

CLIENT

Higgins Construction

PROJECT

Rushworth Street

ARCHITECT

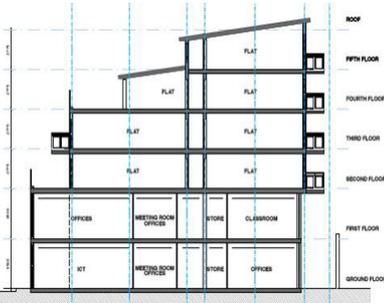
Stock Woolsten Croft

VALUE

£4.1m

SCOPE OF WORK

Mixed Use development comprising 35 apartments and Community Centre



NLG Associates have been appointed by Higgins Construction with awarding winning architects Stock Woolsten Croft, to engineer a multi-discipline design for a mixed use development of 35 apartments together with community centre.

Our project brief and contribution to the project is to design all mechanical, electrical and public health services, in accordance with the employers requirements, providing advice on Code for Sustainable Homes (CfSH) energy requirements for CO2 emissions reductions and energy efficiency.

Following the clients initial energy report, a strategy was devised to comply with CfSH level 3 requirements. 25% of CO2 emissions reductions from calculated baseline emissions was achieved by a series of measures incorporating 10% of renewable energy from PV panels contributing 15.5kWp electricity. U-values for the building fabric was enhanced to achieve around 17% of CO2 emissions reductions through passive measures.

NLG Associates carried out full SAP calculations for the typical flats and the various heating options were compared enabling the client to choose for the best option balancing the system performance and financial optimisation. Having assessed different options the design team and client shortlisted individual gas fired combination condensing boilers.

Further discussions with the design team, the client and developer, NLG Associates were instructed to carry out a feasibility study, to review various forms of heating systems ranging from individual gas fired combination condensing boilers to communal boilers with CHP and electricity driven storage heaters to Air Source Heat Pump (ASHP).

An alternative option of providing ASHP to 6 No. corner flats or Whole House Mechanical Ventilation with Heat Recovery (MVHR) for all the apartments should the client decide to consider electricity as the primary fuel to the development instead of natural gas. Due to site constrains, a centralised boiler room reduced the ability for the community centre to function within a small space, and therefore had to be discounted.

Internal communal corridors were ventilated through automatic air vents. Water, gas and electricity supplies to the apartments were designed to provide easy access for metering/billing purposes and in compliance with utility services provider.

Regardless of the primary fuel (ie. Gas or electricity) 95 No. roof top PV panels will reduce approximately 10% CO2 emissions through on site renewable electricity generation.

