



CITY OF CAPE TOWN
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**ENERGY, ENVIRONMENT & SPATIAL PLANNING
ENVIRONMENTAL RESOURCE MANAGEMENT
BIODIVERSITY MANAGEMENT BRANCH**

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Biodiversity Area: False Bay Nature Reserve

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1. EXECUTIVE SUMMARY

Spring has sprung! With the amazing plant diversity and flowers in full bloom over this spring period, an effort was made to get out into the field and experience the joy of nature. Two spring walk activities, one at Rondevlei Section and the other at Pelican Park Section of the False Bay Nature Reserve was planned this year.

Veld rehabilitation work was continued this quarter along the pathway and recent burn site in the Rondevlei Section of False Bay Nature Reserve. Further to this a new veld rehabilitation project was started on the eastern shore of the Zeekoevlei Section. The work was supported and undertaken by Mrs Suretha Dorse of the Environmental Resource Management Department, who was instrumental in arranging the required machinery from the Transport Cape Town department (TCT), as well as the needed plant material and other resources.

During this quarter, two new faunal species were recorded for False Bay Nature Reserve. In the Strandfontein Section a soft plumaged petrel was recorded by visitors to the Reserve. It is a first for the Reserve and is a rare sighting due the bird being pelagic and not often approaching land. Another first, but this time for Southern Africa is the record of a rufous-tailed scrub robin (*Cercotrichas galactotes*). This bird occurs in North Africa and migrates northward towards Europe for breeding. The southernmost record of for this species is Kenya. But during July 2016 this bird caused quite a stir by arriving up in the Zeekoevlei Section of the Reserve. Many a birder came to view the bird. Some birders were travelling from as far as Johannesburg and Namibia.

There have been a few staff changes over this reporting period. After nearly seven years as the Reserve Supervisor for the Rondevlei Section, Mrs Tamaryn Khan completed her last day of work with the False Bay Nature Reserve team on 30 September 2016 and has moved to join the biodiversity unit based at Westlake Conservation Centre in Tokai. Mr Shihabuddeen Khan (no relation) joined the team in replacing Mrs Khan as the new Reserve Supervisor at the Rondevlei Section and will report to Mr A Khan, Area Manager of the Reserve.

An additional placement through the transfer of a staff member from another City of Cape Town department was also received during this quarter. Ms Shanaaz Moses joined the False Bay Nature Reserve team in September 2016, moving from the Solid Waste Department of the City of Cape Town to the Biodiversity Management Branch of the Environmental Resource Management Department. Ms Moses is currently placed at the Zeekoevlei Section and is assisting in visitor management at the Zeekoevlei entrance gate.

It is with great regret to report that the Expanded Public Works Programme (EPWP) at False Bay Nature Reserve has come to an end. The programme has been running for three years with a number of EPWP staff having been with the Reserve from the programme's beginning. The programme created employment for members of the local community. The programme not only provided an income, but also provided training and skills development opportunities to the staff. Some of the training covered included basic water safety, first aid, health and safety training, chainsaw and brush cutter operators' course, herbicide application and fire awareness to name a few.

2. HIGHLIGHTS & CHALLENGES

Highlights:

- First record for Southern Africa of rufous-tailed scrub robin (*Cercotrichas galactotes*)
- Veld rehabilitation project started on the eastern shore of the Zeekoevlei Section

Challenges:

- EPWP programme ended (14 July 2016)
- Vandalism and theft of infrastructure
- Strandfontein Road upgrades threatening habitat of the critically endangered butterfly Barber's ranger (*Kedestes barberae bunta*)
- Aging vehicles not being replaced

3. CONSERVATION PLANNING

The False Bay Nature Reserve has been greatly depleted in its staff capacity since the ending of the Expanded Public Works Programme (EPWP) on 14 July 2016. The EPWP staff members were responsible for assisting in the day to day operations of the Reserve and were largely responsible for maintaining infrastructure, such as the Zeekoevlei Section eastern shore picnic / braai facilities and toilet facilities, Rondevlei Section museum, toilets and picnic area and fence maintenance across the Reserve.

Alternative solutions are currently being explored to bolster the current field ranger staff component of five persons. These alternatives include the temporary appointment of EPWP staff from an alternative source for six months, for which the budget has been approved, to a more sustainable solution with the appointment of permanent staff.

4. FLORA**Flora – Invasive Flora Management****Aquatic Invasive Flora Management False Bay Nature Reserve****Water Hyacinth (*Eichornia crassipes*) Monitoring and Control at Strandfontein Section**

Water hyacinth (*Eichornia crassipes*) has been called the world's worst water weed. It is a fast growing plant, forming dense mats that quickly cover the water's surface. This results in increased siltation (build-up of silt), water loss and reduced biodiversity. Dense infestations also reduce or alter the flow of water, often resulting in flooding and damage to infrastructure during the rainy season (Cape Town invasive website 2015). Water hyacinth reproduces by means of seed, but can also utilise vegetative reproduction (i.e. producing side shoots which can break off and develop into new plants). In warm temperatures during the summer months, vegetative reproduction is increased, and if left unattended, actively growing colonies can double their abundance in less than 15 days. That is why it is so important to carefully monitor previously infected sites. The monitoring protocol includes three different patrols which are carried out either weekly or monthly. These patrols remove any regrowth, or emerging plants from the water bodies to prevent re-infestation.



Mr Clint Williams removing water hyacinth from a canal in Strandfontein Section (P2) (Photo: E. Essig 2016)

This quarter, a total of 847 pieces of water hyacinth were removed from the Strandfontein water bodies. Water hyacinth was found in the pans referred to as P2 Canal, P8 Canal, S1, S2 (weirs), and the S2 Canal.

The majority of the water hyacinth was found in the pan S1, which contains a water hyacinth barrier; therefore water hyacinth is spreading between the different sections of the same pan and not between different water bodies. The conservation team of Strandfontein Section accessed the barrier by boat and added more floats to improve the buoyancy of the barrier. The water hyacinth that was creeping over the barrier was also treated with herbicide (foliar spraying).

A huge concern again this quarter was the amount of water hyacinth being found in the pan S2 on a weekly basis. The water hyacinth has presumably moved from pan S3 (which is 100% infected) with the systematic flow of the water through the grid at the weir and straight into S2. The high pressure of the water centred around the weir has resulted in water hyacinth getting trapped against the plastic grid and small pieces are breaking off from the adult plants and moving into the adjoining pan (S2). The Cape Flats Waste Water Treatment Works (CFWWTW) on site is assisting by clearing the water hyacinth that surrounds these weirs twice a week. This has yielded some positive results, namely a 26% decrease in plants found in S2 compared to last quarter.

Water Hyacinth (*Eichornia crassipes*) Clearing at Zeekoevlei Section

Water hyacinth has been absent in Zeekoevlei for about six years. In April of this year a small bed of water hyacinth was found at the mouth of the Big Lotus River, where it enters Zeekoevlei. The source of this infestation was unknown, but the staff of Zeekoevlei Section immediately responded to manually clear the water hyacinth. Continuous follow-up checks have since been scheduled and executed on a weekly basis. Water hyacinth was found in the main body of the vlei, mainly down the northern end of the eastern shore and along the edge of the vlei near Bottom Road, as well as in the Big Lotus River section of the vlei. With the weekly follow-ups, no further water hyacinth has been found since early May 2016 and follow-ups were then conducted every second week until the end of September 2016. If no water hyacinth is found in the beginning of the next quarter, then follow-up checks will then be conducted on a monthly basis.

Reed Plant Species Control at Strandfontein Section (*Typha capensis*)

Bulrush reeds (*Typha capensis*) display invasive tendencies at Strandfontein Section, as with other wetlands in False Bay Nature Reserve, due to eutrophication of the water bodies. The reeds become dominant along shorelines and the resultant decrease in habitat diversity results in a marked decrease in fauna species diversity at the site. *Typha capensis* therefore needs to be actively managed to limit encroachment.

Initial removal of reeds in the pans P6, P6 (small), P5 (small) and P4 (small) was completed in January-February 2015. After the initial removal with a long arm excavator (which was loaned from the Cape Flats Waste Water Treatment Works), monthly follow-ups have since been carried out by the conservation team of Strandfontein Section this quarter, with five follow-ups being completed thus far. These follow-ups are completed with a combination of mechanical and chemical treatments (i.e. herbicide application), which are alternated every month. The mechanical treatment involves using a fork or spade to physically remove the emergent regrowth, and its rhizomes from the littoral edge. The chemical method includes using a brush cutter or sickles to cut the emergent plants to ankle height and then a foliar herbicide treatment is applied.

Terrestrial Invasive Flora Management False Bay Nature Reserve

Wood Harvesting at False Bay Nature Reserve

The False Bay Nature Reserve is committed to ensuring the protection and proper management of its natural resources found within its boundary. One aspect of this management is the control of wood harvesting (selected invasive alien plant species only) from the Reserve. In order to ensure proper control, a permit system with guidelines was drafted and implemented. No wood harvesting is permitted in the False Bay Nature Reserve, without a valid permit. There are two types of permits, namely a wood cutting permit and a wood collecting permit. A wood cutting permit is only valid for six months and only a certain quota of wood cutting permits are issued per reserve, per year for monitoring purposes. A wood collecting permit is valid for one year and is given to individuals that are collecting wood for use at home. No mechanical machinery may be used on a wood collecting permit.

This quarter one wood collecting permit was issued to a local resident for Pelican Park / Zeekoevlei Section. One wood cutting permit was issued to a local tree-feller to remove a stand of gum trees (*Eucalyptus* spp.) in the Rondevlei Section. Wood cutting and wood collecting permits are not usually granted for Rondevlei Section, except for specific areas where assistance is required to remove large alien invasive trees, such as the latter.

Terrestrial Invasive Alien Vegetation Control at Rondevlei Section

The Green Jobs Unit under the City of Cape Town Biodiversity Management Branch, based at Westlake Conservation Centre, continues to provide valuable support to the False Bay Nature Reserve for the management of terrestrial invasive alien vegetation. The Unit continues to assess the status of terrestrial alien vegetation infestations and monitor alien clearing interventions across all six sections of the Nature Reserve. They also provide assistance in the form of expertise and advice, resources (e.g. herbicide and equipment) and the organising of contractor teams to carry out alien clearing at the reserve where possible.

Following a site assessment conducted by the Green Jobs Unit in the previous quarter, three alien clearing contractor teams were then provided to carry out follow-up clearing work across three priority management blocks in Rondevlei Section, namely those referred to as NBAL RDV04, NBAL RDV05 and NBAL RDV07. This work was undertaken from 15 July – 5 August 2016 and a site visit was conducted on the last day by the Reserve Supervisor of Rondevlei Section and the Area Manager of False Bay Nature Reserve, together with a representative of the Green Jobs Unit. This was done in order to check the quality of work and to identify and clear any alien invasive plants that had been accidentally overlooked by the teams. Rangers were provided by the security company Quemic to escort the alien clearing teams in the field for security reasons.

Just over one week after the above intervention, the Green Jobs Unit approached the Reserve Supervisor of Rondevlei Section to enquire whether there was additional alien clearing work available for that week, as the clearing teams needed to fill their schedule for three days. The team was then assigned to remove alien invasive vegetation in a management block located along the Peninsula Road boundary of the nature reserve known as NBAL RDV02, up to the Rondevlei weir. This area was selected for clearing because a prescribed ecological burn had recently taken place across most of the site in April 2016; therefore this was a good opportunity to treat the post-fire emergence of alien plant species invading the disturbed site. The management block was also due for follow-up alien clearing work (in the unburned section), as it had last been cleared over a year prior to this intervention.

Ad-hoc alien invasive vegetation clearing was also carried out over a period of three days by the Reserve Supervisor of Rondevlei Section along the road verges of Peninsula Road, Victoria Road and Fisherman's Walk in Zeekoevlei. It is important to control emerging alien plant species along these verges, as they border the nature reserve boundary and can thus easily encroach into the natural veld. The main alien invasive plant species removed were Paterson's curse (*Echium plantagineum*), common vetch (*Vicia sativa*), Port Jackson seedlings (*Acacia saligna*), wild mustard (*Sinapsis arvensis*) and wild radish (*Raphanus raphanistrum*).

Woody Invasive Vegetation Follow-up Treatments at Pelican Park and Strandfontein Sections

Alien invasive terrestrial plant species that are legally listed for removal need to be targeted for the False Bay Nature Reserve to ensure compliance and protect the reserve against the detrimental environmental effects of alien vegetation infestations. Four bi-annual follow-ups (every six months) of the invasive alien plants Manatoka (*Myoporum tenuifolium* subsp. *montanum*), rooikrans (*Acacia cyclops*) and Port Jackson (*Acacia saligna*) were carried out in approximately 1 ha of the Pelican Park and Strandfontein Sections this quarter (Table 1). The work was carried out by the site's conservation teams and another follow-up alien clearing session will then ensue in six months' time. The invasive species targeted have very long-lived seed (15 years) stored in the soil, therefore follow-ups of cleared areas are essential to minimise the recolonisation of these species and the displacement of indigenous vegetation.

Table 1: Management blocks, with sizes and clearance phase of *Acacia saligna*, *cyclops* and *Myoporum* for the Pelican Park and Strandfontein Sections for this quarter

Section	Management block	Follow up phase (After Initial clearance)	Size (h)	Clearance team
Pelican Park	PP002	Maintenance Phase	23.66	Green jobs unit
Pelican Park	PP003	Follow up 3	30.44	Pelican Park Team
Pelican Park	PP008	Follow up 3	5.6	Green jobs unit
Pelican Park	PP009	Follow up 3	3	Pelican Park Team
Strandfontein	SBA001	Follow up 2	31.01	Green jobs unit

Herbaceous Invasive Alien Vegetation Clearing and Follow-up Treatments at Strandfontein Section

False Bay Nature Reserve contains numerous invasive alien herbs, shrubs, grasses, succulents, creepers and climbers. These plants often smother nearby indigenous vegetation and can cause substantial ecological damage, and in most cases complete blanketing of indigenous species. This quarter the following species were targeted for clearing in the Strandfontein Section: Morning glory (*Ipomea purpurea*), Patterson's Curse (*Echium* spp.), Blue lupin (*Lupinus angustifolius*), tree mallow (*Malva dendromorpha*) and common vetch (*Vicia* sp.).

The National Environmental Management Biodiversity Act(10/2004): Alien and Invasive Species Regulations, 2014 - Section 73(2)(b) states that a person who is the owner of land on which a listed invasive species occurs must take steps to control and eradicate the listed invasive species and to prevent it from spreading. This quarter three alien species, which are listed as NEMBA Category 1b, were actively managed.

Table 2: Herbaceous invasive species which have been cleared in the Strandfontein section for this quarter

Scientific name	Common name	NEMBA cat.	Management block	Area followed up (ha)	Method
<i>Echium</i> spp.	Pattersons curse	1b	SBA001, SBA003, SBA005, SBA010, and SBA011	213.71	Manual - hand pulling
<i>Lupinus angustifolius</i>	Blue lupin		SBA011	35.93	Manual - hand pulling
<i>Ipomoea</i> spp.	Morning glory	1b	SBA001	31.37	Foliar herbicide spray
<i>Malva dendromorpha</i>	Tree mallow	1b	SBA002, SBA003, SBA004, SBA005, SBA006, SBA0011	364.02	Manual - hand pulling
<i>Vicia</i> sp.	Common vetch		SBA001	61.37	Foliar herbicide spray

Flora – Indigenous Flora Management**“Winter Wonderland” and Spring Displays at Rondevlei Section**

The following photographs captured along the public footpath and around the fishing platforms of Rondevlei Section demonstrate how dynamic and amazingly beautiful nature can be. Over a period of just three months, the vegetation in this area reflected two completely different extremes - from a “winter wonderland” of ice during early mornings in July 2016, into a warm, abundant display of spring flowers from August to September 2016. This year the spring flower displays were dominated by the white Cape daisy (*Dimorphotheca pluvialis*) and the purple blooms of wild cineraria, also known as “strandblommetjie” (*Senecio elegans*).



View of one of the Rondevlei fishing platforms covered in ice (left) and frost covering patches of soil in the April 2016 ecological burn site between the fishing platforms (right) (Photos: A. Barry and T. Khan 2016)



Views of vegetation (left) and bark (right) found frozen solid along the Rondevlei public footpath in July 2016 (Photos: A. Barry and T. Khan 2016).



View of the spring flowers in full bloom along the Rondevlei public footpath near the first bird hide in September 2016 (Photo: T. Khan 2016)

Post-fire Rehabilitation at Rondevlei Section

The staff of the City of Cape Town Biodiversity Management Branch nursery based at Westlake Conservation Centre provides valuable ongoing support to False Bay Nature Reserve in propagating and growing indigenous plants for veld rehabilitation projects in the various sections of the Reserve. Plants are sourced as locally as possible for the various planting sites to ensure that genetic integrity is maintained, with plants often being propagated from cuttings, or grown from seed, harvested at the sites where they will later be planted.

Hundreds of plants were provided by the above nursery for the rehabilitation of the burn site following the ecological burn at Rondevlei Section on 20 April 2016. Planting began towards the end of the last quarter, when 940 plants were introduced to the burn site. The rehabilitation work continued into this quarter, with a further 263 "jakkalsstert" restio plants (*Thamnochortus erectus*) added to the burn site in July 2016, bringing the total number of individual plants introduced to 1 203. The latter planting was carried out by staff of Rondevlei Section, with valuable assistance received from five nature conservation students from the Cape Town Environmental Education Trust (CTEET), two staff members of the City of Cape Town Biodiversity Management Branch workshop in Maitland, four nursery team members of the Westlake Conservation Centre, a newly appointed intern from the local Friends' group (Zeekoevlei and Rondevlei – FoZR) and a local Grade 8 volunteer from Zeekoevlei. Some of the plants supplied for this veld rehabilitation project were also used to rehabilitate small sections of landscaping in the public picnic area of Rondevlei Section in order to increase the plant diversity and to restore areas that had been recently disturbed by earthworks that were required to repair underground plumbing.

On 20 July 2016, the Reserve Supervisor and a field ranger of Rondevlei Section dispersed a large batch of seeds of the indigenous plant species African scurf pea (*Psoralea pinnata*) between the fishing platforms located within the ecological burn site of April 2016, to contribute to increased plant diversity in this area. These seeds were harvested in 2013 from plants growing in a nearby management block (management block one) known as the Erica field, just prior to the area being burned in a prescribed ecological fire that year.

The following table (Table 3) lists the plant species that have been prepared by the Westlake Conservation Centre nursery staff for veld rehabilitation projects in 2016 at the Rondevlei and Zeekoevlei Sections of False Bay Nature Reserve, with the numbers of plants already utilised for planting in the Rondevlei ecological burn site in 2016 indicated against four different plant species.

Table 3: Indigenous plant species selected for planting at Rondevlei and Zeekoevlei Sections of False Bay Nature Reserve.

Plant species	Common name	Total number of nursery stock plants allocated for False Bay Nature Reserve (2016)	Number of individual plants planted in Rondevlei Section during June 2016
<i>Cliffortia strobilifera</i>	Bog rice bush; kammie-rysos	60	
<i>Helichrysum patulum</i>	Kooigoed	100	
<i>Cliffortia ferruginea</i>	Glaster; hoar Caperose	80	
<i>Anthospermum ciliare</i>		220	20
<i>Cliffortia ericaefolia</i>	erica-leaf	140	
<i>Salvia africana-lutea</i>	bruin-salie; wild sage	10	
<i>Erica verticillata</i>	Cape Flats Erica	40	20
<i>Elegia tectorum</i>	Dakriet; Cape thatching reed	4200	100
<i>Thamnochortus erectus</i>	Jakkalsstert	3400	563
<i>Salvia lanceolata</i>		100	
<i>Psoralea aphylla</i>	Kaalfonteinbos; bare fountain bush	20	
<i>Passerina corymbosa</i>	common ganna	300	
<i>Serruria foeniculacea</i>	Rondevlei spiderhead	40	
<i>Leucadendron levisanus</i>	Cape Flats cone bush	1400	500



Rondevlei EPWP staff member Richenda de Weber with a Cape Flats cone-bush plant (*Leucadendron levisanus*) that she planted along the Peninsula Road section of the April 2016 burn site (Photo: T. Khan 2016)

Plant Species Surveys at Pelican Park Section

On-going flora surveys are conducted at the Pelican Park Section in order to update the plant species list for the site. Three plant identification surveys were conducted this quarter (once a month), where staff and learners from the Pelican Park and Strandfontein Sections were assisted by Robin and Pat Burnett of the Zandvlei Trust (Friends group). September marks spring time, and the local strandveld plant species were in full bloom again this year. Three hours of monitoring for September resulted in 117 different plant species identified, and this was only in one management block within Pelican Park Section (management block four) - a mere 38 ha of the 260 ha area of this Section of False Bay Nature Reserve. Noteworthy was the discovery of *Babiana tubiflora*, which according to the South African National Biodiversity Institute's (SANBI) Red Data List of Plants, has a population size and habitat that is declining, but was plentiful in Pelican Park Section this season. In other areas however, urban and coastal development is causing ongoing irreversible habitat loss over much of the range of this species, and is likely to cause more local extinctions on the Cape Flats. It has lost significant amounts of habitat to urban and coastal development as well as agriculture (Red List SANBI website, 2016).



Blossoms of the plant species cat's claw (*Hyobanche sanguinea*) (above left), Cape daisy (*Dimorphotheca pluvialis*) (middle) and drumsticks (*Zaluzianskya villosa*) (above right) adorning the dunes in Pelican park (Photo: E. Essig 2016)

Veld Rehabilitation at Zeekoevlei Section: Pelican Lodge Shoreline

The Pelican Lodge guesthouse located to the north-eastern side of the Zeekoevlei shoreline has recently received a new general manager, Mrs Amanda Swartz. She is a nature enthusiast and contacted the Reserve Supervisor of Zeekoevlei Section to discuss the rehabilitation of the island section of the Big Lotus River inlet. Several site meetings have been held to discuss plans for alien invasive vegetation removal and veld rehabilitation along the shoreline of the Pelican Lodge guesthouse. Representatives of the Green Jobs Unit of the City of Cape Town Biodiversity Management Branch joined these meetings to offer their assistance with the various projects identified.

Thus far, Mrs Swartz has assisted the Reserve with planting 500 indigenous plant species on site over this quarter. These plants were received from the habitat restoration unit (nursery) based at Westlake Conservation Centre in Tokai.

Veld Rehabilitation at Zeekoevlei Section: Van Blommenstein Park

A Zeekoevlei resident, Ms Emma Oliver, has enthusiastically supported the Reserve with the maintenance and biodiversity management of the van Blommestein Park area of Zeekoevlei Section for several years. One of the ongoing activities driven by Mrs Oliver has been the removal of reed growth (*Typha capensis*) from the shoreline, and she has also employed assistants at her own cost to carry out this work. Positive ecological results have already been observed from the reed clearing, namely the recent establishment of a natural heronry in the area by various heron and egret species that are using this site for breeding purposes.

Ms Oliver also collaborated with a few other passionate residents to create an artistic mosaic signboard for van Blommenstein Park that was erected on 5 September 2016 on the corner of Victoria Road and Peninsula Road.

Veld rehabilitation has been carried out at van Blommenstein Park this quarter in the small seasonal wetland located behind the above-mentioned signboard. The wetland was cleared of reeds and approximately 120 indigenous plant species sourced from the City of Cape Town Biodiversity Management Branch habitat restoration unit (nursery) were planted in this area. The planting was carried out by staff members of the False Bay Nature Reserve with assistance from two of Mrs Oliver's helpers from van Blommenstein Park.



Zeekoevlei Section staff and local residents erecting the signboard at van Blommenstein Park (above left); Ms Oliver with a local Zeekoevlei resident and False Bay Nature Reserve staff member Mr Stefan Dreyer standing with the newly erected sign board (above right); a close-up view of the completed signboard (below left) and planting at the seasonal wetland (V. Day 2016)



Veld Rehabilitation at Zeekoevlei Section: Zeekoevlei Eastern Shore Veld Rehabilitation Project

Plans have long been underway to run a pilot veld rehabilitation project along a section of the eastern shoreline of Zeekoevlei. This project aims to test the feasibility of rehabilitating the entire eastern shoreline. On 19 July 2016, the project was finally implemented, mainly through the enthusiastic efforts and hard work of Mrs Suretha Dorse from the City of Cape Town Environmental Resource Management Department, who has been driving this project.

The first stage of the veld rehabilitation project was to bulldoze the section that was to later be planted with indigenous vegetation. Two weeks prior to the bulldozing operation, the alien invasive kikuyu grass (*Pennisetum clandestinum*) across the site was treated with herbicide (foliar spraying) to limit the re-infestation of the site during the course of the project.

The City of Cape Town Transport for Cape Town (TCT) Department generously supplied a large (D6) bulldozer and a driver to lift the old laterite road surface at the back of the rehabilitation site as well as to landscape the area with a more natural gradient, namely small dunes and seeps.

The newly landscaped area was then re-vegetated with 2 350 indigenous plants supplied by the habitat restoration unit (nursery) of the City of Cape Town Biodiversity Management Branch. A "Working for Wetlands" programme team assisted with the planting.

A search and rescue operation which recently took place at a development site in Pelican Park (lead by the Biodiversity Coordinator of the Biodiversity Management Branch and his team) yielded a number of indigenous plants which were then translocated to the veld rehabilitation site along the eastern shoreline of Zeekoevlei Section.



Veld rehabilitation site along the eastern shoreline of Zeekoevlei prior to bulldozing operations (Photo: V. Day 2016)



Zeekoevlei Section staff members at the eastern shore veld rehabilitation site posing with the bulldozer (above left); the old laterite road being removed (above right); bulldozer landscaping the site (below left) and subsequent planting of the area (below right) (Photos: V. Day 2016)



View of the Zeekoevlei eastern shore veld rehabilitation site during the first planting phase of the project after bulldozing was completed (Photo: V. Day 2016)

Close monitoring of the rehabilitation site has been ongoing since the project's implementation. The focus of these efforts has been to monitor the emergence of alien invasive vegetation (for the planning of clearing interventions), to identify any maintenance activities required e.g. weeding and localised watering of plants, and to monitor faunal species visiting the site.

The alien invasive plant species noted on site thus far are narrow-leaved purple vetch (*Vicia benghalensis*), which has already been removed and alien grasses such as kikuyu (*Pennisetum clandestinum*). Plans have been made with a Working for Wetlands team to treat the alien grass with herbicide.

Faunal sightings at the rehabilitation site include Cape grysbok (*Raphicerus melanotis*), Cape dune mole rat (*Bathyrgeus suillus*) and striped field mouse (*Apodemus agrarius*). Tracks in the sand indicating the presence of snakes have also been observed.

Many bird species have also been observed at the rehabilitation site, including an actively hunting black shouldered kite (*Elanus axillaris*), white necked raven (*Corvus albicollis*); and Levillant's cisticola (*Cisticola tinniens*).

5. FAUNA

Fauna - Indigenous Fauna Management

Notable Faunal Sightings at False Bay Nature Reserve

Interesting Faunal Sightings along the Public Footpath at Rondevlei Section

There have been two unusual sightings observed along the public footpath of Rondevlei Section over the past quarter.

A local birdwatcher who frequents Rondevlei Section of False Bay Nature Reserve, informed the Reserve Supervisor of some interesting animal scat that he had found along the public footpath on 2 August 2016. He collected a small sample and took photographs, from which it was apparent that there were fragments of Cape porcupine (*Hystrix africaeaustralis*) quills within the faecal matter. The pieces of quill were very narrow and quite soft in texture, indicating that they may have likely originated from a very young animal. It is believed that the scat may belong to a caracal (*Caracal caracal*), that preyed upon a juvenile Cape porcupine; however this could not be conclusively determined. Other suggestions include that a predator such as a feral domestic dog (*Canis domesticus*) may have also scavenged on the carcass of a young porcupine and ingested its small quills.

Visitors and staff of Rondevlei Section have been regularly noticing an adult Cape porcupine (*Hystrix africaeaustralis*) active during the day on a small island bank ahead of the first bird hide (Broekhuysen hide). This is very unusual, as porcupines are generally nocturnal by nature. It is believed that the animal may have reached the island during the summer drawdown period while water levels had receded, allowing easy access. It is not clear whether the animal is alone or whether a family group resides on the island.



Scat found on the paved public footpath at Rondevlei Section broken apart to show the pieces of porcupine quill in the contents (Photo: D. Sheard 2016)



The Cape porcupine recently sighted on the island ahead of the first bird hide at Rondevlei Section (Photo: D. Sheard 2016)

Fauna - Indigenous Fauna Management

Notable sightings at Strandfontein Section

An extremely uncommon sighting (and a first for Strandfontein Section) was reported on 10 September 2016. A soft-plumaged petrel was seen flying over pans P1 and P2 at Strandfontein Section. This bird is a marine species which is highly pelagic, rarely approaching land, which makes this a particularly unusual sighting. The species feeds mostly on cephalopods, but will also take crustaceans and fish, preyed upon mainly through surface-seizing (Birdlife factsheet, 2016). The sighting was reported by Greg de Klerk to Trevor Harder, creator of the South Africans Rare Bird Reports and later conveyed to the reserve staff.



Images of the soft-plumaged petrel recently sighted flying over the pans at Strandfontein (Photos: D. Zarzavatsaki 2016)

Fauna – Monitoring

Coordinated Water Avian Counts (CWAC) at the Strandfontein Section

Monthly coordinated bird counts take place every second Sunday of the month at the Strandfontein Section. These counts are coordinated by the Cape Bird Club members. All counts are conducted in daylight hours and counts start between 08:00 and 08:30 am, depending on the season. Counts are lead from a vehicle, and binoculars or a scope is used to view bird species. The direct-count method is used whereby observational counts of all water bird species and their abundances in the vicinity of the Strandfontein Section are recorded and data is submitted to the Animal Demography Unit (ADU) of the University of Cape Town (UCT). The CWAC count at Strandfontein Section is one of the longest running bird monitoring surveys in the Western Cape, and provides accurate data from experienced birders. The data is publically available and can be used for research purposes. This quarter, three counts were conducted by the Cape Bird Club members and Strandfontein Section staff. If you want to learn more and participate in this important information gathering process, which helps management and the policies for the area as well; please contact Dick on 021 689 1106 or visit the Cape Bird Club website at: <http://www.capebirdclub.org.za/counts.html> to view the CWAC count sites.

Butterfly Monitoring at Pelican Park Section

As September arrives, it is not only the spring flowers that are blooming. September at Pelican Park Section also means time for the flight period of the butterfly Barber's Ranger (*Kedestes barberae bunta*). A research monitoring programme was established at Pelican Park Section for the critically endangered Barber's Ranger (*Kedestes barberae bunta*) butterfly, which is endemic to False Bay Nature Reserve in 2014 by Ismat Adams (former graduate intern for Pelican Park). The objective of this monitoring programme is to monitor population trends and keep track of the flight period of these butterflies within the Pelican Park Section of the False Bay Nature Reserve.

Mr Ismat Adams assisted the Pelican Park conservation team in monitoring selected patches of sword grass (*Imperata cylindrica*), the larval food plant for the *Kedestes* species, during September 2016. The monitoring included walking through sword grass patches and photographing and recording all butterfly species present. Results of the monitoring will be made available in the next quarterly report once this year's monitoring season has ended.

The Pelican Park team also assisted Mr Ismat Adams this quarter with data collection in the field for his research for his Master of Science degree on the *K. barberae bunta* species. His master's degree is based on unlocking the habitat preferences of the butterfly and aims to investigate why these butterflies are only found in Pelican Park. The team assisted Mr Adams with his larval survey during a week in August.

Night Drive Faunal Count at Strandfontein Section

On the evening of 13 September 2016, the Zeekoevlei and Strandfontein teams completed a night drive count in order to gather baseline data for the Reserve's species list. The teams started the monitoring at 19:20. Monitoring is conducted by vehicle using a spotlight to scan the surrounds in order to sight animals along a set route. Once an animal is spotted the vehicle is stopped. The animal is then identified and

details recorded (quantity seen, sex, etc.) by a designated scribe. The following table displays the faunal species observed during the latest night drive count.

Table 3: Faunal species noted during the September 2016 night count in Strandfontein Section

Common name	Species Name	Quantity
Cape grysbok	<i>Raphicerus melanotis</i>	6
Black-crowned night heron	<i>Nycticorax nycticorax</i>	1
Water mongoose	<i>Atilax paludinosus</i>	1
Cape/South African porcupine	<i>Hystrix africaeaustralis</i>	2
Western leopard toad	<i>Amietophrynus pantherinus</i>	2
Cape hare	<i>Lepus capensis</i>	1
Spotted eagle owl	<i>Bubo africanus</i>	2



Reserve Supervisor Miss Victoria Day holding a western leopard toad found during the September 2016 night drive count at Strandfontein Section (Photo: E. Essig 2016)

Zeekoevlei Faunal Sightings

This quarter, the eastern shoreline of Zeekoevlei received an unusual visitor from the north of Africa, namely a rufous-tailed scrub robin (*Cercotrichas galactotes*). This is the first ever sighting for South Africa. It was first spotted on 7 July 2016 on the eastern shoreline of Zeekoevlei by two birders, Mr Peter Steyn and Mr Andre Demblon.

The rufous-tailed scrub robin is found in the northern parts of Africa and migrates up to southern Europe to breed. The furthest south in Africa that this bird is usually found is Kenya. It is believed that it was a case of reverse migration (the bird flying south instead of north) that caused this species to appear in Cape Town.



The rufous-tailed scrub robin observed in Zeekoevlei Section (Photo: C. Dorse 2016)

Hippo Escape and Retrieval at False Bay Nature Reserve

On 5 August 2016 a female hippo (*Hippopotamus amphibious*) and her calf broke through the boundary fenceline of Zeekoevlei Section near the area known as southern bridge into the Strandfontein Section. Monitoring efforts confirmed that the hippos were utilising the area close to the fenceline, therefore two funnels were opened up through the fence to encourage the movement of the animals back into the Zeekoevlei Section. On 18 August 2016 it was confirmed that the hippos had moved back into Zeekoevlei section through one of the funnels and the funnels were then closed off. The section of fenceline where the hippos had escaped was replaced with new fencing material.



Closing up one of the funnels after the return of the escaped hippos (above left and right) (Photo: A. Khan 2016) and staff replacing a section of the Zeekoevlei fenceline (below left) and posing next to the completed fence line (Photo: V. Day 2016)



Interesting Faunal Sightings for the Zandwolf Coastal Section

In this quarter a new bird species record was noted for the Zandwolf Section of False Bay Nature Reserve, namely a capped wheatear (*Oenanthe pileata*) sighted by staff member Mr Henry Pheiffer near Mnandi beach and then opposite the Blue Waters resort area of Zandwolf Section. This breeding migrant bird species prefers open grassy areas and feeds on insects. Although a common species to the region, this was the first record for this site.

On 17 July 2016, while conducting a coastal site patrol, the staff of Zandwolf Section noticed something thrashing in the water of a rock pool. On closer inspection they realised it was a dark shyshark (*Haploblepharus pictus*) entangled in fishing line with multiple hooks piercing its body. They used a knife and pliers to cut and remove the hooks and line. The shark was then released into a small rock pool, which gradually filled with the tide increasing in order to allow the animal to recover its strength to swim back into the surf. A clean-up of the surrounding area was then done to remove any other fishing line and plastics noticed between the rocks and the staff members have been making efforts to educate local fisherman in the area about not discarding unused fishing line at the shore.



Reserve Supervisor of Zandwolf Section, Mogamat Samsodien removing fishing hooks from a dark shyshark (left) (Photo: H. Pheiffer 2016) and an interesting crab observed on site - it was so cold that morning that even the crabs wore jerseys! (Photo: M. Samsodien 2016)

Wildlife Rehabilitation at Pelican Park and Strandfontein Sections

An injured yellow-billed duck (*Anas undulata*) was recently found on a road verge on the southernmost section of Strandfontein Road, bordering the Pelican Park Section of the False Bay Nature Reserve. The bird had a severe leg and wing injury, and could not move. It was immediately taken by reserve staff to the Wildlife Unit of the local SPCA (Society for the Prevention of Cruelty to Animals) in Grassy Park. Unfortunately the bird's injuries were so severe that it had to be euthanized. Reserve management suspects the bird was struck by a vehicle whilst flying over the road.



The injured yellow-billed duck retrieved from Strandfontein Road in a transport container (Photo: T. Hadwen 2016)

A sick African sacred ibis (*Threskiornis aethiopicus*) was found at Strandfontein Section this quarter. A concerned visitor who was completing his morning run through the pans informed the conservation staff that there was a bird which was unable to fly. The bird was located by reserve staff and then taken to the Wildlife Unit of the SPCA in Grassy Park for medical treatment. The ibis presented with a high temperature and elevated heart rate in combination with its inability to fly or walk. The veterinary staff at the SPCA treated the bird with fluids and called the Reserve two days later to inform management that the bird was ready to be collected. False Bay Nature Reserve nature conservation student Ms Tayla Hadwen then released the bird nearby the site where it was found.



The sacred ibis being released by student Ms Tayla Hadwen back into Strandfontein Section after being treated at the SPCA (Photo: E. Essig 2016)

Urban Caracal Project – Pelican Park Section

An interesting discovery was made on 23 September 2016 by the Pelican Park Section staff members whilst on a routine follow-up operation of alien invasive vegetation clearing. The team stumbled upon the carcass of a caracal (*Caracal caracal*) in the veld, which had visible tags. This sighting was immediately reported to the Urban Caracal Project who had recently been conducting research at Rondvlei Section. Two caracals had been captured and fitted with collars and ear tags in January 2016 as part of the latter research. The aim of this work is to better understand the threats to the survival of caracal in an urban context, by assessing their movements in and around the Cape Flats (Urban Caracal Project website, 2016).

The Urban Caracal Project team came out to collect the bones and tags for their research purposes. Studying the bones and tissues will give insight to the animal's ability to survive and persist in urban areas, understanding the cat's genetic health in the fragmented habitat, and highlight threats (such as pesticide exposure) to their ability to survive long term.



Images of the caracal skull (left) and carcass (right) found in Pelican Park Section (Photos: E. Essig 2016)

Fauna - Invasive Fauna Management

Domestic Sheep – Zeekoevlei Section

On 2 September 2016, a domestic sheep was removed from the island at the Big Lotus River. It is believed that the sheep escaped from a property on the border of the Big Lotus River and then swam over to the small island in the vlei. The sheep was safely rescued by reserve staff, with assistance from the local SPCA and it was delivered back to its owner.



The domestic sheep being rescued by the SPCA from the Big Lotus River inlet of Zeekoevlei Section (Photo: S. Drever 2016)

6. SOIL

Nothing to report for this quarter.

7. WATER

Water Level Management at False Bay Nature Reserve

Annual Zeekoevlei Draw Down: Weir Closing

Since 1997 the Zeekoevlei weir has been opened on an annual basis (known as the draw down). This allows water to drain from the vlei, which helps to flush the system of excess nutrients for the improvement of water quality. The 2016 annual draw down was carried out on 27 April 2016 and the weir was closed this quarter on 8 July 2016 by the Zeekoevlei Section team.



Zeekoevlei section staff members Mr Jonathan Fischer (left) and Mr Andrew Arries (right) assisting with closing the Zeekoevlei weir (Photos; V. day 2016)



View of the Zeekoevlei weir closed 8 July 2016 (Photo: V. Day 2016)

Shoreline Maintenance Plans at Zeekoevlei Section

Seven new shoreline maintenance plans have been issued to residents since the previous 2015 draw down period, bringing the total number of shoreline plans to 77 for Zeekoevlei Section.

Many piles of reeds were put out for collection by Zeekoevlei residents during this year's draw down period. The total weight of reeds removed in the previous quarter was 45 490 kg. Due to high quantities of reeds cleared during this year's draw down, there were still several piles remaining to be collected after the closure of the weir. Mr Karl Burricks from Wolfgat Nature Reserve kindly offered his assistance with driving a grab truck on loan from Zandvlei Nature Reserve to help remove the remaining piles. During this time a total of 25 100 kg of reeds was removed from around Zeekoevlei and taken to the Coastal Park landfill site. The total weight of reeds removed from Zeekoevlei during the 2016 Draw Down was 10 1100 kg.



Grab truck collecting a large reed pile from Zeekoevlei Section (Photo: V. Day 2016)

Litter Removal from the Zeekoevlei Section

The Transport for Cape Town Department (TCT) kindly provided a contractor to conduct litter clean-ups at both the Big and Little Lotus River inlets again this year. The litter clean-ups proved very effective and the contractor remained on site until the end of July 2016. The contractor was also brought back onto site after any heavy rain that occurred during this period.

New litter traps were constructed in the Big Lotus River inlet of Zeekoevlei Section by the Transport for Cape Town Department (TCT) this quarter. Unfortunately one of the traps broke with a heavy rainfall incident, but TCT have been informed of this in order to repair the damage soon.

Water Monitoring at Zeekoevlei and Rondevlei Sections

Water samples are taken at various points in the Zeekoevlei and Rondevlei Sections to monitor water quality. Monthly water samples are collected and analysed by staff of the City of Cape Town's Scientific Services Department. Results are received and distributed to the relevant reserve managers and interested parties on a monthly basis through the Biodiversity Management Branch. Additional quarterly water sampling is conducted at two points along the eastern and southern shore of Zeekoevlei and at one point at Rondevlei Section located in the seasonal wetland to the south of the main wetland, known as Moddervlei. These water samples are collected by reserve staff and transported to the Scientific Services Department on the same morning of sampling before 10 am. The last quarterly samples were taken on 18 August 2016 and the next sample date is set for 17 November 2016.

Water Level Manipulation at the Strandfontein Section

Strandfontein Section contains a series of 22 sewage detention pans which are part of the Cape Flats Waste Water Treatment Works (CFWWTW). The pans are interlinked to each other 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 (FBNR IRMP, 2013). Generally the water level is left to its own cycles, as the CFWWTW requires all weirs to remain open. Pans P1, P2 and P4 are the sites at Strandfontein Section that are favoured by the Palaearctic waders that visit during the summer months. In order to create this type of habitat for them, the water level has to be decreased. On 1st September wooden boards were placed into the inlet wagon wheel weirs of P1 and P2 (P4 was already closed), and thus no water could flow into the pan. As all three pans had a high water level, it was decided that the boards from the outlet weirs on the perimeter of pan P1 would be removed so that the water level would decrease at an accelerated level in P1. After just two days, four different species of migrant wader birds were noted in the pan. This may just be a coincidence, but it is thought that the draining of the area and subsequent muddy conditions of the pan may have attracted these birds to the site.



Trenches dug at two of the four outlet weirs of the pans at Strandfontein Section which were opened to assist the movement of water from the pans and into the adjoining canals (Photos: E. Essig 2016)

8. FIRE

Prescribed Ecological Burns at False Bay Nature Reserve

Fire Breaks for Pelican Park, Pelican Heights and Peacock Close

Fire breaks for the residential areas which border Pelican Park Section fall under the jurisdiction of the City of Cape Town Parks Department, as these areas are considered to be 'open spaces'. The clearing of fire breaks are commissioned by the Reserve Supervisor of Pelican Park Section. Five meter wide fire breaks for Pelican Park, Pelican Heights, Strandfontein Village and Peacock Close communities were completed this quarter. The Green Jobs Unit of the Biodiversity Management Branch was contracted and funded by City Parks Department to complete the task.



Maps drawn up by the Green Jobs Unit showing the fire breaks cut around Pelican Heights (top left) , Peacock Close and Pelican Park suburb in orange (top right) and Strandfontein Village in blue (bottom left) (Maps supplied by the City of Cape Town Green Jobs Unit)

9. PEOPLE, TOURISM & EDUCATION

Volunteers at False Bay Nature Reserve

False Bay Nature Reserve regularly receives assistance from volunteers, which is greatly appreciated as this helps increase staff capacity for carrying out various important conservation activities.

The staff of Rondevlei Section received assistance from a young volunteer over two days in July 2016. The volunteer, William Day, is a Grade 8 learner who was completing community service as part of his school curriculum, but he also happens to be a local resident from Zeekoevlei. The work consisted mainly of maintenance activities along the Rondevlei public footpath (e.g. weeding the paving, trimming the path edge and removing alien invasive plant species). The volunteer also had the opportunity to assist with veld rehabilitation in a site which underwent an ecological burn in April 2016.

Spring Walk at Rondevlei Section

A spring walk was held on 3 September 2016 for the surrounding communities of False Bay Nature Reserve. The walk was led by Jocelyn van Eeden, the intern who was recently appointed by the Reserve's local Friends' group, namely the Friends of Zeekoevlei and Rondevlei (FoZR). The route selected for the day started at an access gate along Peninsula Road and took the ten participants along a sand track through to the seasonal wetland known as Moddervlei. This allowed visitors the opportunity to see sections of the nature reserve not normally accessible to the public and to view natural Cape Flats dune strandveld vegetation and the beautiful annual spring flowers. Visitors were also able to learn interesting information on the history of Moddervlei, namely that the site was hidden for many years after being covered by dredged material and sand from the construction of a nearby canal. The wetland was later recovered using a bulldozer and was rehabilitated into a natural seasonal wetland with little input required.



Visitors to Rondevlei Section enjoying the Spring walk on 3 September 2016 (above left and right) and a scenic view across Moddervlei seasonal wetland (below) (Photos: D. Warmerdam 2016)





Cape Flats dune strandveld vegetation (left) and a close-up view of Cape daisies (*Dimorphotheca pluvialis*) (right) observed during the 2016 Spring walk at Rondevlei Section (Photos: D. Warmerdam 2016)

Pelican Heights Spring Walk

False Bay Nature Reserve hosted its third annual Spring Walk in the Pelican Park Section this quarter. The walk was aimed specifically at the Pelican Heights residents and included a guided 4 km hike through the dunes of Pelican Park Section which boasted wonderful spring flowers. The walk was led by False Bay Nature Reserve nature conservation student Tayla Hadwen and taught the participants about the endangered Cape Flats dune strandveld vegetation, as well as the adaptations of plant species in this system. Threats to the reserve and its vegetation types were also highlighted. Overall, 25 residents participated and fun was had by all.



Above left and right: Pelican Heights community members enjoying a guided walk through the dunes of Pelican Park Section (Photos: T. Hadwen 2016)

Film Shoot at Rondevlei Section – Wildlife Documentary on Amphibians

The same film company that took footage of the herd of eland (*Taurotragus oryx*) at Rondevlei Section in the previous quarter, again approached the Reserve Supervisor of Rondevlei Section for permission to film wetland habitat within the public areas of Rondevlei Section of False Bay Nature Reserve for the purposes of compiling a wildlife documentary on amphibians. Approval was given by reserve management and after obtaining a film permit from the City of Cape Town film office, the film crew went ahead with the film shoot on 25 July 2016. A professional environmental control officer (ECO) was on site during the entire shoot to monitor activities so as to prevent negative environmental impacts. The presence of an ECO was one of the film permit requirements for operating in the nature reserve.

In the following month, on 11 August 2016, the film crew returned to request permission to film endangered western leopard toads (*Amietophrynus pantherinus*) in Rondevlei Section. The film company wanted after-hours access to the site to film the toads at night. Permission was not granted by reserve management as these conditions were considered to be a high safety risk, due to the presence of wild hippopotamus (*Hippopotamus amphibious*) grazing at night. The film crew were however granted permission to film western leopard toads at night along the road verges surrounding the nature reserve, as well as at the van Blommenstein Park area in Zeekoevlei Section of False Bay Nature Reserve. The crew were advised to conduct the film shoots on rainy evenings, as the toads tend to move across the roads in the areas surrounding the nature reserve under these conditions for breeding purposes and would therefore likely be more visible on such occasions. An ECO was again required to accompany the film crew for these shoots to mitigate negative environmental impacts. The crew were cautioned to drive their vehicles slowly and be vigilant of toads crossing the roads so as to prevent mortalities. They were also requested to assist with moving toads off the roadways if any were observed crossing the roads.

Environmental Education at False Bay Nature Reserve

Various groups have visited the different sections of the False Bay Nature Reserve for day environmental education programmes and overnight programmes with the Cape Town Environmental Education Trust (CTEET) over this quarter (see statistics under Table 4). "Western leopard toad month" is celebrated annually by the Reserve during the month of August where awareness is emphasized on the Western leopard toad and the threats their populations face. CTEET also hosted a coastal clean-up in celebration of "International Coastal Clean-up Day" which was held on 17 September 2016.



Learners from Meerendal Pre-primary School, were happy to meet an angulate tortoise at Rondevlei Section (left) and learners hoping to catch a glimpse of a Cape dune mole rat pushing up a sand heap in the Rondevlei picnic area (Photo: B. Amayo 2016)



A participant in the 2016 programme for International Coastal clean-up Day (left) and learners touching a western leopard toad (*Amietophrynus pantherinus*) during an awareness programme run by CTEET (Photo supplied by CTEET 2016)



A learner from the Mary Kihn School for the Deaf participating in a CTEET environmental education programme (Photo supplied by CTEET 2016)

Table 4: Environmental education statistics for False Bay Nature Reserve from July - September 2016

Programmes	No. of schools	No. of learners	No. of Adults	No. of teachers	Hours of programmes
City of Cape Town - on reserves	6	227	54	13	31
City of Cape Town - off reserves	1	0	67	2	1.5
Partner organisation on reserves	0	0	0	0	0
CTEET - on reserves	4	187	38	12	135
CTEET camps – at the Zeekoevlei Environmental Education Centre (ZEEP)	8	552	437	24	415
CTEET camps – at the False Bay Ecology Park Environmental Education Centre	2	288	108	18	67
CTEET - off reserves	4	1653	58	4	22

False Bay Nature Reserve Outreach Programme

The environmental education staff of False Bay Nature Reserve visited the Western Cape College of Nursing in Athlone to deliver an environmental education programme, as the College were unable to carry out their annual visit to the Reserve this year. This talk aimed at the students focused on raising awareness about the natural environment and make the connection between human health and environmental health.

10. STAFF MATTERS**Staff Training and Development**

False Bay Nature Reserve prides itself for training and developing individuals in various skills and experiences related to nature conservation. Developing people in a workplace scenario bears great benefits not just to the individual and to the organisation, but to the broader industry of nature conservation as a whole.

There are various skills development / employment opportunity programmes currently being hosted at the False Bay Nature Reserve. These include the Expanded Public Works Programme (EPWP) – Kader Asmal Special Projects (concluded in July 2016), as well as three learnership programmes involving partner organisations such as the Cape Town Environmental Education Trust (CTEET), Wildlife and Environment Society of South Africa (WESSA), Culture Arts Tourism Hospitality Sports Sector for Educational Training Administration (CATHSSETA) and the Cape Peninsula University of Technology (CPUT).

Other specific training interventions completed by False Bay Nature Reserve staff over the past quarter include:

- Nature Conservation student of False Bay Nature Reserve, Ms Tayla Hadwen, completed a three day workshop / training course called 'Growing Together', which looks at lessons learned in an urban conservation context. This was hosted by the City of Cap Town Biodiversity Management Branch in partnership with the South African National Biodiversity Institute (SANBI).
- Ms Crystal Moses and Cherilee Gedult have been taking driving lessons with "He & She" driving school, sponsored through the City of Cape Town. Both will complete their drivers' tests in the next quarter.
- Ms Crystal Moses was granted an exciting opportunity through the City of Cape Town's Adult Educational Training (AET). Ms Moses's internal bursary to redo two of her Grade 12 subjects was granted, and lessons started on 31 August 2016, and will continue with once-weekly classes for the next year.
- False Bay Nature Reserve staff participated in a two-day training intervention through SAGIC Invasive Species Training consultants, led by SANBI
- CTEET learner Mr Stefan Dreyer completed First Aid level two training
- Five False Bay nature Reserve staff attend and successfully completed a four day course on the Principles of leadership.

New Reserve Supervisor for Rondevlei Section

The management team of False Bay Nature Reserve are pleased to announce the appointment of a new Reserve Supervisor for Rondevlei Section, starting 1 October 2016. The new incumbent will be Mr Shihabuddeen Khan, who is being transferred from Zandvlei Nature Reserve, where he has been based for three years as a Reserve Supervisor. The team at False Bay Nature Reserve extend a warm welcome to Mr Khan and look forward to working more closely with him.

The current Reserve Supervisor of Rondevlei Section, Mrs Tamaryn Khan, will be transferred to Westlake Conservation Centre in Tokai from 1 October 2016 as a Reserve Supervisor for the site. The Westlake Conservation Centre has historically been utilised as an operational depot by different departments in the City of Cape Town, with little focus on biodiversity management of the grounds itself. The City of Cape Town Biodiversity Management Branch acquired the use of this depot several years ago and have several units based here, including an indigenous plant nursery (now referred to as the habitat restoration unit), the Green Jobs Unit, the South district regional office, several head office components and offices of the associated Cape Town Environmental Education Trust (CTEET). With the operational focus of the site shifting to biodiversity management, the need for a site manager to address the environmental and ecological management of the property has been highlighted, hence the new appointment of a Reserve Supervisor in this capacity.

Mrs Tamaryn Khan (nee Allan) has been managing the Rondevlei Section of False Bay Nature Reserve since November 2009. She has expressed that she is going to very much miss the "vlei" and especially miss working alongside the staff of False Bay Nature Reserve who have become like family to her. However, she is looking forward to the exciting new challenges that lie ahead and is very grateful to have had the opportunity to work at False Bay Nature Reserve, where she has gained valuable experience and many fond memories.



The new Reserve Supervisor of Rondevlei Section starting 1 October 2016: Mr Shihabuddeen Khan (left), alongside the current Reserve Supervisor Mrs Tamaryn Khan (right) (Photo: M. Petersen 2016)



The current team based at Rondevlei Section, from left to right: Visitor Control Officers Mark Petersen and Ashley Barry, with Reserve Supervisor Tamaryn Khan and Field Ranger Theodore Geland (Photo: S. Khan 2016)

Staff Appointment at Strandfontein Section

Mr Thembani Namba joined the False Bay Nature Reserve staff component on 1 July 2016 as an intern field ranger based at Strandfontein Section. This internship programme is being run by the Cape Town Environmental Education Trust (CTEET) and has placed 20 unemployed, graduate students into nature reserves across the City of Cape Town. Thembani Namba, originally from the Eastern Cape, relocated to Cape Town in pursuit of his dream career in conservation. Mr Namba's applied later in the quarter for a

vacancy at South African National Parks (SANParks) based in Tokai. His application was successful and his internship at False Bay Nature Reserve then came to an end on 30 September 2016. The team of False Bay Nature Reserve wish Thembari well on his new career venture in nature conservation.

11. LAW ENFORCEMENT

Law Enforcement – Planning and Patrols

Monthly Pelican Park Section Patrols

Three planned monthly law enforcement patrols were conducted in the Pelican Park Section this quarter. The purpose of the monthly patrols is mainly to document any infringements onto reserve property, patrol the Pelican Park fence line, and to identify and respond to illegal activities taking place. Infringements include any encroachment across the boundary between the Pelican Park Section of False Bay Nature Reserve and the neighbouring communities of Pelican Heights, Peacock Close Pelican Park (suburb) and Strandfontein. Legal services from the City of Cape Town are still involved in managing the encroachment problem in Pelican Heights. Law enforcement incidents noted over this quarter are listed below (Table 5).

Table 5: Illegal activities recorded over a three month period on the Pelican Park Section monthly patrols

Type of incident	Details	Action
Encroachment (major infrastructure)	Two incidents of illegal housing or infrastructure reported	Legal department to take action
Encroachment (minor offences)	Two washing lines built on City property	
Waste water out flow pipe	One incident of household grey water flowing into reserve	Verbal warnings issued
Domestic livestock	Four incidents (sheep and horses in Pelican Park and domestic chickens)	Verbal warnings issued
Land invasion	A middle-aged man was found sleeping in the middle sewage pipe in the Zeekoevlei area.	Asked to leave site
Dumping	Three new incidents of dumping noted at Peacock Close	
Sewage Spill	Backed-up sewage line was over flowing into the Reserve and wetland area.	The site was checked and line was unblocked within three days of reporting the incident
Theft	One incident of theft was evident on the Pelican Park Fence line (12 poles were stolen)	Removed the entire fence line of Punt Road until more law enforcement in that area is made available



Derelict storm water pipe used as a shelter (left) and a blocked sewage line resulted in a spill in Pelican Park Section (Photos : C. Moses 2016)

Fish Trek on Strandfontein Beach

Several staff of False Bay Nature Reserve were on Strandfontein beach during one of the infamous 'fish treks'. Only one family in Cape Town has the historic permits to trek from the shore, but hordes of people stopped to watch the spectacle. The reserve staff remained on site until the nets were pulled to the shore and then monitored the fish that were caught in the nets. The permit holders complied with their permit regulations and returned the by-catch and undersized fish to the sea.



A view of the trek nets being pulled to shore with the help of several bystanders (left) and the resultant southern mullet fish (*Liza richardsonii*) caught by the nets (right) (Photos: E. Essig 2016)

Carcass Dumping at Strandfontein Section

In September 2016, the carcass of a seal pup was found by the Zeekoevlei team dumped in the perimeter dunes of Strandfontein Section of the False Bay Nature Reserve near Baden Powell Drive. The animal appeared to have been 'skinned', but no other evidence was visible as to the origin of the animal.



Carcass of a seal pup found dumped in Strandfontein Section (Photo: S. Dreyer 2016)

Fence Line Damage at Pelican Park Section

On the evening of 5 July 2016, part of the Strandfontein Section fence line which borders the area of Pelican Park on the western side of Strandfontein Road was damaged by a vehicle. The vehicle tracks found on site indicate that a vehicle swerved off the road into the fence and straight into one of the poles. The pole broke and was presumed to be stuck underneath the vehicle. The vehicle then proceeded through the fence and drove through the veld for approximately 20 m and then exited the Reserve again. It is presumed the vehicle owners were responsible for cutting an opening in the fence so that the vehicle could exit the reserve. Large sections of veldspan wire and straining wire were damaged, as well as two wooden poles broken. The damage took four staff members a period two days to repair (64 working hours).



Vehicle tracks indicating a vehicle swerving off the road and into the Strandfontein fence line (top left); driven into the veld (top right and bottom left) and the vehicle finally exited 30 m from entrance by cutting the fence line (bottom right) (Photos: C. Williams 2016)



Additional Law Enforcement Incidences Recorded for Pelican Park and Strandfontein Sections

Other law enforcement incidences noted in Pelican Park and Strandfontein sections over this quarter are listed below (Table 6).

Table 6: Other law enforcement incidents in Pelican Park and Strandfontein Sections this quarter

Type of incident	Details	Action
Illegal Wood cutting	Three persons caught collecting wood with a bow saw in the Peacock Close area.	Individuals were asked for permits. The Reserve Supervisor explained the permit system and application process. The persons were asked to leave site, as they had no valid permits.
Illegal Sand mining	Two persons caught loading sand into their vehicle near Peacock Close	Persons were informed that sand mining is illegal and that the sand which was in their vehicle needed to be off-loaded back onto site. The persons complied with the latter.
Veld damage	Two incidents of veld damage by heavy duty machinery completing operational requirements at Strandfontein Section	Machinery operators were informed of the damage caused and assisted in mitigation measures

Zeekoevlei Section Law Enforcement Incidents

The following law enforcement incidents were recorded at Zeekoevlei Section this past quarter:

July

- 10/07/2016 – Vehicle found on the eastern shore of Zeekoevlei with occupants drinking alcohol and smoking marijuana. Two of the occupants became aggressive and were abusive to the Quemic rangers and started throwing stones at them. The rangers managed to get the two occupants under control and they were all escorted off the reserve.
- 18/07/2016 – Visitors found making a braai in a non-designated fire area along the eastern shore were escorted off site due to being aggressive and making racist remarks towards the Quemic rangers.
- 18/07/2016 – Bricks were stolen from a braai facility along the eastern shore of Zeekoevlei.
- 19/07/2016 – A confused man (later found to be suffering from Alzheimer's disease) was found wandering around the southern bridge area of Zeekoevlei Section. He was taken back to the care of his family by the Quemic rangers. It was discovered that the man had gone missing from Victoria Hospital two days previously.

August

- 13/08/2016 – The Quemic rangers found a man illegally harvesting wood at the southern bridge area of Zeekoevlei Section. The rangers then informed the person of the wood collecting policy (i.e. permit required) and he left site.
- 17/08/2016 – Vandalism along the eastern shore to one of the toilets (smashed). The suspect was arrested, appeared in court and was charged with community service.
- 18/08/2016 - A vehicle was found abandoned on the eastern shore of Zeekoevlei Section. It was found that the owner had abandoned it overnight due to a mechanical failure. The vehicle was collected the next day.
- 22/08/2016 – Eastern shore: A vagrant was removed from the eastern shore of Zeekoevlei by the Quemic rangers.
- 23/08/2016 – Approximately 30 m of fence line was stolen at about 05:00. The fence was temporarily repaired the same day and plans for a more secure solution were made and supplies ordered.
- 27/08/2016 – Three men were found fishing off the Little Lotus River bridge. Only one was in possession of a valid permit and all three were fishing with keep nets, which is not permitted in Zeekoevlei. The men were informed of the above and were escorted off site.
- 27/08/2016 – Illegal wood harvesting near the southern bridge area of Zeekoevlei Section. The Quemic rangers stopped the person involved and explained the wood collecting policy (i.e. permit required). The man then left site.



Toilet smashed along the eastern shore of Zeekoevlei Section (left) (Photo: V. Day 2016)

Over the past three months there has been an increase in vandalism incidents particularly on the eastern shore of Zeekoevlei, where the toilet facilities are being particularly targeted.



Images of recent vandalism to toilet facilities along the eastern shore of Zeekoevlei Section (Photos; V. Day 2016)

Illegal Occupancy at Zandwolf Section

Over the past quarter, six illegal makeshift structures have been identified in Zandwolf Section of False Bay Nature Reserve. Their locations have been reported to the City of Cape Town Land Invasion Unit for removal as soon as the necessary resources are available.

12. INFRASTRUCTURE & EQUIPMENT

Operationally Funded Projects

Progress on the Pelican Park Section Perimeter Fence Line

Pelican Park Section is zoned as a site for primary biodiversity conservation (i.e. conservation objectives take priority over other activities such as recreation and development). This is because the site contains pristine examples of the endangered vegetation type known as Cape Flats dune strandveld. A 2.5 m veldspan wire fence line was erected to help reduce urban impacts on the surrounding vegetation, and also in preparation for possible game species introductions to False Bay Nature Reserve in the future, where adequate enclosures are a requirement.

The above fence line is now complete, but general maintenance and small upgrades are still continuing to be carried out on the fence line. This quarter, 500 m of fencing was removed along this section (including the fence posts) which ran along the southern section of Punt Road. Twelve poles were stolen and thus a decision was made to remove this portion of the fence until more adequate monitoring of the line can be carried out. The fence is situated in an area which is known to be a high risk crime zone where there is frequent theft and the fence is also easy to access by vehicle given its close proximity to the nearby road.



Aerial image showing the extent of the Strandfontein Section fence line in yellow (Google Earth image, 2016)

Strandfontein Section Fence line

Work has commenced on the Strandfontein fence line again this quarter. The Strandfontein fence line consists of a 500 m diamond mesh line which runs from the Zeekoevlei Environmental Education Centre to the north-eastern perimeter of the Strandfontein Section. The three-person team has already completed 350 m of the project, and only have another 150 m to go. Work has included cutting the grass and spraying it with herbicide, as well as cutting back any bush encroachment within 1 m on either side of the fence. Then the poles were strained with insulated straining wire and finally the diamond mesh positioned and tightened. Gate stays have also been placed along the fence line this quarter in preparation for gates that will be installed. The stays will help to anchor the gates when they are in place.

Barriers for Access Points along the Eastern Shore of Zeekoevlei Section

Chain barriers were installed across three access points to the recreational areas along the eastern shore of Zeekoevlei Section over this quarter. These barriers help to limit the number of areas utilised by the public to reduce the workload required to clean and maintain facilities in certain sections. This became particularly necessary since the drastic reduction in the staff component in July 2016 when the Expanded Public Works Programme (EPWP) ended at False Bay Nature Reserve, resultant in lack of capacity to maintain public facilities. In summer time the closed sections will be opened over weekends to accommodate the higher numbers of seasonal visitors, but will remain closed during the week to reduce usage.



False Bay Nature Reserve staff member Grant Revell attaching (welding) one of the chain barriers to bollards across an access point along the eastern shoreline of Zeekoevlei (Photo: V. Dav 2016)

REFERENCES

Red List SANBI website: <http://redlist.sanbi.org/species.php/species=1534-153>

Cape Town Invasive Website: <http://www.capetowninvasives.org.za/project/animals>

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