

### Preventing Polystyrene Pollution in Melbourne's Rivers

Report from Roundtable 1 5 April 2023



### The Purpose of the Roundtable

The goal is eliminating polystyrene pollution in Melbourne's rivers. Work is underway to limit EPS pollution in consumer food and white goods industries. In monitoring by the Yarra RiverKeeper Association, the construction industry is the largest contributor of EPS pollution to waterways. How to eliminate the flow of polystyrene will need targeted and concerted action.

Roundtable 1 identified who can influence practice at each point in the Polystyrene

Average volume of EPS pollution per month by industry, Melbourne, 2022 Pathway, from the manufacture of EPS to its use on construction sites and disposal of waste EPS.

The Roundtable made a first call on strategies that might influence policies and practices and which organisations might contribute. Participants were introduced to a conversation-based inquiry process through which they can test for openings to change business-as-usual, and find more people who want to be part of eliminating EPS pollution.

### Who can do something about EPS pollution?

The world of practice - what people actually do when handling and using EPS - is influenced by people in the world of policy, which sets and implements the guidelines, contracts or regulations that say what should be done). Policy, in turn, is influenced by shifts in the operating environment of an organisation, such technologies and social attitudes.







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Image | Roundtable facilitator Ross leading group discussions around the polystyrene pathway for mapping.



# The Polystyrene Pathway

EPS pollution begins where polystyrene is no longer contained inside a business's premises and is able to enter the drainage system and then waterways. EPS pollution can occur at any of the steps on the Pathway below, from manufacture to the stormwater system.



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# Possible strategies

The constraints on change in practice are significant.

- Polystyrene is used in many aspects of construction, and is low-cost. There is little economic incentive for builders to change current practice.
- Alternatives to polystyrene, such as cardboard and recycled plastic, are not as cheap as EPS, but are close to being price competitive.
- Site cleanliness and appropriate storage seems too much effort for workers with multiple jobs and a lack of education.
- There are many sites of residential construction, and not many resources to monitor compliance. However, large-scale residential development is often managed by a single or several developers, opening a possible path of influence.
- Costs for non-compliance with building permit conditions or EPA regulations can be passed on by builders to the consumer.
- The EPA has a lengthy runway for outright suspension of activity on a building site.
- Making the manufacturer of a material responsible for the whole of life cycle

costs, including removal from the waste stream, is an approach being applied in other industries, but application to EPS requires government resolve in policy and then in enforcement.

• Rating systems for sustainable buildings focus on the end product, not the construction process. The scope of sustainability could be expanded to include the energy and materials used in the building process and the impact on the surrounding environment. "Green" branding has some standing in the market, but the proportion of consumers willing to pay a premium for sustainable buildings or low impact buildings is still low.

In the light of the constraints, and in the light of who has influence on practice and policy at each step in the Polystyrene Pathway, what might make a difference?

Polystyrene is well-confined at manufacture, and dispersed through many locations at the end of the Pathway. Return for effort is likely to be highest by concentrating on construction sites, and practices for EPS use, storage and removal of waste.

Site hygiene and waste management in the construction industry have well-established arrangements in site management systems,



contracts, planning permit conditions and enforcement, and building industry standards, accreditation and education. Two approaches would make more of these ensure builder education, builder existing arrangements:

- better education about the impact of EPS pollution and ways to avoid it; and,
- targeted enforcement.

To test the merits of each approach, and to generate understanding and buy-in amongst those who would have to improve education and enforcement, Roundtable members now need to talk with people who can influence practice.

#### With Local Government:

explore how arrangements for waste management can include EPS pollution in policies, planning permits, local laws, education and enforcement activity.

#### With the EPA:

ensure EPS pollution is part of the education of builders, developers, unions and householders in relation to their General Environmental Duty (GED); explore ways to use the GED to improve waste management in large residential developments and make developers, not just builders, aware of their responsibilities.

#### With building industry bodies:

certification, and 'green' rating schemes cover practices that eliminate EPS pollution.

#### With Melbourne Water:

include EPS pollution in monitoring of waterways health and enforcement activity; test citizen science monitoring and reporting of EPS pollution in geographic areas with a high risk of EPS pollution; consider designs and standards for stormwater systems that will capture more EPS.

#### With unions:

investigate how workers are educated about the GED, in the construction industry, and provisions for reporting persistent pollution.

#### With the EPS manufacturers' peak body:

strengthen the industry code of practice; improve education on the code and on the impact of EPS pollution; assess the feasibility of whole-of-life cycle costs as a way to incentivise non-polluting use and removal from the waste stream.

# Getting inside business-as-usual

EPS is a low priority for many in the construction industry, and one of many concerns of people in planning and regulatory systems. Making it a higher priority depends on finding people with an interest, understanding their perception of business-as-usual and the opportunities they see for doing things differently.

The Roundtable was introduced to conversation-based inquiry through which they can probe another person's perceptions of business-as-usual:

- In your part of the Polystyrene Pathway, how is potential pollution handled now? What is current practice? What policies lock that in place? What's the thinking behind all that?
- What could be done differently? Is this a new idea? Or has it tried before and failed? If so, why? What thinking would push that along?
- What's shifting? Are social attitudes shifting? Might new technologies/materials bring new ways to operate? Is the structure of the industry changing?

#### Action: can we build an informal network?

Eliminating EPS pollution from waterways is best undertaken not by one authority or industry leader, but by a network of committed people who organise for collective action across many organisations.

In a network, hubs of expertise and influence across industry, government and civil society can share their reading of possibilities for change. For example, those in the EPA have a distinct view of what's happening in the construction industry, and those in building associations another.

When action is taken, staff for whom EPS pollution is one of many responsibilities can have more impact by aligning their actions to create shifts in business-as-usual. Each can generate buy-in in their sphere of influence, and bring more people into the design and implementation of strategy. The network can track implementation of strategies across the Polystyrene Pathway. People can adjust strategies, or change course if a particular strategy is not working.

Roundtable participants committed to talk with people they know, to understand their perception of business-as-usual, what they think might be done differently, and the shifts underway that support those new practices. This information will provide a starting point for Roundtable 2, and the design of workable strategies to eliminate EPS in waterways.



**Image** | Polystyrene left up against fence, shavings all over the pavement. A clear example of inadequate containment.

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