

## Project Description and Aims



Leitch Street is a social housing development of 87 houses and Flats built on a brownfield site at Greenock Scotland. The architects brief was to provide social housing which addressed issues of sustainability by examining the different types of construction that could be delivered within the client's budget. The decision was taken to adopt an enhanced timber frame design with various types of cladding. As the roofs in many of the properties would be used as living accommodation a warm roof design based on NBT's New Roof 1 System (NR1) was chosen.



## NBT role in project

NBT provided design support and calculations to the architect at various stages of the project. Technical support was given to the contractor as work progressed on site.

## Leitch Street - Greenock

Client: Cloch Housing Association  
Architect: John Gilbert Architects  
Contractor: Kelvin Homes  
Size of Contract: £6.2m

### Performance:

The roofs were designed to a U-value of 0.14W/m<sup>2</sup> degree C. This was achieved using Isolair 35mm wood-fibre board as sarking with 300mm glass wool insulation positioned either between the roof trusses or in the attic space. The Isolair boards vapour open but airtight properties allowed the architect to dispense with ventilation of the attic space thus reducing heat loss.

### Buildability:

Isolair boards are available in three different thicknesses (22mm, 35mm and 60mm) and are interlocking on all four sides. They are quick and easy to install and eliminate the need for membranes and vapour checks. They provide enhanced thermal and acoustic insulation; airtightness; heat loss and overheating control whilst eliminating the need for any venting of the roof space. The boards are impregnated with natural latex and once installed can be left exposed and unprotected for up to three months without detriment to their integrity or performance.

### Environmental:

Isolair boards have an excellent ecological profile and are manufactured from 95% waste pinewood and 5% natural latex (for waterproofing) and contain no glue or wood preservers. The boards are non toxic or irritant and contain no substances which can off-gas. The boards will compost naturally and therefore require no special precautions to be taken on final disposal.

### Design Issues:

From architect: This was a high profile project in respect of sustainability. The use of Isolair boards helped us to achieve both our ecological and performance objectives.

### Build Issues:

From main contractor: The boards were easy to install although some care had to be taken when walking on unsupported boards between trusses.

### Cost:

Isolair boards proved to be cost effective in helping to meet the stringent performance criteria (SAP rating 100 throughout) required on this contact.

### Performance:

Commentary: Once the build has been completed and inhabited a full performance study is to be undertaken.

