‘Certificering in de circulaire economie’

- Als beroepsuitoefenaar ‘ecologisch’ architect
- Als ontwikkelaar van biobased prefab bouwssysteem

STROOM
ARCHITECTEN

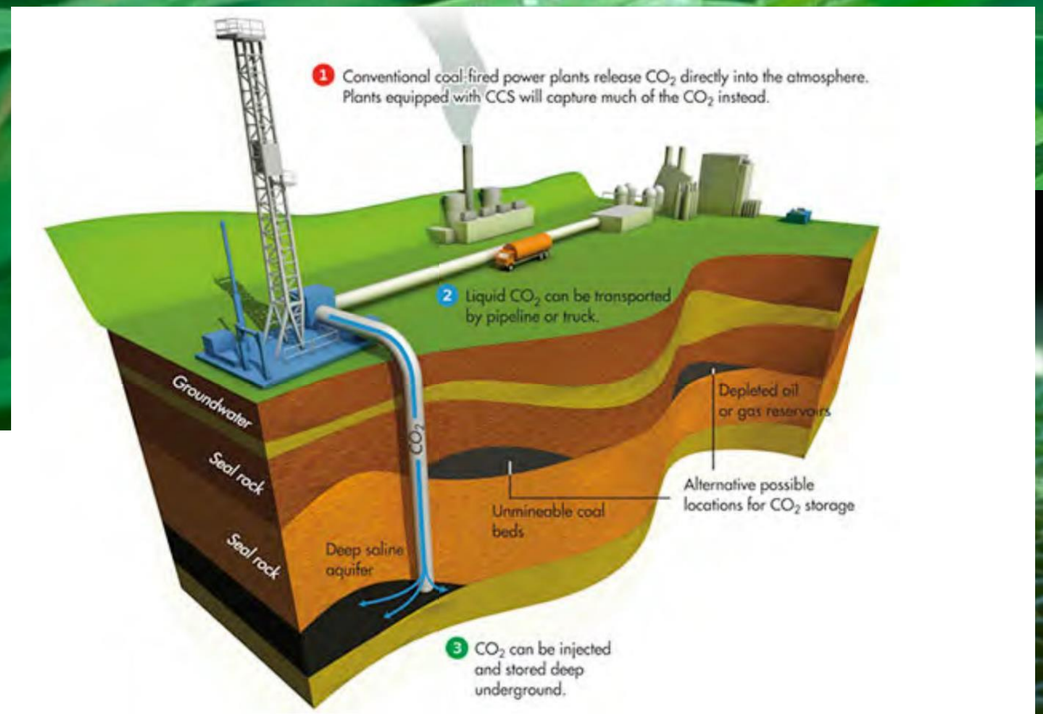
Wijngaard Dassemus

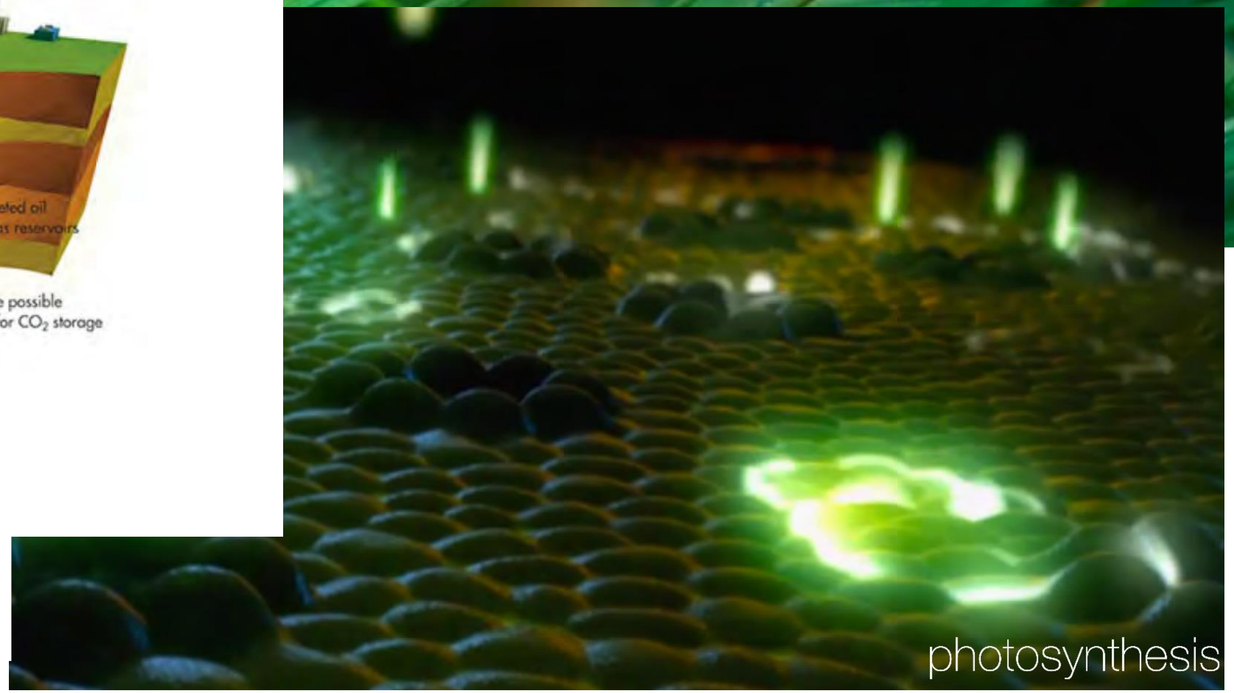
Wijngaard Dassemus

STROOM
ARCHITECTEN

Ecologische woning Chaam

helping you build a more sustainable future





C2C
CO2 is geen afval , CO2 is voedsel

photosynthese - zonlicht + water + CO_2 = cellulose

modcell

ModCell is a super-insulated, prefabricated building system, made from renewable, carbon-capturing materials.

ModCell delivers better than zero carbon buildings today.

20% of all materials delivered to site end up in landfill.

45% of man-made carbon dioxide is emitted through the operation of buildings.

woodcell

800 kg of CO_2 per m^3

photosynthesis - sunlight + water + CO_2 = cellulose

woodcell

photosynthesis - sunlight + water + CO_2 = cellulose

moodcell

3m x 3.2m =1,400kg sequestered CO_2

modcell

prefabricated straw or hemp cladding

modcell

Chiltern INTERNATIONAL FIRE

Test Certificate: Chilt/RF09001

This certificate is awarded to:

Department of Architecture and Engineering
On behalf of Modcell Ltd
Bath University
Bath
BA2 7AY

This document confirms that a fire resistance test was conducted in accordance with BSEN 1364-1: 1999 on a non-load bearing wall system on 21 January 2009 and the following results were achieved.

Integrity – Discrete Area	
Cotton pad	135* minutes
Continuous flaming	135* minutes
Gap gauges	135* minutes
Insulation	
Discrete area	135* minutes - average set 135* minutes - standard set (max) 135* minutes – frame set

* Failure criteria were not achieved upon termination of the test at 135 (one hundred and thirty five) minutes.
The results relate only to the specimens tested, as detailed in test report number Chilt/RF09001

Ross Newman
Principal Test Engineer
Date: 17 April 2009

Vincent Kerrigan
Technical Manager
Date: 17 April 2009

Chiltern International Fire Ltd
Chiltern House, Stocking Lane, Hughenden Valley,
High Wycombe, HP14 4ND, United Kingdom
Tel: 01494 569800
Fax: 01494 564895
Web: www.chilternfire.co.uk
Email: cif@chilternfire.co.uk

UKAS TESTING
1762

135 minute fire certificate

modcell

2 hours 23 minutes test stopped

moodcell

straw still largely intact

moodcell

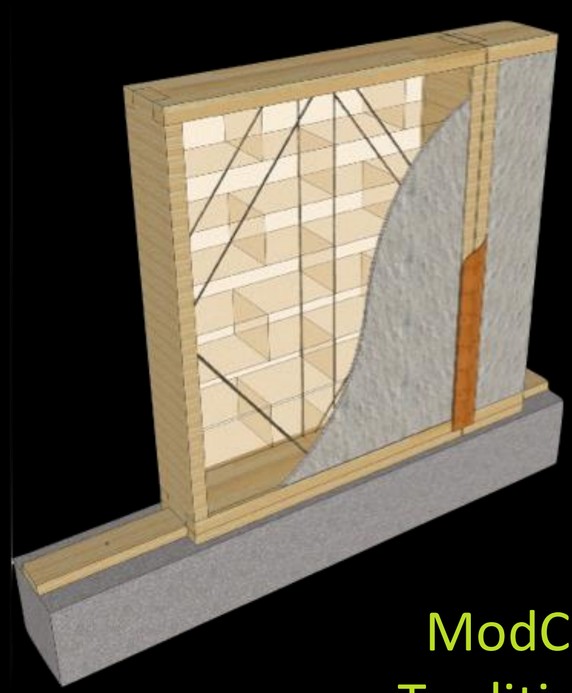
100+ year old straw bales used in building

render spray applied

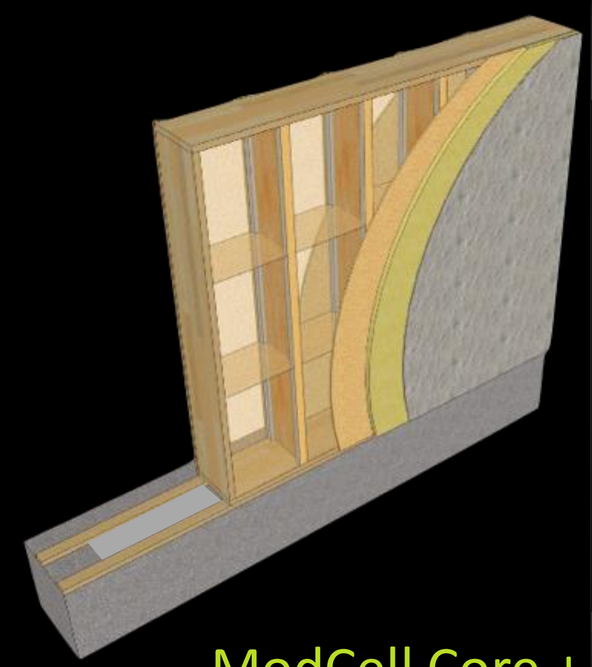
woodcell

non-rendered panel

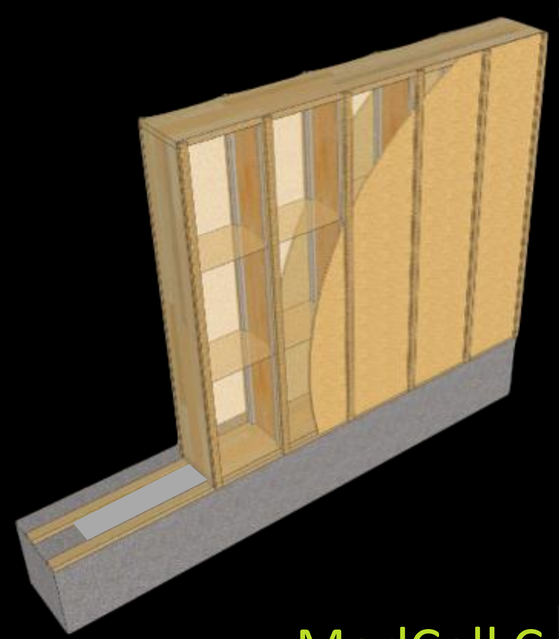
modcell



ModCell Traditional



ModCell Core +



ModCell Core

ModCell Core & Core + internal

panel types

modcell

BaleHaus@Bath

modcell

hayesfield school - bath

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holme lacy

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lilac - BaleHaus

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whitedesign modcell®

ECO-INNOVATION
WHEN BUSINESS MEETS THE ENVIRONMENT

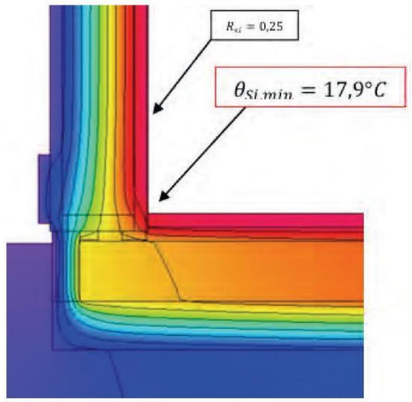
CE

balehaus®
custom homes

Timber Frame Elements

Q-MARK CERTIFICATION
BMTRADA

Q-Mark Certificate Number QTF-006
Issue Date - 06 10 2014
Expiry Date - 05 10 2017



Heat transfer coefficient of building envelope:

$f * U_{opaque} \leq 0.15$ W/(m²K)
with f: temperature reduction factor

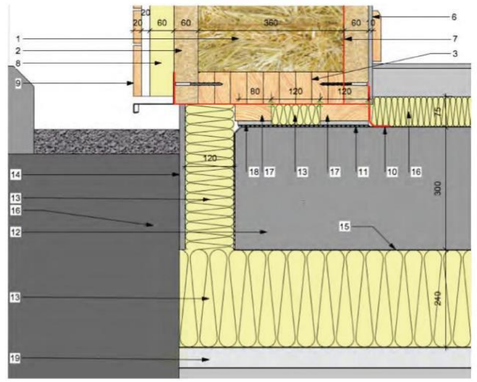
Thermal bridge free design:

$\Psi_e \leq 0.01$ W/(mK) for key connection details
with Ψ_e: linear heat transfer coefficient

$U_{w,standard\ window,\ installed} \leq 0.85$ W/(m²K)
with standard window: width 1.23 m; height 1.48 m

Interior surface temperatures minimum 17°C
at ϑ_{ext} = -10°C und ϑ_{int} = 20°C

CERTIFIED COMPONENT
Passive House Institute



Custom Build

Certified with Q-Mark and the PassivHaus Institute

ÖSTERREICHISCHES INSTITUT FÜR BAUTECHNIK
A-1010 Wien, Schenkenstraße 4
Tel.: +43(0)1-5336550
Fax: +43(0)1-5336423
E-Mail: mail@oib.or.at

Errichtet und notifiziert gemäß Artikel 10 der Richtlinie des Rates vom 21. Dezember 1988 zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedsstaaten über Bauprodukte (89/106/EWG)

OIB
Mitglied der EOTA

Europäische Technische Zulassung ETA-10/0032

Handelsbezeichnung *Trade name*	**WALDLAND Baustrohballen**
Zulassungsinhaber *Holder of approval*	**Waldland Vermarktungs GmbH** **Oberwaltenreith 10** **A-3533 Friedersbach**
Zulassungsgegenstand und Verwendungszweck *Generic type and use of construction product*	Dämmstoff auf Strohbasis zur Wärme und/oder Luftschalldämmung *Thermal and/or acoustic insulation material made of straw*
Geltungsdauer vom *Validity from* bis *to*	**12. 04. 2010** **11. 04. 2015**
Herstellwerk *Manufacturing plant*	**Werk 1**
Diese europäische technische Zulassung umfaßt *This European Technical Approval contains*	10 Seiten *10 pages*

EOTA
European Organisation for Technical Approvals
Europäische Organisation für Technische Zulassungen
Organisation Européenne pour l'Agrément technique

Custom Build

Mortgages, Product Certification via QMark allows high street lending

modcell

whitedesign modcell®

The ECO-SEE project aims to address an emerging health problem associated with modern low carbon buildings. Modern buildings have been developed to be very airtight, improving their energy efficiency and reducing their carbon footprint. However, these sealed environments have created unexpected side effects, with research showing that a build-up of potentially harmful chemicals in the air is potentially causing negative impacts on occupants.

The ECO-SEE project studies the use of innovative eco-building materials that will address poor air quality, while also radically improving the energy efficiency of buildings

European Commission

HORIZON 2020

NATURALLY HIGH PERFORMANCE INSULATION

isobio

IsoBio, aims to transform mainstream adoption of sustainable materials in building and construction - delivering significant energy efficiency improvements and wider environmental benefits.

The project runs from 2015 for four years, has a budget of €6,3M, and the development is planned in four significant phases. The first two will focus on taking the materials from idea to application, before emphasis switches to a transition from lab to demonstration scale.

research led

balehaus® custom homes

Super-insulated and Airtight
Heating MVHR and ASHP
all LED lighting all electric design
Rainwater Harvesting
Plasterboard Free - Compressed Straw Board CSB,
2kW PV per home
£1180m2

Custom Build

Portway, Bristol - Worlds first open market straw bale homes

‘Certificering in de circulaire economie’

Samengevat

Als beroepsuitoefenaar ‘ecologisch’ architect
- Toepassend, regelgeving volgend
- Innovatie stimulerend vanuit vraag

Als ontwikkelaar van biobased prefab bouwssysteem

- Investering?
- Tijdspad?
- Innovatie-remmend?

moodcell

helping you build a more sustainable future