



Hemp Lime Technology

Tradical® Hemcrete® Information Downloads

Case Studies



americanlimetechnology

A joint venture of

Lime Technology Limited *United Kingdom*
U.S. Heritage Group, Inc. *Chicago, Illinois*

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Adnams Brewery Warehouse and Distribution Centre Hemp Lime insulation walling for 4,400 m² distribution centre

Client:	Adnams Brewery
Architect:	Aukett Fitzroy Robinson
Specialist Engineer:	Lister Beare
Principal Contractor:	Haymills
Location:	Southwold, Suffolk, UK
Project Value:	£5.8 million
Completion date:	September 2006
Key Stats:	100,000 compressed (high density) Tradical® lime hemp blocks 1,000 cubic metres of low density Tradical® Hemcrete®



The client decided from the outset that the distribution centre, located in a disused quarry, would be built with a focus on environmental responsibility. This led to the selection of Tradical® hemp lime as the material of choice for the walls of both the 4,400 m² distribution centre and the associated commercial vehicle maintenance facility.

Lime Technology, now partners with Lhoist UK, was involved in developing the technology of the wall construction over an eighteen month period. The final construction form was of a diaphragm wall with high density Tradical® lime hemp blocks, with an infill of low density Tradical® Hemcrete®. The high density, compressed blocks were made of a combination of quarry waste, Tradical® hydrated lime and hemp.

Thermal performance of the walls incorporating over 100,000 blocks and 1,000 cubic metres of Hemcrete® was a key focus because of the need to keep the stored drinks at a cool 12 to 14°C during their time in the distribution centre. The success of the hemp lime design meant that, during the design period, it was decided to delete the air-cooling system from the project making a saving of £400,000 on the original costs.

The environmental benefit of using Tradical® Hemp Lime in the construction means that more than 500 tonnes of CO₂ emissions were saved during the building process, as Hemcrete® captures carbon from the atmosphere and locks it up into the fabric of the building.

Tom Woolley, Professor of Architecture at Queens University Belfast, Chair of the Hemp Lime Construction Products Association and author of 'Natural Building' stated: "... the Adnams hemp walled warehouse catapults this environmentally friendly technology into mainstream commercial building."



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Lime Technology Office at Milton Park Hemcrete® insulation walling for business park Head Office

Client:	Lime Technology Ltd.
Architect:	IJP Architect
Specialist Engineer:	Lister Beare
Principal Contractor:	IJP Construction
Specialist Contractor:	Laurent Goudet
Location:	Milton Park, Didcot, Oxfordshire, UK
Project Value:	£0.8 million
Completion date:	February 2007
Key Stats:	80 cubic metres (160 m2) of Tradical® Hemcrete® walling 30 cubic metres (120 m2) of Tradical® Hemcrete® roof void insulation



temporary boarding and these were stripped off within a week and glazing units installed.

The existing suspended ceiling was removed and in its place a 250 mm thick layer of low density Tradical® Hemcrete® roof void insulation was sprayed into place above a joisted ceiling.

The refurbishment of a typical business unit office and warehouse to form the Head Office for Lime Technology, partners with Lhoist UK, was an ideal opportunity to select Tradical® Hemcrete® as the material of choice for the walls of the steel framed, two-storey offices section of the unit.

Thermal insulation performance of the walls and roof was evident immediately as the heatwave conditions experienced during construction demonstrated that the inner space of the office area was much cooler than being in the shade.

The original thin section panel walling was removed and a secondary timber framing was installed to support the 500mm thick Tradical® Hemcrete® walling. The wall thickness was increased to a practical maximum in order to achieve the greatest benefit from the insulation properties and therefore reduce the energy consumption for the offices to a minimum. The calculated U value for the Hemcrete® walling is 0.18 W/m².K.

The environmental benefit of using Tradical® Hemcrete® in the wall and roof construction means that more than 11,800 kg of CO₂ was captured during the building process, as Hemcrete® captures carbon from the atmosphere and locks it up into the fabric of the building.

A permanent shutter was installed and the Hemcrete® was spray applied in a single layer application in just four days. Window and door openings had been formed with additional

The Hemcrete® walling has a lime based render finish and the internal surfaces of the office are plastered with Tradical® Hemcoat® finish products. The whole of the refurbishment of the office and industrial warehouse is targeted to deliver a low carbon, low energy facility using a combination of the best available appropriate technologies.