



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD



Biodiversity Management Progress Report

July 2016 – June 2017



Helderberg Nature Reserve



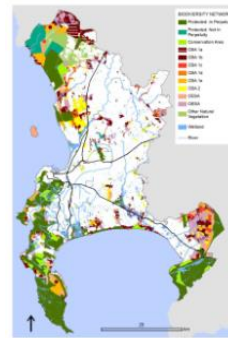
Hippo, False Bay Nature Reserve



Birdathon, False Bay Nature Reserve



CTEET learners



BioNet

TRANSPORT AND URBAN DEVELOPMENT AUTHORITY
ENVIRONMENTAL MANAGEMENT DEPARTMENT
BIODIVERSITY MANAGEMENT BRANCH

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Making progress possible. Together.

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1. Executive Summary

Conserving biodiversity: our natural capital

The City's **Integrated Development Plan (IDP)** and draft **Municipal Spatial Development Framework (MSDF)** recognises Cape Town's critical environmental assets, its globally important biodiversity, and the significance of its 308 km coastline. The IDP also focuses on sustainable development and creating a resilient City, as envisaged in Goal 11 of the Sustainable Development Goals (SDGs). The City's **Environmental Strategy** recognises and commits the City to conserving Cape Town's unique and globally important biodiversity (including freshwater systems) for both present and future generations.

The Environmental Management Department's (EMD'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 2016/17, the BMB continued to implement its objectives aligned with the IDP, and specifically the Strategic Focal Area (SFA) 1 – Opportunity City:

Text from IDP 2017 to 2022 in italics

"1.3.b.3 EPWP Localised Project

The City will continue to localise community works and Expanded Public Works Programmes (EPWP) in order to ensure that sub-councils are involved in the drafting of labour-intensive community programmes benefiting local residents during implementation. A focus will be on the continued improvement of the Jobseeker Database system to address weaknesses in the current system and to operate optimally."

From 1 July 2016 to 30 June 2017; over **135 000 person days of temporary employment** (587 FTEs - Full time equivalents) and **3 256 job opportunities** were created on the reserves and **Biodiversity Network (BioNet)**. The focus of employment was on the local communities and the individuals were employed from the relevant Sub-councils' Jobseekers Database. Supporting and running parallel to the job creation programme are training and formal skills development programmes. These programmes include on-the-job training for learners, students and interns. It is critically important to be able to assist with career development and the BMB makes every effort to provide opportunities for EPWP and skills development incumbents. From July 2016 to June 2017, eight out of 12 vacancies in the Biodiversity Management Branch (all posts <T10, and 1x T12) were filled with individuals from the EPWP and the skills development programmes.

"1.4.b.4 Biodiversity management project

The City's biodiversity and ecosystem services will be restored and managed to ensure their long term sustainability and efficacy. This will be achieved through on and off reserve management, guided by the City's Bioregional Plan and focused on optimising socio-economic benefits and opportunities where ecologically sustainable.

Managing biodiversity and ecosystems strengthens their resilience to climate change and improves the resilience of the city as a whole to the impacts of climate change. The following will form part of this project:

- *Securing the protection of the BioNet (target of 65%)"*

The City has set a target to ensure the conservation of 65% of the 2009 BioNet, the fine scale conservation plan of the City of Cape Town (CCT) area, by 2022. The BioNet, includes all priority natural and semi-natural wetlands and rivers, and indicates which parcels of land are classified as Critical Biodiversity Areas (CBAs) and have to be conserved to meet National Conservation targets. The BioNet and Management Guidelines were consolidated into the **Bioregional Plan** which was approved as policy by the City Council in July 2015. To date, 64% of the 2009 BioNet is conserved or in the final stages of proclamation.

- *"Continued implementation of the Bioregional Plan monitored through the Management Effectiveness Monitoring Programme."*

Protected Area Reviews and METTs assessments were completed. There is now 10 years' worth of data that can be analysed and results can be used to compile an updated PA Review to support preparations for the updated METTs assessment format (METT-SA03).

- *"Conservation Programme which includes all education, events and visitor programmes."*

The City's nature reserves received just over **343 490 visitors**, recorded mostly through its manned access points (the majority of reserves are open access so this figure is an underestimate). Through paid gates an income of R1,9M was collected.

Six hundred and two individuals totalling 1 178 person days with a rand value of R850 000 volunteered in 2016/2017. A further 361 individuals (6 775 person days – valued at R3,8M) worked on the reserves via sponsored programmes. The reserves and the outreach programmes saw **38 706 learners** from **1054 schools** resulting in 54 156 person days of education. With other events and exhibitions, a total of **84 133 individuals** took part in education and awareness activities.

Meetings of the Protected Areas Advisory Committees (PAACs) were successfully held for 11 of the reserves. A forum for the PAACs' chairpersons in order to support and share ideas, highlights and challenges was held three times in the year.

"1.4.b.5 Invasive species management project"

The City's invasive species management programme focuses on:

- *Identifying and managing invasive species introduction pathways in collaboration with national and provincial stakeholders and minimising the movement of invasive species within the metro*
- *Detecting and controlling new and emerging invasive species before establishing viable populations and spreading into new areas."*

The City and CapeNature hosted a meeting of the CAPE's Invasive Species Animal Working Group (IAWG). This group consists of managers and researchers to identify pathways and ways forward in terms of invasive animal species. The City is also part of the provincial meeting ACRAE (Alien Clearing, Restoration and Alien Biomass Economies) focusing on invasive plant species. Lastly, the Biodiversity Management Branch runs a Spotter Network focusing on locating identified emerging invasive plants.

- *"Controlling existing invasive species to improve ecosystem health and services and to protect biodiversity*
- *Control target invasive species according to a species management plan*
- *Maximising green job opportunities through labour intensive control methods and associated jobs such as clearing litter in river channels.*
- *Monitoring efficacy of control methods and reporting progress*

The National Environmental Management: Biodiversity Act (NEMBA) Act 10 of 2004 Alien & Invasive Species Regulations (2014) requires all organs of state at all spheres of government to control invasive species, monitor and report progress and to incorporate invasive species management, control and eradication plans into IDPs."

In the last year, 50% of the control plans for protected areas and other City owned land were completed and submitted. The CCT was one of the few municipalities that submitted control plans. Invasive alien clearing targets are at present being finalised.

1.1 Highlights

In addition to above, the following notable initiatives during the period July 2016 to June 2017 included:

1) Facilitating development and land banking

The land banking process to facilitate development in Atlantis has progressed well with 63 ha being acquired for conservation this year. Altogether since 2012/2013, 940 ha have been secured for the land bank and just under a 100 ha of developments in Atlantis have been facilitated.

2) Protected areas expansion

The Protected Areas Expansion programme was very successful last year with both stewardship and land acquisition (see above) playing a part.

Last year 4 stewardship agreements were facilitated by BMB and signed up by CapeNature:

Name	Size of property	Type of agreement
Zonnestraat	8,6 ha	Voluntary Agreement
Camphill Village	45 ha	Biodiversity Agreement - Perpetuity
Capaia Wines	45 ha	Biodiversity Agreement - 10 year agreement
Joostenbergkloof	101 ha	Biodiversity Agreement- 5 year agreement
Boskloof Eco Estate	40 ha	Biodiversity Agreement – Perpetuity - signed up in 29015/2016 but finalized last year

3) Strandfontien Birding Section of False Bay Nature Reserve – popular birding destination

Bird watching is a very popular hobby with the Strandfontein Birding Section, False Bay Nature Reserve being considered as one of the best birding sites in South Africa (Figure 1). Strandfontein Section remains a birders' hotspot with the site teaming with bird-life and recording no less than six rarities over the past year making the site a "must-see" for local and international birders.

4) Bracken Nature Reserve – removal of derelict buildings

A heritage assessment of all structures at Bracken Nature Reserve was completed. Buildings were assigned an updated grading which allowed reserve management to apply to the Western Cape Heritage Society to have the structures with no heritage significance as well as buildings not conducive to the reserve's long term plans demolished. After more than 10 years of pursuing the idea to have the derelict infrastructure at Bracken demolished, approval was finally granted for the demolition and the buildings were removed.

5) Management Effectiveness Tracking Tool

The Management Effectiveness Tracking Tool (METT) was developed by the World Wide Fund for Nature (WWF) to assess and monitor the management of protected areas. In 2007, CCT was the first organisation in South Africa to adapt and widely use the METT to monitor the City's Protected Areas. The version developed was then taken up by the CAPE partners, further adapted by DEA and called the METT-SA version 1 (2008 original with updates 2012). This tool has now been adopted and prescribed by DEA that all protected areas in South Africa will undertake a METT every 2 years. The latest South African version for protected areas is the METT-SA03 (version 3) and for Ramsar sites is the R-METT. DEA is at present aligning the R-METT and the METT-SA03.

The METT, especially the METT 2012, was at a broad scale and the City developed the PA Review which served the more detailed need. The 3rd METT was undertaken in 2017 and the PA Review every year. There is now 10 years' worth of data that can be analysed and results can be used to compile an updated PA Review to support preparations for the updated METTs assessment format (METT-SA03).

6) Ecological Restoration

Owing to the large number of sites requiring restoration and limited operational resources, the BMB initiated an ecological restoration prioritization project to determine the most important sites to focus on. Ecological restoration is the process of assisting the recovery of a degraded ecosystem, for example by removing the degrading influences (such as invasive alien plants), and re-introducing missing elements such as indigenous shrub and herbaceous species. Once the ecosystem has recovered some of its natural structure and diversity, it will function better with the locally adapted species than the degraded ecosystem (for example, sequester more Carbon) and better withstand extreme conditions that may arise as a result of climate change. Successfully restored ecosystems therefore can assist us to mitigate and adapt to climate change.

All BioNet sites are critical for conserving national biodiversity targets but many are degraded, including areas within our reserves, and these require ecological restoration. In particular, BMB's vision (aligned to the National Environmental Protected Areas Act; NEM: PAA) is to restore all habitats on the nature reserves to a near natural state. It is envisaged that the percentage of the reserve in the different habitat condition classes will be used to indicate trends so that we can evaluate the success of our management on the biodiversity and ecological processes. The METT described above, is weak on the evaluation of ecological processes and biodiversity as it concentrates on systems; procedures; budget and staff being in place. More detailed evaluations (level 4 assessments), such as habitat condition monitoring, need to feed into the METT.

7) Budget

An additional, once off allocation of R4M was given for security to assist with existing areas and to pilot an integrity team at Witzands Aquifer Nature Reserve. This was very successful and resolved some of the security issues in 2016/2017.

A total of 98,7% of controllable operational budget was spent and 98,5% of capital budget was spent. Work began on Biodiversity Management's largest capital budget item, the Witzands' Multipurpose Centre.

8) Other milestones achieved in the 2016/2017 financial year included:-

- Stocking Blaauwberg Nature Reserve with both eland and red hartebeest (Figure 2)
- Management of Zandvlei Estuary mouth and preventing golden algal bloom
- Opening the island at Rondevlei section of the False Bay nature for overnight school groups
- Young male hippo caught and relocated from Rondevlei section of False Bay Nature Reserve to Garden Route Game Lodge on 29 June 2017 (Figure 3)
- Virtual fence in Steenbras Nature Reserve 100% effective in keeping baboons out of Gordon's Bay
- Securing an agreement for the protection of Joostenbergkloof and funds (R3.47M) from WWF for its acquisition
- City of Cape Town used the biodiversity screen saver on all corporate computers for 2 weeks to coincide with International Day for Biological Diversity on 22 March 2017 (Figure 4).



Figure 1: Greater flamingos at Strandfontien, False Bay Nature Reserve



Figure 2: Blaauwberg Nature Reserve's herd of eland



Figure 3: Young male hippo at False Bay Nature Reserve



Figure 4: City's desktop background/wallpaper in May 2017 (22 May is International Day for Biological Diversity)

1.2 Challenges

1) Security and law enforcement

The most serious issue is the land invasion in the Slangetjebos Section of the False Bay Nature Reserve. This is being handled in a protracted legal process. 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 4; 6).

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.

The security situation at Zoarvlei section of the Table Bay Nature Reserve has recently improved as a result of an agreement with Paarden Eiland City Improvement District (PECID) and CTEET which has placed a reserve supervisor at Zoarvlei (Figure 5).

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 Invasive Species Unit. A realignment process, to address some critical gaps is urgently needed and will assist in staff shortages. Security, not surprisingly, is one of the largest budget items and is still inadequate to ensure the safety of resources, people and infrastructure.

3) Comments on development

EIA comments and recommendations (based on BioNet and Bioregional Plans) are rarely adopted in development decision making by the Department of Environmental Affairs and Development Planning (DEA&DP), and developments are often 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 vehicles being non-operational for long periods of time.



Figure 4: Dumping in Pelican Park, False Bay Nature Reserve



Figure 5: New Reserve Supervisor, Reward Nzuza and EPWP workers at Zoarvlei, Table Bay Nature Reserve



Figure 6: Removing illegal structures for Zoarvlei, Table 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	The annual False Bay Nature Reserve Birdathon: Festival and Fun-walk event took place on 6 May 2017. Despite the weather being overcast and cool, approximately 500 people attended the event. The day programme started off with a walk, where participants could choose one of three distances to follow, starting at the Zeekoevlei Section picnic area and leading into the Strandfontein Section, then returning to the picnic area to enjoy various stalls.	Ongoing illegal squatting issues and lengthy processes	Process to be clarified with law enforcement
False Bay	As well as the Temminck's Stint; a number of rare and interesting migrant wader species that have visited the Strandfontein Birding Area has emphasised the effectiveness of the water level management measures that are being used at Strandfontein. The water quality of the Zeekoevlei water body has dramatically improved over the last year and has maintained a clear water phase despite the hot dry summer that has been experienced. The last clear water phase was recorded in 2010 and only lasted for seven days. The young male hippo that had been confined to a pan in the Strandfontein Birding Area was successfully caught on the 28th June and translocated to a new home at the garden Route game Lodge.	In June 2016 the Expanded Public Works Programme (EPWP) at False Bay Nature Reserve came to an end, resulting in the loss of 37 worker posts. Despite a temporary team of 8 workers, this loss has had a profound effect on the ability to maintain basic reserve infrastructure and perform some conservation functions. Of particular note is their absence from the eastern shore of Zeekoevlei, resulting in a reduced oversight over the facilities and a corresponding increase in vandalism. Several of the public toilet facilities have suffered from both theft and vandalism. The ongoing illegal occupation of Slantjebos section of False Bay Nature Reserve of small groups of informal dwellers and a waste recycling.	Two new permanent workers posts were secured for eastern shore.
Zandvlei Estuary Muizenberg East Private Nature Reserve / Psoralea Park Private Nature Reserve (in partnership with residents' association)	A study was completed on Brant's Climbing Mouse showing their habitat preferences. The reserve won the "Highly Recommend" reserve award at the Branch's awards day. A golden algae bloom was noted in the Zandvlei Estuary and confirmed with water analysis. A previous outbreak of these naturally occurring algae several years before had disastrous consequences for the fish biota in the estuary. A full bloom was averted through interventions of the reserve staff and catchment management with the opening of the estuary mouth. The resultant sea water increased the salinity of the estuary and prevented the bloom from developing. No fish mortalities were recorded. Another successful annual Peninsula Paddle took place on Sunday the 11th of June; with reserve staff assisting. The Peninsula Paddle starts at Zandvlei and progresses up the canals and vleis, crossing the Cape Flats to end at the Salt	The ongoing illegal occupation of reserve land by small groups of informal dwellers. Issues and changes (roles and responsibilities in staff) in the law enforcement processes has not assisted The reduction in the EPWP staff component on the reserve meant a reduction in amount of work that can be concluded on the reserve. The weed harvester has been out of action eight times this quarter, with a valve bank which has been repaired thrice and replaced once and is still leaking oil.	Additional surveillance is being undertaken but BiMB is very concerned as to their ability to ensure compliance. EPWP programmes do not provide permanent staff and this now factored into Annual plans of Operations. Motivation for new weedharvester.

	River estuary.		
Edith Stephens	Edith Stephens managed to secure funding to keep the Expanded Public Works programme going EPWP for this quarter. This has resulted in a quarter of good performance, in the area of work and development. Of note is the fact that EPWP three members have existed into more permanent positions, some applying to study next year. The successful community based workshops that have been conducted by partner organisations. The original kitchen cabinets are 18 years old and have been mouldy and unusable for the last 5 years. Work to replace them started in February 2017.	Security related incidents at Edith Stephens remain a concern. With the budget being limited key repairs and maintenance projects that were planned for 2017 were put on hold. Limited capital budget has also meant that key equipment that needs to be replaced and complete new ones are still needed for the site. There has been an increase of pedestrians using the nature reserve as a throughway from Philippi to Govan Mbeki road to access public transport and other reasons. There is need for the boundary to be clearly demarcated and lines for pathways to be set.	Additional security organised. Overall priorities resulted in R&M at Edith not being completed. The urgent items have been held over to 2017/2018. Staff are completing a boundary plan for the reserve which, once implemented, will address some of these issues.
Kenilworth Racecourse / Rondebosch Common/ Liesbeeck River	Alien invasive clearing went well with 13 species being targeted in the post fire burn sites on the reserve. The endangered plant; <i>Macrostylis villosa</i> subsp. <i>villosa</i>; was rediscovered by Sabelo Memani in the Conservation Area.	The Kenilworth Environmental Advisory Committee (EAC) had its first quarterly meeting in February. Highlighted at this meeting was that there is still no news on the stewardship agreement for the Kenilworth. This is despite extensive attempts by City of Cape Town staff to offer a variety of stewardship options to Kenilworth Racing. The unavailability of an EE centre and/ or lavatory facilitates at the EE garden remains a major challenge to Kenilworth. The Friends of Kenilworth Race Course Conservation Area (KRCA) are adamant to assist in any way that may help KRCA towards the acquisition of any of the above mentioned facilities. The development proposals and lack of communication between Kenilworth Racing and the Kenilworth Environmental Advisory Committee is of concern. The killing of a Cape grysbok (<i>Raphicerus melanotis</i>) by stray "Africanis" dogs in the conservation area underlies the impact that the surrounding urban area can have on this isolated conservation site.	Ongoing discussions with Kenilworth Racing. Investigating alternatives in hosting environmental education programmes. The EAC have submitted comment. Ongoing surveillance .
East Region			

Wolfgat (including Macassar Dunes area)	Two incapacity ill health staff transferred to Wolfgat and they are working out brilliantly (Daniel Beukes - Supervisor/Visitor controller at WGNR EEC and Mthuzimele Mlanjana – Senior Field Ranger). Jerome September is doing exceptionally well with his Nature Conservation studies through UNISA, putting all his spare time and most nights into studying and completing assignments. Fire Awareness Campaign in Macassar, Indlovini, Monwabisi, Tafelsig and Mitchells Plain communities. Environmental Camp, and first time MDCA Fun Run/Walk. Wolfgat EEC being booked by groups for workshops (mainly City departments) WGNR EEC used as E learning centre for after schools programme. Conservation work progressing well with interns, namely a new walking paths created with bark chips called Kidwill path. Wolfgat received 18 EPWP from Social Development Street Cleaning programme for 21 days during March 2017.	Connectivity (telephone/ network) links at the Wolfgat Education Centre a challenge. This hinders full operational use of the education centre. Progress with the Fire Break road WGNR is slow due to availability of dedicated machinery. Signage of Kidwill path removed shortly after installation. Dumping and waste removal a major issue within Wolfgat Nature Reserve	This is being resolved. Ongoing issues. Ongoing issues.
Steenbras	M. Sylvester, an alternative placement from Water & Sanitation in a Senior Water Meter Reader capacity, started at Steenbras Nature Reserve, due to incapacity. He will be doing various administrative tasks, including Gorge hiking trail bookings and is settling in very well. The maintenance work done at the Gordon's Bay office is making good progress. The new field ranger, Ntombiziphi Rafu, was appointed. The upgrade of exterior and installation of a lean-to patio at GB office made a positive difference in the overall appearance and enjoyment of the office area. Over a 1000 indigenous plants were sponsored to SNR by a filming company. The plants are used to beautify the exterior of GB office and will also be used to plant at local schools.	The confusing HR time & attendance overtime process is long, confusing and frustrating. The paper trail is everything but green. What happened to the paperless City idea? The return time of vehicles going in for repairs/services are extremely long and impacts on operations of the reserve. The safety and security of Steenbras staff is of great concern. The area is used for criminals to hide in and the response times of Law Enforcement and SAPS are slow and/or sometimes non-existing. Field Ranger, F. Pedro got assaulted and injured as a result. He was taken to hospital.	Ongoing Discussions with fleet Ongoing
Harmony Flats (including Morkel's Cottage)	Additional staff employed on the reserve through the CTEET intern and learnership programmes has greatly increased the operational activity and productivity on the protected area. The HFNR NQF4 CTEET Learners successfully completing their learnership at HF. Melvin Booysen one of HFNR's CTEET staff, is now being permanently employed as a Quemic ranger. Melvin Booysen was filmed at HF, to showcase the successes of the CTEET learnerships in partnership with the CETA's and BMB.	The unfinished building at Harmony Flats (started by National Department of Tourism (NDT)) remains and is resulting in reduced community support. Security and illegal activities still remain a challenge, inadequate fencing makes it difficult to stop illegal activities such as harvesting of bulbs, fires, dumping difficult to manage	Liaison with NDT has resulted in an agreement that the City will take responsibility for the building so it can be finished The appointment of a Quemic ranger covering the dayshift during the week and over weekends, have made a huge difference in the safety and security and for the morale of the team at HF.

	The limited amount of fires occurring, due to more regular patrols of the area and staff being more visible Between HF and MC. The sighting of the three banded plover breeding pair with their fledgling at MCCA.	The lack of a people and conservation officer, limits environmental education just to adhoc holiday at the when staff or students are available. The reserve not being fenced completely and efficiently allows for unwanted activities in the reserve and creates a safety risk to staff and visitors. Excessive amount of litter being blown into the reserve, needed to be cleared is taking up a lot of time we could be spending on other tasks.	Has been raised with senior management. Fencing plan being completed. Ongoing
Helderberg (incorporating Silverboom Kloof, Lourens River PNE)	A staff transfer took place within the Branch which saw Ashton Mouton moved to Tygerberg Nature Reserve. Helderberg welcomed Sandiso Kraai as the new Site Manager and we wish him all the best. Several staff passed their drivers licenses The shipping containers in the education centre parking lot were successfully removed after many months of planning. The 174m section of Clear Vu Fence sponsored by the Friends of the Helderberg Nature Reserve was completed. This will increase security to the Area as well as improve the visual aspect of the entrance precinct.	Vehicles were unreliable. The CCT 30845 bakkie broke down leaving staff stranded on the weekend. Vehicle CEY 15776 also broke down and was in for repairs for December. Lack of reliable vehicles continues to hamper operations. While there are several vehicles on the Reserve – they are old and unreliable. This causes much time to be lost due to constant issues. Gantry was declared unfit for use. This development delayed all the projects as the tanker was left on the trunk. An increase in criminal activity around the reserve is threatening the integrity of the Protected Area in that perpetrators use the reserve as a quick getaway	Ongoing discussions. Gantry was fixed. Ongoing surveillance.

Central Region	Dilapidated buildings at Bracken were demolished Appointment of a Reserve Supervisor for Durbanville Nature Reserve and Haasendal Conservation area Appointment of 26 EPWP staff to assist with alien clearing in the region	Lack of permanent education officers in the region	Lack of permanent education officers highlighted with management. Alien clearing by EPWP teams will continue when invasive tender is in place
Tygerberg (Includes Bothasig Fynbos (BF) Nature Reserve)	Search and rescue of 782 bulbs from Baronetcy into Watsonia Top soil project. Owl and raptor boxes and perches installed on dying pines in pine alley. Jim Fouche avenue demolition of encroaching infrastructure and gardens. TGB5 restoration project planning:- burning and monitoring TNR Working for Wetland gabion project completed; BFNR wetland rehab and new pathway completed	No environmental education intern as incumbent resigned so no capacity to do EE in house Lack of staff, especially at BFNR	Programmes were reduced but continued when possible EPWP staff appointed at BFNR.
Durbanville/ Uitskamp / Botterblom	Successful Spring Walks took place at Durbanville and Uitskamp Nature Reserves during September.	Alien invasive plant species proliferation after the ecological burn. The continued dumping of garden refuse at Uitskamp Wetland Nature	Work continues according to priorities. Ongoing.

	A new staff member, Akho Mayataza, was appointed as Reserve Supervisor and commenced work on 1 August 2016. Lamees Chickte received the student of the year award at CPUT and was appointed as the CTEET Intern, commencing work on 14 October 2016. Field Ranger Henry Christiaan was awarded his GET Certificate by the Education, Training and Development Department. The EPWP team has been very helpful with the clearing of the alien invasive plants at Durbanville Nature Reserve.	Reserve. Difficulty in access to a truck for the transport of cleared invasive alien plant species material at Uitkamp Wetland Nature Reserve to the landfill site.	Ongoing.
Bracken (Including Haasendal)	The annual Spring Event took place on the 24th September at Bracken. The event was a great success with over 500 visitors attending. The old disused building at Bracken has been finally demolished with a permit issued by Heritage Society under the National Heritage Resource Act. The reserve team will now put efforts on the rehabilitation of the site Haasendal Conservation Area Reserve Supervisor: David Morris transferred from Helderberg Nature Reserve has been appointed as the permanent Haasendal Conservation Area supervisor effective November 2016. Haasendal Conservation Area Extension: A land reservation application for the extension of Haasendal has been submitted and supported by the ERMD Director and is currently being circulated through other line departments for comments and support. Of this, 11,4 ha has been identified to have prime Sand Plain Fynbos and would be a great assets to be incorporated into the conservation area and significantly increase the size of Haasendal. The reserve is currently providing employment of 20 people via EPWP from the surrounding communities, the team is currently assigned to help the reserve staff with alien clearing, they will also be assisting with other projects	The lack of a People and Conservation officer at Bracken Nature Reserve. This results in interns and/ or volunteers to fulfilling this function, 750-1500 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. Lack of Security in newly acquired corridor has proved to be a challenging section, especially with the illegal activities that seem to be taking place.	Issue has been raised with senior managers. The stakeholders need to meet to strategise as to what security measures need to be put in place and how it's going to be funded, Some of the identified law enforcement issues are illegal dumping, illegal occupancy and the site being used as thoroughfare by vagrants and suspicious individuals. Protea village security forum invited City officials from relevant departments and councillors for a meeting to discuss the security risks. A site meeting has been set up for the 19 January to identify the risk and hopefully came up with an amicable resolution
North Region	Work began on the Witzands Multipurpose Centre on 13/02/2017 and is progressing well. The City of Cape Town's Transport and Urban Development Authority recently commenced with the construction of a	The lack of people and conservation officers at Tygerberg, Table Bay, Witzands Aquifer and Blaauwberg Nature Reserves is a serious challenge as the EE programme is unable to reach out to the communities who deserve to be informed about the beauty and the uniqueness of Cape Town' biodiversity.	This has been raised to senior management.

	5.85 km cycle lane between Big Bay and Melkbosstrand. The City handed over the site to the contractor on 30 March 2017 and, if all goes as planned, this cycle lane will be completed by the end of September this year.		
Blaauwberg	The City of Cape Town's Blaauwberg Nature Reserve celebrated a momentous occasion as the last of eight eland were released into the reserve on Wednesday 8 March 2017. The other seven eland were introduced to the Blaauwberg Nature Reserve in December 2016 and in February 2017. The animals were donated by the Koeberg Nature Reserve as part of their management of the eland population in that nature reserve. In September 2016 five red hartebeest were also released in the Blaauwberg Nature Reserve that was obtained from Highlands Farm in Graaff-Reinet in the Eastern Cape. Blaauwberg Nature Reserve was presented with Reserve of the Year (2016) by the Biodiversity Management Branch An Appreciation Ceremony was hosted by Councillor Nora Grose, Ward 23 on 30 May 2017 at Blouberg Library Hall. The ceremony was attended by Premier of the Western Cape, Helen Zille, who handed over service appreciation certificates to community-based organisations and the City of Cape Town for making a difference in their community.	Eviction of Blaauwberg's vlei families illegally residing in Blaauwberg Nature Reserve. The City has been engaging with the residents since December 2013 about their illegal occupation of this part of the nature reserve. They have ignored several City-notices requesting them to vacate the homestead. The homestead has been declared unsafe by the City's Building Development Management Department as the structures contravene the National Building Regulations and Building Standards Act. The residents refusal to vacate the property further poses a threat to the reserve's fauna and flora, among which are endangered plant and animal species. The reserve has a rich heritage of natural, cultural and historic elements and as establishment of the BBNR has moved forward, including the fencing of the nature reserve, research on the Battle of Blaauwberg with the intension to establishing the site for education and tourism purposes and the reintroduction of large antelope, it has become necessary to take action to relocate the family. The City of Cape Town has launched an urgent application in the Western Cape High Court for an eviction order. Increased incidents of crime and other illegal activities compounded by few patrols during the day, and none after hours	Ongoing
Table Bay	The refurbished Rietvlei floating jetty was re-launched on 27/09/2016. The jetty, which is about 20 years old, required the replacement of the timber decking and steel fittings. The jetty is essential to the recreational use of the Rietvlei Water Area. It is hoped that the refurbished jetty will serve the water users for another 20 years. The City of Cape Town's newsletter for staff (CONTACT) published an article on the protection of the Nature Reserve's Coastal Section in the November/December edition of 2016. Two Cape grysbok surveys were conducted in the Milnerton Racecourse Section by contract reserve supervisor, Kyran Wright, on 26 and 28 June 2017. Kyran used Biodiversity Management Branch staff in order to determine whether a previous survey that was conducted by the former contract reserve supervisor, Landi Louw, and a team of public volunteers, was accurate. Some fauna specialists were of the opinion that Landi Louw's survey over-estimated the amount of grysbok, due to the inexperience of the public volunteers. The results from	The lack of compliance with Regulations impacts the Table Bay Nature Reserve in many negative ways. Not only is the impact of displaced people in the nature reserve becoming more intense, but private land-owners on the boundary of the nature reserve are also causing negative impacts. Various property owners are placing structures, rubble and alien vegetation in the nature reserve without the permission of the Management Authority. The presence of free-running dogs in the Nature Reserve is presenting a problem to the wildlife and visitors alike. Security issues at Zoarvlei The Rietvlei water area was closed to the public since 17/03/2017 due to a blue-green algal bloom that was observed by Nature Reserve staff on 16 March 2017. It remained closed for public safety reasons throughout this quarter. The water was only re-opened to the public again on 30 June 2017 after a consistent decline in the algae toxins was observed.	Ongoing The security situation at Zoarvlei section of the Table Bay Nature Reserve has recently been improving as a result of an agreement with Paardeneiland City Improvement District (PECID) and partnership with CTEET placed a reserve supervisor at Zoarvlei.

	Kyran's survey however indicated that the grysbok numbers were indeed very high with perhaps even more animals than what Landi's team counted.		Ongoing monitoring and communication with user groups.
Witzands Aquifer	The City's Department of Cleansing: Solid Waste removed a total of 39 truckloads of rubble and other dumped material at WANR12 and 15. On the 11/11 the DCCP was awarded a certificate from the Biodiversity Management Branch for the most improved nature reserve within the City of Cape Town for 2016. This is the third consecutive year that the reserve has received a certificate. The DCCP hosted the first WANR Woodcutters Forum. Woodcutters from Mamre, Pella and Atlantis were invited - eight Woodcutters attended. All attendees are permitted to remove fire wood. The DCCP through CTEET acquired two Learners NQF Level 2 for a six-month period. One of the Learners volunteered full time at the DCCP for six months. Both Learners are from the local communities of Mamre and Atlantis respectively.	The DCCP has experienced a challenge with one of its vehicles constantly having to be taken away to the Ndabeni fleet for repairs. The vehicle has had non-start issues since December 2015. The vehicle shortage causes delays in the daily operations of the DCCP. The vehicle CA716622 is still not operational and still experiences the non-start difficulties on a weekly basis. The vehicle currently remains at Fleet. The DCCP remains without a People and Conservation Officer (P&CO) for this reporting period as well. This is a huge disadvantage as the relationships, programmes and opportunities conducted with the schools/groups/events are affected through the lack of an assigned People and Conservation Officer for the entire DCCP. The P&CO maintains and builds on relationships with communities and or members of the public. Security of the area a concern.	Ongoing Has been raised with senior management. Quemic Ranger team started working at the DCCP. The team will be responsible for all law enforcement in the area

Head Office	The uniform tender expired in June, whereas the specifications were completed and the new tender was advertised. The new tender 307G/2016/2017 was evaluated and samples were called to be delivered on or before 14 July.		
Maitland (Head Office)		Lack of formal meetings or any response from corporate in relation to issues/urgent R&M affecting the offices in Maitland.	Ongoing.
Invasive Species Unit	Second biocontrol tunnel fully functional Invasive passed EPWP audit for period July – December 2016 The dosages for MS222 to control mallards were finally tested and confirmed Receiving additional funding from the EPWP corporate office gave the unit an opportunity to include more sites for invasive species control and assist reserve staff with maintaining reserves although it was only for a short period. We were able to renew the EPWP workers contracts that	High turnover of staff in invasive species unit due to contract positions and uncertainty regarding contract staff for 2017/18 financial year Lack of awareness and environmental education capacity (posts) within the unit Inability to gain access to private properties as a result of continuous change of ownership remains a challenge for the EDRR and Guttural programme The delays in signing of the DEA: NRM memorandum of agreement by	Staff employed as direct EPWP workers. Certain contracts not renewed. MOA with CTEET for project management. Ongoing post prioritisation Policy and by-law needed Investigating ways to streamline the

	were being terminated at the end of April 2017. Job opportunities for Kader Asmal exceeded target of 900 (2878 job opportunities created)	the City will result in late implementation of the projects. These delays together with differences in the financial year cycle between City and DEA will lead to unrealistic timeframes for project management team to implement and complete the planned projects and could result in the agreed targets not being met.	signing and implementation of MOAs.
Westlake Conservation Centre and Habitat Restoration Facility	A Reserve supervisor, Tamaryn Khan was transferred to Westlake to manage the grounds and surrounds from 1 October 2016. This has filled a huge operational need at Westlake. A seed room identified and developed to facilitate better climatic control of ambient temperature and humidity; limit movement of seed between cleaning, processing and storage area; and allow for dry, well equipped cleaning space for rapid cleaning of incoming seed.	Habitat Restoration Coordinator, Geert Sprangers, retired at the end of October 2016. Geert had established the restoration facility with almost no resources. He will be sorely missed. Lack of toilets for a number of staff. Lack of formal sewage system to facilitate the building of toilets.	Julia September was appointed as the Manager of the Habitat Restoration Coordinator on 1 December 2016. Looking at various options including conservancy tanks.

2. Strategy, Policy, Legislation and Plans

2.1 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 LBSAP is being updated and expanded to include the Invasive Species Draft Strategy, but was submitted to Council due to changes in Council due to the elections and Organisation Development and Transformation Plan (ODTP). In discussions with the City's Strategic Planning Unit (SPU), the LBSAP will in all likelihood be separated into two components: the Strategy and the City's 5 year Biodiversity Action Plan. The City's Biodiversity Action Plan is a target for the 2017/2018 financial year.

2.2 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 National Environmental Management: Biodiversity Act (NEMBA) Act 10 of 2004 Alien & Invasive Species Regulations (2014) requires all organs of state at all spheres of government to control invasive species, monitor and report progress and to incorporate invasive species management, control and eradication plans into IDPs. The City assisted with the control plan template and submitted, by the agreed date of October 2016, control plans for 9 (out of 16) nature reserves; 16 Biodiversity Agreement sites; 3 Recreation and Parks sites; Kenilworth Race Course; Lourens River PNE; as well as the City Housing land. Still to be completed and submitted are 7 nature reserves; and City line departments land:- Recreation and Parks (POS and road verges); Health; Property Management; Solid Waste; TDA Asset Management; and Water and Sanitation; as well as all stewardship

sites (not City owned). The City of Cape Town was one of the few municipalities that submitted control plans.

2.3 Biodiversity Network (BioNet)

The Biodiversity Network (BioNet) is the fine-scale conservation plan for the City of Cape Town. It has also been incorporated into the 2017 Western Cape Spatial Biodiversity Plan.

The 2016 BioNet was continually updated and during spring, the BioNet remnants (particularly of the poor habitat condition areas) were groundtruthed to improve the accuracy of mapping and vegetation conservation status statistics. Following capture of this information, the vegetation statistics in terms of remaining 'good and fair' habitat condition remnants will be more accurate. Another recommendation of the 2016 BioNet rerun was the mapping of habitat condition classes for the nature reserves. On the reserves there are 5 habitat classes which are merged into 3 when used for the BioNet.

Wetland mapping was also updated for the latest BioNet and ground-truthing continues as and when needed and possible. The next step of adopting the new national wetland classification criteria into our wetland database has been completed.

2.4 Bioregional Plan

The Bioregional Plan, which incorporates the BioNet and management guidelines, was approved by Council in July 2015 as a policy document to be used as a plan to facilitate, and not to hinder, development in the City (policy number 44854). The IDP states under spatial priority 2 that it should: "actively pursue national biodiversity targets as well as those identified in the City's Bioregional Plan". The Bioregional Plan is the guiding document for conservation protection in the City.

3. Green Jobs

3.1 Job Creation

A total of 135 002,5 person days of temporary employment (587 full-time job equivalent; 3 256 job opportunities) were created in the BioNet (Figure 7).



Figure 7: EPWP team undergoing a Health and safety inspection

The job opportunities were much higher than the target of 900 job opportunities for the year. Most of the jobs (Table 2) were created by the Invasive Species Unit (2 768) with a small amount being created by the baboon programme (84 job opportunities; 13 767 person days) and some on the nature reserves in the South (404 job opportunities; 1 366 person days).

Table 2: Job creation by the Invasive Species Unit

Project	Budget	Expenditure	Person Days	Job Opportunities
Kader Asmal EPWP	R14 000 000,00	R13 999 994,17	96 803,00	2 620
EPWP Additional Funding (source City Parks)	R4 000 000,00	R3 999 994,73		
Biodiversity Management funds	R1 071 836,72	R1 071 836,72		
WfW Special	R3 263 318,84	R3 162 577,90	13 387	
WfW Terrestrial	R749 355,37	R598 774,51	2 549	
WfWet	R1 904 851,66	R1 904 851,66	7 130,5	148
TOTAL	R24 989 362,59	R24 738 029,69	119 869,50	2 768

The Invasive Species Unit also facilitated job creation of 775 job opportunities and 20 450 person days for other line functions (Table 3). This close partnership with other line departments ensures job creation while best management practice in clearing alien invasives species from City land is undertaken.

Table 3: Job creation in other line departments facilitated by the Invasive Species Unit

Line Departments	Budget	Expenditure	Person Days	Job Opportunities
Bulk Water	R 97 017,93	R 97 017,93	380	0
City Parks	R 4 305 169,70	R 4 305 169,70	7191	28
Housing	R 3 327 750,21	R 3 327 750,21	8 990,5	722
Property Management	R 41 923,63	R 41 923,63	80	0
Sports & Recreation	R 25 423,20	R 25 423,20	56	0
Solid Waste	R 4 799 077,37	R 4 799 077,37	864	8
Transport	R 638 526,71	R 638 526,71	2 262,5	17
Water and Sanitation	R 704 113,31	R 704 113,31	666	0
TOTAL	R 13 939 002,06	R 13 939 002,06	20 490	775

3.2 Social Development

The Biodiversity Management Branch has a social development programme linked to the Kader Asmal EPWP programme. This programme addresses and supports the various social and health aspects that the workers deal with on a daily basis. This included a woman's and men's health intervention that reached 343 workers (Table 4). During the medical intervention 96 people were tested for HIV and 20 people tested positive. The 20 workers received the necessary support and guidance through the social development programme as these were all new cases. In collaboration with various stakeholders 189 EPWP workers were supported through outreach programmes. The outreach programmes include one on one intervention with EPWP workers and covers a spectrum of subjects including medical and substance abuse interventions.

As well as the formal training listed in table 4, in last financial year, 1 379 EPWP workers were reached through various interventions including toolbox talks. The toolbox talks highlight and address the various Safety Health and Environmental (SHE) subjects within a team and the specific site the team is working. During the interaction with the teams the social development officer also identified different social aspects that the team is struggling with and gave guidance and advice (Figure 8).

Table 4: Formal training and social development for EPWP

	Number of interventions	Person days	staff
Training Days for the Kader Asmal Programme	Women's Day & Breast Cancer Awareness	-	31
	Medical Intervention (HIV, Diabetes, High Blood Pressure)	-	256
	Men's Health Medical Intervention	-	312
	Substance Abuse	-	12
	Drug Testing Intervention	-	33
	Chainsaw Training	70	10
	Brush-cutter training	42	14
	TOTAL	112	668



Figure 8: Toolbox talk with South (Akhanani) team

4. Conservation Services

4.1 Protected Area Expansion

Cape Town's BioNet is implemented via a partnership with internal line functions and external stakeholders. The BioNet Implementation Committee was set up in 2010 as a governance mechanism to implement the BioNet. This committee comprised of three levels of state authorities, namely SANParks (the national protected area authority), CapeNature (the provincial conservation authority), and the CCT (the local authority), as well as the Cape West Coast Biosphere Reserve (CWCBR). The BioNet Implementation Committee partners signed a memorandum of understanding (MOU) which detailed each of the authorities' obligations in respect to the implementation of the BioNet (CCT *et al.* 2011). The City and its partners, assessed and agreed on strategies for each parcel of land, prioritised on the BioNet.

The Protected Areas Expansion programme was very successful last year with both stewardship and land acquisition playing a part. The conservation estate is now 64% of the 2009 BioNet (target approved in the IDP is a figure of 65% by the year 2022).

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 in the past most of the managed City reserves never 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. Last year the proclamations of the City's nature reserves were signed by the Provincial MEC, verified and processed for gazetting. There were some minor issues and certain of the reserves had to be resubmitted.

The secured conservation estate in 2016/2017, with the nature reserve and the Recreation and Parks' 16 Biodiversity Agreement Sites, increased the City's protected areas to 16 934 ha. The conservation estate of all proclaimed and secured areas (e.g. land purchased and not yet proclaimed) increased from 51 749 ha (60.88% of the BioNet) in 2015/2016 to 54 744.80 ha (64% of the BioNet; Table 5).

Table 5: Land ownership of protected areas in the City

Organisation	Hectares (ha)	% of the BioNet
SANParks (TMNP)	25 100	29,53
City	16 934	19,2
Private landowners – stewardship	2 063	2,43
CapeNature	7 822	9,20
Eskom (Koeberg)	2,826	3,32
Total	54 744.80	64,41

2) Conservation Stewardship (conserving private land)

Last year 24 new landowners were approached and four new properties were signed up: Joostenbergkloof (Garden Cities), 101 ha (5-year Biodiversity Agreement to allow time for WWF to purchase the property), Capaia Wines, 35 ha (10-year Biodiversity Agreement), Camphill Village, 45 ha (in-perpetuity Biodiversity Agreement) & Zonnestraal Estate, 8 ha (Voluntary Agreement). Boskloof Eco Estate (40 ha in-perpetuity Biodiversity Agreement) was signed in 2015/2016 but finalized last year.

Funding for projects remains a huge challenge and without financial support, there is little incentive for landowners in the City to sign up under the stewardship project. Table Mountain Fund (TMF) has been struggling to provide tangible grants with their Small Grants becoming smaller every year i.e. a Small Grant was considered to be up to R50 000 in 2015 while this year there was R18 000 for Camphill Village and R20 000 for Capaia. During 2015/16, various conservation incentives for private land owners were implemented with funding sourced from the organisations in Table 6.

Table 6: Organisations that have contributed funding

Organisation	Budget	Comment
TMF via Conservation@Work	R38 000	Two small grants for alien clearing and construction of an MTB trail.
LandCare	R321 000	Alien clearing.
Total	R359 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 DEA&DP and CapeNature. This pragmatic approach facilitates development while ensuring that priority land is added to the conservation estate, thereby securing biodiversity resources and the vital ecosystem services they deliver. Land banking process to facilitate development in Atlantis has progressed well with 63 ha being secured for conservation this year. All together since 2012/2013, 940 ha has been secured for the land bank and just under 100ha of development in Atlantis has been facilitated (Table 7).

Table 7: Developments in Atlantis that have been facilitated by the land bank.

#	Date	Description	Current status	Development facilitated (ha)
1	16-Mar-13	Atlantis Green Hub	EIA ref: 16/3/1/1/A1/2/303712	68
2	05-Aug-15	Portion 4 of Erf 1183. Electrical Substation.	EIA ref: 16/3/1/1/A1/2/3013/14. Offset (1:1)	2,6
3	01-Dec-15	Portion 1 of Erf. 1543 Shopping centre.	Approved. EIA ref: 16/3/1/1/A1/2/3035/14 Offset (1:1) a condition of approval.	4,4
4	10-May-17	CA1183 portion-50. City Land being sold with approval to clear indigenous vegetation already obtained.	Approved: 16/3/3/1/A1/2/3059/16CF 1020/0	2,52
5	10-May-17	CA4 -69RECity Land being sold with approval to clear indigenous vegetation already obtained.	Approved. EIA ref: 16/3/1/1/A1/2/3055/16	6,22
6	10-May-17	CA1183 portion-55:City Land being sold with approval to clear indigenous vegetation already obtained.	Approved. DEA&DP Ref: 16/3/3/1/A1/2/3058/16	4,3
7	10-May-17	CA1183 portion 214. City Land being sold with approval to clear indigenous vegetation already obtained.	Approved. DEA&DP Ref: 16/3/3/1/A1/2/3056/16	1,398
8	10-May-17	CA1183-162. City Land being sold with approval to clear indigenous vegetation already obtained.	Approved. DEA&DP Ref: 16/3/3/1/A1/2/3057/16	9,99

9	In process	Erf 228 (Previously Ptn 212 of Farm 1183) - Mpact extension	Final S24G with DEA&DP, decision pending	0,4
			Total area:	99 828

4) The Dassenberg Coastal Catchment Partnership

The Dassenberg Coastal Catchment Partnership (DCCP) is an ongoing initiative of the City of Cape Town, CapeNature, WWF, TMF, SANParks, the Wilderness Foundation, the Cape West Coast Biosphere, DEA&DP and the South African National Biodiversity Institute (SANBI). In the year under review, the DCCP continued with the partnership and has initiated the implementation of the grant received from the GEF5 for the co-ordination of the partnership and initiation of key projects. Cliff Dorse and Julia Wood completed writing up this case study under 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, DEA&DP 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.

4.2 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 WWF; CREW and CapeNature are working together towards protecting these Critically Endangered and unique floral gems from extinction.

Biodiversity Floral finds of the year

The Biodiversity Floral find of the year 2017 was the *Gladiolus orchidiflorus* (groen kalkoentjie) was found at Van Schoorsdrift. It is not a threatened species, in fact it is a very widespread species, occurring over much of Western South Africa. However, it is extremely rare in Cape Town with no recent records and it is not known to occur on our protected area network. As such the discovery of this species at Van Schoorsdrift is extremely noteworthy.



There are several species of kukumakranka (*Gethyllis* spp) with at least five occurring in Cape Town. The species indicated in Figure 9, is a large blue grey plant which occurs on the sandy lowlands. It has been referred to a *G. afra* in the past which is an incorrect identification. There are two forms of this plant, one small and one larger. The specimen here is the larger one. Bill Liltved, orchid expert, agrees that the species is undescribed.

Figure 9: *Gethyllis* cf. sp. nova photographed in fruit on the Klein Dassenberg near Chatsworth

A total of 389 flowering *Lachenalia arbutnoliae* were counted at the Mitchell's Plain Conservation Area site (Figure 10). This constitutes the biggest remaining and only viable population in the world. See figure 6. Although the area was set aside as a conservation area during the Environmental Approval process, it is in desperate need of management. The site belongs to the Provincial Public Works Department and the BMB is considering several options to ensure the site is protected in the long term. The striking *Lachenalia arbutnoliae* is a spring flower belonging to the group of bulbs known as viooltjies. This plant is completely confined to the southern portion of the Cape Flats where it used to be common in seasonally wet areas. However, most of its habitat has been transformed due to urban sprawl and now this species is confined to two sites, one of which is the Mitchell's Plain Hospital.

***Protea odorata* conservation**

Funds were secured from WWF to purchase Joostenbergkloof, home to the world's smallest *Protea*, the Swartland sugarbush (*Protea odorata*; Critically Endangered) (Figure 11 & 12). This protea is among another 400 plant species in Cape Town that are nearing extinction and is in need of urgent action. 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.



Figure 10: *Lachenalia arbutnoliae*



Figure 11: *Protea odorata*

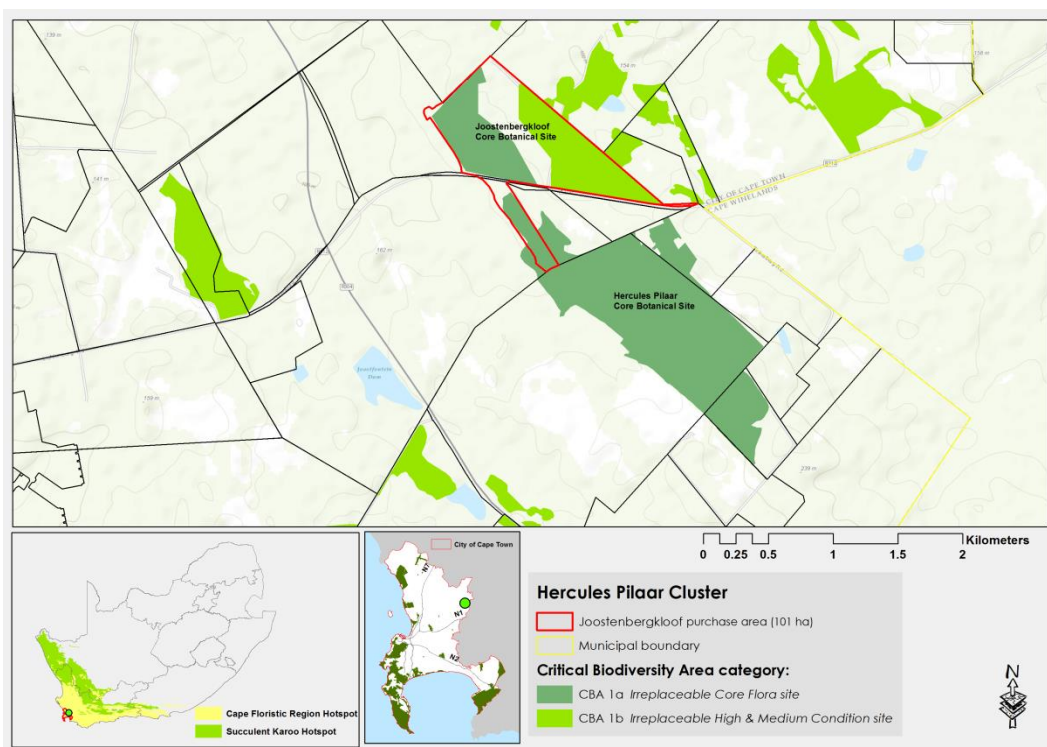


Figure 12: Map showing the Joostenbergkloof Core Flora Site to be purchased by WWF in red.

4.3 Fauna

Rare Birds

Bird watching is a very popular hobby with the Strandfontein Birding Section being considered as one of the best birding sites in South Africa. Strandfontein Section contains a series of 22 sewage retention pans which are part of the Cape Flats Waste Water Treatment Works (CFWWTW). The pans are interlinked by means of inflow and outflow weirs. The water level in all the pans (primary, secondary and tertiary) can be manipulated by means of placing wooden planks into the weir to prevent water from flowing in or out of the pan. As previously reported, the water levels in P1 and P2 were carefully managed in order to create a habitat comprised of sandy islands, shallow water and large littoral edges, which is perfect for wader bird species.

During the last financial year, no less than six national rarities were found at the Strandfontein Birding Section of the False Bay Nature Reserve. Rare sightings include the **Temminck's stint** (*Calidris temminckii*), Spotted crane (*Porzana porzana*), African crane (*Crex egregia*), pectoral sandpiper, elegant tern, and Western yellow wagtail (*Montacilla flava*). The most special of these was undoubtedly the Temminck's stint which was found in late 2016 by Glynis Bowie (Figure 12). This species was the biodiversity fauna find of the year. This was the first record of the species in southern Africa for over 30 years and over 1200 people made the pilgrimage to see it. There have only been four twitches of more than 1000 people in southern Africa's birding history. As well as the Temminck's stint (*Calidris temminckii*), the other twitches which have attracted more than 1000 birders include the rufous tail scrub-robin (*Cercotrichas galactotes*), the snowy egret (*Egretta thula*) and a spotted crane (*Porzana porzana*) that was found near Pretoria. It is highly significant that three of those occurred at CCT protected wetland sites!



Figure 12: Temminck's stint at Strandfontien, False Bay Nature Reserve, the first record in southern Africa for over 30 years.

Honey Badger

In the 2016 financial year, Blaauwberg Nature Reserve staff reared a honey badger (*Mellivora capensis*) that was left orphaned. The necessary permits were obtained from CapeNature and regular checks were made by a veterinarian to monitor the health and progress of the honey badger (Figure 14).



Figure 14a: Honey badger at Blaauwberg Nature Reserve



Figure 14b: Camera trap image outside the soft release site for the badger indicating socialisation with other badgers in the area. Badgers can form 'bachelor' groups that hunt together.

In 2016/2017, a soft release of the badger was planned and initiated. The initial site for soft release of the badger was Blaauwberg Nature Reserve. It was found not to be an ideal release site due to certain factors:

- Proximity to an urban area with easy access to human waste and food.

- Season (winter) making food availability scarce and possible forcing the animal to more easily accessible sites in urban areas.
- Blaauwberg Nature Reserve as a site is still in the early stages of rehabilitation making availability of natural food sources less likely.
- There is a close proximity of busy roads such as the R27.

With this in mind, another release site was chosen up the West Coast on Bokbaai farm with approval from CapeNature. The badger was moved to this location on the 4 June 2017 and a soft release was initiated. The badger was captured on camera traps socialising with other badgers multiple times, and eventually did not return to the site of release (Figure 15). No incidents of damage or entering into human areas have been reported in the last five months and from these observations it can be considered a successful release and reintroduction to the wild of a rehabilitated honey badger. The project will still be monitored. Very valuable lessons were learnt in this project regarding the successful rehabilitation and release of a honey badger.

Hippo



Figure 16: Young male hippo in Strandfontein

A young male hippopotamus (Figure 16) was passively captured in the Strandfontein Birding Area and translocated to Garden Route Game Lodge on 28 June 2017. Reports indicate that he has settled in well with the two females at his new home. The capture operation took several months and thanks are extended to all those who assisted the False Bay Nature Reserve with the capture operation and to the Cape Bird Club and Birdlife South Africa for their financial support in sourcing funding to supply a magnetic lock and infrared beam for the trap door mechanism.

Eland & Hartebeest

The Gantouw Project, located at Rondevlei (False Bay Nature Reserve), continued with the five eland being continually monitored to record their diet preferences (Figure 17). The project is designed to assess the viability of using tame eland as a management tool on small nature reserves to control bush encroachment.

Diet preferences, plot data; camera traps and fixed point photography will feed into the detailed monitoring programme which will hopefully assess vegetation changes. The project will be reviewed in early 2018 and the way forward and future of the project will be decided on. Factors that will be taken into account are the success of the intervention on the vegetation as well as the operational requirements; logistics and budget required to maintain the project.



Figure 17: Gantouw Project

CCT's Blaauwberg Nature Reserve celebrated a momentous occasion as the last eland of a total of eight, was released into the reserve on Wednesday 8 March 2017. The other seven eland were introduced to the

Blaauwberg Nature Reserve from December 2016 to February 2017. The animals were donated by the Koeberg Nature Reserve as part of their management of the eland population in that nature reserve. In September 2016 five red hartebeest that were obtained from Highlands Farm in Graaff-Reinet in the Eastern Cape were also released in the Blaauwberg Nature Reserve.

Caracal

Caracal are fairly common on many of the City's nature reserves and natural open spaces, being vitally important as they are an essential predator on the more intact natural areas in the City. There are however occasions when the caracal and other animals such as porcupine and genet do interact with residential property adjacent to reserves. This can sometimes cause conflict but by far the largest consequences of these animals moving between natural spaces, are road kills. As urban development fragments natural open space, road kills are becoming more common. Over the last year, a number of press releases highlighted this issue. The figure below (Figure 18) shows a remarkable picture of a caracal in Table Bay Nature Reserve.

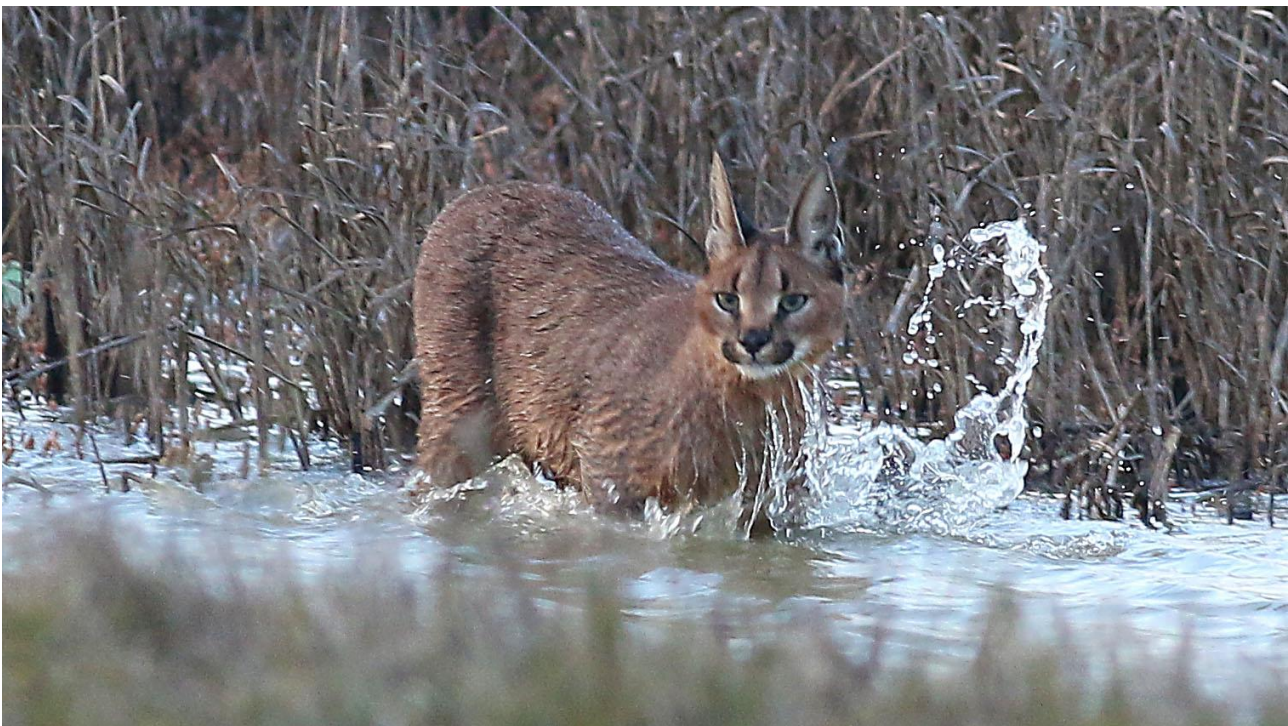


Figure 18: A rare photograph of a caracal in water at Rietvlei, Table Bay Nature Reserve (Photo: Jan and Frieda Prinsloo)

Cape Leopard

Earlier in the year a young leopard (*Panthera pardus*) frequented the Bulk Water treatment plant at Steenbras Nature Reserve (Figure 19). The leopard appeared to be attracted by birds that were nesting in the plant. BMB worked closely with Bulk Water to monitor the leopard and ensure that the facility was secured. The leopard is now no longer in the area and no more issues have been reported.



Figure 19: Leopard photographed at the Steenbras Water Treatment Plant

Game Register

The game register for the game located on the City reserves can be found in Table 8. This register is important and in the near future BMB will be required to report to CapeNature on these statistics.

Table 8: Game spreadsheet for period July 2016 to June 2017

Species	Translocations	Births	Deaths	Total in CCT	Animals on loan	Animals on CCT reserves
Bontebok (<i>Damaliscus pygargus pygargus</i>)	0	0	0	9	8	1
Grey rhebok (<i>Pelea capreolus</i>)	0	0	2	3	0	3
Hippopotamus (<i>Hippopotamus amphibious</i>)	1	1	0	6	0	6
Eland (<i>Taurotragus oryx</i>)	8	1	0	14	0	14
Red hartebeest (<i>Alcelaphus buselaphus</i>)	5	0	0	7	0	7

4.4 Baboons

The chacma baboon (*Papio ursinus*) forms a part of the City of Cape Town's rich biodiversity and is a considerable tourism asset (Figure 20). After many years of management, the Peninsula baboon population is steadily growing (the managed troops grew from 408 in June 2016 to 426 in June 2017) 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 problem in a number of areas in the Peninsula.



Figure 20: Baboons in indigenous vegetation

Table 9: Population statistics

TROOP	Total December Populations					Total Births 2017	Total Deaths 2017	Emigration/ Immigration 2017	Population Increase (Since Dec 2012)	TOTAL CURRENT POPULATION
	2012	2013	2014	2015	2016					
SOUTH										
Da Gama Troop	54	45	43	49	55	2	5	0	-2	52
Smitswinkel Bay	23	21	22	23	33	0	1	+1	10	33
Waterfall	28	30	30	32	37	2	1	-1	9	37
Groot Olifantsbos	19	13	17	16	22	2	2	+1	4	23
Misty Cliffs	18	16	14	11	0	0	0	0	-18	0
Slangkop	33	32	36	41	40	3	3	0	7	40
SUB TOTAL	175	157	162	172	187	9	12	+1	10	185
NORTH										
Zwaanswyk	25	26	28	30	29	1	2	+2	5	30
Tokai	61	65	72	62	67	10	6	-2	8	69
Mountain	33	44	48	49	52	7	3	1	24	57
Constantia 1 & 2	60	63	70	77	84	11	8	-2	25	85
SUB TOTAL	179	198	218	218	232	29	19	-1	62	241
TOTAL	354	355	380	390	419	38	31		72	426

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

The existing 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, CapeNature and the Navy) and the Baboon Liaison Group (BLG) (comprising of Councillors, representatives of the affected ratepayers, SPCA and Baboon Research Unit, UCT) is going from strength to strength. The programme run by the service provider Human Wildlife Solutions (HWS), however, remains costly and runs at about R12 M per year. In the last year, Figure 21 shows that the troops, on average, spent 99.5% (up from 98.7% in 2015/2016) of the time out of town (the tender stipulates that the troops need to stay out of town for over 90% of the time). For the first time since HWS began baboon management in 2012, the average percentage time the baboon troops were kept out of town was over 99%. A monthly average of 99.9% was achieved on three occasions during this period. Individual baboons only raided for 5.1% of the time.

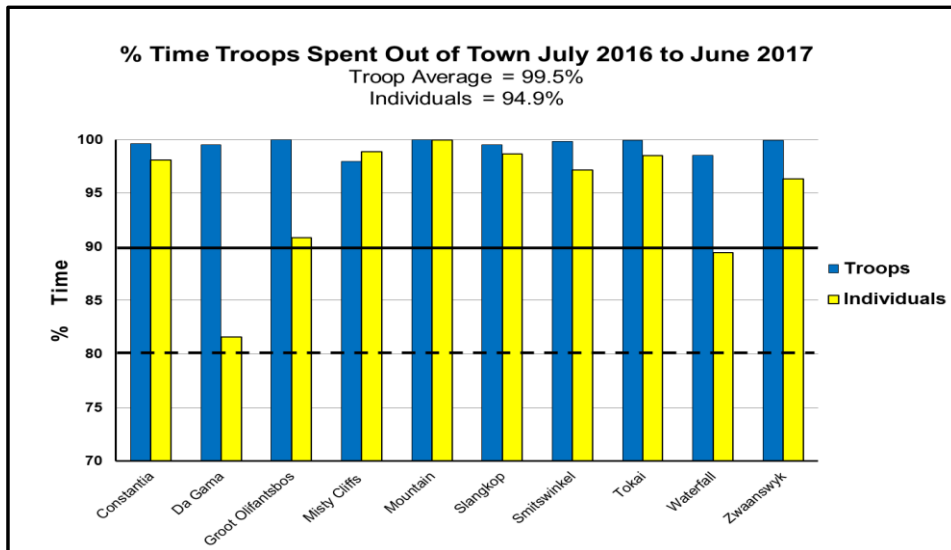


Figure 21: Percentage of time baboon troops and individuals spent out of town

The hotline calls for the last year are one of the indicators which illustrate the urban areas with high conflicts. This is not a complete correlation as there might be many calls on one baboon, but it does indicate where the recurring problems are. For example, there are a high number of hotline calls in Da Gama; Welcome Glen and Glencairn are where the Da Gama troop is located (see figure 22) and whose individual males spend a relatively large amount of the time in town. Similarly waterfall; Simons Town can be correlated with Waterfall troop.

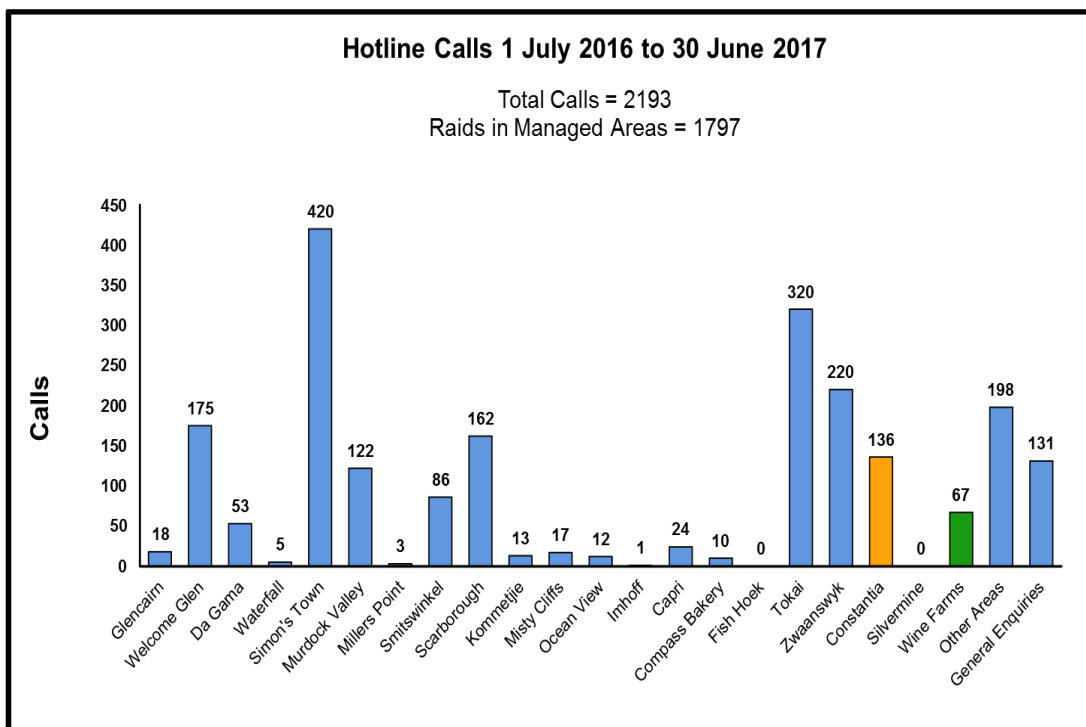


Figure 22: Hotline calls for 2016/2017

There were many highlights to this successful project but the most important was merging the Misty Cliffs females with the Groot Olifantsbos (GOB) Troop in October 2016. The movement of the Misty Cliffs female baboons back into the Cape of Good Hope (CoGH) section of the Table Mountain National Park (TMNP) was a positive step forward. This has reduced the potential for these females to encounter human derived foods as the baboons are now moving and foraging within a natural area.

Two other noticeable highlights pertained to waste management and baboon-proofing in the South-West Region:-

- The village of Misty Cliffs Village sets a good example for all baboon-affected areas. The houses in the village all have baboon-proof bins and most of the bins are stored in baboon-proof enclosures.
- A good working relationship has been established with the City of Cape Town's Solid Waste Department. The Waste Department will be delivering up to 370 baboon-proof bins to residents living in the upper reaches of Ocean View, whom are most affected by baboons. The Black Marlin Restaurant near Miller's Point has also received baboon-proof bins, which will now be emptied by an approved City of Cape Town service provider. To date the Black Marlin has had a very poor waste management record, and acted as a constant food attractant for baboons.

However, Waste Management still remains a challenge throughout all the sections. This is particularly relevant to properties under the stewardship of authorities' such as the SA Navy and SANParks. Other areas such as Heron Park, local restaurants and waste generated by households continue to be a problem as they provide feeding stations for baboons. Without adequate waste management in these baboon-affected areas, waste will remain an attractant to baboons and hamper management efforts.

As well as waste management, the devastating drought currently being experienced in the Western Cape has impacted the baboon troops. Many of the troops seem to be under foraging pressure and are moving into the lower lying areas bordering town. The fires of 2015 and 2016 also impacted many baboon home ranges. The effects of fires, in conjunction with the drought, can have a devastating impact on the fynbos ecosystem. During a drought, the recovery time of fynbos is much slower.

Finally, there were several dispersing males in the northern population of baboons. Some of these males could potentially be moved to the south to maintain genetic diversity. However, there needs to be a vacancy within the receiving troop in order for the translocation to be viable. Unfortunately, if there were no vacancies, some dispersing males had to be euthanased.

In addition to the baboons on the Cape Peninsula, the City's Biodiversity Management manages baboon troops in the Steenbras Nature Reserve. In 2016 the Virtual Fence system was implemented to limit human/baboon conflict in Gordon's Bay. This management method takes the natural behaviour traits of baboons into consideration and simulates the formation of a boundary which the baboon troop no longer find desirable to cross. This management technique has proved extremely successful at keeping the animals out of town, enabling the reserve staff to focus 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.

4.5 Water

The Water Fund

The City of Cape Town and The Nature Conservancy (TNC) continued to work together on the 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 Water Fund is at present being set up and is fund raising. It is a critical intervention in the current water crisis to support water security.

Recreational Water Use By-law

The final draft of the Recreational Water Use By-law for Cape Town's water bodies is still in process and waiting the go-ahead to submit to Council. 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.

Geohydrology and Hydrology of Diep River Estuary (incorporating Rietvlei), Table Bay Nature Reserve

The geohydrology and hydrology Tender at Table Bay Nature Reserve: Rietvlei Section was completed in 2016/2017. The project was undertaken by the Institute for Water and Environmental Engineering at Stellenbosch University (IWEEU) together with Mr Ross Campbell, Dr Gaathier Mahed and Dr Liz Day as sub-consultants as a response to issues identified in the Diep Estuary Management Plan (EMP), enforced through the National Integrated Coastal Management Act (Act 24 of 2008).

This study produced 5 reports relating to (1) Hydrodynamic modelling, (2) Groundwater monitoring, (3) Surface water data analysis, (4) Training and Operations manual, and (5) an Executive Summary.

Estuaries in South Africa have historically been poorly managed, partly because they did not fall squarely within the responsibility of any one department. The result of this is that a high percentage of estuaries are significantly degraded. This is now being addressed through the National Integrated Coastal Management Act (Act 24 of 2008) which makes Estuary Management Plans mandatory. In anticipation of the Act, Cape Action for People and Environment (C.A.P.E.) developed an Estuaries Management Program (EMP) which, over the past few years has provided funding for the development of pilot management plans for a number of priority estuaries in the Western Cape. One of the estuaries identified as a priority was the Diep Estuary, comprising the Rietvlei Wetland and the Milnerton Lagoon. The first version of the Estuary Management Plan (EMP) (Jackson et al. 2011) which includes a 5-year Action Plan was completed in December 2008 and is currently in the process of being implemented. The EMP was based on the findings of a Baseline Study that identified a number of issues affecting estuary condition and management, including:

- The need to allow for seasonal fluctuation in water levels in the estuarine pans,
- The influence of Potsdam WWTW discharges of treated effluent into the estuary, and
- The effects of pollutants.

One of the key management objectives of the EMP for the Diep River Estuary is, *"To develop a mechanism to manage the hydrodynamics of the system in a manner which simulates as far as possible the natural condition and which:*

- *Alleviates the dust problem*
- *Protects property against flooding*
- *Reduces siltation*
- *Optimises flows from and through the various components of the system, and*
- *Establishes optimum conditions at the estuary mouth"*

The operational objectives linked to the management of the hydrodynamics in the system include ecosystem function, salinity regime, water levels, flooding, estuary mouth conditions, sediment management, and water flows.

In order to design a strategy to meet the objectives outlined above, it was necessary to have information on the hydrology and geohydrology of the Diep Estuary system. Despite the fact that this was identified as a priority as far back as 1994 in the Rietvlei Management Plan Report (CSIR Report, 1994), this information was not available. In order to obtain the required information, the Action Plan linked to the EMP of 2008

suggested to study the hydrology and geohydrology of the estuary and to compile a hydrodynamics model.

The specific deliverables were as follows:

- A report on the results of the surface and groundwater monitoring
- A report on flows into the system based on existing information
- A simple database for storing collected data.
- A hydrodynamic model of the system
- Training of relevant CCT staff to operate equipment to ensure continuous monitoring.
- An operation and training manual.
- Purchasing of equipment for collecting data.

These deliverables were all met by the study, and a set of specific recommendations flowed from these deliverables, including the following:

The following recommendations may be made based on the deliverables:

- A water quality model (such as CE-QUAL-W2) should be used in conjunction with a groundwater model (such as AKRU), to reproduce and explain the changes in salinity observed in the Rietvlei dam. The model may also be used to predict algal blooms.
- The channel at Otto du Plessis needs to be surveyed to confirm the modelling report's findings and the salinity should be monitored. It should then be dredged and monitored to see how the changing salinities respond.
- The riparian vegetation at Blaauwberg bridge needs to be cleared to prevent damming of the river and thus lowering the flood risk during flood events.
- The temperature at the outlet of Potsdam WWTW needs to be measured as well as the average salinities to confirm the theory of heating and diluting the salinities of the river water, resulting in warmer, less saline water at Otto du Plessis than Blaauwberg bridge.
- Depth profile sample of salinities in the dam showed that it was uniform from surface to bottom and no halocline was detected.
- Salinities need to be extended up to Otto du Plessis bridge which could be accomplished by dredging the area south of it as dictated by the modelling report.
- In order to increase salinities in the lagoon it was proposed to reduce the water levels in the lagoon. This could be accomplished by the diversion of Potsdam WWTW flows, during the high flow months i.e. winter.
- In order to get the system as close to a natural estuary as possible it would require the limiting of Potsdam WWTW flows especially during summer, such that the mouth closes as well as assessing the drainage characteristics of the Potsdam WWTW canal that drains the system.
- The ideal solution would be for Potsdam WWTW to recycle 100% of its effluent or dispose of it into the marine environment.
- The current dust problems are related to the drying out of the pans during summer and in order to remedy this it would require that the pans remain flooded for longer. The pans do not flood as the Potsdam WWTW canal drains the system too fast and the mouth does not close for long periods. A link between groundwater and surface water in the area of the pans need to be found.
- From a management aspect, a relationship would have to be found that links pan water depths to groundwater levels so that recharge is only allowed when groundwater levels are low.
- The mouth should be closed to allow the water depths to flood the pans and allow a breach later during the season. Keeping the pans flooded longer allows for longer drying periods as well as slower recharge of groundwater, thus producing less dust.
- It was postulated that the Diep River estuary was a salt wedge type estuary and this needs to be confirmed.



Figure 23: Children assisting reserve staff with removing the weir chocks



Figure 24: Drawdown at Zeekoevlei, False Bay Nature Reserve

Zeekoevlei and Rondevlei Drawdowns

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 21st drawdown for Zeekoevlei and took place 27 April 2017 (Figure 24). Members from the local community came through to help with opening of the Zeekoevlei weir with much enthusiasm (Figure 23). People of all ages were eager to help with the removal of the weir chocks. Due to particularly low water levels this year, the impacts of opening the weir were not as evident as in previous years, but the desired flushing effect on the water body was still achieved.

Trek fishing in Zandvlei

Every quarter there is a quarterly fish trek (count) at the Zandvlei Estuary Nature Reserve (Figure 25). The trek was a great success, with interesting catches including Cape stumpnose, white Steenbras and leervis (Garrick). The staff had the opportunity to learn identification of various fish species while conducting the trek.



Figure 25: Students, interns and learners assisting at the Zandvlei Estuary Nature Reserve quarterly fish trek (left and above) (Photos: L. Slingsers 2017)

Zandvlei silting



The silting of Zandvlei Estuary Nature Reserve's estuary remains a cause of concern and ongoing efforts to continue with the dredging is in process (Figure 26).

Figure 26: Zandvlei estuary showing siltation

Algal blooms

Zandvlei Estuary Nature Reserve

On 1 February the reserve manager responded to a report of fish gasping for air in the Park Island canal. The water colour could be described as khaki. Fish were clearly in distress. Dissolved oxygen readings and a sample for algal analysis were taken immediately. The Sample taken positively identified the presence of golden algae (*Prymnesium parvum*). The golden algae bloom caused a massive fish die off in April 2012. As a result of this the mouth was immediately opened in an attempt to allow sea water to ingress and change the dynamic of the vlei. This seems to have changed the dynamics and led to the disappearance of the bloom. Quick management response resulted in diverting a disaster.

Rietvlei, Table Bay Nature Reserve

The City collected and analysed water samples on 16 March 2017 and found that microcystin toxins associated with blue-green algae (see Figure 27 right) exceeded the World Health Organisation's recreational guideline for freshwater water bodies.

The Milnerton Aquatic Club's 24-hour endurance sailing challenge, which was scheduled to take place at the Rietvlei water area from 18 to 19 March 2017, was cancelled as a result.

Due to the ongoing drought and low water levels there were extensive areas of exposed dry shoreline around Rietvlei. It is suspected that 5 mm rainfall that was recorded on 15 March 2017 washed accumulated minerals and organic material from decomposing and dead plants along the shoreline into the water at Rietvlei. These minerals and organic materials, combined with high ambient temperatures, could have provided the nutrients for the rapid growth of algae in the water. The City immediately initiated weekly sampling which continued until July 2017 when Rietvlei was reopened.

The algal blooms can usually be seen as green, blue-green, white or brown scum or mats floating on the surface of the water.

Exposure to these algae can cause eye irritation, skin rashes, mouth ulcers, vomiting, diarrhoea, and cold-or flu-like symptoms. Drinking or swallowing large amounts of water can be extremely dangerous. Members of the public were urged to avoid all contact with the water at Rietvlei during the period.



Figure 27: Example of blue-green algae flocculation in the water

4.6 Restoration

Ecological Restoration Prioritisation Project

Restoring degraded ecosystems will assist us to meet our biodiversity targets and will improve ecosystem resilience to climate change impacts. All restoration undertaken (including fire and invasive species management) will be guided by restoration plans.

The ecological prioritisation project has three main components, as follows:

- Habitat condition assessments on nature reserves and other conservation sites to map areas needing restoration;
- Objective prioritisation process using the SuperDecisions Analytical Hierarchical Process tool, in which criteria (e.g. biodiversity, ecological functioning, habitat condition) were weighted by staff and used by the programme to determine overall priorities.
- Drafting of restoration management plans for reserves, including annual plans of operation that integrate fire, invasive alien and active restoration management interventions.

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. So far 18 sections / reserves have been assessed & mapped (outstanding reserves are Steenbras, Witzands Aquifer, Joostenbergkloof & Dassenberg Hills areas). There are 5 habitat conditions and these can be seen in the example shown here of Bothasig Fynbos Nature Reserve (Figure 28). The City has ensured that the detailed habitat condition assessment methodology developed for reserves is compatible with SAEON's country-wide habitat assessment methodology.

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. Plans completed or in final draft are six; in early draft are another six.



Habitat condition map of Bothasig Fynbos Nature Reserve, as surveyed in September 2016.

21

Figure 28: Bothasig Fynbos Nature Reserve – Habitat Condition Map

Restoration Implementation

There are numerous restoration projects across the branch of which a few are highlighted below.

Restoration planting at Zeekoevlei Eastern Shore, False Bay Nature Reserve, occurred in June 2017. This was a two-day planting event, which was preceded by days in the field to insert wind breaks, broadcast annual seed and prepare plants in the nursery for planting out. The planting team included Zeekoevlei staff and interns, international volunteers, EPWP and CCT staff. This particular project is closely linked to the conservation of the butterflies *Kedestes barberae bunta* (Barber's ranger) and *Kedestes lenis lenis* (unique ranger) as this project not only aims to restore Endangered Cape Flats Dune Strandveld but also aims to provide suitable habitat for these highly threatened butterflies. An interesting additional aspect of this project was that due to the negative impact on the plants of sand blasting on the dunes, the planting depth was increased to compensate for the amount of surface sand that would be lost in the months to come – thereby giving the plants time to establish. This will be monitored and reported on in time to come.

During April and May 2017, the staff prepared, planned and executed the restoration plan for Tygerberg Nature Reserve old ploughed fields. The activities started with seed cleaning, sorting and weighing in May, fence installation around the 50 x 50 meter plot, tilling and adding of organic material to the site, seeding and burning the eastern section and seeding the western section, monitoring the emergence of seedlings. The details of the restoration activities are listed in the restoration section (Figure 29 & 30).



Figure 29: Burnt and unburnt sides of block



Figure 30: Seedlings of *Otholobium hirtum* emerging

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:	No. of individuals
Plants donated	19 407
Plants planted out	17 015
Plants bagged / potted	23 386
Plants propagated/by cuttings	25 039
Seed trays sown	1 632
Totals: (excl seeds and bulbs S&R):	84 847

4.7 Soil Erosion

The Working for Wetland team started on the gabion project which stretches from Poussion Street to Gate 3 on Eksteen Road in the Tygerberg Nature Reserve. Work started on 4 May 2017 and will be completed by Friday 14 July 2017. Extensive excavation occurred and then gabion baskets were installed and filled with shale rock from the La Farge quarry on the Tygerberg Hills (Figure 31 & 32). Once the first phase of gabions is completed the area will be capped with cement. Phase two will begin in the new financial year.



Figure 31: Before photo of lower slope and upper slopes



Figure 32: After photos - View down and up slope of the TNR gabion project.

4.8 Ecological 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 2017 (Table 11).

Table 11: Statistics from the database showing status of all species recorded in City of Cape Town sites. Figures and text in red show an update of the statistics from the previous report.

Species Class	Present on site	Previous on site (not recorded since 2007 or before)	Lost To Site (not recorded since 1997 or before)	Class Total	Notes
Crustaceans	2	0	0	2	Unchanged
Mammals	69	5	5	79	Two species have moved to the "Previous to site" list: Bush Karoo Rat has not been recorded since 2006, however this is regularly sighted in the north sites so can be easily added back onto the list. Heaviside dolphin is another species not recorded since 2007 - As the reserve staff are not directly involved in marine management, time is not spent on doing marine species counts.
Pisces (Fish)	32	2	1	35	Unchanged: Some new sightings but still needing confirmation.
Aves (Birds))	298	3	34	335	Wilson's phalarope is now on the "Previous on-site" list, with Antarctic tern and Damara tern. Wilson's phalarope, last recorded to be at Rietvlei, is a vagrant and thus cannot be actively searched for, and also does not trigger any concern or any special management actions.
Reptilia (Reptiles)	61	0	4	65	Unchanged
Amphibia	22	0	2	24	Unchanged
Plants	1887	70	363	2320	One plant species, <i>Anthospermum ericifolium</i> , moved to the Previous to site category. Five moved to the "Lost to site" category. These plants need active searching/surveys, except for the alien species that have been removed as part of a clearing programme.
Insecta (Insects)	56	0	0	56	Unchanged
Arachnida	5	0	0	5	Unchanged
Fungi	23	0	9	32	Unchanged

4.8 Ecological Research

A large independent research project took place in Nelspruit that was collaborative project between the University of Pretoria, University of Cape Town and Wildlife Pharmaceuticals. The project forms part of City staff member's (Dr. Dorothy Breed) PhD project. The aim of this research project is to elucidate the causes of the very economically and serious condition called 'Capture Myopathy' in wildlife. This has significant benefits for research into the very comparable and very serious human condition of 'Exertional Rhabdomyolysis' that is a common condition in fire fighters, and a known condition in City of Cape Town fire workers.



Figure 33: Prof. Tim Noakes (UCT), Dr. Tertius Kohn (UCT) and Dr. Dorothy Breed (CCT) during the collaborative research project on capture myopathy that will benefit wildlife and humans.

Early Detection and Rapid Response (EDRR)

The paper on the invasion potential of EDRR naturalized ornamental alien species, including *Centranthus ruber* (devil's beard), has been reviewed for the journal *Biological Invasions*. This forms part of a special Issue on urban invasions. The paper was well received but some major revisions are required (will be done in the next year).

Blaauwberg Restoration Research Project

The Biodiversity Management Branch in 2012 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 34).

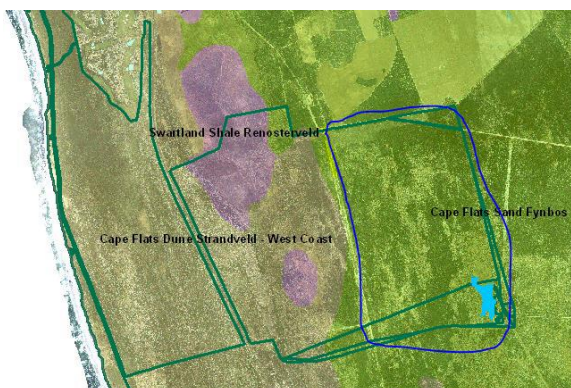


Figure 34: Location of the Blaauwberg Restoration Research Project

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.

On the 30 November a restoration workshop on the project was run at Blaauwberg Nature Reserve (Figure 35). The workshop was also attended by members of the Centre of Excellence for Invasion Biology, University of Stellenbosch (CIB), the Agricultural Research Council: Plant Protection Research Division (ARC-PPRI), and the Department of Environmental Affairs: National Resource Management Programmes (DEA: NRMP – Working for Water).

At the workshop, management frameworks for restoration and the restoration treatments and outcomes at Blaauwberg Nature Reserve were presented and discussed. The group also discussed the lessons learnt from the City's implementation process of alien clearing and restoration and extracted key lessons for future management guidelines.



Figure 35: Participants at the Blaauwberg Nature Reserve restoration workshop

5. Invasive Species

5.1 Terrestrial Invasive Plant Management

The Invasive Species Unit facilitates control of invasive species across the city and collaborates with different line departments to clear woody and aquatic invasive plants. Workload assessments were produced for the majority of the City sites (Figure 39 & 40). Workload assessments need to be done annually (they will also change if there is a fire) and guide costing for the contracts but also provide a baseline for the invasive densities across the City. The plans, which feed into the restoration plans, are also the base of the invasive species control plans that are done per site. The Invasive species control plans for all City land is a requirement of NEMBA.

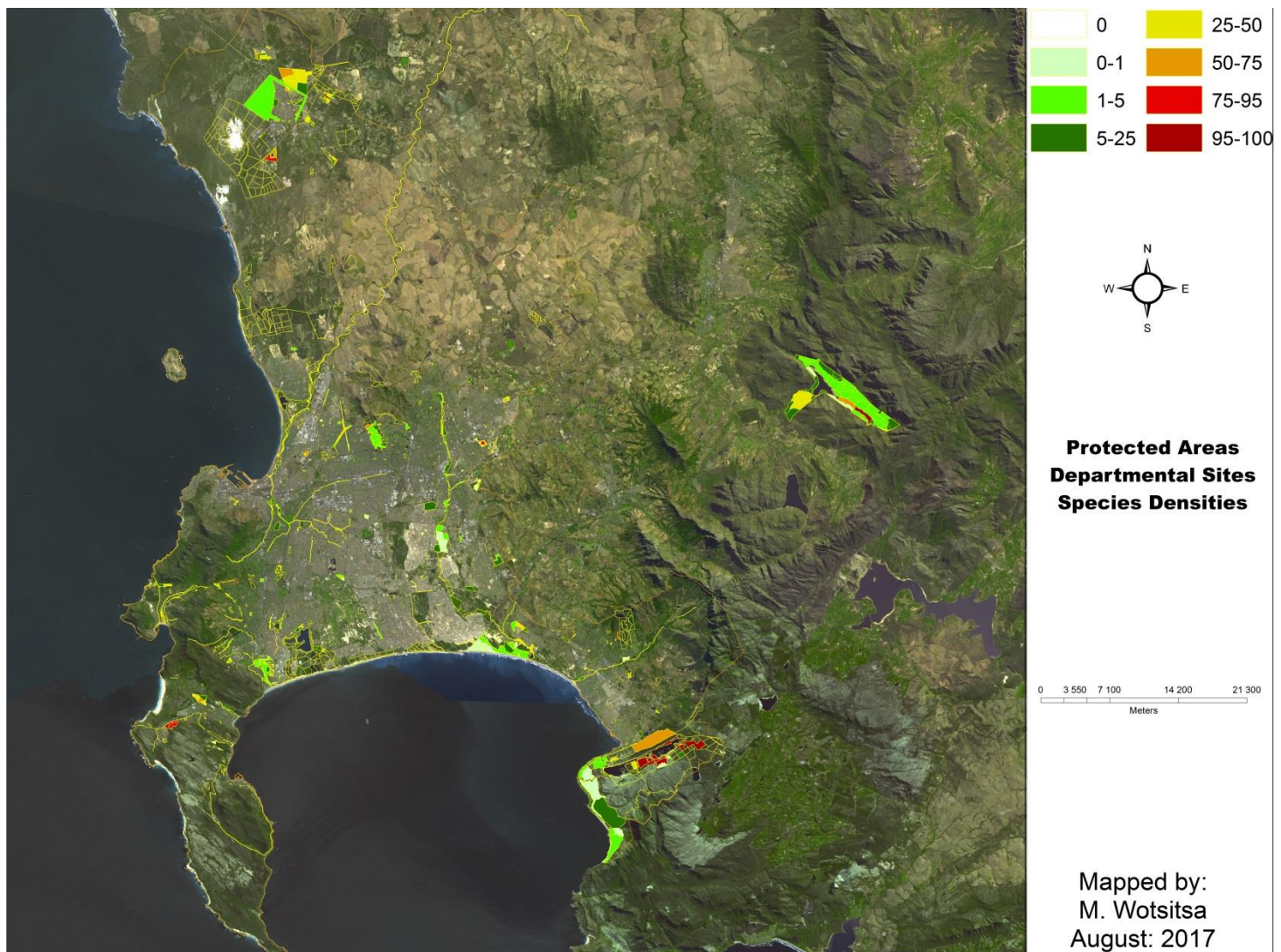


Figure 39: Density map for Alien Invasive Species on City land.

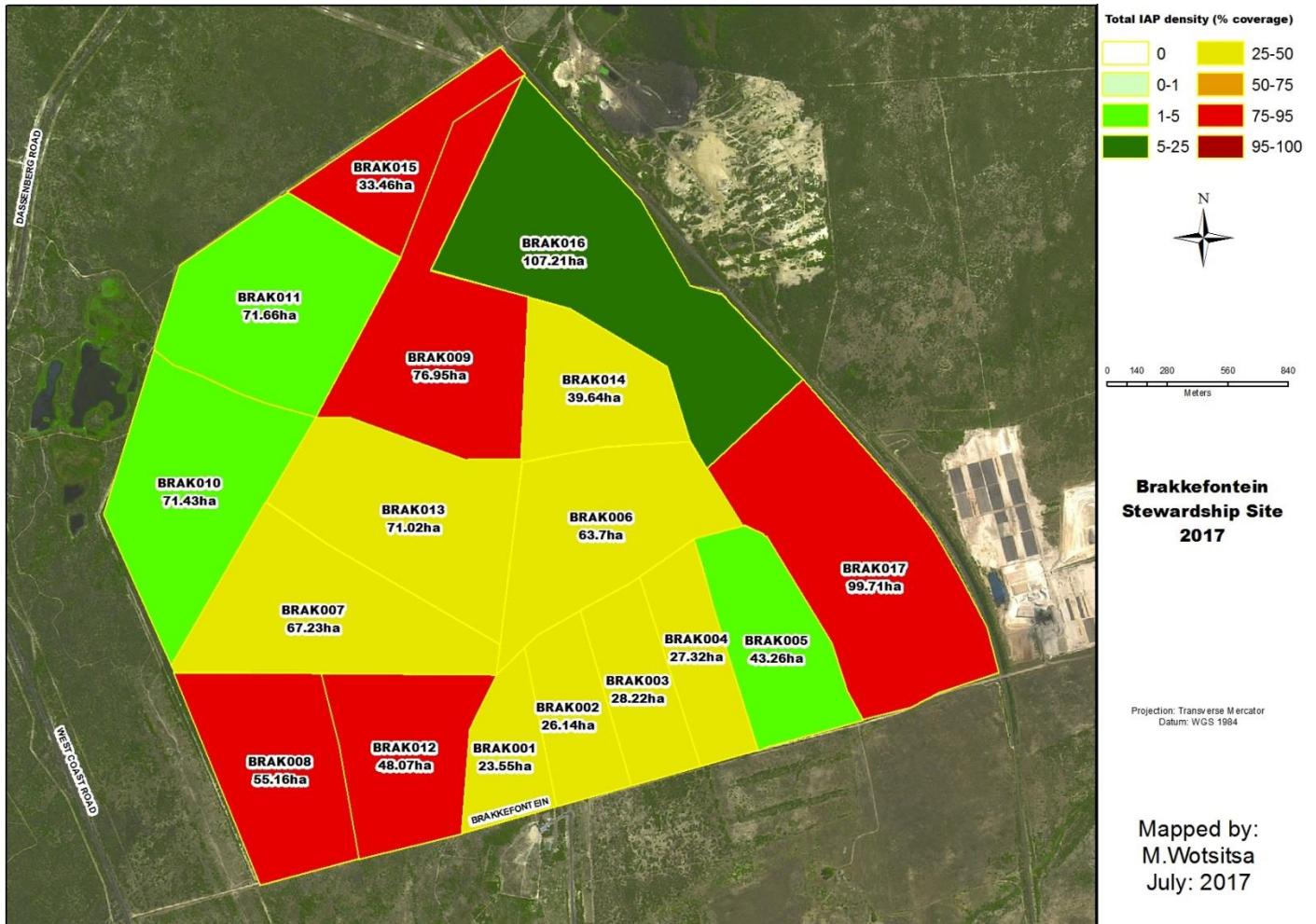


Figure 40: Detailed alien invasive species map for one site – in this case Brakkefontein, part of Witzands Aquifer Nature Reserve.

Figure 41 & 42 shows baseline information and can be used to show trends as the City strives to ensure all land is in the density class of >1% invasion by woody alien invasive species.

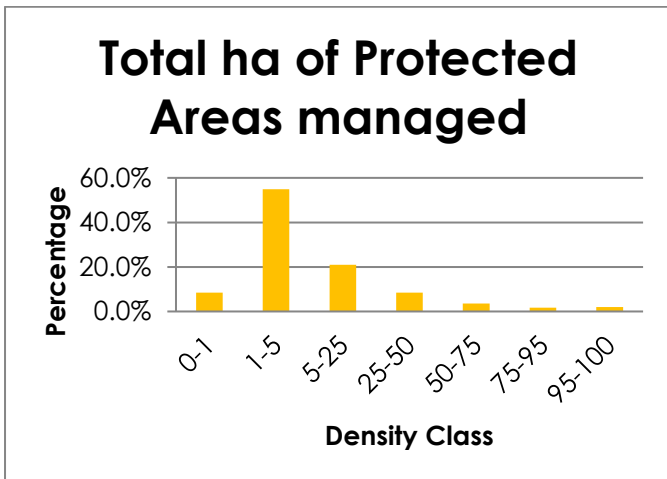


Figure 41: Density classes of City owned protected areas

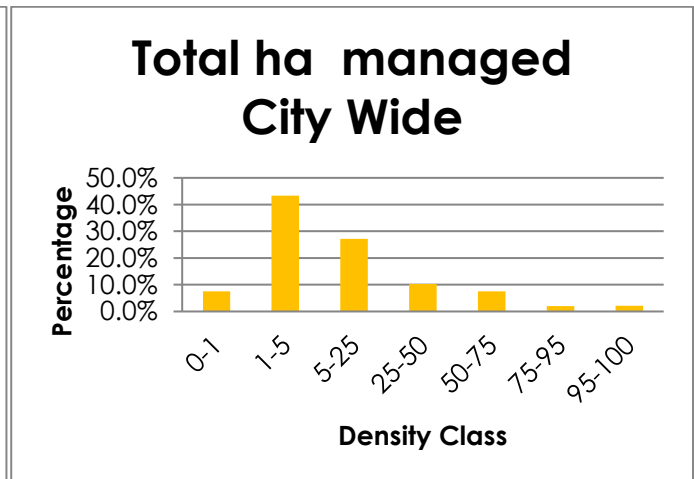


Figure 42: Density classes of City owned land

All together 11 500 initial ha and 12 591 follow up ha cleared form both protected areas and other line departments land. A target setting for woody alien invasive species over the next five year cycle is in process.

Many volunteers assist the reserves in clearing invasive plant species. The most consistent group are the Friends of Blaauwberg Conservation Area hack team who worked every Tuesday in the nature reserve to remove invasive alien vegetation. Last year, they spent over 26 hours clearing invasive species which translated into over 17 person days (Figure 43).



Figure 43: EPWP workers, volunteers and the FoBCA putting hands together to fight the scourge of invasive alien infestation

The City of Cape Town, in collaboration with the DEA Biosecurity Compliance Department, also conducted follow up NEMBA compliance inspections on 50 properties abutting Table Mountain National Park. The process is ongoing.

5.2 Biocontrol

Over one hundred and six thousand biological control agents were released over the financial year.

Table 12: Number of biological control agents released last year.

Biocontrol agent	Target Species	Numbers Released
<i>Neohydronomous affinis</i>	water lettuce	4 170
<i>Lysathia sp</i>	parrot's feather	44 455
<i>Cyrtobagous salviniaea</i>	Kariba weed	19 650
<i>Megamelus scutellaris</i>	water hyacinth	12 440
<i>Neochetina bruchii</i>	water hyacinth	10 400
<i>Eccritotarsus catarinensis</i>	water hyacinth	11 000
<i>Melanterius compactus</i>	Port Jackson	4 000
Total		106 115

On 26 October 2016, a delegation of officials from Sri Lankan Stakeholder Institutions was hosted at the Westlake Conservation Centre. Presentations were held by members of the Invasive Species Unit on biocontrol and invasive animals. In addition, Debbie Muir from DEA: NRMP held presentations on national invasive animal projects, as well as on national and international herbicide use (Figure 44 & 45). After this, the biocontrol project manager and biocontrol team took the delegates on a tour of the Insect Rearing Facility and habitat restoration facility at Westlake.



Figure 44: Sri Lankan delegates on a tour of the Insect Rearing facility at Westlake



Figure 45: Debbie Muir (DEA: NRMP) giving a presentation on national herbicide use

5.3 Invasive Animal Management

House Crows

The City of Cape Town has a remaining house crow population of less than 300 birds. This population roost in Nyanga and Langa. The Nyanga roost has the biggest population of more than 150 birds. The Nyanga and Langa roosts are the only roosts known to be active whereas the other several satellite roost sites namely, Edgemoor, Athlone, Mitchells Plain, Eerste Rivier have been inactive for more than two years. The control project is ongoing.

Mallard Duck

Mallard duck removal operations are only implemented once the grant funding was received in the second half of the year and then a total of 83 mallards were removed. From January to March 2017, the invasive species quality controllers also conducted surveys and population counts at Rondevlei, Zeekoevlei and in Table Bay Nature Reserves. The survey was followed by several removal operations which were conducted in De Oude Spruit Park, Wynberg Park, Aarden Garden and Dam Park.

Wasp

The wasp season begins from September/October and ends in May. During this period there are more than 1,000 wasp reports received. More than 80% of these reports were received through emails and telephone calls. The online reports consisted of less than 20% of the total reports. All the reports that were received were responded to. During the season 18 German and 4418 European paper wasp nests were removed.

Guttural Toad

The guttural toad operation was implemented later than usual due to delays in the Supply Chain Management. The guttural toad season starts in October and ends in March. In the period of the 2016/17 season there are more than 5,000 toads including tadpoles that were collected. More than 83% of the collected toads consist of tadpoles and juveniles.

5.4 Early Detection and Rapid 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>

The spotter network allows general public to spot EDRR plants and report them. A spotter network competition that ran from 15 January 2017 and came to an end on 27 April 2017. Three top spotters were invited to the Invasive Species Unit for the prize giving ceremony (Figure 46). The youngest competitor (and most probably the youngest spotter in the system), Jeremy Gilmore, walked away with the 3rd prize (Figure 42). He is only 13 years of age.



Figure 46: Spotter Network Competition 1st Prize Winner, Phil McLean with Biodiversity Management Branch Manager, Julia Wood in the photo on the left and 3rd Prize Winner, Jeremy Gilmore and EDRR project Manager Phumudzo Ramabulana

6. Fire

6.1 Wildfire

On the City's nature reserves there were numerous small, uncontrolled (wild) fires (81 ha) and three large fires at Witzands Aquifer (2 sections) and Diep River which totalled just under 393 ha (Figure 47, 48 & 49). 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. The most urgent follow up will be the Witzands Aquifer.



Figure 47: Witzands Aquifer Nature Reserve Wildfire



Figure 48: Witzands Aquifer Nature Reserve Wildfire



Figure 49: Witzands Aquifer Nature Reserve Wildfire

Several smaller wildfires plagued the South's and East's nature reserves, but most of these were small and located immediately along the reserves' boundaries.

6.2 Ecological Burns

As a result of the water crisis, only critical fuel reduction or important prescribed ecological burns were undertaken and totalled just over 7 ha. Care was taken to ensure that non-potable water sources were used whenever possible.

On 6 February, at Tygerberg Nature Reserve, teams burnt a block on the Welgemoed side of the reserve – ignition started just after 10:00 and was completed after 12:00 (1 ha). On 9 February the teams burnt a block by the gate (1 ha). Eighty percent of the water used on these burns was from non-potable water from the Goodwood Fire Station sump and Olienhout Dam in Platteklouf (Figure 50). A further 0.25 ha was burnt at Tygerberg on 16 May 2017 to stimulate the germination of seeds sown as part of a restoration project.



Figure 50 : Tygerberg Nature Reserve ecological fuel reduction burns.

A prescribed ecological burn of 5 ha was conducted at the Rondevlei Section of False Bay Nature Reserve on 24 May 2017. The burn was successful and took one day to complete. The purpose of the burn was to reduce nutrient loading in the vleis by burning old reedbeds. Burning the reedbeds helps to remove senescent material and stimulates new reed growth, which allows nutrients to be absorbed from the wetland thus removing excess nutrients from the vleis.

A total of 115 stacks were burnt across the reserves during the year.

6.3 Brush Pile Burning

The BMB decided, as a result of the water crisis, to limit the amount of brush piles that were burnt. Only non-potable water was used and each site was assessed. If the brush piles were not a fire hazard, they were left. This is also in line with recent observations and research that brush piles burning can result in slow restoration in the areas where brush piles were burnt. A total of 115 brush piles were burnt on the nature reserves last year, with the majority being burnt at Penhill Conservation Area and the Tygerberg Nature Reserve. Over 27 tons of invasive plant material was burnt. The brush pile burning was done in the main picnic area, pine alley, Kanonberg section, and along the back of the Jim Fouche houses (Figure 51).

Figure 51: Shows brush pile burning at Tygerberg Nature Reserve



7. Nature Conservation

7.1 Overall Reserve Management

The reserves below were recognised at the Branch's Performance Recognition and Teambuilding Day in November 2016:

Reserve of the year

Blaauwberg Nature Reserve

Significant improvement in overall management (high scores in PA Review) but most importantly addressed items well such as biodiversity management; significant invasive clearing in whole reserve and in particular the restoration block; ecological burn; and biodiversity database – species records; infrastructure (fencing project; adequate enclosure and pending game re-introduction). Jacques Kuyler, Area Manager (was also signalled out): Blaauwberg based at Blaauwberg Nature Reserve for “taking it upon himself to lead and complete a 7KM parameter fence, which led to the successful re-introduction of the red hartebeest. This project was badly managed and after discussion with the contractor, he never hesitated, but employed his best staff to ensure the project was completed. He is simply an outstanding leader.”

Runner-up

Helderberg Nature Reserve

Helderberg won the first Reserve of the Year in 2010 Since then they have improved year on year and is now the top scorer last year's PA Review. The reserve is consistently well managed and has all the systems in place. The Helderberg team are also great in assisting other reserves.

Highly recommended reserves

Zandvlei Estuary Aquifer Nature Reserve

The staff of this reserve have displayed great innovation and motivation to develop the necessary infrastructure to support the Expanded Public Works Programme team and other partner organisations that bulk out their staff component. With limited budget and time they have managed to develop the reserves infrastructure development plan to provide what is needed to support the ongoing reserve activities. Additional highlights include: management of the estuary mouth which resulted in improved water quality and higher salinity – lowering of the wier and dredging, EPWP management, high EE numbers, maximum use of volunteers, Peninsula Paddle & Kite Festival hosted every year.

Most improved reserve

Dassenberg Coastal Catchment Partnership (DCCP; incorporating Witzands Aquifer and Klein Dassenberg Nature Reserves)

DCCP has improved dramatically in a number of areas, especially in working as a consolidated team (including transfer staff), alien clearing, rubble removal, and area integrity. Charline Mc Kie and her team were also commended on following the process and removing the inhabitants on Kleinn Dassenberg. Their attention to detail and never giving up through the process is a model for the branch. Good relationships with West Coast Biosphere Reserve, Fire and Rescue and CREW as well as their PAAC is working well.

7.2 Management Effectiveness of the Nature Reserves

It is recognised worldwide that management effectiveness should be monitored via a Protected Areas Management Evaluation tool. The most commonly used is the Management Effectiveness Tracking Tool (METT) developed by WWF to assess and monitor management of protected areas. The City of Cape Town was the first organisation in South Africa to formally adapt the METT. As a result of the work that the City undertook, the tool was taken up first by Cape Action for People and Environment (CAPE) and then CapeNature. Shortly afterwards it was further adapted and taken up by DEA. This tool is now prescribed by DEA that all protected areas in South Africa will undertake a METT every 2 years. The latest version is the METT-SA03.

Cape Town has undertaken the METT 2008 and 2012 versions three times in the last 10 years. In summary:-

2007 - Majority - Management Clearly Inadequate (less than 33%)

2012 - Basic management with significant deficiencies (33-67%)

2017 - 12 Reserves fell in basic management with significant deficiencies (33-67%)

4 Reserves fell in Sound Management (>67%)

See details of the scores in Figure 52.

The massive improvement in the scores between 2007 and 2012 was mainly attributed to Branch wide processes: the consolidation of the Branch; division of budget so each protected area had a dedicated budget, preparation of management plans for each area, demarcation of boundaries, and process to obtain formal conservation status.

Improvement from 2012 to 2017 attributed to preparation of subsidiary plans; increase in budget, staff and equipment; better systems; habitat condition mapping; databases.

Cape Town will start using the METT-SA03 in 2018 and will in 2020 submit formally the scores to DEA via CapeNature.

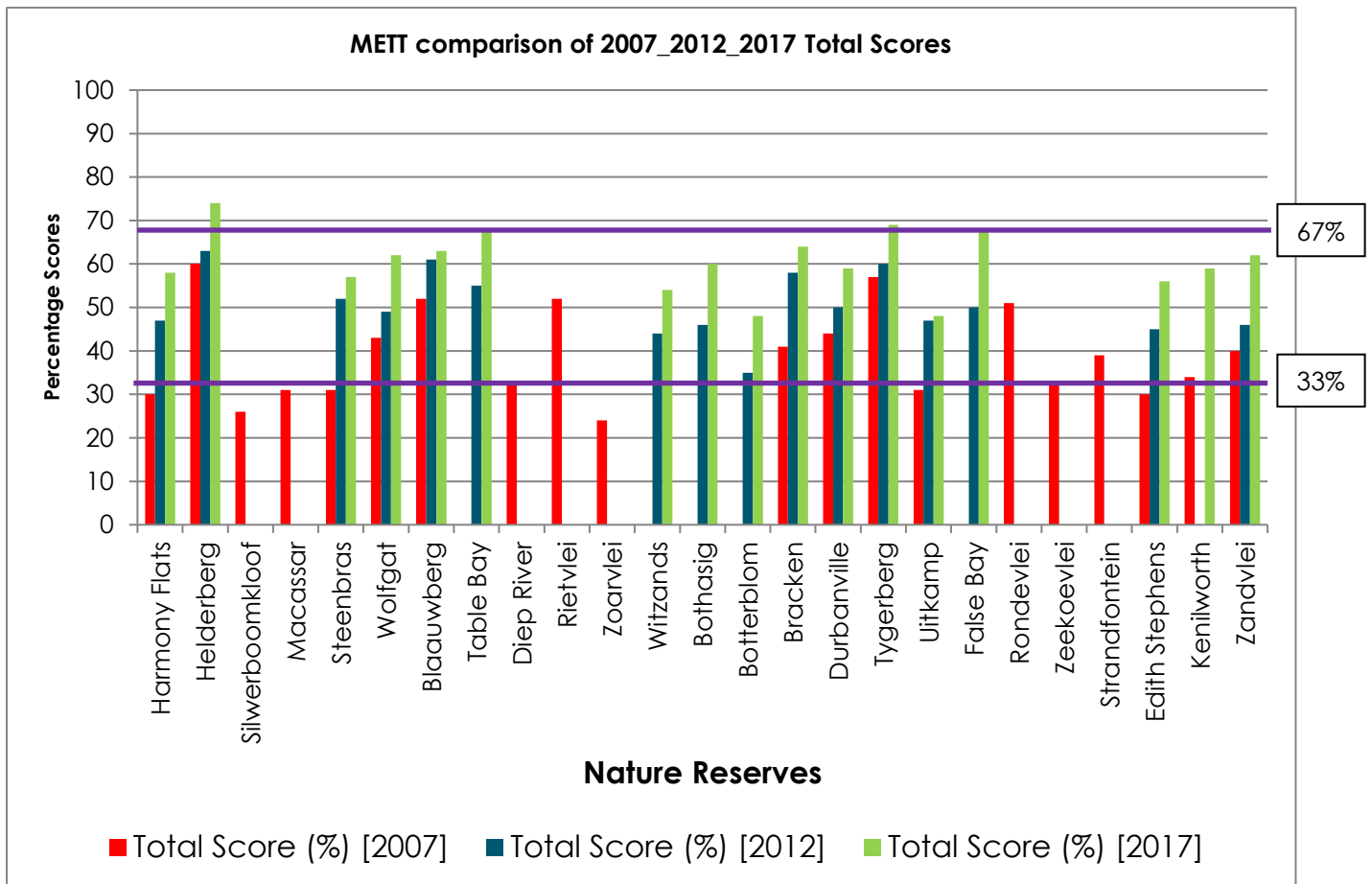


Figure 52: METT scores in 2007, 2012 and 2017

As well as METT, level 4 assessments are important. These include monitoring of flora, fauna and ecological functioning (habitat condition) and Protected Areas Reviews (PA Reviews). This is a more detailed version of the METT and the City has undertaken this on the reserves every year from 2007 to 2017.

The results of the PA Review include the 2015/2016 year which was conducted in July/August 2016 and the 2016/2017 which was undertaken in June 2017. The results are shown in Table 13.

The 10 years of data for the METT-SA03 and PA Review will be analysed to pick up trends and inform continuous improved in management.

Table 13: PA Reviews for 2015/2016 and for 2016/2017. Comparisons with 2013/2014 and 2014/2015 are also shown.

Protected Area Review Scores for 2015 – 2016					
Nature reserve	Score 2014	Score 2015	Score 2016	Score 2017	Main areas of improvement or change
Central region					
Bracken	78%	78%	79%	80%	Improvement in outputs.
Durbanville	60%	60%	62%	63%	Improvement in baseline work
Uitkamp	58%	56%	64%	66%	Some planning and establishment issued have been resolved, improvement on baseline work, some improvement in outputs.
Tygerberg	75%	77%	84%	84%	Significant improvement in planning (proclamation and PAAC) and baseline work.
North					
Witzands	66%	69%	76%	78%	Improvement due to proclamation and PAAC, improvement on baseline work, covered for decrease in scores for ops, management and outputs = mostly symptom of growing team dealing with more sites and impacts but infrastructure and staffing still to catch up - improvement soon underway
Blaauwberg	74%	77%	81%	86%	Significant improvement in baseline work, improvement in planning & establishment, and management.
Table Bay	77%	79%	83%	81%	Improvement due to proclamation, Increased baseline work from 2015; decrease due to operational challenges.
East					
Helderberg	83%	85%	88%	90%	Various operational issues were improved upon
Steenbras	69%	72%	77%	76%	Some improvement in planning (proclamation), baseline work and some management issues resulted in an increase in score. In 2016. 2017: Decrease in planning score as management plan process is behind, and the PAAC issues not yet resolved (actions scored on last year did not work/have not yet shown results).
Harmony Flats	68%	70%	77%	72%	Scores affected by planning issues (management plan process, buffer and expansion issues and PAAC challenges).
Wolfgat	73%	73%	73%	73%	Some improvement in management, but a drop in the baseline section score.
South					
Zandvlei	75%	78%	81%	82%	Significant improvement in operations (staffing, training, vehicles and some maintenance)
False Bay	64%	69%	74%	76%	Improvement due to establishment and resolution of some land issues, some increase in Baseline activities, significant improvement in infrastructure and general maintenance
Edith Stephens	60%	59%	68%	70%	Improvements in planning (linked to proclamation), more work on baseline (but still needs improvement re: records), and improvements in outputs (job creation and EE/awareness)
Kenilworth	62%	70%	74%	75%	Significant improvement in planning, some improvement in other sections except for Baseline that dropped in score. Changeover of manager = missing/can't find some records
AVERAGE:	69%	71%	75%	75%	Slight improvement overall from 2015.

7.3 Assessing management systems in the nature reserves

In November 2017, a group of Danish DTU students spent some time assessing the management systems in the reserves. This was a very useful exercise and acknowledged that the BMB is in a growth phase and operates in a very complex environment. The review of the management system has shown a fundamentally healthy organization with skilled people, high degree of commitment supported by a clear strategy which is understood and adopted by managers on all levels.

However, the rapid growth and limited resources has resulted in an organically developed management system. This has led to an inefficient organizational structure characterized by many direct reports to the branch manager creating bottlenecks and thereby prohibiting scalability.

Though reporting structure was flagged as an area of concern, our analysis show that minor adjustments can make it both coherent and consistent. The underlying problem in reporting is the ad-hoc reporting, which takes up excessive amount of time and thereby inhibits area managers in carrying out work needed fulfil the strategic objectives.

The key recommendations to BMB are:

- Revise the organization structure that allows scalability and specialization
- Align and standardize reporting structure and reduce and systemize ad-hoc reporting
- Continue to develop the capacity and dedication of the skilled employees.

The issues of ad hoc reporting mentioned during this study will be taken up in the next round of DTU students in November 2017.

8. People and Conservation

8.1 Environmental Education

Formal environmental education

A total of 38 706 learners from 1 054 schools (with 15 450 adults) resulted in 54 156 person days of education. Including ad-hoc education related events described below, the total person days amounted to 84 133 individuals (Figure 53). Figures were more than the previous years and more than predicted targets (40,000 person days). The past financial year saw the Environmental Calendar Days celebrated, including, Arbour Day, Heritage/Tourism Month, Coastal Clean-Up Week, Marine Month, Western Leopard Toad Month, Biodiversity Month, Wetlands Month and Water Week (with an invasive species topic).



Edgemead Primary School, Grade 4 at Tygerberg Nature Reserve

Staff enrichment at Table Bay Nature Reserve

New outreach trailer visits Berzelia Primary School, Atlantis



Fire awareness programme

Preparing for fun on the water at Zandvlei Nature Reserve

Sea ridge Primary at KRCA

Figure 53: Photographs of various education programmes across the reserves.

Events, holiday programmes, exhibitions and other

Various events were held at the nature reserves during this period. In total 26 special events were held by nature reserves with approximately 3 300 people attending. Events ranged from annual events such as the False Bay Birdathon to monthly events such as the Tygerberg Full Moon runs.

In addition to the formal events, 2 153 people attended guided hikes through the City's nature reserves during this period.

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 (23 local and 2 Citywide) this year with an estimated 8 300 people attending. Exhibition themes varied, but the most prominent three included careers, marketing and educational exhibitions.

Awareness events/pamphlet hand-outs – at least 23 awareness events were held. Awareness event topics included fire awareness, baboon awareness, snake awareness and beach safety. Over 11 000 people were reached.

Twenty community conservation training sessions were held this year with approximately 255 community members being trained. General community engagements included 1 354 people through 92 contact sessions.

Approximately 1 300 people participated in activity based learning efforts such as beach clean-ups and hacks. This number was similar to last year.

Education support was provided by People and Conservation Officers to students, teachers and volunteers. Over 1 900 people received this support.

8.2 Communication

Approximately 160 resources and resource queries were dealt with this year. Notable planned/strategic resources included various spring event posters, fire, dog walking and other notices; signage was completed for Steenbras Nature Reserve (baboon) and Strandfontein signage. Temporary/minor signs were made for Holbaai, Zandvlei, Bracken, Blaauwberg and Mamre. Various other departments were given advice on outdoor signage; one included De Hel. Designs and/or mock ups for Tygerberg Nature Reserve, Wolfgat Nature Reserve were completed but installation was not completed due to budget constraints and other factors.

Other unplanned resources were developed throughout the year. Some include: trailer re-spray, new visitor statistics sheet, Table Bay information sheets, administrative forms rebrand, midges poster, Rondevlei bird pamphlet, Wolfgat hiking trail poster, EDRR competition invitations, additional vehicle decals, student volunteer posters, virtual fence poster, invitations for various events (e.g. Mandela Day, Birdathon), overnight accommodation booking and other forms, various certificates, visitor safety tips pamphlet, black oystercatcher information leaflet and best student trophies design.

Website content for general biodiversity (e.g. forests, water and baboons), environmental education, nature reserves and specialist areas related to biodiversity continued to be updated. Noticeboard content was developed for each quarter around educational themes. A biodiversity message was also displayed on all City staff computers during the month of May for two weeks in celebration of the International Day for Biological Diversity.

There was a target of two proactive media releases per annum and eight were done. There was a target of 2 CONTACT articles – at least 6 were done and a target of 2 green piece (EMD's internal newsletter) and at least 20 were submitted.

All in all, around 116 media matters were directly 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. Some notable media releases include: Eland release at Blaauwberg Nature Reserve, Table Bay blue-green algae, Youth Day activities and Tygerberg Nature reserve pine and shade structures. Various joint media releases (together with all reserves and other departments) were also done this year – examples include the holiday programmes, spring/winter activity and intention to burn media releases.

8.3 Protected Area Advisory Committees

Quarterly meetings continued for ten Protected Area Advisory Committees (PAAC's). Current PAAC's include-

- Blaauwberg Nature Reserve
- Bracken Nature Reserve
- False Bay Nature Reserve
- Helderberg Nature Reserve
- Lourens River Protected Area
- Table Bay Nature Reserve
- Tygerberg Nature Reserve (including Bothasig)
- Witzands Aquifer Nature Reserve
- Wolfgat Nature Reserve
- Zandvlei Estuary Nature Reserve

Three chairperson forums were held during the year and following elections, new updated Subcouncil representatives were appointed to all the PAAC's.

A new PAAC, for Steenbras (including Harmony Flats) Nature Reserve, was formed. Edith Stephens and Durbanville Nature Reserves (including Botterblom and Uitkamp) remained dormant and will require a recruitment plan prior to be formed.

8.4 Sub-council Presentations

No presentations were given to the Sub-councils this year due to the cancellation of certain Subcouncil meetings following the elections.

8.5 Customer Service

Customised Customer Service training was given to 32 staff members and customer service was added to the student induction training.

8.6 Tourism

In the last financial year, 343 490 visitors visited the nature reserves via the manned access points and key events. Income was R1,9M, slightly down from last year of R2,2M as Table Bay Nature Reserve was closed from May 2017. The income was still more than planned R1,3 M. The visitor numbers were also slightly decreased as a result of Rietvlei section of Table Bay Nature Reserve being closed from 16 March 2017 due to water quality issues.

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

The 2018 Cape Town Visitors Guide (by Cape Town Tourism) was updated with all the relevant nature reserve information and additional biodiversity information added.

8.7 Volunteers, Friends Groups and Sponsored Programmes

Sponsored programmes, mainly through the Cape Town Environmental Education Trust (CTEET), resulted in 361 individuals and 6 775 person days of work in the BMB (approximate value is R3.8M). Some 43 staff members were employed in the conservation projects at the sites listed below:

- Invasive Species Unit – 20 staff members
- Gantouw Project – 4 staff members
- Kenilworth Racecourse Conservation Area– 3 staff members
- Muizenberg East Biodiversity Cluster – 1 staff member
- Strandfontein – 3 staff members
- African Penguin Conservation Project – 4 staff members
- Milnerton Racecourse Section of Table Bay Nature Reserve – 1 staff member
- Atlantic Beach Golf Course Conservation Area – 3 staff members
- Haasendal Nature Reserve– 1 staff member
- Western Leopard Toad Underpass Project – 1 staff member
- Helderberg Eco-Schools Programme – 2 staff members

In the past year 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 as well as across the City, with some 31 034 person days of education being offered by external partners. The education is largely concentrated at schools abutting the False Bay Nature Reserve on the Cape Flats.

The volunteer action plan was revised to better include the City's volunteer policy instructions. A new email account set up exclusively for volunteer queries and People and Conservation Officers trained on how to deal with volunteer queries. Changes have been rolled out across the Branch. CTEET is assisting with the administration. The volunteers (mainly friends groups) resulted in 602 individuals and 1 178 person days on the reserves (approximate value is R850 000) (Figure 54).



Figure 54: Volunteers clearing alien invasive vegetation.

8.8 Skills Development

The BMB was involved in various skills development programmes including the City's Urban Sustainability Graduate Intern Programme (one intern was placed at Head Office to assist with nature reserve environmental education and events), WESSA YES interns (various), WIL students, and the CTEET skills development programmes. Permanent worker and field ranger posts are advertised locally and EPWP workers; interns and learners are encouraged to apply. The EPWP workers were also exposed to various training and skills development opportunities (see Green Jobs section of this report (section 3.2).

The Tsebo-Bohlale Internship programme is continuing with five interns placed on various nature reserves in BMB. This programme, funded by national government, was initiated on 3 August 2017 and ended on 31 July 2017.

The nature conservation WIL students

The nature conservation student experiential year programme continues to be of a very high quality. This programme continues to be of a high standard and this year 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 8 out of the last 13 years, a City student has been the best overall CPUT student.

The CCT placed 14 CPUT students within their different reserves to enable them to complete their experiential learning year in 2016. Of these 12 passed and received their Diploma in Nature Conservation. The average final mark for all 12 students was 60% which is also the class average. The CCT delivered the best WIL student Lamees Chikte who passed with an overall mark of 71%. Lamees also produced the best Conservation Communication project and received 84% for that. Lamees and Tayla Hadwen produced the best and 2nd best Resource management reports with marks of 82 and 73 %.

CTEET learnerships and interns

Twelve successful candidates from the 2015 Nature Conservation Learnership continued with an Environmental Practices (NQF4) Learnerships which started in May 2016 and ended in April 2017 - all 12 candidates successfully completed the programme, with 11 of the 12 finding employment.

In April 2017, a Nature Conservation learnership for nine learners started and was initially going to run for 6 months but fortunately some additional funding from the City of Cape Town has enabled the programme to continue for a further 6 months.

In July 2016, CTEET received funding to place 22 interns with qualifications in Nature Conservation or Conservation Science on the reserves and an additional ten interns in November 2016. All in all, 71 youth (learners and interns) were based on or had some connection to the City's reserves over the course of 2016/17.

9. Security and Law Enforcement

Safety of staff, visitors and infrastructure continues to be a concern. Poaching, arson, illegal dumping and illegal squatting is a common occurrence (Figure 55). Several illegal structures and displaced individuals were removed from various reserves (Figure 56) during the reporting period. Safety of the invasive species contractors is also becoming an increasing concern and certain teams were removed from various sites due to safety concerns. Altogether in 2016/2017, 1 938 permits were checked, and 124 warnings were issued. The biggest challenge is the increase in the security challenges and thus the corresponding costs.



Figure 55: Poaching of a grysbok from one of the reserves.



Figure 56: Illegal structures removed from a reserve.

Visitor and Safe Safety Tender

In order to alleviate the visitor and staff safety and security 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 and in the north, 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
- Harmony Flats Nature Reserve
- Witzandss Aquifer Nature Reserve

Zoarvlei, Table Bay Nature Reserve

The City of Cape Town partnered with the Paarden Eiland City Improvement District (PECID) to appoint a nature conservation officer on a three-year contract to manage the Zoarvlei Section of the Table Bay Nature Reserve. Already the conservation officer has attended PECID security meetings and arranged several joint operations with Law Enforcement to remove illegal structures from the Nature Reserve, as well as undertaken invasive vegetation clearing, natural vegetation restoration, litter clean-ups and monitoring of the birds and plants of the area. These efforts have started to improve the security and aesthetic value of the area, but they also ensure the sustainability of the biodiversity on this land.

The development of the Rugby and Brooklyn residential areas, and the Paarden Eiland industrial complex, around Zoarvlei has brought with it the impacts of urban development, including water pollution, invasive alien vegetation, rubble, litter, fires, and many other challenges. After a public participation process in 2011, the Cape Town City Council approved the inclusion of the Zoarvlei wetland into the Table Bay Nature Reserve, but a manager was not yet appointed for this section.

The Paarden Eiland City Improvement District joined the Table Bay Nature Reserve's protected area advisory committee in 2015 and agreed to fund a contract position for a period of three years in partnership with the City. The conservation officer's contract is administered by the Cape Town Environmental Education Trust, who also placed managers at various other nature reserves in the City, including at Milnerton Racecourse and Atlantic Beach Golf Estate.

10. Staff Matters

10.1 Realignment

The BMB long awaited realignment process, which was initiated in 2012, was abandoned as the ODTP processes took over. A slightly amended BMB structure was signed off as part of the ODTP. This structure to some extent did address the management challenges of the invasive species programme, but unfortunately did not address issues such as management of the people and conservation programmes, wildlife conflict programmes, biodiversity planning, the baboon programme and conservation services. The legal requirements of the nature reserve being proclaimed protected areas under the New Protected Areas Act were also not addressed. A realignment version, within the vision of TDA, will be presented to senior managers in 2017/2018.

10.2 Retirements and Appointments

The retirement of Dr Elzette Jordan and Geert Sprangers at the end of September 2016 and Ian Cranna at the end of February 2017 was a huge loss to the Biodiversity Management Branch and the City. They are wished well in their well deserved retirement.

Geert's position was filled by Julia September who was appointed as the Manager of the Habitat Restoration Coordinator on 1 December 2016. Dr Dorothy Breed was appointed as the City Wildlife Veterinarian (ex Dr Jordan's post) and commenced her service with the City on 2 January 2016. Both Julia and Dorothy will be very valuable additions to the City and we take great pleasure in welcoming them to the team. Ian Cranna's post remained not filled as of the 30 June 2017.

Since July 2016, eight out of 12 vacancies (all posts <T10 and 1x T12) were filled with individuals from the EPWP and skills development programmes.

10.3 Staff Training

Training for permanent staff was undertaken in terms of WPSDP and was above expectation evidenced by overspending of the available budget. Table 14 shows the number of courses and person days of training intervention.

Table 14: Numbers of courses, staff attendance and person days for permanent staff

	2015 – 2016	2016 - 2017
No of courses	82	75
No of staff that attended	143	123
No of person days	1 188	620

There has been a slight decrease in the training interventions attended this financial year and number of staff that attended. There was also a decrease in the number of person days as the courses taken were shorter in length, many of them being related to SAP. The decrease in other courses could be a result of systems changing as a result of ODTP.

The Field Ranger Learnership Program's certificate ceremony was held on the 17 October 2016. Incident Command System (ICS) logistics training was attended by three staff. This critical training needed to

conform to City's accepted processes was funded by the GEF. An events safety course was also attended, critical to improve the approach to larger events management.

Some of the challenges included the training course for the small plant operator tender was not completed and the driving instruction tender expired. A new driving instruction tender is currently being processed.

10.4 Staff Industrial Relations (IR)

All IR matters were dealt with timeously and reported on via the formal SAP process. Please refer to Table 15 for the details of the various disciplinary matters that were attended to during last financial year.

Table 15: IR statistics

	2015 - 2016	2016 - 2017
Non-Financial	7	2
Informal hearing	2	4
Counselling	5	7
Appeals	1	0
Grievance	3	2
Total	20	15

10.5 Staff Health and Safety

The BMB ran consistent processes to ensure H&S standards on reserves are met.

BMB was finally given permission to make use of Fire and Rescue's tenders' for PPE. The FFP2 respirator was tested at the Tygerberg stack burn and my recommendation is that staff should start using FFP2 respirators as mandatory when excessive smoke is experienced at wildfires. This will be determined by the Incident Commander. This is an agenda item at the next Fire Planning Committee meeting for consideration. The Westlake Conservation Centre Health and Safety Committee was restarted and it is going very well.

All Incidences on Duty (IOD)'s were handled efficiently and Table 16 shows the number of incidences.

Table 16: IOD cases as per the EHS Incident Management

	2015/2016	2016/2017
Incapacity	7	11
IOD	14	13

There has been a slight decrease in the reported IOD injuries for the period under review and a slight increase in incapacities.

10.6 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 10 November 2016 at the Harmony Park Resort. The event was attended by Mr Osman Asmal. 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. Certificates were signed off by the Mayor.

Outstanding staff members branch-wide:

Landi Louw, Site Manager, Milnerton Racecourse Conservation Area.

Landi has been the Site Manager of the Milnerton Racecourse Conservation Area for going on 3 years. MRCA was a new site that CTEET established in 2014 and Landi was taken on as the first Site Manager. Starting on a new site is always a challenge, as one has to build brand new relationships with stakeholders, residents and public groups. This is in addition to the conservation and biodiversity challenges which a team is presented with. Since the establishment of the site, Landi has taken ownership and responsibility of the site with an inspiring hands-on approach and dedication. She proactively implements her annual plan of operation, as well as smaller projects such as community engagement and local environmental education days.

Her monthly reports are always a pleasure to read as they are full of detail, photographs and success stories. A professional approach to vegetation monitoring, research and biodiversity improvement has resulted in an impressive and ever growing species list for this relatively new site. Landi also acts as an approachable and inspiring mentor to learners and UNISA students who are placed with her, handling conflict and difficulties with a calm, respectful and positive manner.

Frederik Pedro, Field Ranger, Steenbras Nature Reserve

Frederik comes from a very difficult back ground. He dropped out of school in Standard 5 (Grade 7). Through lots of motivation, he was convinced to enroll with AET. He started AET in 2011 at level 1. Five years later at the age of 52, he is ready to enroll for matric. He's an inspiration what it means not to give up. Well done Frederik, we are proud of you!!! Keep up the good work.

Jonathan Fischer, field ranger at Zeekoevlei section of False Bay

Jonathan is the only field staff at Zeekoevlei, he always has a positive attitude. I have worked with Jonathan for almost 8 years and have never known him to have a sour or bad mood. He is eager to do anything in any weather. I lost him one rainy day and found him in the pouring rain in Zeekoevlei following up with Hyacinth. I told him he didn't have to be in the water in the cold and rain and his response was 'its ok, the hyacinth needs to go, its nature' and he carried on. This is not the only time he has done something like this! You can never find him in the morning because rain or shine he is already doing fence patrol before 07:30, he took it upon himself to take charge of fence patrol and of his own initiative goes and grabs a ranger to do fence patrol. He has also taken ownership of the Eastern shore of Zeekoevlei (2.5 kms 28 toilets and 40 braai spots) and often disappears there to clean toilets and braai spots and pick up litter by himself, except when WOF is there and then he and WOF cleans Eastern shore and the toilets. He gets WOF to work!! I have never had an issue with WOF being lazy when Jonathan is in charge (I think that is worthy of a prize just for getting WOF to work with no issues!!).

Koos Relief, Table Bay Nature Reserve

"the excellent leadership he's shown in the management of the TBNR' PAAC. I think he's got the best PAAC running currently in the branch with regards, representation, attendance by members, subject topics being discussed, the clear understanding by the members of what the structure and platform is to be used for, his

ability to continue learning from others." Koos has also shown an ability to manage permanent staff, interns and students as well as a well-run reserve. He also always responds to emails timeously.

Biodiversity find of the year:

Flora - *Babiana blanda* - Jacques van der Merwe

*Jacques has a great botanical knowledge and has recently discovered the largest population of the Critically Endangered *Babiana blanda* in the world on a small holding south of Atlantis.*

Fauna - Rufous-tailed Scrub Robin - Victoria Day

This migratory bird does not occur in South Africa, but arrived on the Eastern shore of Zeekoevlei much to the delight of birders from all over South Africa.

No awards but special mentions went to Cliff Dorse, Clint Roux, Chrystal Moses, Louis van Wyk, Williem Appolis, Roy Ernstzen, and Kyle October.

11 Administration

11.1 Budget

Operational budgets were spent timeously. There was also an increase of financial control on individual reserve income and expenditure. The Branch investigated overtime of staff and decided to re-schedule shifts to result in fair practice across the reserves and a positive consequence will be a reduction in excess overtime. Items like tea, coffee and refreshments are no longer supplied to the offices.

Of the controllable operating budget 98.72% was spent. During last year there was a motivation for additional funds for security and there was once off allocation of R2 M:

Repairs and Maintenance - 97.14% was spent

Kader Asmal EPWP - R14 000 000 was allocated initially. Another R4M was allocated at the end of April 2017 and spent in 2 weeks. 99.7% of the budget was spent on priority projects.

Capital budgets were spent timeously. 98.5% spent (only R9 433 was not spent; these are funds that could not be spent e.g. On land acquisition or vehicles); All these funds were spent on priority projects. This includes the additional R3.48 M budget obtained for land acquisition.

In last year, 99.3% of the ward allocation projects were spent.

Income was R1.9M as a result of reserve takings and hire of halls. This was more than the target of R1.3M but was slightly down from last year.

In the last year, the City received over R5.82M from NRMP (a programme which includes Working for Water and Working for Wetlands). A total of 97.40% of the NRM funds were spent (the additional moneys are transferred to the new financial year).

R300 000 over 3 years was received from TMF for legal costs for protected area expansion. R100 000 was received from TMF for fencing of Kliprug (stewardship site). Both amounts are being administered by Wilderness Foundation. Funds were also secured (R3.47M) from WWF for land acquisition of Joostenbergkloof

11.2 Fleet and Assets

We have received the first of 10 replacement vehicles that were identified by Fleet.

BMB is 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.

Number of verified assets for 2016/2017 were over 98%. Plans initiated to improve process are ongoing.

11.3 Infrastructure

The infrastructure priorities in the branch slightly shifted and the latest priorities can be seen in Figure 53.

The Wolfgat Environmental Education Centre Phase 1 has been completed and BMB is fixing final snags. Telecommunications and City intranet has been an issue and is still not resolved. Funds will have to be sourced for Phase 2.

Sadly, the building at Harmony Flats, a National Department of Tourism (NDT) project, remains uncompleted. NDT have now agreed to transfer the building to the City and a formal process to sign an MOU is underway.

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

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

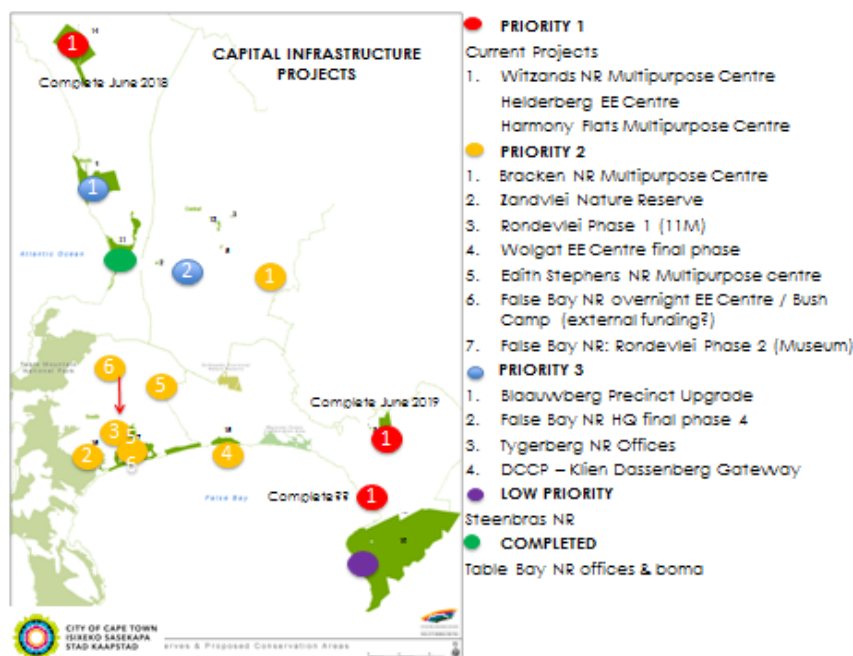


Figure 53: Priority capital projects in BMB

11.4 Contract Management

The Witzands Aquifer Nature Reserve's Multi-Purpose Centre Project 34Q/2016/17 handed over to the construction contractor early February is progressing very well. Sections of the building have been roofed and the concrete slab preparing for the first floor has also been cast. Mari-Louise Van Den Berg is the department's Environmental Control Officer on site during the construction phase of the project.

Tender number 18C/2014/15 is the Provision of a Professional Service Provider to Conduct Hydrology and Geohydrology Study and Produce a Hydrodynamic Model was completed in last financial year. Refer to Water under Section 4. Conservation Services.

The uniform tender was advertised and the tender will hopefully be awarded before the end of the calendar year. The invasive plant species tender process was cancelled and the existing one was

extended until the end of April 2017. New tender specifications were submitted and in all likelihood the tender will be re-advertised in 2017/2018.

The baboon tender was awarded in June 2017 for 3 years (2017/2018 to 2019/2020) to Human Wildlife Solutions and the process for advertising the ranger tender (visitor and staff safety) was initiated. Current tender expires in June 2018.

Invasive Animal Species tender and the EDRR tenders were initiated.

11.5 Reporting

In the last year, the reporting templates were refined again to ensure data integrity and that information is presented in a readable format. The Nature Reserve's quarterly reports are presented at the relevant quarterly protected area advisory committees. The statistics for the branch which includes statistics on: fires, EPWP job creation, Environmental Education, exhibitions and events, visitor numbers, service-in-kind (volunteers and sponsored programmes), skills development, invasive species area cleared, species collected, species propagated, game register, work load assessments, and security incidences. A high quality annual report for 2015/2016 was completed and 2016/2017's report is in progress.

Successful senior management meetings were held (every month apart from December 2017) as well as branch meetings (4 per year). Branch meetings focus on information sharing and are an important place for staff to connect. No presentations were given to the portfolio committees or Council due to elections and ODTP.

Reporting was discussed with CapeNature as the reporting requirements will change with the gazetting of the protected areas. In all likelihood, the City's data and reports will be consolidated and submitted to CapeNature, who will in turn incorporate the City's data and submit to national. The final formats have not been determined.