

# Project Profile



## PROJECT NAME

COURT FARM ROAD

## CLIENT

THE HYDE GROUP

## TWO-YEAR SOCIAL HOUSING ECO RETROFIT PROJECT FEATURES NORDAN

A social housing project, led by The Hyde Group, to identify the most practical and effective package of home retrofit measures to achieve an 80% reduction in CO<sub>2</sub> emissions for a whole house is featuring the industry leading low U-value NorDan NTech Passive windows as well as NorDan external doors.

The project, dubbed 'Retrofit and Replicate', by registered social landlords The Hyde Group and ECD Architects, with Mears as lead contractor, is taking a typical 1930s estate 3-bedroom mid-terrace house in Court Farm Road, Mottingham, south-east London and applying £80,000- worth of initiatives and design to reduce CO<sub>2</sub> emissions.

Over the two-year project, the performance of the low-carbon improvements will be monitored, as will the impact on tenants, to develop a full cost/benefit analysis to ascertain optimum expenditure. This will allow Hyde, which manages 40,000 homes, to make more efficient and effective choices about how best to apply energy saving as part of a large-scale retrofit programme.

The project aims to focus on the most straightforward improvements to achieve the 80% CO<sub>2</sub> reduction target. With the existing double-glazing shown to be the weakest point during airtightness tests, these have been replaced with aluminium-clad NorDan NTech Passive triple-glazed windows. These have warm edge spacers and composite insulated window frames to achieve an industry-leading low U-value of 0.7 Wm<sup>2</sup>K.

Mark Elton, associate director and head of sustainability at ECD Architects and specifier for the project, says: "The primary reason for choosing NorDan was of course the very low U-value on the NTech Passive windows and their durability, but also the availability. Most low U-value windows, to this high specification, are only available through niche eco distributors so that's less appealing to housing associations such as Hyde where we could be looking at a large scale order ideally from a large UK-based company such as NorDan.

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"In addition, if following the trials it is decided that perhaps triple glazing is not the most cost effective way to go across the full housing stock, then NorDan can also supply a double-glazed NTech Low Energy windows which has exceptional low embodied energy, plus a whole window U-value of only 1.2 Wm<sup>2</sup>K."

ECD Architects has been so impressed with NorDan that it has specified them again for a major refurbishment of three 24-storey tower blocks in Shepherds Bush, West London, which looks set to become a flagship renewable energy project. Mark adds: "In this high rise situation the NorDan aluminium clad timber will give excellent low maintenance."

Court Farm Road also features NorDan external doors, the NorDan Hampton high performance door at the front and a standard rear balcony half glazed door at the back. NorDan's high performance external doors combine the best quality burglar resistant materials with integral strength, energy saving construction and character. This includes double steel plates, security lock and striking plate along with triple glazed pane, toughened on both sides as standard. The NorDan standard balcony door also has safety features such as panels that cannot be disassembled from the outside and the insulated panels are 48mm thick with a U-value of 0.6 W/m<sup>2</sup>K.

At Mottingham the internal temperatures, ongoing electricity, gas and water usage, as well as energy used for space and water heating will be monitored remotely over the coming two years. Qualitative research will also be conducted with the tenants to understand what it's like to live in a home full of carbon reducing measures.

A series of 'before' tests were carried out on the home giving a SAP assessment rating of 60 and an airtightness rating of 9.16m<sup>3</sup>/hr/m<sup>2</sup> @ 50 pascals with the windows the worst factor with poor seals leaking air badly. Space heating energy use at the property was estimated at 223 kWh/m<sup>2</sup>/yr with CO<sub>2</sub> emissions estimated at 100kg/m<sup>2</sup>. It is estimated that energy consumption will be reduced by up to 86% with a saving to the residents of around £600 a year. Other initiatives at the house include improved insulation to floors, external walls and roof, controlled ventilation, an efficient space and water heating system, solar thermal collectors and photovoltaics, low energy lighting and water conservation measures.

The two-year project starts as the government recently announced an amendment to the Climate Change Bill increasing its commitment to reduce greenhouse gases from 60% to 80% by 2050.

For more information on NorDan's ranges of high performance windows and doors, please visit [www.nordan.co.uk](http://www.nordan.co.uk)