Bega Valley Shire Council

Organic Processing Facility Project Description

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Facility Overview

SOILCO Pty Ltd (SOILCO) is an Illawarra-based company established in 1982, with its head office located in Kembla Grange, NSW. SOILCO is a producer of organic soil improvers, manufacturing a range of soil, compost and mulch products. SOILCO specialises in the processing of organic waste and has extensive experience constructing and operating composting facilities and organics processing facilities with five approved and licensed facilities in NSW and ACT.

SOILCO Pty Ltd (SOILCO) is proposing a Covered Aerated Static Pile (CASP) composting process for the management of Food and Garden Organic waste (FOGO) at the Central Waste Facility (CWF) for Bega Valley Shire Council.

The Bega Valley Organics Processing Facility (OPF) will have several distinct operational areas:

- Entry, office and amenities.
- Receival, pre-sort and shred (under cover).
- Covered Aerated Static Pile (CASP) composting.
- Maturation, storage and distribution (outdoor).
- Post-sort, screening and de-contamination.
- Leachate management.

The proposed site layout and renders of the facility are provided in Figures 1 and 2.

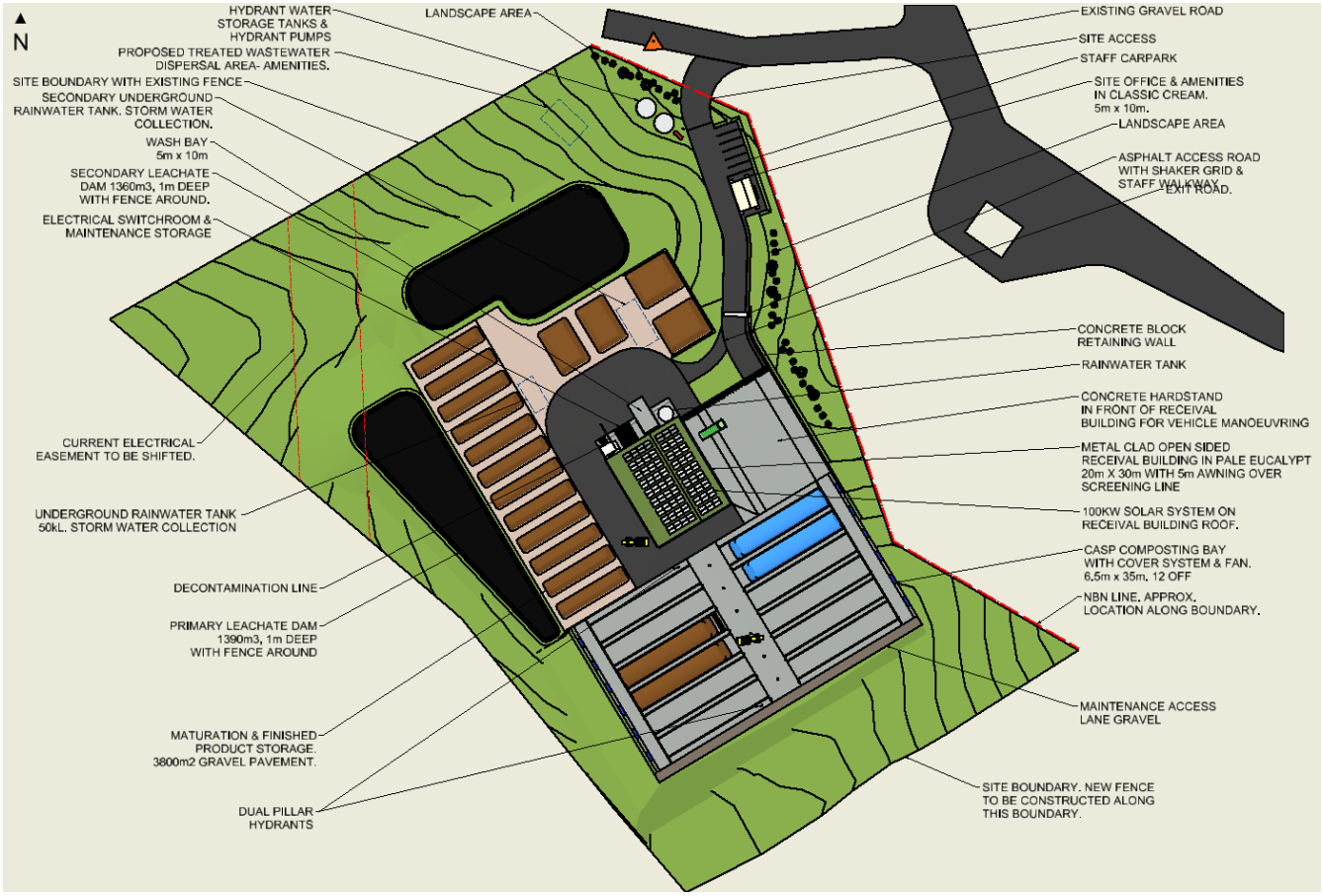

Figure 1 Proposed site layout of the OPF

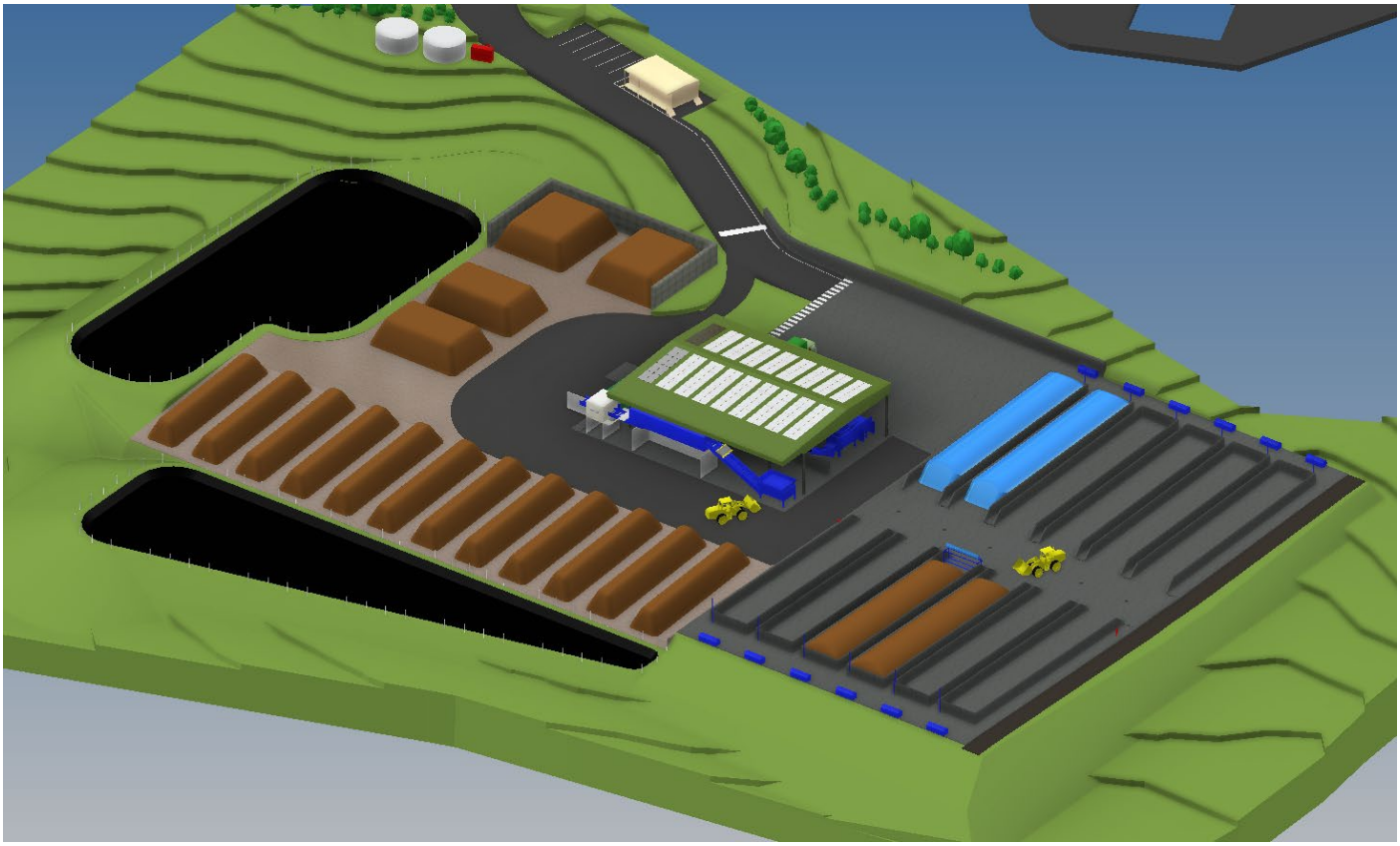

Figure 2 Proposed render of the OPF (view from southwest)

Facility Operation

The BVOPF is a purpose-built facility to initially process up to 15,000 tpa of organics through a CASP process system.

Operating hours for the facility will be between 7.30am to 4.30pm Monday to Friday with the ability to process on Saturday between 7.30am and 4.30pm during peak processing times. The process flow through the facility is presented below for both the 15,000 tpa & 30,000 tpa capacities.

Receival and Pre-Processing

All raw materials will be received over the CWF weighbridge and delivered to the receival building for drop off. Loads will be received, inspected, spread and floor picked prior to size reduction with a fixed electric shredder. The shredder has been sized for 30,000tpa FOGO shredding and is proposed to minimize emissions and utilise renewable energy provided by the solar system on site. Incoming, pre-shredded GO will be stored and blended with the other organics prior to composting in the CASP with leachate process water added at this stage.

Composting

Following pre-treatment, the shredded organics will be batch loaded into the CASP bay in preparation for pasteurisation. Loading of the CASP occurs in batches, allowing for a phase of pasteurisation followed by composting.

Composting is a natural process of degradation of biogenic organic matter by aerobic microorganisms naturally present in the organic matter. The composting technology optimises the conditions for

microorganism growth such as oxygen supply, temperature range, moisture and the availability of easily degradable biogenic organic substance.

Figure 3 Example CASP bays in operation

After filling the CASP bay, the bay is covered with a membrane cover to minimise emissions and to prevent rain getting into the composting material (refer to figure 12 for cover winder system). The waste will remain for approx. 3 weeks (Phase 1) in the aerated and covered designated bay. After turning by wheel loader into a second CASP bay the waste mix will remain for another 3 weeks (Phase 2). Fresh water will be added at this point to ensure ideal moisture levels are maintained.

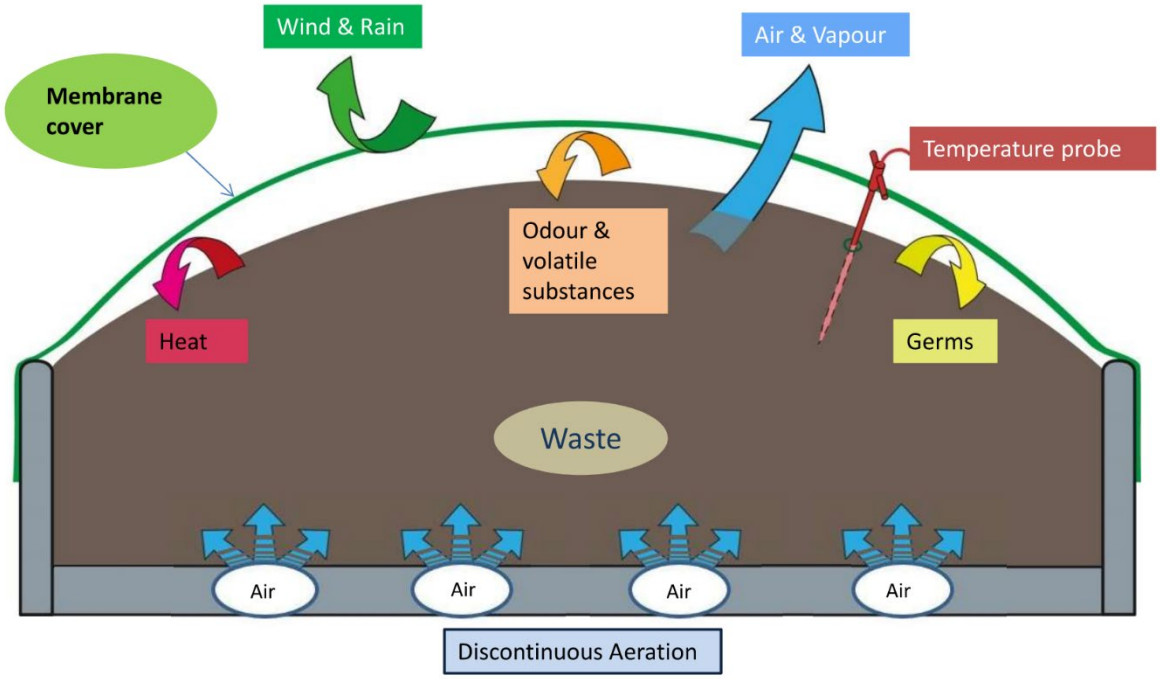

Figure 4 CASP Cross-Section

After the 40 days composting in the CASP, the composted material is sent to the maturation area to be put into open windrows for further composting. The compost will be matured for 6 weeks to allow the organics

to further breakdown, increasing the compost recovery rate. Once maturation is completed the material will be screened for finished product and the oversize material will be decontaminated by wind sifter and manual sort station. Oversize will then be put into piles in the maturation area for further composting and treatment in line with our oversize management plan. Once this further composting is complete, the material is re-screened and decontaminated again to achieve the best possible product recovery of the available organic material.

Storage and value adding will occur to prepare the product for batch and quality release prior to sale and application to land.