

CASE STUDY

Car Park Refurbishment

MAKERS

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PROJECT

Southampton Airport
Parkway Railway MSCP

STRUCTURE

Steel Frame
Multi-storey Car Park

CLIENT

Network Rail

CONTRACT

Located in the south of Eastleigh in Hampshire and adjacent to Southampton Airport lies Southampton Airport Parkway Railway Multi Storey Car Park.

The split-level car park was constructed in 2011, of steel frame and concrete planks providing 575 parking bays to the railway and local airport.

Makers were contracted to undertake the repairs of the top deck which was leaking through cracks within the concrete screed, causing damage to the lower levels and decorations below.

The existing deck system couldn't cope with the structural movement exhibited by the car park and was giving way causing cracks and allowing seepage. It required a highly technical solution to deal with the movement and cracks between the planks and steel frame.



Before



Before

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Protective sheeting was installed to the boundaries of the top deck to prevent atmospheric contamination to the nearby runway and then the original deck system was removed to allow for repairs and the installation of the new deck system.

To accommodate the dynamic movement, a soft joint was created and installed. The deck was then fully fleeced over the slab joints, creating a reinforced flexible base with a double banded fleece system applied over the top to increase the tensile strength and cope with the expected movement.

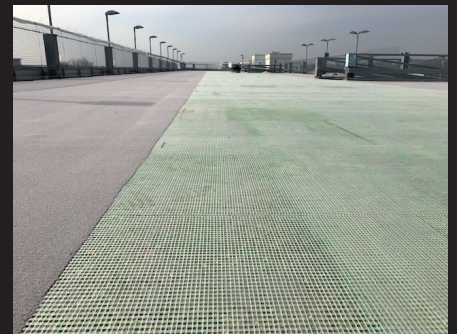
There was 2.5KM of reinforce banding used over a 2500m2 area which is significantly high but reflects the nature of the car park construction which is highly flexible.



During



During



During

Following the banding and the repair to slabs Triflex ProMesh was installed to create and increase the bond strength of the slab and then the Triflex ProPark was installed on top. The deck colours; 5017 Blue, 6024 Green, and 1023 Yellow Linemarker Precoline are unusual for a car park, but replicated the colour design from the original construction in 2011.

The philosophy is to create a deck slab that works uniformly and destresses the dynamic movement.

The new Triflex deck system gives Network Rail a 10 year warranty and Makers Construction provided a 10 year warranty on materials and workmanship. The client was extremely happy with the installation and the end result.



During



After



After

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