Environmental Management at the Copping Landfill Site
Winter/ Spring 2016

Axel Meiss

Background

Since 2010 environmental weeds at the Copping Landfill Site have been mapped and extensively managed on an annual basis. Weeds treated during this time include Gorse, Spanish Heath, Pampas Grass, Serrated Tussock, African Boxthorn, Californian and Scotch Thistles as well as Horehound. All environmental weed sites have since been visited and managed annually. Every year new populations of varying sizes have been detected and treated accordingly and in some instances new weed species have been added to the management plan.

2016 Site Management

In 2016 all known environmental weed sites were visited and treated accordingly. The property has changed significantly due to weather events, natural revegetation as well as site management.

Several new roads have been established as part of the tip operation and bushfire tracks. Associated ground disturbance has resulted in new or increased weed populations. Spoon drains and changing water movement has lead to surface water run off, introducing weed seeds to new areas, resulting in new and/ or increased weed populations. Most notably was the expansion in numbers and area of Spanish Heath.

The bushfire of 2013 has severely impacted on the landscape of the Copping refuse disposal site. Many dead-standing trees resulted from the bushfire, leading to an extensive number of trees across access tracks after recent storms. Site access has hence changed across the property.

In 2016 some banks of the landfill site have been treated with a foliar spray to control existing ground cover, including grasses, as well as pasture weeds, such as flat weeds and wire-weed. Rubbish has been getting entangled in existing ground cover vegetation. Management of these weeds is aimed to minimise this occurrence. However, regrowth of weeds is expected and herbicide application is not assumed to be a long term management tool.

Environmental Weeds

Gorse

A substantial amount of Gorse seedlings as well as regrowth were treated in 2016. Several outlier plants were spotted and treated. The majority of Gorse populations is scattered throughout the paddocks south and south-east of the landfill site.

Primary control of a considerable amount of Gorse was conducted along the access road to the landfill site, Blue Hills Road. Gorse has become well established throughout native road site vegetation. Some off-target damage will be expected due to proximity. Extensive follow up work in future years will be necessary.

Photo: Foliar herbicide application of gorse

Spanish Heath

A substantial amount of Spanish Heath plants were treated along the southern and south-western boundary of the landfill site. Due to changed water run-off, Spanish Heath has invaded otherwise healthy native heath population. Management will be difficult and ongoing. Off-target damage is unavoidable.

The Spanish Heath population in and around the old quarry, south east from the landfill site has rehabilitated remarkably well with very few seedlings present. Newly emerged plants were surveyed for and treated.

Several Spanish Heath populations and individual plants were located and treated along Blue Hills Road. Ongoing management and follow up work will be necessary.

In the past twelve months the Spanish heath population in the ‘back paddock’, south from the landfill site, has increased in size and numbers. While numbers and size were low in past years, the density and reach of the population has increased alarmingly due to favourable weather conditions.

Pampas Grass

No Pampas Grass plants were present around the old population in the ‘back paddock’, south from the landfill site.

One individual Pampas Grass plant was located and treated along Blue Hills Road.

Even though Pampas Grass seed may travel considerable distance, the occurrence of the plant along Blue Hills Road may suggest a near-by mother plant which has not yet been located.

Serrated Tussock

In January 2013 the Copping Tip was burnt by a bushfire affecting the entire property and impacting on future management.

Photo: Main Serrated Tussock site after the bushfire. February 2013

A large Serrated Tussock population has been a prime focus of management. The site is difficult to access. The initial population was a dense monoculture, and stretched over several acres.

Vigilant management and trialling and applying a number of different management techniques have proven to be very successful and the site has changed to a native revegetation site.

Serrated Tussock germination since treatment in 2015 has been limited. However, some areas still had considerable germination of seedlings. Overall, population size and density has decreased remarkably. No mature plants were present at any sites.

Areas that showed considerable germination rates were spot treated with Flupropanate.

A key management tool has been the establishment of a competitive vegetation cover such as native tussocks (*Poa labillardieri* and *Poa rodwayi*), as well as native trees and shrubs including native wattle species (*Acacia dealbata, Acacia verticillata, Acacia melanoxylon*), Native Hop Bush (*Dodonaea viscosa*), and Casuarinas (*Allocasuarina verticillata*). More than 7 000 native grasses, trees and shrubs have been planted over the past years.

Photo: Planting of native trees and shrubs

Survival rates of planted trees and shrubs of previous years have been high, however development is stunted due to browsing stock and wildlife. There has been a high rate of establishment amongst the planted native grasses, however development and growth is dictated by annual weather conditions.

Natural regrowth and rehabilitation of native species {mainly Silver Wattles (*Acacia dealbata*)} has formed a dense vegetation belt around the former Serrated Tussock site, limiting potential expansion of the population.

The site has been treated with spot spraying of Flupropanate, as well as spreading of Flupropanate granules in areas that were densely affected by germination and regrowth. Flupropanate granules are commonly applied by helicopter. Due to cost associated with helicopter operation, granules have been applied by an adjustable fertiliser spreader. The fertiliser spreader had been carefully calibrated to the label recommended amount.

Flupropanate granules were applied accurately along marked outlines to avoid inaccurate application. The use of Flupropanate is dependent on follow up rain activating the herbicide and as such, die-back may be slow and delayed, although it has the capacity to be selective and highly successful.

In general, success rates have been satisfactory. However, leaching of Flupropanate at the Copping Landfill site has been observed, even though leaching had not been reported according to the label. Flupropanate has been observed to affect development of Silver Wattles (*Acacia dealbata*), despite the herbicide being selective according to the label. Plants that have come in contact with the herbicide do not appear to terminate although the health of the plant has been observed to be affected.

Flupropanate as a granule will be continued to be used as a management tool at the Copping landfill site where appropriate, depending on site access and native vegetation present.

Horehound

Some areas at the Copping land fill site are populated by Horehound. Horehound commonly occurs on exposed hill tops and may coexist with Serrated Tussock. During early years of site management at the Copping Landfill Site, Horehound has been left untreated as it provided competition to Serrated Tussock that was otherwise lacking. However, as Serrated Tussock has decreased in area and numbers, Horehound management has commenced in 2016. A combination of mechanical and herbicide management has been implemented and ongoing management in future years will be necessary.

African Boxthorn

African Boxthorn has been detected for the first time in 2016, present on the banks of the land fill site. Plants were treated with a foliar herbicide application, which may require cutting and painting follow up in 2017.

Future Management Recommendations

Management of the weed populations at Copping has been largely successful. The holistic approach to land management, combining herbicide use, mechanical removal of weed species, establishing native vegetation and cover crops (such as rye corn) has been highly successful.

In the summer of 2016/17, Californian thistle control will commence. Californian thistle is an ever increasing environmental threat in Tasmania. It spreads vegetatively and requires treatment with a selective herbicide.

In the winter of 2017, ongoing follow up work of known weed populations is recommended, in combination with continuous planting of native grasses, shrubs and trees. The access road to the Copping Landfill Site, Blue Hills Road, has had primary control conducted in 2016, requiring extensive follow up and management.