

## SITA-RESOURCECO ALTERNATIVE FUELS

The source for manufacture of Alternative Fuels is from Commercial & Industrial (C&I) material. This material is comprised of mixed light loads which usually contain a mix of timber, metals, plastics, cardboard and paper. This material stream may also include small amounts of concrete, bricks and rubble.

This material is sorted and the ferrous and non-ferrous metals, inert fractions (bricks, concrete etc.) and non-recyclables are removed from the combustible portion of this material stream. The combustible material is then processed for manufacturing of Process Engineered Fuel (PEF).

All salvaged metals are recycled and ResourceCo further processes the inert fractions for resupply to the civil construction market.

The manufacture of PEF is carried out at the fully automated SITA-ResourceCo facility at Wingfield. This facility has the capability to convert up to 350,000 tonnes of raw material per annum into 100,000 to 150,000 tonnes of PEF. All raw materials are separated during processing and over 90% of the material is recycled.

PEF has significant calorific value and can be used as a fuel substitute for coal and gas in high combustion facilities. The use of PEF can benefit end-users in two ways:

- the energy replacement value from the utilising PEF instead of traditional fossil fuels
- the carbon and renewable energy benefits:
  - through reduced fossil fuel use
  - the reduction in landfill emissions
  - Renewable Energy Certificates obtained



## PEF Manufacturing Process

2 Product from the primary sizing bay is fed onto vibrating screens for separation into different sizes.

3 The trommel removes the small aggregates and sand which are stockpiled to blend with recycled road base materials.

3b The larger stones are then passed to the air knife which is used to remove small combustible material from the stones.

6 The stones from step 3 are stockpiled and sent to the waterbath, as required, where larger combustible material is reclaimed via a proprietary flotation system.

4 The remaining material is transported by conveyor belt to the sorting facility. Recyclable materials are manually extracted on the picking line. Magnets are used to capture residual metals not picked up through manual processing.

8 The finished alternative fuel is stockpiled for transport to the Adelaide Brighton Cement Birkenhead plant for use as a fossil fuel substitute in the cement making process.

5 Recyclable materials such as steel, concrete and masonry products are extracted for reuse and recycling.

1 Commercial/industrial construction and demolition source material is delivered to SITA-ResourceCo. Following quality inspection, the material is unloaded at the primary sizing bay.

7 Combustible materials move by conveyor to the fuel preparation area. This material is processed to Adelaide Brighton Cement's specifications.

