

Cross Street South, Bromford Group

Creating a sustainable future through building innovations

Overview

Our homes produce half of all CO2 emissions in the UK – from the work done to create them, to how we live our lives in them. Housing and non-residential developments will play a big part in creating a sustainable future.

The Homes & Communities Academy Award for Low Carbon Development recognises new-build developments that use environmentally friendly features to reduce their carbon footprints. Our judges were looking for evidence that the whole project, from design and procurement to construction, is low carbon and sustainable.

They were also looking for projects that create a legacy of sustainability – educating the community and encouraging users to make lifestyle changes that reduce their carbon footprint.

Bromford Group is the 2009 winner of the HCA Academy Low Carbon Development award, for their 'Cross Street South' eco homes project in Wolverhampton.

The chair of the judging panel, George Martin, said the judges were impressed that the low carbon initiatives were “built in, rather than bolted on”. The success of the project begs just one question, he added: “Why not do this for all housing developments?”

The scheme transformed an area of derelict land in Wolverhampton into 30 affordable homes that use half as much energy as a standard house.

Social landlord Bromford Group worked together with sustainable housing experts Integer, and architects Cole Thompson Anders and contractors E Manton to design and deliver the flagship project.

The homes make use of 'green' technologies, including a boiler fuelled by locally sourced, recycled woodchip, low energy lighting, timber walls insulated with recycled newspapers and sedum turf roofs. The design also promotes low carbon living by making the most of natural light and heating.

The development encourages community involvement with allotments, a pavilion for use by the wider community and an eco park, which forms part of the sustainable drainage scheme.

Background

The Cross Street South site in Wolverhampton was originally a line of terraced housing on the edge of the inner city. The houses were demolished leaving a piece of derelict land,

which was used as a temporary car park. Surrounding streets had been eroded by 1960s development and demolition.

There was a need for more high quality affordable housing in the area so Wolverhampton City Council, which owned the land, launched a competition in 2003, inviting proposals for a flagship housing project with low carbon design.

The winning project would be awarded the land for free. The council were looking for a sustainable development with high quality, energy efficient housing to meet the needs of the local population.

Bromford Group, a registered social landlord, won the contract in conjunction with Integer – a thought-leading research and action network on green housing – and architects Cole Thompson Anders, which had worked on a number of low carbon schemes. They worked with contractors E Manton Limited.

The scheme received funding from the Housing Corporation and the All Saints and Blakenhall Community Development (ABCD) – Wolverhampton’s New Deal for Communities initiative, overseen by the Department of Communities and Local Government.

From the beginning, Bromford Group engaged the local community to get residents, schools and the visitors excited about the project and allow them to influence and learn from the development.

The Project

Bromford Group and partners wanted to set an example in sustainable housing by creating the Midland’s first eco-community.

The project aimed to use less energy during construction, use materials from sustainable sources, create an efficient energy supply to the homes and promote low carbon living and waste reduction.

Crucially, the project had to meet the needs of local population for affordable high-quality housing, particularly for the Black and Minority Ethnic (BME) community. It also set out to create jobs and give local people opportunities to learn about sustainable living.

Wolverhampton City Council’s cabinet member for regeneration, councillor Paddy Bradley, said the Council wanted aim “to deliver an innovative project that would not only provide much needed new housing for the city but also ensure low fuel bills for tenants and meet sustainability priorities.”

The result was a complex of 30 homes (27 two bedroom flats and 3 four bedroom houses), with a sheltered eco-park to improve biodiversity and a pavilion, which can be used by the wider community. Cross Street South achieved an EcoHomes ‘Excellent’ rating and an A-rated Energy Performance Certificate (EPC).

It did this by:

- Using environmental friendly materials and technologies including timber from sustainable sources, recycled newspaper insulation and a boiler fuelled by recycled woodchip sourced six miles from the site.
- Promoting low carbon living with features such as: grass roofs providing good insulation; south facing rooms and windows for natural day light and heating; low energy lighting and flow restrictors on cold water supplies.
- Encouraging residents to live a greener life by offering recycling points, allotments for growing food, a composting facility and cycle parking.

The project, which began in 2006 and was completed in June 2008, was funded by a Social Housing Grant from the Housing Corporation (£2,220,000) and private finance raised by Bromford Group (£1,393,000). All Saints and Blakenhall Community Development Partnership (ABCD) contributed £425,000, which paid for the eco park.

The Impact

Update – June 2010

The residents at Cross Street South two years on

Residents settled very quickly into their new homes and way of life. The recycling bins are always full and residents have made insect and bird boxes to increase the biodiversity on the scheme.

After a few weeks of moving in, the allotments were planted with around 15 different crops. The first year was a bumper year and the produce was shared out across the scheme. Eating the crops and utilising the herbs in the communal areas has meant a saving in customers' food bills as well as saving them extra trips to the shops. Looking after the allotments has provided a catalyst for further community cohesion and educational experiences for all ages.

Another important issue that has also been addressed is fuel poverty. Residents' fuel bills are incredibly low, coming in at around 70% less than a standard home, so everyone can afford to keep themselves warm. Water bills are also coming in considerably lower compared to previous bills.

Meanwhile, students from a local sixth form have now carried out the second tranche of Sustainable Living surveys as part of their Business Studies course. Responses have shown a positive increase in attitude and behaviours towards sustainable living.

The allotments are heading for a second bumper crop with the instigation of a crop rotation system designed by the allotment club.

Residents have also made the most of the communal areas for leisure and play, enjoying both the fantastic surroundings and the company of neighbours, which is rare in social housing. The scheme has raised the aspirations of everyone who has come into contact with the project, helping to de-stigmatise social housing and indeed set a new standard within the sector.

In the wider community

Cross Street South has influenced the regeneration of the local area, with the adjacent school being rebuilt to a similar level of eco-build. The third stage of the Blakenhall regeneration, Blakenhall Gardens, is currently being planned and it is anticipated to start in 2010. The combination of this has meant that this area of Wolverhampton is finally shaking off its previously bad reputation and taking steps to becoming a desirable place to live once again.

Lessons Learned

One of the biggest lessons from the project has been the importance of involving stakeholders at an early stage in the design process. Key partners to involve include:

- contractors and sub-contractors, such as the timber frame supplier
- the Eco Homes assessor (now code assessor)
- local property owners and businesses (helping to reduce bad feeling about the loss of the temporary car park and allowing builders on the project to use their services, such as catering)
- local schools (helping avoid vandalism).

Jean Teichmann, regional head of development, Bromford Group explained that, "From the outset we have engaged with local residents and school children to get their 'buy in'. We challenged all the pupils at five local schools to design posters around saving the environment. The winning children spent time with a graffiti artist to transfer their work onto large hoardings that were displayed around the scheme for nearly two years. The fact that the work was not defaced or damaged in anyway speaks volumes."

As the project progressed, Bromford Group learned which environmental features had the biggest impact and how to maximise the benefits. Key lessons include:

- Under-floor heating has increased usable space in homes and lowered operating temperatures, which has meant the boiler uses less fuel and produces less CO2
- Using less concrete and masonry materials and more timber products from sustainably managed forests has a much less detrimental effect on the environment
- Using an air and sound insulation consultant ensured maximum credits were achieved in the Eco-Homes rating process for reducing air and sound leakage.

Reference

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The Housing Corporation
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All Saints and Blakenhall Community Development Partnership (ABCD)
www.abcd-ndc.org.uk

Cole Thompson Anders
www.colethompson.co.uk

E Manton Limited
www.emanton.co.uk

Project Images



Cross_4



Cross_1



Cross_2



Cross_3