**Waste 2024 Conference Abstract Submission**

**(for face-to-face Conference which includes live broadcast)**

Waste Solutions in pedestrian friendly precincts

*My presentation is relevant to the following topic area(s).*

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| [ ]  | **Aboriginal community waste management** (projects, results, planning, what else to be done) | [ ]  | **National waste policies & programs** (new schemes, opportunities & recent results) |
| [ ]  | **CDS** (new schemes, new containers, innovations) | [x]  | **Organics** (food only vs FOGO, implementation strategies, new services) |
| [x]  | **Circular economy** (case studies, right to repair, trials, new materials targeted) | [ ]  | **Plastics** (plastics recycling, plastics recovery schemes, small and large scale plastics projects) |
| [ ]  | **Climate change** (new innovations, strategies & policies) | [ ]  | **Problem & hazardous waste** (asbestos, clinical & medical, illegally dumped hazardous waste, systems for managing hazardous materials) |
| [x]  | **Collections** (innovations, new systems, vehicles, challenges) | [ ]  | **Procurement** (recent process developments, case studies, planning) |
| [ ]  | **Disaster waste management** (bushfires, floods, pandemic) | [x]  | **Project Planning** (projects currently planned, challenges and barriers, planning controls and conditions, project management) |
| [ ]  | **Economics** (business cases, data gathering, planning for financial impacts, reviews & analyses) | [ ]  | **Product stewardship & extended producer responsibility** (current & planned schemes, new materials to be captured by schemes, local schemes for recovery) |
| [x]  | **Education** (behaviour change, community engagement, social media, planning FOGO education) | [x]  | **Recycling & resource recovery** (post China Sword, and export bans, market insights & updates) |
| [ ]  | **Energy from Waste** (projects, case studies) | [ ]  | **Regional issues** (regional responses to waste settings, collaboration, joint projects) |
| [ ]  | **Grants** (major waste grants, outcomes & processes) | [ ]  | **Social enterprise** (new entrants, recent endeavours, case studies) |
| [x]  | **Infrastructure & planning** (FOGO capacity, new material recovery planning) | [ ]  | **State based issues** (policies, strategies, responses & challenges, border transitions) |
| [x]  | **Innovative projects** (sustainability innovations, artificial intelligence, case studies) | [ ]  | **Strategic waste planning & policy** (stakeholder engagement, strategy development, waste policy impacts and opportunities) |
| [ ]  | **Landfill & facility management** (facility operations management, strategic planning, facility budgeting) | [x]  | **Technology** (innovations, must haves, how technology will improve or assist with waste responsibilities, AI) |
| [ ]  | **Legislation, regulations & levies** (major updates, monitoring & enforcement, response to changes in regulations) | [ ]  | **Tenders & contracts** (planning, implementation, contract management, innovations, systems & approaches) |
| [ ]  | **Litter & illegal dumping** (prevention, new management systems & innovative & smart initiatives, surveillance) | [x]  | **Waste projects** (planned waste infrastructure, how to plan & scope, budgeting, understanding what is required, governance & process planning, case studies) |
|  |  | [ ]  | **Other** |

[ ]  **Proposed Panel Discussion** -Proposed topic & participants suitable for key issues that may be addressed by a Panel of presenters. For this category suggest your topic & who you will arrange to attend and present (maximum of 5 panel members).

**Presenter information**

**Presenter name:** Maree Marshall

**Presenter position:** Director - Waste Management & Circular Economy

**Presenter organisation:** WSP

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**Biography**

Maree is a Director with WSP showcasing 20 years’ experience and leadership in Waste Management Engineering and Resource Recovery Innovation. Maree leads WSP’s Waste Management & Circular Economy team who are respected for their innovation and quality of design. Her depth of knowledge has influenced some of Melbourne’s largest commercial, residential, government and recreational developments.

Maree authored the first 5 versions of City of Melbourne’s Guidelines for Preparing Waste Management Plans which have since been adopted as the standard across Victoria. Sustainability Victoria have benefited from her superior industry knowledge and now use the waste generation rates she developed as their industry standard. She is celebrated for her innovative Zero Waste strategies, arming precincts, councils and everyone in between, with action plans that encompass waste hierarchy and circular economy principles.

**Abstract Summary**

In a global transition towards vehicle-free streets, how can we future-proof our cities to support more sustainable methods of waste disposal and collection?

Maree will explore the challenges and opportunities of precinct design, and share the key to innovative waste solutions, including how to achieve increased source separation without the trade-off of excessive vehicle movements.

She will share key learnings from the Arden Precinct in North Melbourne, which holds pedestrian access at its core, with only a third of streets accessible by vehicles. A range of potential solutions will be discussed, including vacuum waste systems, consolidated waste collection docks, organic piped networks and circular economy hubs.

**Abstract**

As urban densities increase, designers are considering walkable cities to reconcile the exponential growth in population and the importance of having vehicle free streets.

From a waste and resource recovery perspective, it will be critical for future cities to re-think the way we dispose of, collect and process increased waste volumes in highly populated areas, to avoid significant increases in waste vehicles and bins.

Maree will discuss the challenges and opportunities of precinct design and share the key to innovative solutions, including how to achieve increased source separation without the trade-off of excessive vehicle movements.

Maree will also share waste management design opportunities identified for Arden Precinct in North Melbourne. The precinct is a 44.6-hectare development that aspires to set the standard for best practice in sustainable urban renewal, aiming to become Melbourne’s first circular and toward zero waste precinct, in line with net-zero carbon emissions targets by 2040. It holds pedestrian access at its core, with only a third of streets accessible by vehicles.

A range of innovative waste and circular economy solutions will be explored, including:

* **Vacuum waste systems**: an overview of applicable waste streams, the space savings that can be provided and overcoming key challenges such as blockages and education.
* **Consolidated waste collection docks**: an investigation into the logistics of clustered services, including transfers between buildings, pre-processing, and management of bulky and extended waste streams.
* **Organic piped network**: opportunities for dedicated trunk infrastructure for the management of organic waste, allowing materials to be piped to a single point for processing and/or collection.
* **Circular Economy Hub**: providing a space for people who live, learn and work in Arden to become actively involved in circular initiatives e.g. a Resale / Upcycle / Repair centre.

Overall, this presentation will explore:

* Key drivers for future-proofing waste systems in vehicle-free cities
* Innovative precinct-scale solutions for waste management
* Practical implementation of vacuum/piped waste systems in Australia and internationally
* The role of economies of scale and resource efficiency
* Circular economy opportunities in precinct design and operations
* Increasing resource recovery through extended waste stream separation