

Keswick Island Weed Control Report



1.0 INTRODUCTION

The following report has been compiled by Strategic Pest Management and seeks to provide an overview of pest pressure on Keswick Island.

1.1 SCOPE

This report seeks to highlight the current conditions as observed by Strategic Pest Management during an initial treatment conducted during December 2009. Furthermore, as a result of this, recommendations and strategies for the successful management of pests are provided.

1.2 LIMITATIONS

Successful weed control is based on Integrated Pest Management (IPM) starting with a thorough inspection of the entire lease to identify the species of weed and to define the extent and source of the infestation. The initial treatment conducted must form part of an ongoing strategy in order to ensure a reduction in the presence of pest species.

2.0 FINDINGS

During the course of survey and control work, it was noted that a very high fire danger is present due mainly to the abundance of long grasses and lantana bushes. Many other pest species were present as well, a major concern is *Leucaena* (*Leuceana leucocephala*). Work in progress (whipper snipping of blocks) is a great way to reduce the fuel load in the interim.

2.1 HAZARDS

The situation presents itself as a potential fire hazard due to the large accumulation over time of fuel in the form of under growth (long grass, lantana and environmental weeds) which have been continually allowed to flourish. This is a great concern considering the topography of the island, as well as in some cases having a eucalypt canopy in close proximity to dwellings. Exacerbating this situation is the inability to access large amounts of water within a quick response time should a fire occur.



Fuel load on vacant blocks



2.2 Weed list for Keswick Island



Class 2 Declared pest plants.

Mother of millions (*Bryophyllum* spp)
 Giant rat's tail, American rat's tail and Parramatta grass, (*Sporobolus* spp)
 Prickly pear *Opuntia stricta*)

Class 3 Declared pest plants.

Balloon vine (*Cardiospermum grandiflorum*)
 Captain cook tree (*Thevetia peruviana*)
 Lantana (all species) (*Lantana* spp)

Environmental weeds, control is recommended.

Guinea grass (*panicum maximum*)*
 Snakeweed (*Stachytarpheta cayennensis*)*
 Mother-in-laws tongue (*Sansevieria trifasciata*)

Leucaena (*Leuceana leucocephala*)



This plant has the potential to out compete native vegetation and seriously add to the fire risk.

Flannel weed (*Sida cordifolia*)
 Mango (*Mangifera indica*)
 Cinderella weed (*Syndrella nodiflora*)*
 Pennywort (*centella asiatica*)

Green Amaranth (*Amaranthus viridis*)
Creeping Cinderella weed (*Calyptocarpus vialis*)
Creeping Oxalis (*Oxalis corniculata*)

Builder mix in bulk bags with Leucaena (*Leuceana leucocephala*) growing from contents.



One of three different species of sisal hemp.

Milkweed (*Euphorbia cyathophora*)*
Siratro (*Macroptilium atropurpureum*)
Corky Passionfruit (*Passiflora suberosa*)*
Red-headedcotton bush (*Asclepias curassavica*)
Townsville Lucerne (*Stylosanthes humilis*)

Swamp Weed (*Melochia corchorifolia*)
Joint Vetches (*Aeschynomene spp*)
Budda Pea (*Aeschynomene indica*)
Tridax daisy (*Tridax procumbens*)
Pink periwinkle (*Catharanthus roseus*)
Asthma plant (*Euphorbia hirta*)
Johnson grass (*Sorghum halepense*)
Signal Grass (*Brachiaria decumbens*)
Blackberry nightshade (*Solanum americanum*)
Chinese burr (*Triumfetta rhomboidea*)
White passion vine (*Passiflora subpeltata*)
Mexican poppy (*Argemone ochroleuca*)
Centro (*Centrosema pubesens*)
Rhodes grass (*Chloris gayana*)
Purpletop Chloris (*Chloris inflata*)
Florida Beggar Weed (*Desmodium tortuosum*)
Silver -Leaf Desmodium (*Desmodium uncinatum*)
Mile-a- minute (*Ipomoea cairica*)*
Blue Morning Glory (*Ipomoea indica*)
Common Sida (*Sida rhombifolia*)
Gomphrena Weed (*Gomphrena celosioides*)
Spiked Sida (*Sida subspicata*)
Red Natal Grass (*Melinis repens*)
Grader grass (*Themeda quadrivalvis*)
Gambia pea (*Crotalaria goreensis*)
Common sensitive plant (*Mimosa pudica*)*
Bauhinia (*Bauhinia monandra*)
Banana Tree (*Musa acuminata*)*
Hyptis or Sweet hyptis (*Hyptis suaveolens*)*
Hairy Indigo (*Indigofera hirsuta*)
Feathertop Rhodes Grass (*Chloris virgata*)
Anal indigo (*Indigofera suffruticosa*)
Sisal hemp (*Agave sisalana*)

*Denotes Nominated locally significant pest species in the Mackay Regional Council area

Hillside areas with large amounts of fuel (undergrowth), managed weed control will create effective fire control zones.



3.0 SUMMARY

It is evident that the fire risk to property and infrastructure is moderate to high. This will fluctuate depending on wet season rainfall, vegetation regrowth and subsequent dry winter or drought conditions. 2009 has seen conditions present a high fire danger. Subsequently, the continued use of island residents' labour for grass cutting/clearing will be a good practice to reduce undergrowth in preparation for chemical control.

During the recent weed control activity many weeds were found, some declared and some of a high environmental concern. Seed bank levels on Keswick Island will be high due to the fact that it has been left unmaintained for so long. Environmental and climatic conditions will dictate from year to year how much weed pressure Keswick Island will have, in turn this will dictate the amount of control required.

3.1 ACTION

Strategic Pest Management has begun treatment and will:

- Treat vacant land to reduce the long term undergrowth.
- Eliminate declared weeds in accordance with current legislation.
- Continue to gather and confirm species of weeds on the island.
- Continue to remove the large populations of sisal hemp(*Agave sisalana*)

3.2 CONCERNS

- Without ongoing non-chemical and chemical control methods, reduction of undergrowth(fuel load) will remain high.
- Keswick Island Developments should be aware that from the 1st of October 2009, AS3959-2009 - Construction in Bushfire Areas was introduced through Part MP2.4 of the Queensland Development Code. This standard may impose additional construction requirements on persons building on Keswick Island, depending on the proximity to unmaintained vegetation.
- Vigilance is required to ensure that *Leucaena leucocephala* does not gain a foot hold on the island.
- Large infestations of Sisal hemp(*Agave sisalana*) require attention on a regular basis to reduce the production of live young, this will mean we have to treat before the plant puts up the spear containing the plantlets.

4.0 RECOMMENDATIONS

- Implement strategic plan to eradicate declared and environmental weeds.
- Lease area requires treatment 3 times annually to break the seed cycle and reduce the available seed in the seed bank.
- Reduce under growth on lease hold blocks that have not been cleared.
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- Reduce sisal hemp(*Agave sisalana*) infestations