Portside Development
Wexford, Ireland

Description

The Portside Development consists of three units – a semi-detached and traditional Irish-style three bedroom house with an open attic for later expansion/renovation.

From the outside, the Portside Super E® homes look just like the traditional Irish homes around them – proof that a highly energy-efficient home can be built in any style.

Setting

The homes are located in a new development near the charming town of Wexford, Ireland. Wexford is located at the extreme south of the Irish Republic. Winters are mild and summers temperate due to the North Atlantic Drift and prevailing southwesterly winds. Average temperatures in winter range from 2 to 7 degrees Celsius in the winter to 20-24 degrees in summer. October to January are rainy, with over 90 mm of rainfall in each of those months and the sunniest months are May and June, with an average of seven hours sunshine per day.

Super E® Irish Member

In the case of this project, the Super E® Member was the architect for the development, John Quigley, of Wexford. He partnered with the builder of the project, Millharbour Construction.

Super E® Canadian Member

DAC International is based in Ottawa, Ontario, and was one of the original Super E® members. Very experienced in building homes in all kinds of climates, DAC International has constructed Super E® homes in Japan, the UK, South Korea and Ireland.

Member Commentary

“People are often surprised to learn how straightforward building energy-efficient homes actually is,” said DAC International’s Jeff Armstrong. “There is a lot of fear of the unknown (by overseas builders) to start, and we are flapping our gums about how airtight these buildings are, but people really don’t know what that means. We talk about mechanical ventilation and people don’t know what that is, and how complicated is that?”

The air tightness performance of the Portside Super E® homes is outstanding – a major reason these houses achieved an excellent A3 rating on their European Energy Performance Certificates.

As it turned out, the level of air tightness in these houses came in at an astonishing 0.29 ACH, at the time confirmed to be the tightest houses in Ireland.

“The air tightness combined with the HRV system brings the homeowner acoustic privacy. In Ireland, the norm is trickle vents and open windows, and that means a lot of noise coming in. Air tightness means energy-efficiency, too, but we don’t emphasize that – even though it’s there. We talk about the health of the occupant. Very often you see an example of pollen allergies and the system is able to clean the air before it enters the house, thereby removing the condition in kids with allergies,” said Mr. Armstrong.

House Performance

The home is extremely well insulated and air tight. On the European BER rating scale, this home registered at an excellent A3 Level. According to the BER system, the detached house uses about 74 kWh/m2/yr. The semi-detached will use somewhat less, as they each have one less exposed wall.

Pictured is a textbook example of air tightness detailing. The crew is ensuring a continuous air barrier at the building's roofline.

Unique Features

The HRV is located in the large attic space, which could easily be converted to a separate living space. There is a renewable energy system in place, with a solar hot water system installed.

Super E® Value Added Services

The house was officially opened at a ceremony in May of 2009, and the Super E® certificate was presented to Millharbour Construction and John Quigley by Canada's Ambassador to Ireland, His Excellency Patrick Binns.

To achieve such an outstanding level of air tightness, Canadian supplier DAC International provided an expert site manager to the Millharbour construction crew. The Canadian stayed on site for a number of weeks during the construction of the development.