

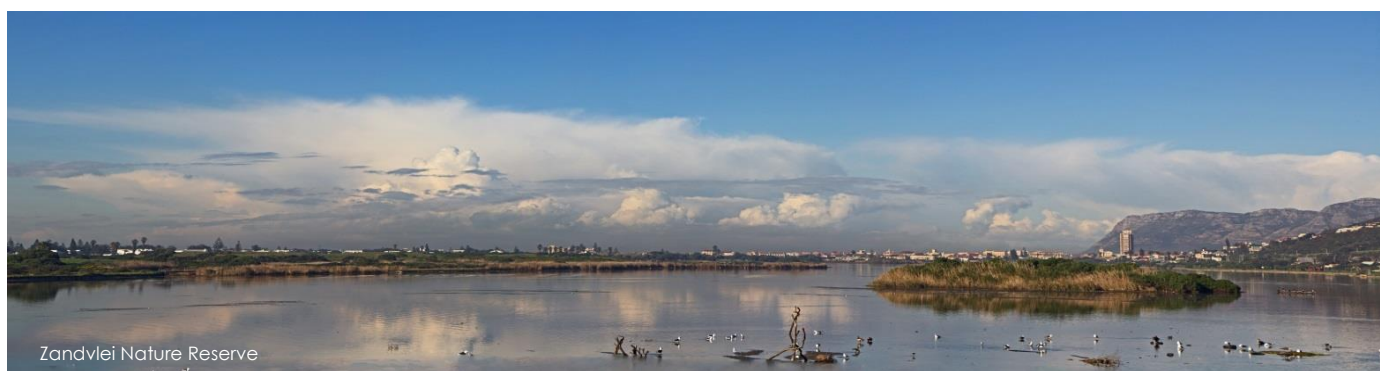


CITY OF CAPE TOWN
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Biodiversity Management Progress Report

July 2015 – June 2016



Zandvlei Nature Reserve



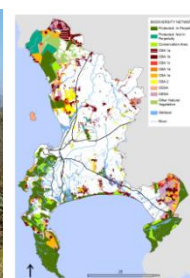
Yellow pansy, Pelican Park, FBNR



EPWP, Green Jobs



Volunteers at Rondevlei, FBNR



BioNet

**ENERGY, ENVIRONMENTAL AND SPATIAL PLANNING DIRECTORATE
ENVIRONMENTAL RESOURCE MANAGEMENT DEPARTMENT
BIODIVERSITY MANAGEMENT BRANCH**

Julia Wood
Manager

T: +27 21 514 4155 E: julia.wood@capetown.gov.za

Table of Contents

Page

1. EXECUTIVE SUMMARY	3
2. HIGHLIGHTS AND CHALLENGES.....	5
3. STRATEGY, POLICY, LEGISLATION AND PLANS	19
4. GREEN JOBS	21
5. CONSERVATION SERVICES	24
6. INVASIVE SPECIES	39
7. FIRE.....	42
8. NATURE CONSERVATION	44
9. PEOPLE AND CONSERVATION	46
10. SECURITY AND LAW ENFORCEMENT	51
11. STAFF MATTERS.....	53
12. ADMINISTRATION.....	57

1. EXECUTIVE SUMMARY

Conserving biodiversity: our natural capital

As outlined in the 2015/16 IDP, "the City has made a commitment to conserve and manage Cape Town's unique biodiversity, while promoting natural areas as community spaces that perform a vital ecosystem service, recreational and social function. The social benefits of the biodiversity network (BioNet) include job creation and skills development opportunities, benefiting particularly the surrounding communities". The Environmental Resource Management Department's (ERMD's) Biodiversity Management Branch (BMB) is responsible for the planning and implementation of the Local Biodiversity Strategy and Action Plan (LBSAP), which incorporates protected areas expansion, conservation services, people and conservation (nature conservation tourism, recreation and education), job creation, skills development, invasive species control, restoration and management of the City's nature reserves.

During 2015/16, the BMB continued to implement its objectives aligned with the IDP, and specifically the Strategic Focal Area (SFA) 1 – Opportunity City:

Programme 1.2 (d) Expanded Public Works Programme (EPWP)

The EPWP is a national government programme that aims to provide social protection through the creation of jobs. The programme's mandate is "to contribute to development by providing work opportunities to the poor and unemployed people in the labour-intensive delivery of public and community assets and services". ***A total of 156 796 person days of temporary employment (681 full-time job equivalent; 2 390 job opportunities) was created on the BioNet (Biodiversity Network).***

Programme 1.3 (a) Sustainable utilisation of scarce resources, such as water and energy

Manage the City's biodiversity and ecosystems, and promote the recreational and social opportunities of the natural environment.

The following key projects and initiatives are planned for the next five years (progress in the past financial year is highlighted in italics):

- Proclaim existing managed areas under the new National Environmental Management (NEM: Protected Areas Act. ***City reserves were proclaimed under the NEM: Protected Areas Act, Act 56 of 2003. The formal gazetting still needs to take place.***
- Compile and adopt a bioregional plan, the purpose of which is to inform land use planning and decision making by a range of sectors whose policies and decisions affect biodiversity. ***The City adopted the plan as policy.***
- Meet the Integrated Metropolitan Environmental Policy (IMEP) environmental agenda target of conserving 60% of the biodiversity network by 2014, by increasing conservation land through partnerships and stewardship programmes, as well as acquisition where financially feasible. ***The BMB achieved this huge milestone, reaching the target in December 2014, and to date 60,88% of 2009 BioNet is conserved. A new target of 65% is proposed for December 2020.***

- Meet IMEP environmental agenda targets in respect of invasive alien species to significantly reduce the coverage of invasive alien plants and eliminate problematic invasive alien animal populations. **Targets in respect of aquatic systems and early detection species were met. House crow numbers were reduced to below 300 birds.**
- Commit to continued roll out of environmental education and outreach programmes which will increase the public's ability to access nature reserves, and will promote environmental education and awareness. This includes the development of a sustainable City communication strategy aimed at improving and streamlining environmental communication across all City departments. **On the nature reserves, 34 965 learners from 461 schools and 18 001 adults attended programmes totalling 52 026 person days of education. A total of 416 199 individuals visited the reserves through the manned gates and recorded events.**
- Ensure continued management of the existing conserved areas so that the benefits to the community are enhanced. **The management effectiveness monitoring of the reserves continues to use world-class systems and all proclaimed reserves have a management plan using a provincially approved template. Ten Protected Area Advisory Committees (PAACs) were initiated from May to August 2015.**
- Create a viable ecological link between Dassenberg Hills and the coast as part of the Dassenberg Coastal Catchment Partnership (DCCP). This partnership aims to protect critical ecological infrastructure, unlock socio economic opportunities, promote climate change adaptation and mitigation, and promote the natural and cultural heritage of the area. **In the year under review, the City purchased three properties in the Dassenberg region totalling 433,98 ha. This brings the total land bank (the land will be used to facilitate development in Atlantis) secured by the City to 873 ha.**

2. HIGHLIGHTS AND CHALLENGES

HIGHLIGHTS

Notable initiatives during the period July 2015 to June 2016 included:

1) Proclamation of City nature reserves

Of the City's 16 nature reserves, 14 were signed off by the Provincial MEC for the Department of Environmental Affairs and Development Planning (DEADP) as contract nature reserves under the NEM: Protected Areas Act, Act 56 of 2003 (PAA). This is a significant milestone and the process took over seven years. Cape Town is the first municipality in South Africa to ensure its nature reserves are proclaimed in terms of the PAA and have Council-approved management plans in the correct PAA format. The remaining two City reserves not forming part of this process are Harmony Flats (HFNR) and Durbanville (DNR) as they both have adequate protection (HFNR already has provincial conservation status and DNR will be only be upgraded once the protected area expansion plan is realised) (Figure 1).

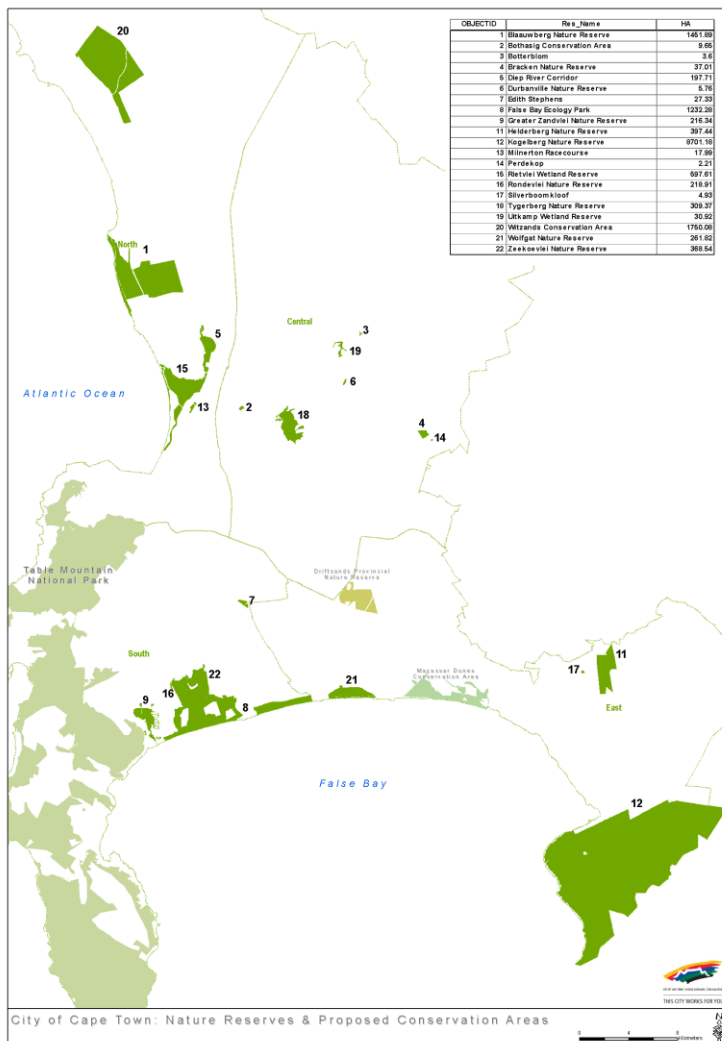


Figure 1: Proclaimed City nature reserves

2) Protected Areas Expansion

The Protected Areas Expansion programme was very successful last year with both stewardship and land acquisition playing a part. The City was awarded the honour of 'Most Valuable Partner' at the CapeNature Stewardship Awards in Porterville on 3 September 2015. Councillor Johan van der Merwe received the award on behalf of the City (Figure 2).

3) Bioregional Plan

The Biodiversity Network and Management Guidelines were incorporated into the Bioregional Plan, which was approved as Council policy in July 2015.

4) Job creation

A total of 156 796 person days of temporary employment (681 full-time job equivalent (FTEs); 2 390 job opportunities) was created. These jobs were created on the nature reserves and in the BioNet, primarily through the work of the Green Jobs Unit.

5) Skills development

The training of EPWP staff; formal skills development programmes; and students and internships are critically important. Permanent worker and field ranger posts are advertised locally and EPWP workers are encouraged to apply. Since January 2016, all 12 workers and field ranger vacancies were filled with individuals from the EPWP and skills development programmes. These staff were all from employment equity target groups, which in turn supported the department and directorate targets.

6) Environmental education and visitor numbers

On the nature reserves, 34 965 learners from 461 schools and 18 001 adults attended programmes totalling 52 026 person days of education. This is less than last year's figures but was within the predicted figure. A total of 416 199 individuals visited the reserves through the manned gates and recorded events, an increase from 347 740 individuals recorded the previous year.

7) Budget

Additional budget was allocated for security.

A total of 98.8% of controllable operational budget was spent and 98,6% of capital budget was spent.

Other milestones achieved in the 2015/16 financial year include:-

- MOU signed with The Nature Conservancy (TNC) to set up a Cape Town Water Fund
- BioNet re-run and vegetation statistics updated
- Wetland classification updated to align with National
- National Department of Tourism project on eastern shore of Zeekoevlei launched (Figure 3)
- Gantouw Project launched at False Bay with the re-introduction of five Eland (Figure 4)
- All City staff computers during the month of May (Biodiversity Day on 22 May 2016) were loaded with a biodiversity desktop background/wallpaper message (Figure 5). This was certainly the highlight which BMB hopes can be repeated next year.
- Successful baboon programme – baboon troops remained out of town 98.7% of the time; more job opportunities were created – 83 against target of 50
- Innovative establishment of virtual fence in Gordon's Bay
- Dealt with Zeekoevlei (carp) fish kill efficiently and managed media on event
- Updated the LBSAP 2016 to 2026 and Council report drafted
- On the nature reserves, over 54 ha of ecological burns were undertaken and 2 278 stacks were burnt (1,015 ha of uncontrolled fire – mainly in Witzands Aquifer Nature Reserve as well as Table Bay and Blaauwberg Nature Reserves) (Figure 6)
- Best Project Management Environment and Culture Sector Team Award 2015/16: for excelling in implementing the Expanded Public Works Programme during the 2015/16 financial year (Figure 7)
- Two New Green Jobs Unit Head positions were filled and this will dramatically assist with job creation and service delivery
- Ten recently established Protected Area Advisory Committees (PAACs) met regularly; chairpersons were elected from local community groups



Figure 2: Clifford Dorse, Biodiversity Coordinator; Councillor Johan van der Merwe, Mayoral Committee Member for Energy, Environment and Spatial Planning, City of Cape Town; Gail Cleaver-Christie, Executive Director: Conservation Management, CapeNature



Figure 3: Minister Derek Hanekom planting a tree at the launch of the False Bay Nature Reserve Eastern Shore upgrade



Figure 4: Gantouw Project

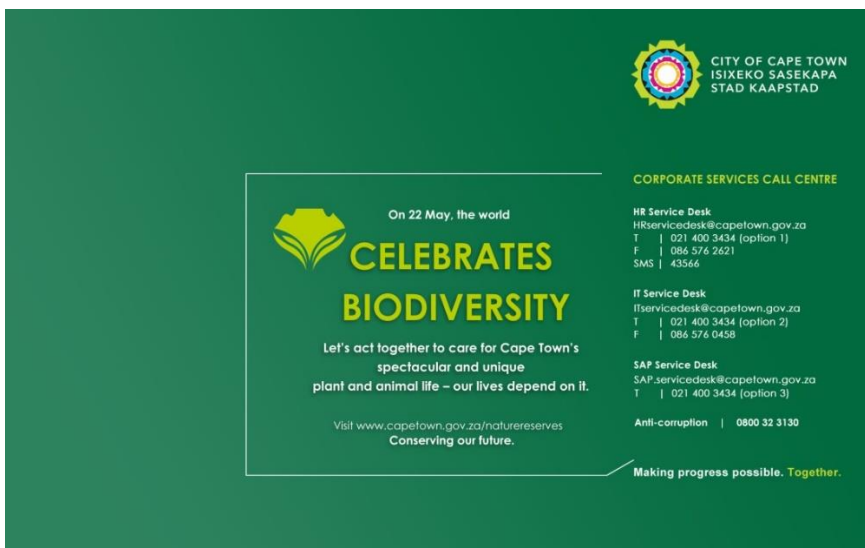


Figure 5: City's desktop background/wallpaper in May 2016 (22 May is International Day for Biological Diversity)



Figure 6: Brush pile burning at DCCP



Figure 7: Award to Green Jobs Unit

CHALLENGES

1) Security and law enforcement

The most serious issue is the land invasion in the Slangetjebos Section of the False Bay Nature Reserve. In April 2016, sixteen shacks were built in Slangetjebos and the adjacent road reserve. All were removed by the Land Invasion Unit, but this resulted in major violence and the temporary closure of Prince George Drive. In June 2016, 14 more shacks were built in the same area, seven of which are in the conservation area. As a result, a court order will be needed to remove these structures. Continued surveillance of this area, in conjunction with City's law enforcement, is critical.

The BMB experiences widespread illegal squatting on most of the City nature reserves. Most of the squatters are removed within 24 hours as a result of ongoing patrols (Figure 8).

Other challenges include illegal dumping, illegal harvesting, and security threats to visitors, staff and contractors. The crime situation has increased exponentially in the last year, as has illegal squatting and land invasion.

2) Staff and budget

There is still a lack of permanent staff in key positions such as administrators, people and conservation officers, field rangers, mechanical operators and staff in the Green Jobs Unit. The BMB's long-running realignment process, which would have addressed some critical gaps, was put on hold as a result of the City's pending Organisation Development and Transformation Plan (ODTP). It is hoped that the BMB realignment process will recommence once the City's ODTP process is implemented. Security, not surprisingly, is one of the largest budget items and is still inadequate to ensure the safety of resources, people and infrastructure. Overspending on security will need to be monitored in the future.

3) Comments on development

EIA comments and recommendations (based on BioNet and Strandveld CIP) are rarely adopted in development decision making by the DEADP, and developments are approved without sufficient mitigation for biodiversity loss.

4) Fleet

The BMB's fleet is still inadequate and many vehicles are very old. BMB also experienced delays in servicing of vehicles and approval of vehicle insurance claims, which resulted in some of our vehicles being non-operational. The situation has also been worsened by the fact that the fleet budget has been decentralised and that individual cost centres need to carry the cost of fuel.



Figure 8: Illegal structure in Zandwolf section of the False Bay Nature Reserve

Table 1: Reserves / offices, each illustrating at least one major highlight and one major challenge

Name of reserve	Highlight(s)	Challenge(s)	Management response to challenge
South Region	On 17 May 2016, the Western Cape Minister for Environmental Affairs, Mr Anton Bredell, signed the proclamation for the Zandvlei Estuary, False Bay and Edith Stephens Nature Reserves. The signing of these nature reserves provides the highest possible protection status under the Protected Areas Act and brings to an end a ten-year process to obtain this status. An increase in visitors was noted on the South's reserves, with an increase from 262 896 in 2014/15 to 298 852 in 2015/16. This increase is largely attributed to the opening of the new visitor facilities on the eastern shore of Zeekoevlei (False Bay).	The Cape Town Environmental Education Trust (CTEET) continued to provide environmental education on both the City nature reserves and to surrounding schools. It witnessed a decrease in the overnight programmes from 9 065 in 2014/15 to 5 864 in 2015/16. This can be attributed to the unavailability of the Rondevlei campsite which burnt down in January 2015. The continued land invasion and occupancy at Slangetjebos (False Bay) continued, with informal shacks, farming and illegal commercial activities in the form of plastic recycling. Informal farming is still taking place in the kraal structures that cannot be removed due to their age. The security situation on South nature reserves remains a concern, with six body dumps occurring in the past year. Armed attacks on contract staff and visitors have been recorded, but fortunately during this year no fatalities to visitors occurred. All reserves noted break-ins, vandalism or theft of infrastructure during the year, with the worst hit being Edith Stephens Nature Reserve. Of concern is the rampant destruction of the new public facilities on the eastern shore of Zeekoevlei where after-hour access occurs along the two kilometre shoreline. Of note were outbreaks of koi herpes virus that occurred at Zandvlei Estuary and Zeekoevlei during early 2016, resulting in large quantities of dead fish in the latter water body during March. Such virus outbreaks can be expected in future summers as the disease remains dormant in the population. A common carp (<i>Cyprinus carpio</i>) die-off occurred at Zandvlei Estuary Nature Reserve in December 2015. Subsequent laboratory tests from Durban showed that this was a result of koi herpes virus that infected the population. The virus remains dormant and is triggered by environmental factors such as low oxygen levels, high nutrient loading and high temperatures. The disease is highly contagious and is a notifiable disease, which is suspected to be present in all local water bodies. As predicted, several outbreaks of the disease occurred in Zandvlei Estuary and False Bay (Strandfontein, Rondevlei and Zeekoevlei Sections).	Work began on the alterations to the island bush camp at Rondevlei (False Bay) to accommodate overnight learners. This facility will replace the Otter Bush Camp which burnt down on the Southern shore of Rondevlei on 2 January 2015. Work on the Rondevlei Island was interrupted for some 12 months whilst trying to clarify if an environmental authorisation was needed for the activities. Various processes with Law Enforcement and ERMD HO are ongoing. A court injunction is in process to deal with this issue but until this is completed the remaining animals cannot be removed. The boundary edge of the nature reserve at Slangetjebos was demarcated using marked concrete bollards set 10 m apart. Efforts to establish a permanent presence on site using a contract ranger staff member and EPWP staff were thwarted due to the multiple muggings and threats to the contract ranger. Some 50 tons of dead fish from these die-off event in Zeekoevlei were collected by staff and disposed of at the Vissershoek landfill site during this time.

False Bay	The three-year Expanded Public Works Programme (EPWP) to upgrade the visitor facilities on the eastern shore of Zeekoevlei was completed. A parliamentary oversight committee dealing with EPWP projects visited the reserve and expressed that this was one of the best-run EPWP projects they had witnessed in the country. The completed redevelopment of the eastern shore of Zeekoevlei was launched by Derek Hanekom, Minister of Tourism, on 8 August 2015. This notable event was a culmination of the three-year Expanded Public Works Programme that operated at Zeekoevlei, employing some 140 staff in the process. Bricked roads, paths, toilets and braai facilities were built. The event was marked by the unveiling of a plaque and the planting of a milkwood tree (<i>Sideroxylon inerme</i>) at the main picnic area on the eastern shores of Zeekoevlei. Ecological burns were successfully carried out at Rondevlei and Strandfontein (False Bay Nature Reserve). These dealt with old senescent veld at Rondevlei and the burning of reed beds as part of an alien invasive programme to deal with <i>Ipomea</i> at Strandfontein. In April this year, the False Bay Nature Reserve along with its partners hosted the third annual Birdathon event and fun day at the Zeekoevlei and Strandfontein sections. This event was held on 16 April 2016 and saw more than 1 500 people participating. This is more than double the amount of people who attended last year. The celebration of the 20th annual drawdown at Zeekoevlei highlights the long-term nature of many conservation management strategies that have been put in place.	The eastern shore of Zeekoevlei now has considerable new infrastructure which will increase visitor numbers. Vandalism and theft of infrastructure □ Inadequate law enforcement response □ Skills shortage: Vehicle and truck drivers The dumping of large quantities (estimated 300 cub. m) of dried human waste occurred on the mobile dunes on Luchannon Drive in the Zandwolf Section of the False Bay Nature Reserve. This was conducted by the City's Sports & Recreation Directorate in an attempt to stabilise the mobile dunes that continually cover Luchannon Drive. The little rain that has fallen so far this winter has been sporadic and too little to support the management actions that need to be done. This includes flora rehabilitation work, especially in wetlands (many of which remain dry). If the next quarter does not deliver sufficient rain then the possibility exists that some of the South's wetlands may not fill up. This will have significant impacts on residents and user groups. The numerous security-related incidents have once more taken up time on reserves and limited areas where staff are able to work.	The cleaning and maintenance of this facility continuous to pose a challenge. Seasonal workers over the summer period are being arranged. Regular patrols and liaison with squatter control. Crisis meetings were held with several line functions to stop further dumping and to clean up the waste; a clean-up plan is in process. Despite the investigations and reports made on the matter, to date no person has been held accountable for this serious infringement of the False Bay Nature Reserve Protected Area. Ongoing monitoring
Zandvlei Estuary Muizenberg East Private Nature Reserve / Psoralea Park Private Nature Reserve (in partnership with residents' association)	The long-awaited dredging at Zandvlei Estuary commenced on 6 July 2016. Some 2 000 cubic metres of sand were removed from the vlei and deposited on the coastal dunes at Strandfontein. This allowed a deep-water channel to be created to facilitate fish migration into the vlei. The grab truck was received on 10 July 2016 and will primarily be used in the pond weed removal operation at the Marina da Gama section of Zandvlei Estuary Nature Reserve. EIA approval was obtained to dredge. Hopefully	Rangers: The lack of a dedicated ranger team for Zandvlei has led to an increase in vagrancy and has resulted in staff undertaking permit checks and other law enforcement and related activities without proper numbers or backup. This lead to one incident that could have cost a life. Grab truck: While the truck has been a major asset, it is becoming more difficult to loan drivers. A dedicated driver position needs to be created. A challenge has been the theft of telephone cables in the vicinity of	Ongoing interaction with Waste. Investigation into EIA for activity to take place.

	dredging will take place in new financial year. Application via MTREF for additional CAPEX for a new machine.	the Zandvlei Estuary Nature Reserve, which resulted in the reserve being without telephonic communication for months at a time.	
Edith Stephens	A diverse use of the facilities, Edith Stephens with its partners have managed to run 219 hours of programmes. All of these programmes were resourced by partners but included environmental awareness in all the training. Sponsored programmes for greening workshops were initiated. Considerable staff training was completed this quarter; of note were the field ranger course and the progression of Russel Fritz and Mncendisi Mtshitshi to the next level.	Several attempts were made to break into the storerooms at Edith Stephens, but these were thwarted by good work done by Quemic staff. Despite these positive actions, security challenges still remain on site. These include the theft of a section of fence and the presence of vagrant structures in the reserve that were removed. Eutrophication of the wetlands remains an issue. Staff capacity is an issue with the People and Conservation Officer being away on extended sick leave.	Assessing security options. Investigating the options to restore and improve water quality. Investigate possible solutions to resolve this issue.
Kenilworth Racecourse / Rondebosch Common/ Liesbeeck River	Tania Snyders started the next level of her NQF 5 environmental management training. Successful ecological burn. Kenilworth Racecourse Conservation Area (KRCA) participated in the annual Earth Day programme held at Oaklands High School, which is stone's throw away. The reserve staff filled a 60 minute timeslot and gave a presentation to Grade 10 learners about the conservation status of the Cape Flats sand fynbos. KRCA ran biodiversity programmes throughout the months of May and June 2016, reaching a total number of 581 learners. KRCA hosted 40 second year nature conservation students from CPUT together with CREW personnel who visited the conservation area to look at rare and endangered plant species. The smart living training intervention with Kenilworth Racecourse's groundsman was completed on 15 June 2016; this was a rewarding experience for the conservation team as well as the participants as we were able to educate people in their mother tongue on how to live sustainably. Thanks to Natanya Dreyer and the translation department.	Lack of an environmental education centre.	Investigating alternatives in hosting environmental education programmes.
East Region	Staff working with local law enforcement, SAPS and the provincial legislature clamped down on an abalone poaching syndicate.	The biggest challenge is the age, reliability and functioning of the current vehicle fleet. The area is currently making use of a vehicle from another area as there are two vehicles which are not roadworthy. Budget constraints and the decentralisation of fuel budgets are having a major effect on operational activities. Security continues to be the biggest threat and item of expenditure on the region's budget.	Ongoing discussions with Fleet. Assess security risks.

Wolfgat (including Macassar Dunes area)	Wolfgat Environmental Education Centre Phase 1 was completed - awaiting final operational installations such as network and telephones, after which the centre will operate full-time for education purposes. Rehabilitation of water erosion in the paragliding area at Wolfgat. Ward allocation monies spent and participation by staff on the camp for Councillor Solomons and workshops for the DAD programme for Councillor Andrews.	Dumping on the urban edge of the Wolfgat Nature Reserve continues to be a major problem in the area, with the reserve lacking the capacity to address the issue due to a lack of resources and the fact that the problem originates outside the reserve boundaries. Stormwater connection and connectivity (telephone/ network) links at the Wolfgat Education Centre a challenge. This hinders full operational use of the education centre. Dumping still a major issue in the Wolfgat Nature Reserve. Completion and occupation of the Wolfgat EEC is dragging due to the lack of connectivity and discovering more maintenance work that needs to be completed after the building was handed over to the City due to the EPWP project running out of funding.	Liaison with Waste Department. Complete building as soon as possible.
Steenbras (including Harmony Flats Nature Reserve)	A four- day holiday programme was held at Harmony Flats in July for the children living in the surrounding communities of the reserve. The holiday programme was an integrated programme between Biodiversity Management and Sports and Recreation and Kinders van die Koning, a community partner of Harmony Flats. The tortoises kept in the enclosure at the Summervale Conservation Area, which was found during the search and rescue efforts between February and April before the ecological burn, were all successfully released back into the veld. This was accomplished by building and maintaining a good partnership with all role-players involved and implementing and keeping to the plan devised to care for the animals. There is a high abundance and diversity of species flowering at the reserve, especially in areas that burned and were mainly infested with invasive species before the wet season. The CTEET Learnership staff have made a huge and positive impact at the reserve and for the area. An increase in staff for the area through the CATHSSETA learnerships have had a significant effect on the amount of work taking place on the reserve. The learnership and learners have made a huge difference operationally and with the environmental education and other functions within the East Region and the branch. An adult male baboon was successfully captured at SNR and collared in order to track its movements to assist with pro-active baboon monitoring operations.	Safety and security have posed a serious challenge for the reserves, due to the inadequate and incompetent service providers allocated to the reserve through the Safety and Security tender. All companies that were allocated to the reserve have rendered a poor service and have caused the reserve more financial losses in theft and vandalism than a gain in services. The cut in the budget for security created a window of opportunity and an increase in theft and vandalism, and a threat to staff and visitor safety due to not having any day shift security at the reserve in the week and over weekends. This also hugely impacted on the operational functions and activities. Criminal incidents at SNR are increasing. More solar panels and solar batteries were stolen, illegal plant harvesters are increasing in the area, and a person was found feeding baboons. GB SAPS are under-resourced and unable to assist most of the time. The Harmony Flats reserve only has a staff component of one permanent staff member and two CTEET staff members. For this reason the team is restricted to working mostly at Harmony Flats for their own safety. This is affecting operational functions at Morkel's Cottage, the Corridor and Summervale Conservation Area. The Harmony Flats office building and environmental education centre at the reserve are still incomplete. The physical operational work in the field has become more challenging due to the lack of additional manpower. With the Macassar not being under full conservation status, conservation staff have limited capacity to implement the conservation regulations and this hinders the progress of the restoration of the LAF to reach its full potential. There is thus limited control over unwanted activities and the action that can be taken to deter such activities. Not having a dedicated P&C Officer limits the reserves to only	Source partnerships and/or budget to assist with the problem. Liaison with NDT. Continue to liaise with landowners, Public Works.

	Implementation of the virtual fence system to assist in baboon management efforts has proved to be 100% successful to date. The acquisition and upgrade of a Council building in Gordon's Bay will shortly see the Steenbras office relocating from Kogel Bay, which will greatly assist in the management of the area by increasing connectivity and reducing travelling time for staff.	conducting ad-hoc programmes such as holiday programmes and the HF Kids Club when staff or students are available to assist. The management of invasive species in the Steenbras Nature Reserve, particularly above the Gordon's Bay residential area, is a major concern. Insufficient budget allocation contributes to the areas returning to their initial state. A large number of complaints from residents regarding the fire and safety risk created by the dense stands are additional reasons for concern.	Motivate for People and Conservation Officer or intern. Motivate for funds.
Helderberg (incorporating Silverboom Kloof, Lourens River PNE)	New office assistant, Zenobia Rhoda, started at Helderberg The removal of the pine plantations was a highlight, not only in terms of the fact that BMB is removing exotic vegetation, but also from a revenue generation point of view. To date R3 396 873,21 was realised and is being ring-fenced for the construction of an new Environmental Education Centre in Helderberg. A successful ecological burn then took place in this area and a 12-month post fire monitoring was initiated and the areas have started to show good signs of recovery. Vuyokazi Rubushe was appointed as a Field Ranger on the reserve during June 2016. She successfully completed her Certificate in Conservation Guardianship NQF Level 2 and this training gave her a strong advantage. Ntombi Rafu and Rando Arendse were selected to complete their certificate at Level 4. Cape fox (<i>Vulpes chama</i>) – two foxes were sighted in the reserve in April, the first sighting for several years.	The reliability of the vehicles has started to hamper operations within the area. Some of the vehicles, such as CEY15776 and CY397841, are becoming a burden to the staff as they are old and need to be replaced. These vehicles are costing more in repairs to keep running than is financially viable. A plan needs to be made to replace them. Small plant sent for repairs takes two or more months to return to site; the slow turnaround times are due to certain vendors taking an exorbitantly long time to repair much of the small plant. This issue has already been taken up with Specialised Technical Services.	Ongoing discussions with Fleet. Liaise with Specialised Technical Services.

Central Region	Several environmental education activities such as exhibitions, holiday programmes and formal environmental education programmes took place, despite being without permanent People and Conservation Officer.	The lack of permanent People and Conservation Officers in Central remains a challenge. Bracken relies on interns and/or volunteers to perform this function and provides environmental education to 750 to 1 500 learners per year. Durbanville's environmental education is handled by students. Relying on temporary staff to perform the function affects the continuation and standardisation of programmes, and also limits the expansion of the programme.	Discuss with Department Financial Officer.
Tygerberg	Winter trail series run with more than 900 people participating. Girls' overnight camp – Beautifully Brave. Received the Reserve of the Year Award.	Poor vehicle servicing and maintenance by workshop is causing tremendous pressure on operations. Poor work performance by contractor doing repairs and maintenance at Platteklouf gatehouse – the plumbing work has not been completed	Continue to motivate for budget. A dissatisfaction of service process has been initiated with procurement.

	Ecological burn TGB4, 28 ha of 60-year-old Renosterveld. The Tygerberg staff completed the construction of the second shade structure situated on the western side of the main picnic area and is made of meranti wood. The structures provide shade to picnickers. The pine trees continue to be monitored and are felled when they are deemed unsafe due to the pitch canker. On 28 June 2016 a winter veld survey was undertaken at Bothasig Fynbos Nature Reserve to assess the protea species and it is confirmed that the serruria species are now recruiting. There are currently eight threatened protea species in the reserve, i.e. <i>Protea burchellii</i>, <i>Leucospermum hypophyllocarpodendron</i>, <i>Serruria aemula</i>, <i>Serruria trilopha</i>, <i>Diastella proteoides</i>, <i>Protea scolymocephala</i>, <i>Serruria fasciflora</i> and <i>Leucadendron levisanus</i>. Nature@heart conducted a successful holiday programme at TNR in the June holidays and invited the reserve staff to participate in the snake show by Cape Reptile Club and the bird show by Eagle Encounters – this was an incredible experience for the staff.	and is of a poor standard. Continuous failure to keep dogs on leashes at Bothasig Fynbos NR and failure to collect dog waste are escalating health concerns at this site.	Reserve management is currently seeking new ways to address this challenge.
Durbanville/ Uitkamp / Botterblom	A successful spring walk was held at Uitkamp Wetland Nature Reserve and included a photographic competition. Several geophytes such as <i>Moraea bellendenii</i> are flowering in the burnt section of Botterblom Nature Reserve. Durbanville NR was finally issued with a prescribed ecological burn permit. All the fire preparations were completed and the burn was undertaken in April.	There was an increase in the dumping of building material. The new construction sites around and adjacent to the Uitkamp NR have been the main reason for this. It is not easy to establish which of the companies are responsible. The dumping of garden refuse continues at Botterblom Nature Reserve. Building rubble is continuously dumped at Botterblom NR. The perpetrator was not caught. The team removed the rubble after being notified by concerned residents. The reservoir along Racecourse Road in Durbanville overflows from time to time and the reserve downslope from the reservoir is the recipient of the water. The overflow usually causes some erosion but during the reporting period the worst damage to the staff's knowledge was inflicted at the reserve. Severe erosion and muddy water ran through the gazebo.	Continuous surveillance by law enforcement – Area Manager contacted Lesley Wolfensberger-Betts from Environmental Management and Heritage who assisted with this matter.
Bracken	A spring event was attended by 750 visitors. 12 stalls ranging from food, crafts and plants were booked. Heritage assessment of all the structures has been completed. All the reserve buildings have an updated grading and as a result the reserve management can proceed with permit application to the Western Cape Heritage Society to have the structures with no heritage significance, and that are not conducive to reserve for	Lack of a People and Conservation Officer at Bracken Nature Reserve. The reserve relies on interns and/or volunteers to fulfil the function. Between 750 and 1 500 learners attend EE programmes at the reserve and the numbers can grow with a permanent officer on site. The reserve is also surrounded by several communities that would benefit from such programmes. The post is critical and in order for the reserve to provide such services to our communities, we need to have adequate resources in place.	

	long-term plans, removed. After more than 10 years of pursuing the idea to have the derelict infrastructure at Bracken demolished, approval was finally granted for the demolition. The permit was issued by the Chief Executive Officer of Heritage Western Cape in terms of Section 24(1) of the National Heritage Resources Act, No 25 of 1999.	The derelict structures of which the asbestos roofs were removed are currently unsightly and potentially dangerous as the roof structures/pillars are not secured.	Remove structures in consultation with the PAAC and Heritage Western Cape.
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North Region	The attendance of a two-day Fishery Control Officer refresher course presented by DAFF. The fishing holiday programme ("Something Fishy") at Table Bay NR in March/April was as usual very successful. The summer holiday programme at Blaauwberg NR in December and the winter arts and crafts holiday programme at Blaauwberg NR/Table Bay NR/Witzands Aquifer NR over June/July were also run successfully. In the September holiday we team up with Sports & Recreation District 1 to do a programme with children from Atlantis/Mamre and Pella. We try to bring the children to different reserves for this programme.	The long waiting period for a vehicle sent to a service provider for a normal service and some minor repairs. Several illegal structures and displaced individuals were removed from Blaauwberg NR and Table Bay NR in this reporting period. While only 121 permits were checked, the team recorded over 310 routine visits to various hotspots, which included parking areas, beaches and other Council properties in the North where crimes of all kinds are most likely to occur if visible patrols did not take place.	Engagement with Fleet. Continuous surveillance.
Blaauwberg	Blaauwberg Nature Reserve received a Certificate of Long-Standing Membership from Cape Town Tourism for being a committed and active long-standing member, having achieved the required criteria for membership and offering quality service and remarkable visitor experiences. The City of Cape Town's Blaauwberg Nature Reserve, in partnership with the Friends of Blaauwberg Conservation Area (FoBCA) and the Melkbos Athletics Club, hosted the 210-year anniversary of the 1806 Battle of Blaauwberg on Saturday 9 January 2016. The Area Manager of BBNR received a Certificate of Appreciation in recognition of dedicated and generous service to the community in Blaauwberg Sub-council 1. The Certificates were handed to Council officials at the Sub-council 1 meeting on 14 June 2016.	Lack of suitable public access to Blaauwberg Hill and inland section of the reserve, thus hampering tourism/visitor development of the reserve, with a concomitant lack of economic development. A southern right whale stranded at Holbaai on Friday 4 March 2016 at around 07:30.	Ongoing investigation of alternatives. The Large Marine Animal Strandings Policy for the City of Cape Town was used to coordinate response and assign roles and responsibilities to the various line departments to remove the whale carcass. The City's Environmental Resource Management (ERM); Disaster Risk Management; Solid Waste and Law Enforcement Agencies managed the scene and removal of the carcass from the beach at around 23:00. The whale carcass was transported to the Vissershok Landfill Site where it was disposed of.
Table Bay	The African parties to the Africa-Eurasian Waterbird Agreement (AEWA) met in Cape Town in August 2015. A special field trip was arranged for about 50 conference delegates to visit the Rietvlei wetlands and the SANCCOB rehabilitation centre at Table Bay Nature Reserve on 26 August 2015. The Rietvlei Open Day on 14 November 2015, the first of its kind at Rietvlei, gathered almost a thousand visitors through	Displaced people and the construction of illegal structures are increasing the pressure on the nature reserve. Illegal prawn collection after normal working hours at Milnerton Lagoon. A large patch of reedbeds burnt at Table Bay NR late in 2015. It is alleged to have been started by a Chinese lantern. Fireworks, in areas where they are not allowed, are one of the biggest challenges during the festive season. Too many wildfires have started as a result, causing huge losses. Emergency services spend large amounts of taxpayers'	Ongoing law enforcement. Ongoing discussions with City Fire.

	the gates on one day. It was the first time that all the role-players in the nature reserve worked together to host an open day. The event was marketed by Pink Drive in collaboration with the Table Bay Nature Reserve, Milnerton Aquatic Club, Friends of Rietvlei and SANCCOB. Several rare birds have been recorded at Rietvlei, including Common (European) cuckoo (<i>Cuculus canorus</i>), Giant Kingfisher (<i>Megaceryle maximus</i>), Great Spotted Cuckoo (<i>Clamator glandarius</i>), and Great Egret (<i>Ardea alba</i>) The Something Fishy Holiday programme was well attended during both sessions. One learner caught a 5,5 kg carp, which is the biggest carp ever to be recorded in the history of the programme since its inception in 2012. A first record for Mozambique tilapia and mullets/springers were also caught during this year's holiday programme. The geohydrology & hydrology tender is continuing well and we have recently received a second-year report feedback.	money to manage these fires. Water pollution and littering remain one of the worst challenges for nature reserve staff. Management has almost no control over what flows into the natural environment from developed areas, but the impacts are felt in the nature reserve.	Ongoing engagement with City Stormwater and Sustainability.
Witzands Aquifer	Camera traps were installed at WANR and Brakkefontein and recorded sightings include caracal, duiker, grysbok, steenbok, secretary bird and honey badger. On 23 October 2015, the Witzands Aquifer Nature Reserve (WANR) held its first Protected Area Advisory Committee (PAAC) meeting. The formerly owned Penelli private property was transferred to the City during the reporting period; this is part of the expansion and land acquisition plan of the City for the Biodiversity Management Branch. One of the informal structures at Klein Dassenberg Conservation Area was removed due to the occupant receiving a Reconstruction and Development Programme (RDP) house at the Kanonkop housing development in Atlantis. Prior to the City owning the land, there were four structures altogether, the City inherited the four structures that came with the land, however at present only one remains. DCCP staff assisted by Andre Rossouw assessed veld age of various management blocks at the Klein Dassenberg Section. Numerous staff from BMB assisted with brush pile burning operations at the Klein Dassenberg Section and managed to burn a total of 530 piles in May alone. The operation was a great success even though staff had to navigate through difficult terrain and harsh weather conditions with wind speeds peaking at 21 km/h on one	The limited office space and storage facilities for the DCCP. The Klein Dassenberg fence of which 1,1 km was stolen in this reporting period and the three wildfires at Klein Dassenberg are suspected to have been intentional and/or due to negligence. Two of these are suspected to have been intentional. The recurrence of fires in and around the Klein Dassenberg Section contributes to the damage. A major challenge is also the high incidences of vandalism, theft of the fence and signage at Klein Dassenberg, particularly along the western boundary adjacent to the ESKOM power lines. The DCCP remained without a People and Conservation Officer during this reporting period. This is a major concern as the relationships, programmes and opportunities conducted with the schools/groups/events will be affected through the lack of an assigned People and Conservation Officer.	The Witzands Gateway project will address this problem. Ongoing community liaison. In the short term it is envisaged that the GEF 5 project run by CapeNature will address this.

	specific day. From 22 to 29 June 2016, a total of 49 Expanded Public Works Programme (EPWP) workers conducted invasive species follow-up clearing within Klein Dassenberg and initial clearing at Witzands Aquifer Nature Reserve Section.		
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Head Office			
Maitland		Lack of formal meetings or any response from corporate in relation to issues/urgent R&M affecting the offices in Maitland.	Ongoing.
Westlake Conservation Centre (Habitat Restoration Facility and Green Jobs)	Large area of seasonal wetland rehabilitated at the Habitat Restoration Facility. A device for smoking seeds was manufactured. This device can take many seed trays at once and is proving to be very successful. All the material used was recycled material. Green Jobs - Collaboration with DEA biosecurity resulted in 20 NEMBA notices issued on non-complying private landowners. Support and integration from City line departments especially TCT & Housing.	Lack of toilets for a number of staff. Lack of formal sewage system to facilitate the building of toilets. Green Jobs – senior and experienced project manager resigned; vehicle shortage impacts on operations; and capacity constraints result in huge pressure on managers.	Looking at various options including conservancy tanks. Ward allocation budget for vehicles in 2015/16 approved. Senior staff positions filled.

3. STRATEGY, POLICY, LEGISLATION AND PLANS

LOCAL BIODIVERSITY STRATEGY AND ACTION PLAN

The City of Cape Town is a member of ICLEI – Local Governments for Sustainability, and was instrumental in developing Local Action for Biodiversity (LAB) as a global programme in conjunction with ICLEI, following the ICLEI World Congress in Cape Town in 2006. In April of the same year, the City re-affirmed its commitment to the conservation of biodiversity by approving its participation in ICLEI's LAB Project. LAB focused on enhancing the planning for and implementation of biodiversity integration within urban precincts and empowering local authorities in this respect. In August 2008, Council signed the Durban Commitment which committed the City to recognising biodiversity as “the variety of life on earth on which human wellbeing is dependent and that biodiversity provides ecosystem services that underpin all our community needs”. At the same time Council signed the IUCN Countdown 2010, a programme that committed partners to halting biodiversity loss by 2010. LAB has now become incorporated into ICLEI's Cities Biodiversity Centre, which also includes the Urban Biosphere Initiative (URBIS). ICLEI has close ties with the Convention on Biological Diversity (CBD).

The LAB programme provided an excellent framework in which to align the City's conservation work. One of the main actions required by partners was to compile and adopt a Local Biodiversity Strategy and Action Plan (LBSAP). Before the initiation of LAB, the City already had an approved Biodiversity Strategy. This Biodiversity Strategy was used as the basis for the LBSAP but took the strategy further, updating the strategic objectives and including an action plan. The LBSAP was also aligned to the IDP, IMEP, and the Cape Action for People and the Environment (CAPE). The LBSAP 2009-2014 was approved by Council in May 2009.

The strategy section of the document remains the same, but the Biodiversity Action Plan (implementation activities) and targets have been updated. The update extends the LBSAP to 2026 with an update planned for 2021. This document also aligns the LBSAP to recent international, national, provincial and local policy. The plan will be submitted to Council later in 2016.

INVASIVE SPECIES CONTROL PLANS

The Invasive Species Strategic Framework dated September 2008 was revised in the previous financial year and aligned with the National Environmental Management Biodiversity Act, Act 10 of 2004 (NEMBA) regulations and the Invasive Alien Species Lists (dated October 2014). The NEMBA requires all organs of state at all spheres of government to compile and submit their Invasive Species Management plans within a year after the management plan framework is made available. The NEMBA furthermore requires the Invasive Species Control plans of municipalities to be incorporated into the Integrated Development Plan (IDP). The management plan framework for organs of state is due on 1 October 2016.

BIOREGIONAL PLAN

The Bioregional Plan, which incorporates the BioNet and management guidelines, was completed and submitted to Province. After much consultation with Province, it was decided by Province not to proceed

with the approval of the Bioregional Plan. In July 2015, Council approved the retention of the Bioregional Plan as a policy document to be used as a plan to facilitate, and not to hinder, development in the City. This approval provides a critically important document that is at the core of the BMB.

The Bioregional Plan is available on:

[http://www.capetown.gov.za/en/Policies/All Policies/Bioregional Plan for City of Cape Town - \(Policy number 44854\) noted on 19 August 2015.pdf](http://www.capetown.gov.za/en/Policies/All Policies/Bioregional Plan for City of Cape Town - (Policy number 44854) noted on 19 August 2015.pdf) (Search terms if not found: "Bioregional Plan").

BIODIVERSITY NETWORK (BIONET)

The updated 2016 BioNet was finalised. GIS shapefiles have been circulated to conservation partners and the latest BioNet is available for download on the City Viewer and SANBI BGIS site (BioNet Map Layers available on City Map Viewer > Natural Resources and the Environment > Biodiversity Network + Wetlands).

The final BioNet methods and results report is available for download from the ERMD website. The BioNet report is available on:

http://www.capetown.gov.za/en/EnvironmentalResourceManagement/publications/Documents/BioNet_Analysis-2016_C-Plan+MARXAN_Method+Results_report_2016-06.pdf (Search terms if not found: "BioNet Analysis Method and Results").

One recommendation of the latest analysis is that some remnant areas should be ground-truthed again for accuracy of habitat condition mapping, particularly some of the poor habitat condition areas. The nature reserves also need to be mapped for habitat condition class. Following capture of this information, the vegetation statistics in terms of remaining 'good and fair' habitat condition remnants will be more accurate. Wetland mapping was also updated for the latest BioNet and ground-truthing continues as and when needed and possible. The next step of migrating the new national wetland classification criteria into our wetland database was been undertaken.

4. GREEN JOBS

JOB CREATION

A total of 156 796 person days of temporary employment (681 full-time job equivalent; 2 390 job opportunities) were created in the BioNet. Most of the jobs were created by the Green Jobs Unit (Table 2) with the balance created as a result of the baboon programme.

Table 2: Jobs created by the Green Jobs Unit (job opportunities per month)

Quarter	Number of person days	Number of job opportunities per month	FTE's
Jul - Sep 2015	36 944,5	732	
Oct - Dec 2015	30 125	656	
Jan - Mar 2016	31 706,5	65	
Apr - Jun 2016	44 336	3 777	
Total	143 112		622
Average	35 778	1 307,5	

GREEN WARDENS



Figure 9: Installation of silt curtains in Simon's Town by EPWP workers

A total of six sand bag weirs have been built across Simon's Town, which were strategically placed to prevent silt from entering the stormwater pipes. In addition, they act as soft ecological infrastructure alternatives, in this case replacing the more permeant gabion weir. These photos serve as proof that the silt curtains do indeed trap silt and in turn prevent erosion from occurring on exposed slopes (Figure 9 and 10).



Figure 10: Silt curtain traps to prevent erosion installed by EPWP team

Table 3: Green Wardens for 2015/2016

Green Wardens	Jobs
De Hel	11
Sun Valley	16
Silvermine	8
Hout Bay	6
Westlake Wetlands	9
Diep River Corridor (Khayelitsha)	13
Nursery WFWet	157
Noordhoek	43
Westlake	16
Scarborough	8
FOCVGB	21
Edith Stephens	56
STADCO	56
PMF	11
KEAG	122
Total	110

SOCIAL DEVELOPMENT

Social development topics covered this quarter (see Table 4)

Table 4: Training in social development

Subject	Participants
Toolbox talks	380
Epilepsy awareness intervention	170
Substance abuse focus groups	12
Drug testing interventions	16


Figure 11: Epilepsy awareness intervention

Figure 12: Substance abuse focus groups

Table 5: General training in the Green Jobs Unit for 2015/2016

Interventions	Number of people	Days	Person days
Fire Awareness Training	490	1	490
First Aid Level 1	12	3	36
Chainsaw Operator	50	10	500
Health and Safety	109	2	218
Herbicide	73	2	146
Water Safety	156	1	156
Weed-eater & Brush Cutter	58	10	580
Rope Access not assessed in the first training	1	1	1
Rope Access Re-assessment	1	1	1
Rope Access Training	18	10	180
Biocontrol Short Course	4	5	20
Total	972	46	2328

5. CONSERVATION SERVICES

PROTECTED AREA EXPANSION

During the 2015/16 financial year, BMB continued to secure the BioNet (Cape Town's fine-scale conservation plan) by implementing various mechanisms to add critical biodiversity areas to the existing protected areas network.

As part of the Protected Areas Expansion work, key projects included:

1. *Reserve Proclamation* – This milestone of the proclamation of the City's reserves is significant as most of the managed City reserves never actually had any status. In 2009, only 2 264 ha were formally proclaimed local authority nature reserves. The recent proclamation regularised the situation on the ground and also included the catchments of Steenbras and Witzands Aquifer. This, with the City Parks' 16 Biodiversity Agreement Sites, increased the City's protected areas to 14 479 ha. There were some problems with certain erven (i.e. ownership issues such as unregistered state land) and these could not be proclaimed. The resolution of these erven will be part of the next phase, which will include recently purchased land (873 ha) and erven adjacent to the Table Mountain National Park, which were also never proclaimed (e.g. City-owned portion of the Noordhoek Wetlands). In 2009, the secured conservation areas were 29 003 ha (34% of the BioNet) and in 2015/16, the conservation estate of proclaimed and secured areas (e.g. land purchased and not yet proclaimed) increased to 51 749 ha (60.88% of the BioNet; see Table 6).

Table 6: Land ownership of protected areas in the City

Organisation	Hectares (ha)
SANParks (TMNP)	25 100
City	14 479
Private landowners - stewardship	290
CapeNature	8 182
Eskom (Koeberg)	2 826
Total	51 749

2. *Stewardship* – In 2010 the Table Mountain Fund (TMF) funded a project to test the tool of conservation stewardship in the City of Cape Town. As a result, the City appointed two permanent staff members. During the past two years, 64 properties were visited (potential = 6 000 ha) for Stewardship, nine signed up (293 ha) and another nine (442 ha) are in advanced negotiations. Last year 30 landowners were approached and five properties were signed up: Kliprug (Contract Agreement), Highbury (Voluntary Agreement), Boskloof (Biodiversity Agreement in perpetuity), Perdekop (Voluntary Agreement) and San Michelle (Voluntary Agreement). During 2015/16, various conservation incentives for private land owners were implemented with funding from the organisations in Table 7.

Table 7: Organisations that have contributed funding

Organisation	Budget	Comment
WWF/TMF	R250 000	Six small grants for alien clearing; fencing
Private (Groenfontyn)	R60 000	
LandCare	R142 000	Alien clearing
CWCBR/TMF	R20 000	Alien clearing
Total	R472 000	

3. *Development facilitation through land banking* – The Atlantis industrial incentive scheme includes a land-banking component. This means that key biodiversity properties outside the urban edge are proactively purchased and conserved to mitigate the loss of biodiversity remnants within the urban edge and industrial area of Atlantis, thereby facilitating new investment opportunities in the area. This scheme is supported by Province's Department of Environmental Affairs and Development Planning (DEADP) and CapeNature. This pragmatic approach has great potential, as it facilitates development while ensuring that priority land is added to the conservation estate, thereby securing biodiversity resources and the vital ecosystem services they deliver. To date 873 ha has been secured in this land bank. A total of 95 ha of development has been facilitated in Atlantis, with a further 68,37 ha in progress.
4. *The Dassenberg Coastal Catchment Partnership* – The Dassenberg Coastal Catchment Partnership (DCCP) is an ongoing initiative of the City of Cape Town, CapeNature, the Worldwide Fund for Nature (WWF), the Table Mountain Fund, the Wilderness Foundation, the Cape West Coast Biosphere, SANParks, the Western Cape Department of Environmental Affairs and Development Planning and the South African National Biodiversity Institute (SANBI). In the year under review, the City continued to be an important partner helping to develop this initiative, which aims to create a multi-use conservation area that will link CapeNature's Riverlands Nature Reserve with the coast, and protect critical ecological infrastructure. The Dassenberg Coastal Catchment Partnership (DCCP) continues and the partnership has received a grant from the GEF6, which will assist the City with coordination and moving the partnership to the next level. Cliff Dorse and Julia Wood are currently writing this case study as part of the Mistra programme.
5. *Metro Southeast Strandveld Conservation Implementation Plan (CIP)* – The Metro Southeast Strandveld CIP is a collaborative City-led project including external conservation partners such as CapeNature, DEADP and the South African National Biodiversity Institute (SANBI). Owing to the urgent need for housing development land in the metro southeast, and the rapidly shrinking area of endemic and endangered natural vegetation in the area, this project was initiated to identify a key set of areas required to secure biodiversity resources and vital ecosystem services, and to set aside other less critical BioNet land for development. A framework and set of maps for this plan were developed and approved in 2013/14. However, implementation of the CIP requires dedicated operational budget, which has not yet been committed.

FLORA

The City of Cape Town is situated in a global biodiversity hotspot and is home to some of the most threatened plant species in the world. The City's team and conservation partners such as the Worldwide Fund for Nature and CapeNature are working together towards protecting these critically endangered and unique floral gems from extinction (Figure 13).



Figure 13: The critically endangered *Watsonia strictiflora* at Joostenbergkloof, now confined to two known populations, neither of which are conserved and both facing a rapid decline in habitat quality

Sadly, at least 13 plant species unique to the Cape Town area are now listed in the IUCN Red List as 'Globally Extinct'. Species now extinct in the wild include:

- Hairy Bigstyle Buchu *Macrostylis villosa* subsp. *minor* (Buchu family)
- Several Ericas (heaths) including *Erica verticillata* & *Erica turgida*, both from the Cape Flats
- Two species of the Pea family - Cape Flats Gorse *Aspalathus variegata* and Grass Mountain Pea *Liparia graminifolia*
- Wynberg Conebush *Leucadendron grandiflorum* (Protea family)
- Table Mountain Window Reed *Willdenowia affinis* (Reed family)
- Peninsula Snapdragon *Nemesia micrantha* (Snapdragon family)

Plant species may become increasingly threatened as a result of various factors, such as too frequent fires, urbanisation, poaching and flower picking.

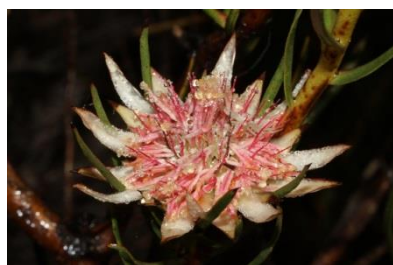


Figure 14: *Protea odorata*



Figure 15: Kraaifontein Spiderhead (*Serruria furcellata*)



Figure 16: Strawberry Spiderhead (*Serruria ameula*)

The City, with its partners, is making every effort to protect plant species that are critically endangered.

- The world's smallest Protea, the Swartland Sugarbush (*Protea odorata*; critically endangered), is among another 400 plant species in Cape Town that are nearing extinction and is in need of urgent action. The City of Cape Town and the Worldwide Fund for Nature (WWF) are looking into how best to protect this Protea, now found only on a single farm in the Fisantekraal area. At present, there are only eight remaining plants left in the wild. The species is in desperate need of conservation management if we are to prevent its imminent extinction. *Protea odorata* belongs to the shale Sugarbush group consisting of only two species, both of which are on the verge of extinction. *Protea odorata* itself is a short shrub up to 1,2 m tall with narrow linear leaves bent straight upwards between 3 cm and 6 cm long and only 2 mm wide. The flowers are cup-shaped, less than 3 cm wide and 2 cm long. The outer bracts of the flower are ivory in colour turning to a faint pink towards the centre (Figure 14).
- The Kraaifontein Spiderhead (*Serruria furcellata*) is a type of low-growing Protea-family species, and is doing well in the City's Bracken Nature Reserve where it has been reintroduced. Only a single naturally occurring plant still occurs in the North Pine area of Brackenfell. With the assistance of the South African National Biodiversity Institute (SANBI), the plant's cuttings were rooted and planted at the reserve. Officially, under IUCN rules, these plants can only be considered to have been successfully restored if they survive for three generations. This would be about 45 years in lowland fynbos (Figure 15).
- The Strawberry Spiderhead (*Serruria ameula*) is only found on the sandy lowlands of Cape Town (Cape Flats Sand Fynbos). With nearly 100 % of its habitat permanently transformed, a few remaining plants are scattered along road verges and tiny patches of vegetation mostly within the City's urban edge where they continue to decline. A few individuals are conserved at the Platteklouf Natural Heritage Site, False Bay Nature Reserve: Rondevlei Section and the Bracken Nature Reserve (Figure 16).
- Blouteebossie (*Psoralea glaucina*) was thought to occur only in wetland depressions to the east of Muizenberg. The few remaining plants are within a small natural area in a residential development and another small population in the vicinity. However, several plants were also discovered in the

wetlands around the Witzands Aquifer Nature Reserve near Atlantis that is in the process of being proclaimed as a nature reserve by the City and CapeNature.

- The Kraaifontein Heath (*Erica bolusiae* var *bolusiae*) is barely holding on with fewer than 250 remaining plants in the wild and it is rapidly declining in numbers due to continued spread on invasive species and too frequent wild fires. Its closely related 'cousin', *Erica bolusiae* var *cyathiformis*, became extinct in the 1970s. Both varieties are cultivated at Kirstenbosch, but at present, none of the wild populations are conserved.
- *Senecio cadiscus* is an annual aquatic plant (living for only a few months in the wet season) occurring on Cape Vernal Pools vegetation along the Cape West Coast. As an annual that dies off in its entirety every year and has to grow back from seed the following year, it is extremely vulnerable to changes in climate and changes in its habitat from year to year. At present the species is only known from three seasonal pools along the N7 highway, none of which are conserved and heavily impacted on by trampling animals. Efforts to establish a population within a nearby protected area has not yet been successful.

There were several important botanical discoveries over the last year. Two of the most noticeable are the discovery of the critically endangered *Gladiolus griseus* at Silwerstroomstrand and the endangered *Leucospermum grandiflorum* from Joostenbergkloof.

Gladiolus griseus was historically known from Saldanha to Milnerton, but is now isolated to three severely fragmented subpopulations each consisting of less than 50 individuals; roughly 100 mature individuals remain. Its natural habitat consists of coastal dunes in low, coastal scrub that has since been transformed by linear coastal developments. Through education of staff and a monthly conservation services field day (held on 10 July 2015), the BMB staff were able to locate four additional populations between Bloubergstrand and Silwerstroomstrand. Although still considered critically endangered, the monitoring of these new subpopulations within the City's protected area network means that for the first time the species can benefit from formal conservation, ensuring its survival in the long run.

Leucospermum grandiflorum was considered to be limited to the higher rainfall granite slopes of the Paardeberg and Paarl mountain and continues to decline in numbers as a result of too frequent fires and subsequent infestation by invasive alien species. The lowland populations were thought to have gone extinct many years ago. An accidental discovery of a small lowland population at Joostenbergkloof Farm during a conservation services field day (13 June 2015) meant that this unique, smaller form of the species is well on its way to being formally conserved within a City of Cape Town Stewardship Site, along with nearly 60 other species of conservation concern. Seeds were collected for the Millennium Seed bank for ex-situ preservation while stewardship negotiations continue.

FAUNA

The Gantouw Project was launched at Rondevlei (False Bay Nature Reserve) in October 2015, with four staff members being appointed by CTEET. Five young Eland (*Taurotragus oryx*) were received from Elandsberg Nature Reserve and raised in a boma. By early December they were introduced into the veld and have had a daily routine of browsing in a section of Rondevlei and returning to their boma at night. Extensive monitoring is in place to evaluate their browsing impact on the Cape Flats Dune Strandveld ecosystem (Figure 17). The project is designed to run for three years after which the applicability of using Eland as a management tool on small nature reserves will be quantified.



Figure 17: Gantouw Project Launch

Blaauwberg Nature Reserve staff is rearing a honey badger (*Mellivora capensis*) that was left orphaned. The necessary permits were obtained from CapeNature and a veterinarian regularly checks on the health and progress of the honey badger. It is intended to do a 'soft release' once the honey badger can forage for itself and is old enough to be released (Figure 18).

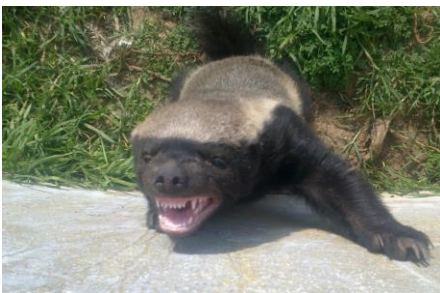


Figure 18: Honey badger at Blaauwberg Nature Reserve

Other important wildlife sightings included cape clawless otters at Table Bay Nature Reserve (Figure 18). This is a very rare sight and especially difficult to sight and photograph five individuals (Figure 19).



Figure 19: A group of five Cape clawless otters in one photo frame at Table Bay Nature Reserve (Photo: Jan and Frieda Prinsloo)

Reserve staff rescued a baby porcupine at Blaauwberg Nature Reserve. The animal was taken to a rehabilitation centre (Figure 20).



Figure 20: Baby porcupine rescued at Blaauwberg Nature Reserve

The highlight of the 2015/16 reporting period was without a doubt the confirmation of a leopard (*Panthera pardus*) in the Koeberg Nature Reserve. This is the first record of a leopard on the West Coast of Cape Town in living memory (Figure 21). For more than two years there has been suspected leopard activity in the Blaauwberg/ Koeberg/ DCCP area.

It was also notable that several Feltham's Opal (*Chrysoritis felthami felthami*) butterflies were recorded at the Pelican Park Section of the False Bay Nature Reserve. This species was last recorded at this location in the 1970s.

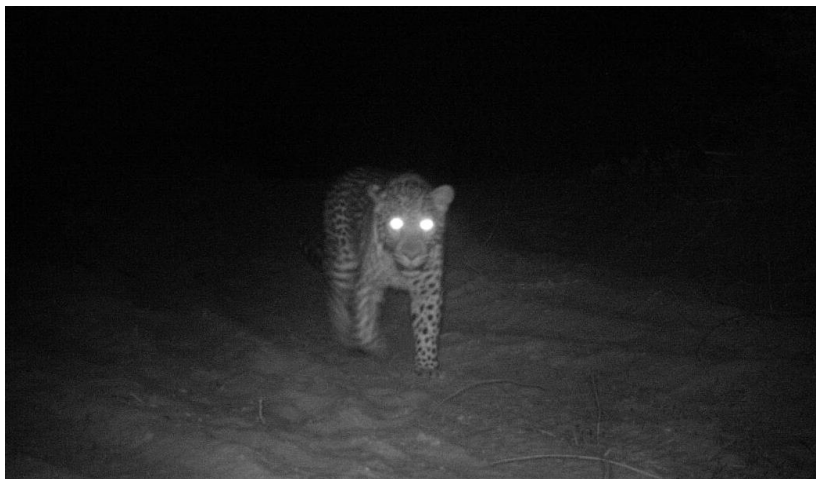


Figure 21: Proof that there is indeed at least one leopard in the Dassenberg Coastal Catchment Partnership Area. This photo was taken by a camera trap at Koeberg Nature Reserve (Photo: Jurina le Roux, Eskom)

Table 8: Game spreadsheet for period July 2015 to June 2016

Species	Translocations	Births	Deaths	Total in CCT	Animals on loan	Animals on CCT reserves
Bontebok (<i>Damaliscus pygargus pygargus</i>)	3	0	1	9	8	1
Grey Rhebok (<i>Pelea capreolus</i>)	0	0	0	5	0	5
Hippopotamus (<i>Hippopotamus amphibious</i>)	0	0	0	6	0	6
Eland (<i>Taurotragus oryx</i>)	0	0	0	5	0	5
Red Hartebeest (<i>Alcelaphus buselaphus</i>)	0	0	0	2	0	2

BABOONS

The chacma baboon (*Papio ursinus*) forms a part of the City of Cape Town's rich biodiversity, is a considerable tourism asset and plays a potentially significant ecological role in the Cape Floristic Region. It is a testimony to numerous management programmes and after fourteen years of development, the Peninsula baboon population is steadily growing and is thus not considered to be under threat (Table 9). Despite management interventions, conflict between baboons and humans (residents, property owners, businesses such as wine farms and restaurants, fishermen and tourists) continues to be a major problem in a number of areas in the Peninsula.

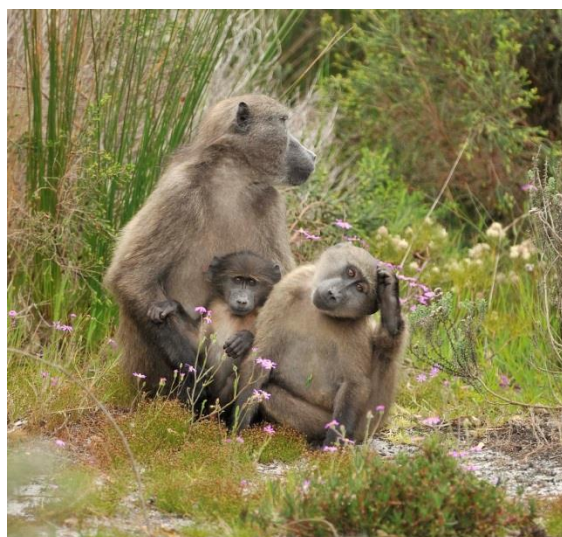


Figure 22: Baboons in indigenous vegetation

Table 9: Population statistics

TROOP	Total December Populations				July 2016			Total Births 2016	Total Deaths 2016	Emigration/ Immigration 2016	TOTAL CURRENT POPULATION
	2012	2013	2014	2015	Births	Deaths	Emigration / Immigration				
Da Gama Troop	54	45	43	49	1	0	-1	8	4	-1	52
Smitswinkel Bay	23	21	22	23	0	0	0	7	1	0	29
Waterfall	28	30	30	32	0	0	+1	0	0	+2	34
Groot Olifantsbos	19	13	17	16	0	0	-1	0	0	0	16
Misty Cliffs	18	16	14	11	0	3	+1	1	3	0	9
Slangkop	33	32	36	41	0	0	0	0	0	0	41
SUB TOTAL	175	157	162	172	1	3	0	16	8	+1	181
Zwaanswyk	25	26	28	30	2	0	0	3	3	0	30
Tokai	61	65	72	62	1	0	0	7	4	+1	66
Mountain	33	44	48	49	2	0	0	3	2	-1	49
Constantia 1 & 2	60	63	70	77	3	2	0	12	6	-1	82
SUB TOTAL	179	198	218	218	8	2	0	25	15	-1	227
TOTAL	354	355	380	390	9	5	0	41	23	0	408

+ Add to this the annual count for 2015 for the Cape of Good Hope = **132 individuals**

The programme continues to deliver excellent results and the partnership with the community via the joint Baboon Technical Team (BTT) comprising of the City of Cape Town, SANParks and CapeNature, and the Baboon Liaison Group (BLG) comprising of Councillors and representatives of the affected ratepayers, is going from strength to strength. The SPCA and UCT Baboon Research Unit are included on both committees. The programme run by the service provider Human Wildlife Solutions (HWS), however, remains costly and runs at about R10 m per year. In the last year, Figure 23 shows that the troops on average spent 98,7% of the time out of town (the tender stipulates that the troops need to stay out of town for over 90% of the time). Individual baboons only raided for 4.1% of the time.

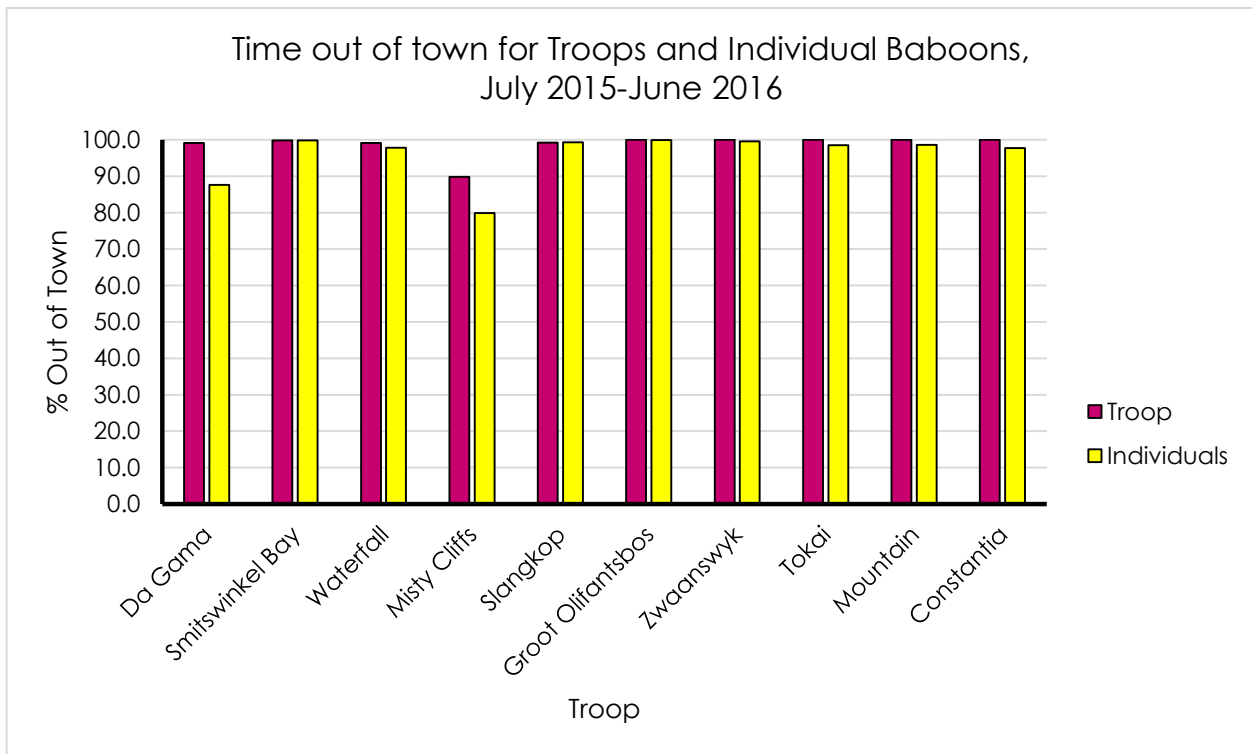


Figure 23: Percentage of time baboon troops and individuals spent out of town

As a result of the fires last year in March and the removal of all the plantations following the fire, an overgrowth of invasive alien plants on the eastern slopes of the mountain was experienced. This fact, along with a year marked by low rainfall, caused the baboons to move lower down the slopes than the previous two years. HWS allowed them access to the available forage lower down on Chrysalis and around the picnic site. Unfortunately this resulted in an increase in conflict, especially on the Chrysalis Academy grounds.

The increase in baboon / human conflict at the Chrysalis Academy had to be addressed and the City and HWS (HWS area manager) had a meeting with the administrative heads at the academy on 5 May 2016 to discuss how these issues could be addressed. It was agreed that HWS would form a part of their introduction course. Lectures as well as field training were conducted with the new intake soon after the meeting, which led to greater cooperation and awareness (Figure 24).



Figure 24: Chrysalis cadets discussing how to baboon-proof the premises

The waste issues at the Navy's Da Gama flats remain a challenge. A hugely positive step was the building of bin bays. However, there are still many hitches. No provisioning was made for drainage of the bin bays, lights have not been installed yet and it is possible that the areas are not big enough. These issues were discussed at a recent meeting and plans made for how the Navy can circumvent these problems (Figure 25 & 26).

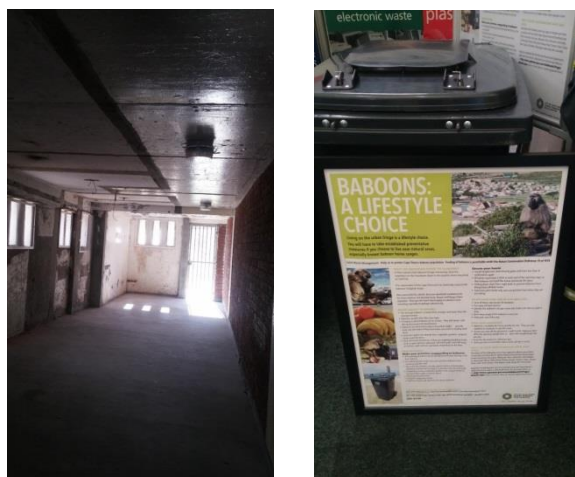


Figure 25: Navy flats bin bay and new poster



Figure 26: Female baboon unable to decipher double-lock system on bin bay door

The design and erection of the 'virtual baboon fence' was completed in the previous financial year in Gordon's Bay. This year, the fence was activated with the Steenbras Nature Reserve staff spending many hours tracking baboons, setting up relay stations, monitoring results and fine tuning systems. The system has proven to be extremely successful at keeping the animals out of town, enabling staff to spend time on other important conservation management activities. The success of this programme is being evaluated with the view to roll it out in other areas with similar challenges both within and outside the City of Cape Town and potentially for the Cape Peninsula baboons.

WATER

The City of Cape Town and The Nature Conservancy (TNC) entered into a partnership agreement to establish a Water Fund for Cape Town. Water Funds are innovative funding mechanisms led by TNC to secure water for cities across the globe. The conservancy has released a new study showing that the Water Fund model can be applied successfully in major cities on the African continent. The *Sub-Saharan Africa's Urban Water Blueprint* found that more than 80 million urban residents across 28 cities could improve their water security by investing in conservation activities such as forest protection and good farming practices in land that drains into the rivers, lakes, and aquifers that supply their drinking water. For half of the 30 cities assessed — including Cape Town — the resulting benefits for improved water quality could offset the costs of conservation activities through reduced water treatment expenses. Given the exceptional ecological significance of Cape Town's adjacent natural areas, the city emerged as a prime candidate for a Water Fund. Savings on future water treatment and desalination costs alone could offset much or all of the costs of watershed conservation in Cape Town's supply and recharge areas, providing dramatic return on investment.

The final drafting of the Recreational Water Use By-law for Cape Town's water bodies was completed and put through the prescribed public process that was completed in May 2016. The final version and report will be submitted to Council in the next month or so. This by-law is a tremendous improvement on the previous by-laws and will assist with recreation use and control on the recreation water bodies in Cape Town.

The Geohydrology and Hydrology tender at Table Bay Nature Reserve: Rietvlei Section is continuing well and we have recently received a second-year report feedback. At the last meeting, it was agreed that the modelling exercises should include the following:

- To investigate effects of changes to the canal, i.e. what happens if the canal is made shallower, or completely removed?
- Investigate effects of changes to Potsdam discharge, i.e. what happens if effluent discharge is reduced or completely stopped?
- Flood scenarios to include average, dry-year and flood conditions in the above.

The model results should try to address issues such as 1) the water levels in the seasonal pans and how long wet pan conditions persist into the dry season, bearing in mind the implications for wading bird stay periods and dust; 2) salinity levels in the estuary; and 3) flood risk, i.e. how do changes to the canal and Potsdam effluent discharge affect the risk of flooding to properties surrounding the vleis.

The silting of Zandvlei Estuary Nature Reserve's estuary is a cause of concern and in this regard, in consultation with the then Zandvlei Environmental Management Forum (ZEMF) (incorporated into the new Zandvlei PAAC), EIA approval was obtained and the dredging commenced in July 2015 (Figure 27).



Figure 27: Zandvlei estuary showing siltation

Annually, both Zeekoevlei and Rondevlei are drawn down to allow flushing and fluctuation of the water levels (naturally both vleis would have had fluctuating water levels and would have dried up occasionally). The drawdown also facilitates access to the shore line to clear reeds and rubbish. This year was the 20th drawdown for Zeekoevlei.

RESTORATION

A process has begun whereby the City's nature reserves will be assessed and mapped for habitat condition, using a protocol that is appropriate for long-term monitoring of vegetation condition. Areas within reserves (excluding the high intensity use zones) that are deemed to be degraded will be targeted either for 'passive restoration' (i.e. self-repair under appropriate management to remove the cause of degradation, such as invasive alien species and erosion through trampling) or 'active restoration' where biodiversity has been lost and needs re-introduction. Restoration subsidiary management plans (subsidiary as they form part of the Integrated Reserve Management Plan) will be drawn up for areas requiring active restoration. These plans will align with other aspects of management, particularly fire management, as summer fire is an essential process in fynbos and renosterveld recovery, and invasive alien vegetation management.

The City's habitat restoration facility is integrally involved in the biodiversity restoration efforts and produces various genetically pure indigenous plants for restoration as well as seed. In addition, the facility participated in activities as per Table 10.

Table 10: Number of plant individuals propagated or collected

Method	Number of individuals
Plants donated	2 905
Plants search and rescued	1 000s
Plants planted out	26 628
Plants bagged / potted	64 953
Plants propagated/by cuttings	36 414
Seeds sown in trays	1 000s
Seedlings re-planted, eco trays	30 254
Seeds collected	1 000s
Total (excl. seeds collected and sown & S & R)	161 154

SOIL EROSION

The soil erosion project initiated in 2014 at Klein Dassenberg with the installation of natural gabions and packed brush is stabilising well (Figure 28). The recovery process will be monitored continuously (bi-monthly), especially this rainy season. On 30 May 2016 the site was inspected and it was found that the chippings have assisted in the stabilisation of the area and indigenous plant species have started to recruit along the edges of the erosion site.

**Figure 28: Recovering erosion site**

Water divergent bars were constructed on the Peregrine Footpath at Tygerberg Nature Reserve. These bars were also constructed in other areas of the reserve. This was done to prevent further erosion and/or to prevent damage to footpaths and roads due to water runoff, especially during heavy storms (Figure 29).

**Figure 29: Construction of water bars as part of footpaths and road network maintenance**

ECOLOGICAL AND RESERVE MONITORING

Some maintenance has been done to repair the tracking programme of the Biodiversity Database, allowing a real-time update to species lists and statistics. However, as the service procured does not include some of the automated functioning (outside of budget capacity), some updates must be done manually. This results in problems with these links on a regular basis. At the time of this report, some new species statistics were missing. The following is a report for the end of June 2016 (Table 11).

Table 11: Numbers of the different taxa

Species class	Present	Previous	Lost to site	Class total	Notes
Crustaceans	0	0	0	0	Unchanged*: Missing sightings of river crab and sand prawn (Westlake and Zandvlei Estuary)
Mammals	72	2	5	79	Unchanged: Cuvier's beaked whale not seen since 2005
Pisces (fish)	32	2	1	35	Unchanged
Birds (Aves)	299	2	34	335	Unchanged
Reptilia	61	0	4	65	Unchanged
Amphibia	22	0	2	24	Unchanged
Plants	1 888 was 1 947	74 was 18	358	2 320	Most of the latest plants added to the 'Previous' list are from a batch of data from a survey/species list loaded for Steenbras NR in May 2006. <u>This survey effort needs to be repeated to confirm these plants are still on site.</u> New plants added to the total list but not reflected include the Bryophytes identified at Bracken.
Insecta (insects)	56	0	0	56	Unchanged*
Arachnida	5	0	0	5	Unchanged*
Fungi	23	0	9	32	Unchanged

*The unchanged values do not reflect changes to species lists as indicated above

ECOLOGICAL RESEARCH

During the last financial year, various research projects were undertaken on the BioNet, of which two are profiled.

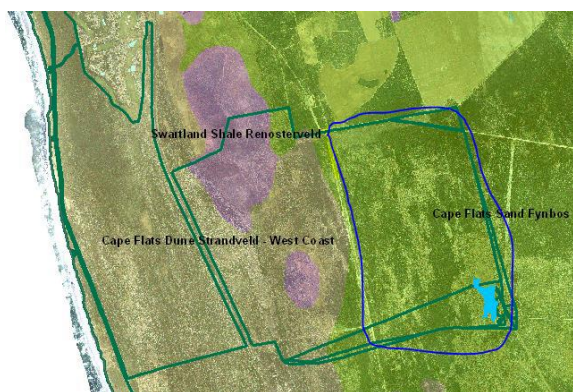


Figure 30: Location of Blaauwberg Restoration Research Project

Blaauwberg Restoration Research Project

The Biodiversity Management Branch has initiated a large-scale ecological restoration project east of Blaauwberg Hill in the Blaauwberg Nature Reserve (1 500 ha). Over 400 ha of dense invasive alien vegetation (mainly the Australian Wattle species *Acacia saligna* – known as Port Jackson Willow) will be cleared and restored to Critically Endangered Cape Flats Sand Fynbos over a period of several years (Figure 30).

This project includes an important research component that resulted from collaborations between the Millennium Seed Bank Project (MSB) of the Royal Botanic Gardens, Kew, Stellenbosch University and City of Cape Town, initiated at the Fynbos Forum. The MSB aims to store seeds for 25% of the world's flora and to also use this resource in ecosystem and species restoration projects. The MSB has provided bursaries and

running costs for two full-time post-graduate research students in return for some seed collections towards meeting their target. The Centre for Invasion Biology hosts the funding and co-supervises the post-graduate students and the MSB at Kirstenbosch assists with seed collection and storage. One of the funded studies will investigate optimal restoration treatments and test ecological theory relating to thresholds of degradation. The other project investigates the seed ecology of species that will be important to use in the active restoration component. The project has captured the imagination of researchers and additional studies have been done by Stellenbosch University on small mammal ecology, soil microbial ecology and invasive alien follow-up clearance methods in relation to the restoration. It is intended that results of the research will feed directly into management and, in this case, optimal restoration interventions.

This project would not be possible without the enthusiastic support of both the City Green Jobs Unit, who coordinates the invasive alien clearance teams (including the EPWP programme), and onsite management by Blaauwberg Nature Reserve staff under the guidance of Jacques Kuyler. Invasive alien clearance commenced in September 2012 and the experimental area of 76 ha was cleared by March 2013, in time to apply the ecological burning treatments. Four invasive alien clearance treatments are being trialled in 1 ha-sized plots: fell & burn in early autumn (with high and low fuel loads); fell & stack, burn stack in winter (with high and low fuel loads) – see experimental design map. The block burn was done on 4 April 2013. Post-fire regeneration of invasive aliens also necessitates intensive follow-up control and various treatments are being tested.

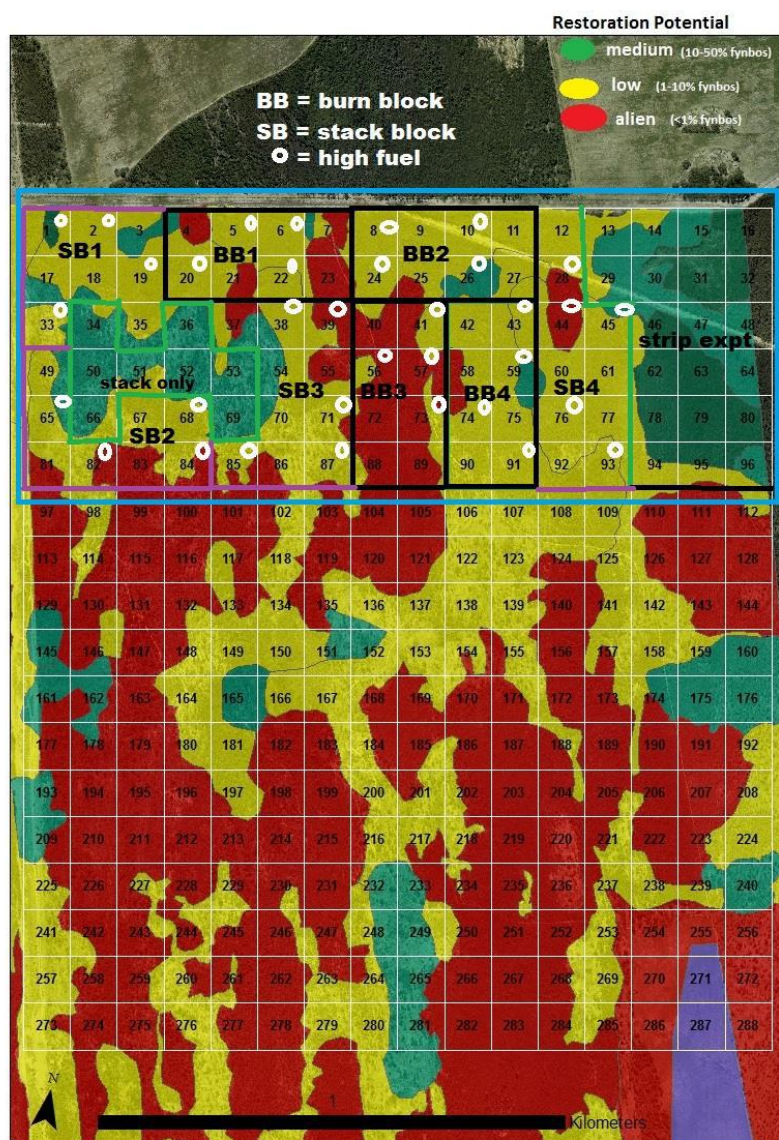


Figure 31: Project design

Site restoration potential was assessed by City staff who walked 13 transects through the study area in May 2012 to map aerial cover of fynbos vegetation remaining under the dense invasive aliens, as a surrogate for restoration potential. In addition, the GIS intern used historical imagery to map land cover classes that may influence restoration potential, including previously ploughed areas, duration of alien invasion and fires, to supplement the survey information. Many fynbos species have long-lived seed banks stored in the soil and it is intended to use this resource, in addition to sowing treatments, to restore the veld. However, restoration is a long-term process and several fire cycles may be required to restore plant and animal community composition to all areas. It will be very exciting to see how the veld responds to the restoration treatments and one day to enjoy the drive to Blaauwberg Hill without being hemmed in by Australian wattles on all sides! The City Restoration Nursery and Kirstenbosch Botanical Garden are assisting the recovery process by propagating some plants to establish at the restoration site.

Blaauwberg Restoration Project – large-scale experimental design 2012-13 (1 ha

plots) overlaid on restoration potential map showing burning blocks BB1-4 and stacking blocks SB1-4. Medium and high restoration potential areas are excluded from the experiment and will be carefully cleared without the initial use of fire to stimulate fynbos germination and allow existing vegetation to recover. Blaauwbergsvlei (site of the 1806 Battle of Blaauwberg) is indicated in purple (SE corner).

The following research papers have been produced as a result of this restoration project:

- Hall, Stuart. 2013-2016. Restoration potential of alien-invaded Lowland Fynbos.
- Krupek, A. 2014. Assessment of post-burn removal methods for *Acacia saligna* in Cape Flats Sand Fynbos, with consideration of indigenous plant recovery.
- Merrett, K. 2013. The impact fuel load has on fire severity and the *Acacia saligna* (Port Jackson) seed bank.
- Nombuso P. Ngubane. 2014. Management consequences of stack burning after invasive alien species control (*Acacia saligna*).
- Slabbert, D. 2014. Soil-seed bank dynamics of *A. saligna* (Port Jackson) in response to restoration interventions at Blaauwberg Nature Reserve.
- Steyn, V. 2014. Rodents and Restoration: A Comparison of Muridae Populations, between Natural and Invaded Fynbos.

THE IINGCUNGCU PROJECT: Restoring birds, building biodiversity leadership

lingcungcu is the isiXhosa name for sunbirds and sugarbirds (birds with long beaks). The lingcungcu Project, which focuses on these iconic birds, was inspired by two concerns: the growing evidence of a global decline in pollinators; and the need to nurture leadership for biodiversity conservation in our youth. The lingcungcu Project is based on a study of the interaction between nectar-feeding birds and bird-pollinated plants, and importantly, it involves the participation of school learners on the Cape Flats.

The project has since engaged 233 Grade 10 learners in the reporting period from four high schools in the Cape Flats, i.e. Muizenberg, Lavender Hill, Steenberg and Crestway. From the raw bird observation data collected between 2013 and 2015, it may be suggested that planting of nectar plant resources can introduce birds back into areas where they previously occurred, i.e. Rondevlei section of the False Bay Nature Reserve (Figure 31). The project is at its final stages and a thesis to be handed in by September 2016 is currently being finalised and the final and analysed data will only be available then.



Figure 32: Average and standard deviation of maximum abundance of cape White Eye and Southern Double Collared Sunbird at schools

ENVIRONMENTAL IMPACT ASSESSMENTS (EIA)

EIA commenting (74 reports and written comments during the year) took up a large amount of time with limited benefits for biodiversity conservation. As a result, a branch decision was made to cease commenting in the next financial year unless a development is proposed immediately adjacent to one of our nature reserves. BMB will, however, continue to be involved in spatial planning to ensure that biodiversity issues are accurately reflected in any revised spatial plans and zoning layers.

6. INVASIVE SPECIES

BIOCONTROL

Table 12: Biocontrol agents released in the last quarter

Date	Aquatic weed	Agent	Number released
April	Water hyacinth	<i>Megamelus scutellaris</i>	10 150
	Water hyacinth	<i>Eccritotarsus catarinensis</i>	4 000
	Water hyacinth	<i>Neochetina bruchii</i>	500
	Parrot's feather	<i>Lysathia sp</i>	3 400
May	Water hyacinth	<i>Megamelus scutellaris</i>	44 150
	Kariba weed	<i>Cyrtobagous salviniaea</i>	500
	Water lettuce	<i>Neohydronomous affinis</i>	435
	Parrot's feather	<i>Lysathia sp</i>	400
June	Parrot's feather	<i>Neohydronomous affinis</i>	200
	Parrot's feather	<i>Lysathia sp</i>	14 600
Total			16 635

Biological control is doing very well with Silverhurst pond clean and Nooitgedacht progress after releasing *Megamelus scutellaris* in both systems (Figure 33 and 34).



Figure 33: Nooitgedacht dam before biocontrol release



Figure 34: Nooitgedacht dam after biocontrol release

TERRESTRIAL INVASIVE PLANT MANAGEMENT

The City of Cape Town, in collaboration with the National Department of Environment (DEA) Biosecurity Compliance Department conducted NEMBA compliance inspections on 50 properties abutting Table Mountain National Park. The DEA issued 20 directives to non-complying landowners. The City of Cape Town is providing support and guidance to six landowners in terms of actions required to become NEMBA compliant, CPFFPA membership, and burn application. Four teams trained by the City are now working on private land.

The Green Jobs Unit facilitates control of invasive species across the city and collaborates with different line departments to clear woody and aquatic invasive plants. The table below shows the hectares cleared in initial and follow-up across the City in 2015/16.

Table 13: Invasive alien clearing undertaken in 2015/16.

Duration	Initial hectares cleared	Follow-up hectares cleared	Total
Jul - Sep 2015	1 009,16	2 225,27	3 234,43
Oct - Dec 2015	1 200,41	1 360,97	2 561,38
Jan - Mar 2016	464,8	2 927,64	3 392,44
Apr - Jun 2016	285,17	2 963,75	3 248,92
Total	2 959,54	9 477,63	12 437,17

Nature reserves – areas in maintenance: 1 653,33 ha

Blaauwberg Nature Reserve	571,64 ha
Helderberg Nature Reserve	267,53 ha
Wolfgat Nature Reserve	260,51 ha
False Bay Nature Reserve:	
Rondevlei Section	188,54 ha (terrestrial only)
Slangetjebos Section	105,53 ha
Zandwolf Section	42,21 ha
Pelican Park Section	105,67 ha
Bracken Nature Reserve	39,21 ha
Edith Stephens Nature Reserve	27,32 ha
Kenilworth Conservation Area	45,17 ha

The Friends of Blaauwberg Conservation Area hack team worked every Tuesday in the nature reserve to remove invasive alien vegetation. The Friends of Blaauwberg Conservation Area, Peninsula Orienteers Club (PenOc) and the Expanded Public Works Programme Working for the Coast worked in BCA03 doing follow-up clearing of *Acacia cyclops* after the wildfire in December 2015 south of Eerste Steen (Figure 35).



Figure 35: EPWP workers, volunteers and the FoBCA putting hands together to fight the scourge of invasive alien infestation

INVASIVE ANIMAL MANAGEMENT

The invasive animal programme focuses on house crows, mallard ducks, guttural toads and the invasive wasps. The current estimate of house crows is now at 180 and it will become harder and harder to eradicate the last individuals. A total of 3 624 guttural toads captured for the 2015/16 breeding season. A management plan was completed and implemented. Mallards are managed in protected areas and City-managed dams, except the biggest population – Marina da Gama. Thirty mallards were euthanised during 2015/16.

EARLY DETECTION AND RAID RESPONSE (EDRR)

Preventing the introduction of invasive species is the first line of defence; the second is the early detection and rapid response that targets species while populations are still localised, and can be contained and possibly eradicated. This programme can save costs by detecting invasive species before they become established and require widespread control measures. The Early Detection and Rapid Response Programme (EDRR) targets 22 listed invader species for control and works with various landowners across the city to detect identify and control these target species from expanding and invading large areas. Management plans have been completed for all these target species. More information can be found on the website: <http://www.capetowninvasives.org.za/edrr>

7. FIRE

WILDFIRE

On the City's nature reserves there were numerous small, uncontrolled (wild) fires (81 ha) and three large fires at Blaauwberg, Witzands Aquifer and Klein Dassenberg which totalled 933 ha (Figure 36 and 37). This has serious implications for veld management, because if invasive species management, i.e. post-fire clearing does not occur, areas which were previously under control/maintenance may become infested, leading to higher budget needs in the future. Both fires were mapped using a drone organised and managed by Roy Fuller-Gee (FoBCA) and Arnold Behrman. Koeberg Nature Reserve was affected by the same fire (Figure 37).



Figure 36: DCCP wildfires, with over 814 ha of natural veld destroyed



Figure 37: Post-fire mapping using a drone at DCCP



Figure 38: DCCP wildfires, which saw over 814 hectares of natural veld destroyed in January and February 2016

Several smaller wildfires plagued the South's nature reserves, but most of these were small and located immediately along the reserves' boundaries. The only fire of significance this year was an arson incident on the 4 June when a fire at Rondevlei (False Bay Nature Reserve) threatened the staff residence and the neighbouring CAFDA buildings on the western side of the reserve. After several hours the fire was brought under control by the efforts of staff and City Fire services.

ECOLOGICAL BURNS

55 ha of prescribed ecological burns, including Tygerberg Nature Reserve's 28 ha of 60-year-old ploughed fields were undertaken (Figure 39).



Figure 39: 28 ha of 60-year-old ploughed fields successfully burnt at Tygerberg NR

A successful ecological burn of block 2 of Durbanville Nature Reserve took place on 12 April 2016 (Figure 40).

Two prescribed ecological burns were undertaken in the South Region at Strandfontein and Rondevlei, both part of the larger False Bay Nature Reserve. The former was a small three-hectare reed bed that was burnt as part of a strategy to control invasive Morning Glory plants (*Ipomea* sp.). The second was along the eastern shores of Rondevlei, an area that has not burnt in over 40 years. Both fires were successfully conducted by reserve staff who were assisted by City Fire Services.



Figure 40: Ecological burn at Durbanville Nature Reserve

BRUSH PILE BURNING

A total of 2 278 brush piles were burnt on the nature reserves last year. Numerous staff from BMB assisted with brush pile burning operations at the Klein Dassenberg section (Figure 41) and managed to burn a total of 530 piles in May alone. The operation was a great success, even though staff had to navigate through difficult terrain and harsh weather conditions with wind speeds peaking at 21 km/h on one specific day. BBNR assisted Robben Island management to apply for a burning permit for fuel load reduction. Once approved, the City sent through a contingent of staff from the Fire and Rescue, Environmental Resource Management and fire seasonal teams.



Figure 41: Brush pile burning at Klein Dassenberg

8. NATURE CONSERVATION

OVERALL RESERVE MANAGEMENT

The reserves below were recognised at the Branch Performance Recognition and Teambuilding Day in November 2015:

Reserve of the year

Tygerberg Nature Reserve

Significant improvement in overall management (high scores in PA Review but most importantly addressed issues); biodiversity management and monitoring; invasive clearing; ecological burn; biodiversity database – species records; infrastructure (new gatehouse; enviro-loos; entrance and garden near centre).

Runner-up

Blaauwberg Nature Reserve

Significant improvement in overall management (high scores in PA Review but most importantly addressed issues); biodiversity management; invasive clearing; ecological burn; biodiversity database – species records; infrastructure (fencing project).

Highly recommended reserves/teams

Witzands Aquifer Nature Reserve

Removal of dumped material; invasive alien clearing; fencing and gates; brush pile burning; biodiversity database – species records.

Helderberg Nature Reserve

Road and gateway project; pine removal, ecological burn and restoration; infrastructure rationalisation.

Most improved reserve

Edith Stephens Nature Reserve

Infrastructure rationalisation; look and feel.

Durbanville Nature Reserve

Infrastructure rationalisation; look and feel.

MANAGEMENT EFFECTIVENESS OF THE NATURE RESERVES

Protected Area Review 2015 – 2016 Report

Protected area reviews were conducted in July and August 2015. See the table below for total score achieved.

Key aspects of protected area management assessed as part of this protected area review process are planning, baseline (assessing the collection and management of data needed to inform management decisions), operations, management, and outputs (include assessing the importance of the reserve for tourists, visitors and other users).

Overall, the planning scores remain static at 75% overall until reserves are proclaimed as Special Nature Reserves under the NEM: Protected Areas Act. At the time of compilation of this report, proclamation of 14 of the 16 reserves had been confirmed. The relevant score increase will be reflected in the 2016 protected area reviews.

There was some improvement in baseline scores (survey and monitoring actions), and some operations and management actions at various sites resulted in a slight improvement in the average branch score to 71%, above the score of 66% that indicates adequate management of protected areas according to literature and international standards. Lists of actions required to improve the management of protected areas, particularly those not yet achieving a score above 66%, are compiled and discussed with the relevant protected area managers as part of the protected area review process.

Table 14: Protected area review scores

Protected Area Review Scores for 2015 – 2016			
Nature reserve	Score 2014	Score 2015	Main areas of improvement or change
Central region			
Bracken	78%	78%	Many issues and actions listed from last year do not have movement, but gains maintained
Durbanville	60%	60%	Improved on operations management issues. Still need movement on baseline data collection: Some ground work is done, can improve scores if support paperwork done/ available
Uitkamp	58%	56%	As for Durbanville: baseline data and associated paperwork issues need attention
Tygerberg	75%	77%	Some advancement on baseline data issues, but some infrastructure maintenance concerns
North			
Witzands	66%	69%	Some baseline and operations issues attended to. Some issues can be resolved with office infrastructure upgrade
Blaauwberg	74%	77%	Improvement in operations issues, correction of baseline scoring
Table Bay	77%	79%	Improvement in documentation and mapping work allowed increase in scores for operations and management
East			
Helderberg	83%	85%	At an advanced stage in terms of baseline actions and procedures, improvements in resource management
Steenbras	69%	72%	Some operational improvements and scoring adjustments
Harmony Flats	68%	70%	A few improvements on some baseline and operational issues
Wolfgat	73%	73%	Held the score while bringing the EE Centre on-line
South			
Zandvlei	75%	78%	Improvements in planning and procedures as well as documentation in place
False Bay	64%	69%	Significant improvement in management aspects, some also in baseline issues
Edith Stephens	60%	59%	Documents and information
Kenilworth	62%	70%	Work has been done on planning and baseline documentation, some improvements on operational issues
AVERAGE:	69%	71%	Slight improvement overall

9. PEOPLE AND CONSERVATION

ENVIRONMENTAL EDUCATION

Formal environmental education

A total of 34 965 learners from 461 schools (with 18 001 adults) resulted in 52 026 person days of education. Figures were slightly less than the previous year but still within predicted targets. The past financial year saw the Environmental Calendar Days celebrated, including Climate Change Month, Arbour Day, Heritage/Tourism Month, Coastal Clean-Up Week, Western Leopard Toad Month, Biodiversity Month, Wetlands Month, Water Week, Invasive Species Week, Disabled Day/Aids Day and Marine Month.



Figure 42: Environmental education at BBNR



Figure 43: Exhibition at Mamre Library



Figure 44: Phumlani Educare navigating the boardwalk at the Rondevlei section of the False Bay Nature Reserve during an Environmental Education Programme



Figure 45: Learning about indigenous vegetation on the dune walk



Figure 46: Taking part in team-building activity



Figure 47: Team-building sand star competition

Eco centres

Eco centre assessments for 2015/16 were completed. Due to changes in staff at The Wildlife and Environment Society of South Africa, the outcome has not yet been received. It has been recommended that the nature reserves therefore remain on the same level as the previous year: Blaauwberg, Table Bay, Bracken and Durbanville Nature Reserve – Bronze Certificate
Helderberg Nature Reserve – Double Bronze Certificate
False Bay, Tygerberg and Zandvlei Nature Reserve – Green Flag

The sites registered on the WESSA Eco Centres programme for 2016 are as follows:

Blaauwberg, Table Bay Nature Reserve – Silver Certificate

Helderberg Nature Reserve – Double Silver Certificate

False Bay, Tygerberg, Edith Stephens and Zandvlei Nature Reserve – Gold Certificate

Durbanville and Bracken – not registered (difficult to manage the programme without permanent staff)

Events, holiday programmes, exhibitions and other

Various events were held at the nature reserves during this period. In total 30 events were held by nature reserves with approximately 6800 people attending (over 50% increase from last year). Events ranged from annual events such as the False Bay Birdathon to monthly events such as the Tygerberg Full Moon runs.

Various holiday programmes were held at the nature reserves throughout the year. An increase was seen in the number of holiday programmes hosted as well as the number of children attending.

The BMB had at least 25 exhibitions this year with an estimated 9000 people attending. (Numbers were similar to last year). Exhibition themes varied, but the most prominent three included careers, marketing and educational exhibitions.

Awareness events/pamphlet hand-outs – at least 12 awareness events were held. Event topics included fire awareness, baboon awareness, snake awareness and beach safety.

Forty six community conservation training sessions were held this year with approximately 2200 community members being trained. Numbers increased dramatically from only 360 persons last year.

Approximately 1700 people participated in activity based learning efforts such as beach clean-ups and hacks. This number increased fourfold.

Education support was provided by People and Conservation Officers to students, teachers and volunteers (1400 people, a remarkable increase).

COMMUNICATION

Notable planned/strategic resources included all the reserve A5 information pamphlet rebranding, Protected Area Advisory Committee booklets, various spring event posters and the hiking trail booklet (for all nature reserves); signage was completed for Wolfgat Nature Reserve, False Bay Nature Reserve: Eastern Shore, Gantouw Project, Steenbras Nature Reserve and Bracken Nature Reserve (replacement signs). Various other departments were given advice on outdoor signage; some included Die Oog and Solid Waste.

Other unplanned resources were developed throughout the year ranging from simple fire notices to complex invitations. Notable resources include: various volunteer advertisement posters, new identity cards for staff, vehicle decals and various forms and templates necessary for the administration of the PAAC's. Website content for general biodiversity (e.g. forests, water and baboons), environmental education, nature reserves and specialist areas related to biodiversity was written by external writers and checked by staff. This will be part of the new City website revamp.

On 8 December 2015 the Two Oceans Aquarium, in partnership with the City of Cape Town, opened the Smart Living Challenge Zone. The Challenge Zone comprises four digital interactive installations that address the themes of energy, water, waste and biodiversity. The biodiversity exhibit shows visitors how their actions, both positive and negative, impact on an ecosystem. Together with this, Smart Living education programmes will complement the exhibition in the form of a puppet show at the Aquarium and an outreach travelling exhibit. Annually more than 450 000 people visit the Aquarium, about 60 000 learners visit and participate in education programmes at the Aquarium and more than 15 000 learners from over 130 schools are reached with the schools outreach programme. These are massive numbers in terms of the biodiversity message being spread throughout the City.

Around 70 various media matters were dealt with (including writing media releases, radio and television interviews). This also includes various articles for CONTACT and Green Piece and other sources, releases were issued and 99% of the issued media releases were published. Most were published in local papers. Notable media releases that received much attention this year include: Gantouw project, invasive wasps, Battle of Blaauwberg Anniversary, hunting dogs and tree of heaven. Various joint media releases (together with all reserves and other departments) were also done this year – examples include the winter activity and holiday programme media releases.

Part of the internal media included a biodiversity message being displayed on all City staff computers during the month of May.

PROTECTED AREAS ADVISORY COMMITTEES

Ten Protected Area Advisory Committee (PAAC) meetings were held this year and chairpersons from community groups were elected:

- Blaauwberg Nature Reserve – Roy Fuller-Gee
- Bracken Nature Reserve – Dr Sjirk Geerts
- False Bay Nature Reserve – Richard Cammell
- Helderberg Nature Reserve – Peter Blaine
- Lourens River Protected Area – Gerald Wright
- Table Bay Nature Reserve – Gordon Laing
- Tygerberg Nature Reserve (including Bothasig) – Dr Pippin Anderson
- Witzands Aquifer Nature Reserve – Derek Bredenkamp
- Wolfgat Nature Reserve – Riccardo Norton
- Zandvlei Estuary Nature Reserve – Damian Gibbs

Successful quarterly meetings were held for the PAACs and a Chairperson/Manager workshop is planned for the next financial year.

PAACs for Steenbras (including Harmony Flats), Edith Stephens, and Durbanville (including Botterblom and Uitkamp) remained dormant as recruitment will first be necessary.

EESP AND SUB-COUNCIL PRESENTATIONS:

Two report-back presentations were well received at EESP. The 2014/15 annual report was tabled at all Sub-councils in September 2014. Presentations were given to 23 Sub-councils in 2015. Sub-councils were invited to visit the nature reserves and two visits took place.

CUSTOMER SERVICE

A first draft of the BMB staff induction training was completed. This includes customer service training.

TOURISM

In the last financial year, 416 189 visitors visited the nature reserves via the manned access points and key events (this is a significant increase from last year's figure of 347 740). Income was up from last year from R1,55 m to R1,7 m and the income was 181% more than planned. The increase in visitor numbers was a result of increased visitors across all reserves and especially as a result of the completion of the braai areas on the eastern shore of Zeekoevlei.

BMB continues to market its nature reserves wherever possible. This mostly includes media releases, exhibitions, and internal media (CONTACT and Green Piece) pamphlet hand outs, e-mailing all contacts, using the EE Friends, and showcasing the reserves at events.

The 2017 Cape Town Visitors Guide (by Cape Town Tourism) was updated with all the relevant nature reserve information and additional biodiversity information added.

Cape Town Tourism staff visited the Central nature reserves during their winter educational tour.

VOLUNTEERS, FRIENDS GROUPS AND SPONSORED PROGRAMMES

Sponsored programmes, mainly the CTEET, resulted in 1 071 individuals and 56 754 person days of work in the BMB (approximate value is R3,7 m). The volunteers (mainly friends groups) resulted in 662 individuals and 18 933 person days on the reserves (approximate value is R500 000). This is a large amount in relation to BMB's own staff which resulted in approximately 44 000 person days in the 2015/16 financial year.

In the past year the Cape Town Environmental Education Trust (CTEET) continued to be the City of Cape Town Nature Conservation's largest partner in terms of programmes being offered and on-the-ground management input. Education programmes again continued at False Bay and the Helderberg area as well as across the City, with some 20 320 days of education being offered. The value of education being provided for is some R2 250 000 and is largely concentrated at schools abutting the False Bay Nature Reserve on the Cape Flats.

On the conservation education side the Nature Care Fund in CTEET conducted nine conservation projects in the City, totalling some R3,7 m of conservation funding. Some 40 staff members were employed in the conservation projects at the sites listed below:

- Green Jobs Unit – 20 staff members
- Gantouw Project – 4 staff members
- Kenilworth – 2 staff members
- Muizenberg East – 3 staff members
- Strandfontein – 1 staff member
- Burgher's Walk Project – 4 staff members
- Milnerton Racecourse – 1 staff member
- Atlantic Beach – 3 staff members
- Haasendal – 1 staff member

Nature conservation learnerships continued to play a large part of the CTEET skills development programme, with 21 learners completing the NQF 2 qualification. A further 12 learners qualified with a NQF 5 in Resource Guardianship. In June 2016 a further 12 learners were placed on City nature reserves and

embarked on a NQF 4 learnership. A number of the successful learners have subsequently found permanent employment.

The volunteer action plan continued to be implemented.

SKILLS DEVELOPMENT

The BMB was involved in various skills development programmes including the City's intern programme, the Groen Sebenza pioneers, WESSA YES interns, WIL students, and the CTEET skills development programmes. CTEET successfully wrapped up its 2014 NQF 2 skills development programme, with 12 learners across the City's reserves completing their qualification. One of these learners was permanently employed with the City and the remaining members are presently engaged in the NQF 5 programme. A new NQF 2 programme was initiated in 2015 with 23 learners placed at six City nature reserves. The BMB also provided in-house training in CV writing and interview skills training at special request to CTEET learnership staff.

The Cape Town Environmental Education Trust (CTEET) successfully wrapped up its 2015/16 NQF 2 skills development programme, with 23 learners from six City nature reserves completing their qualification. Several of these learners had obtained permanent work by the end of the year.

The Tsebo-Bohlale Internship programme is continuing in certain areas of the BMB, while other posts were redeployed to other departments to further expose the interns to the specific areas of their qualifications.

The nature conservation student (WIL students) experiential year programme continues to be of a very high quality. Last year's results of the Cape Peninsula University of Technology (CPUT) nature conservation students (work integrated learning (WIL) students) were exceptional, with one of the City students being awarded the best overall student from CPUT. In seven out of the last 11 years, a City student has been the best overall CPUT student.

Finally, the EPWP workers were also exposed to various training opportunities (see Green Jobs section of this report).

10. SECURITY AND LAW ENFORCEMENT

Safety of staff, visitors and infrastructure continues to be a concern (Figure 48 and 49). Safety of the green jobs contractors is also becoming an increasing concern and certain teams were removed from various sites due to safety concerns. The biggest challenge is the increase in the security costs, which at this stage are running over budget. Several illegal structures and displaced individuals were removed from TNR, BBNR and TBNR in this reporting period. While only 121 permits were checked, the team recorded over 310 routine visits to various hotspots, which include parking areas, beaches and other Council properties in the north where crimes of all kinds are most likely to occur if visible patrols did not take place.

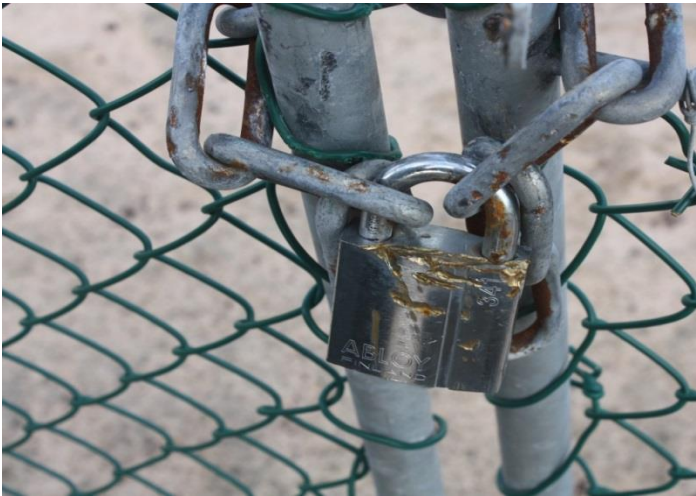


Figure 48: Evidence of vandalised padlock, BBNR



Figure 49: Illegal structures removed at BBNR's Kleinberg

Four suspects were apprehended while extracting various plants and plant parts from the Blaauwberg Nature Reserve's Coastal Section, by the Table Bay Nature Reserve's Area Manager (Koos Retief) and Assistant Conservation Officer (Clinton Roux) on 12 May 2016 (Figure 50). The staff conducted a patrol at the time when unknown people were observed digging in the nature reserve. Four suspects were arrested and six bags of various sizes containing plant materials were seized (Figure 51). CapeNature officials assisted to formulate charges. The case is due to appear in court soon.



Figure 50: Four suspects found extracting various plants and plant parts from the BBNR's Coastal Section were apprehended



Figure 51: Counting the plant parts at the Table View SAPS

An illegal structure was discovered in the dam camp Tygerberg NR and demolished and removed by the staff (Figure 52).

On Tuesday 24 May 2016 at approximately 13:11 staff of the Blaauwberg Nature Reserve observed a Huey Helicopter flying at a very low altitude over the Blaauwberg Nature Reserve. This contravenes the Cautionary Notice regarding Minimum Heights and in particular, Flying Altitudes over Nature Reserves or Heritage Sites. The incident was reported to the South African Civil Aviation Authority (Figure 53).



Figure 52: Illegal structure removed from TGB9



Figure 53: Helicopter over Blaauwberg Nature Reserve.

In order to alleviate the security and safety issues, Quemic Africa deployed rangers for the provision of visitor and staff safety management in the nature reserves and open spaces in the operational area of the City of Cape Town. Quemic Africa deployed a regional integrity team in area south where Rangers were deployed on a 24/7 basis, consisting of two rangers and a 4 x 4 vehicle. They are the first line medical and emergency fire response and also respond to water emergencies, water rescues, crime and related offences, anti-poaching and environmental emergencies. They are responsible for escorting / guiding services to contractors, reptile handling and removal, after-hour gate or building closing and opening, as well as regular safety and security visits, mobile data collection and reporting and assistance during the execution of special law enforcement operations with SAPS, Metro Police and Law Enforcement Units.

Quemic Africa has a control room, manned on a 24/7 basis. This is the heart of the Quemic operation and also serves as the emergency contact centre to members of the public. Operations and emergency call-outs for the applicable City of Cape Town nature reserves are planned and executed from the control room.

Quemic Africa currently renders a service to the following City of Cape Town nature reserves and offices:

- False Bay Nature Reserve
- Zandvlei Estuary Nature Reserve
- Wolfgat Nature Reserve
- Westlake Conservation Offices
- Edith Stephens Nature Reserve
- Tygerberg Nature Reserve
- Durbanville Nature Reserve

11. STAFF MATTERS

REALIGNMENT

The BMB was formed in September 2005 and initially only focused on the City's nature reserves and limited biodiversity planning. However, over the intervening years, the responsibilities have grown substantially as a result of service delivery necessities and alignment to both City and national priorities. Examples of this, amongst others, include the skills development and job creation (Green Jobs Unit), invasive species programme, people and conservation programmes, the nature reserve being proclaimed protected areas under the New Protected Areas Act, wildlife conflict programmes, biodiversity planning, and conservation services. As a result of this, a business improvement process, coordinated by the Business Improvement Unit, was initiated in February 2012. During the business improvement process, re-alignment (restructuring) was discussed by both management and staff at various workshops and meetings. Optimising existing capacity by functionally realigning was seen as an important way forward to address the issues emerging from the business improvement process. It is envisaged that the realignment process will significantly assist the BMB in its service delivery. The above process was at a final stage, but was stopped as a result of the pending ODTP process. The realignment work undertaken and the rewritten JDs will not be lost but will be re-started once the ODTP has been finalised.

STAFF TRAINING

Table 15: Staff training stats: July 2015 to June 2016

Date	Course	No. of staff	Person days
Aug	Basic Firefighting	50	10
Aug	Fire Boss	8	24
Aug	Anti-Hijack	44	44
Aug	Growing Together	20	60
Sep	Truck Crane Operator	2	6
Sept – Nov	First Aid	32	64
Oct	Millennium Seed Bank	10	20
Oct	EMI	13	130
Nov	Field Ranger	18	90
Nov- Dec	Events Safety	4	16
Nov	Crew Leader	30	60
Jan	Student Induction	18	90
Feb	Snake Handling	35	35
Feb	SAP Training	84	4

Feb	HIRA Training	2	1
Feb	Asset Verification Training	9	1
Jan – March	Learnership	6	Ongoing
April to June	First Aid	Booked via LSO	Unknown
May	Events Safety	8	16
April to June	Field Ranger Learnership	12	182
June	Basic Business English	20	40

Table 16: Courses; numbers and person days for permanent staff

	2014 - 2015	2015 - 2016
No of courses	72	82
No of staff that attended	126	143
No of person days	1760	1 188

Bongani Mnisi attended a Coaching Management Committee meeting as well as participated in the Coaching Supervision project where City coaches got involved in giving feedback to various City staff enrolled in the supervision training. The interventions took place at Bytes People Solutions in town and Bongani Mnisi was assigned to attend three of these, i.e. 25 May and 10 and 28 June 2016. Bongani Mnisi is personally still coaching a senior staff member from the Transport for Cape Town Department.

STAFF INDUSTRIAL RELATIONS (IR)

A field ranger, G Hartnick, slipped and fell whilst patrolling the virtual fence. The Steenbras Nature Reserve team had been following the standard operating procedure for patrols and his partner was able to apply first aid and summon help. Mr Hartnick had to be airlifted from the site and transported to hospital. He is recovering well. There has been a decrease from 17 to 14 reported IOD cases over the period under review. This indicates that teams are taking the necessary precautions when performing their respective duties.

Line managers are taking a more active role in applying the disciplinary code but need to be more consistent. They also need to monitor team members who have been through the disciplinary process to ensure that the desired outcome has been achieved (Table 17).

Table 17: IR Statistics

Disciplinary		
	2014/2015	2015/2016
Non-Financial	7	7
Informal hearing	0	2
Counselling	0	5
Appeals	0	1
Grievance	2	3
Total	9	20
Incapacity	6	7
IOD	17	13

There has been an increase in the amount of disciplinary measures applied during the period under review. It indicates that managers are taking charge of their areas. This helps to boost team morale as team members become aware that their line manager is addressing their errant colleagues. It also serves to remind and reiterate to all team members the importance of following the procedures and policies of the City. There has been a slight increase in the number of incapacity hearings. This indicates that line managers are monitoring their team attendance more closely.

BMB PERFORMANCE RECOGNITION AND TEAM-BUILDING DAY

The Biodiversity Management Branch has over 175 permanent staff members in 17 offices over the City. Many of these offices have little communication as telephone lines are often down and e-mails can be intermittent. Communication is a challenge and staff, especially field staff, hardly ever get to interact with fellow colleagues. In order to facilitate interaction, the Biodiversity Management Branch has, since 2007, arranged a staff performance recognition and team-building day every year in November. This has been very successful and bolstered staff morale. The friendly competition between reserves also improves productivity. Each year various awards are handed out and this has become a motivator for staff through the year and a highlight of the day.

Last year's event was held on 6 November 2015 at the SAPS Recreational Club, Pinelands. The event was attended by Mr Osman Asmal. Councillor Van der Merwe and Mr Japie Hugo were unfortunately unable to attend. The recipients of the awards are chosen by the branch manager in consultation with the senior managers and awards are made on the basis of outstanding annual performance; the annual reserve visits and a nomination process open to all branch staff.

Outstanding staff members branch-wide:

Chandre Rhode

Chandre is responsible for managing the bulk of the Kader Asmal local labour. She is also responsible for liaising with the EPWP team and making sure the Kader Asmal team complies and that reports are submitted on time. She coordinates the preparation for various audits, amongst others the Auditor-General. She is the go-to person for the GJU staff and always makes time to assist and support her colleagues. She is always willing to take on additional work without ever complaining. Her heart is in the right place and she backs it up with commitment and passion.

Sandiso Kraai

Sandiso is a senior field ranger at Durbanville (Botterblom and Uitkamp). He has changed the team dynamics, encouraged them to learn, and has established a good working relationship amongst the staff. He has also delivered on various projects (works yard and old nursery at Durbanville as well as fencing at Uitkamp) and is also always willing to help out.

Joshua Gericke

Joshua is a reserve supervisor at Zandvlei Estuary Nature Reserve. He has assisted in improving management of Zandvlei Estuary, liaison with the community and resolving user issues. He has also done much of the ground work on Slangetjebos issues involving illegal squatters, dumping and general crime.

Baasie Smit

Baasie has been working at Helderberg Nature reserve for 19 years. Baasie started his AET classes in 2014 and has been dedicated to the class attendance and improvement of his personal educational advancement ever since. Whenever there is work to be done, Baasie is always the first to start working and

will work until someone eventually tells him...“it's time to stop working”. This continuous dedication to the Biodiversity Management Branch vision has not faded over the years, but only strengthens with every year.

Bongani Mnisi

Bongani is the regional manager in the North. Bongani was nominated by his staff for his support, guidance, mentorship and coaching in leading the North Region to achieve all the successes it had over the last year. Added to this is his willingness and dedication to the branch to help out and also do the jobs that no-one else wants to do (process for PAAC and a host of HR issues including assisting with IPMs for all staff.) His support on the ground for the DCCP project is critical as he has had to take on management responsibility for acquired property.

Clinton Roux

Clinton is a visitor controller at Table Bay Nature Reserve. However, he assists with reserve operations and anything else that is required. He will always go out of his way to assist people, and is prepared to walk the extra mile to get a job done.

EESP AWARDS

An Energy, Environment and Spatial Planning Award for Sectorial Leadership and Service Excellence was awarded to the Biodiversity Coordinator, Cliff Dorse, on 2 June 2016 (Figure 54).

BMB received a directorate award for the dedication of staff that was above and beyond the call of duty during the March 2014 fires. The BMB contributed over 300 person days during the week. In addition to these staff, the branch was assisted by the CTEET staff. Two other staff members from ERMD, Suretha Dorse and Arne Purves, each worked one shift (Figure 55).



Figure 54: Cliff Dorse receives his award from Cheryl Walters



Figure 55: Staff who received the award on behalf of the branch. These staff were on the fire-line the most. From left: David Morris, Sandiso Kraai, Cheryl Walters, Dalton Gibbs, Andre Rossouw, Willem Appollis and Leighan Mossop

12. ADMINISTRATION

BUDGET

Operational budgets were spent timeously and there was increased financial control. Controllable budget 98.8% spent; R&M 99.8% spent and ward projects 99.3% spent. R12 000 000 was allocated initially to the Kader Asmal EPWP Project. Another R9 500 000 was allocated in the January 2016 Adjustment Budget and another R6 000 000 was allocated by the EPWP office, resulting in a total budget of R27 500 000. A total of 99.7% of the budget was spent on priority projects. In relation to capital, 98.6% spent (only R238 881,81 not spent; no roll-overs). An additional R5 725 515 capital budget was obtained. There was also some re-phasing on the Witzands. Multipurpose Centre budget: Construction to start in 2016/17.

As noted previously in Section 9, revenue also increased by 181% of the planned revenue raised.

FLEET AND ASSETS

We took delivery of the following vehicles during this financial year:

Table 18: Recently acquired vehicles

Registration no.	Vehicle	User
CCT 32539	Isuzu 10-ton Tipper Crane truck	Zandvlei Estuary
CCT 32605	Isuzu KB250 4x4	Helderberg
CCT 32549	Chev Utility	Head Office
CCT 32525	Isuzu KB2504x2	IAS
CCT 30388	Isuzu 5-ton Tipper Crane truck	IAS

BMB received the replacement vehicles shown in Table 20.

Table 20: Replacement vehicles acquired in 2015/16

Registration no.	Vehicle	User	Replacement vehicle
CCT 32536	Isuzu KB250 4x4	False Bay: Zeekoevlei	CA 788-901
CCT 32537	Isuzu KB250 4x4	IAS	CCT 30155

The acquisition of the 5-ton tipper crane truck at the IAS Unit has contributed to their ability to remove rubble from various sites, thereby reducing the number of public complaints. For example, we received a complaint about rubble along the Raapenberg bridge. As soon as we received our truck from repairs, the rubble was cleared within a half hour from arriving on site. This would ordinarily have taken us a few days with our half-ton pick-up vehicles (Figure 56).



Figure 56: Cleaning rubble at Raapenberg bridge with new grab truck

The increase in the BMB fleet has enabled us to have more teams in the field, thereby reducing the number of public complaints and allowing us to respond more quickly to any customer complaints. It has also allowed us to cover a bigger area in less time. We are still experiencing delays when sending in our vehicles for scheduled services. This matter has been raised with Fleet by a number of other line departments as well. We anticipate an improvement as they (Fleet) have been filling their vacant posts.

BMB achieved 98.56% during the asset verification. Although this is not 100%, it is a vast improvement on last year's 92.49%.

INFRASTRUCTURE

The infrastructure priorities in the branch remain the same as last year (Figure 57).

The Witzands Aquifer Nature Reserve Multipurpose Centre Project is continuing and the development plans have been approved by Council. The tender for the construction phase will be advertised in August 2016 due to various challenges relating to the verification of BBBEE clauses by Supply Chain Management, as required by Council policies. A Bid Specifications meeting was held on 31 May 2016.

The Wolfgat Environmental Education Centre Phase 1 has been completed and BMB is waiting for confirmation from Urban Renewal to see if funds are available for Phase 2.

Sadly, the building at Harmony Flats, a National Department of Tourism (NDT) project, remains uncompleted despite various attempts to contact NDT and motivate for the completion of the building.

Helderberg Environmental Education Centre is at the design stage and consultants for detailed design and drawing up of the construction tender will in all likelihood be appointed in 2017/18.

Upgrading work to the offices, works yard, storage and other facilities at Westlake continue.

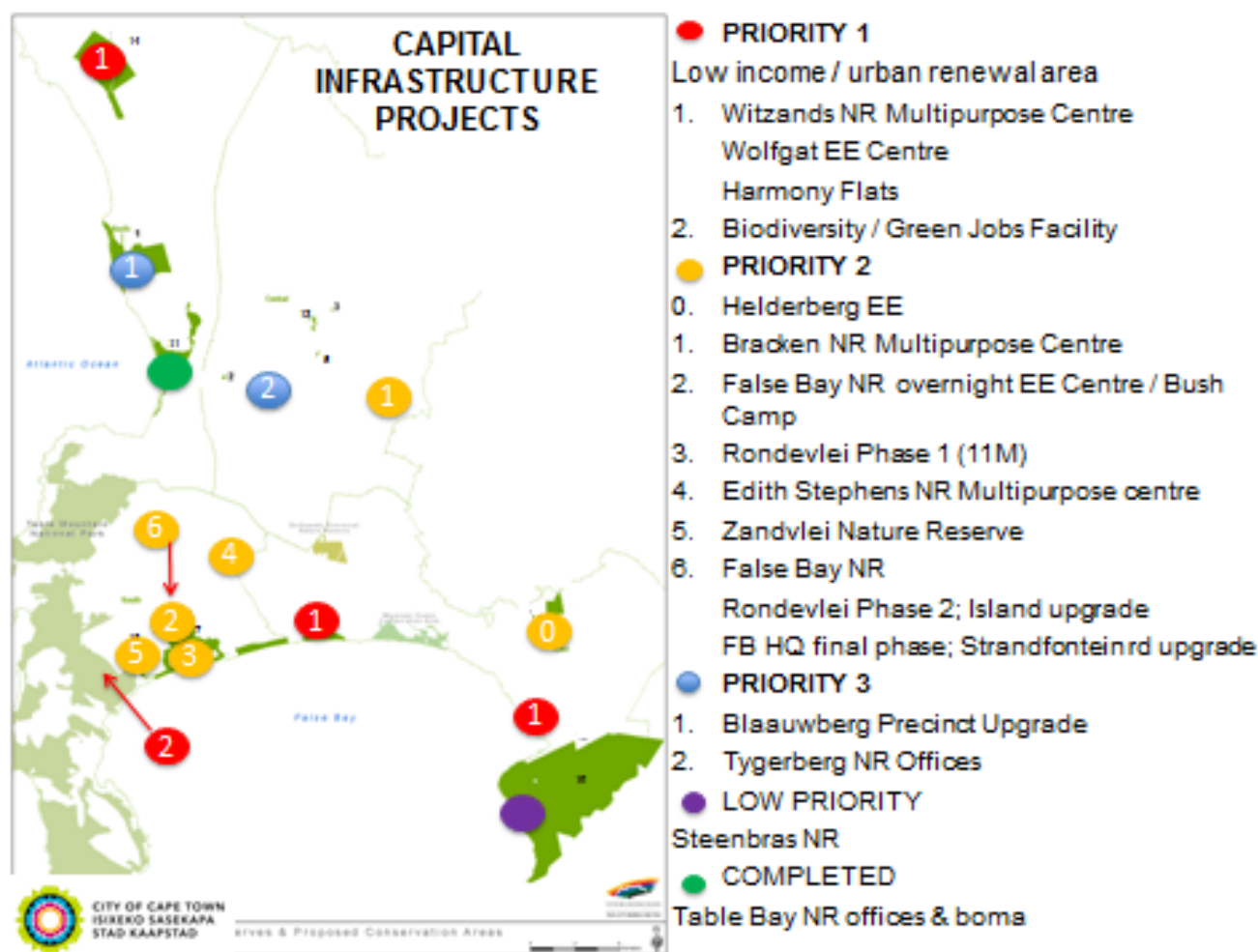


Figure 57: Priority capital projects in BMB

CONTRACT MANAGEMENT

All uniforms ordered for the current financial year have been delivered and a new Bid Initiation Form to kick-start the next three-year tender was signed by the Director, Environmental Resource Management Department (ERMD). Following consultation with the Biodiversity Management Branch (BMB) staff on the new uniform specifications and needs, the uniform team will finalise everything in August 2016 and continue with the tender process.

Other tenders some of them already mentioned such as the Geohydrology and Hydrology tender; Visitor and Safety Management tender; Baboon Management tender; Invasive Plant Species tender, are all on track.