

EVALUATION SHEET

1. Project Details

Project Name:	Weiti Bay 2017 – 2018 Plant Trial (Year 1)	
Client:	<i>Landscape and Grower Supplies Limited*</i>	
Evaluated By:	Godfrey Fitzpatrick Consultant Arborist <i>GreensceneNZ Limited</i>	Christy Reynolds Consultant Ecologist <i>GreensceneNZ Limited</i>
Site Conditions:	Exposed south-facing coastal site, clay soils, low pH (4.7), previous land use forestry – recently subject to extensive re-contouring for residential land development.	
Species and Grade:	<i>Alnus subcordata</i> , caucasian alder (bare root, 250-500mm)	
Rate of Application:	4g/L**	
TerraCottem Product:	<i>TerraCottem Universal</i> [®]	



Weiti Bay, Auckland, New Zealand (X 174.722 Y -36.661).

2. Information about the use of TerraCottem[®]

- In August 2017, 20 bare root *A. subcordata* were planted in adjacent plots; 10 control – 10 subject to treatment.
- Using a spade as a guide, each hole measured approximately 8L. *TerraCottem Universal*[®] was applied to 10 trees at a rate of 4g/L (measured using digital scales). Mixing occurred within the planting hole.
- 500mm plastic triangular tree guards were installed at planting to avoid predation.
- Tree height and samples of treated and untreated soils collected for analysis.
- No additional treatments or watering occurred throughout the growing period.

3. Results

- Qualitative and quantitative assessment was undertaken of soil and tree growth in August 2017 and May 2018.
- Soil analysis of samples supplied to *Hill Laboratories Limited* showed an immediate improvement in the *TerraCottem Universal*[®] treated soil across the range of characteristics assessed.
- Apical bud length and retention of the first five buds of *TerraCottem Universal*[®] treated trees was found to be significantly greater than control trees (refer Table 1).
- Average growth height was similarly greater for *TerraCottem Universal*[®] treated trees (310.3mm) than control trees (159.6mm [refer Table 2]).
- Vitality measured by branching, crown porosity, leaf size and retention was noticeably better in *TerraCottem Universal*[®] treated trees in contrast to control trees which typically presented with reduced leaf size, retention, premature annual bud release, stem and branch retrenchment (refer Figure 1).

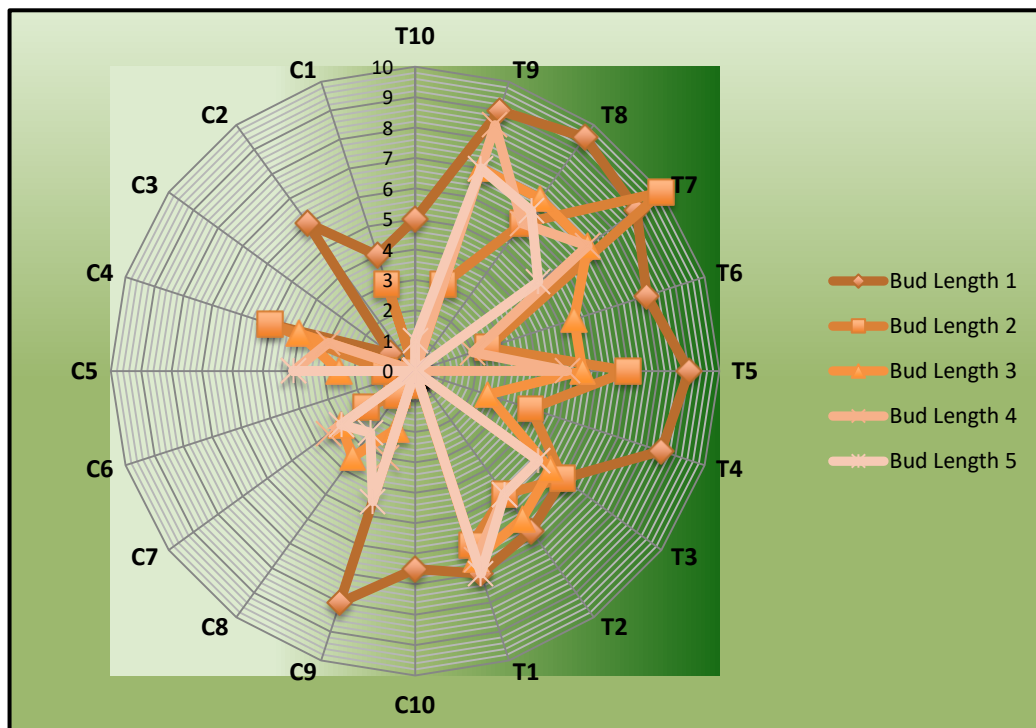


Table 1: Bud length and retention of the first five apical buds of *TerraCottem Universal*[®] treated (T1-T10) and control (C1-C10) trees.

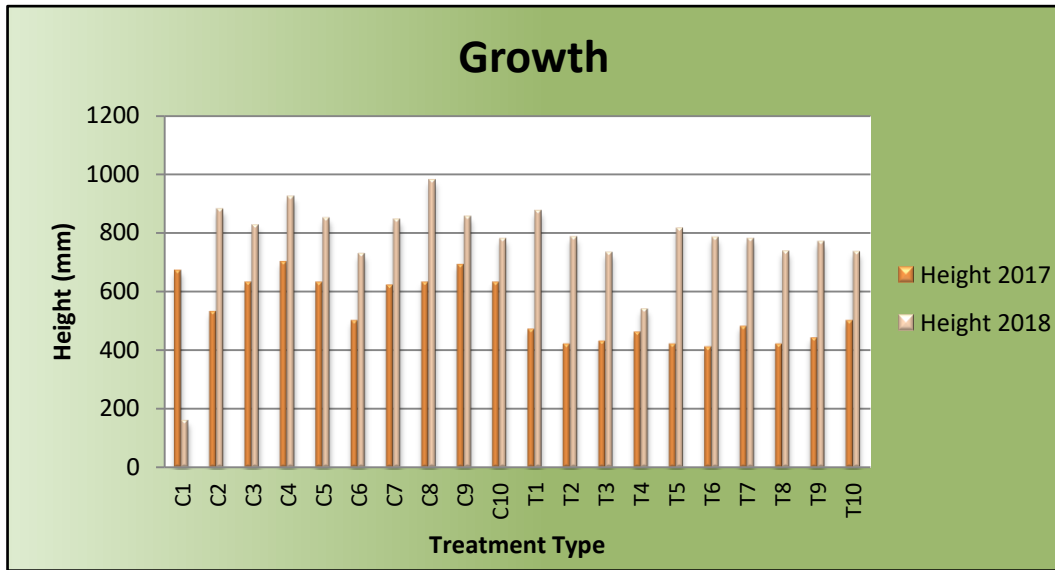


Table 2: Relative growth in height of *TerraCottem Universal*[®] treated (T1-T10) and control (C1-C10) trees.



Figure 1: Apical buds, Control C8 (left), *TerraCottem Universal*[®] Treated T1 (right).

*GreensceneNZ Ltd maintains an interest in Landscape and Grower Supplies Ltd.

** The application rate reflects soil conditions and primary limitation to plant growth, namely, water deficit during summer.