

Education, Education, Education:

A college science block constructed using a steel frame of RSJ's encased in concrete was investigated for the possible addition of a new top storey to be built on the existing flat roof.

Martech were commissioned to carry out a survey for the structural engineers to confirm the construction details of the steel frame and report on the condition of the existing concrete.

Martech testing engineers confirmed the main beams and columns to be of concrete encased RSJ's with the secondary beams of reinforced concrete and the roof slab of beam and pot construction. The condition of the existing concrete showed signs of advancing carbonation and together with low cover in places was causing localised steel corrosion and hence some cracking.

A detailed report by **Martech** confirmed the method of original construction and explained the cause and extent of the concrete problem to the client with included repair options.

Repair recommendations in this case were straight forward with traditional repairs to the spalled areas and the use of embedded corrosion inhibitors to treat the concrete encased steel frame members.

Corrosion Inhibitors in the form of vapour phased inhibitors travel through the pore structure of the concrete to the reinforcement steel where they adhere to the steel surface providing protection from corrosion and the sources of corrosion.

Martech have many years of experience in the field of construction investigation and corrosion control.