



**LeeMcCullough**  
Consulting Engineers

*Project 3314: Public - Restoration and New Build*

**Hugh Lane Gallery, Dublin**

**Client:** Dublin City Council

**Architect:** Gilroy McMahon

**Value:** €13m (2006)

**LeeMcCullough:**

Lorcan O'Flannery

Gerry McCabe

**Project scope:**

- *Restoration and Refurbishment with*

## Historical Renovation

At LeeMcCullough we have exceptional experience of revitalising existing buildings, which is often more demanding 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

identify and resolve issues early, innovatively address demanding existing building problems and deliver our solutions on time and with budget.

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

# Combining old and new at the Hugh Lane Art Gallery

## Project in brief

This mid-eighteenth century building, designed by Sir William Chambers for Lord Charlemont, occupies a prominent position on Parnell Square and houses the Municipal Gallery for Modern Art. This designated Protected Structure also includes two conjoined Georgian buildings at the end of an adjacent terrace, formerly the National Ballroom.

The main building, Charlemont House, is a three storey structure over basement comprising external and internal load-bearing masonry walls with an ashlar façade, slated timber double-pitched roof, timber upper floors with ornate terrazzo on a vaulted brick ground floor, and both timber and stone staircases.

The refurbishment contract included the removal of load-bearing walls, construction of a tall glass lobby, and localised strengthening and repairs. The main contract comprised the construction of a new three storey RC structure over basement to house the Seán Scully Gallery, the Harry Clarke Exhibition, an art restoration laboratory, secure storage and a number of additional galleries. The new build features a full-height glazed central atrium and a planar glazing façade. In addition, the adjacent Georgian buildings were stabilised with general remedial work to strengthen the timber floors and restrain the façades with concealed structural ties.

## Key features

### New structure

The new extension comprised both precast concrete and insitu RC floors on an RC structural frame on pad foundations. The Link Area and extensive Roof Plant Room were framed in structural steel

### Open plan

Load-bearing walls were replaced by large structural steel picture frames (appropriate for an art gallery!) to create both an open plan layout on ground floor and numerous interconnections between the existing art gallery and the new extension.

### Steel framing

The glass lobby was designed with slender structural steel framing and features twin three metre-high glass doors to facilitate delivery of large paintings.

The planar glazing façade was designed using minimal structural steel cantilevers to produce an impressive open void.

### Landscaping

The extension includes an enclosed courtyard comprising a number of interlinked water features and planted areas.

### Dry conditions

The basement was tanked to form a suitable environment for both art restoration and long-term storage of valuable artwork.