THE PROBLEM OF WASTE TYRES IN TASMANIA

NORTHERN MIDLANDS COUNCIL

Version: 23 October 2015

NUMBER OF TYRES IN TASMANIA 2009-10

- Around 2.9 million EPUs (equivalent passenger units) were in use

- Around 1.2 million EPUs came to the end of their life

Source: COAG Standing Council on Environment and Waste, Study into domestic and international fate of end-of-life tyres – Final Report, Hyder Consulting Pty Ltd, 17 May 2012

- In Tasmania a large proportion (est. 70-80%) of waste passenger and truck tyres are collected. There is negligible processing of Off The Road (OTR) tyres and little information on the fate of the OTR tyres and the passenger and truck tyres. It is likely that around 480,000 EPU are unaccounted for every year.

- *Note: EPU is a standard measure for the quantity of tyres, expressed in equivalent passenger units. An EPU is taken to be 8kg for a used tyre.*

DISPOSAL OF WASTE TYRES IN TASMANIA

- In Tasmania there is a $5 levy on the purchase of new tyres, or a charge to dispose of used tyres
- There is only one collector of passenger and truck tyres in Tasmania.
- Until February 2012, these collected tyres were baled in Longford and exported to Asian markets

PERTH TYRE FIRE

In September 2010 there were less than 10,000 tyres burnt in a tyre fire near Perth

LONGFORD BALING PLANT FIRE

- In February 2012 approx 12,000 tyres were burnt in a tyre fire at Longford
- It took four days to extinguish the fire
- It took four months to clean up the site
- Residents were evacuated from the area

LONGFORD BALING PLANT FIRE

BEFORE

AFTER

WASTE TYRES IN THE NORTHERN MIDLANDS

- The number of tyres reaching their end-of-life in Tasmania had grown beyond the ability of the baling plant to process them

- In June 2011, the Northern Midlands Council issued a permit to store waste tyres in its municipality

- Latest estimate is approaching two million EPUs on site

WASTE TYRES IN THE NORTHERN MIDLANDS

WASTE TYRES IN TASMANIA

CRADLE COAST AUTHORITY

NORTHERN TASMANIAN Waste Management

Regional Strategies for Sustainable Management of Recyclables

Tyres/Gas bottles/Cooking oils

Document History:

Title	Date
Draft Regional Strategies for Sustainable Management of Recyclables	14/02/2014
Draft Regional Strategies for Sustainable Management of Recyclables (updated maps)	17/02/2014
Final Regional Strategies for Sustainable Management of Recyclables	30/05/2014
Final Regional Strategies for Sustainable Management of Recyclables v2 (incl. footnote)	13/06/2014
Final Regional Strategies for Sustainable Management of Recyclables v3 (minor edits)	18/07/2014

This report has been prepared by MRA Consulting Group (MRA) for **Dulverton Waste Management** in accordance with the terms and conditions of appointment. MRA (ABN: 13 143 273 812) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

- According to the Regional Strategies for Sustainable Management and Recyclables:
  - Tasmania generates approximately half a million tyres per year, which aren't being processed. As there is no legitimate way to recycle, most are being stored and some (around 10,000 EPU) are being cut into smaller pieces and land filled.

POSSIBLE SOLUTIONS

Whole tyres as fuel for cement works has been problematical at Australian cement kilns

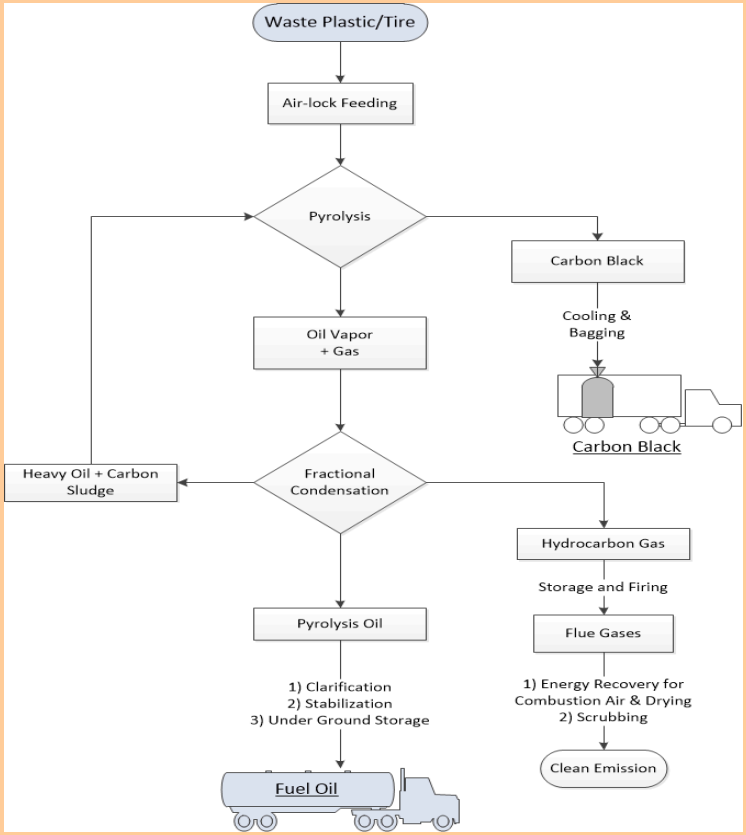
Source: www.cemnet.com

Chipped tyres are used in road base soft fall or fuel which is unlikely to be economic in the Tasmanian market

Source: Planet Ark Environmental Foundation

POSSIBLE SOLUTIONS – High Temperature Pyrolisis

- The draft report recommended further consideration of a high temperature pyrolysis plant in Tasmania for the treatment of tyres



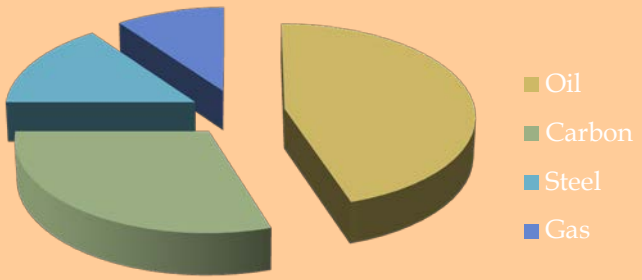
Source: http://www.pyrolysisplant.com/pyrolysis-plant/

POSSIBLE SOLUTIONS – High Temperature Pyrolisis (continued)

- High temperature pyrolysis benefits greatly from the additional revenue stream from the sale of liquid fuel, carbon, and steel

- Pyrolisis as a solution faces commercial and technical challenges. Whilst the cost of tyres is critical, market demand for outputs is also important, even allowing for environmental and social benefits that might arguable offset commercial loss. Given the potential processing volumes involved in pyrolisis, any facility would need to be assessed by the EPA.

Products from pyrolysis of tyres



POSSIBLE SOLUTIONS – High Temperature Pyrolisis (continued)

- Two companies have expressed interest in constructing a high temperature pyrolysis plant in the Northern Midlands for processing waste tyres:
  - Green Distillation Technologies Corporation Limited (GDT) seeks to locate adjacent to the existing stockpile
  - Recycle Pty Ltd seeks to locate on the outskirts of Avoca

POSSIBLE SOLUTIONS – High Temperature Pyrolisis (continued)

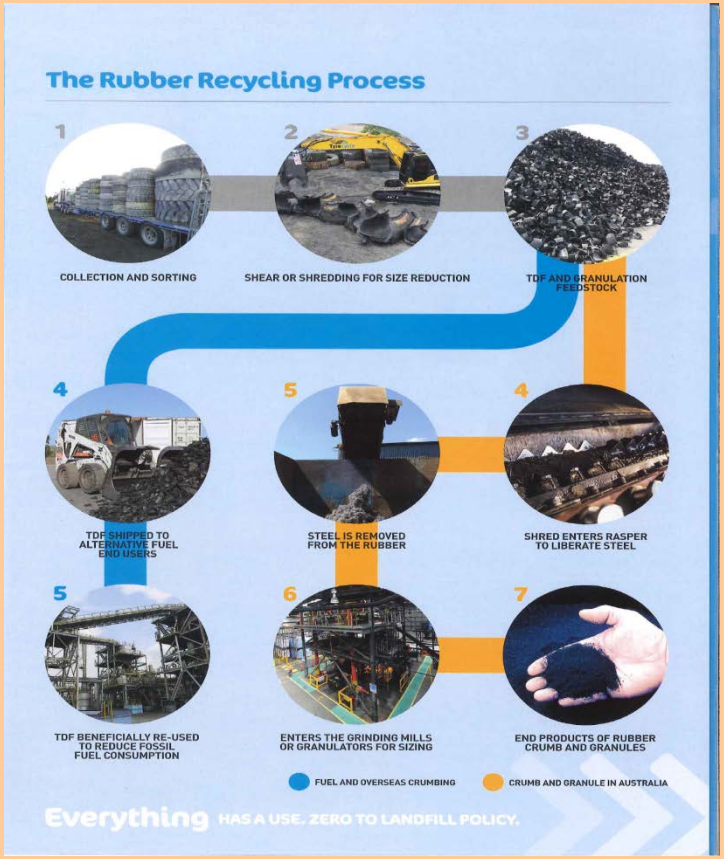
- Both companies have held discussions with the Environment Protection Authority
- Both companies can address the problem
- Both companies will create employment
- The Northern Midlands Council is encouraging both companies to lodge a development application

POSSIBLE SOLUTIONS – CHIP AND EXPORT FOR FURTHER PROCESSING

•Council has recently issued a permit to Tyrecycle to chip and remove 3000 tonnes of the used tyres.

•Tyrecycle will send the chipped product to its plant in Melbourne for further processing or onsale as Tyre Derived Fuel (TDF).

•Tyrecycle have a national contract to deal with the waste tyres from a number of national retailers.



POSSIBLE SOLUTIONS – CHIP AND EXPORT FOR FURTHER PROCESSING

- **Approval to deposit more tyres at the Longford site expires on 31 March 2016, with all tyres to be removed by 31 December 2020.**
- Tyrecycle have advised that they could chip and remove the balance of the stockpile in 110 days and the annual supply of tyres in 60 days each year.
- The process is not self sustaining and would need Government funding to be viable.
- A viable funding stream could become available through a levy placed on the purchase of all new tyres.
- Many purchasers of new tyres believe they already pay some form of levy for the environmental friendly disposal of their used tyres.

POSSIBLE SOLUTIONS – CHIP AND EXPORT FOR FURTHER PROCESSING

- However, only part is spent on the collection and stockpiling.
- The State could regulate (through legislation) the levy scheme at say $8.00 per equivalent passenger tyre unit, with an even split between collection, disposal, removal of the stockpile and later research.
- **A cost neutral solution to the State's problem of used tyre disposal.**
- **Council is advocating this immediate solution to the State Government.**

QUESTIONS & CONTACTS:

Duncan Payton

Planning & Development Manager

Northern Midlands Council

+61 6397 7303

duncan.payton@nmc.tas.gov.au

Paul Godier

Senior Planner

Northern Midlands Council

+61 6397 7303

paul.godier@nmc.tas.gov.au