



Emergency stabilisation work on protected structures

Project in brief

Henrietta Street ranks amongst the more important architectural and urban ensembles of this country. It is the single most intact and important architectural collection of individual houses - as a street - in the city. In the international context, the street is of unique European significance, being the single remaining intact example of an early-18th century street of houses, which was at the forefront of what was to become the Georgian style.

Houses #3 and #14 were acquired by Dublin City Council in a bid to arrest their continued dilapidation and prevent collapse. Both houses had been significantly weakened by water ingress and consequent timber decay. The front wall of #3 was in particularly poor condition and significantly cracked. The rear wall of #14 had been weakened by past interventions and was close to the point of collapse.

Our brief was to restore structural integrity whilst minimising both cost and structural intervention of these important protected structures.

Key features

- Structural assessment of the existing buildings prior to repair
- Contour surveys of external walls to pinpoint areas of structural instability and deficiency
- Reinstatement of overall structural stability using slim profile straps within the floor thickness tied to carefully cast padstones to gently grip the weak masonry
- Repair of rotten timber floor joists, rafters and lintols in line with conservation engineering best practice
- Repair of external cracks using stainless steel *heliforce* bars carefully grouted into masonry joints and made good with lime mortar
- Reinstatement of #14 rear basement wall with salvaged calp limestone and lime mortar
- Repair of internal cracks using made-to-measure concrete ties



LeeMcCullough
Consulting Engineers

Project 3581: Conservation Engineering

3 + 14 Henrietta Street

Client: Dublin City Council

Architects: Shaffrey Associates

Value: €522k (2009)

LeeMcCullough team:

Lorcan O'Flannery

Project scope:

- *Stabilisation of historic structures*
- *Repair and renovation for modern use (future)*

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.