

Worms at Work Pilot summary

A smart, sustainable street furniture pilot



Worms at Work pilot

Transforming a bench into a tool for sustainability, learning and local connection.

Worms at Work is a City of Melbourne pilot that turns ordinary street furniture into living compost benches, combining seating, worm farming, food waste diversion, and smart monitoring in one public asset. Delivered through the City of Melbourne’s [Emerging Technology Testbed](#), the Worms at Work pilot brings together design, sustainability, technology, and community participation to make circular economy practices visible in everyday city life.

Three benches across Fishermans Bend and Yarra’s Edge are now helping residents and businesses turn food waste into rich compost.

What did it test?

The pilot tested whether composting benches in public spaces could:

- Divert local food waste from landfill
- Support local greening and soil creation
- Create visible, hands on circular economy participation
- Generate useful data to inform pilot recommendations and future smart city initiatives

How did it test?

In practice, the pilot involved:

- Sensors and monitoring focused on parameters to assess compost health, bench usage, and community participation, while minimising complexity and maintenance
- Public dashboard to support learning, inform maintenance, and enable transparent reporting during the trial, as well as establish an evidence base for future initiatives
- Community stewardship model where business hosts and community champions supported bench operations and maintenance

Critical stages

Discover and plan	Design	Deliver	Test and monitor	Evaluate	Learn and scale
Site scoping, partner mobilisation, and community engagement	Bench prototyping and technology assessments	Installing benches, conducting training and public project launch	Operating benches with monitoring, maintaining and reporting	Consolidating and documenting findings and recommendations	Knowledge sharing and applying to future initiatives



About the Fishermans Bend Digital Innovation Challenge

Worms at Work was the winning idea from the 2024 [Fishermans Bend Digital Innovation Challenge](#), a Smart-City led program within the City of Melbourne’s Emerging Technology Testbed. The 2024 theme was ‘a regenerative city’, reflecting strong local interest in circular economy, greening and environmental resilience.

The challenge was designed to identify and trial community led, innovative, precinct-relevant-solutions through a time-bound pilot. While not a continuing program, the success of the challenge and its alignment to open innovation models indicates a clear pathway for Council to replicate in future challenge-based innovation initiatives.



Pilot in context

A smart city pilot with practical, place-based impact

Worms at Work sits at the intersection of smart city innovation, circular economy thinking and community-led sustainability.

Smart City alignment

The pilot was delivered through the City of Melbourne’s Emergency Technology Testbed, which supports real-world trials of technology-enabled ideas.

The pilot used data and sensors in a hands-on and evidence-based approach to monitor composting conditions, track bench usage, support maintenance and troubleshooting, and provide transparent public-facing reporting through a simple dashboard.

People could see, use and care for the benches, while Council and the project team could learn from live data over time.

Council alignment

Worms at Work aligns to strategic priorities in the [City of Melbourne Council Plan 2025-29](#), most prominently:

- **‘Living sustainably’** by diverting food waste, encouraging practical composting behaviours and supporting local greening, the pilot contributes to this strategic priority in a visible and place-based way
- **‘Healthy, safe, clean and connected communities’** by creating opportunities for people to participate, connect and care for shared local spaces
- **‘Governing for our future’** by showing how community participation, collaboration and innovation can shape the way new ideas are tested and implemented in the City of Melbourne

The pilot also connects to Council’s [Garden City](#) initiative, which aims to strengthen urban greening, biodiversity, and climate resilience through a practical, place-based form of green infrastructure.

Worms at Work is not a standalone project. It drives the City of Melbourne’s broader mission towards becoming a more circular, sustainable city that is more responsive to local participation.

Partners and collaborators

City of Melbourne

The pilot was led by the Smart City Incubator team, which coordinated the project from concept through to delivery, monitoring and evaluation.

The pilot also drew on input from across Council, with involvement from 30+ team members and collaborators across the organisation.

Internal collaboration

An internal reference group with representatives from 11 City of Melbourne departments helped shape the pilot at key stages. This broad internal collaboration was a key part of making the pilot possible.

Project partners

Zoe Wang and Michael Mobbs were appointed as project partners after submitting the winning idea of the 2024 Fishermans Bend Digital Innovation Challenge.

Project partners led the design and delivery of the bench solution, including development of the composting system and associated monitoring approach, and contributed to installation readiness, training, community engagement, and operational learning throughout the pilot.

Local collaborators and supporters

Worms at Work was also supported by a strong network of local contributors, who helped build local participation, support day-to-day stewardship, promote the pilot, manufacture and install the benches, and provide composting inputs such as worms, compost and seedlings.

Business hosts

The business hosts provided sites, local stewardship and visibility for the pilot, including:

- St Ali Coffee Roasters
- Susuro Urban Winery

Community champions

Community champions played a central role by:

- Supporting day-to-day stewardship
- Encouraging local participation
- Helping care for the Yarra's Edge bench

Precinct, manufacturing and community supporters

Additional support came from:

- Precinct networks such as FB Ideas
- Educators and researchers at International STEAM Education and University of Melbourne
- Eighteen Pence Lane Café
- Local manufacturers Mr Fox in a Box and PolyNova
- Composting and gardening supporters such as Compost Care Naarm
- Community garden and greening networks such as Kensington Town Hall Composting Hub and Footscray Community Garden and Learning Place

These collaborators helped turn Worms at Work into a highly collaborative, cross-sector city project.



Activity and data snapshot

Worms at Work generated both qualitative and quantitative evidence, combining on-site observation, host feedback, and sensor-supported dashboard data.

The pilot's cumulative monitoring dashboard provides an indicative picture of monitoring across all three sites, useful as baseline evidence to inform future business cases while conservative per-bench estimates support future bench design and planning.



435kg

Total waste diverted



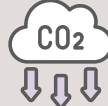
305kg

Total food waste diverted



131kg

Total carbon waste diverted



653kg

Total CO₂e emissions avoided
(equivalent to preventing pollution from driving 3,608km)



497.25L

Estimated annual rainfall capture



13.77K

Total seat usage

5.82K

Yarra's Edge

3.70K

St Ali

2.70K

Susuro

Snapshot of cumulative impact of benches during pilot period across three sites.



Key outcomes

Worms at Work successfully tested and gathered evidence to support future decisions to replicate similar composting bench models. Evidence and outcomes can be thought of across the below dimensions.

Environmental

Indicative pilot data indicate one bench operating for a year can:

-  Divert approximately **500kg of organic material**
-  Avoid an estimated **-750kg of CO₂e**
-  Capture around **497 litres of rainfall**
-  Generate approximately **125kg worth of compost**

This demonstrated that composting benches can support practical food waste diversion, generate compost, and make circular economy principles visible in public spaces. It also shows the potential of hybrid assets of this kind to encourage people to think differently about waste, reframing it as a local resource that can support soil health, urban greening, and community-led improvements to public amenity.

Social

Worms at Work created new ways for people to participate in a shared local sustainability initiative. It supported:

- Shared stewardship of public assets, with business hosts and community champions supporting bench maintenance alongside the City of Melbourne
- Community learning about composting and food waste, with 86% of quiz participants reported having learnt something through the Worms at Work education activity

Community interest and public participation in visible environmental action was also supported, with:

-  **450-500 uses** per month for the Yarra's Edge and St Ali bench design, and **250-300 uses** for the Susuro bench
-  **27 participants** and **107 feedback items** through the first community workshop
-  **30 attendees** at the public launch event
-  **100,000+ social media impressions** across platforms, increasing awareness of Worms at Work and attracting strong positive community responses

Innovation

One of the pilot's most important achievements was demonstrating the value of challenge-based innovation, testing ideas in real, localised conditions, and generating practical evidence before considering scale-up.

Based on the evidence generated, challenge-based pilots like Worms at Work can be considered by the City of Melbourne for future innovation initiatives delivered through the Emerging Technology Testbed.



Key learnings

Reflecting on Worms at Work, the following critical insights and lessons can be applied to future public greening initiatives and challenge-based pilots:

➔ **Stewardship model is critical:** Outcomes and participation were strongest where stewardship capacity and proximity to bench sites were high, and hosts/champions were supported by clear operational guidance, enabling strong uptake and clear demand.

➔ **Site context matters:** Bench performance and usage vary significantly based on local conditions (sun, airflow, foot traffic), as well as availability of food scraps. Future site selection should consider feedstock availability and site-specific characteristics.

➔ **Practicality of hybrid greening assets:** Composting benches currently do not fit within existing Council asset categories and approval pathways, highlighting the practical challenge of a hybrid infrastructure.

➔ **Technology is useful for testing but not essential at scale:** While sensors and dashboards were important for establishing baseline data and supporting learning and transparency through the pilot, uptake was mixed with many hosts preferring practical in-person care. Future expansion should consider technology as a learning tool rather than default requirement.

Next steps

Recommended next steps from Worms at Work are:

For project partners

- Refine bench designs based on pilot learnings
- Consolidate a practical replication package

For Council

- Formalise post-pilot arrangements for the current bench sites
- Support clearer permit pathways for future hybrid greening assets to be installed in public spaces
- Use pilot learnings to assess future deployment opportunities

For community champions

- Continue local stewardship where benches remain in place
- Help identify future locations and local partners
- Support community awareness and participation

Find out more

The pilot has now concluded, but there may be future updates as learnings are shared and next steps are explored. Visit [Worms at Work](#) on Participate Melbourne to learn more about the project, circular economy, composting and food waste. Click "Follow" on the project page to be notified if new updates are shared.



Stay involved

Worms at Work is an ongoing initiative, and there are opportunities for you to participate.



Residents

Visit the bench sites, learn more through the on-site information, and go to Participate Melbourne for pilot details and any future updates



Local businesses

Host a bench and contribute your food scraps as part of your sustainability initiatives



Investors and partners

Provide expertise on refining the model, co-fund expansion, or otherwise support future trials

Contact us

If you want to be involved in Worms at Work, or have ideas about future ways to test and trial community-led solutions in the City of Melbourne, we encourage you to get in touch with the Smart City Incubator team:

smart.cities@melbourne.vic.gov.au



Interpreter services

We cater for people of all backgrounds
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