# 2010 National Recycling Week Sustainability Tour

*Brisbane*

Jones Lang LaSalle

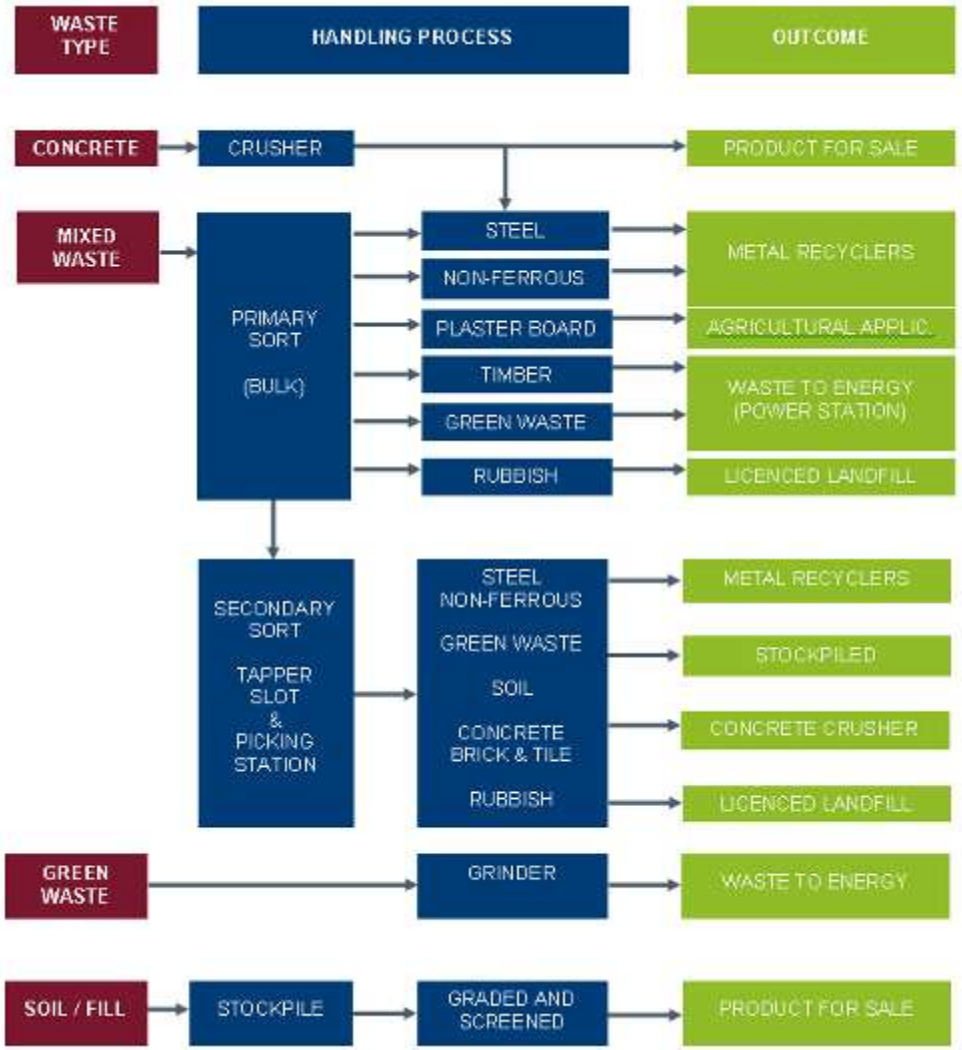
# Transpacific Resource Recovery facility at Willawong

Construction and Demolition waste are brought from sites around Brisbane, including Brisbane Transit Centre and One One One Eagle St.

A ‘primary sort’ is manually conducted to identify any large pieces of recyclable items.

# Transpacific Resource Recovery facility at Willawong

Resource Recovery and Recycling process flow



# Transpacific Resource Recovery facility at Willawong

TRR processes all types of Construction and Demolition waste including clean and dirty concrete, timber and metals.

# Transpacific Resource Recovery facility at Willawong

TRR processes over 200,000 cubic meters of waster per annum.

In 2009, TRR achieved over 80 % diversion from landfill.

# Transpacific Resource Recovery facility at Willawong

A ‘secondary sort’ is conducted by mechanical systems that separate recyclable materials.

# Transpacific Resource Recovery facility at Willawong

The mechanical secondary sort produces a high level of recycling and reduces operator risk.

# Transpacific Resource Recovery facility at Willawong

Timber and soil is also processed and prepared for recycling.

# Transpacific Resource Recovery facility at Willawong

Fine clean concrete is produced and ready for recycling.

# Transpacific Resource Recovery facility at Willawong

| Commodity | Industry |
|---|---|
| Steel – Ferrous & Non Ferrous | Recyclable Metal |
| Crushed Concrete | Construction, Municipal & Civil Engineering |
| Construction Timber & Green waste (shredded) | Power Station / Waste to Energy |
| Crushed Bricks & Tiles | Construction, Municipal & Civil Engineering |
| Gypsum | Agriculture |
| Porphyry Rock | Construction, Municipal & Civil Engineering |
| Clean Fill / Soils | Construction, Municipal & Civil Engineering |
| Cardboard – trials of separation are in progress | Recyclable cardboard<br>Low spec material to Waste to Energy |

# Queensland Urban Utilities - Lytton Wastewater Treatment Plant

This facility processes 9 mega litres per day of sewage and wastewater from local areas such as Wynnum and Fisherman Island and the Port.

# Queensland Urban Utilities - Lytton Wastewater Treatment Plant

Final Settling Tanks – separates water and sediment.

# Queensland Urban Utilities - Lytton Wastewater Treatment Plant


Sludge and waste is emptied during treatment process

# Queensland Urban Utilities - Lytton Wastewater Treatment Plant

The water is treated and prepared for ‘clean water recycling’.

# Queensland Urban Utilities - Lytton Wastewater Treatment Plant

Wayne the operations manager shows us the plant's monitoring computer system.

# Queensland Urban Utilities - Lytton Wastewater Treatment Plant


The end result is shown in the clear water before and after the ‘cleaning’ process.

Approx 3.5 million litres of recycled water is produced and pumped to the local Caltex Refinery. Caltex was previously using drinking water while the treated sewerage effluent was being pumped into the bay.

Subsequently, an enormous amount of drinking water is saved and Moreton Bay also benefits with a significant reduction in nitrogen being pumped into the bay.

# SIMS Asset Recovery - Brisbane

Sims Recycling Solutions dismantles a wide range of electrical and electronic products, ensuring all sensitive data is wiped to protect customer assets.

# SIMS Asset Recovery - Brisbane

Commodities such as metals, plastics and glass are processed for recycling. Waste electrical products are dismantled into commodity groups.

Hazardous substances such as lead and cadmium are separated for environmentally safe disposal.

# SIMS Asset Recovery - Brisbane

There are over 17 trace elements in a circuit board and our resources are diminishing.

Zoltan, the Operations Manager advised that some countries have introduced mining of landfills to salvage elements in e-waste that were buried prior to recycling initiatives and technology.

# SIMS Asset Recovery - Brisbane

The process in Brisbane is very manual and each component requires extensive handling to achieve the highest recycling results.

# VISY Materials Recovery Facility – Brisbane

Domestic ‘ recycling bins’ are delivered daily – 320 to 350 tonnes per day

# VISY Materials Recovery Facility – Brisbane

Paper and Cardboard is conveyed directly into paper mill for production of recycled paper.

Contamination tolerance is .02% to achieve export grade.  Bales are randomly inspected for contamination prior to shipping.

# VISY Materials Recovery Facility – Brisbane

Pre-sort – Visy staff manually remove any non-recyclables

# VISY Materials Recovery Facility – Brisbane

Rotating magnets separate steel and eddy currents are used to separate aluminium cans.

These are then baled and ready for recycling.

# VISY Materials Recovery Facility – Brisbane

Plastic is conveyed into the Auto Plastic Sort for separation of plastic containers and liquid paper board.

Plastic is sorted by polymer type. Plastic bags are also baled and prepared for shipping.

# VISY Materials Recovery Facility – Brisbane

All glass is separated by using advanced infrared technology. Glass is separated into three main colour streams – green, amber and clear, ready for reprocessing into new bottles and jars.

There is also a small business nearby who further crushes some of the glass processed at Visy. This glass is ground to a talcum powder consistency and is used in some toothpastes.

Thank you

for joining us.