



Report on the Trial to Manufacturer 41 ECT Units

Trail Date:	1 October- 14 November 2014
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Outline

This document details the partnership between ECT and IDEA Services Wellington/Hutt Valley to trial the manufacture 41 Emergency Composting Toilet units. This trial was set up to determine the feasibility of making the toilets:

Health and Safety: Incorporating standard industry best practice and taking all practical steps to minimise the likelihood of injury. Identifying what hazards exist, levels of supervision required to make a safe workspace.

Economically: How long will it take to make the toilets and what processes can we create to make it as efficient as possible. In addition- what are the expected rates of pay that can individuals earn.

Quality: How can we ensure that the product meets quality expectations?

Why Partner with IDEA Services?

ECT is a social enterprise. We look for positive social and environmental benefits in our everyday business.

Fundamentally, it is about matching the need to produce toilets with a community need for meaningful employment. The ECT concept arose from a community need following the Christchurch earthquakes. ECT sees great importance in building community resilience and partnering with Idea Services is a great way to do this

Health and Safety

Health and safety is of paramount importance in the manufacturing of ECT units. Industry standard health and safety guidelines, procedures, signage and documentation apply in our workspace as it would in any other.



Team members with the strength and capacity to use the sander were trained and supervised at all times in its use.

A person being active in managing their own health and safety was a key learning during the project. We put this into practice before starting work each day, after breaks and as necessary during the day.



Anthony sanding the toilet pieces with all the safety equipment Photo: Jane Siene/ IDEA Services

Before commencing, an assessment of risks and hazards were identified and measures put in place to eliminate, isolate or minimise where appropriate.

The key hazards identified included:

- Table sander where abrasions, loose clothing, noise, dust and sprains are a hazard
- Electrocution
- Splinters from handling plywood
- Trip hazards around the work space.
- Contact with paint (Low VOC *Enviropaints* used)

All personal protective equipment was purchase and utilized. This included: ear protection, safety glasses, dust masks, gloves and safety boots.

Additional safety equipment purchased and utilised : RCD and dust extractor

Moving forward, our Health and Safety processes and documentation will continue to be assessed and revised.

Activities

The work process involved several steps:

1. Unloading plywood template pieces from trailer and staking to shelves
2. Sanding of edges of plywood pieces
3. Painting of plywood with additional coats to seat section



Maria Painting the plywood sections Photo: Jane Siene/ IDEA Services

4. Quality control and assessment for additional sanding and paint touch ups
5. Fixing toilet seats to lids



Simon fixing the toilet seats to the plywood tops Photo: Jane Siene/ IDEA Services.

6. Bagging up wood shavings

The final quality control and packaging of the toilet units is completed by ECT.

Results of the Trial

Overall the trial was a great success. We set out to make the toilets in 1 month including some time at the beginning for training and setting up the work space. We completed the order in approx. 6 weeks with 1 week delay due to finding alternative workshop space.



The team had varying levels of capability. Time was taken to observe and determine the capability of each team member how best to tailor the work to their needs. In particular, the sander requires some strength in the arms. Simon and Anthony worked best at this and so were taught how to use the sander safely. They were supervised at all times.

All team members were supervised at all times with 1:1 supervision on the sander. No accidents or incidents were recorded.

A key observation is the need to be flexible when taking breaks. Observing when people are getting tired or the concentration is slipping is necessary to maintaining a safe working environment.

The attention to detail and quality were excellent. After demonstrating the required level of finish, all were able to determine if pieces required additional sanding or painting.

Rates of Pay

As part of the trial a unit price per toilet was set at \$45.00 per toilet. This rate is based on \$20.00 per hour for 2 hours to complete the activities set out above. Plus an additional \$5.00 per unit for consumables like protective equipment, sanding discs, sand paper and painting equipment.

Below is a table of hours worked to complete 41 toilets as part of the trial.

Rate per unit	\$45.00	
Total Paid (\$45.00 * 41 units)	\$1,845.00	
Average rate per hr (\$1845.00/ 100.75)	\$18.31	
Name	Hrs worked	Income
Person 1	35.75	\$654.68
Person 2	30	\$549.38
Person 3	15.5	\$283.85
Person 4	8	\$146.50
Person 5	9.5	\$173.97
Person 6	2	\$36.63
Total	100.75	\$1,845.00



Anthony (Left) and Simon with a completed toilet unit and many more Photo: Jane Siene/ IDEA Services

Additional Benefits Identified by IDEA Services

- People having choice in all elements of the ‘have a go’ and work/teaching & supporting people to make own decisions i.e. being their own boss – as opposed to people feeling like staff are automatically ‘the boss’.
- Learning/embedding good work habits, work ethics – getting to work on time/dressing appropriately for job being done/taking time to have a good breakfast/ bringing enough food to last the day – self-management – e.g. Anthony – programming into his phone the days he was working/nights when he’s cooking dinner for himself and his flatmate after work.
- Learning/embedding safe work practices – self-management of - use of personal protective equipment. Following site specific Hazard ID and Control Register. Self-managing safe use of tools (self-management supervised). Learning times to push through when feeling tired, and times to stop and have a break.
- Working respectfully as a team – working together – thinking of other people’s safety
- Value of working with peers – re-establishing old connections – 2 of the workers helped each other push through anxiety



Comments from Team Members

Here are some comments from the Team Members: Anthony, Simon, Maria, Rex, Dan and Trevor:

“loving the work” “loving working” “proud of being a working person” “just like regular people” “makes me get out of bed and get going in the morning” “I didn’t think I’d be able to do it but I CAN!” “I’m proud that I pushed through when I was feeling tired and did a good days work” “doing this work is making me eat healthier” “I’m really tired from working and I love it!”

Acknowledgements

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