

Project Profile

Topcoat Lonsdale Asphalt Plant Civil and Concreting Works



Client	ResourceCo
Location	Adelaide, South Australia
Duration	February 2020 to June 2020
Contract	Lump Sum Construct
Cost	\$1.4 million

Project Overview

Topcoat, a proud and local South Australian company is part of the largest asphalt group in the world, Colas. In 2019 they commenced on an expansion of their operations in South Australia through the establishment of a new asphalt plant in the Adelaide suburb of Lonsdale, positioning their operations to better service customers in the south of Adelaide.

The new plant is situated adjacent to Tyrecycle, a subsidiary company of ResourceCo, who are Australia's largest collector and processor of end of life tyres and conveyor belts. Tyrecycle's Lonsdale crushing facility produces crumbed rubber, designed for use in asphalt producing a 20% recycled product. Topcoat and Tyrecycle entered into a partnership to not only utilise recycled crumbed rubber into asphalt produced in the new plant, but to also access a variety of waste streams to produce unconventional hot mixes demanded by the market.

The plant is designed to produce 250,000t of asphalt and to accommodate 10,000 truck movements each year. The design of the plant allows for 24/7 operation and is capable of small batches of specialist hot mix products, a capability not present in most asphalt batching plants in Australia.

The new plant provides significant environmental savings when producing asphalt, however, by positioning the plant near the

McMahon Services

Head Office

T (08) 8203 3100 **F** (08) 8260 5210

E adelaide@mcmservices.com.au

W mcmservices.com.au



supply source, the environmental savings are compounded, due to removing the truck delivery emissions and fuel burn. Furthermore, recycled Asphalt can be returned to ResourceCo and under agreement with Topcoat is reprocessed for re-use as Recycled Asphalt Product.

ResourceCo engaged McMahon Services in a collaborative arrangement to undertake construction, civil, earthworks, concrete and building works for the new Topcoat processing plant. McMahon Services took on a sustainable focus for the project and worked with Topcoat's designers to fully construct the site pavements from recycled rubble, with up to 500mm being used under the tower and asphalt plant to ensure the design load rating was achieved.

Increased safety and efficiency in materials handling

Most asphalt plants incorporate ramps for loaders to deposit asphalt materials into the hopper. This site was designed with a retaining wall structure producing a split-level site. This innovation elevates loaders above the hopper that provides dual benefits, the first being that loader operators have greater visibility of the hopper, and the flat loading profile eliminates the risk of overturning the loader on a steep hill. The second being that wastage during the offloading into the hopper is also significantly improved, reducing long term material wastage costs.

Storage bunker buildings were constructed to 10m heights to allow for semi tippers to operate inside without risk of damaging the roof or building structure.

Site compaction to future-proof plant requirements

Ground compaction was to 350kPa surface pressure, 50% more than required for current operations and achieved in part with a 500mm bridging layer of recycled ResourceCo products. This ensured that if the plant was expanded in the future, further ground compaction works were not required.



