CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

SPATIAL PLANNING AND ENVIRONMENT
ENVIRONMENTAL MANAGEMENT DEPARTMENT

Koos Retief
Biodiversity Area Manager: Milnerton
T: 021 444 0315 **E:** jacobusj.retief@capetown.gov.za

TABLE BAY NATURE RESERVE

QUARTERLY REPORT: JANUARY – MARCH 2019

CONTENTS **Pg.**

The City of Cape Town's Nature Reserves webpage can be accessed by clicking this link.

1 EXECUTIVE SUMMARY

- **Two Integrity Teams**, consisting of security rangers, were appointed to undertake patrols in the Nature Reserve, and to improve conservation compliance and visitor safety.
- **The Protected Area Advisory Committee (PAAC)** for Table Bay Nature Reserve had its 14th meeting on 17/01/2018. The meeting was attended by 27 representatives from 20 organisations.
- **The City of Cape Town Recreational Water-Use By-Law** was gazetted on 29 January 2019. The by-law regulates the recreational use of the city's public inland water areas, including Rietvlei.
- **The Diep Estuarine Management Plan (Diep EMP)** was updated and circulated to the PAAC.
- **Invasive alien vegetation** was removed from various management sections of the Nature Reserve, including terrestrial alien species as well as aquatic species such as Water Hyacinth.
- ***Typha capensis* bulrushes** were treated with herbicide in a portion of the Zoarvlei Section as part of a trial to determine an appropriate mixing rate and to monitor the effects of the herbicide.
- **The restoration of the Critically Endangered Cape Flats sand fynbos** at the Milnerton Racecourse was supported by the collection of fynbos seeds that will be planted into the restoration area.
- ***Leucadendron levisanus* (Cape Flats Conebushes)** have been monitored at the Milnerton Racecourse since 2016 and an overall increase in abundance of Cone Bushes was noted.
- **The Custodians of Rare and Endangered Wildflowers** conducted a botanical field survey in Milnerton Racecourse, identifying *Wahlenbergia androsacea*, *Ferraria uncinata*, and *Polygala myrtifolia*.
- **A water bird census** counted a total of 2,819 birds comprising of 42 species.
- **Wildlife photographers, Jan & Frieda Prinsloo,** submitted excellent photographs of a Darter, Malachite kingfisher, African swamphen, Water mongoose, Little grebe and a Great white pelican.
- **Camera trap surveys** were extended to the Fynbos Corridor for the first time.
- **A heronry** was discovered at the Zoarvlei Section.
- **Dust emanating from the seasonal pans** was observed by some residents. Management will look to determine whether the dust is exceeding dustfall standards.
- **Rainfall** was slightly over average this quarter.
- **The estuary mouth at the Milnerton Lagoon was artificially breached** to allow water to flow out to sea, thereby preventing flood damage to nearby public infrastructure.
- **The Milnerton cubs visited Milnerton Racecourse** to conduct a dry run bio-blitz in preparation for the City Nature Challenge set to take place in the last week of April.
- **A team of 19 Expanded Public Works Programme (EPWP) workers** was recruited.
- **Three joint operations** were conducted with Law Enforcement to remove illegal structures and displaced people from the Nature Reserve.
- **Some groomsmen from the stables** adjacent to Milnerton Racecourse were educated about the importance of protecting the natural resources found in the Nature Reserve.
- **Unauthorised access** to the Nature Reserve is a growing concern while unauthorised constructions and stockpiles of building materials were also confiscated and removed from the Nature Reserve.
- **Infilled gravel next to Grey Street** at Zoarvlei was removed. The area will be rehabilitated.
- **Various sewer overflows** were reported and a communication email group was established to enable better coordination and containment of sewer spills and overflows.

2 HIGHLIGHTS & CHALLENGES

2.1 HIGHLIGHT: Two Integrity Teams, consisting of senior and junior security rangers, were appointed at the Table Bay Nature Reserve on 01/03/2019. The security service provider, Quemic Africa (Pty) Ltd, placed the teams that work 12 hour shifts, which means that they are on site 24 hours daily. They undertake patrols and focus on conservation compliance and visitor safety.

2.2 CHALLENGE: Unauthorised access to the Nature Reserve is a growing concern while unauthorised constructions and stockpiles of building materials were also confiscated and removed from the Nature Reserve. The public are reminded that it is illegal to carry on private developments in public spaces.

3 CONSERVATION PLANNING

3.1 The City of Cape Town Recreational Water-Use By-Law was gazetted on 29 January 2019. The by-law regulates the recreational use of the city's public inland water areas, including those inside the Table Bay Nature Reserve (Rietvlei and the Milnerton Lagoon). The by-law came into effect from the date of gazetting and it repealed the old by-laws listed in Schedule 1 (including the old Rietvlei by-law). The new by-law was sent to the members of the Protected Area Advisory Committee for noting.

The most noteworthy change in the by-law is that the length restriction of 18 foot on power boats was changed to 24 foot.

The by-law provides for the establishment of formally constituted Water Body Advisory Committees (WBACs) that are representative of the stakeholders of that water body. Where water bodies occur in a Nature Reserve, however, the particular WBACs will be part of the Nature Reserve's Protected Area Advisory Committee (PAAC).

The Advisory Committees may propose a Code of Practice for a water body, as well as nominate Safety Officers. A Code of Practice is a written document that places restrictions and/or makes provisions for activities at a particular water body, as well as establishes zones, circuits, exclusion zones, and operating times.

A Code of Practice must be approved by the city and posted on a notice board at or near the water body. There currently are such notice boards at Rietvlei that may be amended from time to time. There is currently no Code of Practice for the Milnerton Lagoon.

3.2 The Diep Estuarine Management Plan (Diep EMP) was updated by consultants appointed by the provincial government and was re-submitted to the City of Cape Town. The updated EMP was circulated to the Protected Area Advisory Committee for noting.

The purpose behind the updating of the EMP was to align it to the new National Estuary Management Protocol and to include the new water resource quality objectives (WRQOs) in the plan. These WRQOs will be gazetted in the future and thereby become guidelines that will regulate the management of water resources in rivers and estuaries in the country.

3.3 The Protected Area Advisory Committee (PAAC) for Table Bay Nature Reserve held its 14th meeting on 17/01/2018. The meeting was attended by 27 representatives from 20 organisations, including the following:

Guest Speaker: CCT: Catchments Planning
Al Mare Home Owners Association
Cape Bird Club
CCT: Biodiversity Management Branch
CCT: Catchments Planning
CCT: Environment & Heritage Management
CCT: Potsdam WWTW
CCT: Subcouncil 3
Department of Environmental Affairs & Development Planning
Friends of Blaauwberg Conservation Area
Friends of Rietvlei
Milnerton Aquatic Club
Milnerton Canoe Club
Guest: Milnerton Central Residents Association
Paardeneiland City Improvement District
SANCCOB
Sunset Beach Homeowners Association
Environmental Specialist
Table View Ratepayers Association
Woodbridge Island Body Corporate

Some of the items on the agenda included:

- **Annual Water Quality Review**, presentation by Ms Candice Haskins
- **Annual Water Quality Review**, open discussion by the Committee
- **Diep Estuary Management Plan**, update by Ms Hester Pentz
- **Quarterly Report Summary** (October to December 2018), presentation by Mr Koos Retief
- **Trim reeds along the Rietvlei North Shore**, request from Al Mare Home Owners Association, by Ms Brigitte Westermann
- **Include the coastal dunes along Milnerton Golf Course in the Table Bay NR**, proposal from Milnerton Central Ratepayers Association by Ms Caroline Marx

4 FLORA

4.1 Invasive alien vegetation was removed from various management sections of the Nature Reserve (see Figures 1-3, right and below), including at:

- **Milnerton Racecourse Section.** Kikuyu grass (*Pennisetum clandestinum*) was removed by means of herbicide spraying and digging out with spades. Numerous Port Jackson and Rooikrans seedlings were also hand-pulled.
- **Zoarvlei Section:** *Eucalyptus* (gum trees) were ring-barked. Manotoka (*Myoporum tenuifolium*) were also cut and removed. Small seedlings of Port Jackson (*Acacia saligna*) were also handpulled.
- **Diep River Section:** Contractors were appointed to clear aquatic invasive species (water hyacinth) as well as terrestial invasive species in the Diep River. The contractrors are employed through the Expanded Public Works Programme.
- **Rietvlei Section:** Various alien species, including Port Jacksons, Brazilian Peppers (*Schinus terebinthifolius*), and many other garden escaping plants, were removed from the area adjacant to the Table View boundary.

Figure 1. Field ranger spraying small patches of kikuyu grass.

Figure 2. Preparing to ring-bark a *Eucalyptus* tree.

Figure 3. Ring-barking completed.

4.2 *Typha capensis* bulrushes were treated with herbicide in a small portion of a water body at the Zoarvlei Section (see Figure 4, right).

This area historically was open water, but the reeds have encroached in recent years due to nutrients being imported into the system by means of stormwater.

This is part of a trial being undertaken by Reward Nzuza (Contract Reserve Supervisor) to determine an appropriate mixing rate for the herbicide. The effects of the herbicide will also be monitored.

Figure 4. Bulrushes treated with herbicide.

4.3 The restoration of the Critically Endangered Cape Flats sand fynbos in a portion of the Milnerton Racecourse that was donated to the City of Cape Town is progressing well. The restoration area, which was previously used for horse training, is being restored to incorporate it into the Nature Reserve.

- **Fynbos seeds were collected** in the field by Hester Pentz (Contract Reserve Supervisor), Penny Glanville (Senior Professional Officer) and Dale Slabbert (Assistant Conservation Officer). Some of the seeds that were harvested are from *Elegia tectorum*, *Ornithogalum thyrsoides*, *Orphium frutescens*, *Nidorella foetida*, *Watsonia meriana*, and *Athenasia dentata*. The seeds were cleaned and treated with insecticide. Some of the seed will also be smoke-treated at the Westlake nursery to assist germination when they are planted back in the restoration area (see Figures 5-6, below).

Figure 5. The restoration area at the Milnerton Racecourse.

Figure 6. Penny Glanville showing interns how to clean and presence fynbos seeds.

- **Some of the nearly thousand *Leucadendron levisanus* cuttings** that were scheduled to be planted out this year have unexpectedly died at the Westlake Nursery due to an unknown cause. Only about 175 individuals survived. An additional 1,600 *Leucadendron levisanus* cuttings were taken on 13 March and placed in seed trays at the Westlake Nursery (see Figures 7-8, below).

Figure 7. Surviving *Leucadendron levisanus* cuttings from 2018.

Figure 8. More *Leucadendron levisanus* cuttings taken this quarter.

4.4 *Leucadendron levisanus* (Cape Flats Conebush) has been monitored in the field at the Milnerton Racecourse since 2016 by counting them in various management units (see Figures 9-10, below).

Background: This species is Critically Endangered and endemic to South Africa. Their historic distribution ranged from Mamre to the Cape Flats, but much of this land is now developed. They tend to occur adjacent to seasonally damp areas in Cape Flats sand fynbos. Over the past 40 years there has been a 70% reduction in these Cone Bushes due to habitat loss. Other threats to this species include harvesting, habitat degradation, pollution, and invasive alien species.

Findings: Since 2016 eleven management units in Milnerton Racecourse showed an increase in Cone Bushes, while only two management units showed a decrease and three other management units remained more or less unchanged.

As such there seems to be an overall increase in abundance of Cone Bushes in Milnerton Racecourse. This indicates that the protection of habitats can help to preserve species.

Figure 10. A cone on a *Leucadendron levisanus* bush.

Figure 9. *Leucadendron levisanus* bush.

4.5 The Custodians of Rare and Endangered Wildflowers (CREW) conducted a botanical field survey at the Milnerton Racecourse on 24/01/2019. They identified *Wahlenbergia androsacea* in the restoration site, which was last recorded at Milnerton Racecourse in 2011. They also identified *Ferraria uncinata* in the restoration area, and *Polygala myrtifolia* which was only discovered in Milnerton Racecourse last year. Several vygies, all of which are Red List species, were also recorded again. Some of the flora of the Milneton Racecourse is displayed below (see Figures 11-13, below).

Figure 11. *Wahlenbergia androsacea*.

Figure 12. *Polygala myrtifolia*.

Figure 13. *Ferraria uncinata*.

5 FAUNA

5.1 A water bird census was conducted on 18/01/2018. The census was done by the Nature Reserve staff, covering 11 survey sections. The water birds numbered a total of 2,819 birds comprising of 42 species (see Figures 14-14 for details).

19 species with single-figure counts (totalling 82 birds) accounted for 2,9% of the water bird census, including: one Black-crowned night heron, Common sandpiper, and Marsh sandpiper each, two Purple heron, Yellowbilled egret, Cattle egret, White-faced whistling duck, Redbilled teal, African fish eagle, and African black oystercatcher each, three Three-banded plover, six SA Shelduck, seven Reed cormorant and African spoonbill each, eight African darter, Blackheaded heron, and Little stint each, and nine Little grebe and Hadeda ibis each.

15 species with double-figure counts (totalling 647 birds) accounted for 23,0% of the water bird census, including: 10 Swift tern, 15 Little egret, 15 Glossy ibis, 18 Whitebreasted cormorant, 25 Grey heron, 29 Common moorhen, 33 Sacred ibis, 33 Cape teal, 37 Curlew sandpiper, 46 Cape shoveller, 54 Common tern, 67 Cape wagtail, 81 Pied avocet, 91 Blackwinged stilt, and 93 Greater flamingo.

Eight species with triple-figure counts (totalling 2,090 birds) accounted for 74,1% of the water bird census, including: 103 Blacksmith lapwing, 106 White pelican, 156 Egyptian goose, 157 Kelp gull, 166 Spurwinged goose, 258 Redknobbed coot, 264 Yellowbilled duck, and 880 Hartlaub's gull.

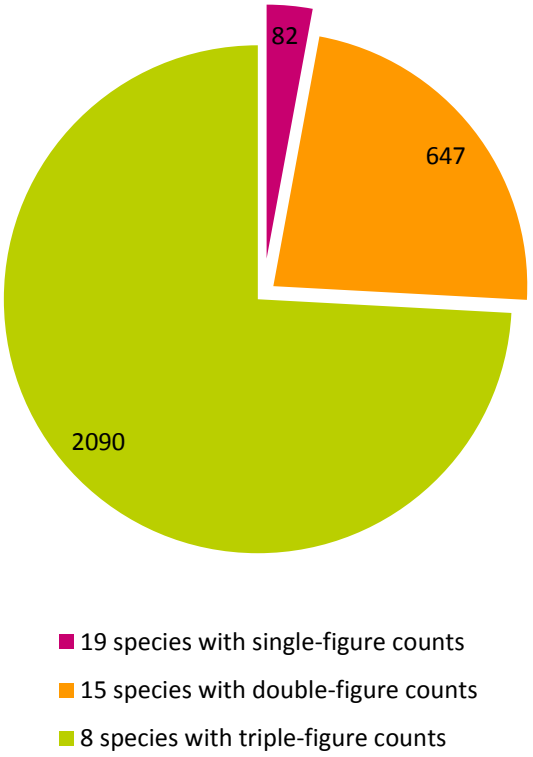


Figure 14. Relative contribution of low, medium and high counts.

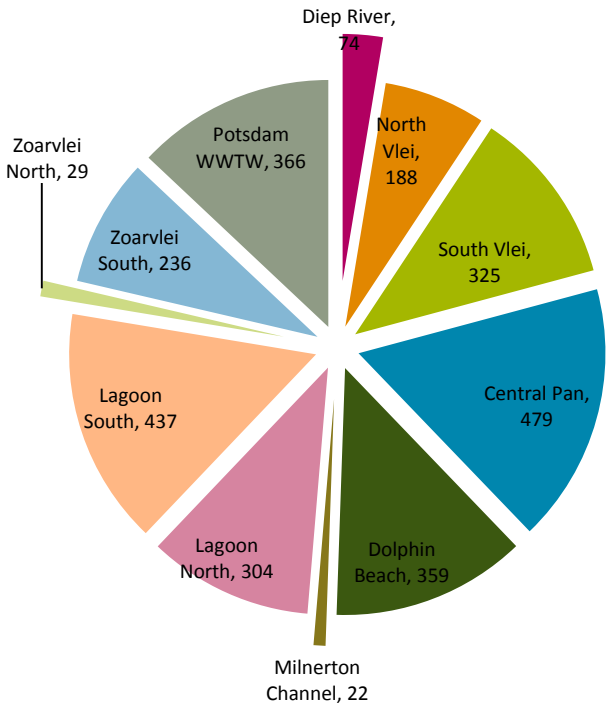


Figure 15. Relative contribution from each survey section.

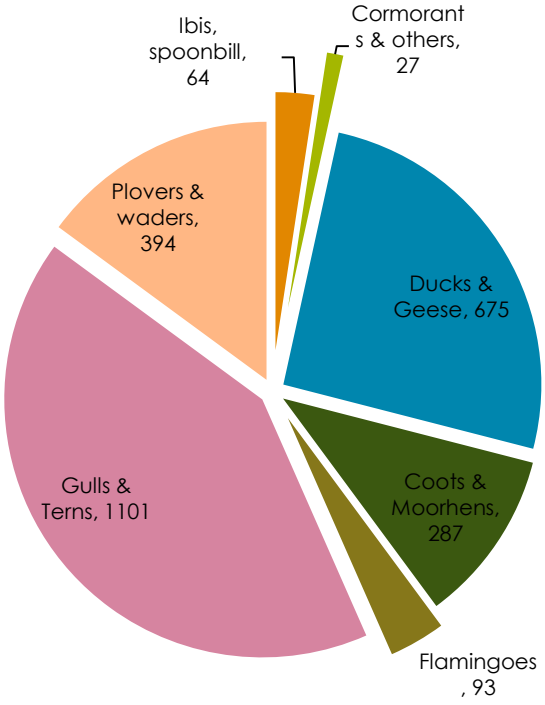


Figure 16. Relative contribution from the various bird groups.

5.2 Wildlife photographers, Jan and Frieda Prinsloo, submitted the following excellent photographs from the Rietvlei Wetlands, including an African Darter, Malachite kingfisher, African swamphen, Water mongoose, Little grebe and a Great white pelican (Figure 17-22 were reproduced with their permission):

Figure 17. An African Darter catching an insect in mid-air.

Figure 18. A Malachite kingfisher with a small fish (possibly Banded tilapia).

Figure 19. An African swamphen in flight.

Figure 20. A Water mongoose.

Figure 21. A Little grebe with a Mosquito fish.

Figure 22. A Great white pelican swallowing its food.

5.3 Camera trap surveys were extended to the Fynbos Corridor for the first time. A Bushnell camera trap was placed at the Sandown Fynbos Corridor and at the Sunningdale Ephemeral Pan. Some data have already been recorded and will be used to confirm the presence of species in the area (see Figures 23-26 below).

Figure 23. Camera trap.

Figure 24. An unidentified fox (possibly Cape Fox).

Figure 25. Cape spurfowl.

Figure 26. Cape turtle dove.

5.4 Other fauna sightings in the Diep River and Fynbos Corridor Sections include these Steenbok:

Figure 27. A steenbok ewe that looks pregnant.

Figure 28. A steenbok (possibly a ram).

5.5 A small heronry was discovered at the Zoarvlei Section. A heronry is a site where various birds (normally herons, spoonbills, storks and egrets) nest together in an attempt to find safety in numbers. It is normally situated in places that are inaccessible to predators, such as islands with trees or reed beds in the middle of waterbodies. It is believed that many birds that were nesting at Intaka Island left in search of new breeding spaces due to Water Mongooses that were raiding their nests. The heronry will be monitored in the future (see Figure 29 below).

Figure 29. A spoonbill feeding at Zoarvlei.

5.6 Some smaller fauna species in the Milnerton Racecourse are listed below (Figures 30-33 below):

Figure 30. Banded garden orb spider.

Figure 31. *Paralacydes vocula* before turning into a moth.

Figure 32. Banded garden orb catching its prey.

Figure 33. Emperor dragonfly.

6 SOIL

6.1 Dust emanating from the seasonal pans was observed by some residents in Table View this quarter. The Rietvlei seasonal pans form part of a larger wetland system in the Diep River floodplain and estuary. In 1996 the Rietvlei wetlands were identified and recommended as a potential Ramsar site due to their international significance for water birds, including migrating wading birds. The area is now part of the Table Bay Nature Reserve.

The system contains various wetland types, including riverine floodplains, estuarine tidal zones, permanent water bodies, and seasonal pans. The earliest clear aerial photograph of the area in 1988 indicates the presence and distribution of the seasonal pans which has remained largely unchanged to the present day.

The vegetation that occurs on the seasonal pans consists of a mosaic of salt marsh, grassland, and reed beds, as well as large un-vegetated areas. Analysis of the aerial photography suggests that some of the smaller pans have, over time, been encroached by grassland and reed beds, whereas salt marsh vegetation appears to have receded as a result of the freshening of the system, over time.

The wetlands produce a large biomass of various invertebrate organisms that serve as an important food source for wading birds at the time when they visit the southern hemisphere. This food becomes increasingly available as the water recedes off the pans through the summer seasons.

Wading birds of various sizes utilize the pans at different water depths. The larger birds, such as flamingos, can utilise deeper water, while smaller waders are able to utilise drying mudflats until just before the pans become completely desiccated. Thereafter the pans are often used as a gathering and roosting site for large numbers of birds that use the openness of the pans as a way to detect approaching predators.

The invertebrate organisms enter dormancy by encysting in the mud while the pans are dry, until the next inundation. A freshwater ecologist visiting the site commented that, if the invertebrate cysts in the mud are brought out of dormancy by unseasonal wetting in summer, the cysts could re-start their life cycle in the wrong season and then fail to reproduce successfully. Such a pattern of unseasonal wetting could affect the diversity and abundance of invertebrate organisms that serve as an important food source for waders.

The seasonal pans also accumulate a large amount of fine sediments, much of which originates from higher up in the agricultural catchment area. Runoff water during flood periods holds the fine sediment in suspension, but as floodwater is trapped in the pans, the sediment settles to the bottom. By the time the water has evaporated, all the sediments that were in the water have settled to the mud layer.

When the pans dry out completely, some of the mud may start to flake and separate from the substrate. Strong winds have the potential to lift sand particles, and these particles can scour more and more sediments from the mud surface and lift them into the air. The finest sediments are able to disperse in dust clouds. The low hill topography of Table View was partly formed by centuries of windblown sand and dust from the Diep River and the Rietvlei wetlands.

The dust is perceived as a nuisance and a health hazard by residents who live in the fallout area of the dust. This dust phenomenon is sometimes observed towards the end of very hot and dry summers when evaporation rates are high during strong south-easterly winds. The occurrence of dust depends on the amount of preceding rainfall, the levels of water retained in the pans, ambient temperatures, relative humidity and wind speeds. In some years no dust was recorded, and then dust suppression was not required.

For some time prior to the establishment of Nature Reserve Management on site, the local authority attempted to suppress the dust by various means, most notably by driving water bowsers and fire tenders onto the pans to wet the area. This caused more damage to the fragile mud crust on the pans and proved unsuccessful in wetting the area due to the rapid rate of evaporation of the water.

In 2000 the local authority then commissioned the CSIR to carry out an investigation into the dust problem. Then in 2001 the CSIR evaluated a range of potential solutions for the dust problem. The CSIR determined that the best dust suppression strategy would be to pump water from the Rietvlei recreational water area onto the pans through a series of connected pipes that can be opened at various places to wet certain parts of the pan (see Figure 34 overleaf).

Initially the Stormwater Department implemented the dust suppression plan and later the work was supervised by Environmental Management staff members that were subsequently placed at the Nature Reserve. It was found however that the pumping of water was only effective insofar as it was done consistently and for an extended period of time. At times the evaporation rates were so high that it exceeded the rate at which water can be pumped onto the pans.

Figure 34. Dust suppression layout.

The pumped water only reaches the main central pan, but is not able to flood the smaller isolated pans to the south and east of the central pan. Despite wetting the central pan, dust still occurred in some years from areas that could not be reached by the pumped water.

In 2008, the Diep Estuarine Management Plan (EMP) adopted the dust suppression approach with the *proviso* that "*the pumping of water from the northern lake onto the pans when they start to dry out should continue until a more permanent solution is found*."

The Diep EMP states that "*the water levels in the vlei should be managed such that they fluctuate on a seasonal basis, thereby allowing the pans to maintain the ecological characteristics which make them attractive to wading birds. At the same time, the period during which they are allowed to dry out completely should be limited to the shortest time possible with a view to alleviating the dust problem*." To that end the dredging of the by-pass channel to the east of the wetlands (along Milnerton Ridge) has been discontinued since 2008 to assist in retaining water on the pans for longer periods of time.

The last dust suppression operation took place in the summer season of 2016/17 which was also the start of a very severe drought in the Cape. Very little rainfall fell at Rietvlei from October 2016 onwards, leading to the rapid drying of the pans that summer. This particular pumping operation was also the first to be managed entirely by the Biodiversity Management Branch. The deployment of the system waited for the pans to dry out extensively, in order to prevent the bogging down of the infrastructure.

Once the infrastructure was deployed, the pumping continued for at least ten hours per day, seven days a week, from 22 February to 9 June 2017. The abstraction of water from the Rietvlei recreational water area reduced the water levels to such an extent, however, that the lake could not be used for some watersports.

During the pumping operation, a blue-green algal bloom occurred in the Rietvlei recreational water area which released large amounts of microcystin toxins and necessitated the closure of the water body for public health reasons from 17 March to 30 June 2017. The water closure also had severe impacts on the operations of the Milnerton Aquatic Club. Good rain only fell again at the end of June 2017, and the dust suppression operation was then stopped.

In the subsequent summer season of 2017/18 it was decided that pumping of water would not take place again in that season due to the persistence of severe drought conditions, prevailing water restrictions, and the presence of high levels of blue-green algae in the water. This decision was communicated through the Protected Area Advisory Committee and disseminated to the residents by the stakeholder representatives.

In the current summer season of 2018/19, the water of the preceding winter, however, remained on the pans for a longer time and only started to recede in February 2019. It was expected that winter rainfall would prevent the successful deployment of the pumping system, and the infrastructure was therefore not deployed. By March the rainfall was still low and the pans were not yet inundated. Reports were then received from residents in Table View that dust was observed over the pans during February and March.

Some members of the public expected that Management must prevent all dust emanating from the Nature Reserve. Although Management is responsible for implementing the dust suppression plan, sound and logical decision-making is still needed to determine when implementation is required. It is not necessary to suppress dust every year, since the pans are not always dry enough to cause dust. Also, when the negative effects of dust suppression could out-weigh the planned benefits, implementation must be questioned.

It is also not possible to guarantee no dust, even when dust suppression is implemented. Since dust may vary from year to year, it is important to determine the level of potential concern which may dictate a process to be followed. One of the key determining factors in deciding whether to implement dust suppression is whether dustfall exceeds acceptable dustfall standards according to National Regulations.

Management therefore decided to institute a dustfall monitoring programme to determine whether dust emanating from the seasonal pans is in fact exceeding acceptable dustfall standards as expressed in the Regulations. This could help to make decisions regarding whether to implement dust suppression or not.

The National Regulations allow for exceeding the prescribed dustfall rate on two occasions per year that are not in sequential months. In residential areas the dustfall rate must be below 600 mg per square meter per day on a 30 day average. In non-residential areas the dustfall rate must be below 1,200 mg per square meter per day on a 30 day average. The method for determining dustfall and the guideline for locating sampling points is prescribed in standard ASTM D1739: 1970.

Management will look to appoint a consultant to:

(1) design and implement a dustfall monitoring programme,

(2) report on dustfall monitoring results, and

(3) review and adapt the existing dust management plan, if necessary.

The proposed dustfall monitoring programme will be steered by the Biodiversity Management Branch (Environmental Management Department) and Specialised Environmental Health (City Health Department).

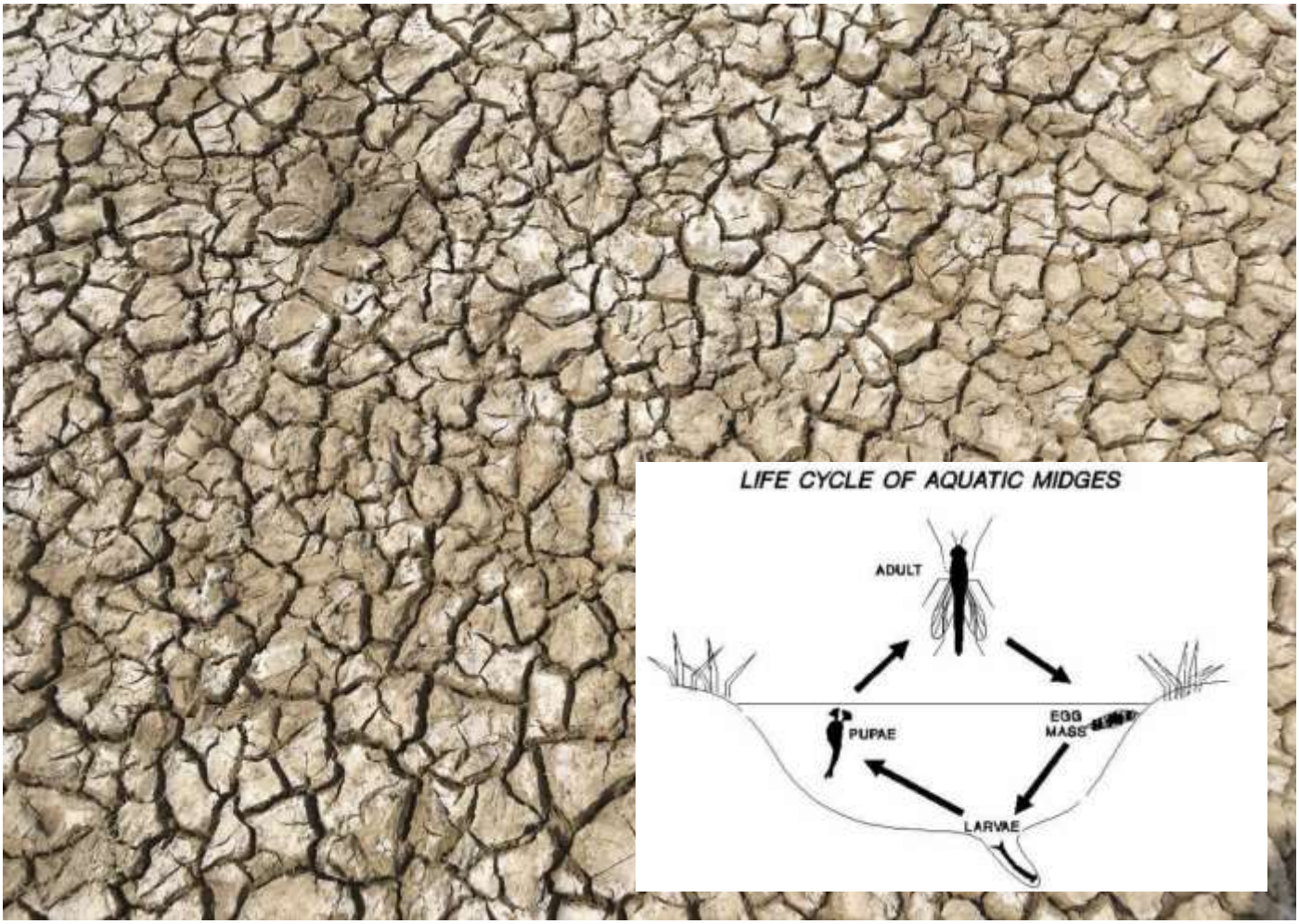


Figure 35. The mudflats of Rietvlei's seasonal pans contain a wealth of invertebrate lifeforms that many bird species require to survive.

7 WATER

7.1 Rainfall recorded in the Table Bay Nature Reserve was slightly over average. The total rainfall during this quarter was 43.7 mm at Rietvlei and 38.1 mm at Milnerton Racecourse.

Figure 36 below indicates the monthly rainfall records of Rietvlei and Milnerton Racecourse in 2019 plotted over the average rainfall pattern. Figure 37 below indicates the accumulation curve for the rainfall in the current year plotted over the average rainfall accumulation curve.

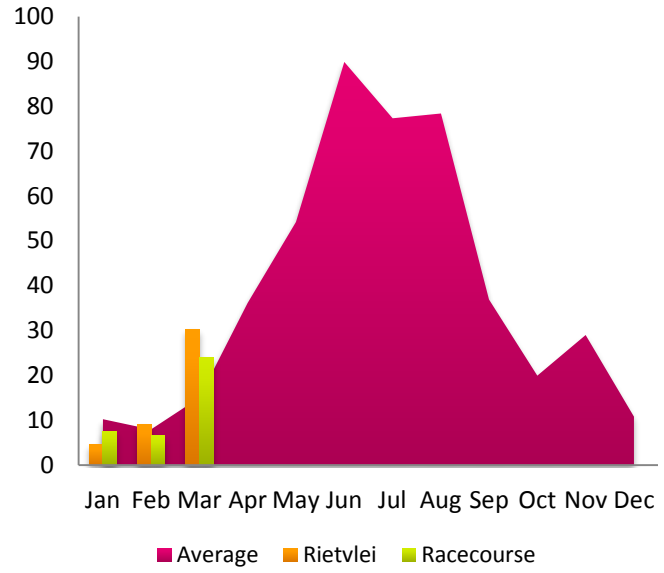


Figure 36. Monthly rainfall records of Rietvlei and Milnerton Racecourse in 2018 plotted over the average rainfall pattern.

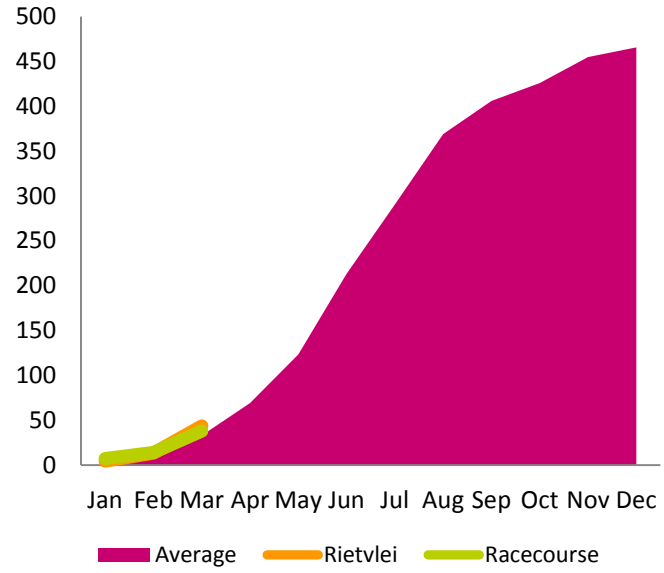


Figure 37. Current rainfall accumulation curves plotted over the average rainfall accumulation curve.

7.2 The estuary mouth at the Milnerton Lagoon was artificially breached on 24/01/2019. The mouth started closing in 2017 due to low flow in the river and the formation of a sand bar along the seafront. The high tides are able to enter the lagoon by flowing over the sand bar, but the water is then not able to flow out again. Water levels could rise until local flooding occurs.

Environmental authorisation was obtained in 2017 to use an excavator to breach the sand bar to prevent flooding, and this method was used nine times since 2017 to breach the mouth. During the past winter the mouth however stayed open most of the time, but it started to close again in December 2018. Water levels inside the lagoon again rose steadily until it caused a potential threat of flooding.

The breaching allowed the water to flow out to sea, thereby preventing flooding damage to nearby public infrastructure. A large amount of water left the lagoon in a short time period (see Figures 38-38 below), and the mouth has stayed open to date.

Figure 38. Excavator starting to cut the trench.

Figure 39. The water is breaking through to the sea.

7.3 Water Pollution in the stormwater systems is affecting the Nature Reserve negatively.

Everything that we discard has the potential to affect the environment, including our precious water sources. South Africa is a water scarce country and Cape Town has recently been affected by one of the worst droughts in history. Residents are not always aware of how their waste can damage the environment.

Households generally have two separate liquid drainage systems:

(1) The sewers convey wastewater to a wastewater treatment plant. This normally contains all the runoff from our baths, showers, hand wash basins, washing machines and toilets.

(2) The stormwater drains however convey rainfall from roads, roofs, and driveways through various canals into our natural waterways. Stormwater generally does not pass through a treatment plant and therefore any pollution in this water finds its way into rivers, wetlands or the sea.

The City regulates what may and may not be discarded into these systems by means of the WASTEWATER AND INDUSTRIAL EFFLUENT BY-LAW and the STORMWATER MANAGEMENT BY-LAW. There are a range of legal and responsible means of disposing of waste, and every person is required to find out what to do.

Generally speaking, only rainfall may be conveyed in the stormwater drainage system. This means that no waste may be discarded into the stormwater system. When waste (chemicals, sewage, paint, detergents, oil) is dumped into stormwater catchpits or canals, it will eventually pollute a river, wetland, or the sea.

Once pollution has reached such a natural ecosystem, it will cause irreparable damage and lead to the death of many organisms. Wetlands accumulate pollution over time, and some of these pollutants can also be taken up into the living tissue of aquatic organisms (fish and frogs) and be eaten by other animals (birds and otters) in a process known as bioaccumulation.

WHAT CAN YOU DO? Dispose waste responsibly and use biodegradable products where possible. Do not dump waste into the stormwater system. Be mindful of your actions and their consequences.

8 FIRE

8.1 Wildfires occurred in the Zoarvlei Section on the 06/01, 01/02, 11/02 and 13/02/2019. Some of the fires were started by displaced people who cook food on open fires or burn cables to extract copper.

The City's Fire Department, assisted by the Nature Reserve staff, suppressed the fires. All these fires were mapped and the data was stored in the database.

Figure 40. Wildfire in a reed bed in the Zoarvlei Section.

9 PEOPLE, TOURISM & EDUCATION

9.1 Stakeholder Engagement

9.1.1 The Milnerton cubs visited Milnerton Racecourse on 8/03/2019 to conduct a dry run bio-blitz in preparation for the City Nature Challenge set to take place from 26-29/04/2019 (Figure 41). The challenge will happen simultaneously in 150 cities worldwide and will be hosted on the iNaturalist web platform.

The cubs and parents used the iNaturalist smart phone application to upload sightings of fauna and flora as they walked in the Northern area of the racecourse. Biodiversity experts are enlisted on the platform to assist to correctly identify the uploaded species observations.

If you wish to participate in the City Nature Challenge you can visit:

https://www.inaturalist.org/projects/city-nature-challenge-2019-cape-town?tab=about.

Anyone who has access to the internet via a smart phone or a computer can take part.

The competition categories include: (1) the city that logs the most biodiversity observations, (2) the most species identified in a city, and (3) the most people involved in recording biodiversity in a city.

Figure 41. Cubs receiving a briefing about the City Nature Challenge.

9.1.2 Internal Meetings

Table Bay Nature Reserve staff attended at least 10 official internal meetings during this quarter:

- 09/01/2019: Outcome of a grievance meeting.
- 25/01/2019: Biodiversity North Region Management meeting.
- 07/02/2019: Case study on Waves' Edge *Typha* control project by Penny Glanville.
- 13/02/2019: Discussion on Protected Area Advisory Committee by Eleanor Hutchings.
- 14-15/02/2019: Nature Reserve by-law workshop, by Arne Purves.
- 21/02/2019: Biodiversity Branch Management meeting.
- 27/02/2019: Fish die-off protocol for the Branch, by Suretha Dorse.
- 01/03/2019: Biodiversity North Region Management and Health & Safety meeting.
- 28/03/2019: Discussion relating to Quemic Integrity Teams.
- 28/03/2019: Emergency sewerage sill response protocol, by Suretha Dorse.

9.1.3 External Meetings

Table Bay Nature Reserve staff attended at least 7 official external meetings during this quarter:

- 17/01/2019: Protected Area Advisory Committee.
- 18/01/2019: Community based natural resource harvesting (basket weaving reeds).
- 24/01/2019: Blaauwberg Development Area Environmental Liaison Committee.
- 25/01/2019: Milnerton Racecourse Environmental Management Committee meeting.
- 12/02/2019: Pollution in the Diep River meeting.
- 22/02/2019: Milnerton Racecourse Environmental Management Committee meeting
- 19/03/2019: Blaauwberg Development Area Environmental Liaison Committee.

9.2 Benefit to People

9.2.1 Rietvlei Education Centre Usage

The use of the Rietvlei Education Centre, excluding formal environmental education programmes, generated 25 person days of benefit to people over one event day.

DATE	GROUP	ACTIVITY	PERSON DAYS
21/02/2019	Friends of Rietvlei	Evening talk	25
TOTAL			**59**

9.2.2 Rietvlei Boma Usage

The use of the Rietvlei Boma generated at least 613 person days of benefit to people over 34 event days.

DATE	GROUP	ACTIVITY	PERSON DAYS
15/01/2019	SANCCOB	Meeting	6
17/01/2019	Protected Area Advisory Committee	Quarterly meeting	27
24/01/2019	Blaauwberg Development Area ELC	Meeting	15
25/01/2019	Biodiversity North Regional Management meeting	Monthly meeting	9
28/01/ – 01/02/2019	Cape Peninsula University of Technology	B.Tech classes	175
4-8/02/2019	Biodiversity Work-integrated Learning students	Induction week	65
18/02/2019	CCT: Enterprise and Investment Department	Workshop	50
22/02/109	CCT: EAP & Wellness	Branch meeting	25
26/02/2019	Department of local government	Strategic planning session	20
06/03/2019	Biodiversity Work-integrated Learning students	Research presentations	40
19/03/2019	Blaauwberg Development Area ELC	Meeting	15
20/03/2019	CCT: Expanded Public Works Program	Induction	30
25/03/2019	CCT: Energy and Climate Change	Energy directorate visioning session	26
27/03/2019	CCT: Energy and Climate Change		26
28/03/2019	Friends of Rietvlei & Friends of BCA	Evening talk	64
29/03/2019	CCT: Enterprise and Investment Department	Workshop	20
TOTAL			**613**

9.2.4 Environmental Education and Outreach

9.2.4.1 Environmental Education and Outreach generated 212 person days of benefit over 5 event days (see Figures 42-45 overleaf).

DATE	GROUP(S)	LEARNERS	TEACHER +ADULTS	PERSON-DAYS	PROGRAMME
11/02/2019	Shelanti Private School (Gr. 4-7)	38	5	43	Wetlands programme
12/02/2019	Shelanti Private School (Gr. 1-3)	22	5	27	Wetlands programme
01/03/2019	West Coast Christian School (Gr. 5)	14	2	16	Marine biodiversity
08/03/2019	1st Milnerton Sea Scout Cubs	20	15	35	City Nature Challenge
18/03/2019	Elkanah House High school (Gr. 7)	87	4	91	With SANCCOB
	TOTALS	**181**	**31**	**212**	**TOTALS**

Figure 42. Shelanti Private School, learning about aquatic invertebrates in Rietvlei by doing a mini-SASS.

Figure 43. A nature conservation volunteer helping to identify the invertebrate species.

Figure 44. Shelanti Private School Grades 4-7 group photo.

Figure 45. Elkanah High School on a bird watching visit and miniSASS activity.

9.3 Visitors and Income

9.3.1 Income from visitors at the Rietvlei Water Area was R32,974 from 1,364 recorded visitors during this quarter.

Analysis of access control records collected from the Rietvlei main entrance gate since 2010 indicates that there is a seasonal trend in the number of visitors accessing Rietvlei.

The highest number of visits occurs from November to March (summer months) while the months April to October (the colder months) generally see much less visitors (see Figure 46 right).

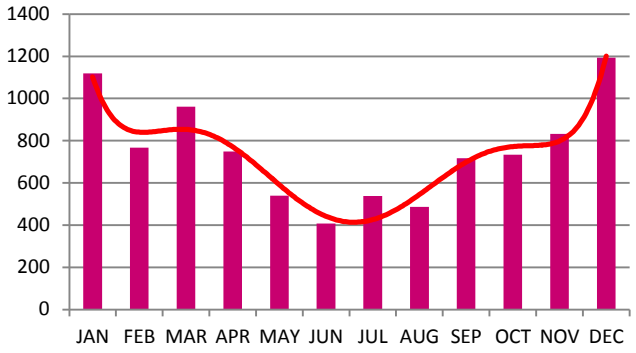


Figure 46. Visitor trends at Rietvlei.

10 STAFF

10.1 Staff establishment

10.1.1 Integrated Performance Management (IPM) templates and Personal Development Plans (PDPs) were updated for all relevant permanent staff between 10-24/01/2019. The positions included the Area Manager, Reserve Supervisor, Assistant Conservation Officers, and the Visitor Access Control Officer.

10.1.2 Training Needs Identification (TNI) forms were submitted for all permanent staff between 21-22/01/2019.

10.1.3 Two Integrity Teams were appointed from 01/03/2019 through the security service provider Quemic Africa to provide security and integrity control services in the Table Bay Nature Reserve. The Integrity Teams consist of two Ranger teams that alternate on 12 hours shifts to provide a non-stop 24 hour service.

10.1.4 A team of 19 Expanded Public Works Programme (EPWP) workers was recruited to support Nature Reserve Management in the field. They were employed from 18/03/2019 until 30/06/2019. Their role is to assist the field rangers in various work activities within the Nature Reserve, including litter clean-ups, data collection, and maintenance of infrastructure such fences and footpaths.

10.2 Training and development

10.2.1 Training of permanent and temporary staff at the Table Bay Nature Reserve amounted to no less than 32 person days over 20 training event days, including the following interventions:

Date(s)	Course	Number of days x	Number of learners =	Person days
14-18/01/2019	NQF2 Nature Guardianship	5	1	5
4-5/02/2019	NQF2 Learner Assessment	2	1	2
6/02/2019	Employee Relations Training	1	1	1
18-20/02/2019	First Aid Training	3	3	9
5-7/03/2019	Smart Driver Training	3	1	3
18-20/03/2019	NQF2 Learner Assessment	3	1	3
27-29/03/2019	Reserve Supervisor Camp	3	3	9
	TOTALS	**20**	**N/A**	**32**

11 LAW ENFORCEMENT

11.1 Two Integrity Teams, consisting of senior and junior security rangers, were appointed at the Table Bay Nature Reserve on 01/03/2019 from the security service provider, Quemic Africa (Pty) Ltd. The teams work 12 hour shifts and they are therefore on site 24 hours daily. They undertake vehicle and foot patrols in all management sections of the Nature Reserve and they focus on conservation compliance and visitor safety.

Some of the specific services that the Integrity Teams provide include visitor management, staff safety, and surveillance of reserve infrastructure. They can liaise with members of the public with regards to reserve activities, directions and rules as well as local information. They can respond to any injury or medical emergency, any wildfire, environmental disasters and wildlife-related incidents. They provide a nature conservation law enforcement service which includes boundary / fence line patrols, clandestine operations, and search of suspicious individuals and vehicles. They can also supervise contractors in the field.

Quemic Africa has a control room dedicated to the project which is operated on a 24/7 basis. This serves as the emergency contact centre for all incidents. Operations and emergency responses are planned, co-ordinated and executed from the control room. The control room is also equipped with an Incident and Information Management Support System. Incidents are recorded with the aim to centralise and standardise incident information and to subsequently identify trends and risks.

Since they started operating at Table Bay Nature Reserve the Integrity Teams logged 47 incidents in the Table Bay Nature Reserve. Below is a pie chart (see Figure 47) containing a breakdown of the types of incidents that were handled by the Integrity Teams. Almost half of the incidents related to "vagrancy" which is a combination of illegal overnighting and the construction of illegal structures by displaced people.

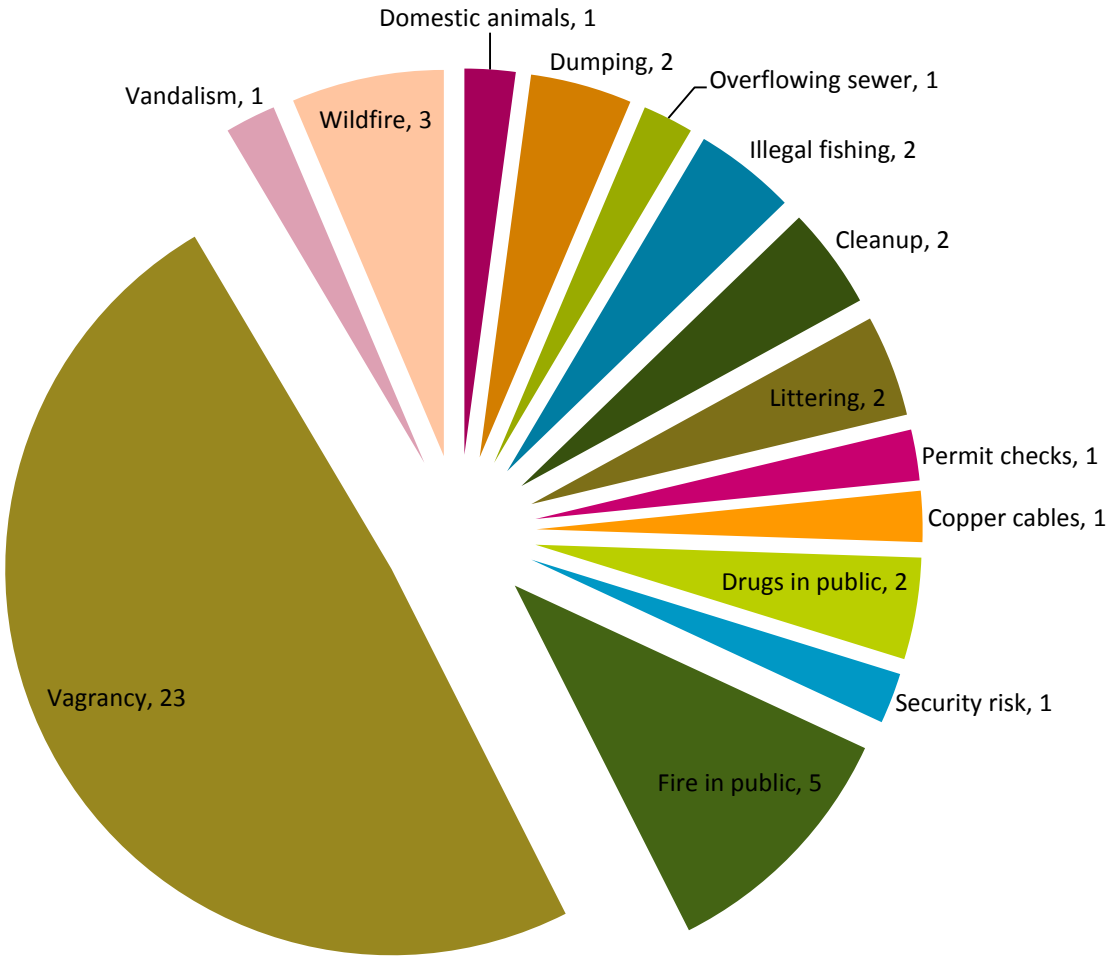


Figure 47. Pie chart of incidents handled by Quemic Integrity Teams in the Table Bay Nature Reserve since March 2019.

11.2 Three joint operations were conducted with Law Enforcement during this quarter to remove illegal structures and displaced people from the Nature Reserve. On the 07/01/2019 three structures were removed from the Zoarvlei Section. On the 12/02/2019 two structures were removed again from the same location. On 26/03/2019 two more structures were removed with the assistance of the Quemic Integrity Teams.

Joint Operations with a range of stakeholders make a tremendous difference in the Nature Reserve as the strong work bonds ensure that interventions are more focussed. There is now also more focus on ensuring compliance after-hours and on weekends, since it is important to remove illegal structures immediately after they were erected (see Figures 48-49 below).

Figure 48. Displaced people living under the footbridge in the Zoarvlei Section.

Figure 49. A displaced person sleeping in the reeds at Diep River.

11.3 Some groomsmen from the horse training stables adjacent to the Milnerton Racecourse were previously observed to snare wildlife and harvest plant material from the Nature Reserve. During a special intervention, the groomsmen were educated about the importance of protecting the natural resources found in the Nature Reserve (see Figures 50-51 below). A Xhosa speaking field ranger helped to interpret the message and informative posters were also placed in the barracks where the staff overnight.

Many of the groomsmen were unaware that the land inside the racecourse is conserved. The groomsmen were asked reasons why they may be poaching and the majority said that it is for medicinal and cultural beliefs, or as a food source. Some of the plants are used to treat sore throats and skin aliments, to induce vomiting, to heal infections, or for spiritual cleansing. Some plants are also burnt as incense.

Some of the groomsmen said that they will report incidents of poaching now that they know it is wrong.

Figure 50. Field Ranger, Thozama Notshati, talking to the groomsmen.

Figure 51. A rope snare that contained a trapped Cape spurfowl.

11.4 Unauthorised access to the Nature Reserve is a growing concern with more and more people living on the edge of the Protected Area. Some access control problems relate to private residents that bring garden services and construction vehicles to their homes through the Nature Reserve property.

Management decided to close off various access points with bollards and boom gates in order to ensure that only authorised and/or emergency vehicles can access onto the Nature Reserve property.

Wildlife photographers Jan and Frieda Prinsloo sent photographs of two pedestrians who gained access to the wetland area without permission. They were walking with two dogs off leash. They also caught a pelican (see Figure 53 below).

These are serious offences, including trespassing, illegal hunting, and using dogs to hunt (a prohibited hunting method) that could result in very hefty fines and/or terms of imprisonment.

Unfortunately the photographs were received after the perpetrators have left the area. Reserve Management and the Integrity Teams will be conducting more patrols in this area to apprehend these people if they repeat the offence.

Figure 52. A private construction company accessed the Nature Reserve without permission.

Figure 53. Two pedestrians with dogs hunting birds (photo by Jan & Frieda Prinsloo).

11.5 Unauthorised constructions and stockpiles of building materials there were left in the Nature Reserve were confiscated and removed off site, including a stockpile of river stones and two benches. The benches were also unsafe as they were not fixed to concrete plinths. If anybody injured themselves by trying to use these structures, their people that placed them there would not have taken responsibility for it. The local authority is not willing to accept responsibility for any unauthorised structures or constructions, as they could create legal liability in the case of an injury occurring.

It is important to be aware that private property owners may not use the Protected Area for private developments, or to extend their private properties or gardens into the Nature Reserve. These developments will be removed, and people will not be able to claim their property back (see Figures 54-56 below).

Figure 54. Stockpile of river stones removed from the reserve.

Figure 55. An unauthorised and unsafe bench was removed from the reserve.

Figure 56. An unauthorised and unsafe table and benches was removed from the reserve.

12 INFRASTRUCTURE & EQUIPMENT

12.1 Infilled gravel that was illegally laid down next to Grey Street at the Zoarvlei Section was removed. The gravel was laid down and compacted by the adjacent container depot that tried to create an embankment to serve as a parking area for their container trucks next to Zoarvlei.

The space was however not delineated for parking as it was at the edge of a wetland and water body. The infilling of a wetland is illegal and therefore Management decided to remove the infilling and to rehabilitate the area. Several 12 tonne trucks and digger loaders were used to removed the compacted gravel. The operational was cost more than R90,000 (see Figures 57-61 below).

While the restoration of the area was underway the truck drivers continued to park their trucks on this space overnight, and as a result Management placed large concrete road barriers to prevent illegal vehicle acess into this space. Indigenous plants will be planted in this area to revegetate the space.

Figure 57. Vehicles continued to park in this space.

Figure 58. Breaking up the compacted infilling.

Figure 59. Removing the gravel material out of the wetland.

Figure 60. Placing concrete road barriers.

Figure 61. Rehabilitation in progress and vehicles are now unable to park on the edge of the wetland.

12.2 An access control cable at the Zoarvlei Section was destroyed by an unknown person. Management repaired the acess control boom (Figures 62-63). Several other access control measures, including booms and bollards, were placed in various locations, including at the Rietvlei Section and the Diep River Section.

Figure 62. Destroyed access control cable.

Figure 63. Field team repairing access control cable.

12.3 Various sewer spills and overflows were reported to Water & Sanitation. A communication email group was established by Suretha Dorse, Senior Professional Officer, to enable coordination and containment of sewer spills and overflows.

It was found that during the recent loadshedding events, more sewer overflows were observed. This is because pumpstations that push sewerage through the reticulation system rely on constant power to operate. As soon as the power cuts out, the pump stations start to fill up from reverse flow. If power is not restored soon enough, they tend to overflow.

Overflows are also caused when people dispose of solid waste into the sewers. Solid waste is not the same as sewerage and may not be disposed of in the sewer system, as this can cause blockages and lead to overflowing that harms the environment.

Figure 64. Overflowing sewer in the Diep River.

Figure 65. Field Ranger Thozama Notshati replacing a broken rain gauge at Milnerton Racecourse.

12.4 Various footpaths, boardwalks and footbridges were maintained in several management sections of the Nature Reserve during this quarter.

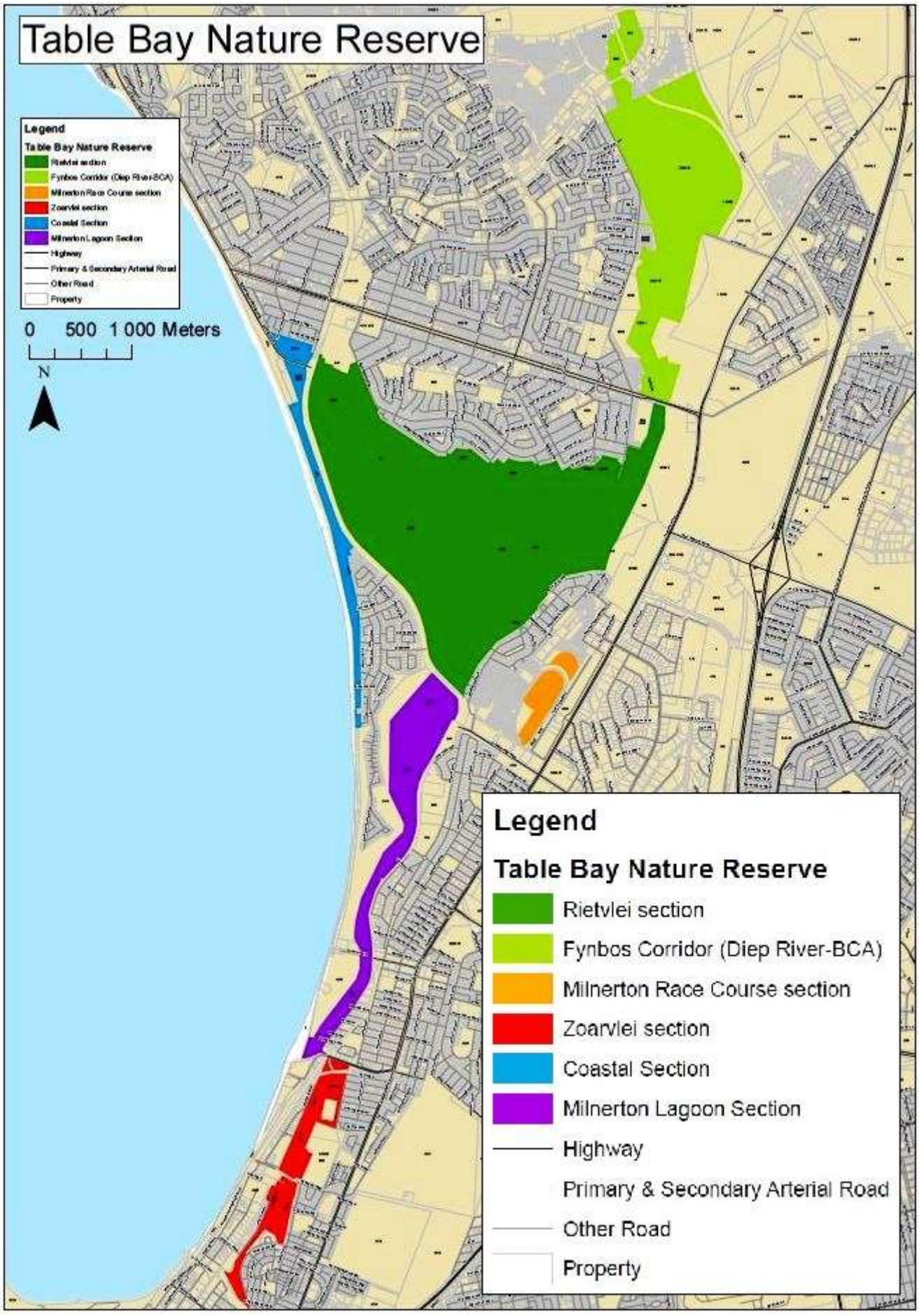
12.5 A broken rain gauge was replaced at the Milnerton Racecourse Section (Figure 65 left).

12.6 Various damaged sections of fencing were repaired at the Milnerton Racecourse and the Coastal Section. A grysbok exclusion fence in the Milnerton Racecourse was also repaired.

12.7 Litter clean-ups were conducted in various management sections of the Nature Reserve this quarter.

12.8 All reserve vehicles and machinery were maintained according to their maintenance schedules.

APPENDIX A: MAP OF THE MANAGEMENT SECTIONS OF THE NATURE RESERVE



APPENDIX B: ADDITIONAL PRESS ARTICLES THAT ARE RELEVANT TO THE NATURE RESERVE

VULA ENVIRONMENTAL SERVICES

ENVIRONMENTAL REHABILITATION SPECIALISTS
• INDIGENOUS SEED SUPPLIES LANDSCAPING
• IRRIGATION DESIGN DEVELOP IMPLEMENT
• MONITOR EVALUATE MANAGEMENT SYSTEMS
(ISO 9001 ISO 45001 ISO 14001)

NOTICE OF PRESCRIBED ECOLOGICAL BURN TO BE UNDERTAKEN AT THE SANDOWN FYNBOS CORRIDOR

Vula Environmental Services plan to conduct an ecological burn of RE-Erf1, Sandown, the Sandown Fynbos Corridor (SFC), a portion of the Table Bay Nature Reserve, between 28 February- 31 March 2019. The area measures approximately 34ha and is located east of The Sandown and Parkland Collage. You have been advised of the above-mentioned action in accordance with the Sub-section 19 read with Schedule 2 of the **AIR QUALITY MANAGEMENT BY-LAW, 2016**

Approximately 34 ha of the SFC section of Table Bay Nature Reserve will be burnt over a 1-2 day prior. This will affect residents as well as businesses in the Sandown area on the days of the burn.

Staff from Vula will conduct the burn. Staff from the City of Cape Town's (CCT) Biodiversity Management Branch (BMB) will assist in various aspects of the burn on the day including overall co-ordination and control. The area will be searched for slow moving animals and these will be relocated to suitable areas outside of the prescribed burn area.

Vula and CCT BMB staff will ensure that the procedure is conducted efficiently and safely. Fire breaks have been maintained and fire-fighting equipment and fire hydrants have been tested to ensure that everything is in working order. Treated waste water will be used to extinguish the fire. The fire will be extinguished at 16h00 on the day of the burn and will be monitored for possible flare ups.

The actual date of the burn is dependent on weather conditions. All required permits will be obtained from the City's Air Pollution section and Fire and Rescue Services. Air Quality, BMB as well as Fire and Rescue Services conducted the required pre-inspection of the area.

Surrounding residents are advised to keep their windows shut while burning takes place. Laundry should be taken off washing-lines to prevent odour contamination from smoke.

The SFC is comprised Cape Flats Sand Fynbos (CFSF). The purpose of the burn is for the stimulation and germination of indigenous plant seeds that require a natural fire regime in order for the vegetation type to remain healthy and to perpetuate species.
The burning of this particular section in this season is critical to the success of the rehabilitation and restoration activities that are currently underway on site.

Prior to the burn, a faunal search and rescue will be undertaken to remove any slow moving animals to safety. The areas are not fully enclosed and escape routes will also be provided.

Residents are advised to send any objectious in writing to the City's Air Quality Management, **rowan.carolus@capetown.gov.za** within **seven days** of receipt of this notice (20 February 2019)

Vula thanks all affected parties in the area for their understanding and cooperation.

For further information, please contact Deon van Eeden via e-mail at deon@vula.biz

King Regards

Deon van Eeden
Cert.sci.nat 116800, PrLM 20283
MSc Botany(Restoration Ecology) NDip Hort

PO Box 858 VREDENBERG 7300
Head Office TEL/FAX 022 766 1106| Cape Town Tel/Fax 021 972 1647
Cell:082 564 5748 (Deon van Eeden)| Cell 082 954 2598 (Mark Elliot)
E-mail admin@vula.biz| website www.vula.biz

VULA ENVIRONMENTAL SERVICES

ENVIRONMENTAL REHABILITATION SPECIALISTS
• INDIGENOUS SEED SUPPLIERS • LANDSCAPING
• IRRIGATION DESIGN • DEVELOP • IMPLEMENT
• MONITOR • EVALUATE • MANAGEMENT SYSTEMS
(ISO 9001 • ISO 45001 • ISO 14001)

NOTICE OF PRESCRIBED ECOLOGICAL BURN TO BE UNDERTAKEN AT THE SANDOWN FYNBOS CORRIDOR

Vula Environmental Services plans to conduct an ecological burn of RE-Erf 1, Sandown, the Sandown Fynbos Corridor (SFC), a portion of the Table Bay Nature Reserve, between 15 February-15 March 2019. The area measures approximately 34 ha and is located east of The Sandown and Parklands Collage. You have been advised of the above-mentioned action in accordance with the Sub-section 19 read with Schedule 2 of the AIR QUALITY MANAGEMENT BY-LAW, 2016.

Approximately 34 ha of the SFC section of Table Bay Nature Reserve will be burnt over a 1- 2 day period. This will affect residents as well as businesses in the Sandown area on the days of the burn.

Staff from Vula will conduct the burn. Staff from the City of Cape Town's (CCT) Biodiversity Management Branch (BMB) will assist in various aspects of the burn on the day including overall co-ordination and control. The area will be searched for slow moving animals and these will be relocated to suitable areas outside of the prescribed burn area.

Vula and CCT BMB staff will ensure that the procedure is conducted efficiently and safely. Fire-breaks have been maintained and fire-fighting equipment and fire hydrants have been tested to ensure that everything is in working order. Treated waste water will be used to extinguish the fire. The fire will be extinguished at 16h00 on the day of the burn and will be monitored for possible flare ups.

The actual date of the burn is dependent on weather conditions. All required permits will be obtained from the City's Air Pollution section and Fire and Rescue Services. Air Quality, BMB as well as Fire and Rescue Services conducted the required pre-inspection of the area.

Surrounding residents are advised to keep their windows shut while burning takes place. Laundry should be taken off washing-lines to prevent odour contamination from smoke.

The SFC is comprised Cape Flats Sand Fynbos (CFSF). The purpose of burn is for the stimulation and germination of indigenous plant seeds that require a natural fire regime in order for the vegetation type to remain healthy and to perpetuate species. The burning of this particular section in this season is critical to success of the rehabilitation and restoration activities that are currently underway on site.

Prior to the burn, a faunal search and rescue will be undertaken to remove any slow-moving animals to safety. The areas are not fully enclosed and escape routes will also be provided.

Residents are advised to send any objections in writing to the City's Air Quality Management, **rowan.carolus@capetown.gov.za** within seven days of receipt of this notice. (13 February 2019)

Vula thanks all affected parties in the area for their understanding and cooperation.
For further information, please contact Deon van Eeden via e-mail at deon@vula.biz.

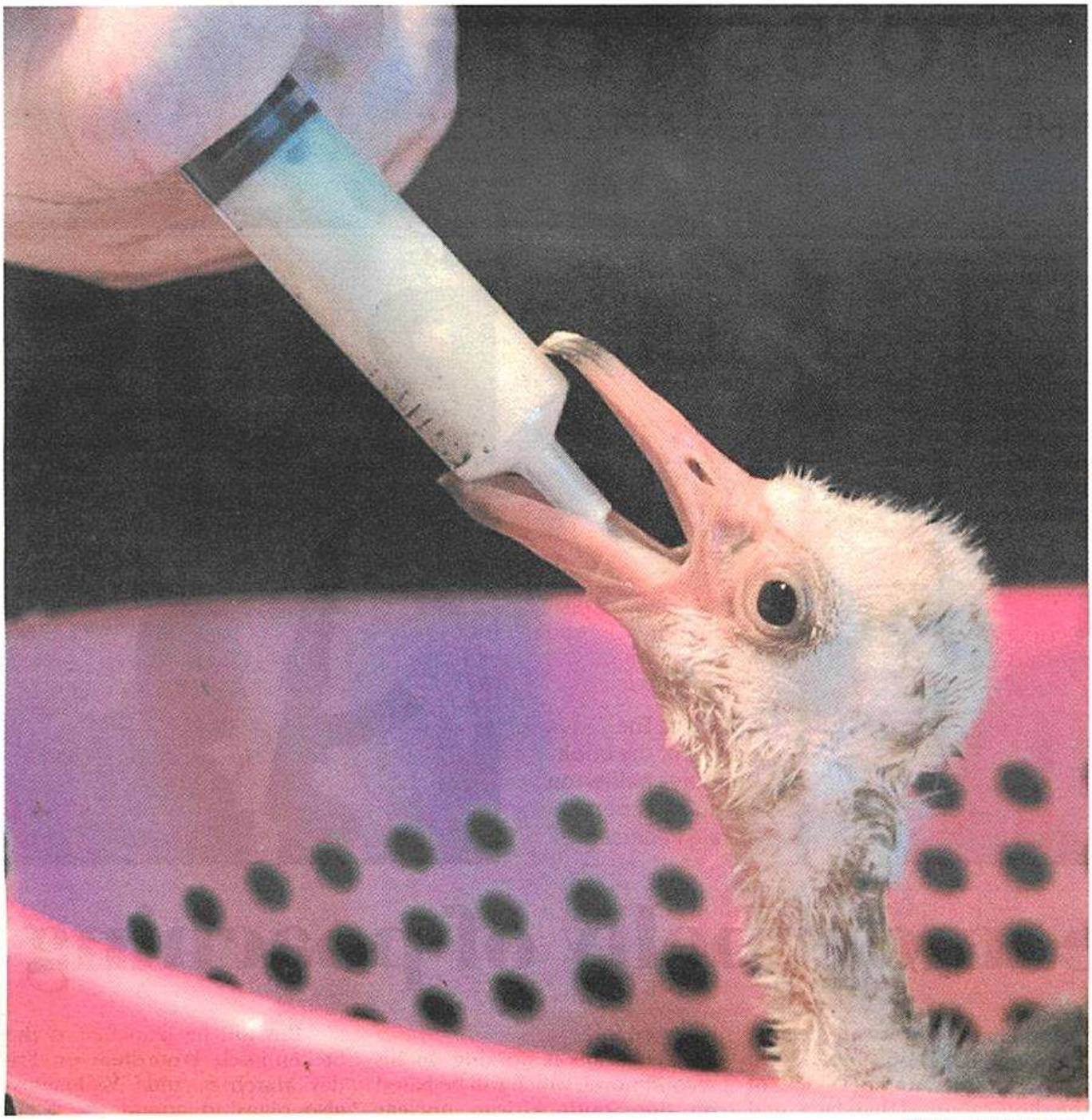
Kind regards

Deon van Eeden
Cert.Sci.Nat. 116800, PrLM 20283
Msc Botany (Restoration Ecology) NDip Hort

PO Box 858 VREDENBURG, 7380
Head Office Tel/Fax: 022 766 1106 | Cape Town Tel/Fax: 021 972 1647
Cell: 082 564 5748 (Deon van Eeden) | Cell: 082 954 2598 (Mark Elliott)
E-mail: admin@vula.biz | Website: www.vula.biz

PICTURE: FRANCOIS LOUW

■ More than 500 flamingo chicks were admitted to the Southern African Foundation for the Conservation of Coastal Birds (SANCCOB) late last month. Pictured is one of the chicks being fed at Sanccob's chick rearing unit. **Read full story on page 6.**



PICTURE: FRANCOIS LOUW

■ Sanccob's chick rearing unit is rehabilitating nearly 300 abandoned flamingo chicks.

Sanccob fights on to save the flamingo chicks

RICHARD ROBERTS
@richardjohn_rj

Despite being faced with all kinds of challenges these past two weeks, a group of volunteers at Sanccob continues to work tirelessly to help save a flock of flamingo chicks abandoned by their parents late last month.

Of the 560 lesser flamingo chicks brought to the rehabilitation centre in Pentz Drive, Table View recently only 269 have survived, Ronnis Daniels, Sanccob spokesperson, told *TygerBurger* on Friday.

The chicks were brought to Sanccob on 28 January after being rescued from the Kamfers Dam outside Kimberley where they had been abandoned by their parent birds and were in danger of dying due to dehydration and starvation.

"We have lost a few birds in the last week but the number of deaths has stabilised since first admitted on 28 January and samples have been sent to the laboratory to determine the causes of deaths," Daniels said.

Earlier she said that the chicks would be cared for at the centre for between three and four months.

"We have about 20 to 30 volunteers daily and have closed applications. We will reach out again when needed."

Since the chicks arrived, the centre has also received several donations.

"The number of donations and amount of volunteers offering their time to assist has been a humbling experience and we are very thankful to all who have reached out and responded to our appeal.

"What we really need now is financial support to cover the costs of medication, rehabilitation services and structures we need on-site to accommodate the surviving, growing chicks," she said.

Daniels added: "It's been heart-warming to witness the number of individuals and companies who have visited the centre with donations in kind or to offer their own time to assist."

As the flamingos grow, the centre will need a 300m² enclosure constructed to provide the birds with an area to walk and exercise, she said. "We will need this very soon. It would be a dream situation to have a construction company or suppliers of building materials partner with us to build such a structure on the premises. The alternative is, of course, for financial contributions towards the cost."

Doctor Katta Ludynia, Sanccob's research manager, explained the reasoning behind the recent microchips inserted into the birds. "The transponder is subcutaneously inserted and it is like a permanent marker to enable identification of birds if resighted in the colonies or if admitted to any rehabilitation facility in future."

▸ All donations can be referred to Wilmie@sanccob.co.za or call 021 557 6155. For direct donations visit https://bit.ly/2jQAzBg. Drop-off donations can be made at 22 Pentz Drive, Table View.

SANCCOB rescues 500 chicks

XOLA QETSEMANI

A Table View bird sanctuary needs help with its rehabilitation of hundreds of rescued flamingo chicks.

More than 500 chicks were admitted to the Southern African Foundation for the Conservation of Coastal Birds (SANCCOB) late last month. They were part of the 2 000 lesser flamingo chicks abandoned by their parents when the Kamfers Dam outside Kimberley dried up. The birds are classified as "near threatened" because of their declining numbers and limited breeding grounds.

The rescued chicks were admitted to various bird rehabilitation facilities in South Africa.

"The flamingo chicks arrived in extremely poor condition and Sanccob's main priority is to give them the best chance to make it through this critical time," said the foundation's Ronnis Daniels.

"The travelling time and period of time passed between their rescue and admission into rehabilitation placed a strain on their already weakened state and, unfortunately, resulted in a number of deaths thus far."

Fewer than 300 of the chicks admitted to Sanccob are still alive.

According to Ms Daniels, there is a large group of strong, growing chicks and then there are 49 weaker ones in high care in the centre's chick-rearing unit.

"Sanccob is renowned for its hand-rearing of abandoned sea bird chicks – especially the endangered African penguin – and while each species presents a different level of resilience, the organisation is using all its resources to hand-rear and provide for each and every chick," she said.

The additional veterinary care, medication, rehabilitation, feeds, and looming space constraints are taking their toll on Sanccob, which is on a funding drive to support what it estimates could be a three to four month long rehabilitation operation.

"We are currently at capacity in terms of space and human resources to accommodate the hundreds of surviving chicks but as they continue to grow in the next few months, and as the birds need to be exercised, possible expansion with enclosures will become necessary," said Ms Daniels.

Visit www.sanccob.co.za and used the reference "Flamingo" to donate online or contact Sanccob at Wilmie@sanccob.co.za or 021 557 6155 to get the foundation's full list of needs.

Beetle poses a serious threat

OWN CORRESPONDENT

PICTURE: FORESTRY AND AGRICULTURE BIOTECHNOLOGY INSTITUTE (FABI), UNIVERSITY OF PRETORIA

The City of Cape Town's Recreation and Parks Department, and the Invasive Species Unit, have put operational plans in place to deal with an invasive beetle that poses a serious threat to trees in the metropole and surrounding areas

The polyphagous shot hole borer (PSHB) has invaded and damaged thousands of trees in other parts of the country and scientists and horticultural experts are concerned that trees in Cape Town could be infected.

"We should not underestimate the damage that the beetle could cause to trees. Invasive species of this nature could go undetected as people don't usually inspect trees to see if there are any beetles on the tree," said mayoral committee member for community services and health, Zahid Badroodien.

The beetle is known to invade the host tree and bore holes in the branches. If undetected, it can destroy a tree within a relatively short period of time.

Adult beetles invade a variety of tree species and dig tunnels to lay eggs. The PSHB beetles then transport a fungus which attacks the tree's vascular tissue, causing a disease called fusarium dieback (FD). FD in turn interrupts the supply of water and nutrients to the tree.

It's known that PSHB attacks more than 300 tree species countrywide of which more than 130 of these species are susceptible to FD.

The PSHB beetle attacks a variety of tree species which include oak, most willows, plane trees, avocado, some acacias and most maples. These species include some of the most common and valuable trees in Cape Town.

Tree species' response to the pest varies and, if detected soon enough and provided that the infection is in an early stage and on a minor branch, it can be effectively treated.

"The City is working closely with the Forestry and Agricultural Biotechnology Institute (FABI) of the University of Pretoria to ensure that the latest technology is shared; and to update databases for current and future research, in an effort to more effectively control the PSHB," said Mr Badroodien.

As adult beetles only grow up to 2mm in length they can be difficult to identify, but their presence can be confirmed by a tree's symptoms, the most common of which are gum extraction on the bark; entry and exit holes, sugary secretions and staining.

The City's Invasive Species Unit, and the Recreation and Parks Department, are calling on residents to report any sightings of the beetle by sending an email to Invasive.Species@capetown.gov.za or phoning the City's toll-free number on 0860 103 089.

For information on invasive species you can visit www.invasivescapetown.org.za

Shipshape!

The remains of the century-old Commodore II, a schooner wrecked off Woodbridge Island in 1945, have been retrieved from the water and set up for public display.

Carry on, Commodore: The 21-ton remains of the wrecked schooner being lifted out of the Diep River estuary.

After months of planning, the remains of the Commodore II shipwreck were successfully relocated from Woodbridge Island to an embankment near the Lagoon Beach Hotel area during a seven-hour operation on Friday 16 November.

A mobile crane capable of lifting 130 tons with a spreader beam and slings lifted the wreck, which weighs approximately 21 tons and is about 14 m long and 6,8 m wide. The wreck remained intact, and was transported on a flatbed truck to a grass embankment owned by the City near the Lagoon Beach Hotel, where it is now available for viewing.

The context

Since the Commodore II shipwreck was uncovered during a winter storm in 2008, there had been various attempts to relocate the remains, as it posed a danger to boats in the river and was deemed to be of historical importance.

Because of its proximity to the equally historic Milnerton wooden bridge, the relocation of the shipwreck was eventually included in the scope of work and budget for the rehabilitation and restoration of the bridge.

The bridge dates back to 1901 and was built by the Royal Engineers to provide entrance to a cannon trench. It was declared a national monument by the old National Monuments Council in 1987.

A brief history of the Commodore II

The Commodore II was built in 1919 in Seattle in the United States. She is believed to have featured in the 1935 American blockbuster film *Mutiny on the Bounty*.

Later, she was also used to ferry coal during World War II. Shortly after, the grandson of President Paul Kruger bought the schooner and sailed to Buenos Aires, Argentina. Here, her fortunes took a turn for the worse.

When going up the River Plate, the ship was grounded on a mud bank, and the damage to the hull took 40 days to repair. The Commodore II also caught fire, but it was fortunately extinguished quickly.

On her return, she was hit by a heavy storm, which left the mast, rigging and sails all severely damaged. Emergency repairs led the vessel and crew safely back to Cape Town, where the ship was stripped and the remains left to the mercy of Milnerton's breakers.

Environmental Management had to obtain a relocation permit from the South African Heritage Resources Agency, as the wreck is more than 60 years old, which is considered worthy of conservation. The Commodore II also qualifies as archaeological material under the National Heritage Resources Act.

Sailors back at Rietvlei, Table View

Boating enthusiasts from across the province showed off their sailing skills at the 22nd Mac 24 Hour Challenge which was held at Rietvlei in Table View last weekend.

This event is regarded as South Africa's premier annual 24-hour dinghy endurance regatta.

According to Mark Algra, spokesperson, a total of 34 teams with up to 12 sailors per team took part in last year's endurance challenge. He says sailors from Cape Town, Stellenbosch, Knysna and Simon's Town took part in the event.

The Mac was held on Saturday 9 March to Sunday 10 March.

The 24 Hour Challange started in 1998 with nine dingies, Algra says.

▸ For more details visit www.milnertonaquatic-club.co.za/24hour/

The Samsa team lost some of their members overboard but recovered again in this weekend's Mac 24 Hour Challange. PHOTOS: COLIN BROWN

Some of the bigger boats tried not to stop to change crew, so adopted an eject-and-reload strategy in order to keep going.

A strong south easter howled on Saturday making the conditions for sailors ideal. The NSRI had three boats and plenty crew, but struggled to keep up with the amount of overturning boats, Milnerton photographer, Colin Brown, says.