

TABLE BAY NATURE RESERVE QUARTERLY REPORT

1 JANUARY TO 31 MARCH 2014
BY: KOOS RETIEF

This quarterly report summarises the activities of the Biodiversity Management Branch at the Table Bay Nature Reserve for the period from 1 January to 31 March 2014.

CONTENTS	PAGE
1 AREA MANAGER'S SECTION	2
2 HIGHLIGHTS AND CHALLENGES	3
3 BIODIVERSITY MANAGEMENT	4
4 NATURE CONSERVATION	6
5 WATER MANAGEMENT	8
6 FIRE MANAGEMENT	9
7 COMPLIANCE MANAGEMENT	9
8 PEOPLE AND CONSERVATION	10
9 HUMAN RESOURCE MANAGEMENT	13
10 VISITORS AND INCOME	14
11 INFRASTRUCTURE MANAGEMENT	16
12 FINANCIAL MANAGEMENT	16
Appendix A: Press articles	17
Appendix B: Species lists	22



Figure 1. BirdLife SA's Important Bird Area (IBA) sign near the Rietvlei Education Centre.

1 AREA MANAGER'S SECTION

1.1 *Typha capensis* (bulrush) reeds

Numerous communications have been received from neighbours around the Table Bay Nature Reserve about *Typha capensis* (bulrush) reeds and the seeds that they release during February and March.

From the 1950s to 1980s there were several drastic alterations to the hydrology of the wetlands in the Table Bay area, including major excavations and dredging, construction of major roads and railways, and the development of residential and industrial areas.

Today these developments and roads act as drainage impoundments. Surface storm-water runoff and treated wastewater effluent is directed into the natural areas. This is changing the dynamic seasonal and temporary wetlands into more static nutrient-enriched permanent water areas.

As a result of this urbanisation, elevated water and nutrient levels are more likely to persist throughout the Rietvlei wetland system. *Typha capensis* (bulrush) reeds are aggressively expansive into such habitats that are modified with very specific favourable conditions, including:

- (1) Prolonged inundation of shallow areas with water, and
- (2) Continual introduction of water-borne silts and nutrients.

In other words, the reeds will grow where the conditions are favourable. *Typha capensis* is not an alien plant and they do not expand beyond their favourable habitats. The factors that allow them to persist (water and nutrients) are not going to change by any attempt to treat the symptoms. No amount of cutting, herbicide application, or burning will change the cause of the reed growth.

The Table Bay Nature Reserve has undertaken cutting, herbicide application and burning when funding and approvals were in place in an attempt to alleviate seed dispersal. This is only treating a portion of the symptom, but it is clear however that the reeds are resilient and will persist in the system.

Throughout the nature reserve there are hundreds of hectares of reed beds. Reserve Management has no objective to eradicate any reed beds as this is simply not possible. There are expectations from the public that any (or a combination of) treatment methods will completely eradicate entire reed beds, but this is totally unrealistic and is causing unnecessary disappointment. While the habitat remains favourable for reeds, such an outcome is not possible.

Fire can be used as a tool to remove and reduce accumulated flammable fuel loads (dead material) in reed beds. This burning is a preventive fire safety approach, but is not aimed at eradicating reed beds.

The City continues to investigate other means and techniques of managing this challenge, including obtaining quotations and proposals from commercial operators. The Environmental Resource Management Department is in liaison with the Catchment, Stormwater, River Management (CSRM) and City Parks Departments to explore what further options are available, but there can never be any guarantee that entire reed beds will be completely eradicated from the environment. See Figures 2-3.



Figure 2. HENCHEM inspecting wetlands to provides quotes.



Figure 3. Wetlands between Dolphin Beach and Waves' Edge.

2 HIGHLIGHTS AND CHALLENGES

2.1 New staff at the Table Bay Nature Reserve includes the Education Intern Karen Merrett, Nature Conservation Students Stuart van Blerk, Damon Hope and Braden Wilkinson, and Milnerton Racecourse Site Manager Landi Louw.



Figure 5. Education intern, Karen Merrett, who will work with Elzette Krynauw.



Figure 6. Students, Stuart van Blerk, Damon Hope and Braden Wilkinson.



Figure 4. Site manager for Milnerton Racecourse Section, Landi Louw.

2.2 Capacity building and skills development has reached a new high at the Table Bay Nature Reserve. For the first time, the reserve is hosting ten interns, students and learners at the same time. Table 1 below shows a breakdown of the staff from Table Bay Nature Reserves that are enrolled in training programmes.

Table 1. Table Bay staff enrolled in learnership programmes.

Programme	Staff members
EMRD Internship Placement (1 placement)	Karen Merrett
CPUT Work Integrated Learning Placements (3 placements)	Damon Hope
	Stuart van Blerk
	Braden Wilkinson
NCC Corporation's NQF4 Learnerships (3 placements)	Clinton Roux
	Kyle Kelly
	Christopher Singo
Cape Town Environmental Education Trust's (CTEET) NQF2 Natural Resource Guardianship Learnerships (3 placements)	Viwe Maposa
	Pamella Mrebe
	Ntombesithathu Fusa

2.3 The Milnerton Aquatic Club hosted a very successful 24-Hour Challenge from 15-16/03/2014. The Area Manager sent a letter to the club's organising committee to congratulate them on a well-managed event. Special attention was paid to security, access control and site clean-up.

2.4 BirdLife South Africa sponsored an Important Bird Area (IBA) sign, which was installed near the Rietvlei Education Centre. The Rietvlei Wetlands are recognised for their importance to water birds. See Figure 1 on cover page.

2.5 The City of Cape Town launched a public process as part of their application to Provincial Government for **Environmental Authorisation for Routine Stormwater, River and Wetland Maintenance Activities**. The report was in the form of a Basic Assessment which was made available to the public at libraries or via internet download. A press advertisement was circulated to stakeholders of the Table Bay Nature Reserve, which happens to be a major wetland system in the City and is connected with surrounding stormwater drainage infrastructure. Much public interest exists about flooding hazards in this area. City departments gave input internally but public stakeholders were asked to comment to the consultants.

3.1 The biodiversity of Table Bay Nature Reserve is constantly monitored and recorded on a centralised database. Below Figures 7-14 some images of specimens found in the field:



Figure 7. Leucistic female Malachite sunbird (photo: Stefan Goets)



Figure 8. Western leopard toad found in Table View area.



Figure 9. Cape dwarf chameleon (photo: Simonne Afonso).



Figure 10. March lilies (*Amaryllis belladonna*).



Figure 11. Rhombic skaapstekker in Rietvlei Section.



Figure 12. Water dikkop eggs at Rietvlei Section



Figure 13. Mole snake rescued from a building site next to the Diep River Section (photo: Landi Louw).



Figure 14. Parrot-beaked Tortoise / Padloper (*Homopus areolatus*) rescued from building site near Diep River Section.

3.2 Wildlife photography is an important passtime for many. Jan and Frieda Prinsloo's images (Figures 15-19) below capture some of the outstanding sightings this quarter:



Figure 15. Hottentot teal.



Figure 16. Crested grebe with chick.



Figure 17. Cape grysbok male.



Figure 18. Cape grysbok baby.



Figure 19. Large grey mongoose.

4 NATURE CONSERVATION

4.1 Flora Management

4.1.1 Planting of approved shade trees took place at the Rietvlei water area's peninsula picnic area from 6-7/03/2014. Some of the trees were bought by the Milnerton Aquatic Club and the rest of the trees were supplied by Biodiversity Management's nursery at Westlake (see Figures 20-21). The Branch manager must approve the planting of trees to ensure that foreign or alien species do not invade into natural habitats.



Figure 20. Student Stuart van Blerk planting a Milkwood.



Figure 21. Wild peach tree.

4.1.2 Invasive vegetation clearing efforts mainly focussed on manual removal of **water hyacinth** in the Milnerton Lagoon and Milnerton Channel, cutting and herbicide application of **Port Jackson** in the Milnerton racecourse Section, the Vissershok Section, the Fynbos Corridor, and the Diep River eastern bank near SATI container depot and the Milnerton Riding School, general hand-pulling of **emergent weeds**, cutting and herbicide application of **Typha capensis bulrush reeds** at Wave's Edge, and the removal of **palm trees** and various other alien species along the R27 boundary at the Rietvlei Section. See Figures 22-23.



Figure 22. Water hyacinth removal in Milnerton Channel.



Figure 23. Port Jackson clearing in Diep River Section.

4.1.3 Additional vegetation management included to cutting and trimming of lawns at picnic areas and visitor use zones. The maintenance and upkeep of visitor facilities is a major focus of the Table Bay Nature Reserve team during peak visitor season.

4.2 Fauna Management

4.2.1 Monitoring of wildlife: Counts and sightings

4.2.1.1 An integrated bird census was conducted on 17/01/2014. The census was done by Nature Conservation staff and members of the Cape Bird Club, covering 11 survey sections.

The water birds alone numbered a total of 2,972 birds comprising of 43 species. These included 11 Great crested grebe, 18 Little grebe, 53 White pelican, 51 Whitebreasted cormorant, 33 Reed cormorant, 11 African darter, 27 Grey heron, 11 Blackheaded heron, 8 Purple heron, 8 Little egret, 12 Yellowbilled egret, 8 Cattle egret, 45 Sacred ibis, 22 Glossy ibis, 3 Hadedda ibis, 4 African spoonbill, 190 Greater flamingo, 346 Egyptian goose, 44 Yellowbilled duck, 9 Cape teal, 37 Cape shoveller, 157 Spurwinged goose, 1 African marsh harrier, 3 Purple swamphen, 68 Common moorhen, 739 Redknobbed coot, 11 African black oystercatcher, 22 Threebanded plover, 84 Blacksmith lapwing, 2 Greenshank, 10 Pied avocet, 6 Blackwinged stilt, 2 Water thicknee, 55 Kelp gull, 630 Hartlaub's gull, 6 Caspian tern, 68 Swift tern, 46 Sandwich tern, 70 Common tern, 6 Pied kingfisher, 1 Pied kingfisher, 27 Cape wagtail, and 6 Mallard hybrid.

18 other birds were seen, including Cape weaver, Cape sparrow, Cape canary, Laughing dove, Common waxbill, Pied crow, Fiscal shrike, European bee-eater, Jackall buzzard, Helmeted guineafowl, Redwing starling, Blackshouldered kite, Orangethroated (Cape) longclaw, Fantailed (Zitting) Cisticola, White-throated swallow, European (Barn) swallow, Banded Martin, Cape reed (Lesser swamp) warbler (see Figures 24-26).

Bird census 17/01/2014	Total	Diep River	North Vlei	South Vlei	Central Pan	Dolphin Beach	Milnerton Channel	Lagoon North	Lagoon South	Zoarvlei North	Zoarvlei South	Potsdam WWTW
TOTALS	2972	141	284	482	737	82	3	582	94	45	81	441
Great crested grebe	11		2	7		2						18
Little grebe	18											
White pelican	53	23			30							
Whitebreasted cormorant	51		2	2	12			28	2			5
Reed cormorant	34	1	1	13	1			2	3			13
African darter	11	5	1	1		1						3
Grey heron	27	4	3	1	3			14				2
Blackheaded heron	11	1	1		2		1				1	5
Purple heron	8	1	4	1	2							
Little egret	8	1	2	2	1				2			
Yellowbilled egret	12	9	1	1	1							
Cattle egret	8	7				1						
Sacred ibis	45	3	7					10			5	20
Glossy ibis	22	11			8	1						2
Hadedda ibis	3	2			1							
African spoonbill	4	2			2							
Greater flamingo	190				60			15				115
Egyptian goose	346	20	14	179	63			60				10
Yellowbilled duck	44	4			1	14		8			6	11
Cape teal	9				2							7
Cape shoveller	37				3	13						21
Spurwinged goose	157	10	1	144	2							
African marsh harrier	1	1										
Purple swamphen	3		1	2								
Common moorhen	68	12				9	2	1			42	2
Redknobbed coot	739	12	71	119	500	33						4
African black oystercatcher	11		2	8				1				
Threebanded plover	22	7										15
Blacksmith lapwing	84			4	3			36		2	20	19
Greenshank	2							2				
Pied avocet	10				10							
Blackwinged stilt	6				3							3
Water thicknee	2							2				
Kelp gull	55		36		9	8			2			
Hartlaub's gull	630		118	1	3			221	77	42	1	167
Caspian tern	6		1	1	3			1				
Swift tern	68		4					56	8			
Sandwich tern	46							46				
Common tern	70							70				
Pied kingfisher	6				2			3				1
Pied kingfisher	1		1									
Cape wagtail	27	5	13	2	2					1		4
Mallard hybrid	6							6				

Figure 24. Results of bird census.

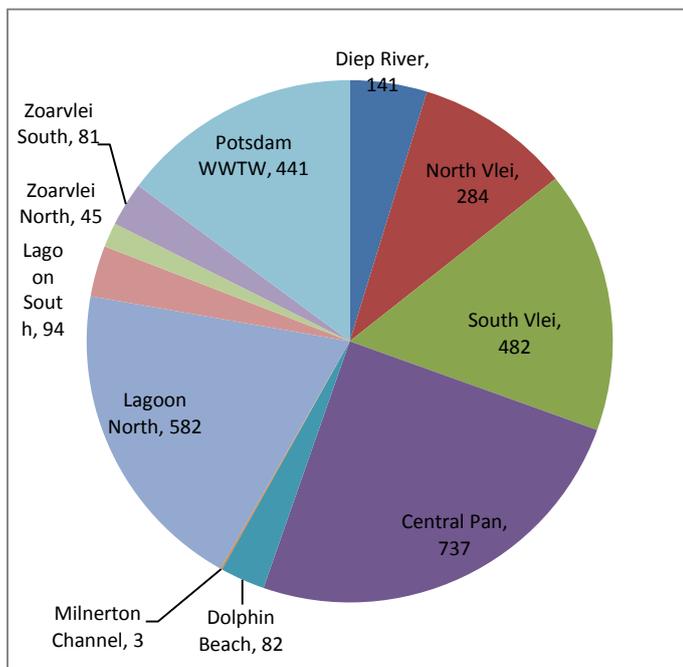


Figure 25. Pie chart of birds in various sections.

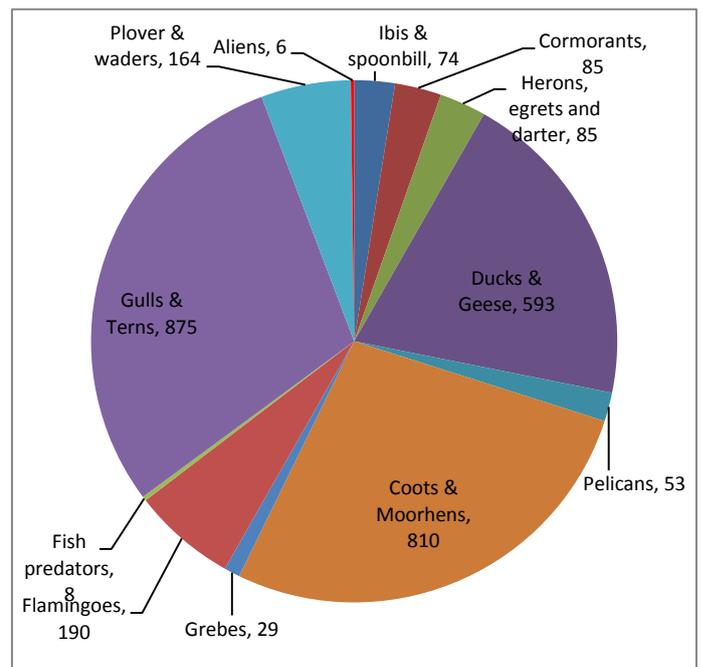


Figure 26. Pie chart of various groups of birds.

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 28/01, 25/02, and 25/03/2014.

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 27 indicates the rainfall records from Rietvlei and Milnerton Racecourse for the first quarter of 2014, plotted over the average rainfall pattern for the reserve calculated since 2000. January and March were well above the average for these months.

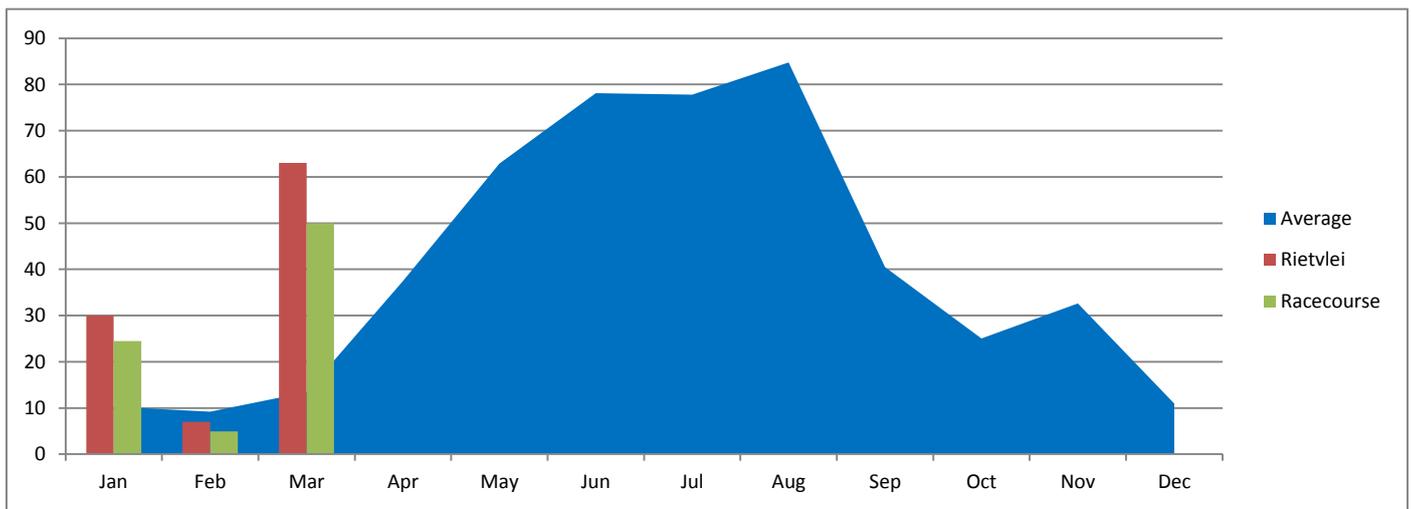


Figure 27. Monthly rainfall records at Rietvlei and Milnerton Racecourse plotted over the average rainfall in Table Bay NR since 2000.

The accumulation of rainfall during this quarter is well above the average accumulation curve for the nature reserve. This, combined with the high rainfalls in 2013, has contributed to exceptionally high water levels. See Figures 28 below.

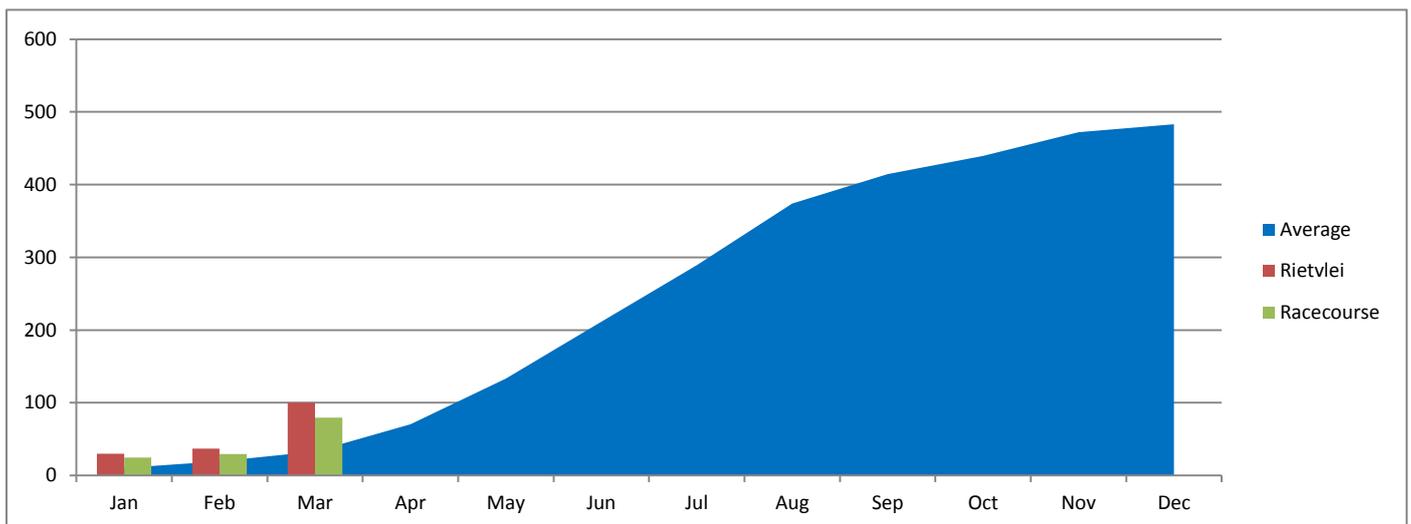


Figure 28. Accumulation of rainfall at Rietvlei and Milnerton Racecourse during 2014, plotted over the average annual rainfall accumulation in Table Bay NR since 2000.

5.2.2 Flooding is a major concern to residential areas situated in the flood levels of the Diep River and Rietvlei wetlands. Rainfall records from 2013 indicated relatively high rainfall in the previous year which resulted in the seasonal pans and isolated ponds remaining wet throughout the summer.

6 FIRE MANAGEMENT

6.1 An application for approval for a controlled burn at the SANCCOB block of the Rietvlei Section was delayed by lengthy processes outside the control of the reserve management team. Despite having submitted the necessary permit application in 2013 already, and conducting field site inspection on 27/01/2014, a permit has not been received to date. A new application will therefore be submitted in 2014 for the next fire season.

6.2 Wildfires occurred in the Rietvlei Section on 16/01/2014 at Hoff Street, and on 2-3/02/2014 near McPherson's Nursery.

The latter wildfire occurred over two days and burned away considerable amounts of reeds which allowed nature reserve teams to access alien vegetation stands for clearing work of the alien plants. See Figures 30-31 below:



Figure 30. Wildfire near McPherson's Nursery on 2/02/2014.



Figure 31. Clearing of alien after the wildfire near McPherson's nursery.



Figure 29. Controlled burning at Tygerberg Nature Reserve.

6.3 A controlled burn was undertaken at Tygerberg Nature Reserve on 31/03/2014. Koos Retief and Landi Louw from Table Bay Nature Reserve assisted at this controlled burn. See Figure 29 above:

7 COMPLIANCE MANAGEMENT

7.1 Illegal occupations were removed from the Zoarvlei Section on 17/02, 24/02, and 20/03/2014. Other areas where illegal occupations were also found and removed include the Diep River Section and Milnerton Lagoon. See Figure 32 below.



Figure 32. Removal of illegal structures and rubble from Zoarvlei.

7.2 An illegal gillnet was removed from the Milnerton Lagoon by the Milnerton Canoe Club. Gillnets are prohibited means of catching fish, and may only be used under strict licensing conditions for research and monitoring. See Figure 33 below.



Figure 33. Illegal gillnet removed from the Milnerton Lagoon.

8 PEOPLE AND CONSERVATION

- Table Bay NR staff attended no less than 19 official meetings with stakeholders;
- The reserve facilities were used to benefit no less than 843 people over 37 events; and
- Environmental education and outreach benefited no less than 781 people over 10 events.

8.1 Stakeholder Engagement

8.1.1 Internal meetings

Table Bay NR staff attended no less than nine internal planning meetings (see Table 2 below).

Table 2. Internal meetings.

Area	Date	Meeting	Purpose
TBNR	28/01/2014	Flora Management Committee	Planning
	31/01/2014	North Region: Health & Safety	
		North Region: Management	
	21/02/2014	Tygerberg Nature Reserve: Ecological burn site meeting	
	27/02/2014	Branch meeting: Tygerberg Nature Reserve	
	28/02/2014	North Region: Student trial run research presentations	
		North Region: Management	
		Farewell function for Jade Kastoor	
04/03/2014	Branch: Student research presentation		

8.1.2 External meetings

Table Bay NR staff attended no less than ten external liaison meetings (see Table 3 below).

Table 3. External meetings.

Area	Date	Meeting	Purpose
TBNR	23/01/2014	Contractor site meeting: Boma blinds	Liaison
	31/01/2014	Milnerton Racecourse Environmental Management Committee	
	07/02/2014	Zoarvlei Management Advisory Committee	
	13/02/2014	Rietvlei Management Working Group	
	18/02/2014	CPUT WIL student progress	
	28/02/2014	Estuary Management Forums: Chairpersons' workshop	
		Milnerton Racecourse Environmental Management Committee	
	03/03/2014	CTEET NQF2 Learnership Induction Programme	
	05/03/2014	Contractor site meeting: Shade ports	
	28/03/2014	Milnerton Racecourse Environmental Management Committee	



Figure 34. Twelve NQF2 learners from the Branch.



Figure 35. Half of the learners are based in the North.

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 206 person days of benefit to people over 8 event days. This is 164 person days more than the previous quarter. See Table 4 below.

Table 4. Rietvlei Education Centre usage.

DATE	GROUP	ACTIVITY	PERSON DAYS
20/01/2014	EPWP working group	Health and safety	62
27/01/2014	EPWP working group	Health and safety	35
10/01/2014	EPWP working group	Health and safety	46
13/02/2014	Rietvlei Management Working Group	Meeting	11
28/02/2014	North Region	Regional meeting	10
03/03/2014	EPWP working group	Health and safety	10
07/03/2014	CapeNature Community Conservation Component	People & Parks forum meeting	8
17/03/2014	EPWP working group	Health and safety	24
TOTAL			206

8.2.2 Rietvlei Boma Usage

The usage of the Rietvlei Boma at the Table Bay Nature Reserve generated 637 person days of benefit to people over 29 event days. This is 262 person days more than the previous quarter. See Table 5 below.

Table 5. External meetings.

DATE	GROUP	ACTIVITY	PERSON DAYS
27-31/01/2014	Biodiversity Management Branch WIL students	Induction	100
03/02/2014	EPWP working group	Health and Safety	32
04-06/02/2014	Invasive Species Unit	Herbicide Training	54
10-13/02/2014	CCT – ERMD	Nat. Cons. Learnership	35
17/02/2014	EPWP working group	Health and safety	23
20/02/2014	Big Bay Law Enforcement	Meeting	10
21/02/2014	Provincial ground crew working group	Workgroup meeting	10
24-26/02/2014	Biodiversity Management Branch	Labour Relations Training	75
28/02/2014	Local Area Economic Department	LAED team meeting	15
03/03/2014	Cathseta / CTEET / CCT	Learnership induction	30
04/03/2014	Biodiversity Management Branch	Student presentations	47
10/03/2014	EPWP working group	Health and Safety	48
12-14/03/2014	Biodiversity Management Branch	Labour Relations Training	87
17-18/03/2014	Environmental Capacity Building, Training and Education	Smart office training	50
31/03/2014	EPWP working group	Health and safety	21
TOTAL			637

8.2.3 Environmental Education and Outreach

Environmental education and outreach at the Table Bay Nature Reserve generated 781 person days of benefit to people over ten event days. This is 487 person days more than the previous quarter. See Table 6 and Figures 36-39 below.

Table 6. External meetings.

DATE	GROUP(S)	PROGRAMME	LEARNERS	ADULTS	PD'S
12/02/2014	Philidelphia Primary	Wetland biodiversity (off site)	29	2	31
24/02/2014	Table View Primary	Wetland biodiversity (with SANCCOB)	49	2	51
25/02/2014	Table View Primary	Wetland biodiversity (with SANCCOB)	59	2	61
26/02/2014	Table View Primary	Wetland biodiversity (with SANCCOB)	55	2	57
04/03/2014	Marconi Beam Primary	Wetland Ecosystems & bird ID	77	2	79
05/03/2014	Marconi Beam Primary	Wetland Ecosystems & bird ID	63	2	65
06/03/2014	Kirstenbosch Careers Day	Biodiversity as a career (off site)	188	36	224
13/03/2014	Seamount Primary	Wetland birds & miniSass	50	2	52
24/03/2014	Parklands College	Fish dissection & plant ID (with SANCCOB)	61	4	65
26/03/2014	Rondebosch East	Wetland biodiversity & birds (+ SANCCOB)	88	8	96
TOTALS			719	62	781



Figure 36. School group from Marconi Beam.



Figure 37. School group from Table View Primary.



Figure 38. School group from Philadelphia.



Figure 39. Atlantis Fire Station certificate awards (photo: K Merrett).

9 HUMAN RESOURCE MANAGEMENT

9.1 Staff establishment at the Table Bay NR was bolstered by new appointments, including Education Intern **Karen Merrett**, Nature Conservation Students **Stuart van Blerk**, **Damon Hope** and **Braden Wilkinson**, and Milnerton Racecourse Site Manager **Landi Louw**. See photographs on Page 3.

9.2 Training needs analysis (TNA's) for all staff were submitted on 13/01/2014. **Training interventions** this quarter amounted to no less than 62 person days over five training interventions:

- **Two snake identification, awareness and handling** courses were attended at the Driftsands NR. Koos Retief and Landi Louw attended 25-26/01/2014, and Clinton Roux on 29-30/03-2014. The course was offered by the Cape Reptile Institute and it covered theory and practical snake handling. Special training involved the capture and handling of venomous us snakes including Boomslang, Cape cobra and Puff adder. See Figures 41-42 below.
- **Industrial Relations** training was attended by Koos Retief on 24-26/02/2014, and by Clinton roux and Elzette Krynauw on 12-14/03/2014. This entailed a detailed introduction to labour law, as well initiation and chairing of disciplinary and incapacity investigation procedures.
- **Basic Fynbos Identification** training was attended by Koos Retief on 24-28/03/2014. This entailed field trips with theory and practical sessions focussing on identification techniques and using guides and resources.
- **Water Safety** training was attended by 26 Expanded Public Works Programme (EPWP) staff on 18 and 25/01/2014. This is to enable to work in water when supplied with the necessary safety gear.



Figure 40. Fynbos identification course.



Figure 41. Mole snake.



Figure 42. Puff adder.

9.3 Learnership workshops with Table Bay Nature Reserve staff this quarter amounted to no less than 55 person days over five training interventions:

- **NQF level 2 Conservation Resource Guardianship Learnerships** were offered to three ladies from the local EPWP projects (Viwe Maposa, Pamella Mrebe, and Ntombesithathu Fusa). The programme runs for a year and is administered by the Cape Town Environmental Education Trust (CTEET). The funding for the learnerships comes from CATHSSETA and the City of Cape Town. Interviews were held on 11/02/2014 and contracts were signed the next day on 12/02/2014. The learners will attend a specialised nature conservation course at Riversdale from 31/03 to 6/04/2014.
- **NQF level 4 Nature Conservation Learnerships** (Clinton Roux, Kyle Kelly, and Christopher Singo) underwent a training workshop on 10-13/02/2014. Additional training workshops will be run in the subsequent quarters throughout 2014. The programme is administered by the NCC-Group.
- **Cape Peninsula University of Technology (CPUT) Students** (Damon Hope, Stuart van Blerk, and Braden Wilkinson) underwent a **student induction** on 27-31/01/2014, and presented their **research proposals** to a Branch meeting on 4/03/2014
- **Environmental Education Intern** (Karen Merrett) attended an Internship workshop on 4-7/03/2014.

9.4 General staff administration included the following interventions:

- **Providing adequate staffing on two public holidays**, including 1/01 and 21/03/2014;
- **Medical check-ups** for new staff on 15/01/2014;
- **Drivers' competence assessments** for new staff on 21/01/2014;
- **Investigations into ill-health** of five staff members on 24/01/2014;
- **Investigations into work performance** of one staff member on 19/02 and 6/03/2014; and a
- **Briefing on the use of a newly acquired Dissolved Oxygen (DO) meter** on 14/02/2014.

10 VISITORS AND INCOME

10.1 Income from visitors at the Table Bay Nature Reserve's Rietvlei Water Area during this quarter were R66,520 from 5,562 recorded visitors. This is R14,530.50 more income and 951 more visitors than the previous quarter. These figures are also well above the monthly averages calculated since 2010.

Since this quarter the Rietvlei access control point now also records the numbers of Milnerton Aquatic Club members entering the reserve, as well as non-paying attendants of meetings and training events.

Figures 43-44 below indicate above-average visitor numbers and income, although a seasonal decline is evident in income.

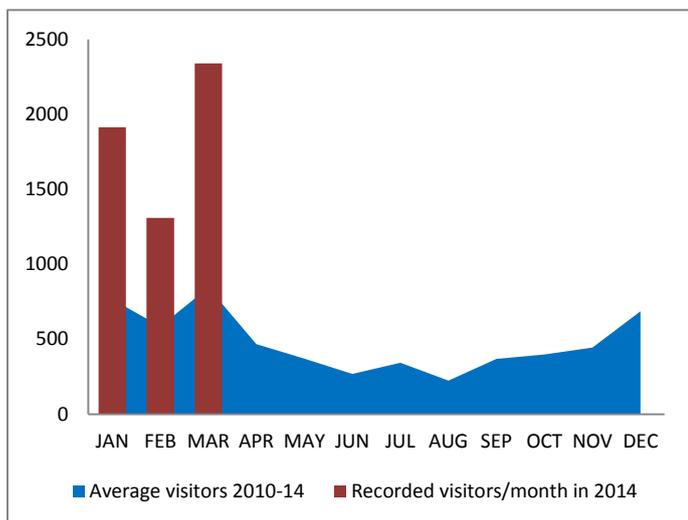


Figure 43. Monthly visitor numbers plotted over averages.

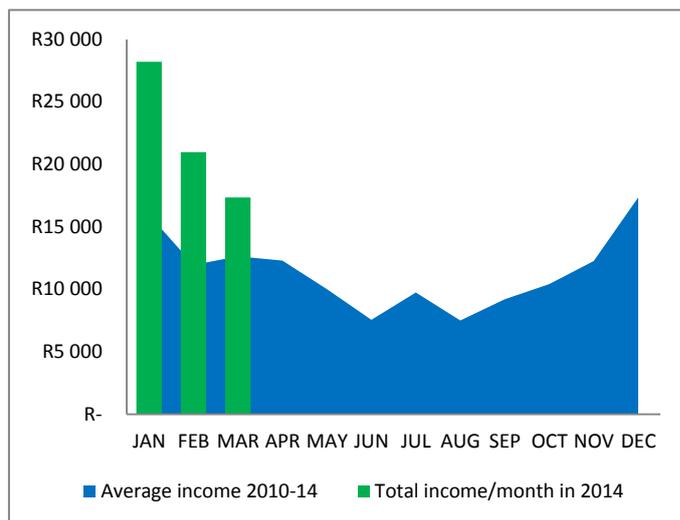


Figure 44. Monthly income plotted over average.

Figures 45-46 below indicate an overall increasing trend for both visitor numbers and income over the last five years.

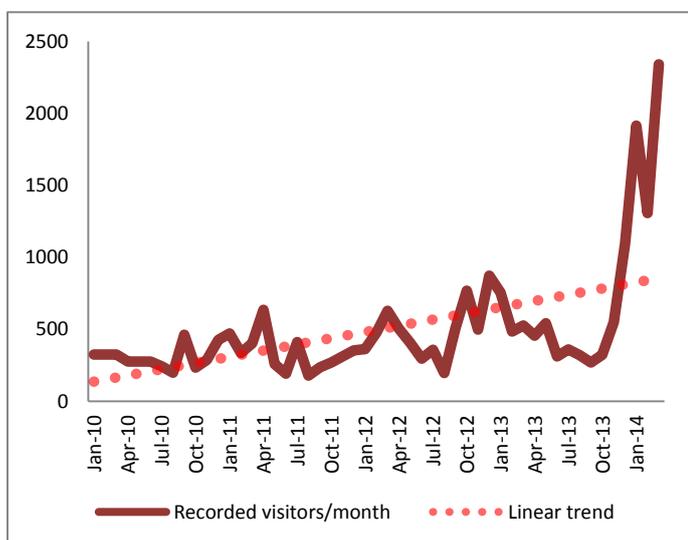


Figure 45. Visitors since 2010 plotted with a linear trend line.

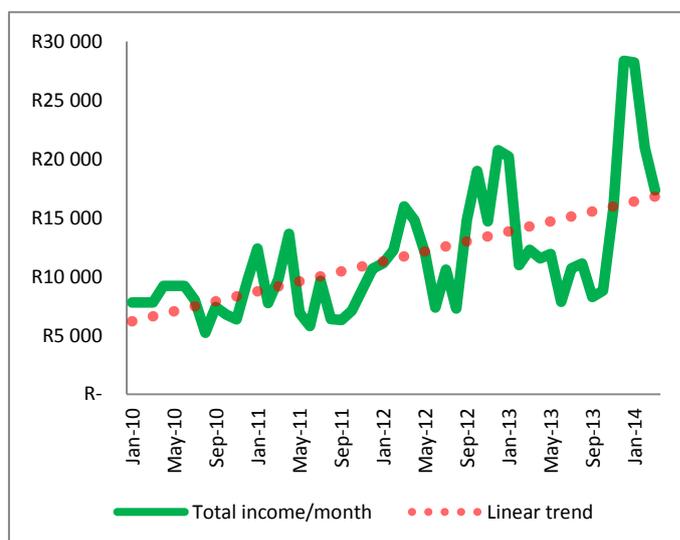


Figure 46. Income since 2010 plotted with a linear trend line.

10.2 The trial period to allow paddling at the Rietvlei Water Area was reviewed mid-financial year. The trial is to test manageability and demand and to monitor conflicts with other sporting codes. For the trial, paddling was allowed on weekdays between 07:30 and 10:00 (totalling 12hr 30mins of paddle time per week). The trial period went very well with no conflict reported from other sporting codes. More requests were however received to allow paddling on weekends during the mornings before power boats are allowed on the water (before 09:00). Reserve Management then agreed to continue the trial period until the end of the financial year (30 June 2014), and to include weekends from 07:30 to 09:00 into the paddling time, bringing the total allowable time for paddling at the Rietvlei Water Area to 15hr 30mins per week.

10.3 A detailed breakdown of visitor numbers and income is given below in **Table 7**.

Table 7. Breakdown of income this quarter.

TARIFF ITEM	TARIFF RATE	JAN	FEB	MAR	TOTAL	INCOME
Day entry: Pensioners	R 6.50	63	57	72	192	R 1 248.00
Day entry: Adults	R 13.00	788	595	433	1816	R 23 608.00
Day entry: Children; 3-17 years	R 6.50	159	92	67	318	R 2 067.00
Day entry: Scholars with student card	R 6.50	1	2		3	R 19.50
Day entry: Children; <3 years, free	R 0.00	5	3	4	12	R 0.00
Learners: School groups, free visit	R 0.00		6	59	65	R 0.00
Learners: School groups, paid	R 5.50		164	211	375	R 2 062.50
Visitor free: Meetings etc.	R 0.00		44	27	71	R 0.00
Friends of Rietvlei: With proof of membership, free	R 0.00	25	12	14	51	R 0.00
Annual Ticket: Adult	R 120.00	1			1	R 120.00
Annual Ticket: Senior citizen	R 62.00	2	1	2	5	R 310.00
Annual Ticket: Family	R 185.00	2	1	2	5	R 925.00
Vehicles	R 18.00	390	313	226	929	R 16 722.00
Powerboats	R 50.00	55	41	27	123	R 6 150.00
Sail/boards/dinghy/windsurfer: Adults	R 20.00	15	13	12	40	R 800.00
Annual permit: Sail/boards/dinghy/windsurfer	R 90.00			1	1	R 90.00
Fishing: Senior Citizen	R 14.00	9	15	13	37	R 518.00
Fishermen: Adult	R 40.00	135	70	78	283	R 11 320.00
Fishermen: Children (3-17yrs)	R 14.00	22	11	7	40	R 560.00
TOTAL FOR YEAR		1672	1440	1255	4367	R 66 520.00

10.4 The Rietvlei Water Area has the highest compliance to water quality guidelines of all the City's inland recreational water areas, ranging from 92% to 100% over various time periods. During the summer season and festive period there is a lot more demand on the use of Rietvlei for recreational purposes, bringing about additional challenges. To sustain safe and equitable access for all Capetonians to the Rietvlei Water Area, Reserve Management issued a letter to all users about strict compliance to various regulations. This is intended to protect all water users and the natural environment. The important points are in Table 8 below:

Table 8. Important points relating to management of water sports and visitors

All vehicles and water craft that require license registrations or certifications must display such licenses as stipulated by the law. Unlicensed vehicles and water craft will not be allowed into the Water Area.	All drivers of vehicles and skippers of boats must have driver's and skipper's license with them as stipulated by law. No vehicles or water craft will be allowed in the Water Area if they are not operated by a licensed person.
All water craft must comply with restrictions and limitations as determined by law. No craft that exceed or fall short of legal restrictions or limitations will be allowed in the Water Area.	Legally-specified blood-alcohol level limits apply to all drivers and skippers at all times in the Water Area, and no consumption of alcohol will be allowed in any public part of the Water Area, including roads, picnic areas or on the water.
Fishermen are required to be in possession of the necessary permits as stipulated by law at all times during fishing, and must remain in demarcated areas of the shoreline.	Council approved tariffs apply to all users of the Rietvlei Water Area, with exemptions only applying in certain cases to parties who have valid working agreements with the City. These tariffs are amended every year on 1 July.
All users of the Rietvlei Water Area must use the water according to the operating times, zones, directional circuits, and demarcated areas as set out for such uses by Reserve Management.	City of Cape Town employees who work at the Rietvlei Water Area, including Water Rangers and Visitor Control Officers, are empowered to manage compliance at all times. Your cooperation will ensure that safe and equitable access for all Capetonians to the Rietvlei Water Area remains possible.

11 INFRASTRUCTURE MANAGEMENT

11.1 **Maintenance works** at the Table Bay Nature Reserved included the following:

- **Boardwalk repairs** due to flooding damage from the previous season. These repairs are carried out by Expanded Public Works Programme (EPWP) employees in conjunction with a specialist contractor.
- **Planting of approved shade trees** on peninsula (island) picnic area. Trees were donated by the Milnerton Aquatic Club and the Biodiversity Branch's nursery at Westlake.
- **Machines and equipment** that were maintained included brush-cutters, chainsaws, and a kudu lawnmower.
- **All transport vehicles** on the nature reserve were sent for maintenance, repairs and servicing when required.
- **The Toyota Tazz** was involved in a traffic accident on Blaauwberg Road and was subsequently removed by a City-contracted towing service. No occupants of the vehicle were injured. The appropriate SAPS incident reports and insurance claim forms were submitted within 24 hours. The vehicle is currently being assessed.
- **The electric gate** was reported faulty on several occasions. Suitable repairs were carried out.
- **Minor lights and electrical repairs** are being attended to by means of an internal works order.

11.2 **The tipper truck** that is temporarily based at Table Bay Nature Reserve was required to assist with large scale earth moving operations at False Bay Nature Reserve, Kenilworth Racecourse Conservation Area, and Tygerberg Nature Reserve, as well as transporting of plants to and from the Westlake Nursery. In all occasions Clinton Roux drove the truck.

12 FINANCIAL MANAGEMENT

12.1 **Capital Expenditure (CAPEX) projects** progress at Table Bay Nature Reserve included the following:

- **The insulation and ceiling of the Rietvlei boma** was completed and paid of this quarter. This will make the boma more usable during extreme weather conditions. See Figures 47-48.
- **All-weather upgrade of canvas blinds** in the Rietvlei boma was initially lagging, but then underwent a site meeting with the contractor. The contractor designed a system to stabilize the blinds, which is being tested and will be implemented in the next quarter. This will make the boma more usable during windy and rainy conditions.
- **Car park shade ports** will be installed next to the office. A contractors' site meeting was held on 5/03/2014 and quotations were evaluated on 17/03/2014. A purchase order was subsequently issued and work is to commence in the next quarter.
- **Replacement and new vehicle purchases** for the Table Bay Nature Reserve were ordered during this quarter, but delivery will most likely take place in the next quarter. The vehicles will include a 4x4 bakkie and a 5 ton tipper truck.



Figure 47. Ceiling insulation work in progress.



Figure 48. Completed ceiling insulation.



PICTURE: FAATIMAH HENDRICKS

■ The City of Cape Town said the ban on recreational activities in Milnerton Lagoon had been lifted. The water had been polluted after a sewerage pipe collapsed, contaminating the water and infecting at least one lifesaver, last year.

Lagoon safe for swimming

FAATIMAH HENDRICKS

The City of Cape Town said most of the restoration work has been completed on the pipe that collapsed and caused a sewage spill at the Milnerton lagoon. City officials were alerted to the spill in November last year.

At the time, the City said they warned recreational clubs and put up signs telling people not swim in the lagoon because it was polluted. However, Tabletalk saw only one sign which had been stuck to an existing signboard, in the parking lot on Woodbridge Island.

Mayoral committee member for utility services, Ernest Sonnenberg, said the sewage came from three pump stations located in Milnerton and Sanddrift which flowed towards the main Koeberg pump station, north of the Theo Marais Park sports fields next to Koeberg Road.

Mr Sonnenberg said the pipe under the stormwater canal collapsed because of ageing infrastructure and erosion.

The pipe travels through the lagoon and any sewage leaks had the potential to pollute the water. City officials have since conducted most of

the repairs.

“All remedial work with reference to manholes and associated infrastructure has been completed. All remedial work on the damaged Koeberg pump station has been completed. The existing sewer network and Koeberg pump station is now in full operation and working order,” he said.

Mr Sonnenberg said the entire section was being monitored every week.

“The reinstatement on the Theo Marais stormwater canal is still outstanding. This work will be completed just after the builders’ holidays. The reinstatement thereof has no influence on the daily operations of the sewer reticulation network and pump station.”

He said the sewage polluted the water to the extent that recreational activities were no longer allowed. The water levels were found to be outside of the national guidelines set by the Department of Water Affairs.

Officials then treated the water with a mixture of bacteria and enzymes. Mr Sonnenberg said enzymes play an important role in the hydrolysis or breaking down of organic compounds in waste water.

“For example, the presence of protease, an enzyme, removes proteinaceous organic compounds in sewage, whereas amylase, another enzyme, will act on starch and lipase to reduce fats and lipids,” he said.

“The concentrated mix of bacteria used is naturally occurring and accelerates the catabolism – the metabolic breakdown of complex molecules into simpler ones – of organic matter.”

In December Mr Sonnenberg said the ban on swimming in the lagoon had been lifted.

In November Milnerton lifeguard Dean Burger suffered severe skin infection, after swimming in water polluted by sewage (“Playing Russian ‘poollette’”, Tabletalk, November 27).

He was treated with antibiotics, a hepatitis shot, penicillin and steroids. He became infected after swimming in Milnerton lagoon as part of his lifeguard training. A week after he started training he received an email from his coach saying that everyone who had been in the lagoon should see a doctor.

Mr Burger said after he fell ill he only saw one sign, warning bathers not to take a dip. He said he wasn’t the only one in the water and was left with scars on his legs because of the boils that formed from the infection.

Councillor wants more E coli tests for Milnerton lagoon

Ward 4 councillor Joy McCarthy has proposed wider and more frequent *E. coli* tests be done higher up the Diep River to determine if there are more sewage leakages, and where they are taking place.

She asked that these findings be reported on by the relevant departments at the next Sub-council meeting which will be held on Thursday February 20.

Dr McCarthy also submitted a motion for more safety signs and regular testing of the Milnerton lagoon and Rietvlei.

At the first sub-council 1 meeting for the year, on Thursday January 23, she expressed concerns about the origins of the sewage that contaminated the Milnerton lagoon. She proposed that sampling at various points higher up the river be done to accurately determine the origin of the contamination; questioning if the contamination is from one source.

She also proposed that:
 ● The lagoon be tested for *E. coli* contamination on a monthly basis for the next six months, and that the reports be submitted to the sub-council to monitor the results.

● Further steps be taken to combat and reduce contamination, and she questioned whether if the lagoon is unsafe to use, there were appropriate warning signs.

She also asked if the recent upgrade of the Phoenix/JSP pump station and the canalising of the "stormwater" from the Milky Way, diminished the contamination.

The Milnerton lagoon was polluted by a sewage spill caused by a pipe that collapsed due to aging infrastructure last November; sewage came from three pump stations located in Milnerton and Sanddrift, which flowed toward the main Koeberg pump station. It was found that water levels were outside of the national guidelines set by the Department of Water Affairs. All recreational activities were then banned.

At the November meeting with the Economic Environmental Spatial Planning, reports showed that the *E. coli* count was increasing, but it was not of concern, however, the City of Cape Town "water report shows something different", Dr McCarthy stated in her motion to the sub-council.

Controlled burn alert

The City of Cape Town's Table Bay Nature Reserve would like to alert residents to a planned controlled burn of dry and dead bulrushes at the Rietvlei Wetland section of Table Bay Nature Reserve between February and April.

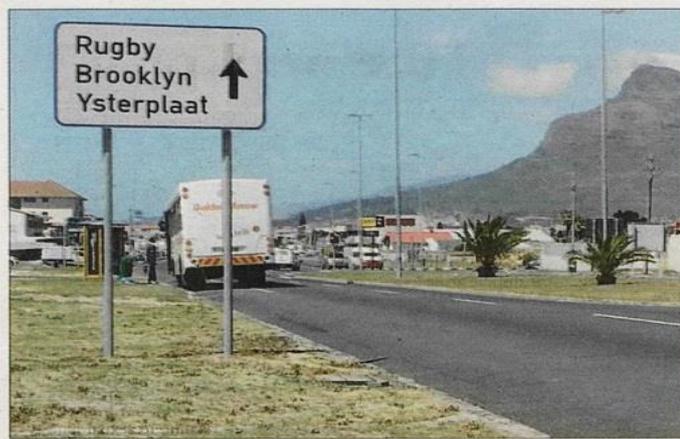
The city is applying to Sub-council 1 for a permit for controlled burning in order to conduct an open burn of this reed bed vegetation to remove accumulated dry and dead bulrushes that increase the fire hazard.

The area that will be burnt is situated between Pentz Drive and Otto du Plessis Drive in Table View.

The city's Environmental Resource Management Department will ensure that the procedure is conducted safely and efficiently.

The controlled burn will take place on a suitable weekday between Monday to Thursday and will be completed within the course of one day where possible.

Neighbouring residents and land owners will be notified of the exact date of the burn by a letter-drop in their mailboxes and email notifications where available. Measures will be put in place to direct traffic away from any smoke and ash.



■ The City of Cape Town has a spatial development framework for Brooklyn, Ysterplaat and Rugby, but it did not say when residents could expect to see changes. The plan's focus was on developing open land, such as on the Paarden Eiland nature reserve.



PICTURES: FAATIMAH HENDRICKS

■ The Brooklyn, Ysterplaat and Rugby Residents' Association said it wants the City to think carefully about densifying the area even further, considering that there are already multiple flats and complexes.

BYRRA wary of densification plans

FAATIMAH HENDRICKS

The Brooklyn, Ysterplaat and Rugby Residents' Association (BYRRA) is not entirely happy with the plans the City of Cape Town has for the Spatial Development Framework (SDF) for the area.

However, the City did not want to elaborate on what the SDF entails and were vague when questions were put to them. The BYRRA has analysed the plan and last year encouraged residents to give their input during the public participation process.

The SDF for Brooklyn, Ysterplaat and Rugby also includes Paarden Eiland and Milnerton. It is a local planning initiative focusing on different forms of development between Marine Drive and Koeberg Road.

It includes the implementation of the Integrated Rapid Transport (IRT) system. The City will also see where it can improve public environment by developing open spaces. BYRRA secretary Kyle Mason-Jones said the draft plan has

a number of proposals that will have a significant effect on the area.

He said there is a lot of emphasis on developing open land and making it attractive to developers. He said the plan also outlines what developers should be allowed to build and where.

"New buildings would be encouraged in open areas in the Zoarvlei nature reserve and along the river between Brooklyn and Paarden Eiland," said Mr Mason-Jones.

"A high-rise tower block of offices and flats would be allowed at the off-ramp from the freeway, business development would be encouraged on Koeberg Road and a lot of densification would be encouraged in suburban areas."

The draft SDF does not stipulate any timelines by which residents can expect changes in their community.

Mr Mason-Jones said the rate at which development took place would depend on how many property developers would want to take advantage of the more relaxed regulations and sale of City-owned

land. He said once the SDF was adopted, developers could apply for permission to build almost immediately.

Mr Mason-Jones said some of the changes under the SDF will be good for the area. He said it will make it easier and more attractive to develop businesses along Koeberg Road. He said this will then help to uplift the area considerably.

"On the other hand, houses in our area already sit on very small properties, so blocks of flats would impact heavily on the existing homeowners," said Mr Mason-Jones.

"The draft SDF also imagines that all property development will be upmarket and revitalising, creating a new Waterfront or Century City. But we know from experience that dense development in Brooklyn, Ysterplaat and Rugby has as much chance of creating new slums that damage rather than uplift the neighbourhood."

Mr Mason-Jones said while BYRRA believes that sensible development can do a lot to improve and revive the area, the SDF seems

to say that all development is good without acknowledging that it can also have negative consequences.

He said BYRRA supports development along Koeberg Road and agrees with the City that empty land around the highway and river could make way for positive development opportunities, but they would like to see a more cautious approach.

He said there should not be a rush to build inside a nature reserve, push up high-rise buildings or do risky urban experiments in an area which is already densely populated.

"This is a long-term plan, so let's be more careful and, if the new developments turn out to be as good as hoped, we can look at how to expand them in later revisions of the framework," said Mr Mason-Jones.

When asked about the City's short-term and long-term plans for the area, the director of the City's Planning and Building Development Management Department, Cheryl Walters, said there are plans in place to develop urban parks. This includes landscaping and

enhancing pedestrian route links to Zoarvlei.

She said these plans were in draft form and require input from all stakeholders.

"The short-term objectives are to introduce mechanisms which provide a degree of certainty to prospective developers and/or owners, reduce administrative turn-around time and ensure planning applications are prioritised within the proposed overlay zones," said Ms Walters.

She said the public participation process ended in November last year. She said the draft document will be reviewed after all stakeholders have given their input. A final report will then be compiled for the presentation to be submitted to the relevant portfolio committee and/or council on the recommended way forward.

"The medium to longer term goal is wholly dependent on buy-in from private land owners and partnerships for the development of various strategic precincts identified in the draft document," said Ms Walters.



About 200 firefighters converged on a vlei in Table View on Sunday to stop a blaze from spreading.

PHOTO: DARYL HENNING

Polly gets an oxygen mask in fire

ANDRÉ BAKKES
 @andrebakkes

A parrot had to be given oxygen on Sunday when two veldt fires broke out in Table View.

This was just one of the memorable scenes as firefighters, ably assisted by the local neighbourhood watch, combated the fires.

With the temperature soaring and the wind howling, the risk of the fires causing mayhem was a real threat, but good teamwork ensured that both were extinguished by 23:00.

The first broke out just behind Checkers Sandown and the second in the vlei near Gill Road.

The latter happened just behind McPher-son's Restaurant and the adjacent nursery

and it was here where the parrot was treated for smoke inhalation.

Says Table View Neighbourhood Watch (TVNW) spokesperson, Gemma Redelinghuys: "Apparently the parrot was coughing. Don't ask me what a coughing parrot sounds like!"

She continues: "The first fire was brought under control due to a swift response from the Fire & Rescue Teams, however the fire in the vlei spread quickly and presented more of a challenge. Our members' swift action in assisting the police on scene to close roads leading to the vlei and directing traffic, made a huge impact on the success of the day." Many of TVNW's remarkable Facebook friends heeded the call for donations of water or food and the 200 firefighters couldn't ask for more.

"It was an incredible response," confirms Redelinghuys. "We have asked for donations before with a fire last year, but it was nothing like this. After we fed 200 firefighters we sent three bakkie-loads of food to Silverstream, where they had to go fight another fire."

Members also helped bandage the hands of firefighters who received cuts while trying to hack through the dense vlei.

She continues: "There were multiple houses that were threatened but a quick response from residents after a call to douse roofs and gardens, assisted in keeping the flames at bay. Fire and Rescue Services asked TVNW to remind residents to please remember to clean out their gutters of debris as even just a few sparks can set debris alight."

Saving African penguins one by one

SANCCOB (the Southern African Foundation for the Conservation of Coastal Birds) in Table View proudly welcomed its first hatchling of 2014 last week. Admitted from Boulders Beach, the hatchling weighed a healthy 76 grams and will undergo special care and rehabilitation in SANCCOB's Chick Rearing Unit. Once it reaches fledging age, it will be released back into the wild to bolster the endangered wild African penguin population.

PHOTO: FRANCOIS LOUW



R2m spent on removing unwanted material

OWN CORRESPONDENT

Within six months more than R2 million was spent on removing rocks, wood, car parts and other foreign objects from pump stations throughout Cape Town, according to the City.

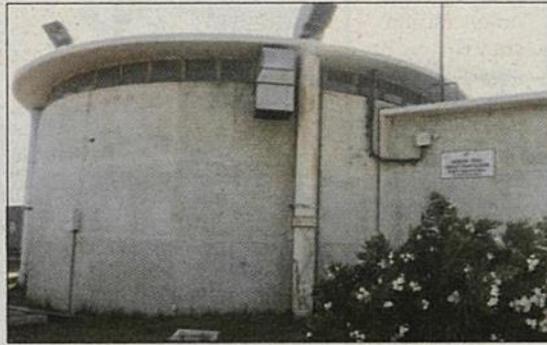
City officials said there was a drastic increase in the amount of unwanted material that was removed from the Koeberg pump station, situated at Theo Marais Park in Milnerton.

The pump station receives waste water from Milnerton, Montague Gardens, Monte Vista and Century City.

Mayco member for utility services, Ernest Sonnenberg, said this pump station was one of many in the City's sewer network that was being damaged by foreign objects dumped into sewers. He said the R2 million was spent in the first six months of the current financial year.

He said the unwanted materials caused blockages which put severe strain on the pump casings.

"Every cent spent on fixing the damage caused by the vandalism of City infrastructure could have



■ Koeberg pump station.

been spent on increasing service delivery," said Mr Sonnenberg.

He said the dumping of objects such as rocks, wood, car parts, tyres and industrial waste in the sewer network negatively impacts on the City's capability to move waste water from the source to the end point where it has to be treated. "The rampant vandalism of the City's infrastructure, which is vital to ensuring our sustainability going forward, is totally unacceptable."

Mr Sonnenberg said the Koeberg pump station, like the others across the city, was constantly placed under severe strain when the sewer pumps were abused and

vandalised.

He said it was costly when the pumps fail because of the dumping of foreign objects into the sewer system. "The Koeberg pump station has, in a very short space of time, experienced a dramatic increase in the quantity of unwanted material removed from the inside of the pump casings," said Mr Sonnenberg.

"Every time the pumps have to be hoisted from the chamber in order to be cleaned, it places the local sewer network at risk because pump failure could result in the overflow of sewer manholes into the immediate environment." Mr Sonnenberg said this

causes problems for both residents and the environment.

According to the City, about 70% of blockages were caused by substances and objects which should not be put in sewers.

Officials estimate the cost of unblocking sewers to reach R311 million by the end of the financial year. "This money could have been used by the City to build new infrastructure, to replace ageing infrastructure and to increase the already high levels of service delivery to residents," said Mr Sonnenberg.

He said the City's sewer network consisted of more than 9 000 km of pipeline and was supported by 381 pump stations. All waste water from houses, businesses and other industries flowed through the shortest route to the nearest waste water treatment facility.

Mr Sonnenberg said every year the City dealt with more than 100 000 sewer blockages. This equates to about 11 blockages for every kilometre. He said this was caused by the incorrect usage of the onsite sewer system, the removal of sewer covers, vandalism and the dumping of objects.

MAIN CULPRITS: INFORMAL SETTLEMENTS

Sewer system strained

ANDRÉ BAKKES
@andrebakkes

More than R2 million has been spent in six months due to the dumping of large debris into the sewer system.

The City of Cape Town has recently quantified the growing problem of illegal and irresponsible dumping into sewers, and the suspicion exists that the main culprits are

those that live in informal settlements.

As a result of this dumping problem, Koeberg pump station is continually placed under severe strain.

The Koeberg pump station receives wastewater from the surrounding areas of Milnerton, Table View, Montague Gardens, Monte Vista, Century City, Joe Slovo Park and Du Noon. Mayoral committee member for utility services, Ernest Sonnenberg says: "This

pump station has, in a very short space of time, experienced a dramatic increase in the quantity of unwanted material removed from the inside of the pump casings."

This comes as no surprise to one of the ward councillors, Joy McCarthy, who has recently tasked authorities to carefully monitor the sewer system up- and downstream of Du Noon and Doornbach, as well as between Koeberg pump station and the Milner-

ton lagoon mouth.

"We need to pinpoint exactly where the contamination is occurring," says McCarthy. "Who is guilty? *Ek is nou raadop!* We know for a fact it happens in Joe Slovo Park and the main culprits are backyarders. They dump all sorts of things in the drains, such as disposable nappies that are in actual fact not disposable at all."

► To page 2.

FROM PAGE 1

Both Sonnenberg and McCarthy say the tendency is that people will lift manhole covers up and dump their garbage into the system.

"Overcrowding, ignorance and possibly laziness is costing the City millions. The sewer line also backs up as a result the sewage starts overflowing from the manhole covers.

"Then I am inevitably over flooded with complaints. If people knew what others throw into the sewers then it should come as no surprise!"

Sonnenberg concludes:

"It is important that the City is informed when these dumping activities or acts of vandalism occur and residents are encouraged to report this to our Call Centre on 0860 103 089, by sending an SMS to 31373 or by sending an e-mail to watertoc@cape-town.gov.za. Alternatively residents can use a FreeCall line at their nearest City facility."



■ With the south easter howling as often and powerfully as it does, its not surprising that the low-energy pelicans keep a tow rope handy, says photographer Colin Brown.

Eet hulle vis of ontspaan hulle net?



Eet die hordes pelikane nie dalk al die visse in die Rietvlei-panne van Tafelbaai-natuurreservaat op nie? Daar is duidelik te veel van hulle, of hoe? Hierdie vraag is verlede week aan *TygerBurger* gestel, maar Koos Retief, die bioversiteit-areabestuurder van Milnerton, lag lekker oor hierdie opmerking. "Ons monitor die visbevolking oor die seisoene en daar is niks om oor bekommerd te wees nie," sê Retief. "Pelikane is nie net visroofvoëls nie, maar ook aasvoëls – so, hulle eet ook dooie biologiese materiaal, soos diëe by munisipale stortingsterreine. Dit is miskien die enigste probleem, dat sulke kos onnatuurlik beskikbaar is." Volgens hom is die hoeveelheid pelikane by Rietvlei glad nie buitengewoon nie.

FOTO: FRIEDA EN JAN PRINSLOO



■ Frieda and Jan Prinsloo of Parklands took this picture of Pelicans at the Rietvlei area of the Table Bay nature reserve.

APPENDIX B: Species of the Table Bay Nature Reserve

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 aestuarius
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
Cryptochlois asiatica
Cynictis penicillata
Equus burchellii
Felis caracal
Felis silvestris catus
Galerella pulverulenta
Genetta tigrina
Georychus capensis
Herpestes ichneumon
Hystrix africaeaustralis
Lepus capensis
Mellivora capensis
Mus minutoides
Mus musculus
Myosorex varius
Neoromicia capensis
Oryctolagus cuniculus
Otomys irroratus
Raphicerus campestris
Raphicerus melanotis
Rattus norvegicus
Rattus rattus
Rhabdomys pumilio
Sylvicapra grimmia
Tatera afra

Species seen longer than 15 years ago

Cryptomys hottentotus

REPTILES

Species seen within 10 years

Acontias 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 gracilirostris
Actitis hypoleucos
Actophilornis africanus
Alcedo cristata
Alopochen aegyptiaca
Amaurornis flavirostris
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 hartlaubii
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 coryphoetus
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 albicularis
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
Albica juncifolia~
Albica 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
Aspalathus 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
Briza 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 sociorum
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 satireioides
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
Pseudaltheria 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 odorum
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 striata
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 androsaeca
Wahlenbergia capensis
Watsonia meriana~
Zantedeschia aethiopica
Zygophyllum sessilifolium
Species seen 10-15 years ago
Acrolophia bolusii
Albuca fragrans
Alternanthera sessilis
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 carnosae~
Ehrharta longiflora
Elegia verreauxii
Erodium moschatum
Eucalyptus gomphocephala
Eucalyptus lehmannii
Euclea racemosa
Ficinia indica
Ficinia nodosa
Geranium molle
Grielandia grandiflorum
Helichrysum niveum
Ipomoea purpurea
Ischyrolepis eleocharis
Juncus kraussii
Juncus kraussii~
Kedrostis nana~
Lactuca seriola
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
Albuca 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
Dicerotheramnus 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
Microloma 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