

# Stoneham Green

## PROJECT SUMMARY

Stoneham Green is the first Code for Sustainable Homes Level 6 development in Southampton. Indeed, the eleven family homes that will provide a variety of affordable accommodation for Radian's residents, is one of the few schemes to reach zero carbon standards in the south of England.

All the homes are designed to reduce the impact on the environment and maximise the use of renewable energy sources, with each home fitted with a fully interactive Energy Dashboard to help residents get the most from the technologies installed. By doing so, Radian hopes the homes will significantly lower energy bills and generate more disposable income for the residents.



## Project background

One of Radian's key objectives is to build on its success and environmental sustainability credentials by investing and completing the building of this Code 6 scheme. Having won the Ashden Gold Award for its track record and commitment to promoting sustainable development nationally, Radian is continuing its promise to develop eco homes and provide affordable, sustainable housing for families across the South of England.

## Consultation

The site was previously derelict, having formerly housed a series of unused allotments and a community centre, which had been demolished. Due to the proposed site being overgrown with vegetation, slow worms and grass snakes were present on site. These had to be sensitively rehoused to a suitable habitat nearby over a period of months.

As with all Radian developments, extensive consultation was held with local residents and community members about issues such as overlooking, access, and materials. Their views and comments were taken into account and incorporated within the proposals and the final design.

There was broad consensus that Radian's proposals reflected the need for quality family homes in the area. Most people who attended the consultation felt that the scheme was well designed and made good use of the derelict site.

Radian has also provided each of these homes with an allotment garden, which they will be encouraged to maintain. In order to inspire residents to produce their own vegetables and fruit, Radian are hosting a number of gardening workshops to give advice and teach residents how to get the best from their allotment.

## Key Features and technologies

Radian was determined to create a scheme that would achieve the highest levels of sustainability through use of renewable energy and a well sealed building fabric using passivhaus principles to reduce energy consumption. **These included:**

- Timber frame construction with high performance insulation
- A communal biomass boiler burning wood pellets to provide all homes with heating and hot water
- Use of low flow rate taps and shower
- High performance triple glazing
- Fully integrated PV installation
- All homes designed to Lifetime Homes standards
- Whole house mechanical ventilation.
- A high performance building fabric providing significantly reduced U values and improved air tightness
- An advanced Building Energy Management System (BEMS) with interactive energy dashboard.

The water efficiency technologies in place also ensure that the new residents will use no more than 80 litres of water per person per day. This figure far exceeds the current average usage of 150 litres per person per day and the Building Regulations requirement of 120 litres per person per day.

However, in order to realise Radian's ambitions of lowering utility bills to combat fuel poverty, these technologies must be utilised properly.





## Energy Dashboard

The Energy Dashboard offers residents a personal interactive touch screen in each home that provides information on how much energy they are using, together with information on how best to use their home to maximise energy efficiency. The screen also informs them how much they could reduce their heating and electricity usage by in order to meet their personal savings targets. It can inform them when is the best time to use their electrical appliances in order to maximise the solar panels' contribution, allow them to send comments or questions, and even see when their next bus is due.



Radian has also produced a video guide to using the BEMS. In it, Polly Long, herself a Radian customer, takes residents through the key features of their house, demonstrating and explaining how the technology works and how to get the best from their home.

Kevin Bourner, Head of Area at the HCA, said: "These homes are at the cutting edge of energy efficiency, and I'm delighted that they will be available as affordable housing for the local community. Radian and Southampton City Council should be congratulated for pushing the sustainability boundaries to provide homes fit for the future."



## Design and Challenges

The development site is a narrow strip of land located to the rear of an established residential development in the Mansbridge area of Southampton and is adjacent to a cemetery and the Ford Factory.

These factors restrict the site's size and have meant that careful consideration has had to be given to the orientation and placement of the homes to ensure maximum use of daylight, solar gain and solar shading and to gain the maximum output from solar renewable technologies. Therefore, the homes are grouped into a row of terraced houses and three pairs of semi detached homes.

**Lindsay Todd Chief Executive of Radian said** "Radian is committed to sustainable development and being a leading organisation in promoting the merits of sustainable living. The opening of these energy efficient, carbon neutral homes demonstrates Radian's long term enthusiasm for providing the highest quality homes, something we have been doing, in one form or another, with great success since 1925."



## Open House

The Open House sessions at Stoneham Green allow visitors to explore Southampton's first Code for Sustainable Homes level 6 development and study the technologies utilised on site.

The Open House sessions offer a unique opportunity to hear presentations from key members of the project team, including builders, architects and local apprentices, and to review the lessons learnt during the build.

Councillor Peter Baillie, Cabinet Member for Housing, said: "The first of these new and exciting zero rated carbon homes means that Southampton is at the forefront of this green technology and our thanks goes out to Radian and the HCA for making these homes possible."

## Partnership working

The scheme, which has been funded by the Homes and Communities Agency (HCA), is another successful outcome of the Southampton Affordable Housing Partnership, led by Southampton City Council, of which Radian is a key partner helping to meet local housing need.

In order to deliver this Stoneham Green scheme, Radian partnered with Southampton contractor Drew Smith. Drew Smith's commitment and expertise shone through during the procurement process resulting in award of the contract in March 2011. Chris Payne, Construction Director for Drew Smith said,

“ We are genuinely excited to be working with Radian on this ground breaking project, further developing the already successful relationship between Southampton City Council, Radian and Drew Smith.” ”



## Unit type mix

5 x 2 bed 4 person houses (81m<sup>2</sup>)

2 x 3 bed 5 person houses (86m<sup>2</sup>)

2 x 3 bed 6 person houses (106m<sup>2</sup>)

2 x 3 bed 6 person house (109m<sup>2</sup>)

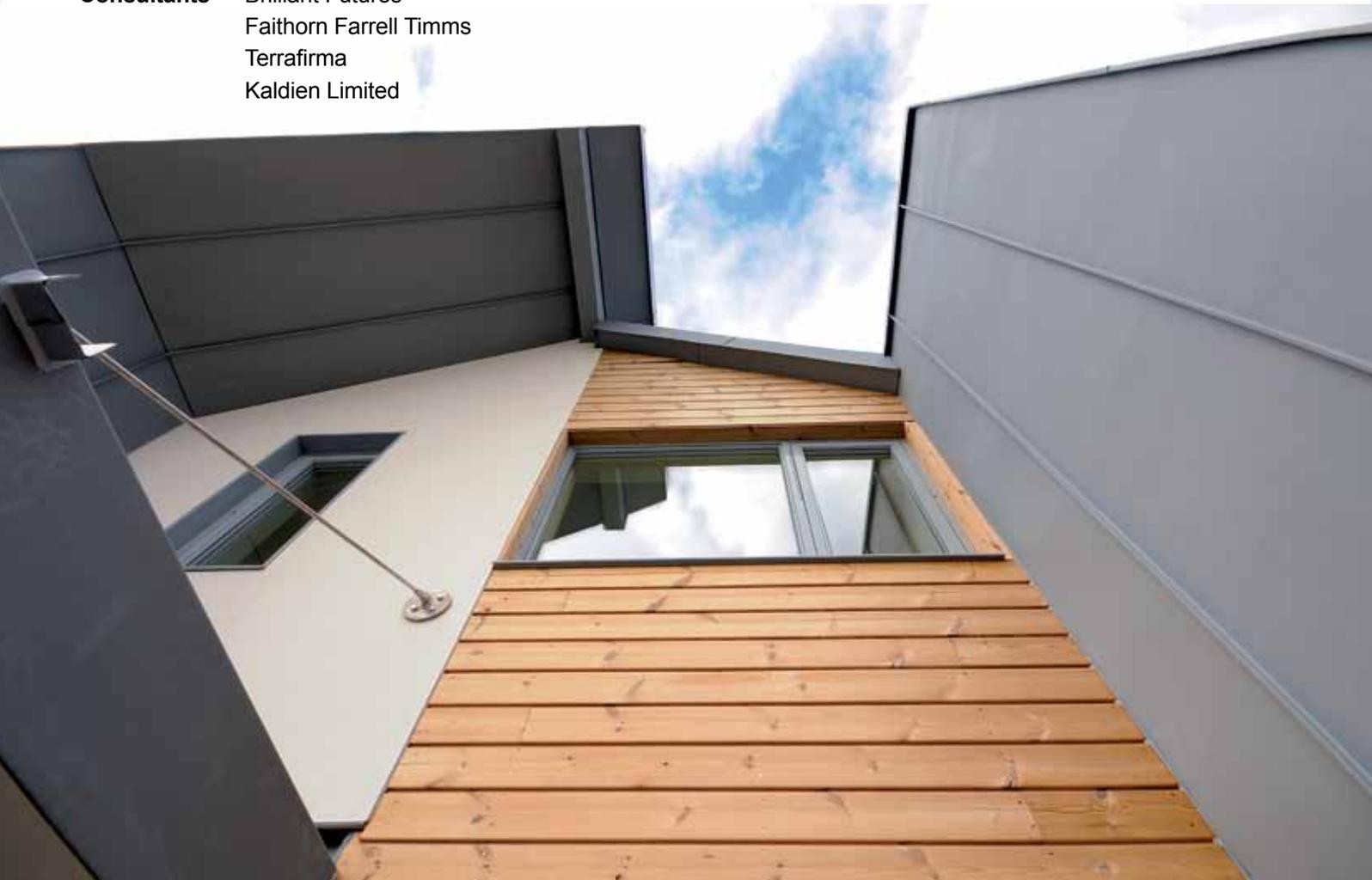


## Timetable for development

- Planning Awarded – September 2010
- Tender Process Completed-January 2011
- Start of Construction Works – March 2011
- Completion of Construction Works – March 2012

## Project team

<b>Developer</b>	Radian
<b>Architect</b>	Kenn Scaddan Architects
<b>Contractor</b>	Drew Smith Ltd
<b>Consultants</b>	Brilliant Futures
	Faithorn Farrell Timms
	Terrafirma
	Kaldien Limited



Radian is an award-winning housing and support provider, managing 18,000 affordable homes across the south of England. Whilst the majority of housing stock is general needs housing, it also includes a significant portfolio of sheltered and supported housing, together with key worker accommodation, shared ownership, market rent and private sale properties.