



SIKA AT WORK

AOTEA CAR PARK STRENGTHENING, AUCKLAND, NZ.

REFURBISHMENT: Sika Carbodur® · SikaWrap®

BUILDING TRUST



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PROJECT DESCRIPTION

The Aotea Car Park is an underground car park beneath Aotea Square in Auckland. The car park descends 4 levels below ground and was constructed of reinforced concrete in the 1970's. Subsequently buildings have been built alongside and above parts of the car park.

PROJECT REQUIREMENT

An investigation of the integrity of the structure showed that for the above and other reasons that the structure was under-strength and required remedial strengthening. Water has also leaked through the roof from above ground landscape planting boxes.

SIKA SOLUTION

Where buildings had been built over the car park it was decided that the best option to strengthen both the primary and secondary beams was to apply carbon fibre FRP. Holmes Consulting Ltd decided on the Sika CarboDur® system applied to the underside of the beams, to increase flexural capacity and the SikaWrap® system applied to the sides of the beams to enhance shear. Concrete

preparation was performed by ultra high pressure but low volume water jetting. At least 500 lineal metres of each of the products of the SikaWrap® and Sika CarboDur® systems were applied to beams across 6 grids and 4 bays.

SIKA PRODUCTS

- Sika CarboDur
- SikaWrap

PROJECT PARTICIPANTS

Client: Hawkins Construction Limited.

Consultant: Holmes Consulting Limited.

Specialist Contractor: BBR Contech (Construction Techniques Ltd).

Sika Organisation: Sika (NZ) Ltd

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