

11.7	PARKS, OPEN SPACES AND ENVIRONMENT: (PC: J JOON)
11.7.1	STELLENBOSCH MUNICIPALITY INVASIVE ALIEN PLANT MANAGEMENT PLAN (5-YEAR REVIEW)

Collaborator No: 738427
 IDP KPA Ref No: Good Governance and Compliance
 Meeting Date: 16 November 2022 and 23 November 2022

1. SUBJECT: STELLENBOSCH MUNICIPALITY INVASIVE ALIEN PLANT MANAGEMENT PLAN (5-YEAR REVIEW)

2. PURPOSE

The Stellenbosch Municipality Invasive Alien Plant (IAP) Management Plan, adopted by Council in 2017, have been reviewed (5-year cycle) in consultation with the Department of Forestry, Fisheries and the Environment (**ANNEXURE 1**).

The latter document (September 2022) is herewith presented to Council for approval as Stellenbosch Municipality's 2nd generation IAP Management Plan prepared in terms of the National Environmental Management Biodiversity Act, 10 of 2004 (NEMBA).

3. DELEGATED AUTHORITY

Council

4. EXECUTIVE SUMMARY

As local authority and as landowner of various portions of nature areas throughout the WC024 area, Stellenbosch Municipality is required (in terms of NEMBA) to have an invasive alien monitoring, -control and -eradication plan in place. Stellenbosch Municipality responded to this requirement by adopting its first IAP Management Plan during June 2017 (Council decision included below). The latter plan required that it be reviewed and updated in accordance with the status of invasive alien plant investigation of the relevant municipal property included in the plan as well as alien clearing work undertaken.

The Stellenbosch Municipality IAP Management Plan, as contained in this item, has been finalized in collaboration with the Department of Forestry, Fisheries and the Environment.

5. RECOMMENDATION

that Council approves and adopts the Stellenbosch Municipality Invasive Alien Plant Management Plan (September 2022) as its 2nd Generation invasive alien monitoring, -control and -eradication plan prepared in terms of NEMBA.

6. DISCUSSION / CONTENTS

6.1 Background

As stated above Stellenbosch Municipality has defined obligations in terms of NEMBA, Section 76, to draw up (and maintain) an invasive alien monitoring, -control and -eradication plan for the land under its control. Such a plan must include:

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- (a) a list and description of any listed invasive species occurring on relevant land;
 - (b) a description of the parts of that land that are infested with listed invasive species;
 - (c) an assessment of the extent of such infestation;
 - (d) a status report on the efficiency of previous control and eradication measures
 - (e) current measures to monitor, control and eradicate such invasive species; and
 - (f) measurable indicators of progress and success, and indications of when the control plan is to be completed.

In terms of Section 4(2)(a) of NEMBA all municipalities are required to manage and conserve biological diversity. This includes taking steps to control and eradicate invasive alien plants in areas that they own or manage. The purpose of the attached document is to respond to this obligation and to coordinate Stellenbosch Municipality's approach in this regard in order to reduce future IAP control costs and improve the integrity of the relevant natural areas and ecosystems.

6.2 Discussion

A primary reason for the conservation of the natural environment of Stellenbosch Municipality is that it forms an integral part of the world-renowned Cape Floral Kingdom. The Cape Floral Kingdom is internationally recognised as one of the six Floral Kingdoms of the world (0,06% of the earth's surface). It is the only Floral Kingdom contained, in its entirety, within a single country. The Cape Floral Kingdom is characterised by its exceptional richness in plant species and its endemism. More than 8 700 species are known to occur, with more than 68% of these species being confined to the Cape Floral Kingdom.

Biological invasion has become a major cause for concern worldwide. Being a result of human induced environmental change, biological invasion is not only threatening global biodiversity, but it plays a major factor in both global and local extinctions, as well as causing substantial economic and human health problems. Defined as exotic or non-endemic species, alien species become invasive by passing through a series of barriers and establish new populations in areas at a distance from their immediate area of introduction. These barriers are geographic, environmental, reproductive, dispersal, environmental. Consequently, the lack of native enemies and controlling agents enable these invasive species to out-compete native species for available resources and space while altering the surrounding natural environment. This in turn leads to unnatural successions and the displacement of many natural vegetation communities. The extent of this displacement of natural vegetation communities and thus the unnatural alteration of many native habitat's effects ecosystem services that we as humans rely on. As such, the main impacts of IAPs are summarized as follow:

- a) **Reduced stream-flow** - Invaded sites have a much greater biomass and total leaf area than un-invaded sites. This results in reduced infiltration, river and stream runoff through increased water uptake and evapo-transpiration per unit area.
- b) **Loss of indigenous plant species** - In the Fynbos Biome, invasion by invasive plants has resulted in the extinction of approximately 26 species, and approximately 750 plant species are currently at risk.
- c) Species in riverine areas and wetlands will **accelerate bank** erosion and alter the stream flow and thereby cause increased siltation of rivers, wetlands and dams, increase the risk of flooding, loss of suitable breeding habitat for indigenous fauna in particular fish and by reducing water quality.

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- d) **Increase in frequency and intensity of fires** - Not only do invasive plant species produce a greater volume of biomass (i.e. potential fuel), but they are often taller than indigenous plants, and thereby lead to more intense fires and greater flame lengths, than would be encountered in natural vegetation.

These impacts will have serious economic consequences which may could include:

- i) Reducing the available water with the consequence that there is an increased need to build additional supply schemes, at considerable cost, reducing the total amount of water available for human use.
- ii) Reduction in eco-tourism potential.
- iii) Depletion of potential exploitable genetic stock of wildflowers and medicinal plants.
- iv) Loss of potentially productive land.
- v) Increased costs of fire protection and damage by wild fires.
- vi) Erosion following fires in heavily impacted areas.
- vii) Increased siltation of dams and rivers.

6.3 Financial Implications

The Stellenbosch Municipality IAP Management Plan (September 2022) has been completed internally. There is no direct financial implication should the recommendation as set out in this report be accepted. The alien clearing work prescribed in the plan has been included in the annual budget of the Section: Environmental Management (Department: Community Services).

6.4 Legal Implications

NEMBA, Section 76, states that all organs of state are required to draw up an invasive alien monitoring, -control and -eradication plan for the land under their control. The Stellenbosch Municipality IAP Management Plan has been prepared in response to this requirement.

The recommendations in this report comply with Council's policies and applicable legislation.

6.5 Staff Implications

This report has no additional staff implications to the Municipality. The prescribed work will be undertaken by the Section: Environmental Management.

6.6 Previous / Relevant Council Resolutions:

10TH COUNCIL MEETING: 2017-07-26: ITEM 7.3.2

RESOLVED (nem con)

that Council approves the Stellenbosch Municipality Invasive Alien Plants Management Plan (April 2017) as Stellenbosch Municipality's invasive alien monitoring, -control and -eradication plan prepared in terms of NEMBA.

6.7 Risk Implications

This report addresses relevant risk implications for the Municipality.

6.8 Comments from Senior Management

This Item was circulated to all directorates on 19 October 2022 for comment by 31 October 2022. The following responses were received:

6.8.1 Director: Infrastructure Services

Plan should include invasive alien vegetation clearing of all municipal properties (such as at the WWTW's, landfill, Transfer Stations etc.). Alien vegetation on all vacant municipal properties should also be attended to (Response received via e-mail on 20 October 2022).

In response, the following information was provided: Stellenbosch Municipality owns a very long list of smaller properties (such as the ones mentioned in the comment and other properties in both the rural and urban areas) throughout the WC024. The management of these properties, in terms of invasive alien plant management, remains the responsibility of the landowner whether it is included in a management plan or not. Environmental Management have put in place two year-tenders in terms of which these properties can be maintained as required. The IAP Management Plan (September 2022), however, currently focuses on those properties (with specific reference to nature areas) owned by the municipality with high conservation potential. These areas include Papegaaiberg-, Jan Marais-, and Mont Rochelle Nature Reserves, Wemmershoek wetland area, the Idas Valley Dam area, Paradyskloof nature area, Botmaskop, Louwsbos and the Purgatory Outspan area. As focus areas these properties are especially important to maintain (in terms of alien clearing) for a range of reasons, primarily the ecosystem services that is derived from them. As example these areas directly effects water yield from catchment areas to the Idas Valley Dams, the Eerste-, Franschhoek- and Eerste Rivers.

6.8.2 Director: Planning and Economic Development

Item supported. Question - Have we consulted and/or collaborated with DEA&DP / Cape Nature / DWS / Local Water Boards / surrounding Municipalities in the review of our Alien Invasive Plan? (Response received via e-mail on 20 October 2022).

In response, the following information was provided: Yes, we represent Stellenbosch Municipality on the Greater Cape Town Water Fund Operations and Data Management Working Group where we collaborate with the organisations you've mentioned, including WWF and Working on Fire, on matters pertaining to alien clearing, co-operation and funding. We presented our plan on the 10th of August this year with various recommendations received reflected in our revised plan. Sufficient funding for this obligation will always be a challenge. This is especially true for Stellenbosch Municipality mainly because the municipality is the owner of a substantial amount of land ($\pm 3\ 000$ ha of nature areas is prioritised in the relevant invasive alien plant management plan), most of these areas are heavily invaded (given their past use for forestry purposes) and large portions of these areas are located in areas that pose topographical challenges to basic alien clearing operations. Our plan, does, however include a 3-year budget (for clearing work and firebreak maintenance) along with a section prioritising the areas for clearing work to be done over the next 5-year cycle to make sure our limited resources are most efficiently utilised.

6.8.5 Chief Financial Officer

Item supported (Response received via e-mail on 19 October 2022).

RECOMMENDATIONS FROM THE EXECUTIVE MAYOR, IN CONSULTATION WITH THE EXECUTIVE MAYORAL COMMITTEE, TO COUNCIL: 2022-11-16: ITEM 7.7.1

that Council approves and adopts the Stellenbosch Municipality Invasive Alien Plant Management Plan (September 2022) as its 2nd Generation invasive alien monitoring, -control and -eradication plan prepared in terms of NEMBA.

ANNEXURES**Annexure 1**

Stellenbosch Municipality Invasive Alien Plant Management Plan (September 2022)

FOR FURTHER DETAILS CONTACT:

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REPORT DATE	19 October 2022

ANNEXURE 1



STELLENBOSCH

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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STELLENBOSCH MUNICIPALITY
ALIEN INVASIVE PLANTS MANAGEMENT PLAN

September 2022

