AS 4454
Composts, Soil Conditioners and Mulches

Sample Drop Off: 16 Chilvers Road
Thornleigh NSW 2120

Tel: 1300 30 40 80
Fax: 1300 64 46 89
Em: info@sesl.com.au
Web: www.sesl.com.au

Batch N°: 73519	**Sample N°: 1**	**Date Received: 6/10/26**	**Report Status: Final**

Client Name:	**Gippsland Soil Solutions P/L**	Project Name:	**Gippsland Soil Solutions**
		SESL Quote N°:	
Client Contact:	**Jamie Marslen**	Sample Name:	**Soil Improver**
Client Order N°:		Description:	**Compost**
Address:	**PO Box 376** **Trafalgar VIC 3824**	Test Type:	**4454_CSC_LV11**

Classification:

- (●) Soil Conditioner
- ( ) Coarse Mulch
- ( ) Fine Mulch
- ( ) Vermicast

Process criteria:

- ( ) Raw Mulch
- ( ) Pasteurised
- (●) Composted
- ( ) Mature Compost

RECOMMENDATIONS

This soil improver sample was submitted for analysis of physical and chemical characteristics in accordance with the *Australian Standard 4454:2012 - Composts, mulches, and soil conditioners* (AS4454).

Analysed by SESL Australia NATA #15633

Analysed by ALS Laboratory Group, NATA # 825, Report # ES2632386

Results only requested.

Characteristic		Unit	Requirement	Result	Comments
pH (1:5) in water		pH units	≥ 5.0	7.2	Pass
Electrical Conductivity (1:5)		dS/m	≤ 10	2.12	Pass
Phosphate-P (soluble)		mgP/L	≤ 5.0	0.25	Suitable for sandy soils
Phosphate-P		mgP/kg	No requirement	1.2	–
Phosphorus (P) - Total		% dry wt	≤ 0.1 [1]	0.133	Unsuitable for P sensitive plants
Ammonium-N (NH_4)		mg/L	<200	3.2	Pass
Ammonium-N (NH_4)		mg/kg	No requirement	16	-
Nitrate-N (NO_3)		mg/L	No requirement	0.333	-
Nitrate-N (NO_3)		mg/kg	≥ 10 [2 3]	<2.0	See Note 2
Plant Available N (NH_4 + NO_3)		mg/L	See Note 4 below	<5.0	See Note 4 below
Nitrogen (N) - Total		% dry wt	≥ 0.8 [2]	1.25	Pass - see Note 2 below
Total Organic Carbon		% dry wt	≥ 20	32.3	Pass
Organic Matter		% dry wt	-	55	-
Carbon : Nitrogen Ratio		C : N	See Note 4	26	Level appropriate for application
Total $CaCO_3$ Equivalent		% $CaCO_3$	Report if pH > 8.0	-	See Table 3.2 for application rate
Wettability		min	< 5	1.14	Pass
Particle Size Grading	>16mm	% Retained	≤ 20	<0.05	Pass
	<5mm	% Passing	No requirement	74.89	No requirement for Soil Conditioner
Moisture content		%	25 - 61	53	Pass
Glass, metal, rigid plastics	>2mm	% Retained	≤ 0.5	0.03	Pass
Light plastic	>5mm	% Retained	≤ 0.05	<0.01	Pass
Stones & lumps of clay	≥5mm	% Retained	≤ 5	<2.0	Pass
Viable Plant Propagules		Detection	No requirement		No requirement
Pathogens - Faecal Coliforms		MPN/g (dry wt)	< 1000	-	Did not test
Pathogens - Salmonella sp.		Detection	Not detected / 50g	-	Did not test
Pathogens - E. Coli		MPN/g (dry wt)	No Requirement	-	No Requirement

Notes: 1. For products that claim to be for phosphorus-sensitive plants. No requirement otherwise.
2 If a contribution to plant nutrition is claimed.
3. No requirement for Raw Mulch or Pasteurised product.
4. Level appropriate for application specific products.

Tests are performed under a quality system certified as complying with ISO 9001: 2008. Results and conclusions assume that sampling is representative. This document shall not be reproduced except in full.

SESL AUST.

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Characteristic	Requirement	Result (%)	(Ca + Mg) : Na	Comments
Sodium (Na)	Na < 1.0%	0.174	Na low	Pass
Calcium (Ca)	or	2.51		Calcium and magnesium need to be reported only if sodium % is ≥ 1.0
Magnesium (Mg)	(Ca+Mg)/Na ≥ 7.5	0.33		

BIOLOGICAL STABILITY AND PLANT GROWTH TO DETERMINE COMPOST MATURITY

Group A: Biological Stability Testing	Unit	Requirement		Result	Comments
Solvita Compost Maturity Index	Index	Composted Product	Mature Compost	Solv. NH_3: Solv. CO_2:	Did not test
		5 - 8	7 - 8	Mat. Index: -	
Nitrogen Drawdown (NDI)	Index	> 0.2	> 0.5	0.01	Fail
S.O.U.R.	mg O_2/g BVS/hr	< 3.0	≤ 1.0	-	Did not test
Carbon Dioxide Respiration	mg CO_2/g BVS/hr	≤ 12	≤ 8	-	Did not test
Dewar self heating test	°C above ambient	≤ 20°C	≤ 10°C	-	Did not test
Group B: Plant Growth Testing					
Bioassay (Toxicity)	mm root length	> 60	N/A	87	Pass
Solvita Ammonia	Solvita scale	≥ 4	≥ 5		Did not test
Volatile Fatty Acids	mol/g	< 1000	< 200		Did not test

UNRESTRICTED USE UPPER LIMITS FOR CHEMICAL CONTAMINANTS

Category	Element	Unrestricted Use Upper Limits	Results	Comments
Chemical Contaminants (mg/kg)	Arsenic (As)	20	6.9	Pass
	Cadmium (Cd)	1	0.3	Pass
	Boron (B)	100	17	Pass
	Chromium (Cr)	100	17.1	Pass
	Copper (Cu)	150	38.4	Pass
	Lead (Pb)	150	21.9	Pass
	Mercury (Hg)	1	<0.1	Pass
	Nickel (Ni)	60	11.5	Pass
	Selenium (Se)	5	<1	Pass
	Zinc (Zn)	300	139	Pass
Organic Contaminants (mg/kg)	DDT/DDD/DDE	0.5	<0.003	Pass
	Aldrin	0.02	<0.003	Pass
	Dieldrin	0.02	<0.003	Pass
	Chlordane	0.02	<0.003	Pass
	Heptachlor	0.02	<0.003	Pass
	HCB	0.02	<0.003	Pass
	gBHC (Lindane)	0.02	<0.001	Pass
	BHC	0.02	<0.003	Pass
	PCBs	Not detected (<0.2)	<0.5	Not detected at 0.5 mg/kg LOR

Consultant: Biserka Vasovic

20/10/2026

Authorised Signatory: Owen Guy

20/10/2026

Date Report Generated
20/10/2026

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