



Upper Deua
Catchment
Landcare

Weed management: a key part of the Araluen Creek Restoration Project

A key component of the Upper Deua Catchment Landcare Group (UDCLG), Araluen Creek Restoration Project is weed management, so a Weed Management Plan was prepared in 2021.

The survey assessed weeds along the Araluen Creek riparian zone, Bridge to Bridge (refer map below). This included presence, abundance, and classification of weed species within individual properties. 91 monitoring sites were assessed. Based on the survey the report included recommendations for eradication, control and remediation of the various weeds.



The Araluen Creek Weed Management Plan project area extends between and Majors Creek Mountain Road bridge in the north and Neringla Road Bridge in the south.

The survey identified seventeen species of weeds including:

- Two Weeds of National Significance
- Two State Priority Weeds
- Seventeen Environmental Weeds
- One Local Management Programs Weed
- One Declared Pest Plant (ACT)

The most significant woody weed species identified within the Weed Management Project area are:

- **African Boxthorn *Lycium ferocissimum***, a Weed of National Significance, which was recorded within 64 of the 91 survey sections.
- **Broad-leaved Privet *Ligustrum lucidum***, an Environmental Weed, which was recorded within 71 of the 91 survey sections.
- **Small-leaved Privet *Ligustrum sinense***, an Environmental Weed, which was recorded within 60 of the 91 survey sections.
- **Blackberry *Rubus fruticosus species aggregata***, a Weed of National Significance, which was recorded within 19 of the 91 survey sections.

The presence of a range of growth stages (i.e. seedling to maturity) of African Boxthorn, Broad-leaved Privet and Small-leaved Privet indicate that the infestation of these weeds is actively increasing.

Weed eradication and control

The WMP project area is located within a riparian zone, which will restrict the type of eradication and control methods employed if impacts on water quality and biodiversity are to be avoided.

The Weed Management Plan recommended that the following methods be applied in order of priority:

- Non-chemical eradication and control methods e.g. mechanical or manual removal.
- Use of chemicals without spraying e.g. cut and paint, direct drill treatments.
- Spray application using only herbicides registered for use in association with waterways.

Practical Weed Control Workshop – 25 June 2022



*Greg Stone of the Upper Deua Catchment Landcare Group giving an overview of the weed management plan for the Araluen Creek.
Photo: Erin Brinkley*

A bunch of about 25 people gathered at Araluen campground Saturday 25 June to look at on-ground weed control techniques. The workshop was led by Daniel Anderson of Apical and his team of Blake and Jess. This Upper Shoalhaven Landcare Council workshop was the third as part of the Araluen Creek Restoration Project.

Daniel has 20 years of practical experience of weed management, and he offered “to share what he had learned from his

failures and the knowledge of the things that really work and are almost guaranteed” to save us some time from making the same mistakes. His take home message was “be strategic, weeds are a big problem, however you have limited time, limited resources, so do the things that make the big impacts. Sometimes less is more”.

He provided an overview of what we can do by ourselves, the low-down on various methods and needed materials, costs, time needed to clear various weed patches and follow-up. Plus, he advised on how to make the decision of what we could do ourselves and when to call in a good professional weed controller.

At the end of the day Daniel said: “We had a great trip and an awesome day in Araluen. It certainly was a great opportunity to have a receptive group of interested and enthusiastic land managers and naturalists to communicate with and impart some of our derived knowledge”.

He noted that “Landcare is a national treasure and represents everything that can be great about Australian community we must protect these collective assets. It was great to see a strong and resilient network – which can lead a resurgence in the valley.”

The Upper Deua Catchment Landcare Group has a long term aim to protect and restore the Araluen Creek and its tributaries. A variety of funding arrangements are sourced to achieve this. Recently this has included funding via the Bushfire Community Recovery and Resilience Fund and the NSW Land and Environment Court.

Daniel Anderson, of Apical, thoughts on weed control

Landscape Ecology

The control or eradication of invasive plants must be undertaken with strategic foresight, all activities must be carefully established to ensure that clear targets can be achieved and that efforts are directed towards the most beneficial and achievable outcomes for a given project objective at a given point in time.

Refer to your weed management plan – and adapt – modify. Update the plan to represent the project progressions.

Nothing in science is static, conceptualise the orders of cause and effect – all inputs create outputs, feedback loops and change thresholds are real and can be measured in biological science. To this end, focus the inputs (effort, resources, investments) into activities that are achievable and measurable. Only start actions that can be finished, only start actions that can deliver a defined goal. Think about successional process – what comes next. If we intervene a cycle or trend – then we must change a threshold to achieve a sustainable reward.

Weed control – is a function of stopping the spread of a plant. We can measure this by weed extent, weed cover, weed presence.

Weed Eradication – is a function of changing thresholds in the landscape, replacing a trend or dominance with something different. Weed eradication has multiple phases and must lead to a new pattern of plant interactions in the landscape to be successful.

Landscape Restoration – is a function of successfully integrating several key actions to ultimately influence a new balance of interactions (feedbacks – relationships) in a system that creates a new or novel desired balance. Landscape restoration in effect is (the sum of all parts) and should be measured in qualitative terms. What is the quality of our creations with regard to things like habitat, biodiversity, water quality, soil health, species diversity, local climate and overall resilience?

Weed Control – Tips

- **Target (1) Ascending Vines.** Vines and scrambling plants, such as *Anredra cordifolia* (Madeira Vine) have the ability to impact forest and woodland canopy trees. Forest and woodland structure must be preserved as number (1) priority. Canopy replacement = 1 human lifetime.
- **Target (1) Aquatic Weeds.** Aquatic weeds – must be target (1) along with ascending vines where they are present within a system. Aquatic weeds impose significant harm to the aquatic environment which can degrade water quality quickly and create other complex interactions which can be difficult to intervene and correct and can be long lasting in the riverine system.
- **Target (2) Invasive Grasses.** Invasive grasses are prioritised under the national weeds classification (WONS) due to the impact on agricultural production, in an ecological restoration realm invasive grasses are highly mobilised in the landscape, produce seed quickly and can impact the diversity of native plant species more than other weed forms as most species diversity in the Australian landscape occur within the ground layer formed of herbs, forbs, lichens, fungi etc.
- **Target (3) Woody Weeds.** Woody weeds are highly noticeable and general attract the most attention by humans. They are located within our broadest line of sight and generally interfere with our normal activities – driving, walking and moving about the landscape. Some woody weeds have a relatively high rate of infestation capability, but generally take up to decade to impose their dominance within a landscape. Weeds with high seed proliferation / generation capability such as African Olive, Gorse are best to target first. Other examples of woody weeds such as African Box thorn or Sweet briar or Privet should be a target of control, however gains can be made quickly on controlling these plants if they are targeted strategically and incrementally.