

Object name

Racecourse**United Kingdom**

Object photo



Object description

This scheme is believed to be the largest PassivHaus housing project in the UK. As a single storey development the bungalow typology has proven to be particularly challenging, however, it has been possible to satisfy the PassivHaus standard and as a consequence deliver an 80% reduction in space heating energy use.

The houses utilise micro-district heating system which is essentially a single condensing gas boiler that serves each terrace of homes. Detailed monitoring is to be undertaken to assess both the energy performance and to understand the sociological implications for the average UK occupant.

The start on site was officially marked with a sod-cutting by Housing Minister, Iain Wright. He showed his support for the innovative scheme:

“Homes account for a quarter of the country’s carbon emissions and one of the biggest long term challenges is how we build the extra homes we need to tackle affordability problems whilst also acting on climate change. The Government is committed to reducing carbon emissions in new homes and making them zero carbon from 2016. Schemes like this are great examples of building much needed new housing to very high levels of sustainability, and are to be encouraged.”

Fact sheet

Residential development in Sunderland
 Treated Floor Area 66.7 m² each
 Number of homes 25
 Completion date 2010

Energy standard [PHPP]

Heat requirement / year 15 kWh/m²a
 Heat load 10 W/m²
 Primary energy requ. <120 kWh/m²a
 Air-tightness (n₅₀-value) 0.60 1/h
 Building type Timber construction

U-value

Exterior wall 0.10 W/m²K
 Roof 0.08 W/m²K
 Basement floor / Floor slab 0.097 W/m²K
 Windows / average 0.8 W/m²K

Specification ventilation system

Decentralised System (one per house)

Heating installation

Condensing gas boiler, solar collector

Construction costs --- Euro/m²

Building owner

Gentoo Group

Architect/Planner

Mark Siddall, Devereux Architects

Photo credits
