



Property of the Month



GREENHOUSE, LEEDS

Greenhouse may not change the world, but from small seeds great ideas can grow... Jenny-Wren Charlton spent a night in a new apartment at Greenhouse to find out more.

As you drive through Leeds you can't help but notice the buzzing atmosphere. The city is ripe with activity and excitement and it is a positive and thriving place in which to live. With history ingrained in its industrial and commercial past, juxtaposed, albeit obtrusively with the cosmopolitan developments across the cityscape, you can't help but be absorbed by this metropolis of the North. Much of Leeds has been renovated in the last 20 years and the development of business in the region is booming – a trend which is no more obvious than in the development of Greenhouse in south Leeds. Only ten minutes from the city

centre, within easy walking distance of local amenities and nestled in a suburban area of town, Greenhouse is an impressive piece of enlightening architecture, with a facade of luminescent white rendered walls, softened by sympathetic planting.

This building however has not always attracted such positive attention or been such a reputable part of the local community. Shaftesbury House, as it was originally known, was built in the Beeston area of south Leeds in 1938 as a building with a purpose. Its role was to act as a home for the hundreds of seasonal workers who flocked to the city every year to work in industry. A modernist red-brick building, it was an innovative

piece of 1930s architecture, and was one of the first examples of economically viable housing built in the region, improving the standards of living for the thousands of people who used it as a hostel. However, the next 50 years saw the building slowly fall into disrepair, becoming more dilapidated and gaining a reputation as a centre for crime. In 1997 the building had fallen into such squalor that it was boarded up by the council before later being registered for demolition.

Shaftesbury House's saving grace came in the form of Citu in 2004. Citu is a company which takes a different stance on property development. They challenge traditional building processes and use cutting edge technology and science to build homes and offices that are sustainable, comfortable, built with an environmental conscience and in a way that nurtures a sense of community. Citu bought Shaftesbury House, and decided that its re-development was going to embody all of the ideals that the company held dear. It was an ambitious project, one that was intended to make progressive steps into the uncharted waters of cutting edge sustainable development. From this dream, Greenhouse was born.

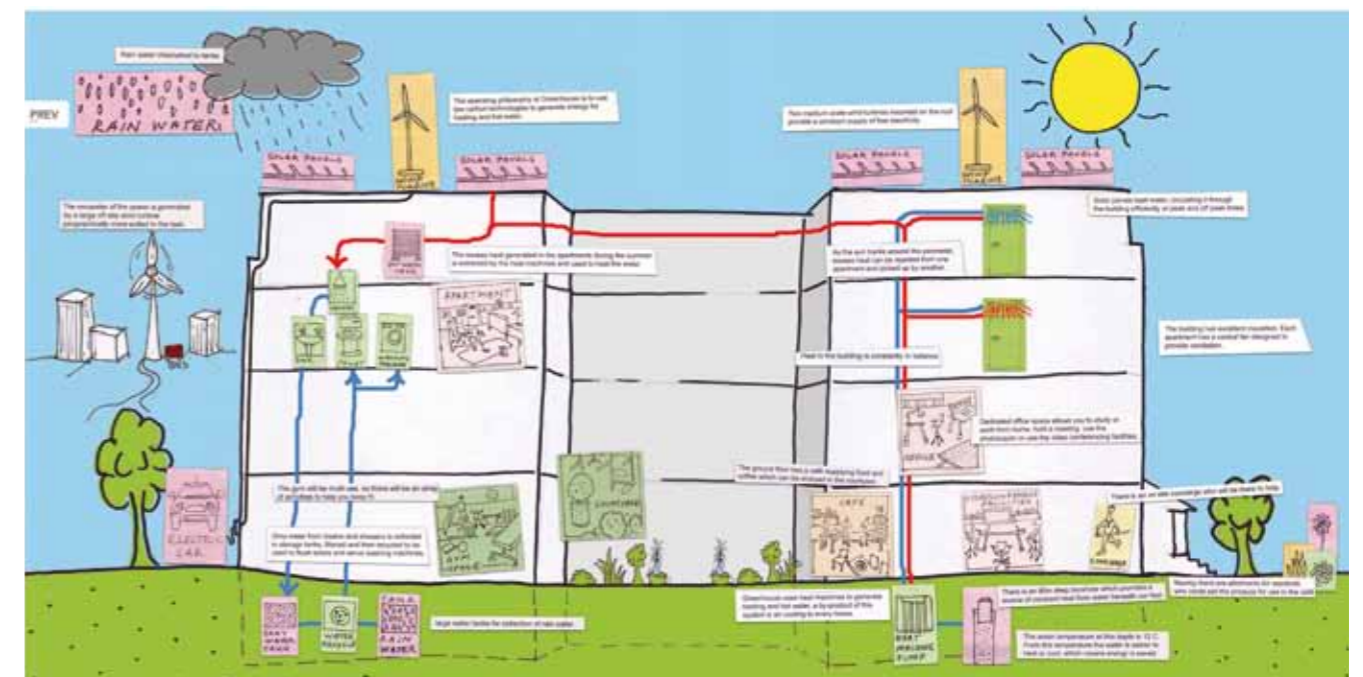
Greenhouse is pioneering in a myriad of ways, and unique in even more, being the only building of its kind in the country. Using many of the latest construction techniques to fuse the old building with the latest technologies was a key part of the design dream. Fraser Stride, one of the Directors at Citu explained 'We had three main reasons for not just clearing the site and starting afresh. Firstly, the original structure of the building was sound, so from a cost-saving perspective it made sense for Citu to reuse as much of it as possible. By doing this we also significantly reduced the carbon emissions from building the structure and also reduced our need for more of the earth's precious resources. And from an aesthetic perspective, we felt the art deco style was an important and identifying characteristic of the original building and we wanted to retain this.'

The re-development of the site saw the builders gut the disintegrating interior of the building and strip it back to its bare red-brick bones. To this they applied a skin of sustainably sourced, super insulated building materials, which housed an internal system of futuristic technologies that would help the building to run in as environmentally sound a way as possible, using low carbon technologies to produce energy. Some technologies which have been used are models which many of us are familiar

with, even if it's only from watching Grand Designs, for example, the roof is covered in solar panels as well as holding two wind turbines which produce enough electricity to power all of the communal space within the building. Working alongside these more commonly known eco-friendly generators are some seriously high powered systems which make the most of the earth's ample renewable resources and are used to control every element of the building. With pump rooms across the building which source thermal heat from an 80 metre bore hole in the ground, pulling it into the central heating system, computers then monitor the temperatures of individual rooms and apartments, process the information, and allow the hot or cold air to be distributed across the building in the most economical and efficient way possible, saving both power and money. Similarly, water within the building is harvested and all grey water (water that is waste from showers and collected rainwater etc) is reused over and over again to flush toilets and supply dishwashers, thereby saving water and cutting utility bills, whilst water for showers is heated using the excess heat extracted from the thermal systems, again cutting costs – it is expected that most residents will see a saving of around 60 percent of bills during the course of a year in Greenhouse.

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In terms of the internal structure of the building it was an important part of the plan to not only include residential social spaces and facilities such as the open courtyard garden which acts as community space, and office space which could be leased out to local businesses into the complex. When I asked why this was such an integral part of the plan, Fraser told me, 'The energy generated by the on-site renewable energy sources (wind, solar and ground source heat) cannot easily be retained. The pattern of regular household consumption is a high energy demand in the morning and evening with very little demand during the





community. Styled in a contemporary way, using local architects, designers and furniture producers, whilst also using environmentally sound products in the fixtures and fittings within the space; such as bamboo sourced from sustainably maintained forests for the work tops and natural wool carpets with recycled underlay on the floors, while the door numbers and signage are made from recycled plastic, even the tiniest features make a contribution to the eco-credentials of the project, without renegeing on great design.

One of the most exciting and positive aspects of Greenhouse as a development in the region is the way that it nurtures and helps to develop a whole new community. Attracting residents and business from a variety of backgrounds due to the range of facilities on offer for a reasonable price in this diverse area of the city, means that people who normally wouldn't live next door to one another end up doing so. When I ask Fraser why this is so important he tells me, 'The sustainability of a building is directly influenced by the behaviour of its occupants. A strong community gives people a sense of pride about where they live and work, promotes positive behaviour, builds friendships, support networks and ultimately makes Greenhouse a more enjoyable place to be. Community is the personality of Greenhouse and without it, it would just be a collection of bricks and mortar.' As well as providing accommodation and office space, the project also features a community gym, free to use for residents and workers, a courtyard garden which produces fruit and vegetables from its raised beds as well as an off-site allotment which yields further produce, all of which makes its way to the on-site cafe and deli, which is run by residents of Greenhouse.

The lady who runs the cafe is a resident of the building and her husband helped to set up a cycle scheme within the building for residents to borrow bikes in an attempt to help develop friendships as well as to help to cut down on carbon emissions. It is this cyclical nature of Greenhouse and the fact that each member of the community is excited by the project and as such contributes to its maintenance in some way that makes it so positively sustainable.

rest of the day. Offices on the other hand have a steady energy requirement throughout this period. Combining these demands removes the peaks and troughs in the energy consumption and ensures that the renewable sources can be utilised as much as possible.'

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One thing that the developers were very conscious of when building Greenhouse was that they didn't want to sacrifice style or comfort within the development, for the sake of using recycled products, or saving on luxurious home appliances which makes life that little bit more pleasurable. As such, there is no shortage of exciting technology in the 172 apartments in Greenhouse, and all of the gadgets in each apartment allow you to make small but hardly noticeable contributions to reducing your carbon footprint in your daily life. For example, flat screen televisions allow you not only to watch television on demand, but to check public transport times, book an electric car from the on-site car club for a day out, pay your utility bills, check how much energy you have used and even receive updates from the Citu office on news from the building, letting you know what's going on in the Greenhouse

With its launch taking place in early October, where Hilary Benn MP described the project as 'a magnificent and visionary tale of two buildings and two times', and having recently been shortlisted for 'Sustainable Refurbishment of the Year' in the 2010 Sustainability Awards, Greenhouse is already filling up with residents and businesses, all eager to be a part of this exciting project and sign up to the ethos that Greenhouse promotes. With building development taking poll position in the league of carbon emitters and energy consumers, the development of projects such as Greenhouse, and Citu's promotion of living with an environmental conscience as well as within a thriving community is perhaps one of the most inspiring and exciting projects in architectural and social development today. There is a clear desire which radiates from the project and its managers that living in a sustainable way should not be something that is hard to achieve, but rather something that is part of daily life, considered, but not laborious. Let's hope this desire spreads far and wide, and look forward to the day that Greenhouses are popping up in towns and cities across the country.

For more information on Greenhouse visit www.greenhouseleeds.co.uk or call 0113 234 6686