

Green Distillation Technologies

Downstream Product Development

Trevor Bayley - January 2021

Process and Products

- Proprietary Process - Destructive Distillation
- Mature Technology - commercial scale unit operational
- Plant construction to full scale in progress
- Planned 7 plant roll out in Australia
- Planned minimum 15 plant roll out in North America - total capacity 500k tonnes of tyres per year producing 225k tonne rCB, 200 million litres oil
- Global opportunity



NEW APPLICATIONS HAVE THE POTENTIAL TO CREATE SIGNIFICANT, INCREMENTAL DEMAND GROWTH IN THE FUTURE

- Battery Industry - Lithium-ion Batteries
- Fuel Industry - Fuel Cell
- Nuclear Power Industry
- Consumer Electronics Industry
- Power Tools Industry
- Auto Industry - hybrid and fully electric vehicles

(Each hybrid electric car uses about 22 pounds of graphite, while a fully electric auto uses about 110 pounds.)

Graphite

Products

Recovered Carbon Black (rCB)

- Defined by ASTM standard D8178-20
- Potential markets requiring further processing

- Rubber reinforcement

Has specific particle size and surface area limitations. GDTC product requires milling and pelletising

- Graphene - multiple variations, multiple markets

New and emerging technologies for Edge Functionalised and Turbostatic Graphene

- Graphite - batteries, capacitors etc.

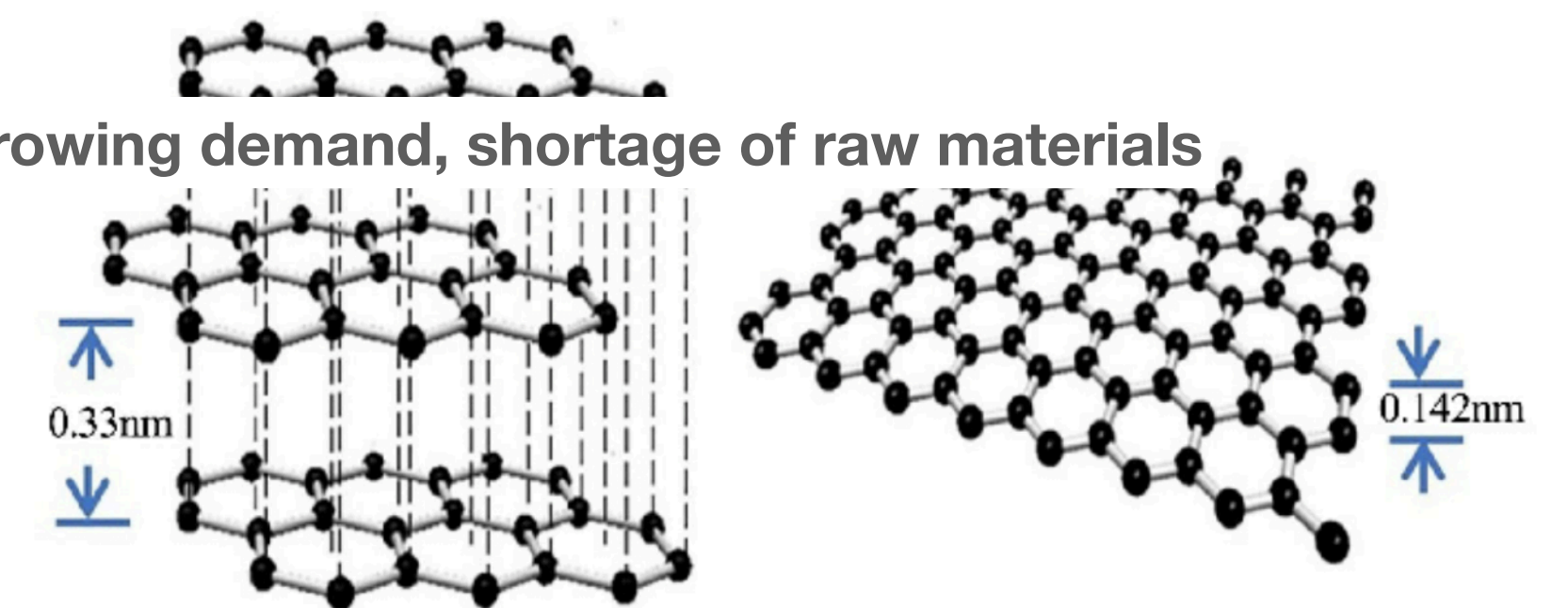
New technologies to convert carbonised materials into battery ready graphite. Huge and growing demand, shortage of raw materials

- Paints and coatings

Strength, UV protection, thermal insulation requirement

- Asphalt and Bitumen

Strength and colour, thermal resistance



Products

Oil

- Stable oil, easily refined into diesel substitute

70% in the diesel range, standard refining protocols apply

- Can be blended with fossil fuels to achieve low carbon fuel status

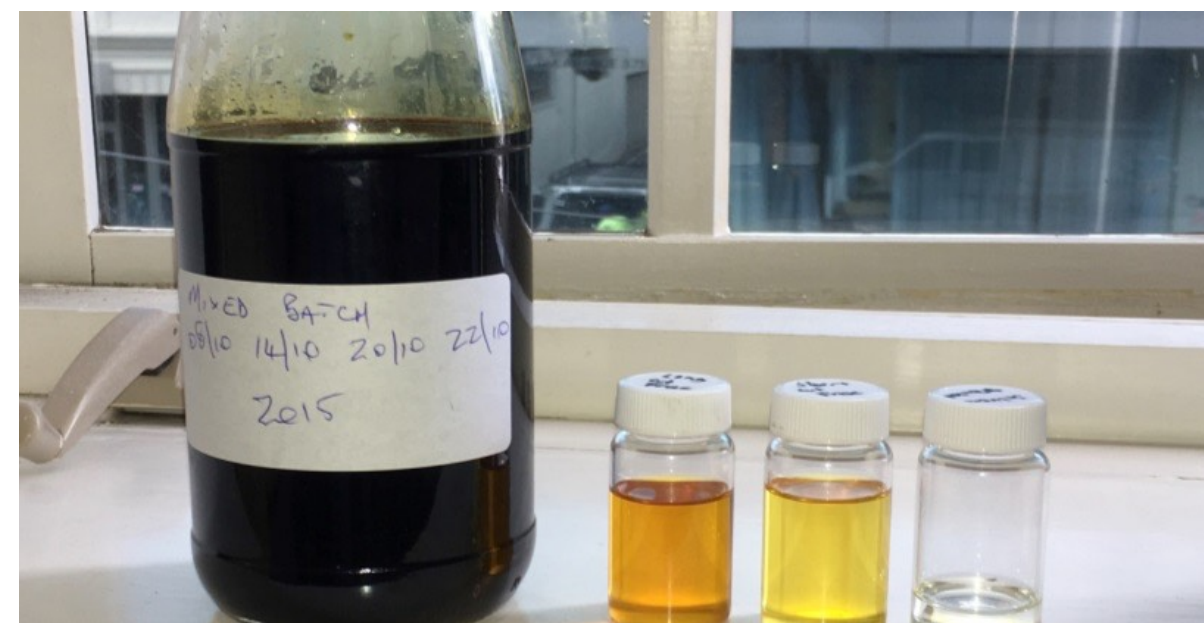
Increased legislation to achieve low carbon fuel status. Refined or blended potential.

- Multiple opportunities in polymer and other industries

Oil is the base ingredient in a range of plastics and polymers. GDTC oil can replace fossil fuels in some of these applications

- High demand in Europe

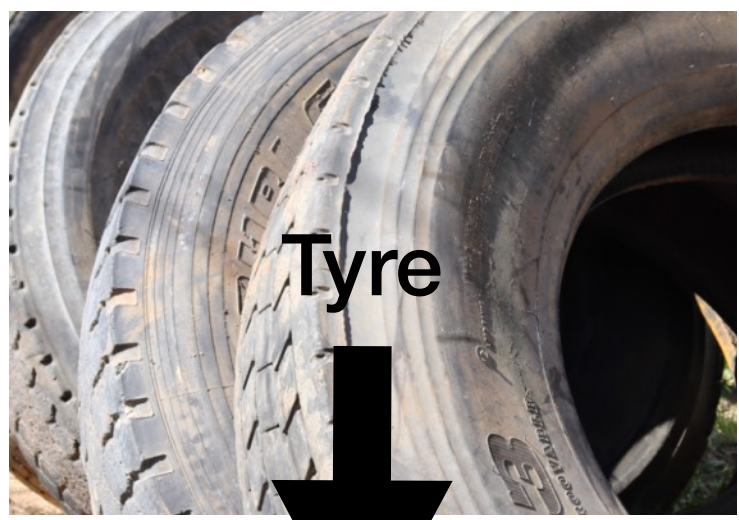
The Non Oil producing nations of the EU have been the first to grasp the significance of renewable oils.



Proposal

Joint Development Agreement

- Raw products need processing to enter high value markets
- Partner sought to assist development of high value markets
- JDA resulting in JV operation or license agreements
- Global problem with global potential
- Circular economy, sustainability, low carbon future
- Government and industry focus on renewable resource



Tyre



Carbon



GDTC

VORTEX

Particle Size Reduction

Turbostatic - Flash Joule

Edge Functionalised EFG

CarbonScape Sustainable Engineered Graphite

Particle Size Reduction

Refinery

R & D

Joint Development Partner

Rubber

Graphene

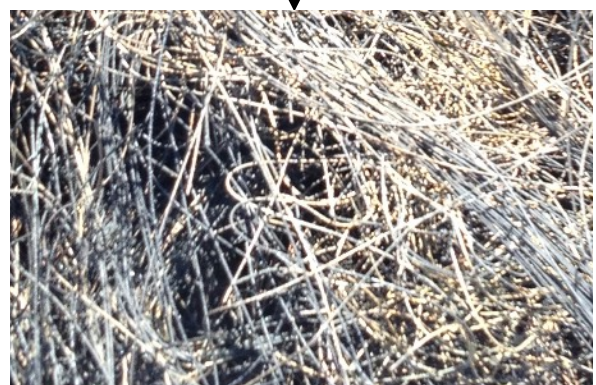
Graphite

Paint and Coatings

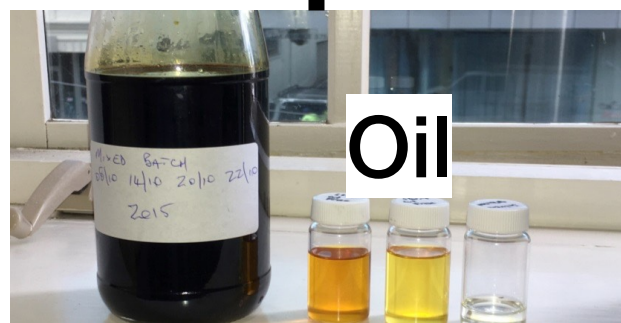
Diesel Substitute or Blend

Polymers and Plastics

Joint Development Business



Steel



Oil