# Handrails Designed into Staircase

This initiative was driven from the desire to reduce working from height (incl. scaffolders installing edge protection). As may be seen from the photographs below, the staircase to be used for construction access was installed in conjunction with the steel frame. The handrail protection to the staircase was installed at ground level and lifted as a complete unit into place.

Crucially, the design team did not want to drill holes for the temporary sockets which hold the scaffold uprights and further holes for the permanent handrail as this would damage the intumescent paint. This necessitated the designers talking to the company that would install the permanent balustrades to see where they would require fixings. These holes were drilled during the staircase manufacturing process and used for the temporary edge protection (as seen) as well as the fixing of the permanent balustrade.

Temp. stair handrails installed at ground level (Same holes were later used for the permanent handrail)

Staircase with Edge Protection being lifted into the Structural Steel Frame


Benefits

- Minimises work at height (including scaffolders).
- Quicker to install protection at ground level rather than moving all materials to the staircase and also reduces manual handling risks.
- Handrail was installed by scaffolders away from the main erection process thus no conflict of trades working in the same area.
- Purpose made fixings for the scaffold uprights make this a much sturdier form of edge protection than is typically found on staircases.
- Fixings for the permanent handrail were already in place which was a time and quality saving (no damage to intumescent paint).

Drawbacks

- Need to have design from the permanent handrail designer/installer at the structural steelwork stage of project design.

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