



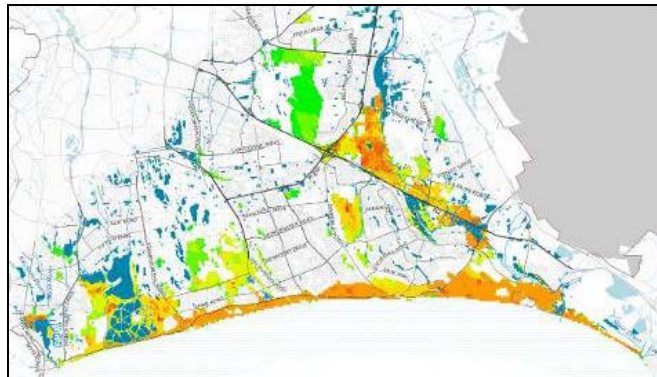
CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

THIS CITY WORKS FOR YOU

## CONSERVATION IMPLEMENTATION PLAN FOR STRANDVELD IN THE METRO SOUTH-EAST

P. M. Holmes, C. Dorse, A. Stipinovich, A. Purves, J. Wood, D. Gibbs, R. Ernstzen.  
Environmental Resource Management Department (ERMD), City of Cape Town

*Final Report, August 2011*



## Executive Summary

The Cape Town Municipal Area is one of the most important and diverse areas within the Cape Floristic Region global biodiversity hotspot. However, this unique city biodiversity is under threat, with many vegetation types and over 300 plant species threatened with extinction. Cape Flats Dune Strandveld is one of six vegetation types endemic to Cape Town and therefore it can only be conserved within the city boundaries. Two vegetation subtypes are recognized: False Bay and West Coast Cape Flats Dune Strandveld.

The False Bay subtype is highly threatened and is disappearing fast owing to recent formal and informal development, sand mining and other degrading land uses. It is not only of importance to biodiversity conservation, but in providing many ecosystem services to communities, including coastal protection, flood attenuation, “green lungs”, educational and recreational space and tourism opportunities. Over two million people (56% of the city’s population) live in the False Bay Strandveld area. For this reason, the Biodiversity Management Branch (of ERMD) initiated the conservation implementation plan (CIP) study for the metro south-east area that encompasses the False Bay Strandveld subtype. A steering committee was convened with other stakeholders, to assess in more detail the biodiversity priorities, implementation and management practicalities, and development needs. The objective was to identify a pragmatic set of areas that could be implemented for conservation as a matter of urgency while indicating some other natural areas that could be developed. *However, development on Biodiversity Network land will only be supported by conservation agencies once a mechanism to secure the CIP areas has been agreed to.*

The latest available data were used in the analyses, with the main informants being:

- Biodiversity (habitat condition, connectivity, wetlands and threatened species)
- Other environmental informants (flood-prone and coastal protection zone areas)
- Land use (potential mining, urban edge, land ownership)
- Housing (New Development Areas, subsidized housing priority areas, informal settlements)

Indicators were scored (on a 1-9 scale) using 1ha grids then summarized for each informant and the final result obtained by combining the individual scores. Combined scores from 4-9 were considered as priorities in the CIP. An expert process followed to screen for unmanageable selections and a final “expert combined” CIP was produced.

Of the historic extent of False Bay Cape Flats Dune Strandveld (25,672ha) only 6,486ha or 25.3% remains. This is just sufficient to meet the minimum national conservation target of 24%. However, only 13% of the original vegetation remains in good condition, with 8% in moderate and 4% in poor condition. The final expert CIP covers an area of 4,954ha or 19.3% of the historic area. It encompasses the conservation areas, coastal protection zone and flood prone areas and most of the good condition habitat. A population study indicated that over 1.4 million people live within 1km of a CIP natural remnant and could access it for recreation. Although the identified CIP land is well below the minimum national conservation target, it was agreed that provided this area could be

secured and a mechanism to manage it implemented, that the 1,682 ha of other biodiversity land could then be supported for development.

There is a valuable opportunity now to secure and manage the CIP areas that will soon be lost if we are not proactive. This investment would create jobs, secure valuable ecosystem services, improve human wellbeing, and unlock further potential job opportunities through the tourism sector. An operational budget of R13.7 million per annum would be required to manage the CIP area that is not currently conserved.

Subsequent to the above analyses, a recent update of the biodiversity information (August 2011) indicated that only 6,112 ha (or 23.8%) of strandveld now remains in the study area, which is below the minimum national target. In addition, it was decided to remove the 409 ha on the CIP representing unresolved conflicts between priority strandveld remnants and New Development Areas on the Spatial District Plans, until more detailed planning can be done to identify which portions will be included in the CIP. These two factors have altered the statistics presented in this report. These updated statistics and map are presented as an addendum.

## **TABLE OF CONTENTS**

<b>1</b>	<b>Introduction</b>	<b>4</b>
1.1	<i>Rationale</i>	4
1.2	<i>Cape Flats Dune Strandveld</i>	4
1.3	<i>Importance of Cape Flats Dune Strandveld</i>	5
1.3.1	<i>Biodiversity</i>	5
1.3.2	<i>Ecosystem Services</i>	5
1.4	<i>Desired Outcomes</i>	5
<b>2</b>	<b>Methodology</b>	<b>6</b>
2.1	<i>Study Area</i>	6
2.2	<i>Differences between the CIP and Biodiversity Network</i>	7
2.3	<i>Data Preparation and Analyses</i>	7
2.4	<i>Stakeholder Participation</i>	8
<b>3</b>	<b>Results</b>	<b>9</b>
3.1	<i>Summary Statistics</i>	9
3.2	<i>Results of the Conservation Implementation Plan Analyses</i>	10
<b>4</b>	<b>Discussion</b>	<b>14</b>
4.1	<i>General</i>	14
4.2	<i>Budget for Conservation Management of CIP</i>	14
4.3	<i>Way Forward</i>	15
<b>5</b>	<b>Addendum: updated statistics and CIP maps</b>	<b>18</b>

## 1. Introduction

### 1.1 Rationale

The Cape Town municipal area (city) is one of the most important and diverse areas within the Cape Floristic Region (CFR) global biodiversity hotspot. However, this unique biodiversity is under threat, mainly as the result of habitat transformation to agriculture and urban development. One third of the CFR's native plant species occur in the city (in less than 3% of the area), of which 319 are Red Listed as threatened with extinction, and 13 species are already extinct or extinct in the wild.

We are obligated to conserve biodiversity for future generations and in its own right: South Africa is a signatory to Convention on Biological Diversity (1992); National Environmental Management Act (NEMA: Act 107 of 1998): the principle of duty of care; National Environmental Management: Biodiversity Act (NEM:BA: Act 10 of 2004): conservation of threatened biodiversity is the responsibility of all tiers of government and civil society; amongst other legislative imperatives.

Owing to the recent severe pressure for development land in the Metro South-east, primarily in Cape Flats Dune Strandveld vegetation areas, the City's Biodiversity Management Branch initiated this study to assess in more detail the natural vegetation remnants in this area in terms of biodiversity priority, management practicalities and development needs. The current situation is one where there remain sufficient natural remnants to meet the minimum national conservation targets for this vegetation subtype. However, the situation is rapidly changing and the opportunity to secure this target will soon be lost.

The objective of the study is to draft a conservation implementation plan (CIP) that can be supported by internal line functions and external conservation partners, and lead to the urgent securing of priority biodiversity areas, while facilitating development in Biodiversity Network and other remnants not identified as CIP areas. *High level commitment in City and Province will be required to secure and manage the identified CIP areas, before development in other remnants can be supported by the biodiversity conservation sector.*

### 1.2 Cape Flats Dune Strandveld

Cape Flats Dune Strandveld occurs on recent alkaline sands and differs from fynbos in composition, structure and functioning: for example, unlike fynbos it does not require regular fire for persistence. It is one of the city's six endemic vegetation types (i.e. it is confined to within the borders of the city) and therefore cannot be conserved elsewhere. Botanists have split the vegetation type into two main subtypes: False Bay and West Coast, as these differ significantly in composition. As far as possible we should meet the minimum national conservation target (24% of historical extent) for both vegetation subtypes.

Note that the strandveld landscape is one of dunes (some of which are transient and move) and dune slack wetlands: much of the Cape Flats historically comprised seasonal wetlands. Today, most of this is transformed, although relatively recently, as large machinery was required to bulldoze the dunes and fill in the wetlands. Urban sprawl now

extends eastwards to the Macassar Dunes, and remaining natural dune areas are also subject to sand mining pressures and other degrading land uses.

### *1.3 Importance of Cape Flats Dune Strandveld*

#### *1.3.1 Biodiversity*

- Cape Flats Dune Strandveld is important to conserve because it is endemic to the city, and also because it comprises many different habitats supporting a large variety of flora and fauna: from coastal and inland dune ridges, dune slopes and dune slack wetlands, to limestone outcrops (some with limestone fynbos communities) and cliffs.
- The limestone sea cliffs are important breeding sites for Kelp Gulls and Peregrine Falcons.
- Wetland areas and surrounding terrestrial habitat support threatened amphibians, including the Western Leopard Toad.
- The strandveld coastal corridor provides the last terrestrial ecological link for gene flow and migration between the Cape Peninsula and the Helderberg region.

#### *1.3.2 Ecosystem Services*

- Strandveld abuts the coastline and together with the high inland dune ridges this provides wonderful panoramic views and potential for high quality recreational and environmental education experiences close to communities living on the Cape Flats.
- These natural areas are also important in underpinning potential tourism opportunities on the Cape Flats.
- Strandveld provides numerous ecosystem services to city dwellers, not least of which is flood attenuation (in areas below the 1:100 year floodline) and coastal protection (from predicted increase in sea level rise and storm surge under global climate change).
- Well-managed natural vegetation areas prevent the nuisance of blowing sand, provide “green lungs” and promote a high quality of life in neighbouring suburbs.
- Access to natural open space has been shown internationally to improve human health and wellbeing.

Conserving a representative sample of False Bay Strandveld supports the sustainable development imperatives of the City.

### *1.4 Desired Outcome of CIP*

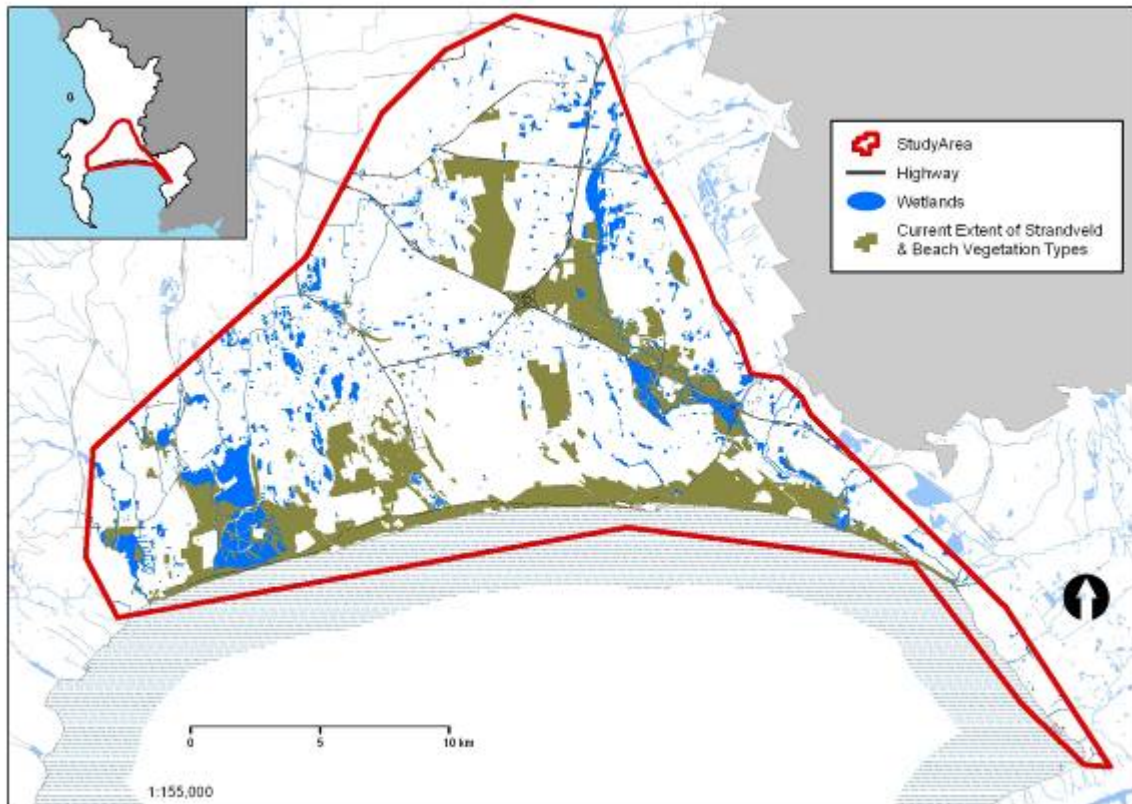
Because False Bay Strandveld is under such imminent threat, it is necessary to be both proactive and pragmatic if we are not to lose remaining remnants to formal and informal development. The aim of the CIP is to obtain support from City and Province to secure the priority biodiversity areas, while facilitating development in natural remnants not identified as CIP areas. The ultimate aim is to proclaim the final selected CIP areas under the National Environmental Management: Protected Areas Act (NEM: PAA: Act 57

of 2003). Releasing any government-owned areas of the Biodiversity Network<sup>1</sup> that are not identified as CIP areas must therefore proactively unlock resources to first secure the priority CIP sites; in the case of privately-owned land, mechanisms such as a biodiversity offsets or land swaps may need to be implemented.

## 2 Methodology

### 2.1 Study Area

The study area included all the False Bay Cape Flats Dune Strandveld from Muizenberg to the Lourens River Mouth and inland to the Cape Flats Nature Reserve at the University of the Western Cape, Bellville (Figure 1). Large water bodies and perennial wetlands (>5ha) were excluded from the strandveld layer.



**Figure 1. Study area for the Metro SE strandveld CIP**

<sup>1</sup> The Biodiversity Network is the fine-scale systematic conservation plan for the City of Cape Town

**Table 1. Comparisons between the CIP and Biodiversity Network**

<b>Conservation Implementation Plan</b>	<b>Biodiversity Network</b>
<ul style="list-style-type: none"> <li>• Covers a specific area or vegetation type within the city</li> <li>• Analyses factors other than biodiversity, to better inform the practicalities of securing sites for biodiversity conservation; is not driven by biodiversity targets</li> <li>• Identifies the most important sites that are also feasible to conserve &amp; manage</li> </ul>	<ul style="list-style-type: none"> <li>• Fine-scale systematic conservation plan for the entire city area</li> <li>• Includes a “threats” analysis, but is primarily informed by biodiversity pattern and process in order to identify the optimal, minimum set of sites to meet national &amp; city biodiversity targets (as far as remains possible)</li> <li>• Does not consider implementation feasibility</li> </ul>

### *2.2 Differences between the CIP and Biodiversity Network*

Primary biodiversity informants and principles are embodied in the Biodiversity Network C-plan and Marxan analyses<sup>2</sup>. However, these are set to meet national and local biodiversity targets and this cannot be achieved using high quality remnants only. Nor does the Biodiversity Network take into account informants on the practicality of securing an area for conservation (Table 1). Nevertheless, the Biodiversity Network remains the minimum set of areas required to meet our legal conservation imperatives and as such is a key informant in the Spatial Development Plans.

### *2.3 Data Preparation and Analyses*

The following were the critical biodiversity indicators used in the analysis:

- Primary Biodiversity Informants (double weighting):
  - Habitat condition
  - Connectivity between remnants
- Secondary Biodiversity Informants:
  - Significant wetlands on site
  - Threatened Red List species on site

The following were the critical indicators of lower development pressure used:

- Other Environmental Informants:
  - In flood-prone areas
  - In Coastal Protection Zone

<sup>2</sup> Biodiversity Network C-Plan and Marxan Analysis: 2009 Methods & Results (available for download from [www.capetown.gov.za/environment](http://www.capetown.gov.za/environment))

The following were the critical indicators of higher development pressure used:

- Land Use Informants:
  - Potential for mining (permit or zonation)
  - Inside urban edge
  - On government-owned land
  - On other structuring open space
- The housing development informants used were:
  - In New Development Area
  - In Subsidised Housing Priority Area
  - In an informal settlement hot-spot

Indicators were scored and summarized for each of the four informants on a scale of 1-9. In the combined analysis, scorings were reversed for informants that reduce biodiversity conservation probability. Thus the highest combined scores indicate areas of high biodiversity importance that are least threatened by other land uses. The informant layers existed in a GIS shapefile format and were converted to GRIDs (at a 1ha resolution) to allow for spatial analysis using the Spatial Analyst Extension of ArcGIS 9.3. The GIS expertise was provided by Amalia Stipinovich and the methodology is detailed in the appended technical report.<sup>3</sup>

The analysis generated the “Combined” Informant layer. The internal biodiversity team reviewed these results and based on their expert knowledge, changes were made to some of the computer-generated values to create an “Expert Combined” Informant layer. Factors such as suitable boundaries, and remnant edge effects, isolation and poor habitat condition, led to demotion of some areas. A few transformed areas were promoted in the “Expert Combined” as these are essential for consolidating the important remnants (e.g. some post-sand mining areas in the Macassar Dunes that are amenable to ecological restoration).

#### *2.4 Stakeholder Participation*

Three steering committee meetings were held with identified primary stakeholders. Internal line functions from Environmental Resource Management (ERM), Housing, Spatial Planning & Urban Design (SPUD), Planning & Building Development Management (PBDM) and external partners from CapeNature and DEA&DP were represented. The first meeting was held following a preliminary analysis run (November 2009) so that stakeholders could comment on the criteria and methodology being used. Adjustments were made according to useful inputs and a second meeting was held to discuss the updated analysis (February 2010). Comments from this meeting were noted and further corrections done prior to the final analysis and draft report which was circulated for comment prior to the third steering committee meeting in October 2010.

---

<sup>3</sup> Conservation Implementation Plan for Strandveld in the Metro South-east: Spatial Analysis Technical Report. ERMD 2010.

One-on-one meetings were then held with district SPUD/ PBDM and Housing to go through the CIP in detail.

In November 2010, we were alerted to a concept development plan for the Airport-Symphony Way corridor which had not been tabled during earlier meetings. This necessitated an extraordinary Steering Committee meeting in January 2011 to discuss the steering committee position in relation to the proposals. The Steering committee did not support the development of the priority CIP natural remnants and it is hoped that these areas will be secured as part of this development, in accordance with one of the concept plans presented. A parallel process led by Housing will run with this.

### 3 Results

#### 3.1 Summary Statistics

The False Bay subtype of Cape Flats Dune Strandveld is disappearing fast: only 25.3% of the original extent remains (January 2011). This is 4% lower than the May 2008 analysis figure and indicates just how rapidly the situation is changing (Table 2). This vegetation subtype is therefore approaching “Critically Endangered” status.

Unfortunately False Bay Strandveld in good habitat condition remains on only 13% of the historical area, and together with medium habitat condition vegetation covers only 21% of the historical area (Table 3) – short of the minimum national conservation target of 24%.

Ten percent of the study area falls into either the Flood Prone Area (FPA; areas under 1:100y flood line) or Coastal Protection Zone (CPZ), which are considered by the City as unsuitable to most forms of development (Table 2). There are large areas of permanent and seasonal wetlands present in the study area, with the larger wetlands (>5ha) covering 6.5% of the study area. “Other open space” covers 17% of the study area and includes open spaces without natural vegetation that are Natural Heritage Sites, Heritage Inventory Sites, sports fields and farms.

**Table 2. Summary Statistics for study area: False Bay Cape Flats Dune Strandveld (including beach vegetation). Minimum National Target = 24%**

In Study Area	Hectares	% of Original veld
False Bay Strandveld historical extent	25,672	100
False Bay Strandveld remnants remaining	6,486	25.3
False Bay Strandveld in Coastal Protection Zone	1,882	7.3
False Bay Strandveld in Flood Prone Areas	628	2.4
Wetlands >5ha in False Bay Strandveld area	1,665	6.5
Other open space (transformed)	4,367	17

### 3.2 Results of the Conservation Implementation Plan (CIP) Analyses

The individual informants' results maps are available in the technical report<sup>3</sup>. The biodiversity informants indicated a strong signature along the coast and the Kuils River biodiversity corridor to Driftsands Nature Reserve. The Swartklip Denel conservation area was also a priority biodiversity remnant.

For the combined scores (Figure 2), we considered using cut-offs of “ $\geq 4$ ” and “ $\geq 5$ ” to determine the CIP area. In both cases the resultant CIP area fell beneath the national target of 24% (Table 4). However, when the expert biodiversity team reviewed the results, additional areas were demoted on the basis of pragmatism (feasibility to conserve), and this reduced the recommended CIP area further. It was agreed that the score cut-off of “ $\geq 4$ ” was the more suitable, in combination with expert adjustments. This Expert Combined  $\geq 4$  result selects an area of 4,954 hectares (or 19.3% of historical False Bay Strandveld) as recommended for pro-active conservation (Table 4, Figures 3, 4). Note that this includes some areas of sand-mined land amounting to 150ha (e.g. in Macassar Dunes) that is amenable to restoration and required for ecological processes. While the CIP is 5% below the minimum national target, it was agreed that securing this area would consolidate current conservation efforts, while facilitating urban development in the other areas. A total of 1,682ha of natural strandveld vegetation was identified as potentially developable. The CIP was thus accepted by the steering committee as an appropriate compromise.

**Table 3. Habitat condition in remaining remnants of False Bay Cape Flats Dune Strandveld**

Habitat condition	Area (hectares)	% of Original CFDS
High	3,342	13.0
Medium	2,087	8.1
Low	1,007	3.9

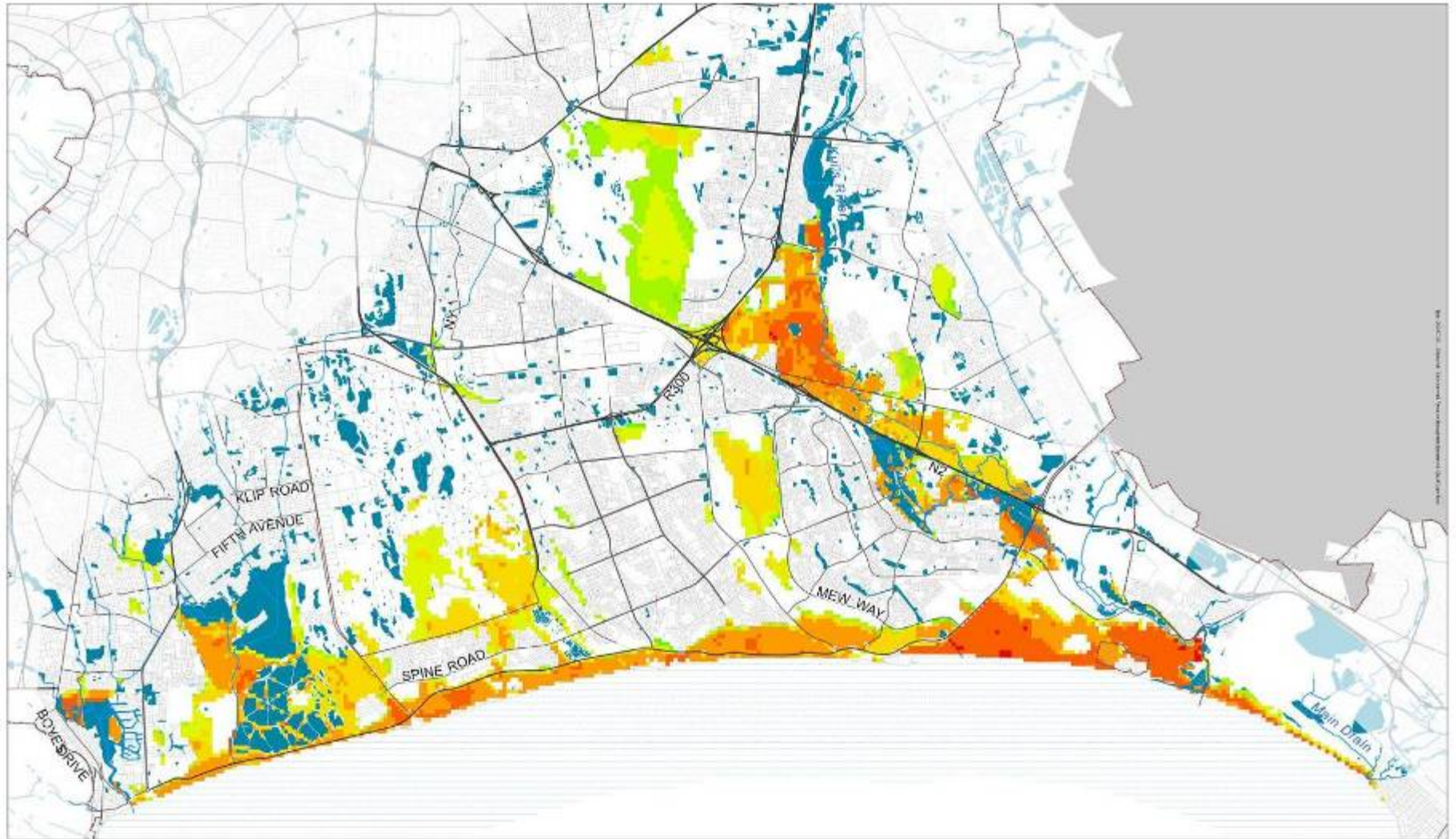
**Table 4. Results of Conservation Implementation Plan Analyses for the Metro SE Strandveld: Combined and Expert Combined**

In Study Area	Area (hectares)	% of Original CFDS
Combined score $\geq 4$	5,779	22.5
Combined score $\geq 5$	4,532	17.7
<b>Expert Combined score <math>\geq 4</math></b> (includes 150ha of mined land)	<b>4,954</b>	<b>19.3</b>
<b>Strandveld not selected</b>	<b>1,682</b>	<b>6.6</b>

**Figure 2. Combined informant scores for all strandveld remnants (next page)**

Conservation Implementation Plan of Metro SE Strandveld:


COMBINED INFORMANT





— Urban Edge  
 — River  
 Wetland


— Highway  
 — Arterial Road  
 — Other Road


INFORMANT VALUE


 1.77 - 1.99


 2 - 2.99

 3 - 3.99

 4 - 4.99

 5 - 5.99

 6 - 6.99

 7 - 7.99

 8 - 9

0 1 2 km



1:31,000

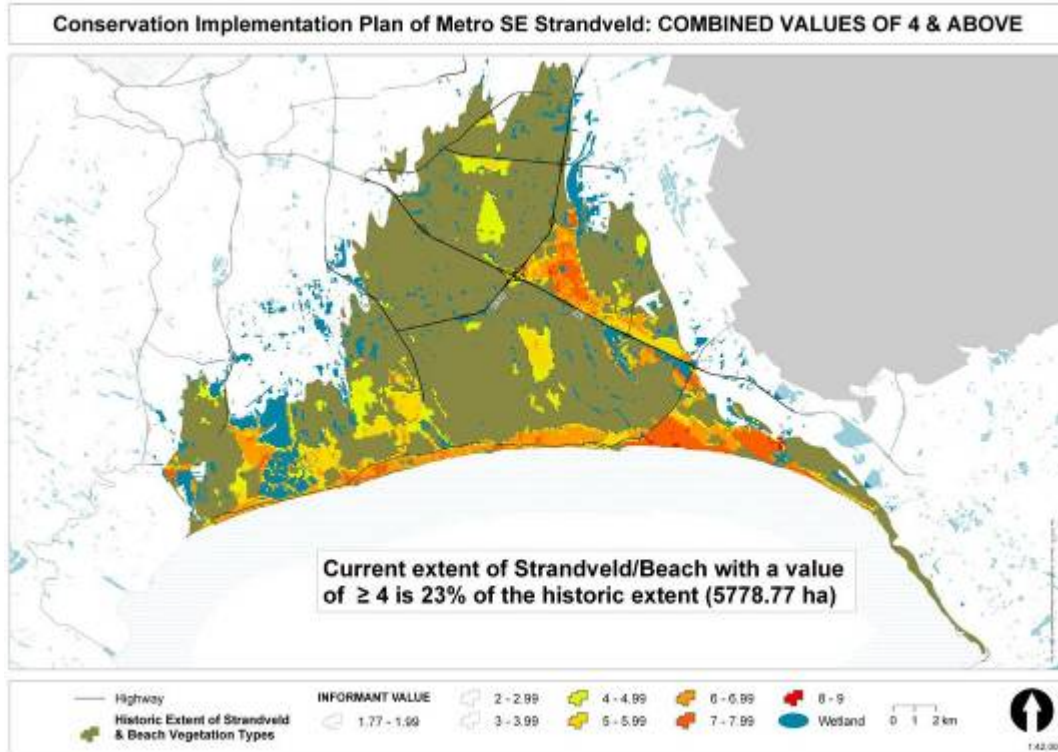


Figure 3. Combined results indicating only those remnants  $\geq 4$

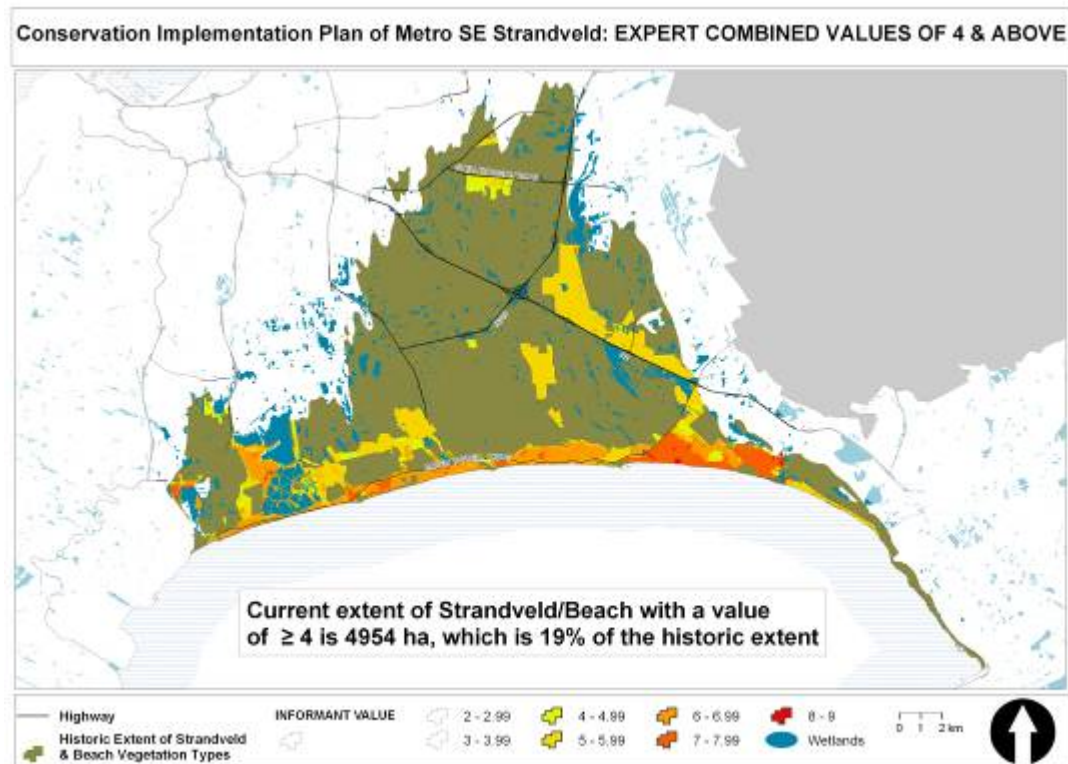


Figure 4. Expert Combined results indicating only those remnants  $\geq 4$

Only 3% of the study area is proclaimed as local authority or provincial nature reserves (Wolfgat, Zandvlei, Rondevlei, Zeekoevlei Nature Reserves, Driftsands). Parts of Driftsands Nature Reserve are being transformed to housing and urban park owing to past land invasions. Therefore we are only 12% towards securing our national target for this vegetation subtype (Table 5). A further 5% is in process for proclamation under the Protected Areas Act (NEM:PAA, Act 57 of 2003) and another 2% is managed as conservation area (see Figure 5 for conservation status).

**Table 5. Status of Land within Expert Combined  $\geq 4$  Conservation Implementation Plan (CIP)**

<b>FALSE BAY Strandveld Land Status</b>	<b>Area (hectares)</b>	<b>% of Expert Combined</b>
Expert Combined CIP $\geq 4$	4,954	100
Portion of CIP inside urban edge	3,825	77.2
Portion of CIP outside urban edge	1,129	22.8
Proclaimed Nature Reserve	702	14.2
In proclamation process	1,322	26.7
Managed, but not yet being proclaimed	574	11.6
Non-conserved CIP	2,356	47.5
Portion of non-conserved that is public/ undefined land	1570	31.7
Portion of non-conserved that is private land	786	15.8
Portion of CIP in CPZ	1,882	38.0
Portion of CIP in FPA	406	8.1
Portion of CIP in both CPZ & FPA	12	<0.1
Portion of CIP in NDAs	397	8.0

A high proportion of the Expert CIP (46%) represents CPZ and FPZ areas which are not suitable for development. Portions of the CPZ and FPZ currently outside of conservation areas should be proclaimed and managed as nature reserves to secure ecosystem services to the City and local communities. However, unfortunately these areas also do suffer from land invasions and are not secure: proactive management and law enforcement will be required. Portions of New Development Areas (NDAs) identified in the Spatial Development Plans that conflict with the CIP amount to 397ha and are indicated in Figure 5. Further detailed planning and environmental impact studies will determine the exact delineation of development and conservation land in these areas.

Of the unmanaged, non-conserved land (2,356 ha), 1570 ha is public (or undefined) land and 787 ha is privately owned. Different implementation approaches may be required between private and public land parcels within the CIP. These implementation approaches are summarized in the Appendix, together with the available property information.

## **4. Discussion**

### *4.1 General*

Resources will be required to proactively secure and manage the selected CIP areas, but this brings the additional benefit of creating new jobs (see below). In order to compensate for not achieving the national conservation target in the False Bay Strandveld CIP, sufficient West Coast Strandveld remnants should be secured in order to meet the minimum national target of 24% for the vegetation type as a whole. At present, the West Coast subtype of Cape Flats Dune Strandveld is relatively intact (80%) so this is feasible and must be a condition of approving the Metro SE Strandveld CIP. The minimum target of 3,048 ha for West Coast Strandveld would need to increase to 4,255 ha in compensation for losses to False Bay Strandveld. The latter area already is selected in the latest Biodiversity Network owing to the requirement to meet ecological process and species targets, so the minimum national target remains achievable for the vegetation type as a whole.

City policies for coastal protection, flood plain river management and stormwater management align with conserving CIP land within the CPZ and FPA, respectively. Securing these areas would significantly contribute towards biodiversity conservation as well as important ecosystem services in the city and should be considered as a matter of urgency, with budget allocated to operational management, particularly law-enforcement to prevent land invasions and other illegal activities.

A spatial analysis of Cape Town's population living within the False Bay Strandveld Area, based on 2008 population figures, indicates that more than half (2,008,610) of the city's 3.6 million people (55.8% of the population) live here. This proportion will likely have increased since 2008. There are many studies internationally that indicate the vital importance of access to natural open space for human health, as well as psychological and spiritual well-being. It is therefore essential to retain and manage the priority CIP vegetation remnants, not only for biodiversity conservation and ecosystem services, but also to secure the future health of our human population. Securing the CIP areas will thus promote the goal of sustainable development in Cape Town. Once these areas are secured and made safe to visit, potential further job creation in the tourism sector will be unlocked.

A few conflict areas remain, for example, high priority CIP areas on the False Bay natural corridor that are earmarked by Spatial Planning and Urban Design for connecting inland suburbs to the coastal resorts through urban development. These are indicated on the final map as overlaps (Figure 5) and further detailed studies will need to ensure that critical biodiversity, and important ecological corridors, are not irretrievably lost, or severed, by the footprints of these proposed new developments.

#### 4.2 Budget for Conservation Management of the CIP

The estimated operational management costs are based on the 2010/11 management budget for the City-run conservation areas, such as the False Bay Ecology Park, Wolfgat and Macassar Dunes nature reserves (Table 6). This budget was work-shopped among senior managers in the Biodiversity Management Branch and is based primarily on staffing requirements and excludes built infrastructure costs. Thus a sum of R13.7 million rand per annum is required to manage the area at current costs. This would create jobs for an additional 61 people at various work grades and some additional people as contracted labour (e.g. for invasive alien clearing work). The potential benefits of this investment to the City and Western Cape are enormous and would offer returns on investment in excess of 8:1, resulting from the various ecosystem services that are secured (De Wit et al. 2009<sup>4</sup>). There are further benefits, including biodiversity conservation and human health that are difficult to quantify in financial terms. Conversely, if we do not proactively conserve these areas, we will lose this unique biodiversity (both to illegal land invasions and other developments), with the result that the flow of ecosystem goods and services will cease, to the greater long-term cost to society.

It is important to emphasize that if we do not act now, we will lose many of these sites and once they are gone they will be gone forever. Investing in this conservation plan is also investing in human capital as most of the budget would go towards creating jobs and is therefore in support of the country's job creation imperative.

#### 4.3 Way Forward

A joint report will be submitted to PEPCO, the subcouncils in the study area and any other relevant council committee. One purpose of the report will be to obtain support to approach City and Province finance departments to motivate for operational funding in providing the full or part of the mechanism required to secure the CIP. After this it is proposed that ERMD take the lead in securing the priority biodiversity CIP areas with the assistance of other line functions and conservation partners. Non-CIP biodiversity sites can be supported for development by the biodiversity conservation sector **provided that** a mechanism has been agreed and implemented by City and Province to secure the CIP sites, and it is accepted that sufficient land is selected in compensation from the West Coast subtype of Cape Flats Dune Strandveld, to meet the minimum national conservation target for the vegetation type as a whole. Mitigation measures for development of biodiversity land in the area should include mechanisms to assist in securing the identified CIP sites (e.g. using tools such as biodiversity offsets).

A detailed figure of the CIP (suitable resolution for scrutiny) and tables of results by erf number and ownership (Appendix) are available for dissemination.

**Figure 5. Final Metro SE Strandveld CIP which includes Protected Areas, and indicates the excluded Biodiversity Network and other natural remnants, other open space and remaining conflicts with NDAs (next page)**

---

<sup>4</sup> De Wit, M., Van Zyl, H., Crookes, D., Blignaut, J., Jayiya, T., Goiset, V. & Mahumani, B. 2009. "Investing in Natural assets. A Business Case for the Environment in the City of Cape Town". Cape Town, unpublished report.



**Table 6. Budgeting requirements for the conservation management of the False Bay Strandveld CIP**  
(Figures exclude current expenditure on reserves)

**Staffing**

	Post	Grade	Current	Required	Annual cost/ post	Total annual cost
1	Site Managers	T8	4	11	R 200 000	R 2 200 000
2	Legal Compliance	T12	0	3	R 313 000	R 939 000
3	Enviro. Education Officer	T12	2	1	R 313 000	R 313 000
4	Enviro. Education Assistant	T10	1	9	R 252 000	R 2 268 000
5	Field Ranger	T6	1	35	R 150 000	R 5 250 000
6	Admin Assistant	T8	0	2	R 200 000	R 400 000
					<b>TOTAL:</b>	R 11 370 000

**Operational budget:**

	Item	Cost / annum
1	Contracted labour	R 1 800 000
2	Fuel/ hire costs	R 400 000
3	Uniforms / PNE	R 122 000
<b>TOTAL:</b>		R 2 322 000

**Total operational cost per annum:**

**R 13 692 000**

## 5. Addendum: Updated statistics and CIP maps

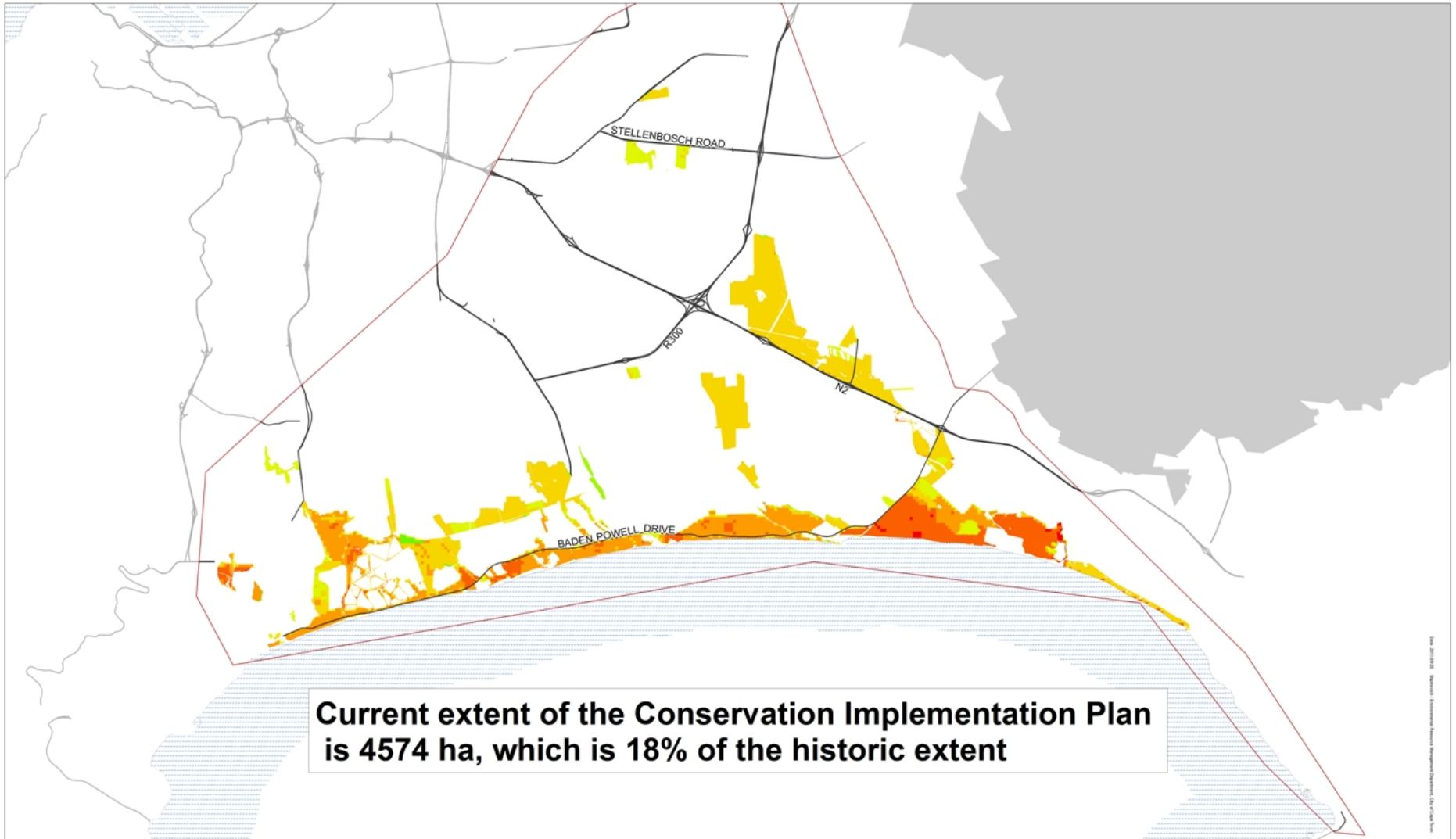
Subsequent to the analyses presented above in this report, a recent update of the biodiversity information (August 2011) indicated that only 6,112ha (or 23.8%) of strandveld remains in the study area, which is below the minimum national target of 24%. In addition, in preparation for a submission to the City Portfolio committee (Economics, Environment and Spatial Planning Committee) it was decided to remove the 409 ha on the CIP representing unresolved conflicts between priority strandveld remnants and New Development Areas on the Spatial District Plans, until more detailed planning can be done to identify which portions will be included in the CIP. These two factors have altered the statistics presented in this report. These updated statistics are presented in table form and maps below. The area of False Bay strandveld now selected in the CIP is 4,574 ha and the area of strandveld excluded, and potentially developable, amounts to 1,833 ha. The second map below may be viewed in detail at:

[http://citymysites.capetown.gov.za/personal/astipinovich/Shared%20Documents/SE%20Strandveld%20Conservation%20Implementation%20Plan/20110913\\_SEStrandveld\\_Maps\\_CIP\\_ConflictAreas\\_LandWithPotentialToDevelop.jpg](http://citymysites.capetown.gov.za/personal/astipinovich/Shared%20Documents/SE%20Strandveld%20Conservation%20Implementation%20Plan/20110913_SEStrandveld_Maps_CIP_ConflictAreas_LandWithPotentialToDevelop.jpg).

### Status of land within final CIP incorporating latest biodiversity information

<b>False Bay Strandveld Land Status</b>	<b>Area (ha)</b>	<b>% of Final CIP</b>
<b>Final CIP</b>	<b>4,574</b>	<b>100</b>
Portion of CIP inside urban edge	3,442	75.2
Portion of CIP outside urban edge	1,132	24.8
Conserved: Proclaimed Nature Reserve	677	14.8
Conserved: in proclamation process	1,208	26.4
Conserved: managed, not yet being proclaimed	668	14.6
Non-conserved CIP	2,018	44.2
Portion of non-conserved public/ undefined land	1,169	25.5
Portion of non-conserved that is private land	852	18.6
Portion of CIP in CPZ	1,867	40.8
Portion of CIP in FPA	404	8.8
Portion of CIP in both CPZ & FPA	12	0.2

### Conservation Implementation Plan of Metro SE Strandveld



Date: 2018-08-20 10:00:00 AM; Author: Environmental Services Department; Project: Conservation Implementation Plan; City: Cape Town

Highway	<b>INFORMANT VALUE</b>	2 - 2.99	4 - 4.99	6 - 6.99	8 - 9
Study Area		3 - 3.99	5 - 5.99	7 - 7.99	

0 1 2 km



1:42 000

### SE Strandveld Conservation Implementation Plan - Conflict Areas & Land with the Potential for Development are Highlighted

