PRIDE PAINTS
(TRADING AS PAINT FACTORY)

PRESSURE PAYS OFF

Key outcomes

Annual savings

	Total: $28,200
Waste disposal	$12,500
Raw materials	$12,272
Labour	$3,900
Water	$650

Cost of setup investment

	Total: $5,915
Capital	$2,030
R&D	$3,250
Labour	$635

Annual operating costs

Biocide usage	$1,121

Payback period

3 months

Bonus benefits identified

- Environmental compliance
- Water conservation
- Increased product quality
- Increased process efficiency
- Increased productivity
- Benefit-focused cost reduction and resource management

Further information

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A healthier bottom line and higher quality paints are just two benefits of cleaner production processes.

When The Paint Factory was confronted with the pressure of tough times and cost reduction, management realised that thinking outside the square was required.

The family company, established in 1972 for the manufacture of high-performance architectural paints, began to look at its wastewater and resource management practices.

After a batch of paint is produced, the blending tank and all associated tools used to make that batch need to be cleaned.

Prior to implementing the cleaner production initiatives the blending tanks were cleaned by a low-pressure water rinse technique. All wastewater was stored in a sludge-holding tank. Once every two months a waste disposal contractor emptied the sludge tank at a cost of approximately $5000.

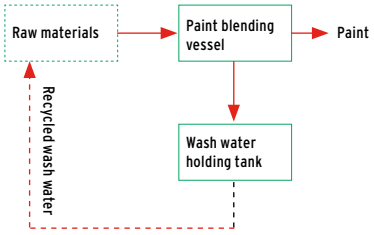
The cleaner production initiative implemented by The Paint Factory involved the reuse of the white wash water previously being disposed of through the contractor's system. This constituted more than 60 per cent of all wastewater produced.

To facilitate this reuse, an 800 L holding tank was purchased, into which all white wash water is emptied after tank cleaning.

The wash water is then recycled back into acrylic paint product batches.

Stringent research, development and quality control testing has enabled The Paint Factory to develop empirical alterations to product recipes to take into account the use of wastewater that has paint raw materials remaining in it.

Hence raw materials (especially thickeners), as well as water, are being recycled, saving over $12,000 per annum.



Note: Adjustment in recipe to allow for addition of wash water as raw material

The additional amount of thickener in each batch of acrylic paints has also led to enhanced product quality.

In addition to the recycling of wash water, the purchase of a Kärcher high-pressure water gun has meant that cleaning time has decreased and wash water volume has been reduced by 60 per cent or 50 to 70 litres of water per batch. This provides an annual reduction of nearly 75,000 lites of water usage.

Future opportunities

- Use the two discarded resin tanks to store liquid resin.
- Bulk resin deliveries instead of 1000 L OPTI tanks.
- Future R&D to determine whether the coloured wastewater can be recycled.
- Implementation of an environmental management system (EMS).

'The "cleaner production" initiative devised by Fred Dellisola and his team in 2001/02 has had a continuing impact on the methods and processes in our production plant and it is especially pleasing to note the volume of precious water we are recycling, rather than consigning it to a waste treatment contractor.'

Ian Ahon,
Director & Technical Manager

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SAVE WATER, SAVE ENERGY, REDUCE WASTE AND SAVE MONEY! — HINTS AND TIPS

Save Water

Understanding where water is used and lost in your business provides opportunities to quickly save water.

- Can existing processes use less water? Vacuuming, sweeping and high-pressure trigger nozzle hoses can be just as effective as cleaning with water.
- Review tank & system cleaning processes to identify opportunities to automate or amend to minimise water required for cleaning.
- Minimise water use in cooling processes by recycling cooling water, using fogging nozzles instead of running mains water, and shutting off flow when not in use.
- Identify opportunities to reuse or recycle your rinse, waste and greywater – the final flush may be able to be used as the first rinse.
- Establish a regular preventative maintenance program for water pipes to ensure blockages are removed, and leaks and overflows are minimised.
- Reduce water pressure where possible to minimise volume of water lost to leakage.
- Install rainwater tanks for irrigation use.
- Use non-potable water for appropriate end-uses in place of potable water (for example, dust suppression, on-site toilet flushing).
- Replace existing fixtures with more water efficient fixtures (for example toilets, taps and equipment).

Save Energy

Energy source and use has significant impact on profitability, productivity and greenhouse gas emissions.

- Install variable speed drives (VSDs) on pumps and other equipment.
- Optimise your boiler performance with regular maintenance and tuning and consider insulation, fixing steam leaks and installing economisers.
- Optimise your compressed air systems through insulation, fixing air leaks and optimising operating pressures.
- Review your plant lighting including efficiency of lighting, motion and day sensors and removing unnecessary lighting.
- Ensure your hot water system is insulated and running at an optimal temperature.
- Explore heat recovery options in industrial processes such as collecting condensate for use as feedwater for your boiler or using waste heat for space heating.
- Assess your heating, ventilation and air conditioning (HVAC) by adjusting your thermostat dependent on the weather (26 °C in summer and 18 °C in winter). Ensure systems are switched off out of operating hours.
- Regularly review plant equipment as upgrading equipment can often improve productivity and deliver energy savings.

Reduce Waste

Reducing waste can save your business money as well as saving valuable resources and helping the environment.

- Choose products with less packaging and purchase raw materials in bulk to minimise packaging.
- Plan ahead and avoid waste by matching raw material quantities to batch sizes.
- Educate and involve all staff in waste minimisation projects with rewards for new and creative approaches.
- Regularly review causes of 'off-spec' product and adjust systems and processes to minimise these occurrences.
- Establish 'take back' loops with suppliers such as packaging waste, product, which is faulty, or at the end of its useful life.
- Minimise product residue in packaging by removing more raw materials.
- Avoid product spillage through installing conveyor and gutter guards.
- Evaluate product design and manufacturing processes to find ways to avoid producing prescribed industrial waste.
- Investigate whether your waste could be used as a resource elsewhere and find opportunities for reuse.
- Share recycling resources with other businesses in your community to reduce cost. For ideas, see www.wasteexchange.net.au.

Leadership and Life Cycle

Learning how to manage your product or service life cycle more effectively can uncover a wealth of business, environmental and social benefits.

- Life Cycle Management supports evaluation of design and business decisions with the goal of reducing impact over the entire life of a product.
- Encourage innovation and work with colleagues and business partners to discover new ideas and solutions for improving sustainability.
- Actively seek information to better understand and address life cycle issues as they impact your specific business operations.
- Encourage staff from all levels to get involved by establishing an environmental committee.
- Beginning at product design, assess the life cycle impact of your product or service, looking at all activities that go into making, selling, using, transporting and disposing of a product or service.
- Train employees in specific Life Cycle Management skills.
- Investigate the use of life cycle tools such as Life Cycle Assessment and Ecological Footprint.
- Explore outcome-focused partnerships with your suppliers and customers to enable product and service delivery with the least possible environmental impact.

These are just a few of the opportunities available to improve profitability, productivity and your business environment. For other helpful weblinks and information on what other businesses are doing to improve their resource efficiency and sustainability visit www.epa.vic.gov.au/outcomes