



The Holden PassivHaus, Tullow

Building to PassivHaus Standards

Project Information

Building owner
The Holden Family

Architect
OLS Architects

The Holden House is a 4 bedroom family home that achieved PassivHaus standards with the help of Gyproc and Isover Ireland products and support.

Project Overview

The Holden House was an innovative design project involving the construction of a highly energy efficient passive house. The 4 bedroom family home required high levels of technical skill and knowledge regarding the detail within the construction in order to optimise the energy efficiency of the house. The 298 square metre home required specific functions in its design: a bedroom area, a traditional farm house style kitchen, a large family room, and a large garage. Combining Gyproc and Isover products enabled the Holden House to achieve PassivHaus standards of high levels of both airtightness and thermal performance, while still meeting design specifications.

The Challenge

Maintaining high levels of airtightness and management of moisture within the building fabric were the designer's chief concerns. Due to the various building structural elements, Gyproc and Isover Ireland were responsible for selecting the products and systems that would ensure the building performance criteria could be met without sacrificing quality. A high level of technical support was required during the construction process from the Gyproc technical and specification teams to ensure all systems and interfaces were installed to the highest standards, securing the PassiveHaus standard.

The Approach

The external walls were finished with a Weber 15mm render, achieving an airtightness performance of 0.30 air changes per hour at 50pa and a U-value of 0.09W/m²K. The external wall construction consisted of dense block outer leaf with a beaded insulation filled cavity, while the inner leaf consisted of light aggregate block with Gyproc Airtite Quiet parge coat, Isover Optima insulated service cavity system with Isover Metac Insulation and Isover Vario air-tight membrane.

Project Gallery



Gyproc Products Used

Gyproc Undercoat Plasters, Gyproc Finishing Plasters, Gyproc Plasterboards, Isover Optima wall linings, Isover Roof Insulation, Isover Vario airtight membranes, and Weber external renders were used to achieve the PassivHaus standard. The family home highlights not only the strong technical support and expertise available, but also the combination of Saint-Gobain products and systems that allow designers to achieve high levels of performance in Irish house designs.

Product List

Gyproc Hard Coat

Gyproc Skimcoat

Gyproc Airtite Quiet

Gyproc WallBoard
