

Towards Zero Carbon Project







Towards Carbon Zero

Radian's **Towards Carbon Zero** Project was established in 2008. The scheme will deliver approximately 40 low to zero carbon homes over the next two years and is an integral part of a number of Radian strategies.

The homes are to be built using various modern methods of construction. A range of renewable energy solutions and procurement methods will also be employed. This will enable us to test and evaluate their success in delivering affordable, sustainable, comfortable and welcoming homes for Radian's residents, which achieve the government's stated goal of Carbon Zero housing by 2016.

Residents moved into the first set of completed houses in March 2011 and this has become the first major milestone in the delivery of the goals and aspirations of the project.

“Radian, a housing association leading the way in retrofitting hard-to-treat homes and building eco homes that far exceed the current minimum standards for energy efficiency; nearly 44,000 people are reaping the benefits in lower fuel bills and cosier homes.”

The Ashden Awards Judging Panel, 2011



Project one: Lovejoy Lane



The best way to illustrate the **Towards Carbon Zero** Project in action is to show you some of our schemes at work:

1) Lovejoy Lane, Windsor

Scheme Details:

8 code 5 homes
1 code 6 home

Funding:

Radian and HCA funding



The Facts:

- A need was identified for additional family housing.
- A former garage site owned by Radian at Lovejoy Lane was considered suitable.
- The site was also identified as being somewhere we could deliver the first scheme within the **Towards Carbon Zero** Project.

Sustainability Credentials:

a) The Build:

- Timber framed/SIPS panel construction
- High thermal insulation
- Marked attention to detail, e.g. airtightness and cold bridging.

b) Renewables:

- 3 units have solar roof tiles providing solar hot water
- 2 units have solar panels with evacuated tubes
- 2 units have Air source heat pumps
- 7 units have gas fired condensing units
- All units have MHVR
- All units have Individual rainwater harvesting
- All units have PV tiles or panels



Next steps

- To welcome new tenants into their new homes.
- 'Teach ins' to explain the technologies and help clients understand the environment they will be living in.
- To monitor the performance and viability of these new homes in practical, daily use.



Project two: Stoneham Cemetery Road



Our Zero Carbon Flagship, one of the first and largest Code For Sustainable Homes Level 6 Schemes in the South:

2) Stoneham Cemetery Road, Southampton

Scheme details: 11 code 6 units

Funding: Radian, with significant funding from the HCA.

The Facts:

- With our learning from the first scheme, we modified the procurement process.
- We ensured we had more control and cost certainty on the final scheme.
- By employing an M&E Consultant, we had greater control on the final layout, the position of services through the building, etc.



Sustainability Credentials:

Renewables:

- Central Biomass boiler
- All units have individual PV
- MHVR systems used throughout



Next steps:

- Build and process will be monitored to evaluate effectiveness in delivering new sustainable homes.
- Implementation of thorough monitoring system to evaluate the comfort, usage and cost of running these houses during occupation.
- 6 monthly evaluation analysis and information used to inform future developments.
- Rainwater harvesting and/or low flow rate taps to be investigated.





Project three: Copnor Bridge

We're delighted with the success of the first two schemes in this project series, but our work doesn't end there.



3) Copnor Bridge, Portsmouth

Third Development Scheme: We are now in the planning stages of our third scheme to develop a site in Portsmouth. We plan to develop 14 Codes 5,4 and 3 units at the Copnor Bridge site in Portsmouth. This is still subject to planning and funding. All homes will be designed to incorporate elements of the PassivHaus standards.



This is at an early stage, and lessons learned from the previous schemes in terms of construction, deliverability, sustainability and ease of use will be used to inform the final strategy for delivering this scheme.

Whitehill Bordon Eco Town: We are also currently working with East Hampshire District Council to sponsor an international design competition for a site at the gateway to the proposed EcoTown.

Radian will build out a terrace of four Carbon Neutral homes as part of a demonstration project.

Our achievements

European Recognition: Radian is the first UK housing association to receive European Regional Development Funding for the retrofit of social housing.

National Recognition: This year we are delighted to be finalists in the 2011 Ashden Awards.

The Ashden Awards Conference is unique in bringing together energy champions from the UK and the developing world.

Award finalists are described as,

“experienced, successful practitioners, bringing the benefits of clean energy – improved health, income generation and education opportunities – to the lives of millions.”

Our Ashden Award finalist nomination recognises our efforts in rolling out retrofits and eco homes. The judges of these prestigious awards describe Radian as a, **“housing association leading the way in retrofitting hard-to-treat homes and building eco homes that far exceed the current minimum standards for energy efficiency; nearly 44,000 people are reaping the benefits in lower fuel bills and cosier homes.”**

We are hugely proud of this recognition.



About Radian

Radian provides affordable housing to around 18,000 homes in Berkshire, Buckinghamshire, Dorset, Hampshire, Isle of Wight, Surrey, Sussex, and Wiltshire, and provides care and support to 470 people, across the South East.

Radian employs over 1,000 staff and has a turnover of in excess of £100 million.

The Radian Ethos

At Radian, our focus is our clients, and meeting their needs in the context of sustainable living.

We are committed to developing affordable eco homes and to retrofitting our existing builds. We have a proven track record in our mission to provide sustainable housing for families across the South of England and are proud of the progress we have made in our position as advocate and pioneer of advanced whole house retrofit solutions.

