



Figure 1. Senior People & Conservation Officer: North Region, Elzette Krynauw, and Environmental Education Intern, Jade Kastoor, recording bird numbers at Rietvlei (photo: Bruce Sutherland).

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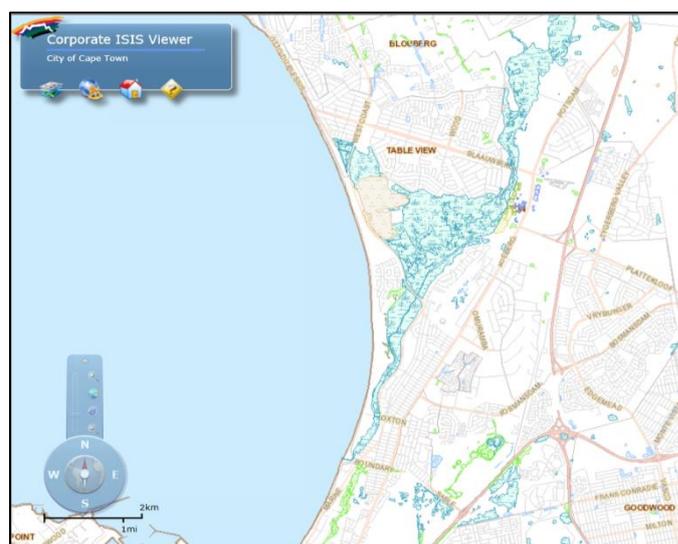


Figure 2. The Table Bay Nature Reserve mainly consists of wetlands.

1.1 This quarterly report summarises the activities of the Biodiversity Management Branch in the Table Bay Nature Reserve (TBNR) for the period from 1 October to 31 December 2013. This report is written in such a way that stakeholders and role-players may refer to it for information purposes, but it does not contain all the official internal reporting information.

1.2 Some of the main headlines in the local media that were relevant to Table Bay Nature Reserve this quarter include stories on the City's "Reserve of the Year" and sewage contamination at the Milnerton Lagoon and Milnerton Beach.

TABLE BAY: BEST NATURE RESERVE

City's reserve of the year

LOUISA STEYL
@lounotes

Thanks to its dedicated staff, many improvements, and the co-operation of the surrounding community, Table Bay Nature Reserve has won the City of Cape Town's Reserve of the Year award, for a second time.

The biodiversity area manager for the Milnerton area, Koos Retief, explains that the Table Bay Nature Reserve (TBNR) is owned by the city and managed by the Environmental Resource Management Department (ERMD).

"We see this award not just as recognising the nature reserve, but the team of people who work to promote the reserve, and all of the stakeholders who are involved in some way to benefit from or contribute to the nature reserve," Retief says.

The reserve protects about 258 plants, 185 birds, 30 mammals, 20 reptiles, 13 fish, and seven amphibian species.

"Some of these species and vegetation types are threatened with extinction and re-

ly on protected areas to survive," Retief says, adding: "Rietvlei is listed as an Important Bird Area (IBA) by BirdLife South Africa."

The reserve covers designated areas in Table View, Milnerton, Paarden Island and Du Noon.

Retief says the TBNR has partnered with organisations in the area, namely Friends of Rietvlei, Milnerton Aquatic Club, SANC-COB, Milnerton Canoe Club and BirdLife SA.

"Many local wildlife photography hobbyists now find the Rietvlei wetlands a very safe place to photograph birds because of the upgrades we have done," Retief says.

Through the subcouncil, the reserve sources labour from the Du Noon community and has made natural resources available to support a reed craft group in Du Noon.

Retief says the reserve interacts with stakeholders through management forums to ensure the community is involved with decision-making. They also keep neighbouring residents informed of activities.

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Last year July, the TBNR launched a new new administrative office complex at Rietvlei.

Since then, the building and reserve infrastructure has seen upgrades to make the reserve more accessible.

"The reserve promotes opportunities for environmental education as well as bird watching and various water and shore-based recreational activities," Retief says.

The Rietvlei water area is also used by police and rescue divers, boat skippers and firefighters as a training venue and is often used to test water craft.

The Friends of Rietvlei constructed a wheelchair access ramp to the Rietvlei education centre and the Milnerton Aquatic Club repainted the water sports club house to blend in with the reserve's colour scheme.

The arrival of a very rare Black Skimmer (seabird from the Americas) this year caused bird watchers from as far as Gauteng to stream to Rietvlei while there have also been several sightings of caracals, one of which was captured at the Potsdam Wastewater Treatment Works and relocated to Rietvlei.

Tygerburger readers might also recall the stray plains zebra which wandered into the Milnerton Horse Riding Club. Retief says the zebra was captured and relocated.

"The reserve management team consists of an area manager with three assistants, as



This South American Black Skimmer caused quite a stir when it visited Rietvlei in October last year, attracting bird watchers from as far as Gauteng.

PHOTO: YUNUS MOHAMED

well as environmental educators, students, an intern, and a team of field rangers," Retief explains.

Pollution, alien vegetation, increasing amounts of stormwater runoff into the reserve, dumping and illegal structures on the edges of the reserve are some of the challenges the reserve faces due to its urban surroundings.

"We work closely with Law Enforcement, Table View Neighbourhood Watch and the Paarden Island City Improvement District to respond to such transgressions," Retief says.

He says residents can help protect the reserve by reporting illegal activity, by not dumping, by not allowing their pets in the

reserve and by not planting any plants in the area.

"Communities have a right to be represented in decision-making around nature reserves and therefore must ensure that their residents' associations make contact with us," Retief says.

"It is an honour to be recognised in such a way and we want our neighbours to be equally proud and help us to tackle the challenges that we are faced with in the future," Retief concludes.

▶ For more information about the Table Bay Nature Reserve, visit www.capetown.gov.za/tablebaynr, call 021 444 0315, email tablebay.naturereserve@cape-town.gov.za, or visit the Nature Reserve at 10 Sandpiper Crescent, Table View.

1.2.1 The City's Reserve of the Year 2013 was awarded to Table Bay Nature Reserve for a second year in a row. Table Bay NR also won this award in 2012 (see Figure 3).

The director of Environmental Resource Management, Mr Osman Asmal, and the manager of Biodiversity Management, Ms Julia Wood, handed over the award during the Branch's annual team building day.

[Subcouncil 1](#) and a local paper published the story which cites various improvements and upgrades that have raised the profile of the Nature Reserve, and generated many jobs as well as various other opportunities for the public to benefit.

The vision for the Table Bay Nature Reserve is to become an internationally recognisable natural feature in Cape Town.

We feel that the recognition that was received from the City will promote the Nature Reserve to higher levels of recognition in times to come.

Figure 3. Article in the local press about Table Bay Nature Reserve being "Reserve of the Year" in 2012 and 2013.

1.2.2 Sewage contamination at the Milnerton Lagoon and Milnerton Beach, caused by a collapsed bulk sewer pipe at the Koeberg Road sewer pump station, resulted in the temporary closure of access to these water areas.

The incident took place on 31/10/2013. Various user groups of the lagoon and the beach were notified via email, alerts were published in the media, and warning signs were posted at various public access points.

The Environmental Health Department continuously monitored the water throughout the process of repairs. By 12/12/2013 a significant improvement in the quality of the water was recorded, leading to the Department lifting the closure in a media release on 23/12/2013, and removing warning signage.

Several articles appeared in the local press regarding this incident, which are an indication of how important environmental health and a clean environment are to Capetonians (see Figures 4-5 and [Appendix A](#)).

The fact that the Table Bay Nature Reserve is in a very urbanised part of Cape Town exposes the natural area to a wide variety of threats and hazards.

Apart from sewage contamination from aging bulk infrastructure, it is clear that large amounts of other pollutants and contaminants, including litter and runoff from roads and industrial areas, constantly enter our waterways.

What is required for Cape Town's nature reserves and natural areas to persist in a clean and healthy state is that every citizen should realise their responsibility to limit waste and to dispose of waste correctly.

Illegal dumping of garden refuse, building rubble, household waste and even industrial chemicals is still taking place. For this to stop every citizen has to change their attitude and work towards a cleaner and healthy environment for all.

Sewage spill in Milnerton lagoon

STAFF REPORTER

All recreational activities in the Milnerton Lagoon have been put on hold following a sewage spill.

In a statement issued yesterday, Tuesday November 5, the City said it had put up signs and notified recreational clubs after a bulk sewer pipe collapsed on Thursday October 31, spilling sewage into the lagoon.

The statement said the City's water and sanitation department had been working over the past few days to fix the pipe, which carried sewage to the Koeberg pump station from the areas of Milnerton, Montague Gardens, Century City and Monte Vista.

Seven weeks ago, a City-appointed contractor had started repairs and the construction of a temporary pump station to upgrade the infrastructure and reduce the risk of spills. But during construction of the last section of the new pipeline, the stormwater canal had flooded the site after a storm. Sand had washed into the pipe and into the Koeberg pump station, which had then been unable to pump at full capacity, causing flooding and spillage at the station during peak periods, said the City statement.

Water and sanitation department staff were treating the spill area with enzymes to improve the water quality and minimise harm to residents and the environment, said the City.

Meanwhile, the contractor continued to repair the pipeline and planned to do the final connection and clean out as soon as possible. Pump station staff were cleaning sand and debris from the Koeberg pump station.

Figure 4. Article in the local press about the sewage spill in the Milnerton Lagoon and beach.

MILNERTON LAGOON: NO SWIMMING

Sewage spill 'fixed'

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The pipe connection which caused a sewage spill in Milnerton Lagoon has been fixed.

This is according to the City of Cape Town's mayoral committee member for utilities, Ernest Sonnenberg, who said that the pipe connection was fixed on Monday and that the department would hopefully be able to seal it by last night.

The City of Cape Town warned residents and recreational clubs in a press release last week not to use Milnerton Lagoon, following a sewage spill in the area.

According to a press release, the bulk sewer pipe which carries sewage from Milnerton, Montague Gardens, Century City and Monte Vista to Koeberg pump station col-

lapsed, causing the spill.

Repairs and the construction of a temporary pump station were started about two months ago by a contractor appointed by the city. This would allow upgrades to be made to the current infrastructure to reduce the risk of spills.

Spillage

While busy with the last section of the new pipeline at the end of October, the stormwater canal flooded after a storm, causing sand to be washed into the pipe and the Koeberg pump station.

According to the city, this means that the Koeberg pump station could not operate at full capacity, causing spillage and flooding during peak periods.

Sonnenberg explains that the pipe was damaged under a stormwater canal feeding

into the lagoon. "The pipe that was damaged was around one to two kilometres upstream from the lagoon," he says.

The city has assured residents that the contractor has been working throughout the night to fix the damage.

The harmful effects of the spillage on residents and the environment are also a concern and the city has stated that they are working to minimise the effects of the spill.

One of the measures they are taking is to treat the spillage with enzymes to improve water quality.

"The city's Water and Sanitation Department has been working outside of peak sewer flows, has maximised the retention of the flows within the reticulation system, has diverted sewage from the damaged section and placed booms at strategic sections to limit the amount of floating debris," Sonnenberg

says.

Prohibited

The city's Water and Sanitation Department is working with the Roads and Stormwater; Health; and the Environmental Resource Management Departments alongside Scientific Services laboratories and Cape Nature to minimise and rectify the effects of the spillage.

While some recreational activities, like swimming, are prohibited in the area, others, like canoeing are temporarily prohibited while the city monitors the water quality in the area.

"The city will advise once the quality has improved," Sonnenberg says.

He says construction is due to be completed this week and other possible damage fixed as it is identified.

Figure 5. Article in the local press about the sewage spill that contaminated the Milnerton Lagoon and beach.

2 HIGHLIGHTS AND CHALLENGES

2.1 The Reserve of the Year 2013 award went to Table Bay Nature Reserve for a second year in a row (Figure 6).

This is undoubtedly the highlight of this quarter and is testimony to years of strategic planning, financial investment, relationship building, capacity development, and persistent hard work.

Various public partners also invested much into the reserve, including but not limited to the Friends of Rietvlei, Milnerton Aquatic Club, Milnerton Canoe Club and BirdLife South Africa.

Although so much work has been done there are still many opportunities for achieving even greater heights as well as continued improvement. We are looking forward to 2014 and what lies ahead.



Figure 6. Reserve of the Year 2013 award.

2.2 Staff at the Table Bay Nature Reserve continued to develop and achieve excellence:

2.2.1 Nature Conservation student from UNISA, Landi Louw, passed the practical component of her National Diploma course and will be graduating shortly. Landi also managed to obtain a three-year contract placement as Site Manager for the Milnerton Racecourse Section of Table Bay NR. She will start on 02/01/2014. The post is paid by the Milnerton Racecourse Environmental Management Committee (EMC) and is administrated by the Cape Town Environmental Education Trust (CTEET). Landi will be seconded to the Nature Reserve team and report directly to the area manager.

2.2.2 Nature Conservation student from CPUT, Simonne Afonso, also passed the practical component of her National Diploma course and will be graduating in the new year. Simonne was offered a one-year internship at Tygerberg Nature Reserve, starting on 01/02/2014 as an Assistant Environmental Educator.



Figure 7. Simonne Afonso, Jade Kastoor, and Landi Louw at a Friends of Rietvlei evening meeting.

3 BIODIVERSITY MANAGEMENT

3.1 Biodiversity Database

3.1.1 The species richness of the Table Bay Nature Reserve is recorded in an online database, which keeps records of sightings in three categories. Species that have been seen within the last 10 years are presumed to be present at the reserve, although this is not always true as in the case of vagrant species. Records that are older than 10 years but less than 15 years are in a category between present and lost, whereas records that are older than 15 years are deemed to be species that are lost to the site, such as old historic sightings that cannot be verified today.

Nature Reserve staff undertake active searches to confirm the presence of species. [Appendix B](#) is a list of species recorded for Table Bay Nature Reserve. Table 1 below is a summary of the current statistics for various classes of species in each of the three categories:

Table 1. Summary of species richness of Table Bay Nature Reserve.

CLASS	PRESENT (0-10 years)	NOT SEEN (10-15 years)	PRESUMED LOST (15+ years)	TOTAL
Amphibians	8	2	2	12
Fish	13	1	-	14
Mammals	30	-	1	31
Reptiles	21	11	1	33
Birds	185	9	16	210
Plants	254	70	109	433
TOTALS	511	93	129	733

3.1.2 Introduced and alien species are not acceptable to stay in the Table Bay Nature Reserve. Leopard tortoises are widespread in southern Africa, but are not indigenous to the Western Cape. The below tortoise must have escaped from a private garden as a pet. It was captured while walking in the road near the Rietvlei entrance gate. This particular tortoise was delivered to the SPCA for relocation.

Workers and field rangers at the Nature Reserve assist Reserve Management with recording sightings of species, as is seen with field ranger Qalile Lisa inspecting a Cape dwarf chameleon below.



Figure 8. Alien leopard tortoise (*Stigmochelys pardalis*) sent to SPCA. **Figure 9.** Cape dwarf chameleon (*Bradypodion pumilum*).

3.1.3 Wildlife photography is a hobby that visitors are encouraged to participate in at the Nature Reserve. Jan and Frieda Prinsloo are members of Friends of Rietvlei and they regularly visit the Rietvlei wetlands to photograph wildlife in their natural behaviour and habitat. Reserve Management awarded a certificate of recognition to Jan and Frieda Prinsloo for having some of their wildlife photography published in a local newspaper earlier in 2013. See a selection of their latest photographs overleaf.

3.1.4 Some amazing wildlife photography submitted by Jan and Frieda Prinsloo (Figures 10-12):



Figure 10. Great white pelican (*Pelecanus onocrotalus*) eating a Common carp (*Cyprinus carpio*).



Figure 11. Common greenshank (*Tringa nebularia*).



Figure 12. African marsh harrier (*Circus ranivorus*) catching an Egyptian gosling (*Alopochen aegyptiacus*).

4 NATURE CONSERVATION

4.1 Flora Management

4.1.1 The clearing of alien vegetation during this quarter was focussed on the areas indicated red in Figure 13. The areas include Diep River Section East at Killarney Racetrack, Diep River Section West at L'Afrique and Herons Cove, Rietvlei Section including the SANCCOB/Pentz Drive boundary, the Bird Hide Block, the recreational area, Potsdam Waste Water Treatment Works and near the McPherson's Nursery, as well as the Milnerton Racecourse Section and the Milnerton Lagoon Section East.

The person days spent on this work amounted to almost 800. The main target species included Port Jacksons, Rooikrans, Blue-gum trees, kikuyu grass, water hyacinth, annual weeds, and other trees including Brazilian peppers and manatokas.

4.1.2 A Working for Wetlands contractor also cleared a section of alien plants in the diep River Section North-East of the Railway line. This is a section of land that was recently incorporated into Table Bay Nature Reserve.

4.1.3 Firebreaks were also maintained along SANCCOB, Pentz Drive, and Sandpiper Crescent.



Figure 13. Map indicating focus areas of alien clearing work.



Figure 14. Christopher Singo working with Wetlands contractors.



Figure 15. Diep River Section East of the railway line.

4.1.4 Annual Workload Assessments for alien clearing in 2014 were compiled by C. Singo.

4.2 Fauna Management

4.2.1 Monitoring of wildlife: Counts and sightings

4.2.1.1 A grysbok census was conducted at the Mitchells Plain Hospital site by City staff to determine numbers of antelope in the area. Only one antelope was found in this area on 17/12/2013. The Milnerton Racecourse Section of Table Bay NR requires that two antelope be introduced from outside the area to supplement the genetic health of the population inside the Nature Reserve.



Figure 16. City staff doing grysbok census at Mitchells Plain.

4.2.1.2 An integrated bird census was conducted on 15/10/2013. The census was done by nature reserve and other North Region staff, covering 11 survey sections. The census incorporate water birds as well as bush birds.

The water birds numbered a total of 1,777 birds comprising of 42 different species, including:

8 Great crested grebe, 7 Little grebe, 4 White pelican, 49 Whitebreasted cormorant, 8 Reed cormorant, 23 African darter, 9 Grey heron, 9 Blackheaded heron, 3 Purple heron, 10 Little egret, 3 Yellowbilled egret, 3 Cattle egret, 2 Blackcrowned night heron, 53 Sacred ibis, 5 Glossy ibis, 4 Hadeda ibis, 2 African spoonbill, 114 Greater flamingo, 167 Egyptian goose, 32 Yellowbilled duck, 38 Cape teal, 1 Hottentot teal, 28 Redbilled teal, 9 Cape shoveller, 2 African fish eagle, 2 African marsh harrier, 1 Purple swamphen, 2 Common moorhen, 515 Redknobbed coot, 2 African black oystercatcher, 29 Blacksmith lapwing, 1 Marsh sandpiper, 4 Pied avocet, 26 Blackwinged stilt, 3 Water thicknee, 103 Kelp gull, 360 Hartlaub's gull, 9 Swift tern, 1 Sandwich tern, 107 Common tern, 7 Pied kingfisher, and 12 Cape wagtail.

Additional species include Clicking stream frog, Karoo prinia, Helmeted guineafowl, Cape spurfowl, Redwing starling, Masked weaver, Common starling, Levillant's cisticola, White-throated swallow, Pied crow, Mole snake, and Red bishop.

Bird census 9/09/2013	Total	Diep River	North Vlei	South Vlei	Central Pan	Dolphin Beach	Milnerton Channel	Lagoon North	Lagoon South	Zoarvlei North	Zoarvlei South	Potsdam WWTW
TOTALS	1777	151	278	193	332	43	144	235	170	24	44	163
Great crested grebe	8			6							2	
Little grebe	7			2							3	2
White pelican	4			3	1							
Whitebreasted cormorant	49		1	11			1	36				
Reed cormorant	8	4	1		1				1			1
African darter	23		2	5			2	14				
Grey heron	9	1		6				2				
Blackheaded heron	9	1	1	1	1						2	3
Purple heron	3	1					2					
Little egret	10	2	1				2	4	1			
Yellowbilled egret	3	2									1	
Cattle egret	3	3										
Blackcrowned night heron	2	2										
Sacred ibis	53	29	12	3	1		4			3	1	
Glossy ibis	5	1	3	1								
Hadeda ibis	4	1	1				2					
African spoonbill	2			1				1				
Greater flamingo	114	4		12	30		66					2
Egyptian goose	167	17	5	60	22		5	45	2	2		9
Yellowbilled duck	32	5		5			3			8	6	5
Cape teal	38	17		1	16							4
Hottentot teal	1											1
Redbilled teal	28	3	1	2			21					1
Cape shoveller	9				2	3	4					
African fish eagle	2	2										
African marsh harrier	2	1					1					
Purple swamphen	1					1						
Common moorhen	2					1	1					
Redknobbed coot	515	39	113	63	251	17	4	1		2	25	
African black oystercatcher	2								2			
Blacksmith lapwing	29	5	2	2	2		6	3		1	3	5
Marsh sandpiper	1							1				
Pied avocet	4				2							2
Blackwinged stilt	26	4		9			13					
Water thicknee	3											3
Kelp gull	103		5		1				10			87
Hartlaub's gull	360	7	126			21	7	104	57	7		31
Swift tern	9							2	7			
Sandwich tern	1								1			
Common tern	107		1					18	88			
Pied kingfisher	7							4	1			2
Cape wagtail	12		3		2					1	1	5

Figure 17. Waterbird census results from 15/10/2013.

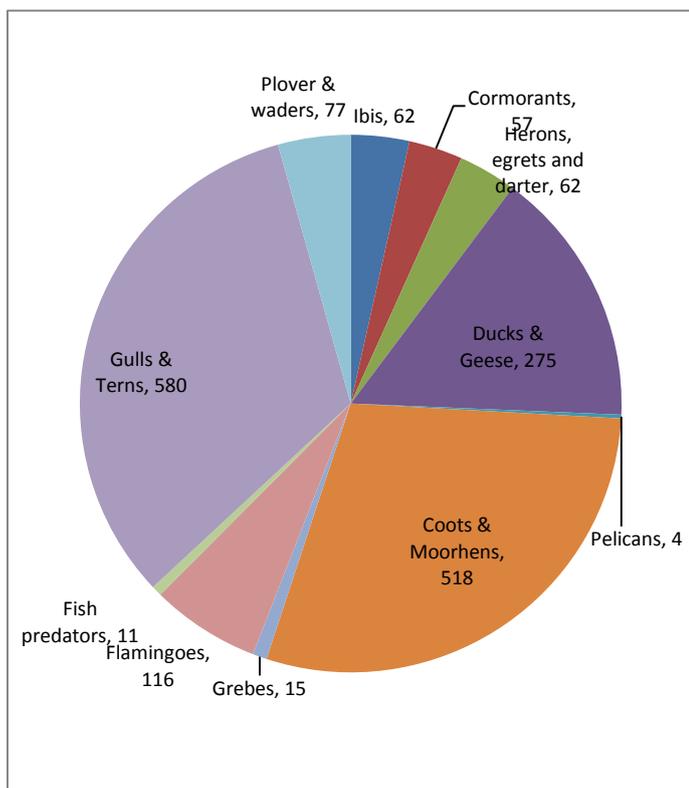


Figure 18. Pie chart of various types of birds.

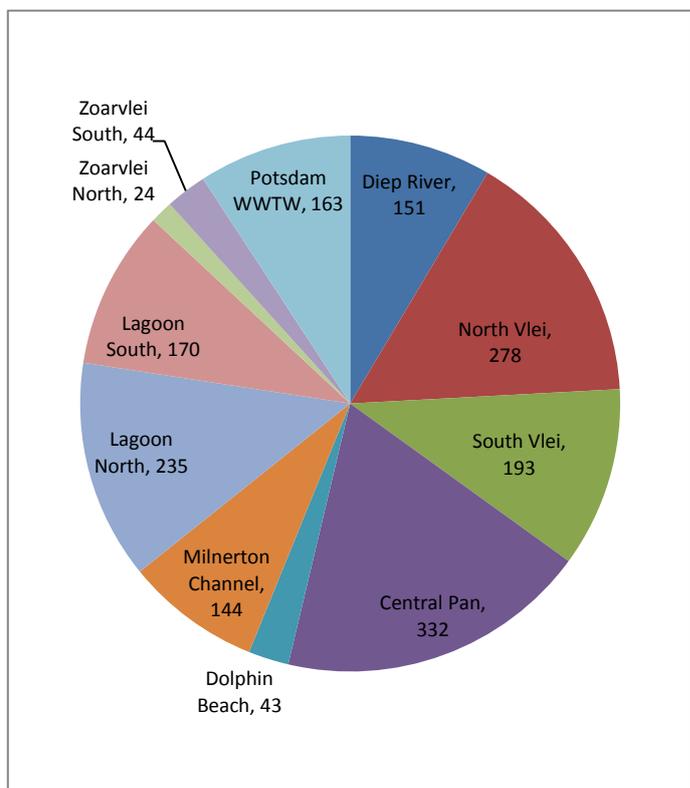


Figure 19. Pie chart of numbers of birds per section.

5 WATER MANAGEMENT

5.1 Water Quality

5.1.1 The water quality of the Table Bay Nature Reserve was monitored by reserve staff on three occasions at 15 monitoring points. The monitoring dates were 29/10, 26/11, and 10/12/2013.

5.2 Rainfall Measurements

5.2.1 Rainfall records from two locations in the Table Bay Nature Reserve, Rietvlei Water Area and the Milnerton Racecourse, are stored in a central database.

Below Figure 20 indicates the rainfall records of Rietvlei and Milnerton Racecourse for 2013, plotted over the average rainfall for the reserve. Half of the months in 2013 recorded **rainfall in excess of the average**, with the total for 2013 being **the highest since 2001**.

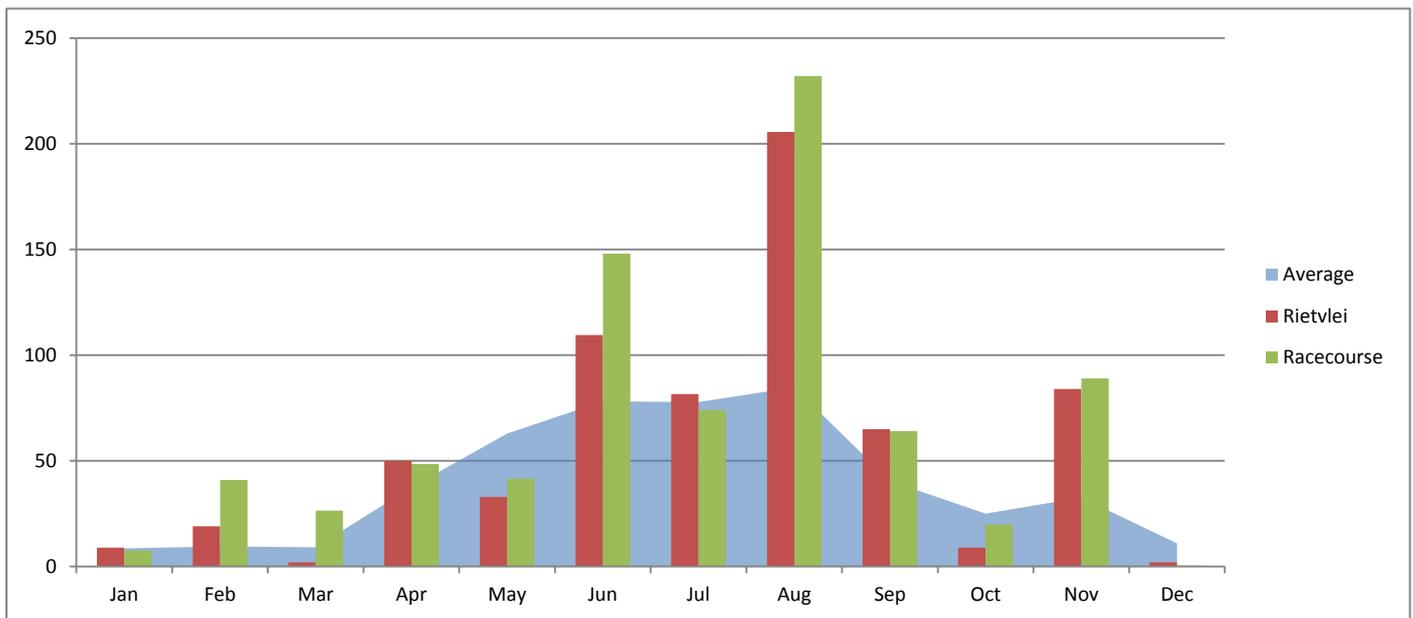


Figure 20. Monthly rainfall records at Rietvlei and Milnerton Racecourse plotted over the average rainfall in Table Bay NR since 2000.

Below Figure 21 indicates the accumulation of rainfall in 2013 at Rietvlei and Milnerton Racecourse, plotted over the average accumulation curve for the reserve. The rainfall in 2013 was well **above the average** annual rainfall and the **highest since 2001**.

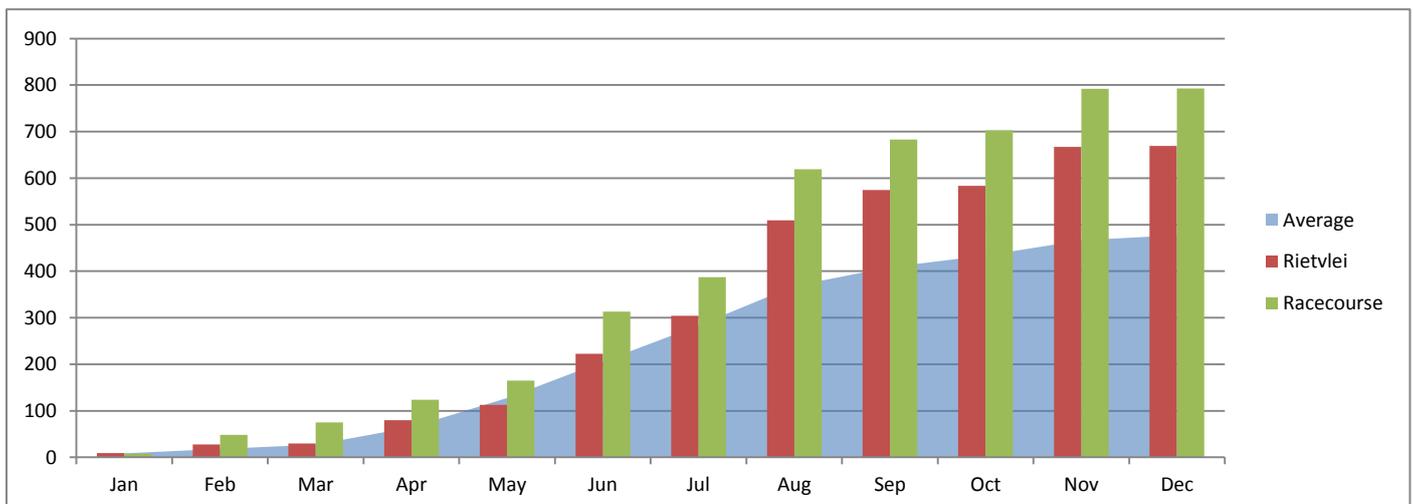


Figure 21. Accumulation of rainfall at Rietvlei and Milnerton Racecourse during 2013, plotted over the average annual rainfall accumulation in Table Bay NR since 2000.

6 FIRE MANAGEMENT

6.1 A planned controlled burn of an area of wetlands between Pentz Drive and the R27 is being prepared for execution in March 2014. The wetlands lie in the Rietvlei Section of the Nature Reserve.

A permit application has been submitted to Air Pollution Control Department for review early in the new year. A public notification process will commence and site inspections will be held with Fire, Traffic and Air Pollution.

The site is being prepared for the controlled burn by means of the cutting of protective firebreaks along the Pentz Drive fence and outside SANCCOB. Old internal fencing and disused structures, that do not need to be burned, have also been removed (Figures 22-24).

The controlled burn may only take place once a permit is obtained, and this decision will be made by Subcouncil 1, once a report has been submitted subsequent to all due processes being undertaken. Similar firebreaks were being cut along Heron Cove in the Diep River Section for fire protection.



Figure 22. Firebreak next to SANCCOB.



Figure 23. Disused structures and old internal fences were removed.



Figure 24. Layout of the firebreak.

7.1 Illegal occupations in the Nature Reserve continue to be a problem. The reserve staff repeatedly removed several illegal structures from areas including the Zoarvlei Section, the Wooden bridge, Blaauwberg Road bridge, and Diep River Section. Stakeholders, including Neighbourhood Watch, are working hard with Law Enforcement to improve the situation. Cultural and religious gatherings in Diep River, including initiation schools, compound the problem. Below article in the local press (Figure 25) demonstrates the extent of the vagrancy problem from the public perspective.



■ The Table View Neighbourhood Watch took the initiative to clean the mess left behind by homeless people.



■ Kitchen knives were found among dumped rubbish.

Eye on the neighbourhood

FAATIMAH HENDRICKS

The Table View Neighbourhood Watch (TVNW) said it has desperately been trying to make residents aware of crime trends in the area so that they can take measures to keep their families and properties safe over the festive season.

The TVNW has been using Facebook to reach everybody and encourage them to get involved to help keep their neighbourhood safe. "We want to teach our community how they can best take care of themselves and one another and work with us to eradicate crime," said TVNW spokeswoman, Gemma Redelinghuys.

She said residents need to be aware of their surroundings at all times, double-check that all doors and gates are locked and to activate their house alarms. She also said residents must refrain from putting out their dirt bins long before the City of Cape Town's refuse removal is meant to collect it, as it attracts homeless people into the area.

The recent discovery of rubbish littering a vacant piece of land near Happy Valley along the R27 has left the TVNW frustrated with residents giving generous handouts to homeless people and leaving items on dirt bins for them to take.

The TVNW has since launched an appeal to the community to donate unwanted items to charity organisations in the area or the City's Give Responsibility campaign. The campaign allows people to SMS to donate R10, of which an average of R8 goes towards NGOs working in partnership with the City of Cape Town to help homeless people.

On Tuesday December 3 TVNW member Garth Bruwer was driving along the R27 near Happy Valley when he spotted a mess in the bush. He stopped to take photos of it and posted it on Facebook, showing the community the mess left behind from their

donations.

"This rubbish (your rubbish) was not left by the Happy Valley locals but rather all the vagrants that have made the bush their temporary home before they go back to their real homes in Atlantis for the weekend," he wrote on Facebook. He said the mess was now left behind for the TVNW to clean up.

When asked how he knew the items found were all given to homeless people, Mr Bruwer responded by saying he spent many hours on the road at night, in the middle of the night and during early mornings to observe the behaviour of people scratching in bins. "I've physically seen people hand stuff to them, place clothes and food on top of bins, leave broken lawnmowers, computers, televisions, fridges and couches to be removed by vagrants," said Mr Bruwer.

He said he has also spoken to many homeless people who have told him residents had given unwanted goods to them. "In fact, we have on several occasions gone back to the houses to confirm the story with the residents themselves."

On Sunday December 8 more than 40 people belonging to the TVNW and members of the public from the age of 13 to 65 helped clear the area where all the rubbish was found. They ended up with more than 150 bags of waste and found items such as televisions, blankets, trolleys and paddle skis. It took them 90 minutes to get the area spotless and two truck-loads of rubbish bags

were taken away to the dump site.

"For the 'newbies' it was a real eye-opener as to how much mess these vagrants actually make and their general disregard for our suburb and the environment we live in," said Ms Redelinghuys.

She said residents need to stop dumping unwanted items that are too large for the bins on the pavements for the homeless people to take.

"This is a lazy and irresponsible attitude on the part of the homeowner and is directly responsible for the increase in vagrants to our area."

Ms Redelinghuys said criminals come into the area pretending to be trolley pushers when most actually have homes elsewhere.

She said residents not disposing of goods properly causes several problems. When homeless people take items they find on top of bins and on pavements, they discard what they don't want in the greenbelts, parks and bushy areas, leaving the community to clean up the mess. Often there are also dangerous items thrown away which criminals use as weapons. "We often hear stories where victims are held at knife-point for their cellphone or purses. The resident is enabling the perpetrator," said Ms Redelinghuys.

She said homeless people also earn a steady income begging or selling the unwanted items that were generously donated to them. She said metal, such as stolen drain covers and metal wall numbers, is being sold to illegal scrap dealers.

Figure 25. Article about the problem of vagrancy in the local press.

7.2 Illegal structures are constantly removed from the Table Bay Nature Reserve (Figures 26-30).



Figure 26. Illegal structures removed under Wooden Bridge.



Figure 27. Illegal sleeping place removed from under a bush.



Figure 28. Illegal structure under Blaauwberg Road bridge.



Figure 29. Illegal structure removed next to Rietvlei Section.



Figure 30. Initiation hut in the Diep River.

8 PEOPLE AND CONSERVATION

- Table Bay NR staff attended no less than 28 official meetings with stakeholders;
- The reserve facilities were used to benefit no less than 417 people over 18 events; and
- Environmental education and outreach benefited no less than 294 people over 12 events.

8.1 Stakeholder Engagement

8.1.1 External meetings

TBNR staff attended no less than 16 meetings with external stakeholders this quarter (see Table 2).

Table 2. Summary of external stakeholder meetings attended.

AREA	DATE	MEETING	PURPOSE
TBNR	03/10/2013	Meeting Niel van Wyk (Friends of Rietvlei) about Milnerton Racecourse management	Planning and feedback
	04/10/2013	Zoarvlei Management Advisory Committee	
	07/10/2013	Joe Slovo cleanup with Emeritus Arch Bishop Desmond Tutu	
	10/10/2013	SANCCOB AGM at Iziko Museum	
	17/10/2013	Rietvlei Management Working Group meeting	
		Ficus tree and boundary inspections at Zoarvlei with ZMAC members	
	25/10/2013	Milnerton Racecourse Environmental Management Committee meeting	
	01/11/2013	Inter-organisation workshop on reserve fencing	
	07/11/2013	Combined fencing workshop with Portuguese and Italian Clubs	
	07/11/2013	Nicky Stander from SANCCOB regarding proposed controlled burn	
	29/11/2013	Milnerton Racecourse Environmental Management Committee meeting	
	06/12/2013	Zoarvlei Management Working Group meeting	
		Meeting Niel van Wyk (Friends of Rietvlei) about hippo management	
10/12/2013	Conservation Learnership induction meeting		
11/12/2013	Rietvlei Management Working Group meeting		

8.1.2 Internal meetings

TBNR staff attended no less than 12 meetings with internal stakeholders this quarter (see Table 3).

Table 3. Summary of internal stakeholder meetings attended.

AREA	DATE	MEETING	PURPOSE
TBNR	02/10/2013	Kikuyu management and restoration planning with Dr Pat Holmes	Planning and feedback
		Portuguese Club site inspection	
	08/10/2013	Signage task team meeting	
	22/10/2013	Helderberg Nature Reserve site visit	
	05/11/2013	Meet Dalton Gibbs and Cliff Dorse about hippo population management	
		Monthly DEA EPWP project progression	
	08/11/2013	Branch Entertainment and team building day	
	19/11/2013	City flora management committee	
	21/11/2013	Post-fire site inspection at Zoarvlei with Dr Pat Holmes	
	03/12/2013	Branch quarterly meeting	
		Branch Business Improvement meeting	
	06/12/2013	North Region Business Improvement meeting	
13/12/2013	Reserve staff year-end function		

8.2 Partnerships and Benefits to People

8.2.1 Rietvlei Education Centre Usage

The usage of the Rietvlei Education Centre at the Table Bay Nature Reserve, excluding school groups, generated 42 person days of benefit to people over 3 event days (see Table 4).

Table 4. Summary of Rietvlei Education Centre usage.

DATE	GROUP	ACTIVITY	PERSON DAYS
17/10/2013	Rietvlei Management Working Group	Meeting	9
05/11/2013	Environmental & Heritage Management: District B&C	Meeting	8
14/11/2013	Friends of Rietvlei	End year meeting	25
TOTALS			42

8.2.2 Rietvlei Boma Usage

The usage of the Rietvlei Boma at the Table Bay Nature Reserve generated 375 person days of benefit to people over 15 event days (see Table 5).

Table 5. Summary of Rietvlei Boma usage.

DATE	GROUP	ACTIVITY	PDs
07/10/2013	EPWP working group	Health and Safety	21
14/10/2013	EPWP working group	Health and Safety	24
19/10/2013	New Apostolic Church	Introduction to TBNR	25
21/10/2013	EPWP working group	Health and Safety	20
28/10/2013	EPWP working group	Health and Safety	19
04/11/2013	EPWP working group	Health and Safety	20
11/11/2013	EPWP working group	Health and Safety	22
18/11/2013	EPWP working group	Health and Safety	19
25/11/2013	EPWP working group	Health and Safety	12
29/11/2013	Finance Directorate, Treasury Dept	Quarterly departmental workshop	25
02/12/2013	EPWP working group	Health and Safety	16
06/12/2013	Environmental Health: Air Quality Management	End year function	20
13/12/2013	EPWP working group	End year function	22
18/12/2013	Ntinga Destiny Consulting	Health & Safety, First Aid training	55
19/12/2013	Ntinga Destiny Consulting	Health & Safety, First Aid training	55
TOTALS			375



Figure 31. Table Bay NR offices and Rietvlei boma.



Figure 32. Interior of Rietvlei boma.

8.2.3 Environmental Education and Outreach

Environmental education and outreach at the Table Bay Nature Reserve generated 294 person days of benefit to people over 12 event days (see below Table 6 and Figures 33-36).

Table 6. Summary of Environmental Education and Outreach.

DATE	GROUP(S)	PROGRAMME	LEARNERS	ADULTS	PD'S
19/10/2013	New Apostolic Church	Introduction to TBNR & walk	4	21	25
01/11/2013	Cape Town Studies	Introduction to TBNR & wetlands	28	2	30
06/11/2013	Sophakama Primary	Wetlands: miniSASS & birding	61	1	62
14/11/2013	Sophakama Primary	Wetlands: miniSASS & birding	53	1	54
22/11/2013	Table View Brownies	Overnight camp	10	3	13
23/11/2013	Table View Brownies	Overnight camp	10	3	13
09/12/2013	Sports & Rec Atlantis Holiday group	Fishing holiday programme	12	1	13
10/12/2013	Sports & Rec Atlantis Holiday group	Fishing holiday programme	12	1	13
11/12/2013	Sports & Rec Atlantis Holiday group	Fishing holiday programme	12	1	13
17/12/2013	Holiday group	Fishing holiday programme	13	5	18
18/12/2013	Holiday group	Fishing holiday programme	13	5	18
19/12/2013	Holiday group	Fishing holiday programme	15	7	22
TOTALS			243	51	294



Figure 33. Table View Brownie Camp (photo E. Krynauw).



Figure 34. Group from Sophokama Primary (photo E Krynauw).



Figure 35. Sport & Recreation's fish programme (photo E Krynauw).



Figure 36. TBNR's fishy holiday programme (photo E. Krynauw)

8.2.4 The Biodiversity Management Branch's annual photo competition received two winning pictures from Table Bay NR, thanks to Elzette Krynauw and Landi Louw's photography skills.



Figure 37. Photograph of Elzette Krynauw that won first place in the Branch's photo competition in the category "visitors".

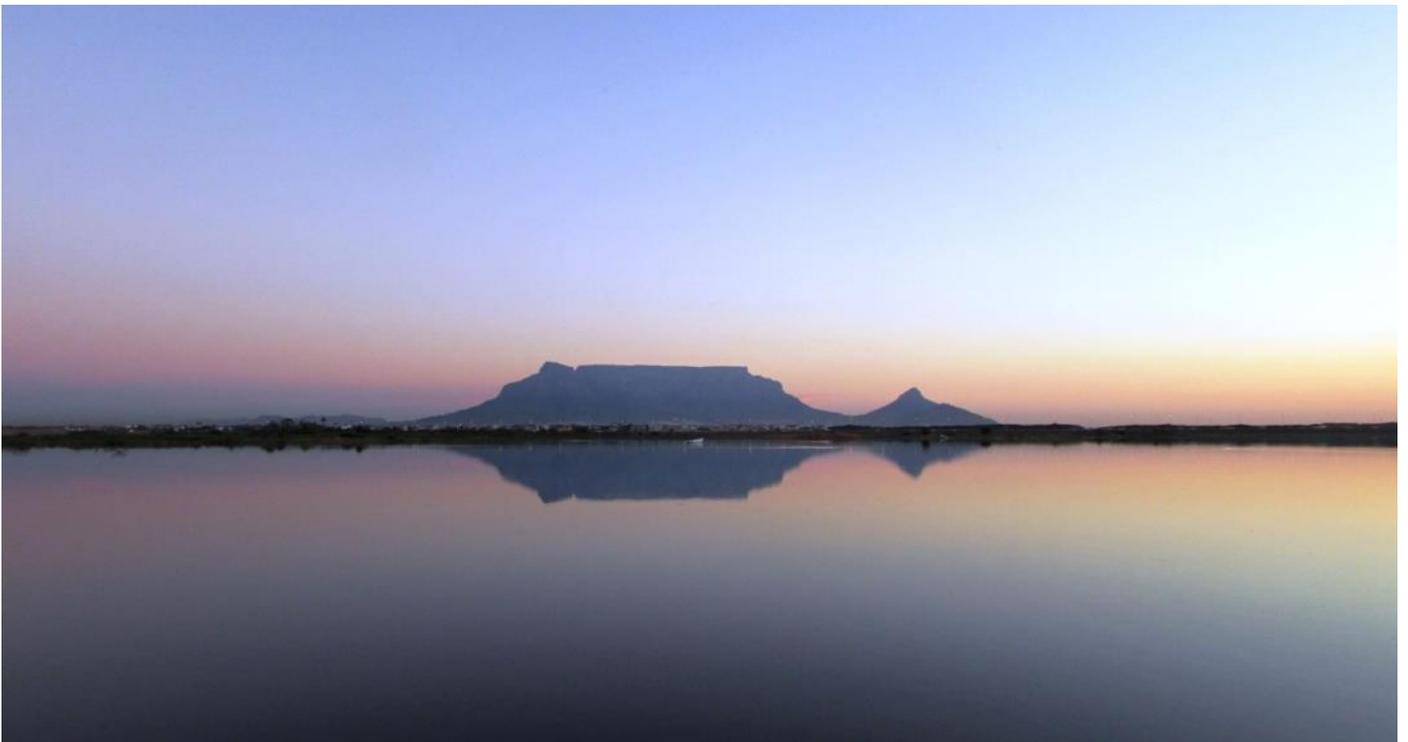


Figure 38. Photograph of Landi Louw that won second place in the Branch's photo competition in the category "landscapes".

9.1 Work-integrated learning (WIL) students at the Table Bay Nature Reserve, Landi Louw of UNISA, and Simonne Afonso of CPUT, both passed the practical component of their National Diploma courses and will be graduating in the new year. Landi Louw has been working as a permanent Visitor Control Officer at the Blaauwberg NR since the previous quarter. New student placements at Table Bay NR in 2014 will be Damon Hope, Stuart van Blerk and Braden Wilkinson (all from CPUT).

9.2 The Milnerton Racecourse Site Manager post, which is presently filled on a part-time basis by former Blaauwberg NR student Simone Greveling through a contract with WetlandSolutions, became vacant due to Simone planning to take up residence and employment in Hermanus from 2014.

The Milnerton Racecourse Environmental Management Committee (EMC) and the City decided to advertise a new full-time Site Manager post through the Cape Town Environmental Education Trust (CTEET) to fill Simone's vacancy. The Milnerton EMC, CTEET and Table Bay NR worked together to recruit and select a suitable candidate to fill this post on a three-year full-time contract starting from January 2014 and ending December 2016. **Landi Louw**, former Table Bay NR student and currently Blaauwberg NR Visitor Control Officer, was successful in her application for the post. From January 2014 Landi will report to the Table Bay NR as a CTEET employee seconded to the City of Cape Town.

9.3 Environmental Education Intern, Jade Kastoer, will complete her internship year during the next quarter in 2014. The process to recruit and select a new intern for 2014 was already completed. **Karen Merrett**, Current Blaauwberg NR student, was successful in her application for the internship post at Table Bay NR for 2014. Karen was voted by the CPUT as the best WIL student of 2013.

9.4 Current Table Bay NR student Simonne Afonso was also successful in her application for the Tygerberg NR's Environmental Education Internship for 2014. We wish her all the best for 2014.

9.5 NQF level 4/5 Conservation Learnerships, administered by the Local Government Sector Education and Training Authority (LGSETA), are being offered to Nature Conservation staff in the City that do not have formal qualifications. Table Bay NR staff **Clinton Roux, Kyle Kelly and Christopher Singo** entered into the course and have attended the induction programme. The learnership course will be presented by NCC Environmental Services (Pty) LTD in partnership with the City of Cape Town.

9.6 The Cape Peninsula University of Technology's Work-Integrated Learning Programme for conservation is geared to offering students practical work opportunities in the conservation industry. This is required for the completion of the National Diploma. Koos Retief served on the evaluation panel with the CPUT from 26-29/12/2013 to evaluate the outcomes of almost 50 students during 2013.

9.7 The North Regional Manager Bongani Mnisi was on leave during the festive season and Koos Retief acted in his behalf from 12-27/12/2013.

9.8 Basic Supervisory Training was presented to Table Bay NR staff Kyle Kelly, Clinton Roux, Christopher Singo, Bulelwa Nomna and Qalile Lisa from 24-25/10/2013.

9.9 Annual audiometric testing of Table Bay NR staff took place on 29/10/2013.

9.10 Former staff of Table Bay NR continued to exceed expectations in their career development:

- **Robert Slater**, 2012 student, is now the Kenilworth Racecourse Conservation Site Manager;
- **Chanelle Naidoo**, 2011/12 intern, is now the Kenilworth Racecourse Conservation Area's People and Conservation Officer;
- **Rifqah Johnson**, 2010/11 intern, is an Environmental Education Officer at SANCCOB;
- **Noxolo Sidzumo**, 2009 student, is now the Senior Operational Supervisor at Wolfgat NR;
- **Sandiso Kraai**, Site Manager at Diep River Section from 2007 to 2009, is now the Senior Operational Supervisor at Durbanville NR;
- **Elana Kellerman**, 2008/09 intern, is now the Site Coordinator at Kogel Bay Resort;
- **Jeremy Keyser**, 2003 student, now works with Doug Jeffery Consultants; and
- **Bronwen Foster**, 2003 student, is an Environmental Education Officer at the False Bay Nature Reserve: Rondevlei Section.

9.11 Staff at the Table Bay NR consisted of 11 permanent and 30 non-permanent staff (Table 7).

Table 7. Staff establishment at Table Bay Nature Reserve.

TBNR	POSITION	PURPOSE	PERMANENT	CONTRACT
Internal	Area manager	Functional / Operation management of TBNR	1	
	Assistant Cons Off	Site management / compliance / visitor management	3	
	Snr People & Cons Off	Education and Outreach	1	
	Snr Field Ranger	Management of work output	1	
	Field Ranger	Field ranging & supervision of teams	4	
	Worker	Work output	1	
	Intern	Education programme		1
	Student	Work-integrated learning		1
External	Worker	EPWP services		28
TOTALS			11	30

9.12 Learnership, Internship and Work-Integrated Learning Programmes have been incorporated into the Nature Reserve’s daily activities to capacitate students to develop skills and to facilitate their career development in the conservation industry. The work that interns and students do also directly contributes to the management of Nature Reserves.

The transition from “student” to “intern” is an additional stepping stone for people to enter the formal conservation industry (Figure 39).



Figure 39. Former student and intern Elzette Krynauw (left) is working with intern Jade Kastoer to develop her skills (photo: B Sutherland).

10 VISITORS AND INCOME

10.1 Income from visitors at the Table Bay Nature Reserve's Rietvlei Water Area during this quarter were R8,812.50 from 322 visitors in October; R15,716.00 from 548 visitors in November; and a record high of R28,353.00 from 1,093 visitors during December 2013.

This totals to R52,881.50 from 1,963 visitors in this quarter (excluding figures of Milnerton Aquatic Club members that access the club's leased area). It is important to note also that the tariffs are adjusted annually by the Council of the City of Cape Town on every 1 July.

Figures 40-41 indicate **an above average amount of visitors and income** recorded in some months during 2013, with a record high in December. The figures also indicate seasonal trends, with December and January being the busiest months, and June and August being the quietest months.

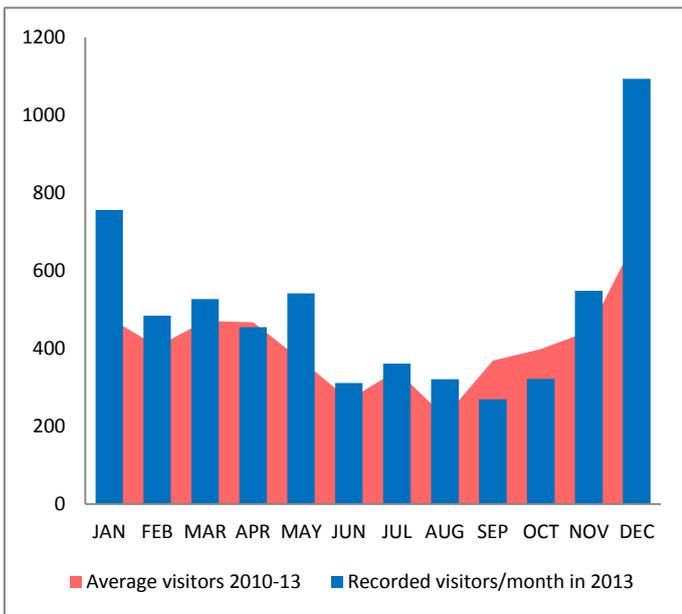


Figure 40. Monthly visitors plotted over averages since 2010.

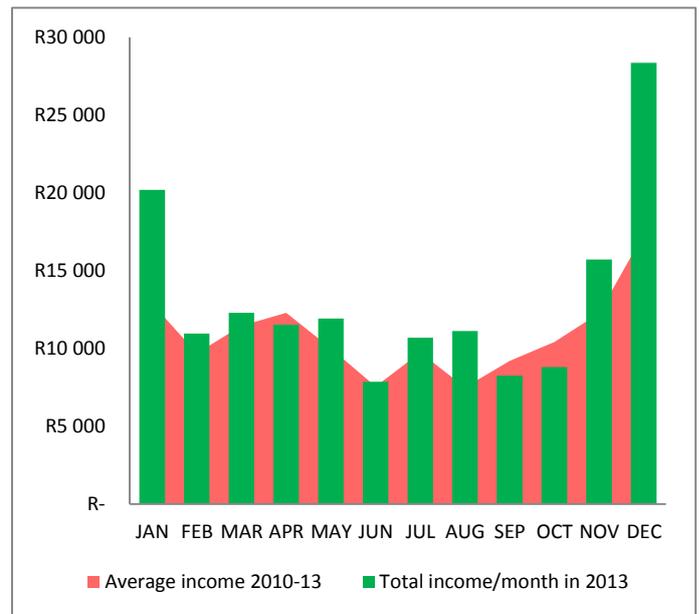


Figure 41. Monthly income plotted over averages since 2010.

Figures 42-43 indicate a **strong increasing linear trend** in both visitor numbers and income over time since January 2010. The strong increase marks higher demands from Capetonians to access natural areas for outdoor recreation, wildlife appreciation and nature-based environmental education. It is also testimony to better compliance enforcement and management by the reserve team.

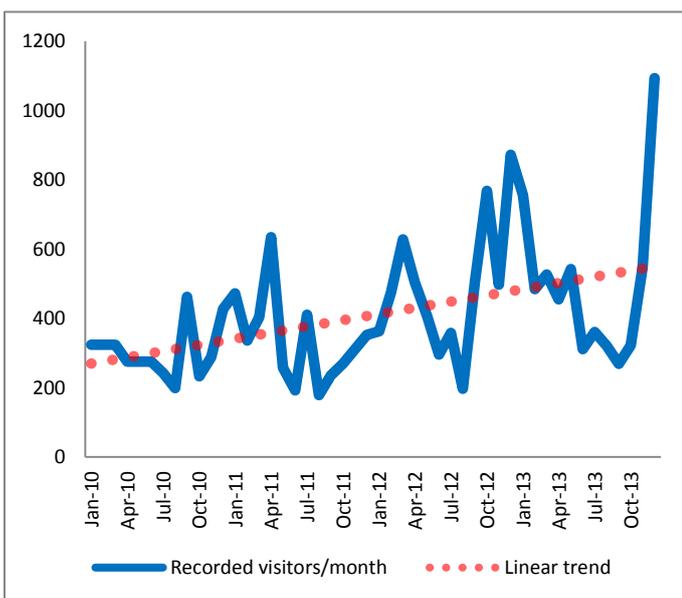


Figure 42. Monthly visitors since 2010 plotted with a linear trend.

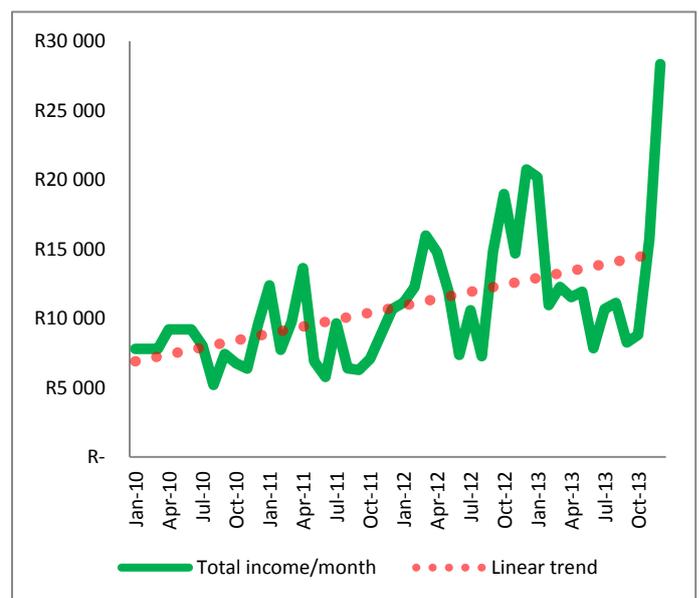


Figure 43. Monthly income since 2010 plotted with a linear trend.

11 INFRASTRUCTURE AND MAINTENANCE

11.1 Maintenance activities in Table Bay Nature Reserve were focussed on the following:

- Sanding and varnishnig of all wooden benches;
- Litter picking in various areas including the Milnerton Lagoon;
- Installation and maintenance of landscaping around the offices and Aquatic Club boat park;
- Mowing of grass at picnic and fishing sites as well as around the offices;
- Cleaning of braai areas, litter bins, picnic sites, bird hides and toilets;
- Repairs to machinery including brushcutters and lawn mowers;
- Repairs to 2 fire fighting skid unit pumps;
- Repairs to vehicles including the 4x4 bakkies and the truck;
- Removal of dumping and derelict infrastructure;
- Removal of illegal constructions such as bicycle jump ramps; and
- Repairs and maintenance of the office's flushing system and toilets.

11.2 A pocket book system was introduced for the field rangers to capacitate them to record more information about what is happening on the Nature Reserve and to give feedback about items that require attention. The pocket book system is an essential tool for field rangers to support management. Assistant Conservation Officer, Christopher Singo, inspects and signs the pocket books of field rangers on a weekly basis.



Figure 44. Litter cleaning at Milnerton Lagoon.



Figure 45. Landscaping around the Aquatic Club boat park.

12 FINANCIAL MANAGEMENT

12.1 Capital Projects that were managed this quarter included:

- Installation of an underground water conservancy tank at the Rietvlei offices;
- Installation of a set of solar water geysers at the Rietvlei recreational ablution block;
- Construction of a pedestrian pavement sidewalk towards the Rietvlei entrance gate;
- Upgrading of a public parking area near the Rietvlei gate; and the
- Replacement of a PC workstation and a laptop computer at the Rietvlei offices.

12.2 Pending projects that will be managed during the next quarter include:

- Installation of insulation and a ceiling in the Rietvlei boma;
- Repairs to the all-weather canvas blinds in the Rietvlei boma,
- Construction of fishing platforms; and
- Repairs to the Rietvlei boardwalk system.

12.3 Construction and installation works during this quarter (Figures 46-51):



Figure 46. Construction of a section of the pavement sidewalk.



Figure 47. A completed section of the pavement sidewalk.



Figure 48. Upgrading of the parking area in progress.



Figure 49. Completed upgrade of parking area.



Figure 50. Solar geysers installed at ablution block.



Figure 51. Underground water conservancy tank being installed.

Penguin release streams live

Be a part of the action at the V&A Waterfront's penguin release and meet-a-penguin event on 12 October from 09:30 to 11:30.

This year the The Southern African Foundation for the Conservation of Coastal Birds (SANCCOB) will be bringing the experience closer to Cape Town audiences by streaming the release live to the V&A Waterfront amphitheatre where attendees will also get the opportunity to meet a real live ambassador

penguin on stage.

Come and experience a release of a large group of rehabilitated African penguins back into the wild as they stream it live on the big screen directly from Simon's Town.

Learn about SANCCOB's amazing conservation efforts with African penguins and seabirds; and get the opportunity to meet one of SANCCOB's very own ambassador penguins.



Free the Penguins! Coming to you live at the waterfront.

PHOTO: MARK WESSELS



Bird's eye view: SANCCOB (the Southern African Foundation for the Conservation of Coastal Birds) is in need of volunteer drivers and general cleaners for its busy festive season at its seabird rehabilitation centre in Table View, Cape Town. Individuals who are 18 years and older and are able to volunteer half or full day shifts between November and January can call Louise Myburgh (volunteer co-ordinator) on 021 557 6155 or email volunteers@sanccob.co.za. PHOTO: SANCCOB (FRANCOIS LOUW)



■ The chief executive officer (CEO) of the Southern African Foundation for the Conservation of Coastal Birds (SANCCOB), Margaret Roestorf, was announced the winner of the Eco-Angel Award at this year's Eco-Logic Awards. The awards ceremony was held on Thursday September 26 in Gauteng. It was hosted by The Enviropaedia in partnership with SABC 3. Sanccob, based in Table View, is dedicated to the rehabilitation of seabirds.



■ Andre Dicks of Rugby spends many lonely hours wandering the Milnerton coastline at low tides, including the middle of the night using a head torch. This past winter saw the beach sand at one of its lowest levels which exposed new areas to explore.



PICTURES: COLIN BROWN

■ The fossilised sharks' teeth he finds are used in the making of necklaces and similar jewellery. They are very difficult to see among the natural stones and sand, especially at night.

■ A six-month-old baby grysbok, which was injured by a water mongoose on Intaka Island at Century City, is now back with his mother after being nursed back to health. Century City's environmental manager, Alan Liebenberg, said a vet treated the grysbokkie and it was kept in a box with staff administering antibiotics and feeding it through a syringe. After a few days it was fully recovered and it was released back onto the island.



Floral gems: The Milnerton Racecourse Nature Reserve held their annual Spring Walk recently. The floral display showcases another of the reserve's hidden gems. The guided walk provided an informative morning where eager walkers learnt about the different plant and animal life of the reserve. It was truly unique to see how these species have adapted to survive in the Cape Flats Sand Fynbos. Be on the lookout and join them again next year and experience Milnerton's floral gem.

Playing Russian 'poolette'

A scientist is worried that the way the City gathers data on sewage spills fails to give the public adequate warning about dangerously high spikes in pollution levels.

CLEMENT DEANE

Sewage spills can spoil your day at the beach, just ask Milnerton lifeguard Dean Burger, 24. After swimming in water polluted by sewage three weeks ago,

Mr Burger suffered a severe skin infection and had to take antibiotics. He was also given penicillin and steroid jabs and a hepatitis shot.

Mr Burger took a dip daily in Milnerton lagoon three weeks ago

to train for a lifeguard exam. He is now wary of the water.

His coach emailed him a week after he started training warning that anyone who had been in the lagoon should see a doctor.

The lagoon water was polluted

when a sewerage pipe the City of Cape Town was working on collapsed on Thursday October 31. ("Sewage spills into Milnerton lagoon," *Tabletalk*, November 6).

In a press statement, issued five days after the spill, the City said it had put up signs and notified recreational clubs, but Mr Burger said he had not seen signs and he had not been the only one in the water.

"There are still no signs by the lagoon, but there is one by the lighthouse," said Mr Burger.

His skin infection has left his legs scarred. He went to a clinic for treatment, but boils on his thighs have not disappeared and they are leaving scars where they formed.

He hopes raising awareness will help others realise the impact of polluted water. He has had to skip training and may not be able to take part in the lifesaving exams in December.

Continued on page 5

Call for transparency on sewage-spill data



Have your say
SMS TALK with your message, name and area you live in to 3CCNG (32263)
SMSes charged at R1 each

From page 1

"I wanted to work for the City of Cape Town, not be held back by them," said Mr Burger.

While the sewage spill was an isolated incident, it highlighted ongoing concern about sewage leaks affecting the city's beaches.

Water expert and epidemiologist Dr Jo Barnes says the City needs to be more open with the results of its water samples, especially at Bloubergstrand, Big Bay and Melkbosstrand.

Unlike the Milnerton Lagoon spill, Dr Barnes is worried about the sewage leaks happening daily in Cape Town.

Sewage leaking from blocked and ageing pipes seeps into the nearest water source, usually a river, and flows into the sea.

The risks of swimming in polluted water included ear infections, eye infections, skin irritations and diarrhoea, said Dr Barnes.

"Unfortunately, we're talking straight-forward sewage," said Dr Barnes, who has a PhD in community health and an interest in water-borne disease.

She said sewage leaks were a hazard for people with chronic illness, such as diabetes or HIV. They risked getting sick every time they swam or surfed.

There is less risk for healthy beach-goers, but their chances of getting an infection rise the more time they spend in the water.

Dr Barnes said she was concerned about the way the City had reported the statistics. Instead of breaking down what organisms were in the water, it summarised its findings and smoothed over the



Surfers, kiteboarders and bathers are at risk of diarrhoea, ear infections, and eye infections as long as sewage leaks continue to pollute the beach.

els of sewage in the water, such as the sewage spill at the lagoon, but it needed a quicker response and ought to make signage as prominent as possible.

She is also concerned about the City reducing the number of samples it takes over the years because of budget cuts.

She said this could lead to it missing a crucial time when sewage leaks increased and left a gap in the early warning system, because the highest amount of pollution took place soon after a spillage.

An expanding population and ageing sewerage infrastructure would most likely lead to more leaks, more pollution, and more infections if not curbed.

The City said many of its beaches complied with guidelines and regulations. Those which failed, did so by a small margin.

Brett Herron, mayoral committee member for transport, roads and stormwater, said for July 2012 to June this year, Melkbosstrand and Big Bay failed by a small margin, while Bloubergstrand was fully compliant.

Since then, Melkbosstrand had cleaned up its act was fully compli-

"Water samples are collected twice a month from each site and then analysed by microbiologists at the Scientific Services Laboratories. *E. coli* and *Enterococcus* levels are measured using standard laboratory techniques for these bacterial organisms.

I wanted to work for the City of Cape Town, not be held back by them

"The results for a particular date are assessed and follow-up sampling is undertaken should the *E. coli* or *Enterococcus* results differ significantly from the previous sampling.

"Consecutive sample results can differ significantly as water quality can change within a matter of hours, depending on environmental conditions. It is for this reason that the guidelines recommend evaluation of the longer-term statis-

health risk," Mr Herron said.

Escherichia coli (E. coli) and *Enterococcus* are species of bacteria normally present in the intestinal tract of humans and other animals.

Mr Herron said the water would not be safe for swimming if the guidelines were not met by a large margin, but he did not state how large the margin needed to be.

He said it was wrong to call the results an average because of how they were calculated. For the 80th percentile, the *E. coli* concentration had to be less than 100 *E. coli* for every 100ml of water. For the 95th percentile, the City's guidelines were far more lenient: up to 2 000 *E. coli* for every 100ml of water.

The percentiles refer to the samples taken throughout the year. If the City consistently takes two samples a month, it would have 24 samples by the end of the year. These would be ranked in ascending order, from least polluted to most polluted, with the 19th sample usually indicating the 80th percentile (19 is 80% of 24), which needed to have an *E. coli* concentration of less than 100 for every 100ml.

For the City to allow a concentration of 2 000 *E. coli* by the 95th

percentile, significantly higher health risks if beach-goers are unfortunate enough to take a dip on a highly polluted day.

The City's guidelines, which favour a long-term statistical analysis, do not appear to account for short-term spikes in pollution levels, meaning there is little chance of it issuing timely warnings to beach-goers.

By remeasuring results when they differ dramatically there is a chance that pollution spikes will not be recorded as such if levels settle by the time new readings are taken, although well after surfers or swimmers have been affected.

Contrary to Dr Barnes's view, Mr Herron said sewage leaks were not the only factor impacting water quality. Illegal dumping of refuse, rubble, animal carcasses, garden and domestic waste contributed to the deterioration of the city's rivers, beaches and wetlands.

"Even seemingly insignificant activities like washing out your refuse bin, washing your car in the driveway, hosing your patio or driveway, using pesticides, washing tools and paintbrushes and not picking up your dog waste, actually seriously impacts on the environment since these pollutants are washed into the stormwater system and from there into rivers, wetlands and onto beaches," said Mr Herron.

Residents should take more responsibility for the condition of the environment because of increasing pollution levels, he said. However, these types of pollution cannot account for the presence of fecal matter at the City's beaches, as *E. coli* and enterococcus

Sewage spill 'busy getting fixed'

LOUISA STEYL
@lounotes

The pipe connection which caused a sewage spill in Milnerton Lagoon has been fixed.

This is according to the City of Cape Town's mayoral committee member for utilities, Ernest Sonnenberg, who said that the pipe connection was fixed on Monday and that the department would hopefully be able to seal it by last night.

The City of Cape Town warned residents and recreational clubs in a press release last week not to use Milnerton Lagoon, following a sewage spill in the area.

According to a press release, the bulk sewer pipe which carries sewage from Milnerton, Montague Gardens, Century City and Monte Vista to Koeberg pump station col-

lapsed, causing the spill.

Repairs and the construction of a temporary pump station were started about two months ago by a contractor appointed by the city. This would allow upgrades to be made to the current infrastructure to reduce the risk of spills.

Spillage

While busy with the last section of the new pipeline at the end of October, the stormwater canal flooded after a storm, causing sand to be washed into the pipe and the Koeberg pump station.

According to the city, this means that the Koeberg pump station could not operate at full capacity, causing spillage and flooding during peak periods.

Sonnenberg explains that the pipe was damaged under a stormwater canal feeding

into the lagoon. "The pipe that was damaged was around one to two kilometres upstream from the lagoon," he says.

The city has assured residents that the contractor has been working throughout the night to fix the damage.

The harmful effects of the spillage on residents and the environment are also a concern and the city has stated that they are working to minimise the effects of the spill.

One of the measures they are taking is to treat the spillage with enzymes to improve water quality.

"The city's Water and Sanitation Department has been working outside of peak sewer flows, has maximised the retention of the flows within the reticulation system, has diverted sewage from the damaged section and placed booms at strategic sections to limit the amount of floating debris," Sonnenberg

says.

Prohibited

The city's Water and Sanitation Department is working with the Roads and Stormwater; Health; and the Environmental Resource Management Departments alongside Scientific Services laboratories and Cape Nature to minimise and rectify the effects of the spillage.

While some recreational activities, like swimming, are prohibited in the area, others, like canoeing are temporarily prohibited while the city monitors the water quality in the area.

"The city will advise once the quality has improved," Sonnenberg says.

He says construction is due to be completed this week and other possible damage fixed as it is identified.



■ Johannes Koering from Milnerton attached a light GoPro camera to his remote controlled quadcopter and snapped this picture of Milnerton from 100 metres.

► **Fishing programme:** The City of Cape Town's Table Bay Nature Reserve will host yet another holiday fishing programme from 17 to 19 December. The programme is open to all children between the ages of eight and 12 years. It will run from 09:00 to 14:00 on each of the three days with a focus on the art of fishing, including practical and interactive lessons at the Rietvlei section of the Table Bay Nature Reserve. Space is limited so parents are encouraged to book as early as possible. Bookings can be made from Monday 2 December until 14:00 on Thursday 12 December. To book, or for more information regarding the programme, please contact Elzette Krynauw on 021 444 7221 or via email to elzette.krynauw@capetown.gov.za.

Editorial

Sewage in the sea

No one likes a crappy beach. Sewage leaking into beach water makes for an unpleasant, and smelly, experience indeed. When Tabletalk contacted epidemiologist Dr Jo Barnes she was concerned the City of Cape Town was playing down the amount of sewage seeping onto beaches. Big Bay has been known to have sewerage blockages and leaks, but it seems the stuff is getting into the sea from almost everywhere.

What was particularly disturbing was the City's response to the issue, which was essentially quoting policy. They did not provide more details, such as the exact point when a beach is declared unsafe for swimming. Mayoral committee member for transport, roads and stormwater, Brett Herron, said it was only declared unsafe if the concentration of *E coli* meant the beach failed by a large margin. He didn't say what this margin was. This is what Dr Barnes's main concern is. She wants the information to be made available for academics to study so they can clear up a murky issue.

Durban's beaches lost their Blue Flag status because of a similar issue – too much sewage in the sea. The City may be concerned about a similar issue. Bloubergstrand and Big Bay lost their Blue Flag status and, unless the water quality improves, it could mean far fewer tourists, fewer beach side property sales and a tougher clean-up for the City.

The real issue here is that of aging sewerage infrastructure. While the City says not all the pollution is caused by sewage leaks, the presence of faecal matter is not caused by residents dumping building rubble or not disposing of chemicals properly. *E coli* and *enterococcus* are formed in the gut, which means our sewer pipes are leaking due to blockages and an increasing population. The first step would be to warn beach-goers as soon as possible when leaks are detected or there is a high presence of *E coli* in the water. The sooner they tend to the problem, the sooner they can mitigate further health risks before the sewage hits the fan.

AMPHIBIANS

Species seen within 10 years

Amietia fuscigula
Amietophrynus pantherinus
Breviceps gibbosus
Kassina senegalensis
Strongylopus grayii
Tomopterna delalandii
Vandijkophrynus angusticeps
Xenopus laevis

Species seen 10-15 years ago

Breviceps rosei

Cacosternum platys

Species seen longer than 15 years ago

Amietophrynus rangeri
Cacosternum boettgeri

FISH

Species seen within 10 years

Anguilla mossambica steinitzi
Caffrogobius nudiceps
Clarias gariepinus
Cyprinus carpio
Galaxias zebratus
Gambusia affinis
Gilchristella aestuarii
Lithognathus lithognathus
Liza richardsonii
Mugil cephalus
Oreochromis mossambicus
Sandelia capensis
Tilapia sparrmanii

Species seen 10-15 years ago

Rhabdosargus globiceps

MAMMALS

Species seen within 10 years

Aonyx capensis
Arctocephalus pusillus
Atilax paludinosus
Bathyergus suillus
Canis lupus familiaris
Cryptochloris asiatica
Cynictis penicillata
Equus burchellii
Felis caracal
Felis silvestris catus
Galerella pulverulenta
Genetta tigrina
Georychus capensis
Herpestes ichneumon
Hystrix africae australis
Lepus capensis
Mellivora capensis
Mus minutoides
Mus musculus
Myosorex varius
Neoromicia capensis
Oryctolagus cuniculus
Otomys irroratus
Raphicerus campestris
Raphicerus melanotis
Rattus norvegicus
Rattus rattus
Rhodomys pumilio
Sylvicapra grimmia
Tatera afra

Species seen longer than 15 years ago

Cryptomys hottentotus

REPTILES

Species seen within 10 years

Acantia meleagris meleagris
Afrogecko porphyreus
Bradypodion pumilum
Chersina angulata
Dasypeltis scabra
Duberria lutrix
Lamprophis aurora
Lamprophis capensis
Lycodonomorphus inornatus
Lycodonomorphus rufulus
Meroles knoxii
Naja nivea
Pelomedusa subrufa
Psammophylax rhombeatus
Pseudaspis cana
Scelotes bipes
Stigmochelys pardalis
Tetradactylus seps
Trachylepis capensis
Trachylepis homalocephala
Typhlosaurus caecus

Species seen 10-15 years ago

Bradypodion occidentale
Crotaphopeltis hotamboeia
Dispholidus typus
Gerrhosaurus flavigularis
Homopus areolatus
Homoroselaps lacteus
Leptotyphlops nigricans
Psammophis crucifer
Psammophis leightoni
Psammophis notostictus
Rhinotyphlops lalandei

Species seen longer than 15 years ago

Pachydactylus geitje

BIRDS

Species seen within 10 years

Accipiter melanoleucus
Accipiter tachiro
Acrocephalus baeticatus
Acrocephalus gracillirostris
Actitis hypoleucos
Actophilornis africanus
Alcedo cristata
Alopothen aegyptiaca
Amaurornis flavirostra
Anas capensis
Anas erythrorhyncha
Anas hottentota
Anas platyrhynchos
Anas smithii
Anas sparsa
Anas undulata
Anhinga rufa
Anthus cinnamomeus
Apalis thoracica
Apus affinis
Apus apus
Apus barbatus
Apus caffer
Ardea cinerea
Ardea goliath
Ardea melanocephala
Ardea purpurea
Asio capensis
Batis capensis

Bostrychia hagedash
Bradypterus baboecala
Bubo africanus
Bubulcus ibis
Burhinus capensis
Burhinus vermiculatus
Buteo vulpinus
Calandrella cinerea
Calidris alba
Calidris canutus
Calidris ferruginea
Calidris minuta
Cecropis cucullata
Centropus burchellii
Ceryle rudis
Charadrius hiaticula
Charadrius marginatus
Charadrius pallidus
Charadrius pecuarius
Charadrius tricollaris
Chlidonias leucopterus
Chroicocephalus cirrocephalus
Chroicocephalus hartlaubi
Chrysococcyx caprius
Chrysococcyx klaas
Ciconia ciconia
Cinnyris chalybeus
Circus maurus
Circus ranivorus
Cisticola juncidis
Cisticola subruficapilla
Cisticola textrix
Cisticola tinniens
Colius colius
Colius striatus
Columba guinea
Columba livia
Corvus albicollis
Corvus albus
Corvus capensis
Corvus splendens
Cossypha caffra
Crithagra albogularis
Crithagra flaviventris
Crithagra sulphurata
Dendrocygna bicolor
Dendrocygna viduata
Dicrurus adsimilis
Egretta alba
Egretta garzetta
Egretta intermedia
Elanus caeruleus
Emberiza capensis
Erythropygia coryphoeus
Estrilda astrild
Euplectes capensis
Euplectes orix
Falco biarmicus
Falco peregrinus
Falco rupicolus
Fulica cristata
Gallinago nigripennis
Gallinula chloropus
Haematopus moquini
Halcyon albiventris
Haliaeetus vocifer
Himantopus himantopus
Hirundo albigularis
Hirundo dimidiata
Hirundo fuligula
Hirundo rustica

Hirundo semirufa
Hydroprogne caspia
Ixobrychus minutus
Laniarius ferrugineus
Lanius collaris
Larus dominicanus
Limosa lapponica
Macronyx capensis
Megaceryle maximus
Merops apiaster
Milvus migrans
Milvus parasitus
Morus capensis
Motacilla capensis
Nectarinia famosa
Netta erythrophthalma
Numenius arquata
Numida meleagris
Nycticorax nycticorax
Oena capensis
Onychognathus morio
Oxyura maccoa
Passer domesticus
Passer melanurus
Pelecanus onocrotalus
Phalacrocorax africanus
Phalacrocorax capensis
Phalacrocorax coronatus
Phalacrocorax lucidus
Phalaropus tricolor
Philomachus pugnax
Phoeniconaias minor
Phoenicopterus roseus
Platalea alba
Plectropterus gambensis
Plegadis falcinellus
Ploceus capensis
Ploceus velatus
Pluvialis squatarola
Podiceps cristatus
Podiceps nigricollis
Porphyrio madagascariensis
Porphyrio martinicus
Prinia maculosa
Pternistis capensis
Pycnonotus capensis
Recurvirostra avosetta
Riparia cincta
Riparia paludicola
Rostratula benghalensis
Rynchops niger
Scleroptila africana
Scopus umbretta
Serinus canicollis
Sigelus silens
Sterna balaenarum
Sterna hirundo
Sterna vittata
Streptopelia capicola
Streptopelia semitorquata
Streptopelia senegalensis
Sturnus vulgaris
Sylvietta rufescens
Tachybaptus ruficollis
Tachymarpis melba
Tadorna cana
Telophorus zeylonus
Thalasseus bergii
Thalasseus sandvicensis
Thalassornis leuconotus
Threskiornis aethiopicus
Tricholaema leucomelas
Tringa glareola
Tringa nebularia
Tringa stagnatilis

Turdus olivaceus
Tyto alba
Upupa africana
Urocolius indicus
Vanellus armatus
Vanellus coronatus
Vidua macroura
Xenus cinereus
Zosterops capensis
Zosterops pallidus
Species seen 10-15 years ago
Anthropoides paradiseus
Buteo rufofuscus
Caprimulgus pectoralis
Delichon urbicum
Indicator indicator
Numenius phaeopus
Saxicola torquatus
Sphenoeacus afer
Tringa totanus
Species seen longer than 15 years ago
Arenaria interpres
Calidris melanotos
Cercomela familiaris
Chlidonias hybrida
Ciconia nigra
Coturnix coturnix
Hirundo spilodera
Lamprotornis bicolor
Mycteria ibis
Oenanthe pileata
Passer diffusus
Phylloscopus trochilus
Porzana pusilla
Rallus caerulescens
Sarkidiornis melanotos
Sylvia subcaerulea

PLANTS

Species seen within 10 years

Acacia cyclops
Acacia saligna
Aizoon sarmentosum
Albuca juncifolia~
Albuca spiralis
Amaryllis belladonna
Amellus asteroides~
Androcymbium capense
Androcymbium eucomoides
Anthospermum aethiopicum
Anthospermum prostratum
Anthospermum spathulatum
ecklonianum
Anthospermum spathulatum~
Aponogeton distachyos
Arctotheca calendula
Arctotheca populifolia
Arctotis hirsuta
Aristea africana
Arundo donax
Gnpsalathus cymbiformis
Aspalathus ericifolia~
Aspalathus hispida~
Aspalathus ternata
Asparagus asparagoides
Asparagus capensis
Asparagus rubicundus
Athanasia dentata
Atriplex cinerea~
Atriplex semibaccata~
Avena fatua
Azolla filiculoides
Babiana tubiflora
Babiana tubulosa

Berkheya rigida
Bolboschoenus maritimus
Brixa maxima
Brunsvigia orientalis
Bulbine lagopus
Calopsis viminea
Carpanthea pomeridiana
Carpobrotus acinaciformis
Carpobrotus edulis
Ceratophyllum demersum~
Chlorophytum undulatum
Chrysanthemoides incana
Chrysanthemoides monilifera
Cliffortia ericifolia
Cliffortia falcata
Cliffortia hirta
Commelina benghalensis
Conicosia pugioniformis~
Cortaderia selloana
Cotula coronopifolia
Cotula filifolia
Cotula turbinata
Cotyledon orbiculata~
Crassula decumbens
Crassula fallax
Crassula flava
Crassula glomerata
Cyanella hyacinthoides
Cynanchum africanum
Cynodon dactylon
Cysticapnos vesicaria
Dasispermum suffruticosum
Diascia capensis
Dimorphotheca pluvialis
Disa bracteata
Dischisma capitatum
Dischisma ciliatum ciliatum
Disphyma crassifolium
Drimia filifolia
Drosanthemum candens
Echium plantagineum
Ehrharta calycina
Ehrharta villosa~
Eichhornia crassipes
Elegia tectorum
Erica subdivaricata
Eriocephalus africanus~
Euphorbia burmannii
Euphorbia mauritanica~
Euphorbia peplus
Falkia repens
Felicia tenella~
Ferraria crispa
Ferraria crispa~
Ficus natalensis~
Geissorhiza aspera
Geissorhiza tenella
Geranium incanum~
Gladiolus carinatus
Gladiolus cunonius
Gladiolus griseus
Gnidia spicata
Haemanthus pubescens
Haemanthus pubescens pubescens
Haemanthus sanguineus
Harveya squamosa
Hebenstretia dentata
Helichrysum patulum
Helichrysum revolutum
Heliophila africana
Hermannia alnifolia
Hermannia linifolia
Hermannia multiflora
Hermannia pinnata
Hermannia procumbens

Hermannia procumbens procumbens
Hermannia procumbens~
Holothrix villosa
Indigofera complicata
Ixia paniculata
Lachenalia contaminata
Lachenalia pallida
Lachenalia reflexa
Lachnaea grandiflora
Lampranthus amoenus
Lampranthus calcaratus
Lampranthus explanatus
Lampranthus glaucus
Lampranthus reptans
Lampranthus socrorum
Lavatera arborea
Lemna gibba
Lemna minor
Leucadendron levisanus
Leysera gnaphalodes
Limonium equisetinum
Limonium scabrum~
Limosella africana~
Lolium multiflorum
Ludwigia adscendens diffusa
Lycium afrum
Lycium ferocissimum
Lyperia lychnidea
Lyperia tristis
Lythrum salicaria
Malva parviflora~
Manulea rubra
Melianthus major
Mesembryanthemum crystallinum
Metalasia densa
Metalasia muricata
Micranthus junceus
Monopsis lutea
Monopsis simplex
Moraea albiflora
Moraea flaccida
Moraea fugax
Moraea gawleri
Morella cordifolia
Morella quercifolia
Muraltia dumosa
Muraltia satureioides
Myoporum tenuifolium
Myriophyllum aquaticum
Nemesia affinis
Nidorella foetida
Nylandtia spinosa
Olea europaea africana
Ornithogalum flaccida
Ornithogalum thyrsoides
Orphium frutescens
Otholobium fruticans
Otholobium virgatum
Othonna filicaulis
Oxalis hirta~
Oxalis luteola
Oxalis obtusa
Oxalis pes-caprae~
Oxalis purpurea
Oxalis pusilla
Paspalum vaginatum
Passerina corymbosa
Pelargonium capitatum
Pelargonium hirtum
Pelargonium myrrhifolium~
Pelargonium senecioides
Pelargonium triste
Pennisetum clandestinum
Persicaria lapathifolia
Petalacte coronata

Pharnaceum lineare
Phoenix canariensis
Phragmites australis
Phyllica cephalantha
Phyllica ericoides~
Phyllica parviflora
Phyllobolus canaliculatus
Phyllopodium cephalophorum
Plantago crassifolia
Plantago crassifolia~
Plecostachys serpyllifolia
Pseudalthenia aschersoniana
Pterygodium catholicum
Putterlickia pyracantha
Rhynchosia ferulifolia
Romulea hirsuta~
Romulea schlechteri
Romulea tabularis
Rumex crispus
Rumex lativalvis
Ruschia caroli
Ruschia macowanii
Salvia africana-lutea
Sarcocornia natalensis~
Sarcocornia perennis~
Satyrium coriifolium
Satyrium odoratum
Schinus terebinthifolius
Searsia crenata
Searsia laevigata
Searsia lancea
Searsia lucida~
Searsia tomentosa
Sebaea albens
Sebaea aurea
Senecio arenarius
Senecio burchellii
Senecio elegans
Senecio halimifolius
Senecio hastatus
Senecio littoreus~
Senecio pubigerus
Senecio rosmarinifolius
Sideroxylon inerme~
Sparaxis bulbifera
Spergularia media
Spiloxene capensis
Spiloxene curculigoides
Stenotaphrum secundatum
Stoibrax capense
Struthiola foetida
Sutherlandia frutescens
Tetragonia decumbens
Tetragonia fruticosa
Thamnochortus erectus
Thamnochortus spicigerus
Thesium spicatum
Torilis arvensis
Trachyandra divaricata
Trachyandra revoluta
Tribolium hispidum
Triglochin bulbosa
Typha capensis
Vicia benghalensis
Vicia sativa~
Wachendorfia paniculata
Wahlenbergia androsacea
Wahlenbergia capensis
Watsonia meriana~
Zantedeschia aethiopica
Zygophyllum sessilifolium
Species seen 10-15 years ago

Amellus tenuifolius
Ammophila arenaria
Arctotis stoechadifolia
Aspalathus acanthophylla
Avena sativa
Calopsis rigorata
Carissa macrocarpa
Chasmanthe aethiopica
Cissampelos capensis
Cladoraphis cyperoides
Cynosurus echinatus
Cyperus textilis
Didelta carnosa~
Ehrharta longiflora
Elegia verreauxii
Erodium moschatum
Eucalyptus gomphocephala
Eucalyptus lehmannii
Euclea racemosa
Ficinia indica
Ficinia nodosa
Geranium molle
Grielum grandiflorum
Helichrysum niveum
Ipomoea purpurea
Ischyrolepis eleocharis
Juncus kraussii
Juncus kraussii~
Kedrostis nana~
Lactuca serriola
Lampranthus stenus
Lavatera cretica
Lobelia erinus
Lolium perenne
Lolium rigidum
Medicago polymorpha
Moraea miniata
Nemesia ligulata
Olea capensis~
Othonna coronopifolia
Paspalum distichum
Passerina ericoides
Pelargonium gibbosum
Pistia stratiotes
Plantago coronopus
Plantago lanceolata
Psoralea repens
Rapistrum rugosum
Ruschia geminiflora
Ruschia tumidula
Salicornia meyeriana
Sarcocornia capensis
Sarcocornia pillansii~
Satyrium bicorne
Schoenoplectus scirpoides
Searsia glauca
Senecio pterophorus
Sonchus oleraceus
Sporobolus virginicus
Tetragonia spicata
Thinopyrum distichum
Trachyandra brachypoda
Trachyandra filiformis
Willdenowia incurvata
Xanthium strumarium
Zaluzianskya villosa
Zygophyllum morgsana
Species seen longer than 15 years ago
Acrosanthes humifusa
Agave sisalana
Albica maxima
Ammocharis longifolia
Aponogeton angustifolius
Asparagus lignosus

Athanasia crithmifolia~
Athanasia trifurcata
Babiana ambigua
Bromus diandrus
Capnophyllum africanum
Cassytha ciliolata
Chenopodium murale~
Cineraria geifolia
Cliffortia stricta
Corycium crispum
Corycium orobanchoides
Cotula eckloniana
Cotula vulgaris
Crassula cymosa
Crassula dichotoma
Crassula vaillantii
Cuscuta nitida
Datura ferox
Dicrothamnus rhinocerotis
Dimorphotheca sinuata
Diosma aspalathoides
Dipogon lignosus
Drosanthemum floribundum
Eriocephalus racemosus~
Eucalyptus grandis
Euclea undulata
Euphorbia caput-medusae
Euphorbia helioscopia
Eustegia filiformis
Exomis microphylla~
Ferraria divaricata
Ficinia nigrescens
Frankenia pulverulenta
Fumaria muralis~
Galenia africana
Galium tomentosum
Gladiolus undulatus
Gomphocarpus physocarpus
Gymnosporia heterophylla
Haemanthus coccineus
Hebenstretia cordata
Hebenstretia repens
Helichrysum cymosum~
Helichrysum helianthemifolium
Hellmuthia membranacea
Hemimeris racemosa
Hemimeris sabulosa
Hypochaeris radicata
Lampranthus aureus
Lampranthus multiradiatus
Lapeirousia anceps
Lessertia rigida

Lichtensteinia obscura
Lycium horridum
Manulea tomentosa
Melasphaerula ramosa
Microlooma sagittatum
Moraea setifolia
Myoporum tetrandrum
Nemesia versicolor~
Oncosiphon suffruticosum
Ornithogalum hispidum~
Ornithoglossum viride
Osteospermum junceum
Otholobium hirtum
Oxalis compressa~
Paraserianthes lophantha~
Passerina rigida
Pelargonium cucullatum~
Pennisetum macrourum
Pennisetum setaceum
Persicaria decipiens
Polygala myrtifolia~
Pterocelastrus tricuspidatus
Ranunculus rionii
Raphanus raphanistrum
Romulea flava~
Romulea obscura~
Rumex sagittatus
Ruppia maritima
Ruschia serrulata
Salvia lanceolata
Schinus molle
Senna didymobotrya
Seriphium plumosum
Sesbania punicea
Silene pilosellifolia
Solanum americanum
Solanum guineense
Solanum linnaeanum
Sonderina hispida
Sonderina tenuis
Spartium junceum
Spiloxene aquatica
Steirodiscus tagetes
Stoebe capitata
Stuckenia pectinata
Trachyandra ciliata
Trachyandra muricata
Trichogyne repens
Tylecodon grandiflorus
Viscum capense
Zygophyllum flexuosum