

Refurbishment and expansion at one of Dublin's oldest colleges



LeeMcCullough
Consulting Engineers



Client: Castleknock College

Architects: Campbell Conroy Hickey

Value: €7m (2006)

LeeMcCullough: Frank Lee; Norman Irvine.

Project scope: Refurbishment of existing buildings and new classroom extension

*Project 3562:
Education, Renovation and New Build*
Castleknock College, Dublin

Project in brief

Some of the buildings at this well known rugby college date back as far as 1834 and the school has been attended by many politicians and well known personalities.

On this project we were asked to provide the Engineering consultancy for the refurbishment of a number of existing college buildings, as well as for a new link and extension. These are three storey structures, comprising insitu concrete on metal deck floors supported on a steel frame.

The new building includes an entrance hall, class rooms and laboratories. One of the main aims of the refurbishment element of this project was to improve the circulation in some of the existing buildings.

Challenges

The project had to take into account the fact that many of the buildings

on the site are protected structures and the new extensions were to be constructed adjacent to existing structures.

Innovative solutions

A vibration analysis was carried out on the new build sections of this project in order to allow the lightest possible beams to be used throughout.

Surface water attenuation was required for the stormwater run-off from the new buildings and car parking areas. This was dealt with by the construction of an underground soakaway tank constructed of proprietary cellular units wrapped in a geotextile.



Historical Renovation

At LeeMcCullough we have exceptional experience of revitalising existing buildings, which is often more complex than the structural engineering of new buildings.

Over many projects we have addressed and resolved a wide range of issues, including:

- Strengthening historical joists and beams to carry increased loading
- Masonry Decay/Delamination
- Threading modern services into old structures

At LeeMcCullough we always seek to identify and resolve issues early, innovatively address demanding building difficulties and deliver our solutions on time and cost efficiently.

When it comes to renovation and refurbishment, anticipating and resolving engineering issues effectively is the key to a successful outcome.