

Grosvenor Centre Car Park, Macclesfield



The car park serves a busy shopping centre

Shopping centre car park refurbishment features concrete repair, sacrificial anodes and over 700 tonnes of retro-fit secondary strengthening steelwork.

Client	Borough of Macclesfield
Consultant	Ove Arup
Principal Contractor	Balvac
Value	£ 222,000
Programme	21 weeks
Completion	September 2001



Installing a steel strengthening beam

Ove Arup were commissioned to examine the Grosvenor multi-storey Car Park in the town centre of Macclesfield and found it be under-strength. Balvac were awarded the second phased of a repair and strengthening scheme to rehabilitate it.

An inspection was carried out by Ove Arup of the building fabric, which led to the conclusion that the concrete had been affected by chloride ingress and this, combined with inadequate cover to the reinforcement, was the cause of the deterioration.



In all 700 beams were installed

Before repairs could commence any loose soffit concrete was removed. Concrete repairs were then carried out to the soffits that had been damaged by the corrosion of the reinforcement bars. The columns were also in need of repair and further protected from deterioration by the installation of sacrificial anodes.

The contract works also included the installation of 700 steel beams on the 7 levels of the car park to increase the strength of the structure. Over 700 tonnes of steel beams had to be transported into car park and manoeuvred very carefully into place by Balvac. Beams had to be carefully prepared with tight tolerances to fit between the existing concrete beams.



The car park remained in use throughout

The car park had to remain in normal operation for the duration of the works with normal vehicle and pedestrian access. Works were completely suspended for one week during the Christmas period to allow shoppers and traders full benefit of the parking spaces.

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