



A-Rated Energy Performance for Laboratory building using the SIPFIT build system

Project Brief

The client, Dimplex Renewables, sought an Energy Performance Certificated building for their new European Renewables Laboratory in Portadown.

The Renewable Heat Incentive (RHI) legislation, whereby a subsidy is paid to the property owners who generate their heat from renewable sources such as Heat Pumps, was a key factor in shaping the challenge.

Dimplex had a desire to expand their Research & Development in advance of the RHI subsidy being withdrawn meant that a fast build solution was required.

Heat Pumps operate most efficiently in air tight buildings and achieving an air tightness result under 1-Air Change Per Hour (ACH) was critical. Dimplex also wanted a sustainable modern build system to complement their new technologies and state of the art testing facilities.

SIPFIT was chosen to design and deliver a solution to meet the competing demands.

Project Type/Application

SIPFIT designed, manufactured and installed the building. SIPFIT used 150mm SIPs in large format to create the walls and roof of the building. Glulam beams were incorporated in to the roof structure.

The external finish comprised timber cladding whilst a standing seam roof was used.

Outcome/Result/Success Factors



SIPFITs tailor-made solution meant that all project goals were exceeded.

The building was weather tight in just three days meaning that the project could be completed significantly quicker than traditional build and the client could commence their testing ahead of schedule.

The building comfortably achieved an A-rated EPC with a score of 20 and an exemplary air-tightness of $0.99\text{m}^3/\text{h.m}^2$ at 50 Pascals.

The buildings heat loss has been calculated at less than 5 Kilo Watts per hour compared to UK housing average of 150 Kilo Watts per hour.



Neil Stewart, Managing Director of Dimplex Renewables stated “the building has exceeded our expectations in terms of build quality and energy performance. Everything was delivered on time and within budget and the SIPFIT team displayed an excellent work ethic, with a high level of professionalism and attention to detail. I would be happy to recommend this building technology and the SIPFIT team to any prospective client”.



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