



## Code Level 4 fast-track volumetric modular housing project on Steeple Road in Antrim

### Project Brief

The aim of the project was to deliver a fast-track housing scheme to Code Level 4 with lifetime homes accreditation, built off-site, to the same build costs as traditional build, but in a fraction of the time. The challenge from Egan and John Prescott to build houses using modern methods of construction (MMC) but to the same budget was one of the key drivers for this project.

The use of modular housing was incorporated into the design brief as it was extremely efficient with land use. SIPFIT have been able to remove apartments from schemes and replace them with houses, even increasing site density on this occasion.

The monitoring of waste and the energy efficiency of the dwelling were considered fundamental, not only for sustainability, but as oil and gas are experiencing hikes of 30% at a time and fuel poverty has now crept into the middle classes and had to be fully addressed.



### Project Type/Application

There was a mix of three types of houses:-

- 75m<sup>2</sup> – 3 person 2 bedroom
- 85m<sup>2</sup> – 4 person 3 bedroom
- 95m<sup>2</sup> – 5 person 3 bedroom

SIPFIT panels were used as the basis of the modular design as they have a robust nature combined with excellent thermal qualities. The jointing of the panels guarantees very air tight joints without the need for proprietary membranes like other forms of construction. Engineered floor and ceiling joists allow easy transfer of services between units and also incredible strength for both transporting the units and also lifting into place. Each design was sized according to plasterboard dimensions and this led to very little waste, cutting down on labour costs. Each unit was completely finished in the factory and tested before leaving for site. Once on site, they were roofed with ordinary fink roof trusses that had been spread on the adjacent sub-floor for speed and safe working at heights, roof tiles were fitted and brick and block skin added with a render and paint finish.

## Outcome/Result/Success Factors



In design terms, the Client was very pleased that we had converted a scheme from 10 townhouses and 14 apartments into 29 houses, all semi-detached except for a block of three units.

This has led to the second scheme being applied and successfully approved through Planning Service from 31 houses and a 13 apartments to 43 houses, another scheme for 160 houses, one for 44 houses and another for 38 houses are all in progress with the same Client. Not an apartment in sight.

The first delivery of five townhouses were delivered and fitted on to prepared footings in less than eight hours, the second delivery of 2½ storey semi's were delivered and erected in just four hours and all seven ready to move in 49 working days later was a huge success.

Benefits included less capital outlay due to reduced prelims and a quicker return on investment from a shorter build programme. The fact that there was no down time for weather conditions has caught the eye of housing providers especially in the North of Scotland where annually time on site can be a window of less than 8 months and at huge build costs.

This volumetric modular housing solution is not dependant on weather, and provides factory quality every time with comparable costs to traditional build, making this one of the leading solutions for MMC and housebuilding.



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