

Energy efficient homes at Sir John Leale Avenue development, Victoria Avenue, St Sampson

Guernsey Housing Association was requested by the States Housing Department to provide higher energy efficiency standards than current Building Regulations.

We consulted the Building Research Establishment, in England (a government body offering advice and good practice). They recommended we look at:

- High insulation (walls, windows, doors)
- Air tightness, & heat recovery system
- Renewables (solar, air source heat pumps, ground source heat pumps, wind, photo voltaic)
- Pay back periods
- Water conservation
- Community heating systems
- Low energy appliances (lighting, white goods)

The aim at our Victoria Avenue development (58 new homes) was to reduce resident's fuel costs by at least 50%.

We specified:

- High insulation through Structurally Insulated Panels (Kingspan, through Norman Piette), air tightness of 2 (Building Regulations is standardly 10), mechanical ventilation heat recovery (85% efficient), solar panels providing hot water and heating through an Ecocostor (DHS provided), triple glazed windows & doors .
- First 17 households moved in during November 2009. Fuel bills to date look low, between £8 and £10 a week. This is one of the coldest periods and there will be limited benefit from the solar panels. We will review all year round.
- Our calculations show that residents should be saving annually at least 60% of the equivalent fuel cost of a standard Building Regulations new property.
- We provided £25 Owl energy use monitors so that residents can see their instant energy use.

The Code for Sustainable Homes is used in England. We think our homes are between Code Level 3 and 4 on energy use. We intend to get a SAP energy test, to assess their exact energy efficiency.

We have not calculated emissions reduction, but inevitably they will be much lower than normal with such low energy use.

We are using the same specification on 2 new projects, 15 homes at Mont Arrive and 55 new homes at the Grand Bouet. We have specifying an air tightness of 3, and are now using a high performance double glazed window on the grounds of cost and benefit.