



BIOSECURITY PRIORITY WEED SURVEILLANCE

Location: Ku-ring-gai Municipal Council LGA

Date: 2018-2023

Client: Ku-ring-gai Municipal Council

Site Description:

Entire Ku-ring-gai Municipality Council (KMC) Local Government Area (LGA) of 86 km². KMC encompasses five wards, including the Comenarra, Wahroonga, St Ives, Gordon and Roseville Wards. The LGA holds significant environmental assets including six Endangered Ecological Communities (EECs) and many threatened species in remnant bushland areas.

These areas represent a high biodiversity, recreational and community amenity value, however a large urban-bushland interface predominates vast swathes of the LGA. This, along with network of high-risk pathways, sites, stormwater infrastructure and complex catchments present an increased biosecurity risk and impacts associated with imported weed invasion.





Project Objectives

- To support KMC in the delivery of their Weed Action Plan (WAP) and biosecurity duties
- To develop, implement and conduct a Local Government Area (LGA) wide priority weed inspection program using a rapid assessment methodology over several years.
- To minimise the potential biosecurity risk of priority weeds through a proactive, tenure-neutral surveillance approach over vast and complex land use and zoning in accordance with the objectives of the Greater Sydney Regional Strategic Weed Management Plan (GSRSWMP) and the NSW Department of Primary Industries (DPI).



Description of Works

Working with Ku-ring-gai Council we were responsible for enacting weed legislation with the following activities:

- Conducting weed inspections on public and private property (mapping and reporting) including private property, bushland interfaces, high risk pathways/areas, historical weed infestation sites, high value assets, weed movement (transport) corridors, lower catchment collection points and stormwater infrastructure to maximise survey efforts
- Inspecting and controlling priority weeds (where required) in high-risk sites/pathways
- Providing education, training and resources to the public and KMC staff in relation to weed management
- Responding to breaches of the Biosecurity Act
- Notifying and reporting on weed activities to stakeholders (NSW DPI and KMC) via the Biosecurity Information System (BIS)



Outcomes Achieved

- Survey of 45 high priority Environmental Asset bushland reserves. A reserve was deemed high priority in accordance with an assessment matrix relating to measures of federal and state significance, presence of threatened species, ROTAP (Rare or Threatened Australian Plants), resilience, and impacts on the reserve.
- Isolating rapidly assessable zones through establishing GIS overlays of suitable slope, fire trails and APZ access for traversing on foot throughout the LGAs bushland and residential interface, allowing for ground survey of over 2500 residential properties and bushland interface.
- Carrying out surveys, ground truthing any larger infestations and the intersection of all high-risk terrestrial rail/road pathways (54km) and high-risk aquatic pathways (75km), including Cowan Creek, Lane Cove River, Middle Harbour and their respective sub-catchment drainage lines.
- Inspection of appropriate stormwater infrastructure deemed high risk including 69 Gross pollutant traps, 42 bio-filter gardens, 11 creek restorations, 18 stormwater harvesting reuse systems and 2 wetlands.
- Inspection of 245 Human Health Assets such as recreational playing fields, sporting complexes, schools, day care centres and medical facilities where these intersect within a 50m buffer zone of possible toxic Appendix 2 weed sources/species (e.g. Rhus Tree (*Toxicodendron succedaneum*) and Asthma weed (*Parietaria judaica*)).
- We achieved a highly successful inspection program, surveying vast areas of the LGA in accordance with the objectives outlined in the (GSRSWMP). We identified and reported many priority weeds. Some examples of reported regional priority weeds under management categories and regulatory tools (mechanisms) encountered below:
 - Prevention (Frogbit – *Limnobium laevigatum*)
 - Eradication (Black Willow – *Salix Nigra*)

- Containment (Alligator Weed – *Alternanthera philoxeroides*)
- Asset Protection (Water primrose – *Ludwigia peruviana*)
- Prohibited Matter (Frogbit – *Limnobium laevigatum*)
- Control Order (Frogbit – *Limnobium laevigatum*)
- Mandatory Measures Regulation (Cat's Claw Creeper – *Dolichandra unguis-cati*)
- General Biosecurity Duty (Green Cestrum – *Cestrum parqui*)

- GEM also identified and reported potential invasive priority weeds not listed within the GSRSWMP or NSW DPI such as: *Pontederia cordata* (Pickerel Weed), *Akebia quinata* (Chocolate Vine) and *Eryngium pandanifolium* (Giant Sea Holly)