical infrastructure that could be impacted. If it is apparent that the tide is likely to penetrate beyond the bridge, the following procedure will be required.

CONSTRUCTION OF SAND BARRIER

Using a front-end loader or bulldozer, move sand from position A into the position marked XXX, until a stable barrier has been created. Care should be taken not to disturb the sand dunes in the surrounding area. It will be necessary to install overflow pipes above the high water mark on the sand barrier in order to maintain the flow from the sewage works. While the barrier is in position, it is to be inspected regularly, with any repairs needed, to be effected immediately.

RESPONSE TIME

It is estimated that a front-end loader will take 3 hours to raise the sand barrier to 1 m.

MAP 3P**EERSTE RIVER****MOUTH CONDITIONS**

This river receives large daily volumes of final treated effluent from Macassar WWTW, and forms an elongated backshore lagoon during the summer months. The outlet to sea has shown considerable westerly migration. Seawater washes over the sandspit into the lagoon during high spring tides. During these periods, a straw bale barrier should be laid where the sandspit is low. The mouth usually breaches the sandspit in a variable position wherever the sandspit is lowest, after the first winter rains, or is sometimes artificially breached by management. During this period a sand barrier should be constructed.

CONSTRUCTION OF STRAW BALE BARRIERS

See page 69 for details on construction of straw bale barrier.

CONSTRUCTION OF SAND BARRIER

Using a front-end loader, sand is to be removed from position A and placed in the river mouth so as to form a stable sand barrier. Care should be taken not to remove sand from the sandspit or surrounding dunes.

RESPONSE TIME

The time required to construct a sand barrier will be dependent on the width and position of the mouth. Six man-hours will be required for each 50 metres of straw bale barrier.

MAP 3Q**LOURENS RIVER****MOUTH CONDITIONS**

The mouth is generally closed during the summer months with the sandbar being breached at its lowest point during winter months. In the event of the mouth being open, the following procedure will be required.

CONSTRUCTION OF SAND BARRIER

Using a front end loader or bulldozer, sand should be moved from position A, into a position across the mouth, until a stable barrier is formed. Care should be taken not to disturb the sand dunes in the area. While the barrier is in position, it is to be inspected regularly with any repairs needed, to be effected immediately. At certain times of the year, there may not be enough sand available, in which case a barrier will need to be constructed using straw bales. Shore sealing booms could also be used if available.

HEARTLAND (AECI) MAIN DRAIN

This drain flows across the beach to the west of the river mouth. During high spring tides, straw bales must be placed on the seaward edge of the road bridge to prevent oil entering the vegetated area above the bridge.

MAP 3R**HARBOUR ISLAND MARINA (Gordon's Bay)**

This Marina is a residential property development managed by the Home Owners Association. There is a slipway within the harbour, which falls under the jurisdiction of the City of Cape Town Metro. There is no Oil Spill Contingency Plan in place for the harbour development, and there are no booms on site.

In order to protect the Marina, it is suggested that a floating barrier be placed across the entrance to the harbour. Booms will have to be sourced from DEA or other service providers. Failing this, individual basins could be protected using floating barriers or sorbent booms.

MAP 3S

GORDONS BAY HARBOUR

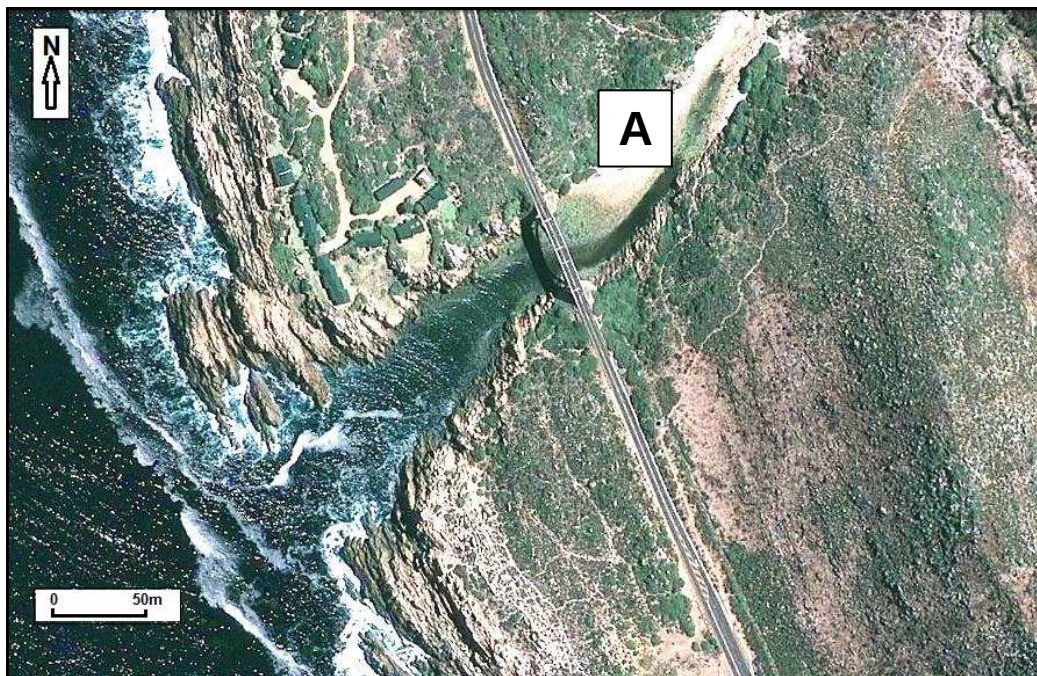


In the event of a threat of oil entering the harbour, a bubble barrier is to be installed across the entrance. An air compressor(s), which will feed a perforated submarine air hose, is to be positioned at the end of the eastern breakwater. This air hose is to be secured in the position marked on the map. As the breakwater falls under the jurisdiction of the Naval College, clearance will need to be obtained for this course of action. The harbour is to implement their Oil Spill Contingency Plan, which has yet to be compiled.

At present, there is no bubble barrier available on site. An alternative option is to place a floating boom across the entrance to the harbour. This will need to be sourced from DEA or another service provider.

MAP 3T

STEENBRAS RIVER

**MOUTH CONDITIONS**

The mouth is a rocky tidal inlet and is permanently open. Closure of the mouth is not possible. Tidal penetration does not extend beyond point A.

PROTECTION MEASURES

During calm conditions, a floating barrier could be deployed in the vicinity of the road bridge. If this is not possible, the pebble beaches should be protected using straw bale barriers.

11. WASTE MANAGEMENT

During the clean-up process, large amounts of oily waste will be generated. Methods for the collection, transportation and temporary storage of this oil can be found in Addendum C. Decisions regarding the final disposal of this oil will be made by the Department of Environmental Affairs: Pollution and Waste Management, and the DEA Shore Controller.

Waste management will need to take into account various streams of oily water and solid waste. Waste contractors will be required to deal with waste requiring special disposal. Arrangements need to be made ahead of time with contractors, to establish their suitability and capabilities for removing oily waste in an environmentally acceptable manner. Response teams need to be fully briefed on how to deal with different types of oily waste. Specially marked, separate containers/skips for oily waste separation and removal need to be provided.

The only suitable disposal site for significant quantities of oil and oily waste is situated at Vissershok, as the Swartklip site has been closed. The Vissershok site is preferred as it is an old established site, with a capacity for volumes that may normally be encountered. The Swartklip site may be available as a temporary storage and transfer station for oil spills occurring in False Bay. These sites fall under the jurisdiction of the City of Cape Town and any intention of disposal of oil should be directed to the Director: Solid Waste.

Fuel Firing Services is involved in the recycling of liquid waste oil, with a depot at the Port of Cape Town and their plant at Vissershok. Their oil storage tanks may be available for storing collected oil. The ROSE Foundation can assist with the co-ordination of recycling of waste oil. Their contact details are provided at the end of Section 13.

The oil refinery in Milnerton can be approached for disposal of liquid waste oil that is not contaminated with sand or debris. They do however have strict limitations on what type of oils they can accept.

12. EQUIPMENT - MATERIAL – MANPOWER

12.1 DEPARTMENTAL EQUIPMENT

The Department of Environmental Affairs manages the national equipment stocks for the combating of oil pollution. This equipment consists of:

- K9 surveillance aircraft on contract
- inshore patrol vessels fitted with dispersant spraying equipment and breaker boards (managed by DAFF)
- an offshore patrol vessel equipped with dispersant tanks (managed by DAFF)
- Seaguardian and Shoreguardian booms, a Portboom and Riverboom
- Skimmers
- Floating tank and fast tanks
- Inflatable boat
- Drum vacuum unit
- High pressure water washer

This equipment is held at Paarden Island in Cape Town but can be mobilised at short notice. A full list of equipment is provided in Appendix IV.

12.2 TRANSNET NATIONAL PORTS AUTHORITY EQUIPMENT

The TNPA has oil pollution equipment stocks at all the major ports. This includes booms, skimmers, storage tanks etc. This equipment can be commissioned during emergency situations. The nearest Harbour should be contacted to establish availability of equipment. A full list of this equipment is provided in the National Plan.

12.3 SOUTH AFRICAN PETROLEUM INDUSTRY

The Oil Industry has various booms, skimmers and other equipment stored at various locations around the country. SAPIA should be contacted to establish the availability of this equipment. (See contact details in Section 13.) A full list of the equipment held by SAPIA is provided in the National Plan.

12.4 COMMERCIAL CONTRACTORS

Various contractors such as Smit Amandla Marine, OPCSA, Drizit, ABZorbit, have equipment available at various locations. This equipment can be hired on contract, and skilled staff are available for deployment. The contact numbers for these organisations are provided at the end of Section 13.

12.5 LOCAL AUTHORITY EQUIPMENT AND MANPOWER

The equipment and materials required for beach clean-up operations by local authorities are for the most part not specifically for oil spills.

The following plant and machinery is likely to be required:

- Bulldozers
- Front-end loaders
- Low bed transporters
- Excavator and tractor loader backhoes
- Self loading trucks / self elevating scrapers
- Articulated dump trucks
- Tractors 2x4
- Tractors 4x4
- Platform truck and crane
- Tip trucks
- Water trucks
- Open trucks
- LDV's 4x4
- LDV's 2x4
- Vacuum tankers

Materials and equipment as listed below will also be useful:

- Portable Centrifugal pumps
- Sludge pumps
- Straw bales
- Petrol generator and lighting sets
- 200 litre drums and bins
- Wire mesh - diamond
- Plastic and hessian bags
- PVC sheeting
- Spades

In terms of manpower, supervisors, operators and labourers will also be required.

Where requirements for these resources exceed in-house availability, private local contractors can be approached. Local authorities should ensure that they know where these resources can be supplied.

13. TELEPHONE NUMBERS

13.1 PRIORITY NUMBERS

Organisation	Office Tel	Fax	Cell	Email
DEPARTMENT OF ENVIRONMENTAL AFFAIRS: MCPM				
Pollution Officers:				
Dr Yazeed Petersen (DD)	021 819 2450	021 819 2445	083 530 3127	ypeterson@environment.gov.za
Ms Albertus-Stanley (AD)	021 819 2457	021 819 2445	072 173 6234	feroza@environment.gov.za
Pollution Officer				
Equipment (Paarden Is.): Teboho Ntje	021 510 3957	021 510 3957	078 200 8442	tntje@environment.gov.za
SAMSA				
SAMSA: WESTERN REGION				
Regional Manager: Capt Dave Colly	021 421 6170	021 419 0730 086 616 4104	083 412 8861	dcolly@samsa.org.za
Cape Town: Capt G Louw (PO)	021 421 6170	021 419 0730	083 227 0721	glouw@samsa.org.za
Mr. Barry Jubber (DPO)		086 696 9074	082 6776630	bjubber@samsa.org.za
Saldanha Bay:				
Mr. Martin Slabber	022 714 1612	022 714 3635 086 693 7084	082 789 6764	mslabber@samsa.org.za
Port Nolloth: Mr. Justin Coraizen	027 851 7695	027 851 7699	082 386 2141	jcoraizen@samsa.org.za
Centre of Sea Watch: Maritime Rescue Co-ordination Centre MRCC				
Head: Mr. Karl Otto	021 938 3317	021 938 3319 086 654 4742	082 812 2991	kotto@samsa.org.za
Capt Ravi Naicker	021 938 3310	021 938 3319	082 768 8401	rnaicker@samsa.org.za
Duty Controller: all hours	021 938 3300	021 938 3309		

Organisation	Office Tel	Fax	Cell	Email
SAMSA: Head Office: Head: Centre of Ships. Mr. Sobantu Tilayi Mr. Francis Chilalika(Operations Manager)	012 366 2600	012 366 2601 086 590 9056 086 615 0886	071 608 6480 082 789 6802	stilayi@samsa.org.za fchilalika@samsa.org.za
SAMSA Head Office CEO –	012 366 2600	012 366 2601		
SAMSA: SOUTHERN REGION Regional Manager: Capt N. Campbell	041 582 2138	041 582 2130 0866 157489	083 309 6053	ncampbell@samsa.org.za
Port Elizabeth: Mr B Colenutt (PO) Capt Daron Burgess (DPO)	041 585 0051	041 582 1213 0866 942707	082 445 3167 082 374 7942	bcolenutt@samsa.org.za dburgess@samsa.org.za
East London: Capt P Kroon (PO)	043 722 4120	043 722 2264 0866 158659	082 445 3166	pkroon@samsa.org.za
Mossel Bay: Mr. Dave Manley	044 690 4201	044 691 1206 0866163370	082 477 1813	dmanley@samsa.org.za
SAMSA: EASTERN REGION. Regional Manager: Capt. Saroor Ali	031 307 1501	031 306 4983 0866 153417	071 686 9593	sali@samsa.org.za
Durban: Mr. Grant Conway	031 307 1501	031 306 4983 0866 157055	082 449 6350	gconway@samsa.org.za
Richard's Bay: Mr. Thandi Mehlo	035 788 0068	035 788 0067	082 492 4404	tmehlo@samsa.org.za
CITY OF CAPE TOWN: Disaster Operations Centre: Cape Town				
Duty Officer: All hours Alternate: 107 PECC	0800 911 4357 0800 112 4357 107 (from Telkom line) 021 480 7700 (from Cell)	021 597 5025	DisasterOperations.Centre@capetown.gov.za	

13.2 RESPONSIBLE LOCAL AUTHORITIES

Organisation	Office Tel	Fax	Cell	Email
CITY OF CAPE TOWN METRO MUNICIPALITY: 021 400 1111 (switchboard)				
Greg Pillay: Head Disaster Management Secretary	021 597 5012 021 597 5007	021 597 5010	084 711 7723	greg.pillay@capetown.gov.za
Franz Schlaphoff: Disaster Management	021 597 5019	021 597 5010	084 462 2013	franz.schlaphoff@capetown.gov.za
Chris Konings: Disaster Management	021 597 5015	021 597 5010	084 711 7756	Chris.Konings@capetown.gov.za
Koos Retief: Biodiversity Management	021 550 1086	021 550 1003	082 788 6987	koos.retief@capetown.gov.za
Darryl Colenbrander: Coastal Management	021 487 2355	021 487 2255	0823123443	darryl.colenbrander@capetown.gov.za
Barry Wood: Catchment, Stormwater and River Management Branch.	021 400 1204/5	021 400 4554	084 900 0916	barry.wood@capetown.gov.za
Jaco Uys: MPA Manager	021 851 6982	021 851 2148	084 645 8810	Jacobus.Uys@capetown.gov.za
Sakhile Tsotsobe: Sport and Recreation	021 400 4638	086 537 7418	072 626 3669	sakhile.tsotsobe@capetown.gov.za
Claire McKinnon: Manager Solid Waste Eddie Abrahams: Solid Waste	021 400 2822 021 514 3478	021 400 2620 021 514 3491	082 600 6648 084 220 0049	claire.mckinnon@capetown.gov.za EdmundC.Abrahams@capetown.gov.za
KOEBERG NUCLEAR POWER STATION: ESKOM				
Emergency Control (24 hours) Shift Manager: Gary Thomson Martin Saaymans: Emergency Manager	021 550 4100 / 5840 021 950 6111 021 950 6111/6	021 950 6150 021 950 6150	083 450 4574 072 148 9958	Gary.Thomson@eskom.co.za martin.saaymans@eskom.co.za

Organisation	Office Tel	Fax	Cell	Email
TRANSNET NATIONAL PORTS AUTHORITY				
Port Control: (all hours)	021 449 2805			
Lyndon Metcalf: SHEQ	021 449 2156	021 449 2085	082 405 2811	Lyndon.Metcalf@transnet.net
Henry Kemp: Pollution	021 449 2484	021 449 2085	073 148 1421	Henry.Kemp@transnet.net
Dennis Mqadi: Harbour Master	021 449 5763	021 449 2091	084 444 8758	Dennis.Mqadi@transnet.net
Michael Melato: Pollution	021 449 2152	021 449 2085	082 517 5561	Michael.Melato@transnet.net
V & A WATERFRONT				
Steven Bentley: Harbour Master	021 408 7500	086 679 3142	083 293 4616	sbentley@waterfront.co.za
GRANGER BAY				
Wilfred Prince: CPUT	021 440 5766	021 419 8050	072 138 1034	princew@cput.ac.za
Fariel Sylvester: Water Club	021 425 4256	086 660 2482	082 569 0362	admin@mywaterclub.co.za
ROBBEN ISLAND MUSEUM				
Anthony Thomas: Harbour Master	021 409 5128		083 642 1546	anthonyt@robbenisland.org
S A NAVY Port Control (all hours)	021 787 3728			
WO Haywood (Port Operations)	021 787 3728	021 787 4063	083 523 8597	haywoodGuy@yahoo.com debbie.loubser@sanavy.co.za
DAFF FISHING HARBOURS				
Hout Bay: H. Stevens	021 790 1440	021 790 1792	082 771 8892	HendrikS@daff.gov.za
Kalk Bay: Pat Stacey	021 788 8313	021 788 1038	082 829 3010	PatricS@daff.gov.za
Gordon's Bay: H Stevens	021 856 1482	021 856 5222	082 771 8892	HendrikS@daff.gov.za

Organisation	Office Tel	Fax	Cell	Email
SANPARKS All hours				
Justin Buchmann: Senior Ranger, TMNP	021 780 9100	021 780 9525	086 110 6417	justinbu@sanparks.org
Paul Sieben: Marine Area Manager, TMNP	021 786 5656	021 786 4507	082 905 4661	pauls@sanparks.org
Danielle Bowen: Marine Ranger	021 786 5656	021 786 4507	082 674 3578	danielb@sanparks.org
Bernacia Andreas: Marine Ranger	021 786 5656	021 786 4507	076 541 4117	Bernacia@sanparks.org
Boulders	021 786 2329	021 786 5786	All hours	moniquer@sanparks.org
Monique Ruthenberg: Simonstown	021 786 5787			
Amos Lombo: Cape Point	021 780 9100	086 525 2781	All hours	amosl@sanparks.org
Mathabatha Matjila: Cape Point	021 780 9100	086 5252 763	All hours	mathabatham@sanparks.org
Hilton Blumerus: Senior Ranger, Oudekraal	021 422 1601	021 4233 106	083 785 4773	hiltonb@sanparks.org
Jannie du Plessis	021 689 4441	021 689 4461	082 346 7191	jannied@saparks.org
Leighan Mossop: Noordhoek, Kommetjie	021 789 2457	021 789 2455		leighanm@sanparks.org
HEARTLAND LEASING (previously AECI)				
Johan Truter (All hours)	021 852 1111	021 852 1901	083 641 1642	johantr@heartland.co.za
RHEIN-METALL DENEL MUNITIONS (previously Somchem)				
Stephen Mitchell	021 850 2911	021 850 2487	083 676 5434	smitchell@nashuaisp.co.za
HARBOUR ISLAND DEVELOPMENT (Gordons Bay) and GORDON'S BAY BOAT ANGLING CLUB				
Harbour Master: Louis Siewertszen	021 856 1683	021 856 1683	082 874 1424	club@gbbac.co.za
Chairman: Paul Dobson	021 856 5125	021 856 5125	082 451 3064	paulmarion@telkomsa.net

13.3 RELEVANT GOVERNMENT DEPARTMENTS

Organisation	Office Tel	Fax	Cell	Email
WEATHER FORECAST OFFICE: Cape Town 082 231 1640 or 082 231 1645 all hours				
DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES (DAFF)				
Monitoring, Compliance and Surveillance Unit				
Keith Govender Pollution Combating Vessels	021 402 3079	021 402 3113	084 597 1147	KeithG@daff.gov.za
Fisheries Control Officers (DAFF) Mqondisi Ngadlala (Director)	021 402 3439	021 402 3433	082 379 3429	MqondisiN@daff.gov.za
Hout Bay	021 790 2530	021 790 1792		
Kommetjie	021 783 2295	021 783 5853		
Kalk Bay	021 788 8313	021 788 1038		
Gordon's Bay	021 856 1482	021 856 5222		
Fishing Harbours: Technical Manager Desmond Marinus	021 402 3337	021 402 3690	084 488 8844	DesmondM@daff.gov.za
W. CAPE PROVINCIAL GOVERNMENT				
Jackson Rikhotso (Disaster Management)	021 937 0806	021 931 9031	083 277 4221	jrikhot@pgwc.gov.za
Lavenia Nichols (Disaster Management)	021 937 0806	021 931 9031	074 262 5151	lnichols@pgwc.gov.za
Zain Jumat (DEA&DP: Coastal Environment)	021 483 2889	021 483 8326	079 523 3715	zjumat@pgwc.gov.za
CAPE NATURE				
Kas Hamann	021 659 3466		082 572 7205	khamman@capenature.co.za
Fanie Bekker	021 659 3468	021 659 3467	082 553 3476	fbekker@capenature.co.za

Pierre de Villiers (Estuaries)	021 866 8023	021 866 1523 086 529 4983	083 236 2924	estuaries@capenature.co.za
Terence Coller: (Betty's Bay MPA)	028 272 9829	086 605 8517	082 453 0835	terence@capenature.co.za
Johan Visagie : (Dassen Island)			082 745 9421	dassenisland@gmail.com

13.4 SCIENTIFIC ADVISORY PERSONNEL AND I&AP'S

SAPIA: Anton Moldan	021 671 8460	086 668 8054	082 801 6215	anton@sapia.co.za
SEA BIRD and MAMMAL RESCUE				
SANCCOB (Seabirds) Venessa Strauss Nola Parsons	021 557 6155 021 557 6155	021 557 8804 021 557 8804	082 325 4638 084 822 0189	venessa@sanccob.co.za vet@sanccob.co.za
Dr Rob Crawford: Seabirds, DEA	021 402 3140	021 402 3330	082 578 1533	rcrawford@environment.gov.za
Bruce Dyer: Seabirds, DEA	021 402 3138	021 402 3330	082 953 3153	bdyer@environment.gov.za
Mike Meyer: Marine Mammals DEA	021 402 3173	021 402 3330	082 5787617	mmeyer@environment.gov.za
ROYAL CAPE YACHT CLUB	021 421 1354	021 421 6028		info@rcyc.co.za
FALSE BAY YACHT CLUB	021 786 1703	021 786 3925		admin@fbyc.co.za
HOUT BAY YACHT CLUB	021 790 3110	021 790 2585		hbye@africa.com
GORDONS BAY YACHT CLUB	021 856 3263			

13.5 CONTRACTORS AND SERVICE PROVIDERS

Organisation	Office Tel	Fax	Cell	Email
SMIT AMANDLA MARINE Clare Gomes Paul Maclons Dave Murray	021 507 5777 021 507 5777 021 507 5777	021 507 5885 021 507 5885 021 507 5885	079 699 4406 082 909 2013 082 909 9948	c.gomes@smit.com p.maclons@smit.com d.murray@smit.com
SHELTAM AVIATION: Surveillance aircraft Peter Roux (Cape Town office) Peter Woods (Port Elizabeth office) Donovan Jordaan (Pilot) / Thys du Toit (Pilot) To contact pilots in the air – emergency only Phone Air Traffic Control: Cape Town Overberg George Port Elizabeth East London Durban	021 510 3341 041 581 4194 021 937 1116 028 425 4111 044 801 8809 041 501 5948 043 736 6161 032 436 5001	021 510 3432 041 581 3413 021 934 0964 028 425 4068 044 801 8810 041 501 5959 043 7366 014 032 436 3811	082 800 4560 083 452 7007 083 651 4863	peterroux@sheltam.com pwoods@sheltam.com sacoastguard@hotmail.co.za
ENVIROSERV Stephen van Zyl	0800 192 783 021 951 8420	021 951 8440	082 447 4447	info.ct@enviroserv.co.za
DRIZIT	021 425 5187	021 425 3932	0800 202 202 all hours	
OIL RECYCLING Fuel Firing Services: Depot Manager The ROSE Foundation: Raj Lochan NORA-SA	021 557 5301 021 448 7492 086 066 7272	021 557 0667 021 448 7563 086 652 7384	083 652 6113 083 378 8556	usedoil@iafrica.com
OPCSA Piet Coetzee	021 912 1600	021 912 1613	082 566 0525	pcoetzee@opcsa.co.za