

WEBINAR Q&A



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Bayside Council Worm Farm to Digest Dog Poo trial

Webinar held 20 January 2022

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Q1 What information can you share about your budget and the project costs?

Total material costs per park (Phase 2) = \$3,500 (AUS\$)

Key costs - 4 Subpods, worms, soil, signs and plants

Plus staff = 2 staff for a day setup and 20-30min/week per park maintenance

For details see Appendix 1.

Q2 Do worms chew through the biobags to get at the poo?

No, worms can't chew, they have no teeth or stomachs. The worms ingest the microbes that break down the dog poo and the poo bag material, leaving behind castings that gardening professionals call "black gold" because of its amazing ability to stimulate healthy plant growth ([Composting - Enviro Pet Waste Network \(epwn.org\)](https://epwn.org)).

Q3 Can the sub pods be sunk into the ground?

We are unsure if they were designed for this purpose. We haven't tried it and the surrounding garden bed comes with the Subpod. It would be best to check with the manufacturer.

Q4 Have there been costs savings in emptying landfill bins?

We expect there have been cost savings in terms of frequency of garbage bin emptying and disposal of dog poo to landfill. Quantifying this is one of the next stages of the trial.

Q5 Any statistics on how much diverted from landfill?

Not at the stage. Future research includes estimating this diversion from landfill by one or more method including:

- Counters on bin (to count number of lid lifts, with estimated weight of dog poo per lid lift)
- Information on reduced frequency of emptying adjacent garbage.

However, it is worth noting that we expect further diversions from landfill that are more difficult to quantify:

- Dog owners moving towards dog poo recycling at home, inspired by our project
- Increased diversion of other types of waste as project demonstrates an innovative method of recycling, inspiring residents and visitors to consider what other current wastes they can recycle.

One of the main objectives of this project is to inspire behaviour change by encouraging people to think more about their waste and how they can reduce it.

Q6 What is the volume of poo in sub pods vs landfill bins?

This has not been quantified to date but will be the focus of future research. The volume of poo in landfill bins will increase, if:

- Recycling options are full (more likely with Phase 1 bins)
- The Council provided bags are not used (dog poo becomes contamination and is moved to the landfill bins).

Q7 How much dog poo is going into the Subpods each day or week? i.e. Approx how many dogs is it catering for?

This has not been quantified to date, but the Subpods are being used in public off-leash dog parks.

Future research includes estimating usage by one or more method including:

- Counters on bin (to count number of lid lifts by users)
- Information on reduced frequency of emptying adjacent garbage.

Q8 Where is the product going?

In Phase 1, the worm castings (digested nutrients produced by worms) can move into surrounding sub-ground soil through holes in the sub-ground part of the bin. We anticipate that eventually these bins will reach capacity and the worm castings will be manually moved to Subpod garden beds.

In Phase 2, the worm castings provide nutrients to the surrounding garden beds. No product is removed from site.

Q9 What are the thin compostable bags that you use that work with the worms?

Of the two options that were used, the Compost-A-Pak Dog Waste Bags were the most successful in decomposing (made from vegetable material and are plastic free) – [Compost-A-Pak® Dog Waste Bags \(source-separationsystems.com.au\)](https://source-separationsystems.com.au) – tested over 2 years.

The Cardia Compostable Pet Waste Bags with Handles on a Roll did not decompose as quickly - <https://cardiabio.com/product/cardia-compostable-pet-waste-bags-with-handles-on-a-roll/>.

Q10 Have you observed that more visitors pick up the poo now that the worm bins are available?

Yes, staff have noticed less dog poo on the ground in the off-leash dog parks but it is not clear if the worm farm project can take the credit for this result!

Q11 What is the name of the community and what is the climate?

Bayside Council is a southern suburb of Sydney near the Sydney International Airport (Sydney latitude is -33.865143, and the longitude is 151.209900).

The Sydney climate is humid subtropical, from mild and cool in winter (Jun, Jul, Aug) to warm and hot in the summer (Dec, Jan, Feb), with no extreme seasonal differences as the weather is moderated by proximity to the ocean. January, the hottest month averages temperatures of 23°C (73°F) and July, the coldest averages temperatures of 13°C (55°F). December gets the most daily sunshine hours and March is the wettest month with an average of 164mm of rain.

APPENDIX 1

Project costs

Below are the approximate set up costs per park for **Phase 2**.

Each park includes 4 Subpods situated together.

In addition, allow the cost of two staff for one day to set up.



Ongoing costs include approximately 20-30 mins maintenance per week per park (including rotating Subpods, watering Subpods, contamination management and replacing bags).

Additional time required for maintenance and servicing of adjacent garbage bin, although we expect this time to be less due to less dog poo in the garbage bins. The cost of dog poo is included and sometimes a second lot of worms were added to Subpods if required (to assist with digestion).

Costs for maintenance could be reduced by locating Subpods in the shade, necessitating less watering and in household use where usage of the Subpods was less. For households, you might only need one Subpod (below is for 4).

Item	Quantity	Unit cost (incl gst)	Total cost (incl gst)	Comments
25L All Purpose Garden Soil	38	\$4	\$152	
Compost/Manure	19	\$ 4	\$76	
Handle (150mm chrome)	4	\$7	\$28	Handles for lids of Subpods – not included with Subpods
Rubber flashing	4	\$9	\$36	Trim for garden beds
Padlock 25mm brass - 4 pack	1	\$16	\$16	
Ground screw stirrup	1	\$35	\$35	For post installation
Pine post treated F7 90 x 90 mm 2.4m	1	\$49	\$49	Post for corflute sign
Screws for post 10x40mm	5	\$1	\$5	
Compost start block (coconut fibre)	2	\$12	\$24	
Corflute signs (Council contractor)	4	\$80	\$320	Corflute signs
Subpod Bundle (Pod bin x 2 chambers, garden bed, aerator and shipping)	4	\$460	\$1,840	
Plant bundle (Bayside Garden Centre)	1	\$330	\$330	Mixture of shrubs and groundcovers - dog friendly plants
Worms (4kg = 16,000 worms and shipping to Bexley Depot)	1	\$600	\$600	
TOTAL COST PER PARK			\$3,500	

Phase 1 set up costs include approximately:

- 1 day, one staff member
- Cost of bin (Tumbleweed Pet Poo Converter) - \$176 (when last purchased)
- Starting material and worms (1,000) + extra 1,000 after 6 months

Ongoing costs are similar to Phase 2 (above) with additional replacement lids (due to high usage in public areas) – approximately \$26 per lid when last purchased.

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January 2022

For more information about projects to divert pet poo from landfill head to <https://epwn.org> and visit the 'Projects' tab.

