

Pulling Products not Pushing Waste Repurposing in Action



November 2019 – Graham Henderson



Our Society is Demanding Change

Indonesia rejects 'toxic' Australian plastic recycling



Councils need Circular solutions

- The waste problem is owned by Local Councils
 - Waste is a Local issue with a State and Federal optic
 - Collection is good, initial sort is ok
 - But this is where it stops
- The system falls down around reprocessing and reuse
 - Quality of reprocessing is mostly non existent or of insufficient quality
 - The market demand for recycled products is nowhere near the required levels
- In essence, you are creating the problem
- Embracing the Circular Economy could resolve this

Circular economy creates recycling solutions

- ➡ Our focus is on Pulling Products not Pushing Waste
- ➡ Reconomy:
 - Represents how we manage resources. We not only recover resources to avoid landfill, we recycle and repurpose into high quality products and materials.
 - Creates economic, social and environmental value for our customers and their communities.



Current Portfolio of Repurposed Materials

Diverse and Innovative Blend of Materials:



Reclaimed Asphalt Pavement



Recycled Toner Cartridges



Recycled Glass



Soft Plastics



Recycled Waste Oil



Recycled Tyre Rubber



Fly Ash



Road Sweepings

Reconophalt story

- Converts 'waste' destined for landfill into a useable resource.
- One tonne of Reconophalt includes;
 - 800 plastic bags
 - 252 glass bottles
 - Toner from 18 used printer cartridges
 - 300kg of Reclaimed Asphalt Pavement
- It also has a **60% improvement** in fatigue, when compared to typical road asphalt.



Reconophalt Case study – South Australia

- In March Downer Paved 2,800t of Reconophalt containing;
- - 2,172,000 plastic bags
- Toner from 50,000 toner cartridges
- Over the 39,000 households, that's **Two weeks worth soft plastic recycling that has been beneficially reused, not sold to Asia or put in landfill.**
- **No Micro-Plastics**
- **100% recyclable in the future**
- **Road lasts 3 years longer**



Detritus Rosehill

Receives Road Sweeping and Pit Waste

Both are classified materials that were previously disposed in landfill

Ability to process 25,000t annually.

Diversion rate of 88%.

- 50% Sand and Aggregates
- 33% Organics for compost
- 5% metals
- Saves 20,000t Carbon emission per year



Landfill Diversion and Reuse is the key

Invest in one of these



To Process This



Put it beside one of these



To Make this



Repurpose It - Melbourne

- Recently purchased 50% shareholding in Repurpose It.
- A resource recovery precinct which 'Harvests' waste to create products.
- Ability to process heavy waste, transforming the waste into materials suitable for construction
- Provides a range of services to construction, maintenance and infrastructure.



Repurpose It - Melbourne



Resource Recovery and Reuse Precincts



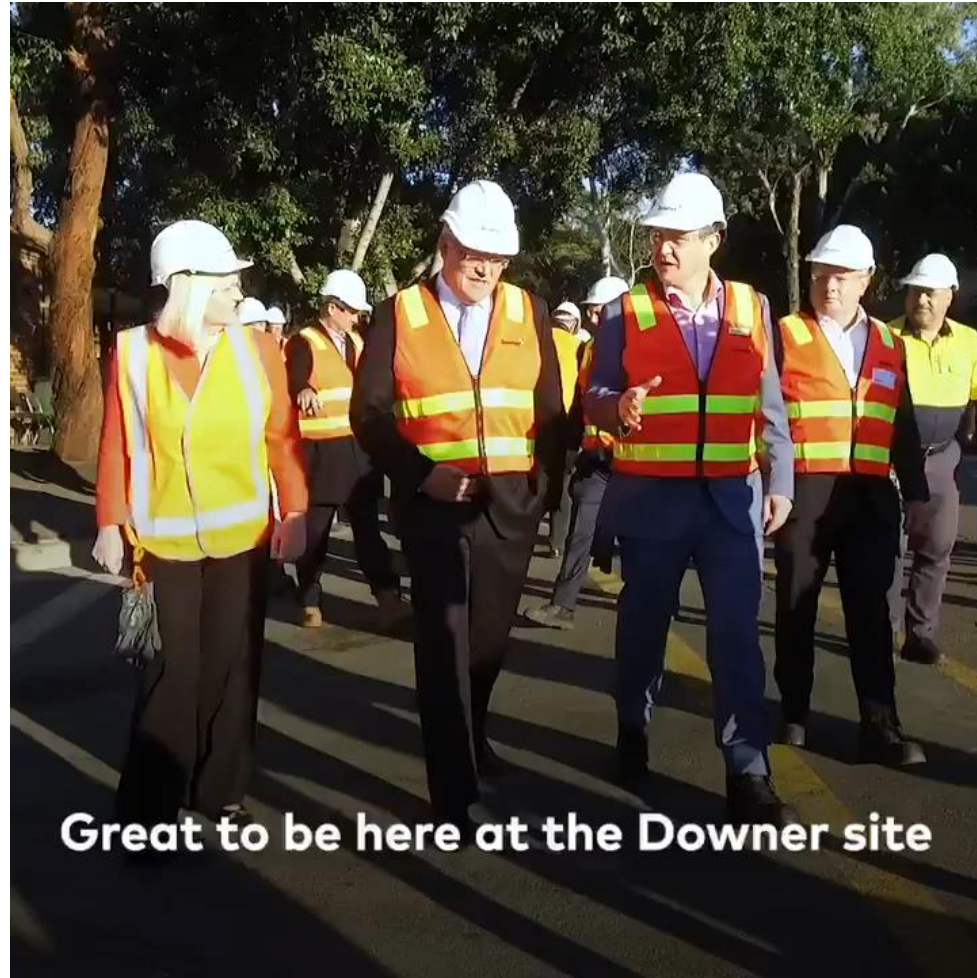
Looking into the future

- Tyre Harvesting
- Rubber devulcanization
- Virgin aggregate replacement
- Plastic polymerisation
- Bio Bitumen

Conclusion

- **Circular Economy is not a Fad**
 - Its now a political issue. Your stakeholders are demanding action
- **Councils are perfectly placed to embrace it**
 - States are producing policy but will lag behind the need to change
 - Councils need to be an enabler
 - Proactive Procurement is the key to circular success
- **Industry must provide solutions based around quality**
 - Recycled does not mean lower performance or compromise
 - Industry will invest if the market demand is there

And if you don't believe me, maybe you'll believe him



Great to be here at the Downer site