

## Environmental and Land Management Report Copping Tip

### Winter 2020 to Autumn 2021

During the period of July 2020 to autumn 2021 extensive environmental and land management was carried out across the land owned and managed by Southern Waste Solutions, known as the Copping Tip. Following areas were monitored and managed based on works proposed in June 2020.

**1.1.1. Spanish Heath** South-East and East of the main landfill site has been controlled over several years. Spanish heath has been moving into the native heathland in this area and ongoing work was necessary to stop further spread and particular seed set over the past two years.

The area populated is quite large and has been increasing associated with heavy rainfall events, which has led to mobilisation of an existing Spanish heath seed bank into previously non-infested areas. Extensive work was carried out over the past twelve months over two management applications in early spring and early summer 2020. Even though further management will be necessary in the 2021-22 management period, numbers of flowering plants managed has been decreasing.

**1.1.2. Spanish Heath** in and around the quarry past the shooting range has been subject to control for many years. Very few seedlings are present each year and the site is close to being free of environmental weeds. Extensive work was carried out over the past twelve months however, responding to plants germinating along the drain along the road and a drain that runs parallel to the track approximately ten meters above the track. The quarry itself is close to free of Spanish heath.

**1.1.3. Spanish Heath** has populated the main road to the Copping Tip for many years. For unknown reasons the spread and overall numbers of the weed had a spike in recent years, however extensive management has led to a decrease in numbers and distribution. Extensive work was carried out again over the past twelve months. following up from previous control work and addressing newly germinated plants.



Photo showing flowering native heath (*Epacris impressa*) road side in late spring post Spanish heath management in winter.

**1.1.4. Spanish Heath** has been treated in recent years along the boundary track West of the landfill site. Some new spots were detected during the spring survey in 2018. Management was carried out prior to the bush-fire track upgrade completed in 2020. Even though very few plants were expected during the spring 2020 survey and control, a lot more plants were located and treated than expected, including outliers extending into healthy bush uphill from the track. Further attention to this area will be necessary during the 2021/22 management period.

**1.1.5. Spanish Heath** was found North of the landfill site during the spring 2020 survey. This population stretches throughout otherwise healthy bush. Extensive management work was carried out over the past twelve months; however, some follow up work will be necessary in this area expecting further germinating seedlings during the 2021/22 management period.

**1.1.6. Spanish Heath** was identified populating a large stretch of land North-West of the landfill site surrounding the settlement ponds. This area has been sparsely populated by Spanish heath in the past and outlier plants were controlled annually. This population however has sprung up rapidly, wide spread at high density across approximately .5 ha. All plants were controlled using a selective woody weed herbicide. This site will require follow up in future years.



Photos showing the new Spanish heath control site prior to and post management

**1.2.1. Gorse** in the back paddock, now leased by [REDACTED] has had several small outlier populations. Based on the 2020 survey no outliers were detected in the paddock, however some old plants still growing on the edges of the paddock were flowering and were attended to. This area will require surveying and control during the 2021/22 management period.

**1.2.2. Gorse** has been managed along the main road into the tip for many years. Yearly follow up is necessary. Some small gorse plants were detected flowering and re-sprouting and were managed by cutting and painting and foliar herbicide application.

**1.2.3. Gorse** was found on the boundary track between the new serrated tussock population and the main road last year. It was treated when found and further follow up work carried out over the past management period.

**1.2.4. Gorse** was found among the Spanish Heath population North of the landfill site. Numbers were far less extensive compared to Spanish Heath. Control work was carried out over the past twelve months, carrying out two controls.

**1.2.5. Gorse** was found along the boundary track North of the landfill site. There were only few scattered plants across a small section of the track. During the May survey only one plant was detected, however while carrying out control further plants were detected and treated.

**1.3.1. Californian Thistle** populations are across the property and have been managed at an annual basis over several years. Californian Thistle benefits from disturbance, thus new populations are located most years. The fairly newly discovered road side population was extensively treated in January 2020 and further work was done on it in December 2020, as it is widely spread throughout the old revegetation site. Older known populations were also surveyed and managed, including the population to the North of the landfill site and around the site office. New populations discovered and managed include a population to the North-West of the landfill site near the ponds and a small track side population to the East of the landfill site.



Photo showing Californian thistle populating a track side near the water settle ponds prior to management.

**1.4.1. Serrated tussock** used to form a dense monoculture across a hill North-West of the main landfill site. Ongoing management and revegetation over many years has improved the site vastly, however the wet autumn of 2020 led to increased germination.

During the 2019/20 management period a trial was carried out establishing the most economic and successful way of guarding trees and shrubs that were planted years ago, however not thriving or putting on any growth due to heavy browsing by wildlife, including deer, as well as sheep.

The trial was successful and all guards proved to be successful and plants developed from being heavily grazed and highly stunted to have filled out the guard entirely over nine months.

Based on these observations, guards were fitted to all trees and shrubs planted across the hill over the past years, providing long term competition to serrated tussock.

Flupropanate, a residual herbicide, was applied to the site to target increased germination of serrated tussock.



Photo showing a heavily browsed Casurina (*Allocasurina verticilata*) prior to guarding and established guards around trees and shrubs across the hill.

**1.4.2. Serrated tussock** has been populating the hill South of the landfill site. Annual Flupropanate application and chipping of individual plants has been carried out over many years now. No serrated tussock was identified during the 2020/21 management period.

**1.4.3. Serrated tussock** has been populating the area North of the main landfill site. Ongoing disturbance of this site as part of the tip expansion has reduced the numbers, however has also led to the spreading of the population across larger area. In the winter of 2020/21 widespread chipping and spot application of Flupropanate targeting patches of more than five individuals was carried out.



Photo showing serrated tussock seedlings germinated in open disturbed ground

**1.4.4. Serrated tussock** has been sparse along the main road into the Copping Tip. All known sites were chipped and Flupropanate applied where necessary.

**1.4.5. Serrated Tussock** was found populating a small exposed hill top North of the landfill site during the 2018 survey, close to the property boundary. There were several outliers nearby along the fire trail. All sites were controlled during 2019/20 with high success rates. Follow up work applying Flupropanate was carried out in winter 2020 and 500 native tussocks (*Poa labillardierei*) were planted providing competition to germinating serrated tussock seedlings and long-term ecological health.



Photo showing serrated tussock seedlings germinated after primary control in winter 2019

**1.4.6. Serrated Tussock** was located next to the track near the water ponds and managed.



Photo showing serrated tussock seedlings on the side of a track near the water settlement ponds

**1.5.1. Ragwort** has not posed an issue in past years, however in December 2020 some road side plants were located and controlled. These plants may be associated with increased farming activity within the area or road works. Regardless, Ragwort will be on the alert list in future years.

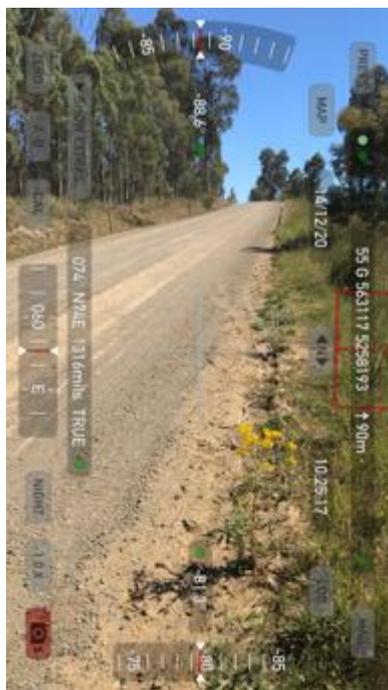


Photo showing road side Ragwort including GPS data

**1.6.1. Pampas** has been an issue across the property historically, however all known populations had been eradicated several years ago. In spring 2020 however two young road side plants were located and controlled.



Photo showing road side pampas

**Further land management carried out:**

In early spring 2020 a large area across a scree slope forming the boundary of the landfill mound was planted out with 10 000 native tussocks (*Poa labillardierei*). The ground is heavy clay and in some parts the depth of gravel and rocks forming the scree was too deep to plant into, however a high success rate will lead to the native tussocks forming a good cover across the site in coming years and self-seeding will extend this population further.



Photo showing young planted native tussocks across the landfill mound

**Future management recommendations:**

A site visit will be carried out in May 2021 to determine necessary management during the 2021/2022 management period.