

# LORD HOWE ISLAND (LHI)



## NOXIOUS WEED CONTROL ORDER 2014 ~ CONTROL CLASSES

Plants declared Noxious under Noxious Weed Control Order 2014 have been gazetted in the following Control Classes for LHI and the whole of the State. Noxious weeds must be controlled in accordance with the measures identified in the Control Class.

**Class 1** - The plant must be eradicated from the land and the land must be kept free of the plant and requirements in the *Noxious Weeds Act 1993* for a notifiable weed must be complied with (Notifiable – State prohibited)

**Class 2** - The plant must be eradicated from the land and the land must be kept free of the plant and requirements in the *Noxious Weeds Act 1993* for a notifiable weed must be complied with (Notifiable – Regionally prohibited)

**Class 3** - The plant must be fully and continuously suppressed and destroyed (Regionally controlled)

**Class 4** - The growth of the plant must be managed in a manner that continuously inhibits the ability of the plant to spread (in accordance with your local Councils Class 4 weed management policy) (Locally controlled)

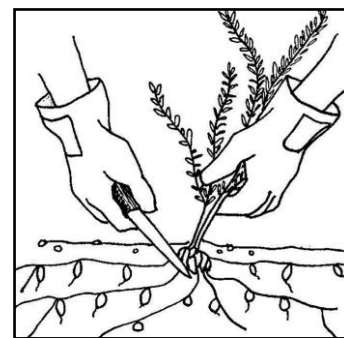
**Class 5** - Requirements in the *Noxious Weeds Act 1993* for a notifiable weed must be complied with (Notifiable – Sale restricted)

***Refer to your noxious weed inspection notice to confirm the control class of the noxious weeds on your lease***

## RECOMMENDED WEED CONTROL TECHNIQUES

The following recommended weed control techniques are provided to assist leaseholders to implement effective weed control measures to achieve the requirements of each Control Class. A range of techniques can be applied to control weeds. The technique will depend on the species of plant and size of the infestation. It may involve hand removal or the careful use of herbicide. **Contact the LHIB for further advice.**

- Hand removal, crowning out or digging up
- Foliar spraying
- Basal bark
- Stem injection
- Cut & paint
- Cut, scrape & paint
- Snip & drip
- Scrape & paint
- Aquatic/Water Weeds



### Hand removal

Small infestations of weeds can be removed by hand (see following examples)

**Ground Asparagus**, hold foliage and crown out the central growing point of the root system/corm; the water tubers can be left in the ground; or foliar spray the entire plant.



**Bridal Creeper**, all of the root system and water tubers must be removed; or foliar spray the entire plant.





**Hand removal continued...**

**Ginger Lily (#)** Remove seed heads and contain. Dig up rhizome/ginger like root system with a mattock; or gouge, scrape and paint rhizomes; or foliar spray the entire plant.

Repeat treatment will be needed.



**Glory Lily (#)** Dig up the root system; ensure to remove all segments. The roots can be long or round and segmented. Collect and contain seed heads. Dispose material at WMF  
NB: plant is toxic.



**Holly Fern.** Dig up plant, ensure to remove rhizome.

**Singapore Daisy (#) & Freckle Face** Carefully prise up all roots and rootlets with a knife. All plant material will need to be removed; or foliar spray the entire plant.



**Cape Ivy (#).** Carefully prise up root system and collect all vegetative material; or cut, scrape & paint; or foliar spray the entire plant. NB: The stems of this plant readily break. Remove any aerial material. Contain and take to the waste mgt facility.



**Mother of Millions (#)** Carefully pull up the plant - removing the root system. Collect all leaf material; or foliar spray. The leaves and stems of this plant will propagate if left on the ground. Bag material and take to the waste mgt facility (WMF).



**(#)** denotes plant material cannot be left on the ground; take refuse to the waste management facility (WMF)



## Foliar Spraying

Foliar spraying is the use of herbicide diluted with water at a specific rate. It requires the foliage of the target plant to be wetted, but not to the point of dripping; using a backpack/knapsack spray unit. Foliar spraying is recommended to control dense patches of ground covering weeds such as herbaceous plants, creepers or climbers or weed seedlings. Follow-up treatments will generally be required. Marker dye should be included for guiding the progress of your work.

**Recommended spray mix 1 (Asparagus mix):** Glyphosate & water at 1:75 (13.3 ml/L) & Metsulfuron-methyl at 1.5g/10L + non ionic surfactant (e.g. Pulse®).

**Target noxious weed species:** Asparagus species, Blue Periwinkle, Cape Ivy, Freckle Face, Glory Lily, Holly Fern, Japanese Honeysuckle, Madeira Vine, Mother of Millions, Singapore Daisy, Siratro, Wandering Jew, Blue Passionfruit

**Recommendation spray mix (2):** Glyphosate & water at 1:100 (10 ml/L) + surfactant (e.g. Pulse®).

**Target noxious weed species:** Blue Morning Glory, Cats Claw Creeper

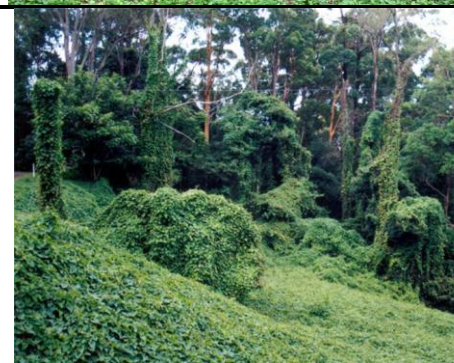
**Asparagus weed species.**  
For dense infestations foliar spray (*spray mix 1 – Asparagus mix*).



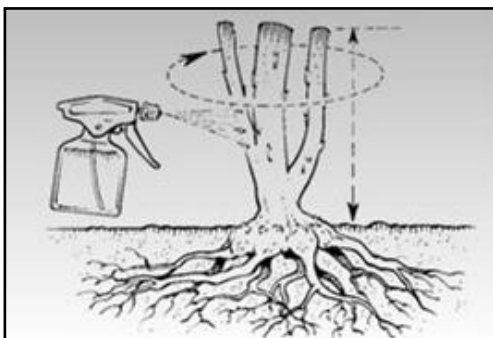
**Blue Periwinkle** Small infestations hand remove or foliar spray (*spray mix 1*). This plant layers/ is stoloniferous and will need repeat treatment.



**Blue Morning Glory**  
Foliar spray (*spray mix 2*), ensure to cover foliage well. Repeat treatment will be needed.



## Basal Bark



This method involves mixing an oil soluble herbicide in diesel and coating the circumference of the trunk or basal stem (using a spray pack/bottle). The solution needs to be applied to 30cm high. Basal bark is recommended for dense stands of woody weeds and weeds with thorns or stems that are hard to access.

**Target noxious weed species:** Cherry Guava, Rhus Tree, Ochna, Olive, Cotoneaster, Robinia

**Recommendation herbicide mix:** Starane Advanced 35ml per Litre of diesel.



## Stem Injection



Stem injection is a low cost means to control large weed trees; where it is safe to do so. This method involves drilling or using a hatchet to cut through the bark into the sapwood tissue in the trunks of woody weeds and trees. Herbicide is immediately placed into the hole or cut. The aim is to reach the sapwood layer just under the bark which will transport the herbicide throughout the plant. It is essential to apply the herbicide immediately (within 15 seconds of drilling the hole) as stem injection relies on the active uptake and growth of the plant to move the herbicide throughout the plant.

**Target noxious weed species:** Camphor Laurel, Cotoneaster, Flame Tree, Olive, Rhus Tree, Silky Oak, Umbrella Tree, White Cedar

**Recommendation herbicide mix:** Glyphosate & water 50:50 (1 part herbicide : 1 part water)

## Cut, scrape and paint

This technique can be applied to invasive vines and woody weeds. For woody weeds cut plants down to ground level (as close to the ground level as possible). Paint cut stump ASAP; then scrape lateral roots along their length and paint ASAP. Completely cover all cut surfaces with herbicide.

**Target noxious weed species:** Cherry Guava, Coastal Tea Tree, Brazilian Buttercup/Senna, Bitou Bush, Kahili Ginger, Lady of the Night, Leaf Cactus, Murraya, Privet, Lilly Pillis (introduced), Pittosporum, Rice Paper Plant, Silky Oak, Thorn Apple, Umbrella Tree.

**Recommended herbicide mix:** Glyphosate & water 50:50 (i.e. 1 part herbicide : 1 part water) with 1g of Metsulfuron-methyl/L.  
NB: The Metsulfuron methyl needs to be refreshed every 2 days.

**Cut scrape & paint can be used on most woody weeds e.g. Cherry Guava, Sweet Pittosporum, Night Jasmine.**

These images show the remaining section of stem that has been cut and lateral roots scraped & painted.



Annual or short lived herbaceous weeds such as Thorn Apple can be cut and painted; or sprayed.

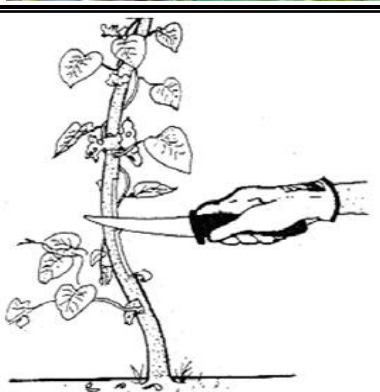
### Thorn Apple

Cut and paint; collect and bag immature and mature fruit to avoid explosion and spread of seeds. NB: this plant is toxic plant



### Blue Passionfruit & Blue Morning Glory.

For climbing infestations; cut ascending runners down low leaving a 30cm section; scrape stem and any lateral roots and paint with herbicide. Repeat treatment will be needed.



Blue Passionfruit is used as root stock for grafted varieties of passion fruit. It outgrows the graft & has inferior, less palatable fruit.



## Scrape and paint - Ochna

This technique is used for vine weeds or woody weeds that are hard to control. By leaving the stem intact, allows the herbicide to translocate around the plants system.

**Recommendation mix for Ochna:** Glyphosate & water 50:50 with 1g of Metsulfuron-methyl per litre. NB: The metsulfuron methyl needs to be refreshed every 2 days.

### Ochna/ Mickey Mouse Bush.

Excavate soil near base of plant to expose sub-surface stem. With a knife, scrape from the subsurface stem up one side of the plant. Apply herbicide ASAP. Drizzle herbicide onto leaves.

NB: for plants with a stem < 2cm wide; cut plant to 30cm high, whilst retaining lower lateral branches; apply the technique as above. Ochna has a large taproot and shouldn't be hand pulled.



Painting the scraped stem.



The finished product, sub-surface stem exposed, entire stem scraped & painted with drizzle of herbicide on to the plants leaves.

## Snip & drip - Climbing Asparagus

This technique is used on mature Climbing Asparagus plants. Cut the asparagus canes down low to 30 cm off the ground; then cut near ground level & 'drip' the cut with herbicide immediately. Cutting the canes 'twice' creates a gap between treated and non treated stems. Scraping of the stem is not needed.



Intact canes of Climbing Asparagus



Snip n dripped' canes of Climbing Asparagus



## Scrape & Paint - Madeira Vine

**Recommended mix for Madeira Vine:** undiluted/ neat glyphosate, or picloram gel

### Madeira Vine (#)

Madeira Vine sites should be treated at least 4 times per year; to ensure control is greater than its rate of growth.



Madeira Vine Tuberling

Prior to treating aerial infestations, treat the ground layer. Collect any fallen tubers and prise up tuberlings (sprouting tubers).



Aerial Tubers

Collect any aerial tubers that may be disturbed whilst you are scraping and painting. Dispose of collected material (including leaves and tubers) at the WMF. Sections of leaf can sprout if left on the ground!

#### Acknowledgement of images:

LHIB, Terry Inkson, Port Macquarie Landcare \_ Master Weed Whackers Manual; Asparagus Weeds Management Manual, Garden Escapees & other weeds of Bushland & Reserves – Mid North Coast Weeds Coordinating Committee.

Contact the LHIB if you need further advice on weed identification and control techniques.

Visit this website for noxious weed profiles  
<http://www.dpi.nsw.gov.au/agriculture/pests-weeds/weeds/prof>



For climbing infestation; scrape stems and paint with herbicide. The herbicide will translocate through the plant and impact aerial tubers. Don't cut the vine as the masses of aerial tubers can stay alive and be held up in trees for 10 yrs and continue to rain down.

Scrape the vine to near 1/3 thickness of stem in long sections; whilst leaving some gaps to allow you to hold the vine.



Paint the scraped sections immediately.



Scrape and paint as much vine as possible including large tubers in the ground. Clear around the base of the vine to unearth the ground tubers. In a few months after treatment the vines and tubers will wither. For this treatment to work well the plant must be actively growing and not drought stressed.



## Water / aquatic weeds

There are a number of introduced water / aquatic weeds in gardens on LHI that are listed as noxious for NSW owing to their highly invasive capacity and impact to waterways. Although LHI has limited areas of freshwater habitats it is important that these plants are removed before they establish (Salvinia has been found on the Golf club ponds). The plants must not be shared or re-introduced back to the mainland. They are required to be removed across all of NSW.

### **How to control water weeds !**

Collect all parts of the plant and use as mulch on your garden or compost; or drain your pond. Repeat treatment will be needed to control any regrowth.



**Water Hyacinth - one of the worlds worst water weeds.**



**Camboma spp.**



**Water Milfoil - *Myriophyllum spicatum***



**Salvinia - *Salvinia molesta***



**Funeral Lily - *Zantedeschia aethiopica***  
Dig up plant with mattock or spray with Asparagus mix..



**Water Lettuce - *Pistia stratiotes***



## Exotic ferns

**Japanese Holly Fern - *Cyrtomium falcatum*** has recently been listed noxious for LHI in a bid to prevent the plant spreading further. Fertile spore produced on the underside of leaves can be spread by wind. It can form dense colonies in habitats which would otherwise support delicate native herbs and fern species. LHI has over 58 native ferns with at least 34% of these being endemic! Holly Fern has been removed from Red Point, Middle Beach cliffs and the Settlement.

### How to control Holly Fern

For small infestations of individual plants, crown out or dig out entire plant including the root system and take material to the Waste Management Facility. If the plant has mature spore – contain in a bag. To treat dense infestations refer to section on Foliar Spraying.



Holly Fern - with spore



Holly Fern - in a garden setting

## Plants dangerous to wildlife

### Leaf Cactus - *Pereskia aculeata*

Leaf Cactus is required to be removed from LHI. It has been recorded from a number of gardens. At one location it was found to have set fruit (a fleshy yellow fruit with black seeds) and concern that it may have spread into bushland. This plant has dense multi-spines and forms impenetrable thickets. A woodhen was found at the base of a plant where it had become trapped in the spines and died.

### How to control Leaf Cactus

Refer to section on cut, scrape & paint. Take any material or potted plants to the waste facility to be destroyed.



Leaf Cactus – Removed from LHI



Woodhen trapped in spines

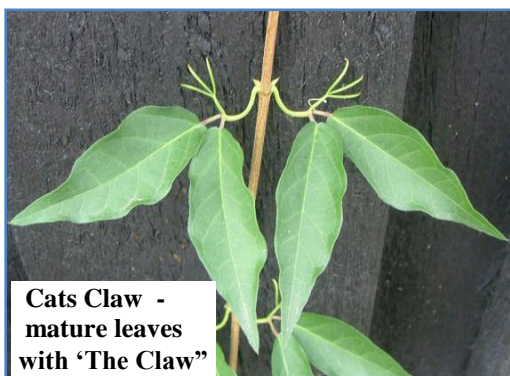


**Dutchman's Pipe – *Aristolochia elegans*** Dutchman's Pipe is only known from a few locations on LHI. It is a toxic plant that is a serious weed from eastern Australia. It has windblown seed (similar to Tiger Lily) and can establish in dense forest. It contains aristolochic acid and when crushed smells like acetone or nail polish remover. It flowers in summer which is a good time to detect the plant which otherwise can look similar to the native Snake Vine - *Stephania japonica*. Collect and destroy any seed pods. For control techniques, refer to section on cut, scrape & paint. Ensure to wash your hands after treatment. If you find this plant – contact the LHIB.

## Plants to monitor

### Cats Claw Creeper – *Dolichandra unguis-cati*

This exotic plant was detected in a garden in 2006 and removed. It has a stunning yellow flower but its growth can harm forests. Claw like tendrils assist this plant to climb and smother trees eventually killing them. It's seeds are readily spread by wind and can establish in dense forest. If you find this plant – contact the LHIB.



Cats Claw - mature leaves with 'The Claw'



Cats Claw - seedling plant



Cats Claw - smothering trees