

## Alien Plants Control for Boschhoek

### What is an “alien plant”?

An “invasive species” is any species whose establishment and spread outside of its natural distribution range (i) threatens ecosystems, habitats or other species or has demonstrable potential to threaten ecosystems, habitats or other species; and (ii) may result in economic or environmental harm or harm to human health.

Invasive alien plant species alter the functioning of ecosystems and thereby the capacity of the ecosystem to deliver goods and services. Invading exotic or alien plant species are well adapted to local conditions and displace the indigenous plant species. The worst invaders in South Africa are *Rubus* spp., *Chromolaena odorata*, *Acacia mearnsii*, *Acacia dealbata*, *Lantana camara*, as well as invasive aquatic plants. *Melia azedarach* is considered the second most extensive alien species in streamline habitats in South Africa after *Ricinus communis*.

**Nineteen (19) alien plant species were recorded on Boschhoek and of these, seven (7) are declared invaders.**

The following categories of declared weeds and invader plants are recognised (Conservation of Agricultural Resources Act No. 43 of 1983 - see Regulation 15, promulgated on 30 March 2001) and the Biodiversity Act (National Environmental Management: Biodiversity Act, 10 of 2004).

**Category 1 plants:** They are prohibited and must be controlled by the land user.

The following species were encountered on Boschhoek:

<i>Achyranthes aspera</i> burweed,	grootklits
<i>Datura ferox</i>	large thorn apple, grootstinkblaar
<i>Datura stramonium</i>	downy thorn apple, gewone stinkblaar
<i>Lantana camara</i>	lantana
<i>Opuntia ficus-indica</i>	sweet prickly pear, Boereturksvy

**Category 2 plants:** These are plant species that serve a commercial purpose, e.g. shelterbelt, building material, animal fodder, medicinal function etc. Plants may be grown and maintained in demarcated areas provided that permission is obtained and a permit is issued. Steps should be taken to prevent the spread of these plants.

**No species in this category was encountered on Boschhoek.**

**Category 3 plants:** These are ornamentally used plants. These plants may no longer be planted, maintained or multiplied. Existing plants may remain, as long as all reasonable steps are taken to prevent the spreading thereof. They are not allowed within 30 m of the 1:50 year flood line of watercourses and wetlands.

The following species were encountered on Boschhoek:

*Melia azedarach*      syringa, maksering  
*Senna bicapsularis*      rambling cassia

Other non-declared weedy alien species occurring in the study area:

*Acanthospermum hispidum*  
*Bidens pilosa*  
*Chenopodium* sp.  
*Conyza sumatrensis*  
*Emex spinosus*  
*Guilleminea densa*  
*Richardia brasiliensis*  
*Schkuhria pinnata*  
*Tagetes minuta*  
*Verbena bonariensis*  
*Verbena* sp.  
*Zinnia peruviana*

**What preventative measure can I take?**

Preventative measures towards alien plant species:

There are a number of strategies that can be employed as preventative measures:

- Limiting human introductions, e.g. into property, with animal fodder and thatch grass. Many invasive alien plant species are introduced by staff living in natural or protected areas, e.g. *Lantana camara*, *Senna didymobotrya*, *Solanum seafortianum* and *Jacaranda mimosifolia*;
- Creating a buffer zone of alien-free vegetation around protected areas;
- Integrated catchment management with surrounding neighbours because areas around and upstream of protected areas provide an unending source of seed which invade other areas;
- Preventative veld management, e.g. maintaining a healthy grass sward; and
- Maintenance of a good vegetative cover by sound veld management and judicious burning of the grass sward.

## How to control “alien plants”?

### Integrated control strategies (ICS)

The satisfactory control of weeds and other invasive species is usually only achieved when several complementary methods, including biological control, improved land management practices, herbicides and mechanical methods, are carefully integrated (Richardson 1997). Such a strategy is termed an integrated control strategy (ICS).

An integrated approach to control relies on a number of important principles:

- It must be recognised that in most cases control is achievable although eradication might not be, and that the problem requires a long-term approach and long-term commitment.
- Clearing of lightly infested areas, where invaders are spreading the fastest, is usually far more effective than the clearing of areas already fully invaded.
- It is best to begin control at the source area, e.g. headwaters of rivers.
- Follow-up always has higher priority than new clearing operations.
- Training of staff in integrated control must be provided.

### Control of alien invasive plant species on Boschhoek

- **Five Category 1** alien invasive species were recorded on Boschhoek (Table 17). These species are prohibited and their control is compulsory. Infestations by *Lantana camara* are moderate to severe locally and their numbers should be controlled to prevent widespread and severe invasion. Most of the other Category 1 species were not common on Boschhoek. *Lantana camara* was locally abundant in communities 1, 2, 4 and 7 (Table 17).
- **No Category 2** species were recorded.
- **Two Category 3** species were recorded and it is recommended that individuals of these species be removed to prevent further spread.

Table 17 Declared alien invasion species and indigenous encroacher species on Boschhoek and their level of infestation.

Category	Species	Severity of infestation	Community
1	<i>Achyranthes aspera</i>	Low & localised	1, 2, 4, 6, 9
1	<i>Datura ferox</i>	Low & localised	9
1	<i>Datura stramonium</i>	Low & localised	9, 10
1	<i>Lantana camara</i>	Moderate to severe	1, 2, 4, 5, 7
1	<i>Opuntia ficus-indica</i>	Low & localised	7
1	<i>Melia azedarach</i>	Low & localised	7
1	<i>Senna bicapsularis</i>	Low & localised	10
indigenous	<i>Seriphium plumosum</i>	localised	8, 10
indigenous	<i>Lopholaena coriifolia</i>	Moderate to severe	4, 5, 6, 7, 8
indigenous	<i>Dichrostachys cinerea</i>	Low & localised	1, 9



Boschhoek management will help and give guidance for each property owner how to remove and control any alien plants and weeds on their property.

The responsibility for the control of all common area of the Boschhoek Mountain Estate is the responsibility of the HOA, which will continue with the existing alien plant control plan which was started a few years ago by Mr Chris Klingenberg together with "Working for Water".

Fighting these invaders (chemically) normally occurs from Feb to March each year. During the rest of the year manual labour would be enough.