



Plas Mix

In 2018 China officially closed its borders to accepting other countries plastic waste. This has created a serious problem for New Zealand as over 50% of all plastic collected for recycling could no longer be sent off-shore. All around the country waste plastic is being stockpiled as there were very few ways of repurposing it.

New Plymouth District Council approached Road Science about their growing waste plastic problem. The local authority had an existing partnership with EnviroNZ and together with Road Science the organisations have come up with a ground-breaking solution - Plas Mix.

Plas Mix is in essence raw shredded plastic that goes into asphalt. Road Science laboratories have gone to great effort to identify the optimum plastic mix and the actual size needed for the product to work. It is then laid and paved in the same way a traditional asphalt.

"The creation of Plas Mix is a collaboration between two commercial companies actively working together to solve significant local and global waste minimisation issues. The team are tasked with developing a meaningful outcome that can successfully repurpose waste plastic while not compromising the integrity of the pavement solutions" - Murray Robertson, Road Science.

"The main benefits of using recycled plastic in roading is that it prevents waste going to landfill or ending up on our beaches or in our rivers and oceans. It also eliminates the need to transport and ship these materials thousands of kilometres overseas for processing, which significantly reduces our carbon footprint." Glen Jones, Commercial Manager, EnviroNZ.

Benefits to the environment

- Plas Mix is able to take difficult to recycle plastics and turn it into roads
- Over 500kg of plastic can be consumed in less than 100m of road.
- Prevents waste going to landfill or ending up on our beaches or in our rivers and oceans.
- It also eliminates the need to transport and ship these materials thousands of kilometres overseas for processing, which significantly reduces our carbon footprint

Benefits on the road network

- Increase resistance to both heat and traffic
- Increased moisture resistance
- No detriment to fatigue life

Habitat

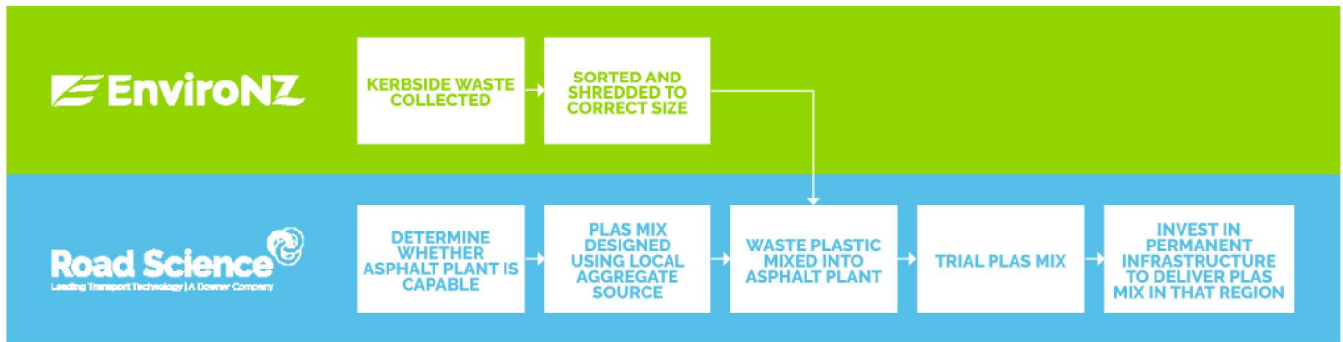


Rural



Residential

The process



FAQ's

Wont bits of plastic wear off the road?

Not at all, 95% of the road is actually made of aggregate and is the primary component that wears with traffic. As the plastic is melted into the bitumen there is very little opportunity for it to come in contact with tyres and therefore release of plastic particles is unlikely.



What types of plastic can we use?

Any type of plastic collected from kerbside waste can be consumed. At the moment it is preferred that plastic type 1 is limited.



Does it require any special equipment?

There is a need to have a method of addition for the plastic into the asphalt plant. This is easier in some plants with small modifications to the asphalt plant.

Where is it available?

Our initial trial has been conducted in New Plymouth with the intention of making this permanent if successful. Other regions can be made available upon consultation.



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