

Native Seeded Compost Blanket

A Case Study : Turning the Land Stabilization Site into the Nursery Site.

Location : 27 Brenchley Road, Lyttelton, Christchurch

Site : 1020 m2

Date : May 2017

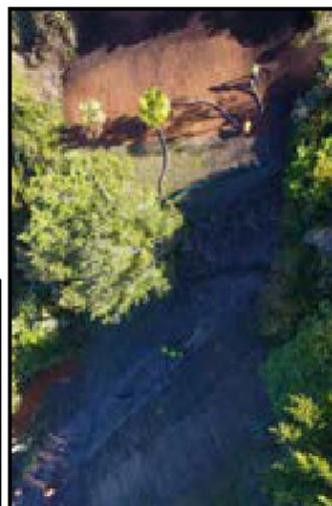
Backstory

Red Tree Environmental Solutions Ltd over the past three years has been engaged in Project Management and Contract Delivery within the LINZ Port Hills Land Stabilization Project.

As a Company we have 20 years direct experience in NZ Native Revegetation and Wetland Restoration however, establishing Indigenous Vegetation Cover in the Port Hills Red Zone has been a significant challenge due to prevailing conditions:-

- Reduced soil quality
- Limited to no topsoil on 1:3 gradients
- Impaired drainage within cut and fill zones
- Competitive weed species introduced within imported topsoil
- Compaction as a result of heavy machinery activity Erosion and sedimentation

Traditional Revegetation and its scope of work is well known and there are four major economic inputs Topsoil, (existing or imported), Mulch cover / erosion control matting Labour and handling



The challenges of the past three years and the contractual obligations to deliver 90% survival rate has meant that Red Tree has dedicated time and research into exploring innovative solutions.



About our Case Study

Compost based products are used in construction and civic applications and are a well-established management tool for erosion control and vegetation establishment within the US with over 40 States having written specifications for its use and application.

Red Tree in conjunction with Living Earth are trialing an alternative specification to the traditional revegetation scope and have used compost products as the growing and erosion control medium.

The two products employed for the purposes of this trial are:-

- 1) The compost blanket acting as the seedbed for indigenous plant species and exotic nurse crops, whilst effectively serving as the prime erosion control management tool.
- 2) Compost socks used in combination with the compost blanket are installed as retaining batters on slopes of 1:3 gradients. They also slow and filter sheet flow, trapping sediment and binding toxins; to increase functional and aesthetic value there is also the opportunity to seed or plant into the socks.

A Little More About It

Compost replaces topsoil. It is lighter and cheaper to apply and delivered pneumatically has a 200-meter reach from roadside with application from the flat to a 1:3 gradient.

Compost applied as a blanket becomes the growing medium, its intrinsic structure facilitates air and moisture uptake as well as water filtration: Living Earth compost is pasteurized and each batch is certified weed \ pathogen free thus providing nutrients to establishing plants without introducing competitive weed species and posing risk to public health.

Eco sourced native seed replaces nursery grown native plants in root trainer grades, compost acts as the ideal forest floor seed bed as evidenced in our Finnsarby Trial 2016; nine month old native seedlings are out performing planted natives introduced as 7 cm tubes.

Compost, once applied as a blanket, settles to form an organic mesh. Its inherent interlocking ability replaces erosion control matting and or mulch as the compost, applied at the correct depth, protects the soil from splash erosion, absorbs large amounts of rain water, slows sheet flow and minimizes rilling.

Why Compost?

Quite simply it costs less and does more.

When working on projects of scale, compost as a product enters a class of its own outperforming traditional methodology measured against both economic and performance KPI's.

Application methodology and native seed blends are site specific. If you have further interest or enquiry as to whether any of the compost based products are suitable for your project we are more than happy to meet with you on site.

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