



WAIKATO DISTRICT HOSPITAL CAR PARK

PROJECT: Waikato District Health Board hospital multi-level car park building

Application: Coating and waterproofing of a 20,400 m² 18 level car park

Project Specification: A flexible polyurethane waterproofing membrane with heavy-duty vehicle wear coat

Material Supplier: Polymer Group Ltd
Applicators: Resitech, Cantec

Project Background:

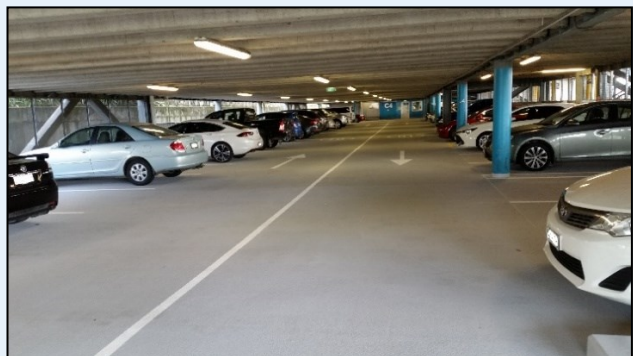
The Waikato Hospital carpark is a 10-storey, 18 level, 800 car park building and it was constructed in 2007. Cracks in the carpark parking deck floor slabs were discovered four years after the car park building was built.

Cracking of carpark floors is common to these light-weight structures. However, it was the extent and frequency of cracks which prompted repair and remediation.

The cracked concrete parking decks in the car park building have the potential to expose the steel reinforcing in the concrete to water and ultimately cause corrosion and spalling of the concrete. Evaluating concrete core sampling showed that the parking decks were in a fair condition but further deterioration would limit the life of the parking building. Water transferred from vehicles saturated the parking decks up to level 10 and water from the upper open exposed levels and the open sides of the car park reached all levels.

Polymer Group's polyurethane system was chosen to extend the life of the car park structure. The project specification detailed a thorough cleaning and preparation of the surface prior to rectifying the cracks in the concrete and then application of a flexible polyurethane membrane system topped with a heavy-duty vehicle wear coat. Combined, the above system provides a trafficable car park deck waterproofing system that is extremely hard wearing and has long-term serviceability. The result was a 100% waterproofed, fully bonded, very hard wearing, vehicular traffic system applied over the entire surface area.

Waterproofing the car decks has prevented water ingress from further affecting the steel reinforcing that would ultimately cause immeasurable damage to the structure. Polymer Group's solution offered the best cost and time/benefit solution.



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