



**limetalk**

Summer 2009



## Latest News from Lime Technology

### New Chelsea Pensioners' Infirmary Chooses Lime Mortar

The new infirmary at the historic Royal Hospital Chelsea, designed by architects Quinlan and Francis Terry and built by Wates Construction, has chosen Limetec hydraulic lime mortar.

Limetec Hydraulic lime mortar is increasingly being specified for new build work, as architects and specifiers who, until recently, have used it solely on the refurbishment of heritage buildings, have realised its many desirable qualities.

A viable, superior alternative to conventional cement-based mortar, its benefits are manifold. Principally, it is its dexterity in accommodating settlement or thermal shock without cracking that now draws specifiers and architects to it. Eliminating the need for expansion joints, it means there will be no compromise in their

designs - their vision of a building's aesthetics can be transferred straight from the drawing board to the actual building.

Across the centuries lime mortar has been used for its breathability, workability and proven performance and it is this collected knowledge that we can now draw on for today's modern buildings.

The new build infirmary features a traditional exterior, fully in keeping with the historic surroundings of the Royal Hospital Chelsea. The £35 million project also involved the modernisation and refurbishment of the famous Christopher Wren-designed Long Wards. Developed by Steffi an Bradley architects, the new facilities have been brought up to 21st century standards.



### Four Lime Technology Schemes Win RIBA Awards

Four projects with which Lime Technology has been involved have been recognised at the prestigious RIBA Awards 2009.

Joseph Chamberlain Sixth Form College designed by Nicholas Hare Architects, The Minster School designed by Penoyre & Prasad and Runnymede Civic Centre designed by Feilden Clegg Bradley Studios all specified Lime Technology's Limetec hydraulic lime mortar for their projects. Limetec is the modern day alternative to traditional lime mortar. It has a high level of durability and reduces/eliminates the need for expansion joints as well as facilitating future recycling of the bricks.



Joseph Chamberlain Sixth Form College

Clay Fields housing scheme, designed by Riches Hawley Mikhail Architects has already been recognised by a number of awards as well as this prestigious RIBA award. Lime Technology's Tradical® Hemcrete® was specified on this project along with their mortars, render and Sumatec® blocks as part of the scheme's aim to achieve a sustainable community.



Clay Fields by Riches Hawley Mikhail Architects

### CPD Presentations Available On Line

As part of a recent upgrade of the Lime Technology website ([www.limetechnology.co.uk](http://www.limetechnology.co.uk)) most of the company's CPD presentations have been made available on line. This is a great place to look for those interested in any of Lime Technology's products to give a general introduction.

These presentations can be viewed or downloaded by clicking on the CPD tab on the left hand side of the homepage and selecting the presentation desired.

Limetec® is a registered trademark of Lime Technology

[www.limetechnology.co.uk](http://www.limetechnology.co.uk)



# The Renewable House is launched at INSITE09



The Renewable House, a new demonstration house that has been designed to illustrate that low cost and low carbon are compatible, has been officially opened.

Built at the BRE Innovation Park and officially opened at INSITE09 where the house was the undisputed star of the show, the Renewable House is a demonstration of the commercial viability of building affordable homes to a high environmental standard from renewable materials.

The house has been designed to meet Level 4 of the Code for Sustainable Homes, with a build cost of £75,000, excluding groundworks and utilities. Due to its flexible design, the concept can be developed to create a variety of house types including town houses, terraced and semi-detached. It can also be enhanced to meet levels 5 and 6 of the Code for Sustainable Homes.

Unlike many other houses that meet Level 4, the Renewable House features very few additional technologies. Instead the performance of the house has been made possible through the ingenious use of materials, such as Lime Technology's Tradical<sup>®</sup> Hemcrete<sup>®</sup>, which have been used to create a thermally efficient and low carbon building envelope.

The scheme was delivered by the NNFC with funding from the Department of Energy and Climate Change (DECC). The house was project managed by contractor The Linford Group who handled the design development and construction. They worked with design partners Emper Homes and Archial Architects with the development overseen by the client's agent Benchmark Property.

To arrange a tour around the house or if you are interested in discussing low cost CSH level 4 housing, go to [www.renewable-house.co.uk](http://www.renewable-house.co.uk).



## Hemcrete passes fire tests

Lime Technology's Tradical<sup>®</sup> Hemcrete<sup>®</sup> has successfully passed rigorous fire tests conducted at the BRE's laboratories.

The tests, on a Tradical<sup>®</sup> Hemcrete<sup>®</sup> loaded wall, were carried out in accordance with BS EN 1365-1:1999 – fire resistance test for load bearing elements.



Lime Technology created a wall, 3 m high, 3 m wide and 300mm thick with a imposed load of 135kN. The wall contained eight vertical timber studs and cast Tradical<sup>®</sup> Hemcrete<sup>®</sup> and the internal face was exposed to the fire. The test proved the integrity and load bearing capacity of Tradical<sup>®</sup> Hemcrete<sup>®</sup> for in excess of the one hour fire test.

The test is part of Lime Technology's ongoing research and development programme which is quickly helping to establish products such as Tradical<sup>®</sup> Hemcrete<sup>®</sup> as a viable alternative to masonry construction for mainstream projects.

## Hemcrete 3N blocks available

Hemcrete thermal blocks have been available for some time, however an upgraded structural block has now been developed and is available for those who want to minimise the embodied carbon in their projects.

The block is identical to a standard 440 x 215 x 100mm concrete block except it is carbon neutral through the use of hemp rather than aggregate. The hemp absorbs a similar amount of carbon dioxide in its growth as is emitted in manufacturing the binder, making this one of the

first structural blocks in the UK market which is truly carbon neutral.

The blocks will be produced by Lime Technology's partner Hemcrete Masonry Limited and are available currently for use as a replacement to Dense, Lightweight and Aircrete blocks.

The blocks will cost more than traditional concrete blocks but for those customers who care about embodied carbon, it is a small price to pay for a much reduced carbon footprint.



## Limetec chosen for impressive private house

Lime Technology's Limetec hydraulic lime mortar has been specified for Elysium, a private house in Butlers Cross, Buckinghamshire. Designed and built by Kevin Maizey for his family, the house is located less than a mile from Chequers, a prime example of a Jacobean Manor house. It is this house that provided the inspiration for the final design of Elysium.

With such an imposing façade, the choice of bricks and mortar was of paramount importance. After viewing bricks from various brick manufacturers, 2" Chalfont red bricks from HG Matthews were chosen. These were selected as the best possible match to the handmade 2" bricks that were used in the construction of Jacobean manor houses.

To complete the sympathetic build, Limetec mortar was chosen. This enabled the house to be built without expansion joints which would have spoiled the exterior aesthetics.



## Lime render provides crisp contrast

Sarah Wigglesworth Architects has used white lime render from Lime Technology to create the perfect contrast against brightly coloured cladding on its latest scheme at Heathfield Children's Centre and Nursery.

Designed to create a vibrant and accessible children's centre, the scheme was won following a competitive interview. The project replaces below-standard nursery accommodation at Heathfield Primary

School in Richmond-upon-Thames, London, and adds adult-education and children's day-care facilities.

The lime render was included as part of a package of sustainable materials, chosen to help the scheme achieve a Very Good BREEM rating. Other sustainable features include a brown roof, thermal solar panels and mechanical heating with heat recovery.



## Linford sets up C-zero

As a result of the success of the Renewable House launched at Insite09, Linford Group who built the house for the NNFCC, have decided to set up C-zero. C-zero is a wholly owned subsidiary of the Linford Group and is focused on creating code level 4 houses for the social housing market built out of Hemcrete®.

C-zero's aim is to minimise carbon footprint, eliminate waste, and manage in a manner considering the environment and community. At the same time they aim to reduce the cost premium in terms of overall value by

developing solutions that focus on the long life elements of the building rather than expensive short term bolt on technologies.

"Our solutions involve cost engineering sustainable designs, working more along the lines of how a car is developed through concept and costing, rather than a traditional plan and specification approach", commented Robert Pearson, C-zero's managing director.

For more information contact C-zero on 0121 386 8080 or at [www.czzero.com](http://www.czzero.com)

## Limetec® range of coloured bagged mortars extended

Lime Technology is now manufacturing bagged Limetec® mortars at its blending plant at Milton Park. This will enable a broader range of coloured bagged mortars to be produced for those customers who are looking for a high quality factory produced mortar. The mortars will have all the benefits of a Limetec® mortar in a greater range of colours for customers who want the look and feel of a high quality natural hydraulic lime mortar.

Bagged mortars can be purchased direct from Lime Technology or for smaller quantities through a range of partners and distributors.



## New lower cost Sumatec® blocks

Sumatec® unfired clay blocks have been redesigned to reduce weight and enable the blocks to be laid on edge. Sumatec® unfired clay blocks have a low carbon footprint and are excellent for use in internal partition walls due to their high thermal mass. This enables specification of a high thermal mass internal walls solution without the resulting carbon footprint of concrete blocks.

To reduce cost, a new sodium silicate based mortar has been developed by Bath University which has a high enough bond strength to enable the unfired blocks to be laid on edge.

Further improvements have been made by creating holes in each block to reduce the weight of the blocks to ease manual handling. The blocks are designed to a 3 newton strength required for a structural block.

Sumatec® low carbon partition blocks are available from Lime Technology.



# Lime Technology Acquires Hemcore

Lime Technology, the UK's leading developer and manufacturer of lime based low carbon building products, has acquired Hemcore, the Suffolk based industrial hemp processor and supplier. The business was purchased from Hemcore's administrators.

Lime Technology has been working with Hemcore over the past five years, as part of the supply chain for its Tradical® Hemcrete® product. An innovative product used to create carbon negative, highly thermally efficient walls, it is a mix of hemp shiv, supplied by Hemcore, and a lime based binder.

As part of the acquisition, Lime Technology will be retaining the Hemcore offices and factory in Halesworth. It is planned that current members of staff will be retained and the plant will continue operating.

The Hemcore brand name will be retained but as part of a long term growth strategy the business will be renamed Hemp Technology Limited, a wholly owned subsidiary of Lime Technology.

"The acquisition is part of the continued growth of Lime Technology and its Hemcrete® brand," commented Lime Technology's Chairman & Technical Director, Ian Pritchett. "It will enable us to have greater control over our supply chain which in turn will enable us to pass on efficiencies and cost savings to our clients."

As well as providing hemp shiv for Hemcrete® and other construction products, Hemp Technology will continue to provide a range of products including horse bedding and fibre to the automotive industry. Hemp fibre is used as a lightweight renewable alternative in body panels in many cars as well as being the raw material for hemp insulation. In addition, the company is

planning to expand its base of farmers for the growing season of 2010.

For further information on Hemp Technology, visit [www.hemptechnology.co.uk](http://www.hemptechnology.co.uk)



## Passiv Haus standard modified for the UK

At a recent lecture at the AECB conference Professor Wolfgang Feist, Founder of the Passivhaus Institute gave an indication that the standard will be modified for the UK climatic conditions. Typically Passivhaus standards require walls to have a U Value of 0.15, but Professor Feist indicated that having looked at UK weather files this should be reduced to 0.18 for the UK.

Hemcrete can easily achieve this standard with 310mm of Hemcrete plus surface finishes. Along with the air tightness inherent in the Hemcrete system and minimal thermal bridging with Y values of 0.03 easily achievable Hemcrete is the ideal product to use in any buildings being designed with Passivhaus ideals in mind.

For more information on how Hemcrete can contribute to Passivhaus buildings please contact Lime technology on....

## Events programme

As part of its knowledge bank and education programme, Lime Technology holds an ongoing programme of events. Based around its CPD events, they cover its range of mortars and renders plus Tradical® Hemcrete®.

The events are held at a number of locations. This includes the company's head office in Abingdon, where visitors can see and experience the use of their materials in practical demonstrations, and the Innovation Park at the BRE in Watford where visitors have the opportunity for a guided tour around the Renewable House, a house built using Tradical® Hemcrete®.

Dates for forthcoming events include: -

22nd July – BRE Innovation Park

23rd September – Milton Park - Oxfordshire

21st October – BRE Innovation Park

18th November – Milton Park - Oxfordshire

To book a place on one of these events, call Lime Technology on 0845 603 1143 or email at [info@limetechnology.co.uk](mailto:info@limetechnology.co.uk)