



Energy saving refurbishment involves tenants

The community in De Tuinwijk is invited to be actively involved in the modernization of the area and energy-saving measures.

Groningen, The Netherlands

In the spring of 2009, Housing Corporation De Huismeesters started with the large scale refurbishment of houses in the district De Tuinwijk. It is a characteristic area from the early years of the last Century. Restructuring the district contains both modernization in terms of new social structures, sustainability and comfort by higher energy efficiency.

Some of the 284 houses will be combined with others to create approximately 110 larger homes for families and other households. All dwellings will be significantly improved with the restoration of unique facades and architectural constructions and renewed toilets, bathrooms, hot water and electrical installations. At the same time significant investments will be made in order to make all homes more energy-efficient.

A large package of energy-saving measures will be carried out: all roofs, facades and floors will be isolated, houses will be provided with HR++ glass and heating HR++ installations only. Intelligent ventila-

tion/heating system with heat recovery will be installed. These investments result in improvement of the energy label of the buildings. The project aims for an improvement from label E/F to label B/C.

The main question in this pilot is how to act in future refurbishment on a structural approach, rather than ad hoc. The Municipality of Groningen, De Huismeesters, KAW architects and Noorderlings Communications have taken the initiative for the above issue, by working on a practical manual.

Energy saving investments are not easy to realize in practice. In order to achieve minimum energy consumption and energy costs, it is very important to involve the tenants, get their acceptance and create enthusiasm. In De Tuinwijk the tenants can express their opinions, take part in the discussion on different options and be actively involved in energy-saving measures.

The toolkit will be developed with the support of Build with CaRe. It will contain practical do's and don'ts, checklists and best practise.

Scotlands Housing Expo-Highland Housing Fair

The Highlands of Scotland is staging a major housing fair in 2010 to showcase the best of house building design and technology - the first of its kind to be held in Scotland. The keynote of the event is sustainability and it aims to motivate house builders and buyers to make environmentally friendly decisions when it comes to choosing a home. The event will be a catalyst for positive change in the whole area of urban and rural planning, and features homes designed by the winning architects, builders and suppliers who took part in a prestigious competition held in 2007.

For more information see the website at <http://www.scotlandshousingexpo.com>

Build with CaRe at BRE Innovation Park



Watford, UK

With the objective to mainstream energy efficient buildings in Europe, the Build with CaRe partnership cooperates with important key organisations around the North Sea Region. In September Build with CaRe visited the Building Research Establishment. BRE representatives invited the group to a study tour in the Innovation Park which features a range of sustainable homes and energy efficient buildings.



Energy efficient healthcare centre with low running costs

Borås, Sweden

The 10-story-high healthcare centre has now been classified as a Green Building. The classification is a quality label for energy effective buildings that minimise their carbon emissions. The building will be using approximately 60 percent less energy than the average Swedish healthcare centre.

Tehuset, which got its name from the building's T-shape, will become a 20 000 square metre healthcare centre where each patient will have a private room with a connecting hygiene room. All technical solutions have been analysed for lifecycle cost (LCC) to ensure the lowest possible running costs.

– The Green Building classification was not our goal when we started the project. It was more important to create an energy effective building based on the “LCC-model”. Happily, though, we can now claim that the building meets the Green Building criteria, says Bengt-Ove Ström, project manager at the regional estate manager Västfastigheter.

Early on Västfastigheter set an energy consumption goal of 100 kilowatt hour per square metre and year, including the operational electrical consumption, which was later implemented in the project planning and building phase. In the building process, Västfastigheter has chosen to work in a partnership in which NCC is the general contractor.

– We have been able to maintain our set goals with the Tehuset thanks to the good cooperation in the project. And it is here that NCC's partnering model has played a major role, says Fredrik Johansson, Business Manager, NCC Construction, West region.

Building a hospital is complex, which makes partnering a favourable



*Energy efficiency is possible in all types of buildings.
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approach. Partnering is a structured work method in which the building commissioner, consultants and contractors together work on the task. The method is based on an open and trusting cooperation where each party's know-how is a complement to the others' throughout all the phases of the project.

The building will be completed in November, but the EU has already awarded it the Green classification following thorough calculations. One of the goals with Green Building is to decrease the carbon emissions and the requirement for this is that the energy consumption of the building is reduced by 25% of the current norm.



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Low energy homes in three days

Norfolk, UK

The two low-energy homes at Skelton road in Diss, Norfolk, took three days to erect. The component parts are driven on to the site, and include prefabricated panels from Sweden with triple-glazed windows already installed, ready for lifting into place by crane. Build with Care partners University of East Anglia and West Suffolk College are supporting and monitoring the project.

During 2008 Saffron Housing Trust carried out extensive research into how it could deliver better new homes. Encouraged by the Governments increasing restrictions on carbon reduction Saffron made a decision requiring its new build homes to meet challenging low energy and low carbon requirements. No surprise when you think

that traditionally construction is responsible for almost 40% of all the UK's carbon emissions and a typical 3bed semi creates about 6 tonnes of carbon each year and over 50% of that is from heating a home.

The homes at Skelton road are designed and supplied by UK Company, Carbon Lite Solutions with its partners Scandinavian Homes and Scandinavian Foundations and are made of pre-engineered panels.

These were shipped to Diss from Sweden in "kit form".

The homes have a high content of sustainable materials and come as whole wall panels with doors and windows already installed. This "offsite pre engineered method" allows very effective quality control and ensures consistency of build whilst reducing site time. However these homes are designed and finished to look like any "normal" home



The low energy houses have been equipped with monitoring devices and will be evaluated by the Build with CaRe team.



and not like a pre fabricated "log cabin". This was a key requirement of both Saffron and South Norfolk Council to ensure that they would sit well with neighbouring homes.

The panels arrived on site on the morning of Tuesday the 3rd of March and were craned into position over the next few days with both homes taking just 3 days to erect. This created quite a stir with all the onlookers including Saffron's own team who were learning how to build this type of home under supervision from the supplier. The previous weekend had seen the laying of a special highly insulated ring beam foundation on which these homes now stand. Speed of erection was a key consideration as this allowed the homes to be made weather tight and Saffron to progress quickly with finishing the internal elements. This also ensured that neighbours had a minimum of disturbance during the process.

The walls, floor and ceilings all have high levels of insulation to reduce heat loss and to hold in the warmth. The building is also "wrapped" with a special polythene vapour barrier to keep out damp that helps maintain the thermal stability. The external doors have wrap around seals and the windows are all triple glazed and filled with argon gas to reduce heat loss. The homes have been likened to a "Thermos Flask" and once warmed will stay warm and once cooled will stay cool. This should enhance the comfort of the residents throughout the seasons.

Open Day of the Passive House

Europe

On the 6th to 8th of November, passive houses all over Europe will open their doors to welcome everyone who is curious on how it is to live in an energy efficient home. It will be possible to visit villas, multifamily houses, refurbishment projects and even public buildings. Build with CaRe supports the initiative and take part in the organisation. Open Day of the Passive House originates from Germany and this year it will be the 6th time it is organised. Region Västra Götaland participates for the first time. To find out more about when and where to go, visit www.ig-passivhaus.de for Germany and www.passivhusdagarna.se for Sweden.



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EVENTS

28 – 30 Oct	European Fair on Education for Sustainable Development	Hamburg, DE
6 – 8 Nov	International Day of the Passive House	Europe
11 – 13 Nov	Build with CaRe annual conference	Oldenburg/Bremen, DE
12 – 12 Nov	Workshop Quality Assurance System	Göteborg, SWE
26 – 28 Nov	RENEXPO Austra	Salzburg, A
3 – 5 Mar 2010	World Sustainable Energy week	Wels, A
22 – 26 Mar	EU Sustainable Energy week	Brussels, B
28 – 29 May	14th International Passive House Conference 2010	Dresden, DE

NEWS

Visit www.buildwithcare.eu for more news on energy efficient buildings

EU Starts Hammering Out Deal On Buildings Directive

Launch Of BUILD UP Web Portal

UK: First Large-Scale Zero Carbon Housing Development

EU promotes smart energy meters



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