
Sustainability
John Carter



# Take the One Planet Challenge

## If everyone lived as we do in the UK we'd need three planets to support us.

That's why we need One Planet Living. But the good news is reducing your environmental impact to a sustainable level is possible and can give you a better quality of life. The ten One Planet Living principles cover all aspects of your life from saving energy and reducing waste to your health and happiness. People all around the world are taking up the One Planet Living challenge.

## Calculate your impact

Use our questionnaire to calculate your ecological footprint and carbon emissions. We've got two options; choose the quick and easy version (5 minutes) or the full calculator (15 minutes) which gives more accurate results and a detailed action plan.

## Your Action Plan

After calculating your impact you'll get a personalised Action Plan packed with practical things you can do to achieve One Planet Living. We've included links to useful information and products that will make it easier for you to shrink your footprint.

Get Started ▶

Get Started and Calculate Your Impact

Already started using the One Planet Living Calculator? Retrieve your details here.




### 10 principles of sustainability

This Calculator & Action Plan is based on the 10 One Planet Living principles. Your Action Plan will help you achieve One Planet Living.

ONE PLANET LIVING®

Frequently Asked Questions | Find Out More

# CoP21

Conference of the Parties of the United Nations Convention on Climate Change.

*Agreed at CoP 21, in Paris, in late 2015, to limit global warming to 1.5 degrees Celsuis.*

*CoP26 was due to be held in Glasgow in Nov 2020 …….*

With 2° Celsius of warming, large parts of the world's surface will become less habitable. The people of these regions are likely to face wilder extremes: worse droughts in some places, worse floods in others, greater storms and, potentially, grave impacts on food supply. Islands and coastal districts in many parts of the world are in danger of disappearing beneath the waves.

*(Think, Fairbourne, on the west coast of Wales.)*



Meanwhile it’s business as usual: Heathrow airport’s proposed third runway, for example. Will Covid 19 force a re-think; or will the “don’t worry, we can make planes electric” faith in technology mentality win the day ?

# George Monbiot 2016

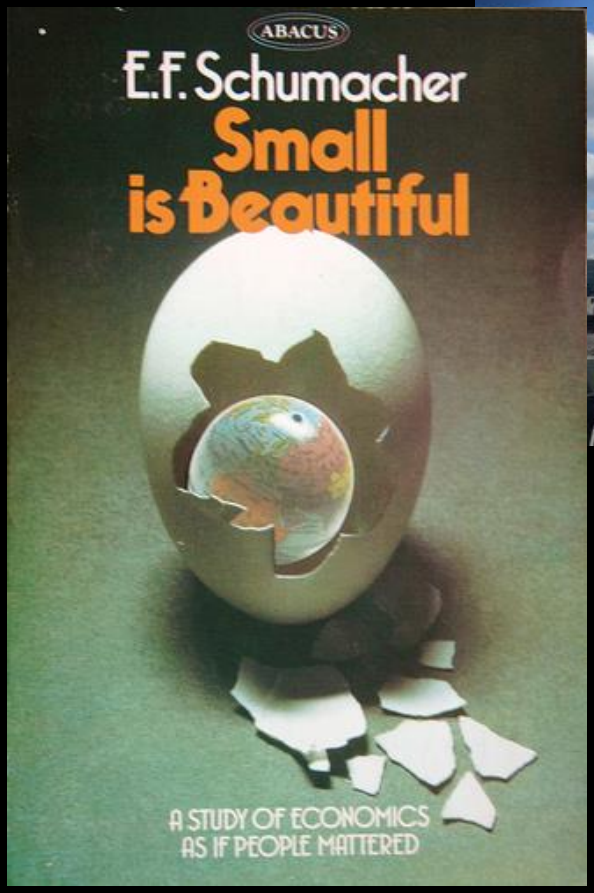
- “Sorry, but you cannot build new runways and prevent climate breakdown.
- The correct question is not “where?”. It is “whether?”. And the correct answer is no. The prime minister has just announced that her cabinet will recommend where a new runway should be built. Then there will be a consultation on the decision. There is only one answer that doesn’t involve abandoning our climate change commitments and our moral scruples: nowhere.
- The inexorable logic that should rule out new sources of oil, gas and coal also applies to the expansion of airports. In a world seeking to prevent climate breakdown, there is no remaining scope for extending infrastructure that depends on fossil fuels. The prime minister cannot uphold the Paris Agreement on climate change, that comes into force next month, and permit the runway to be built.”

- (Published in *The Guardian*, 19th October 2016.)


Sustainable ?
Just 15% of people in this country take 70% of the flights



Sharing resources – an equitable distribution …….






Big is better




I know, let’s just go electric ……

**7th Oct 2018**

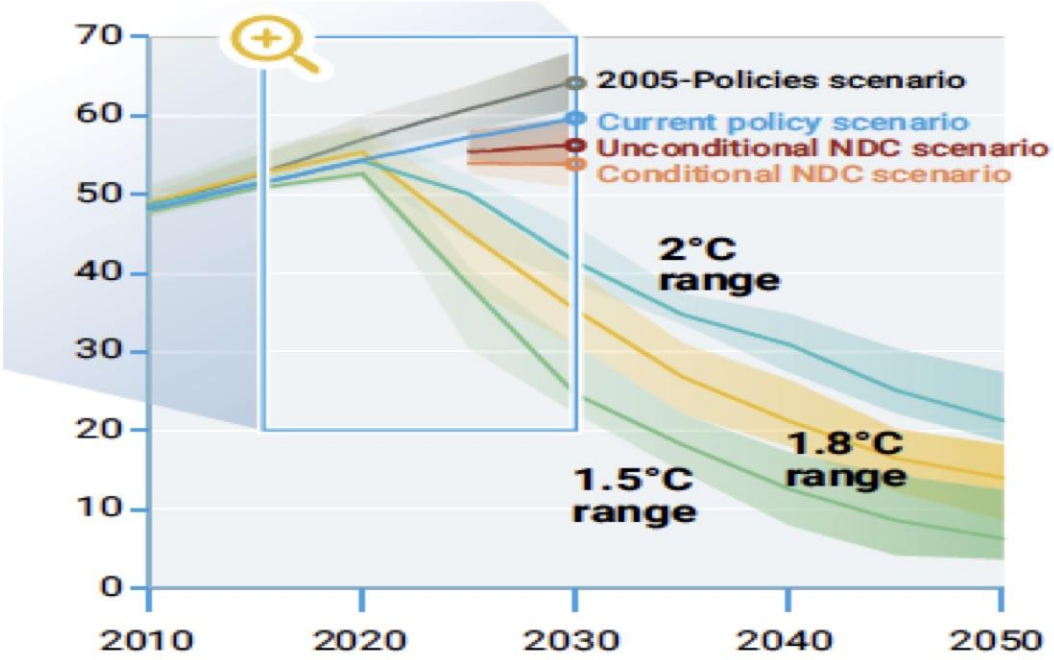
## Landmark UN scientists' report confirms difference between 1.5˚C & 2˚C global warming is ruinous



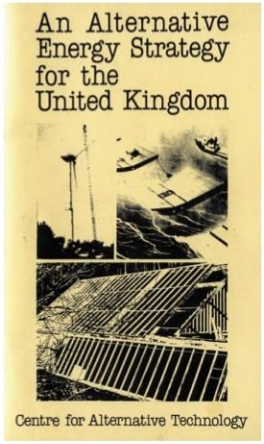

For 1.5˚C limit, emissions must be cut from 2010 levels by 45% by 2030, & net zero by 2050. This requires reconfiguring the human world within a generation.

UN environment programme

# Emissions Gap Report 2019



# We need to become net zero asap!




1977




2007




2010




2013




2014




2019

# Power-down & Power-up

Through integrating a smart approach to:

**buildings, transport, energy & land-use**

the UK's greenhouse gas emissions ***<u>can</u>*** be rapidly reduced to net zero.

- Using only proven technology
- Whilst also considering 'resilience'



# Power down from extreme energy normality:

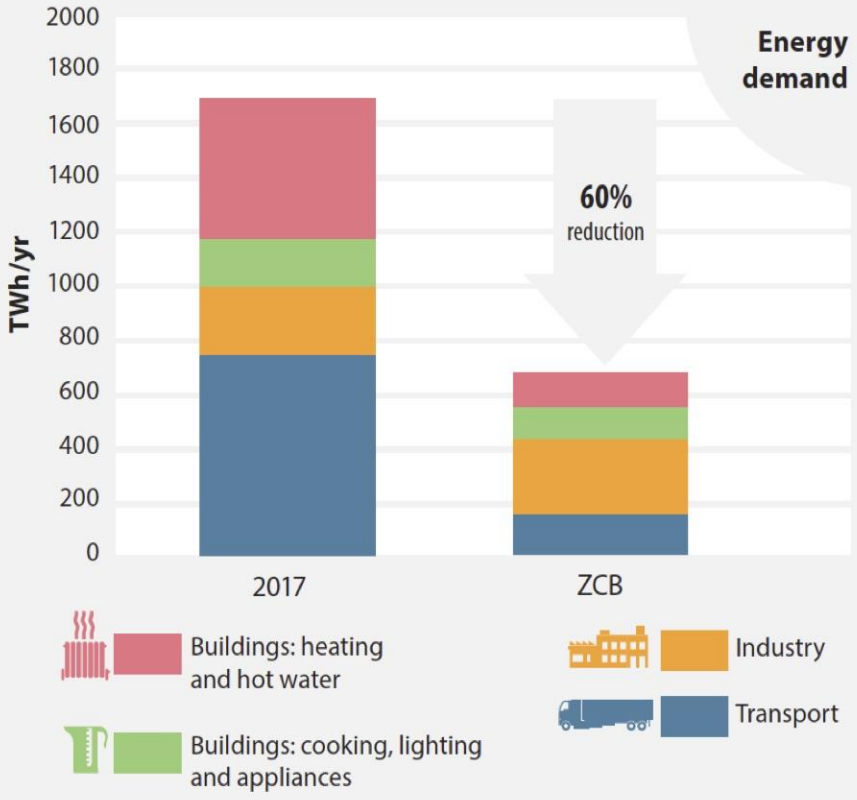
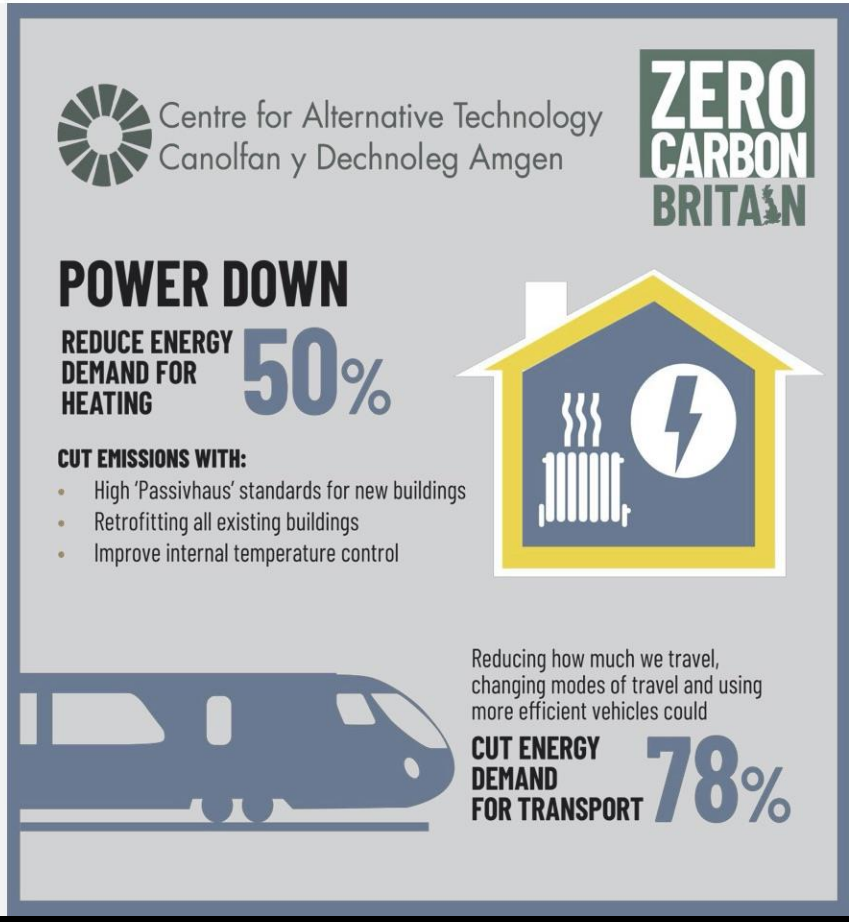
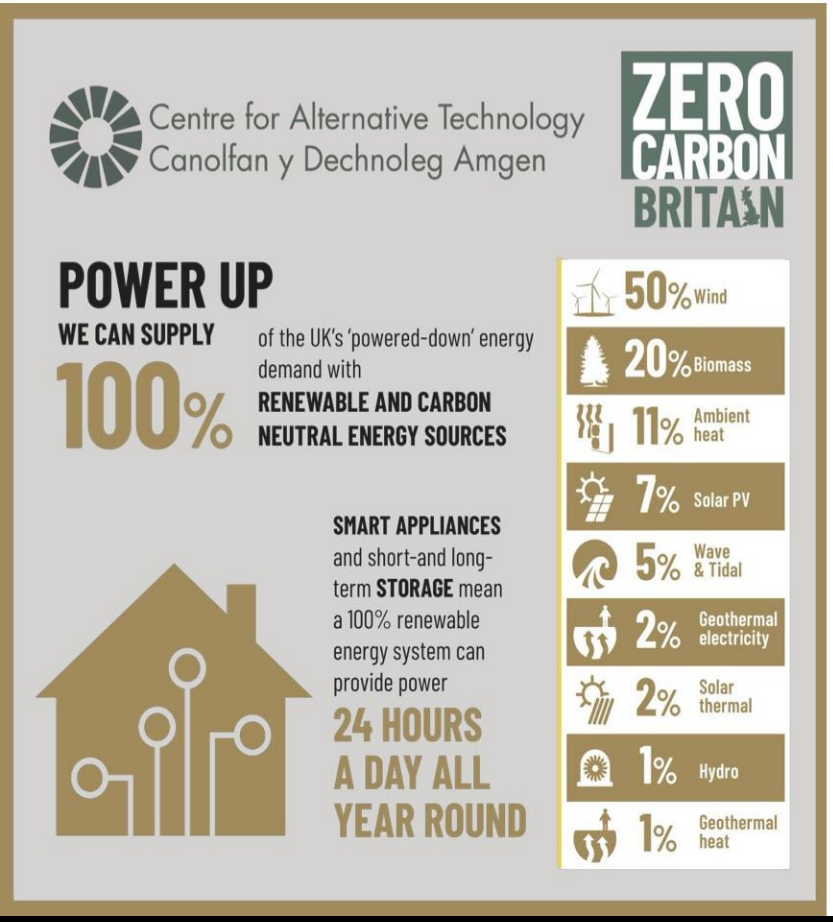
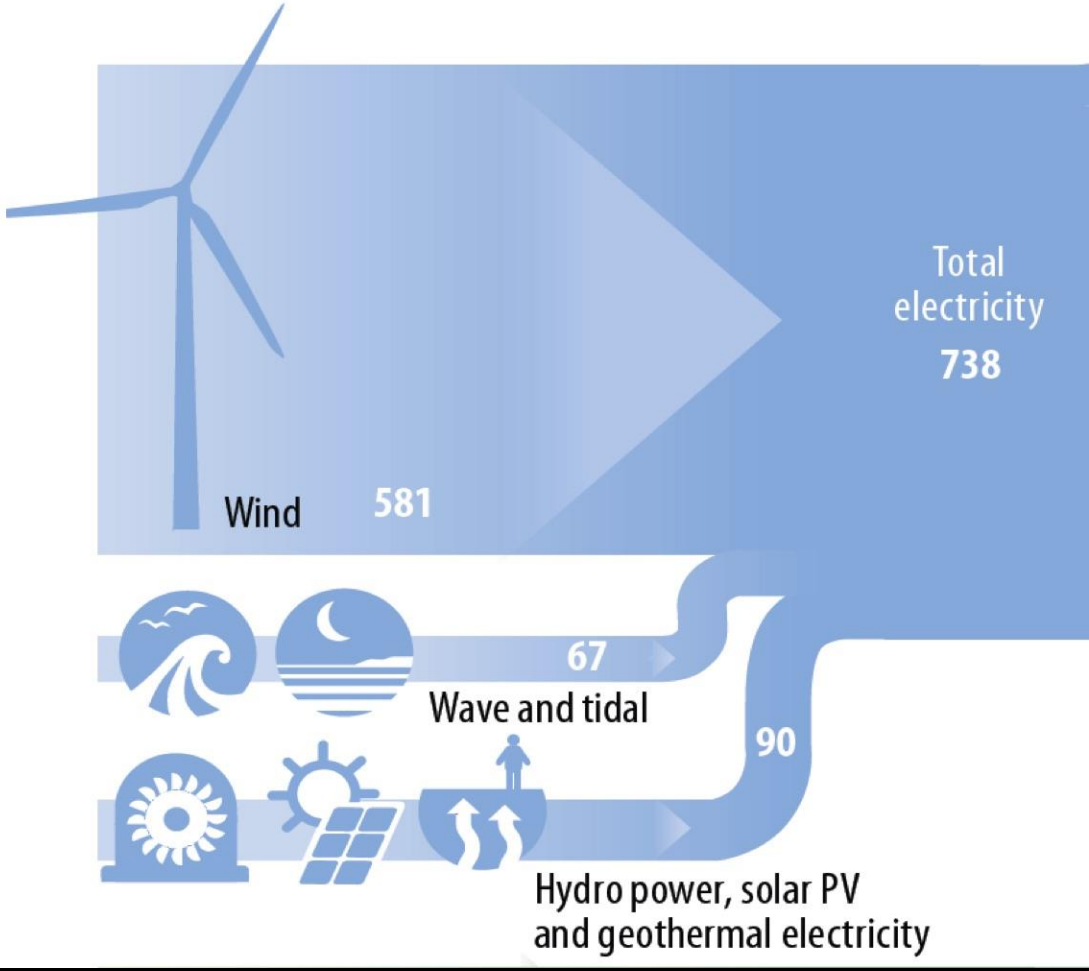



Figure 3.4: Total annual energy demand by sector in the UK in 2017 (BEIS, 2018) and in our scenario.



# Powering up Britain with 100% renewables:



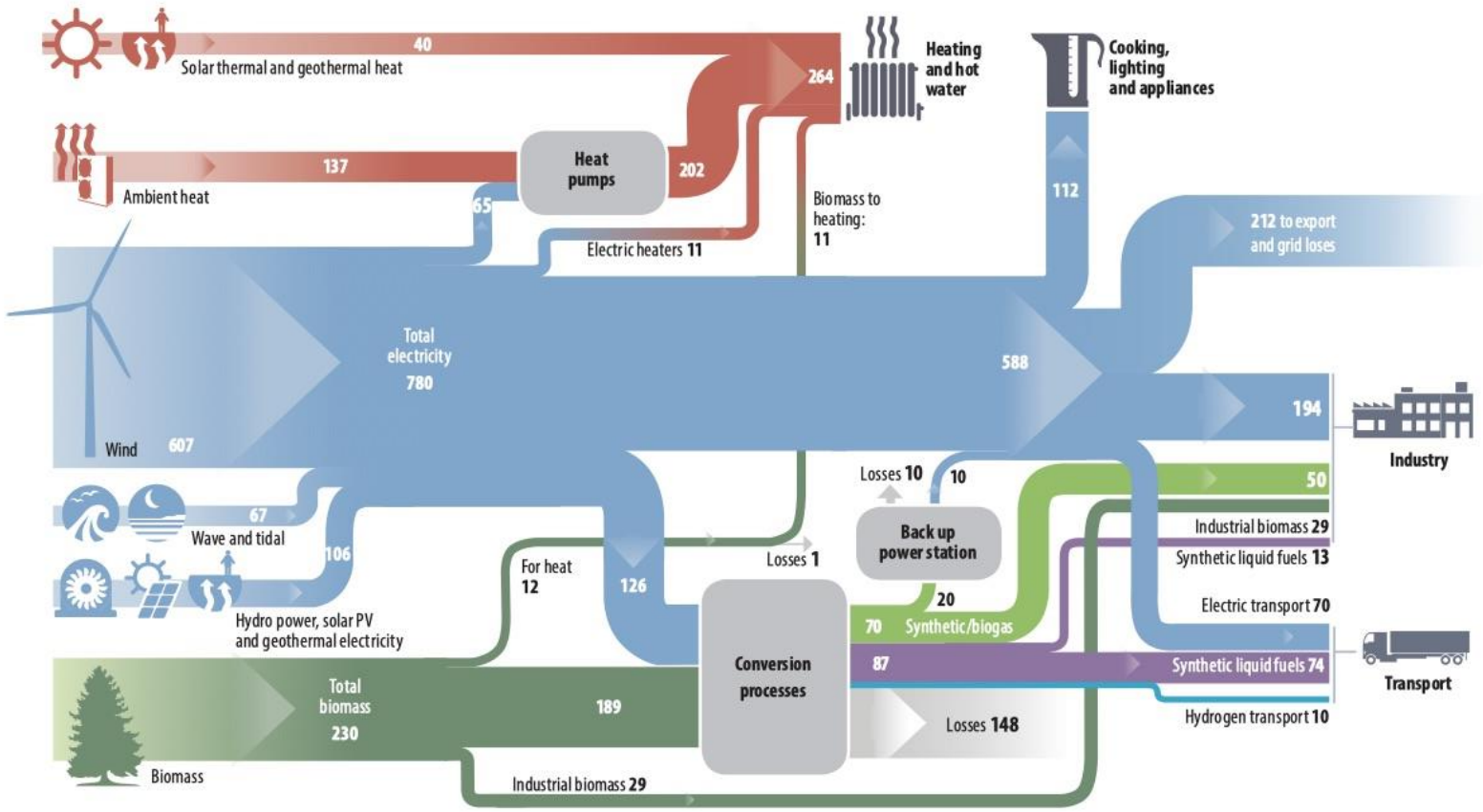



Figure 3.18: Energy flows in our scenario – from supply to demand. Numbers used here are rounded up or down to the nearest TWh and so inputs and outputs may not add up exactly.

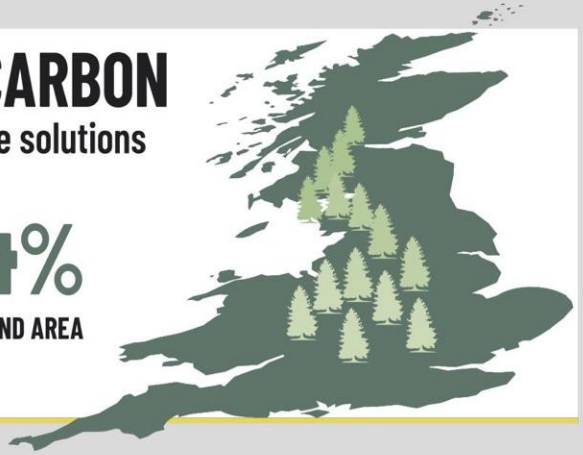
Centre for Alternative Technology
Canolfan y Dechnoleg Amgen

ZERO CARBON BRITAIN

# CAPTURE CARBON

## with natural climate solutions

**FOREST AREA** is **DOUBLED** to **24%** of the **LAND AREA** of the UK



**RESTORE 50% OF UK PEATLANDS**



Each year, on average, we could **CAPTURE** around **47 MILLION TONS OF $CO_2$ EMISSIONS**

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ZERO CARBON BRITAIN

# HEALTHY HAPPY LIVES

- **BETTER BALANCED DIETS**
- **RESTORED AIR QUALITY**
- **RESTORED BIODIVERSITY**
- **SUSTAINABLE, THRIVING ECONOMY**



Through **dietary change**, **food waste reduction** and **improved agricultural** practices we can provide a **healthy, sustainable diet**, whilst also reducing food imports.

## Land use summary:

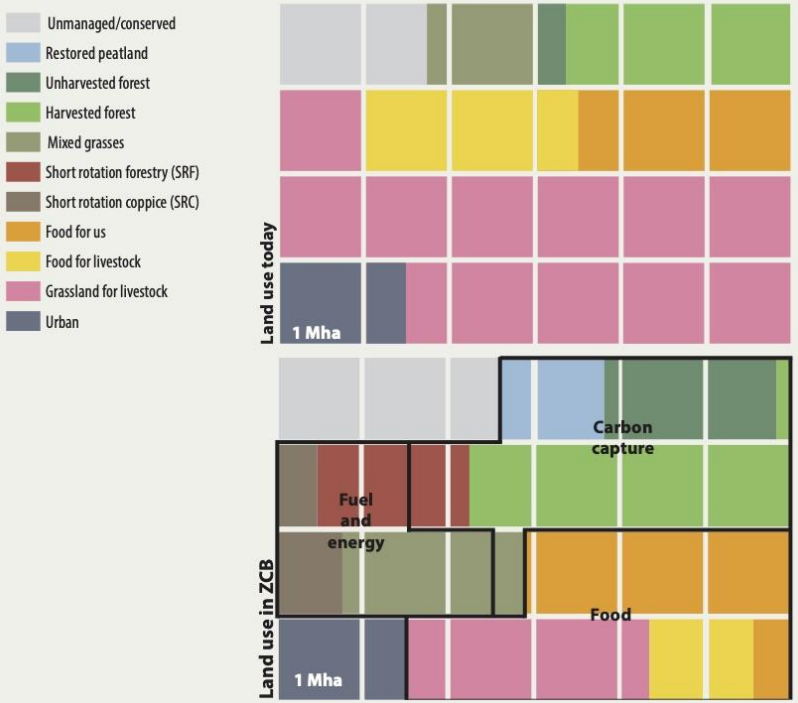



Figure 3.24: Change in land use between today (based on data from Morton et al. (2008), Forestry Commission (2007), DEFRA (2012), NERC (2008), Bain et al. (2011) and Read et al. (2009)) and our scenario. Approximate areas dedicated to providing food, fuel and energy, and carbon capture are shown in our scenario.

- Agricultural GHG emissions are reduced from 45.6 MtCO2e to about 19.7 $MtCO_2e$ per year via a combination of dietary changes, waste reduction, elimination of conversion of land to agricultural use and improved land management practices.
- There is much less protein in the diet from meat and dairy sources, and more from plant sources like beans, legumes, cereals and vegetables.
- This results in a healthier and more balanced average diet for the UK population.
- The amount of land required to grow grass for livestock is only a quarter of the area used today (2.8 million hectares (Mha). The same amount of cropland is used, though more of it is used to grow food for people, rather than feed for livestock.
- Whilst re-purposing this land to cater for other needs in our scenario, it is important not to plough up grassland as this can release carbon dioxide, so grassland is converted to use for biomass and wood production and habitat restoration.

# So we can go from this…

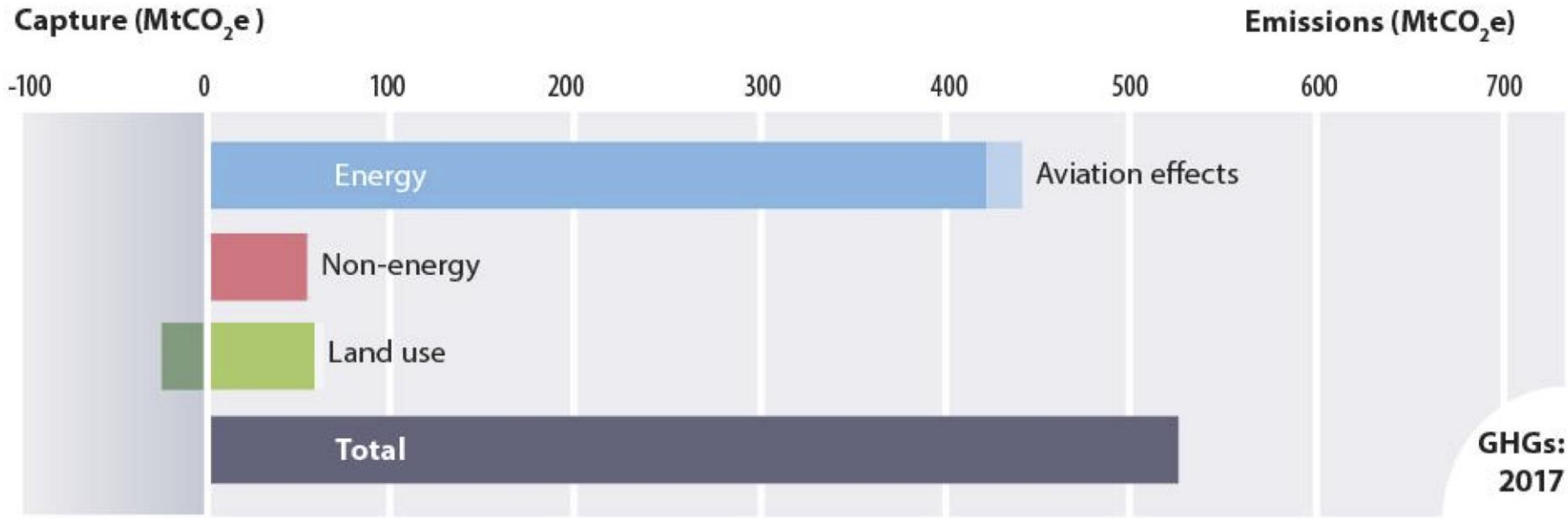



Figure 3.1: UK Greenhouse gas emissions in 2017, including international aviation and shipping, and the enhanced effect of emissions from aviation (BEIS, 2019).

# … to this - net zero emissions is achievable!

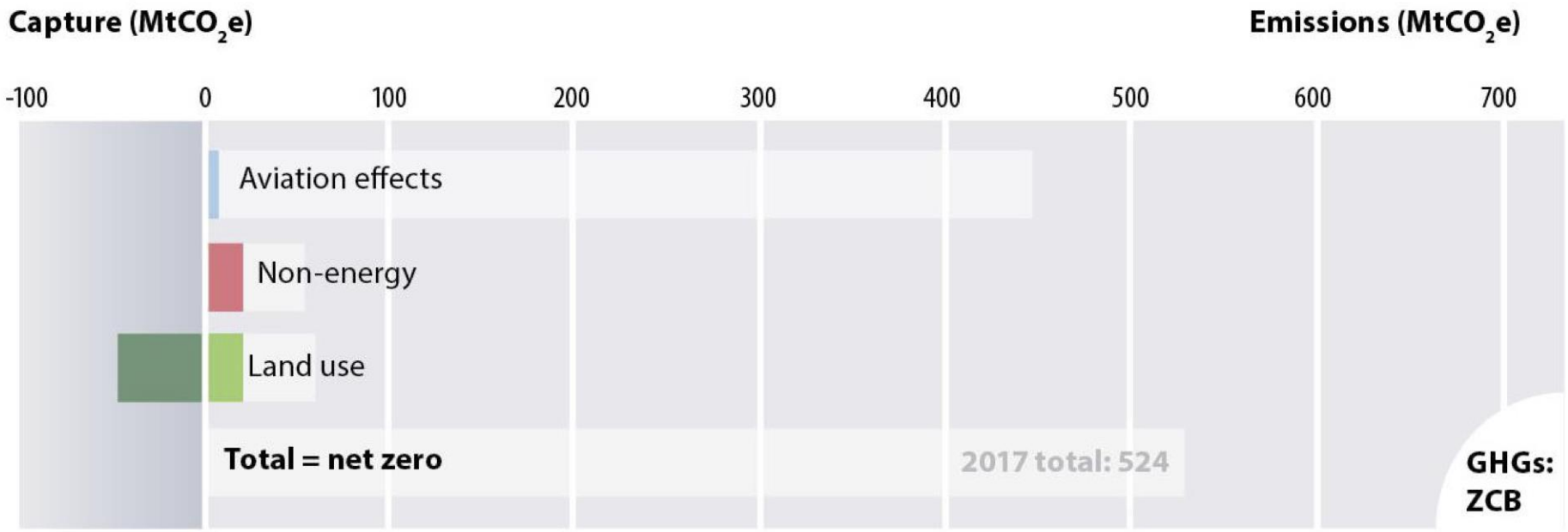



Figure 3.35: Carbon captured and greenhouse gas emissions for the UK in our scenario relative to 2017, including international aviation and shipping and the enhanced effect of emissions from aviation. Total emissions sum to net zero.

# Understanding where we are today – is this really normal??







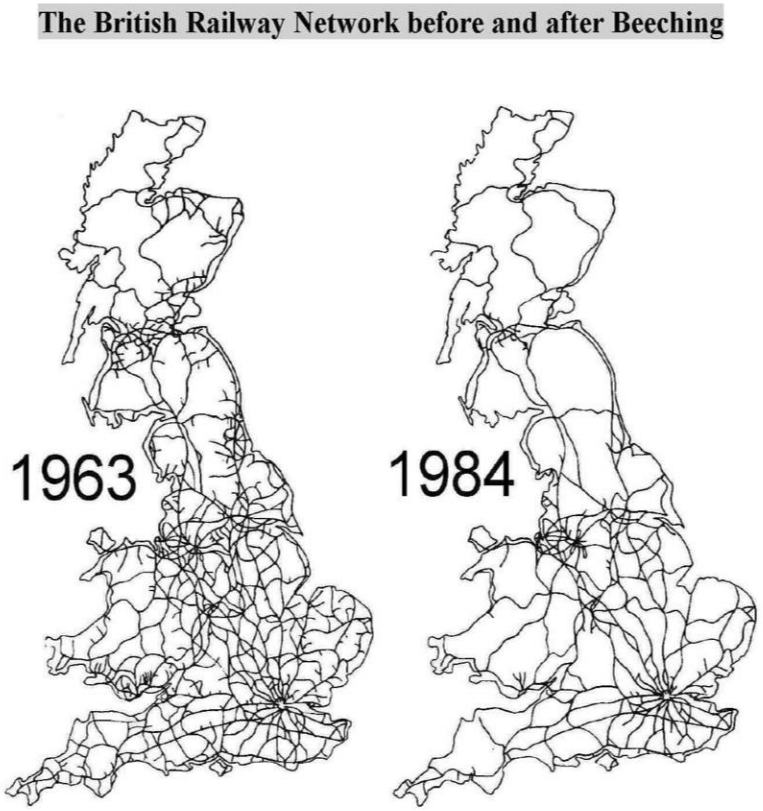




# Un-picking our External Infrastructure which makes us consume more:










# Un-picking our Internal infrastructure which makes us consume more:















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# UK Parliament declares climate change emergency

9 hours ago

Share




MPs have approved a motion to declare an environment and climate emergency.





TUE, SEP 4

Launch of Zero Carbon Lancaster & Morecambe

# ZERO CARBON WALES

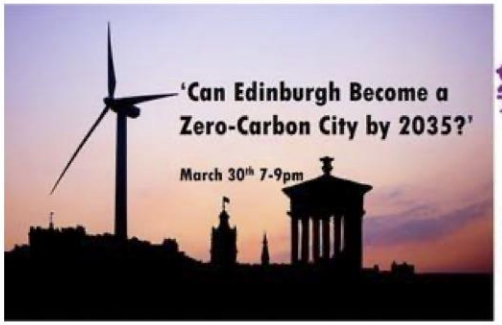



WELCOME TO **CAMBRIDGE**

$0\ CO_2$

ZERO CARBON CITY

**ZERO** Carbon (Scotland)




British Science Association

Friends of the Earth Scotland

# Zero Carbon Yorkshire

# ZERO CARBON LIVERPOOL 2040

**MAKING IT HAPPEN**

Zero Carbon Liverpool will be running two local workshops:

## BUSINESS ENERGY WORKSHOP

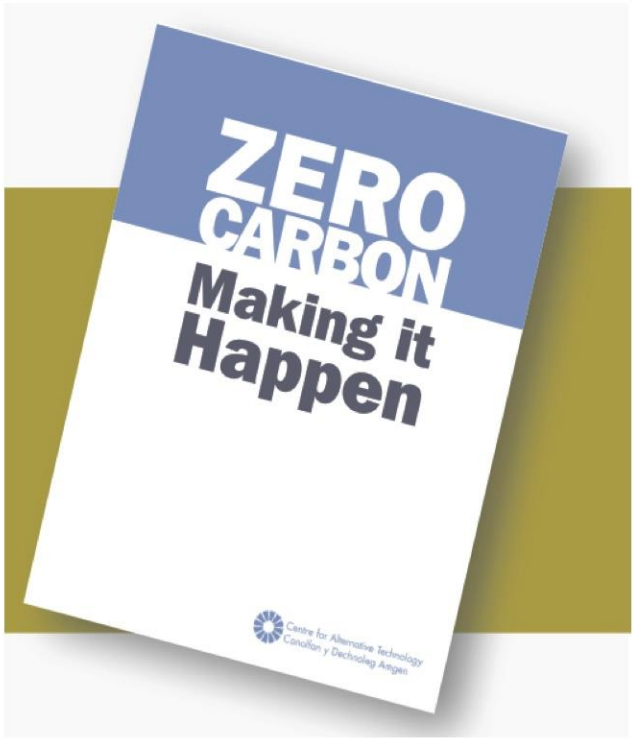
18th May, Mann Island, Liverpool
10:00-16:30

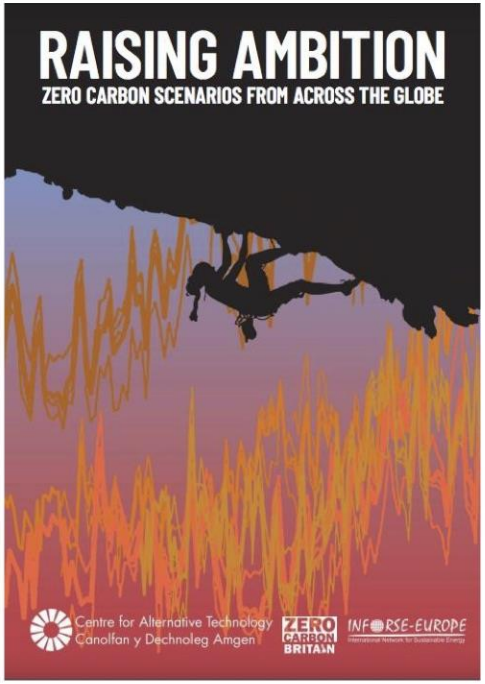
Workshop for businesses, corporations, social enterprises, strategic bodies and political leaders. Sign up is via Eventbrite.
Places are limited.

# ZERO CARBON WEDMORE

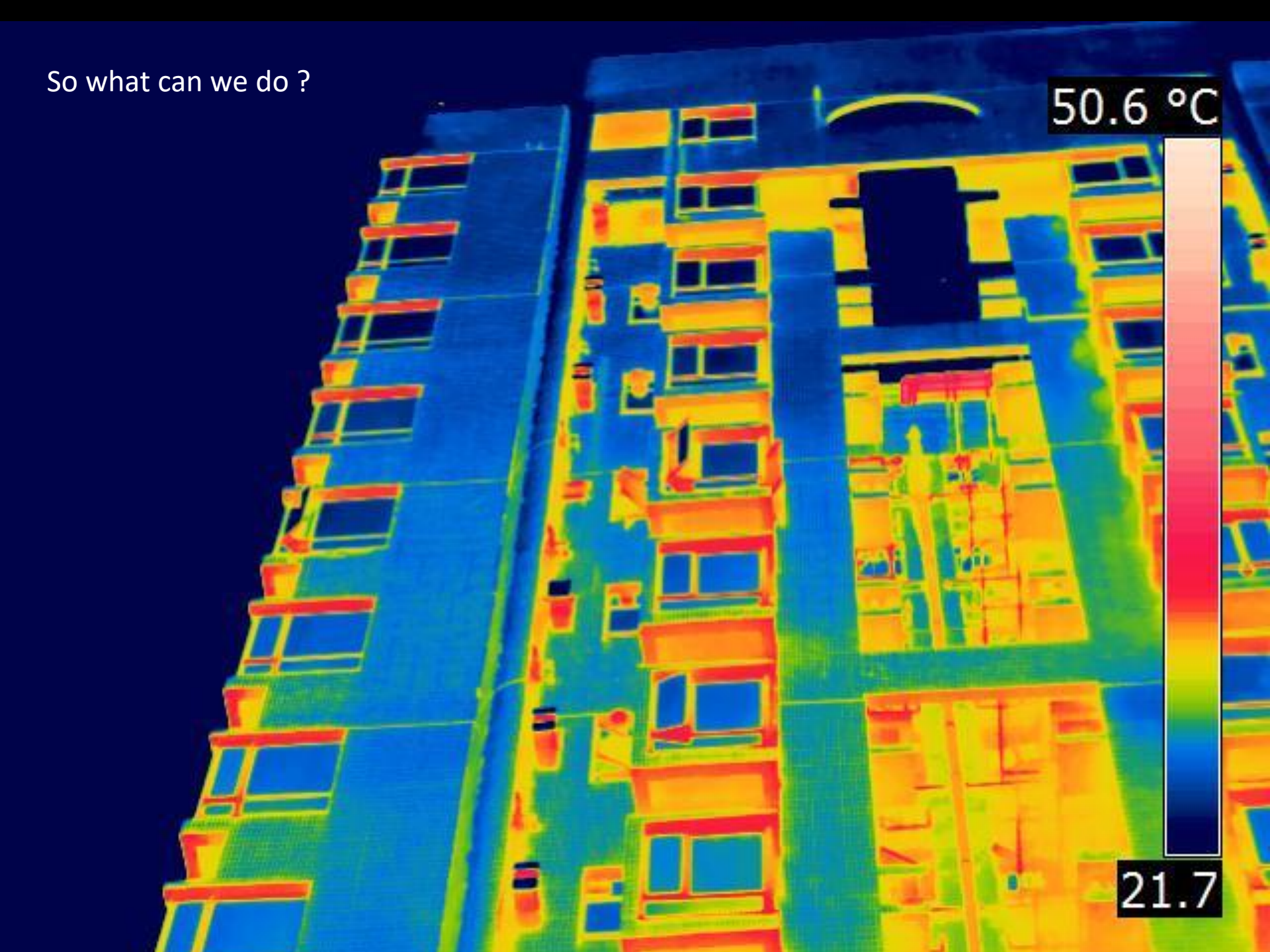
# Free to download from www.cat.org.uk

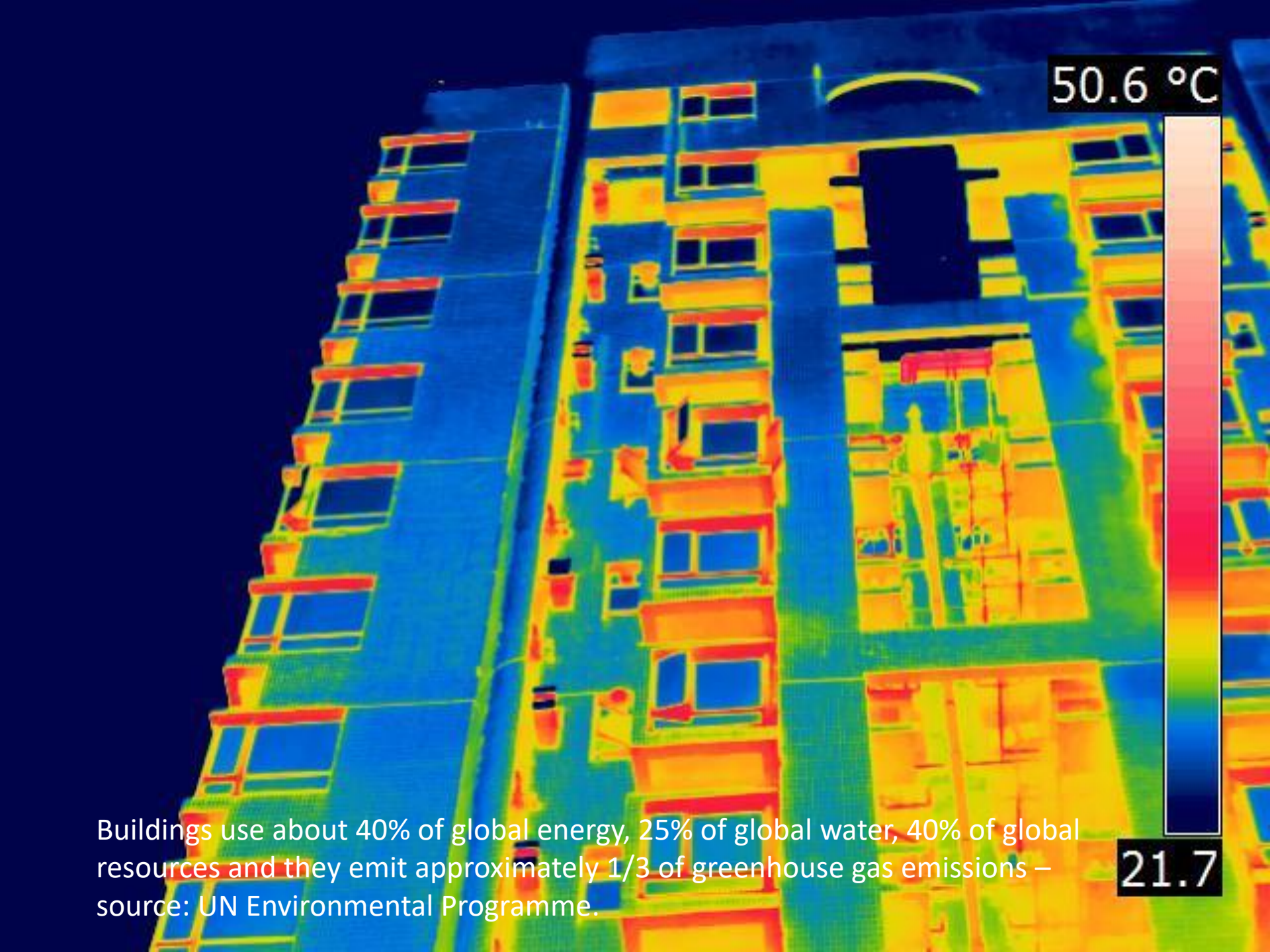


So what can we do ?

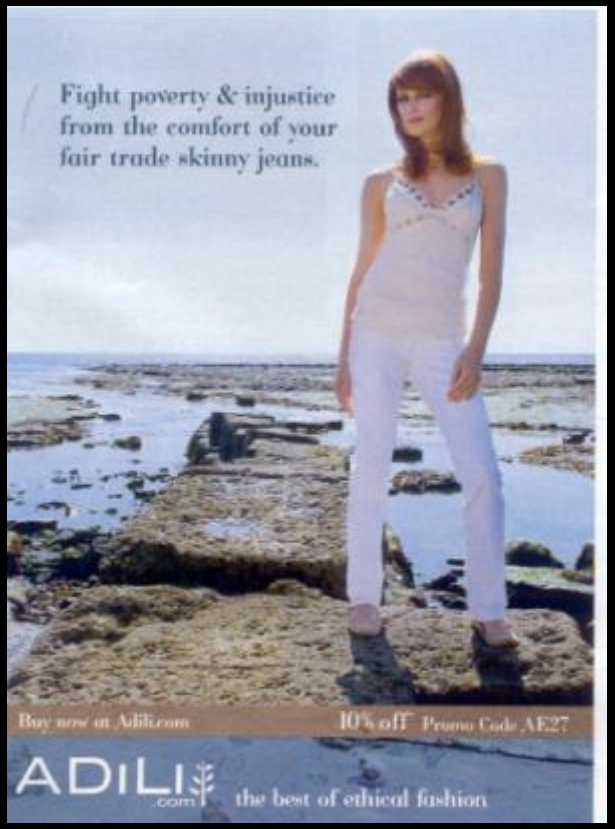





Buildings use about 40% of global energy, 25% of global water, 40% of global resources and they emit approximately 1/3 of greenhouse gas emissions – source: UN Environmental Programme.



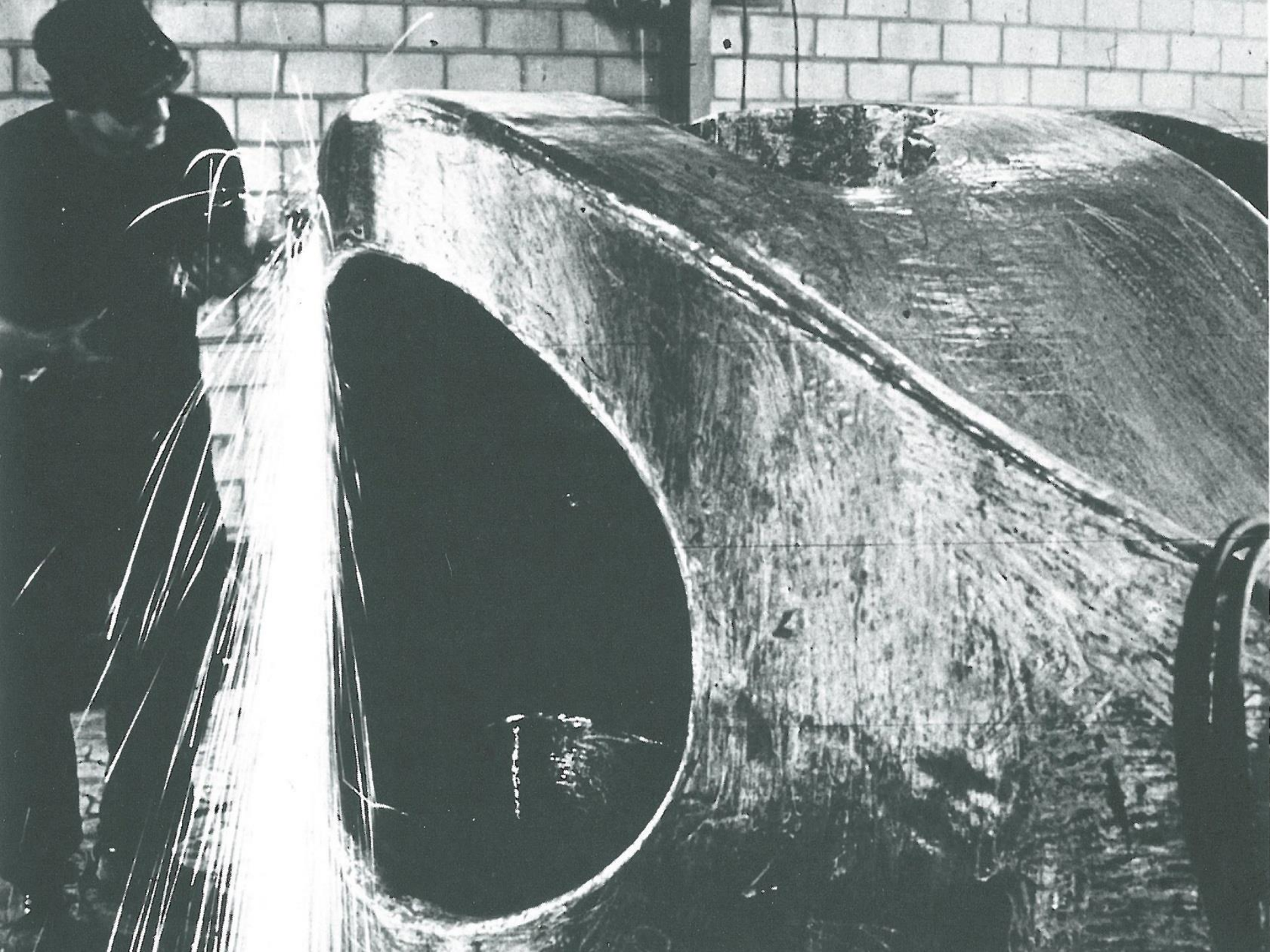

Hellman
Emperor's NEW (SUSTAINABLE) CLADDING
"WOULDN'T THE MOST SUSTAINABLE SOLUTION BE NOT TO BUILD IT AT ALL?"


Fight poverty & injustice from the comfort of your fair trade skinny jeans.
Buy now at Adili.com
10% off Promo Code AE27
ADILI .com
the best of ethical fashion


Wow, these stockings have a 30% smaller carbon footprint than normal ones. I must buy two pairs!
CRACKERS
SWEAT-SHOP-FREE
ECO-LEES
Sugar
I'm CARBON NEUTRAL
HD DiVX MPEG-4/J
ORGANIC HORMONE-FREE
DVD PLAYER

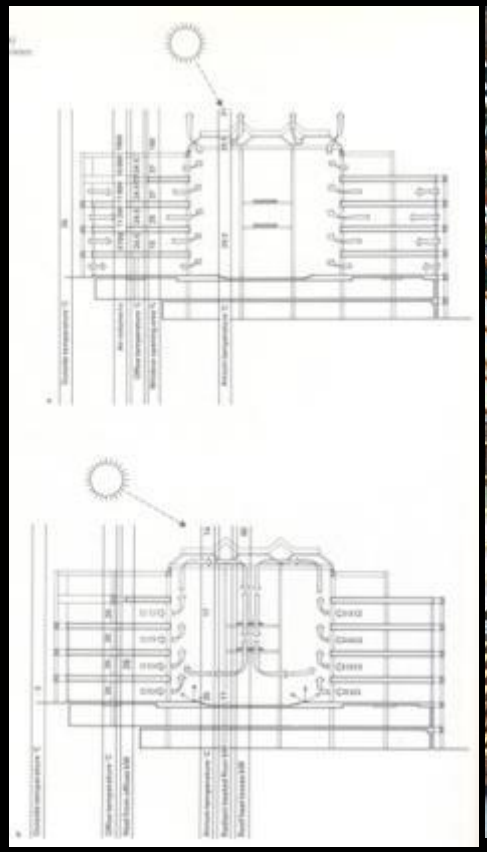

[redacted] THERMAL WINDOWS.
THE NATURE OF EFFICIENCY.



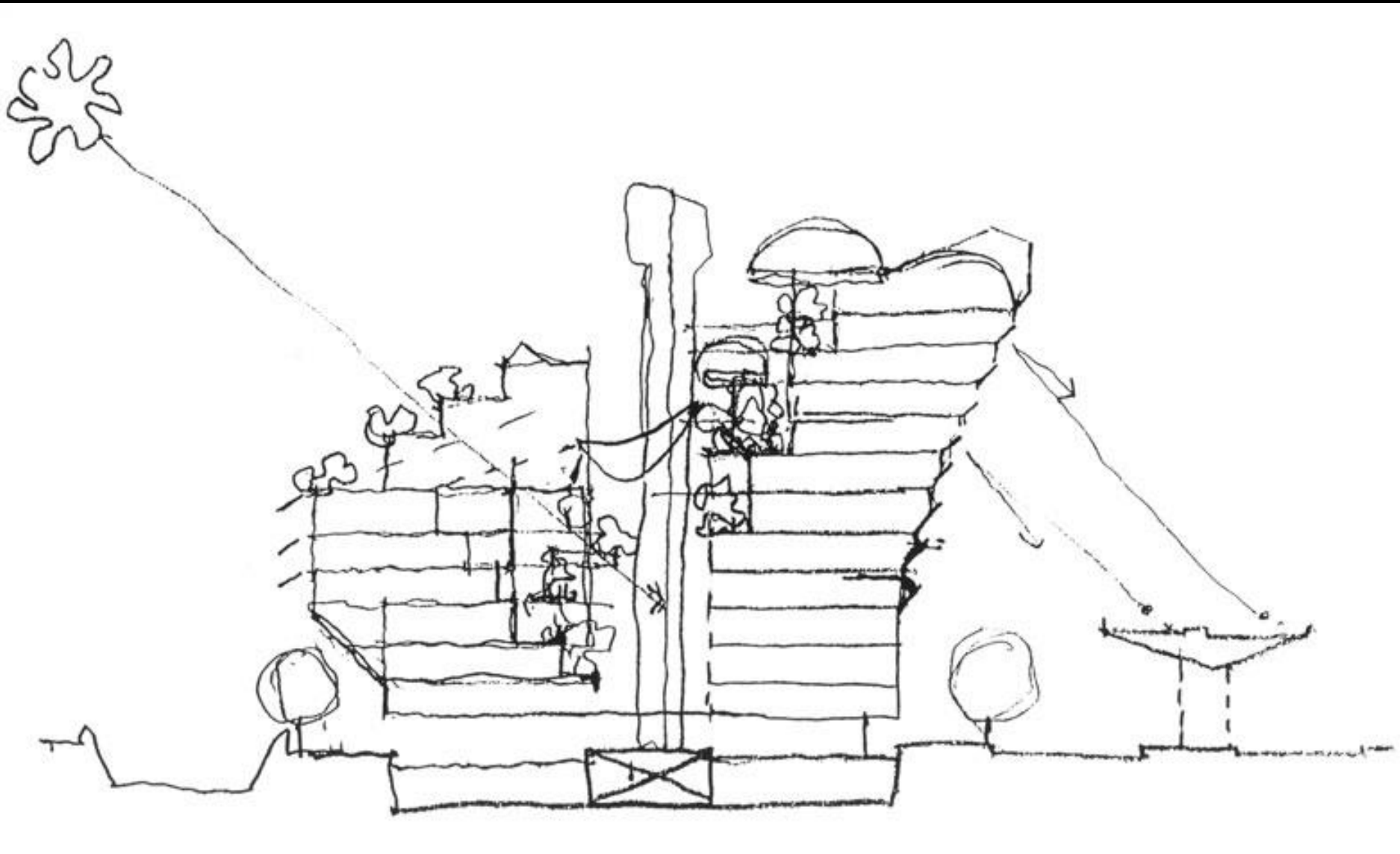



EDVARD MUNCH
EDVARD MUNCH
L'ŒIL MODERNE
Centre Pompidou





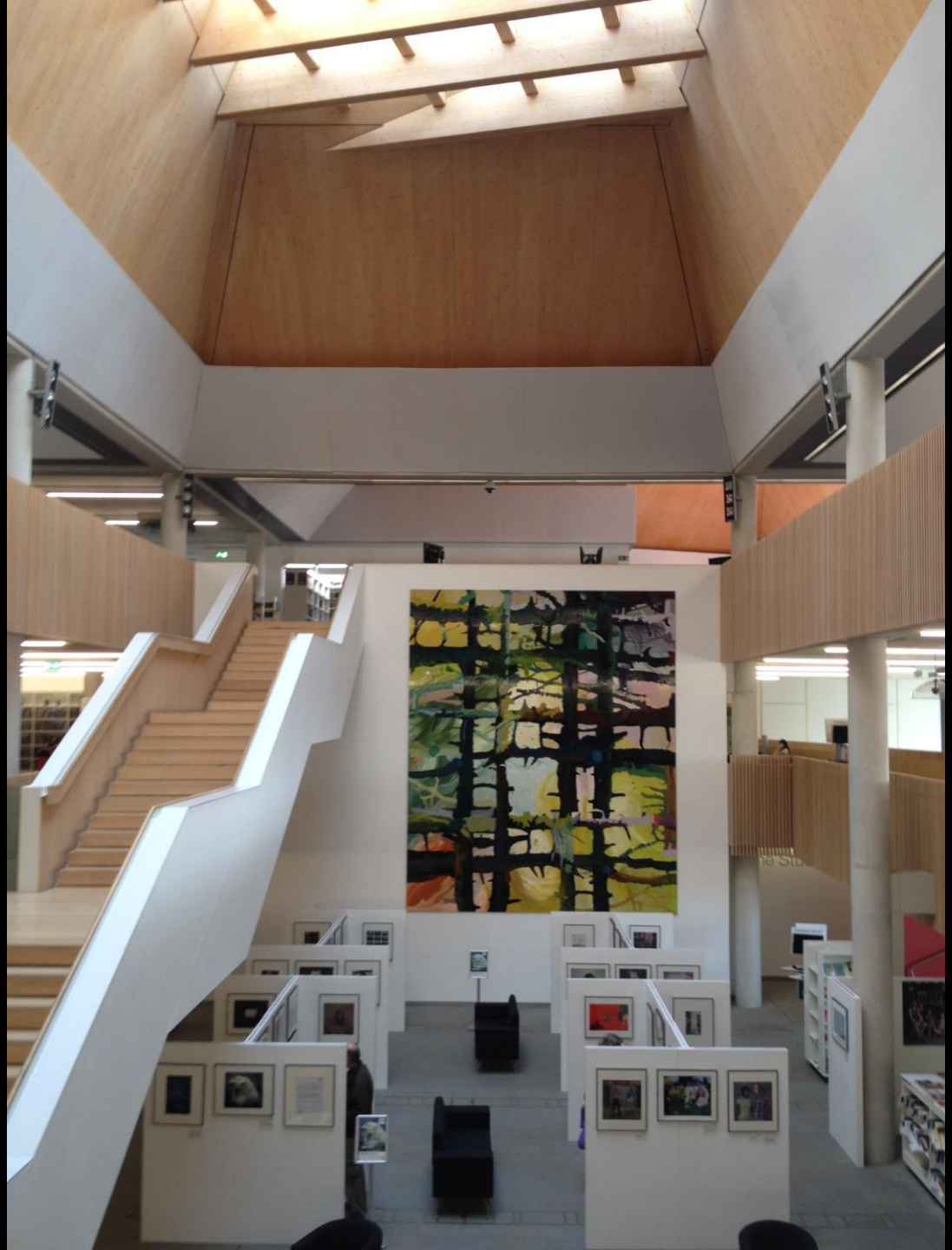






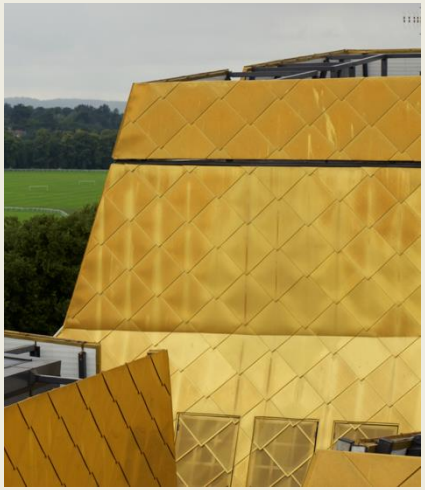
# ENVIRONMENTAL DESIGN
## Building Form

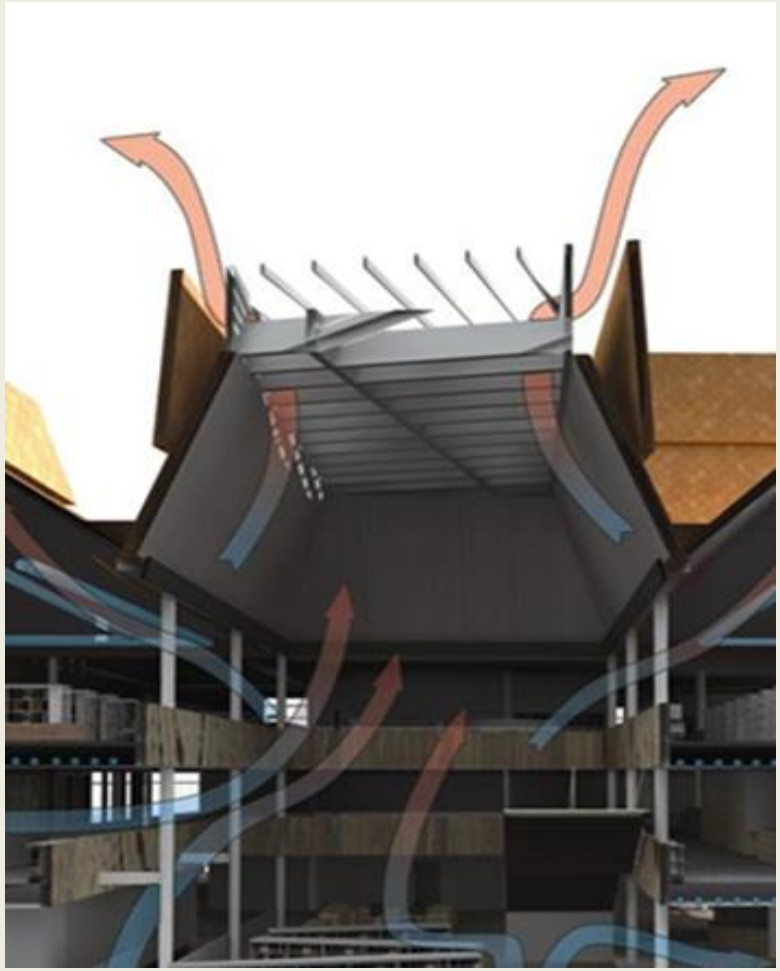




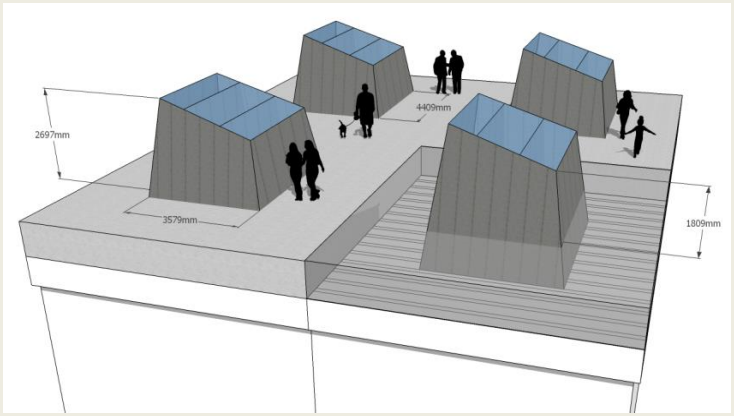
# ENVIRONMENTAL DESIGN
## The roof cones

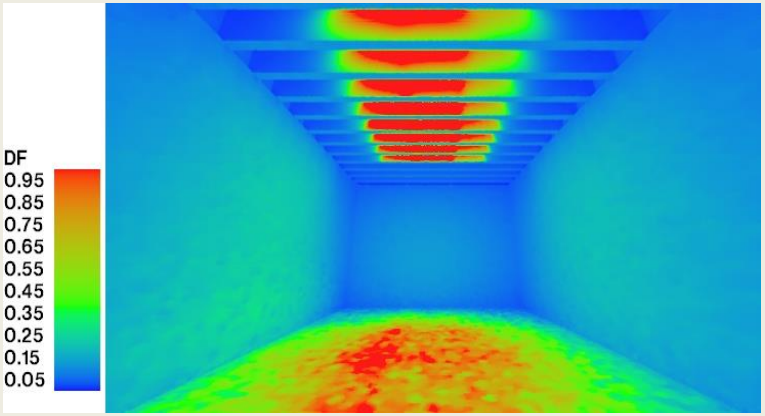






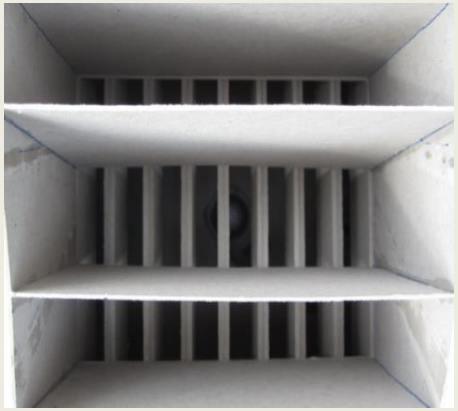
# Physical models







MAX FORDHAM















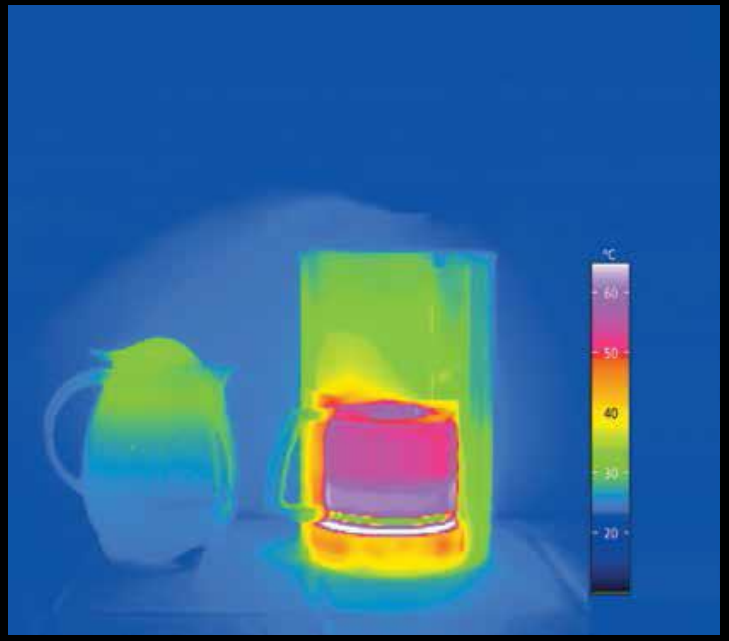





Spaces are provided for business support, with open plan offices and hatcheries for start-ups alongside seminar rooms






°C
60
50
40
30
20



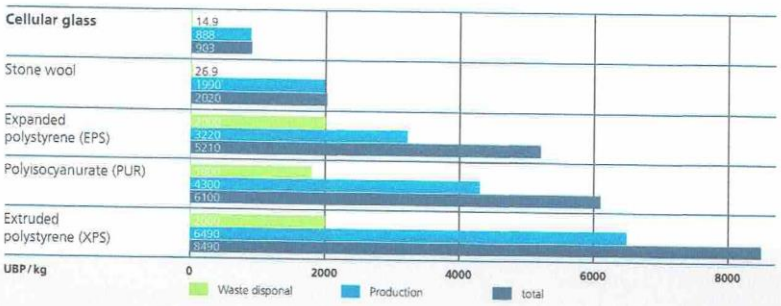



Kings

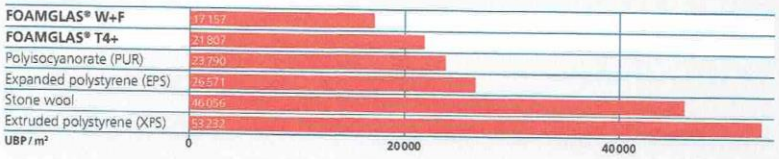

WARMCEL

## FOAMGLAS® stands comparison

The environemental pollution score (UBP 2006**) for the production and waste disposal of FOAMGLAS® is 903 points/kg (insulation). This puts FOAMGLAS® into the pole position in eco-balance. Other insulation products show points between 2020 (stone wool) anc 8490 (Extruded polystyrene).




Compared to surfaces, with a specified insulation value of 0,20 W/m²K, FOAMGLAS® performs very well. The environmental pollution score (UBP 2006**) of cellular glass is 17 157 points (FOAMGLAS® W+F), 21 807 points (FOAMGLAS® T4+) per square meter. Other insulation products show 23 790 points (PUR), 26 571 points (EPS), 46 056 points (stone wool) and 53 232 points (XPS) for an identical U-value (see table).




| Insulation | ? | ?D* | d | weight per m² | UBP* per kg | UBP per m² |
|---|---|---|---|---|---|---|
| | kg/m³ | W/mK | m | kg/m² | UBP/kg | UBP/m² |
| **FOAMGLAS® T4+** | **115** | **0.041** | **0.21** | **24.15** | **903** | **~ 21 807** |
| **FOAMGLAS® W+F** | **100** | **0.038** | **0.19** | **19.00** | **903** | **~ 17 157** |
| Polyisocyanorate (PUR) | 30 | 0.026 | 0.13 | 3.90 | 6100 | ~ 23 790 |
| Stone wool | 120 | 0.038 | 0.19 | 22.80 | 2020 | ~ 46 056 |
| Expanded polystyrene (EPS) | 30 | 0.034 | 0.17 | 5.10 | 5210 | ~ 26 571 |
| Extruded polystyrene (XPS) | 33 | 0.038 | 0.19 | 6.27 | 8490 | ~ 53 232 |

* The data are taken from building database KBOB/EMPA, june 2009.

** The environemental pollution score (UBP 2006) quantifies the pollution coming from resources, water consumption, emissions into air, water and ground and also for the waste disposal. The environment pollution through grey energy and global warming are included in the UBP score.

# INVENTORY OF CARBON & ENERGY (ICE) SUMMARY

| Materials | Embodied Energy & Carbon Coefficients | | | Comments |
|---|---|---|---|---|
| | EE - MJ/kg | EC - kgCO2/kg | EC - kgCO2e/kg | EE = Embodied Energy, EC = Embodied Carbon |
| Aggregate | | | | |
| General (Gravel or Crushed Rock) | 0.083 | 0.0048 | 0.0052 | Estimated from measured UK industrial fuel consumption data |
| Aluminium | Main data source: International Aluminium Institute (IAI) LCA studies (www.world-aluminium.org) | | | |
| General | 155 | 8.24 | 9.16 | Assumed (UK) ratio of 25.6% extrusions, 55.7% Rolled & 18.7% castings. Worldwide average recycled content of 33%. |
| Virgin | 218 | 11.46 | 12.79 | |
| Recycled | 29.0 | 1.69 | 1.81 | |
| Cast Products | 159 | 8.28 | 9.22 | Worldwide average recycled content of 33%. |
| Virgin | 226 | 11.70 | 13.10 | |
| Recycled | 25.0 | 1.35 | 1.45 | |
| Extruded | 154 | 8.16 | 9.08 | Worldwide average recycled content of 33%. |
| Virgin | 214 | 11.20 | 12.50 | |
| Recycled | 34.0 | 1.98 | 2.12 | |
| Rolled | 155 | 8.26 | 9.18 | Worldwide average recycled content of 33%. |
| Virgin | 217 | 11.50 | 12.80 | |
| Recycled | 28 | 1.67 | 1.79 | |
| Asphalt | | | | |
| Asphalt, 4% (bitumen) binder content (by mass) | 2.86 | 0.059 | 0.066 | 1.68 MJ/kg Feedstock Energy (Included). Modelled from the bitumen binder content. The fuel consumption of asphalt mixing operations was taken from the Mineral Products Association (MPA). It represents typical UK industrial data. Feedstock energy is from the bitumen content. |
| Asphalt, 5% binder content | 3.39 | 0.064 | 0.071 | 2.10 MJ/kg Feedstock Energy (Included). Comments from 4% mix also apply. |
| Asphalt, 6% binder content | 3.93 | 0.068 | 0.076 | 2.52 MJ/kg Feedstock Energy (Included). Comments from 4% mix also apply. |
| Asphalt, 7% binder content | 4.46 | 0.072 | 0.081 | 2.94 MJ/kg Feedstock Energy (Included). Comments from 4% mix also apply. |
| Asphalt, 8% binder content | 5.00 | 0.076 | 0.086 | 3.36 MJ/kg Feedstock Energy (Included). Comments from 4% mix also apply. |
| Bitumen | | | | |

Extract from: www.circularecology.com - free download of their inventory of carbon and energy (ICE) database.


Wood-Mizer


LOVE



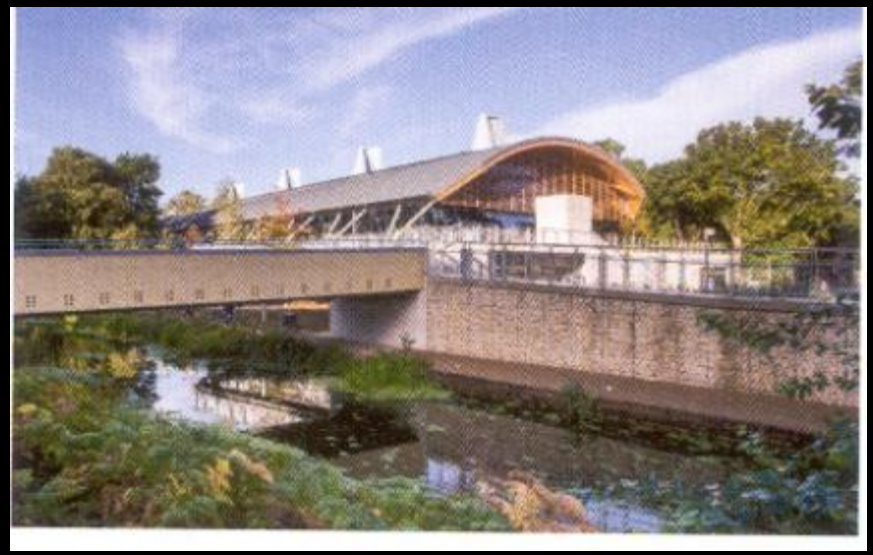


*Round-wood pole roof at Hooke Park, Dorset; engineers: Buro Happold.*



*The interior of the grid-shell building at the Weald and Downland Museum of Ancient Buildings in Sussex, here being used for a green building fair; architects: Edward Cullinan, engineers: Buro Happold.*








IKO
IKO
IKO
IKO
ght
BOSCH











TRADITIONAL LOW-TECH, LOW-ENERGY/ LOW-CARBON MATERIALS

HIGH PERFORMANCE HIGH-CARBON MATERIALS

HIGH PERFORMANCE, BUT ALSO HIGH IMPACT

LOW-CARBON MATERIALS PROVIDE MOST OF THE BULK, POSSIBLY NET-NEGATIVE-C

# Peter Harper's 80%-20% principle:

- Aim for 80% low-carbon Materials & 20% meta-industrial materials in building projects.

- For example, glass is high carbon, but it is long-lived and has huge energy benefits (day-lighting and solar gain).
- For example, straw and hemp-lime are low-carbon, eminently renewable and help to create healthy buildings.


Time for a a stretch and a cup of tea ?

# Passivhaus



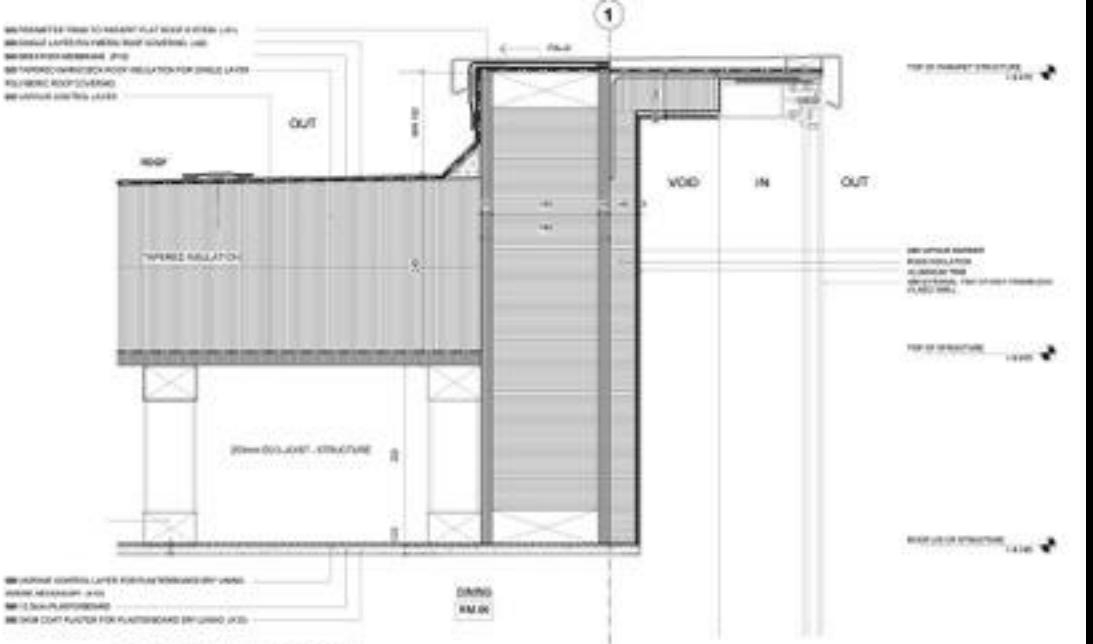
# Wolfgang Feist

“I was working as a physicist. I read that the construction industry had experimented with adding insulation to new buildings and that energy consumption had failed to reduce.

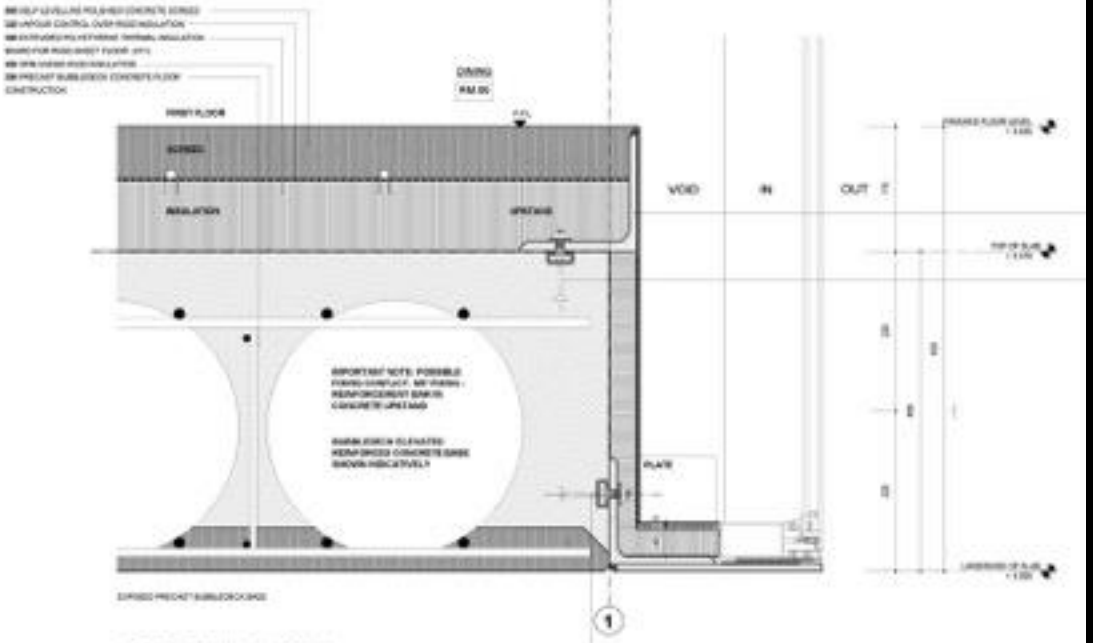
This offended me – it was counter to the basic laws of physics. I knew that they must be doing something wrong. So I made it my mission to find out what; and to establish what was needed to do it right.”



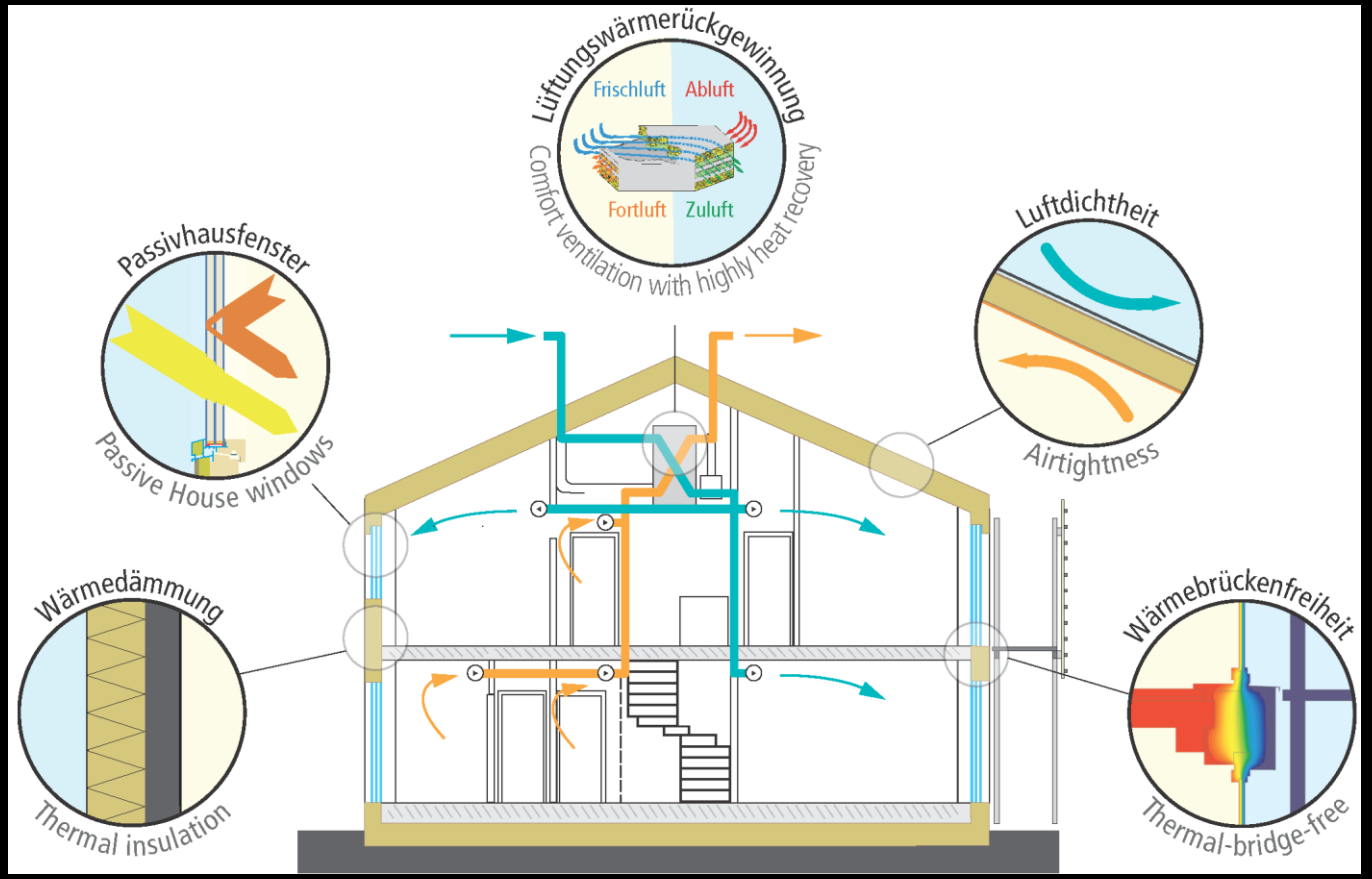





GLAZED WALL HEAD SECTION
1:5




GLAZED WALL CILL SECTION
1:5


Lüftungswärmerückgewinnung
Frischluft
Abluft
Fortluft
Zuluft
Comfort ventilation with highly heat recovery
Passivhausfenster
Passive House windows
Luftdichtheit
Airtightness
Wärmedämmung
Thermal insulation
Wärmebrückenfreiheit
Thermal-bridge-free

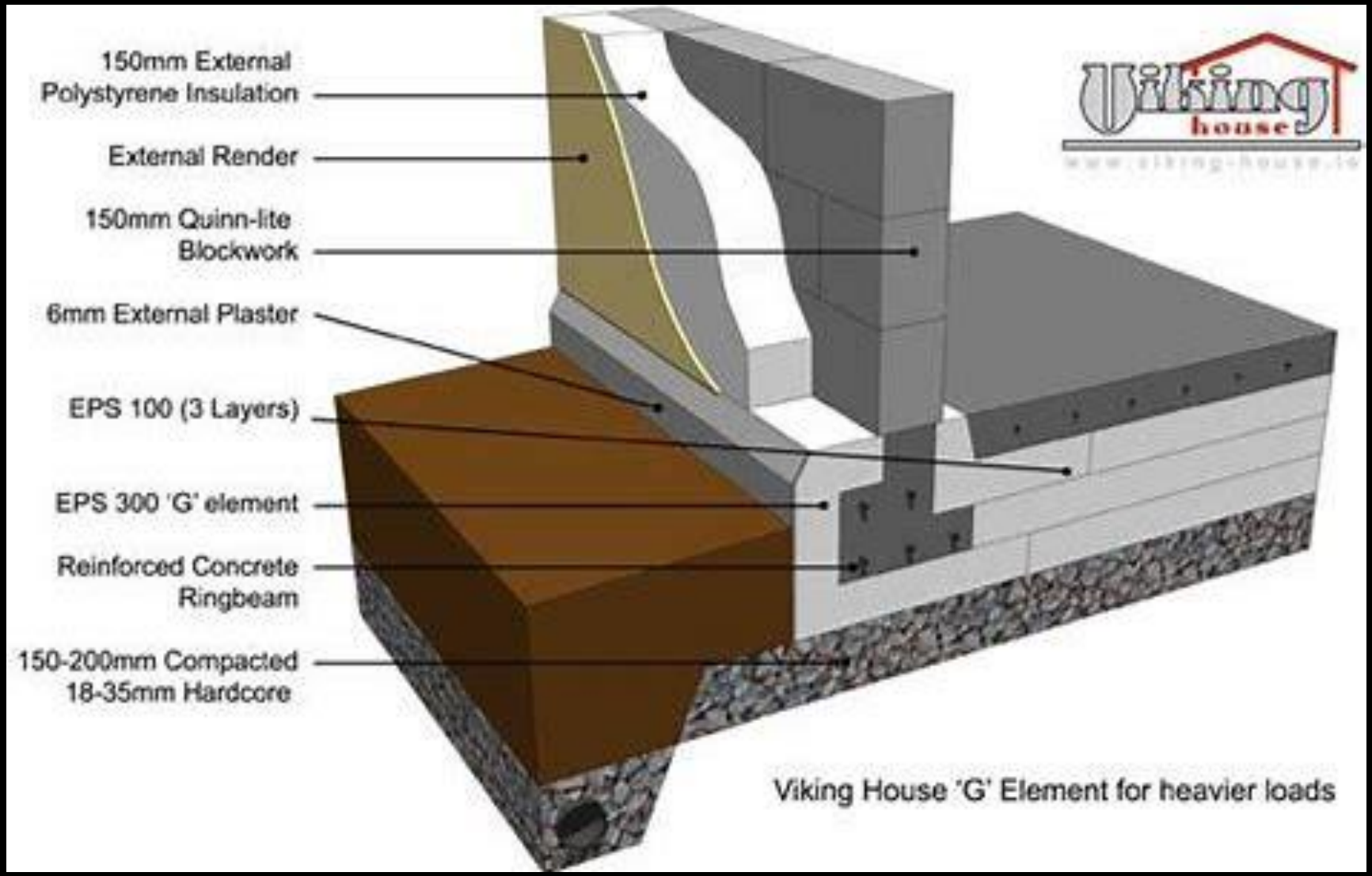

Science…
Technology
leading
edge but
little Art






Kings




150mm External Polystyrene Insulation
External Render
150mm Quinn-lite Blockwork
6mm External Plaster
EPS 100 (3 Layers)
EPS 300 'G' element
Reinforced Concrete Ringbeam
150-200mm Compacted 18-35mm Hardcore
Viking House 'G' Element for heavier loads

# INVENTORY OF CARBON & ENERGY (ICE) SUMMARY

| Materials | Embodied Energy & Carbon Coefficients | | | Comments |
|---|---|---|---|---|
| | EE - MJ/kg | EC - kgCO2/kg | EC - kgCO2e/kg | EE = Embodied Energy, EC = Embodied Carbon |
| Aggregate | | | | |
| General (Gravel or Crushed Rock) | 0.083 | 0.0048 | 0.0052 | Estimated from measured UK industrial fuel consumption data |
| Aluminium | Main data source: International Aluminium Institute (IAI) LCA studies (www.world-aluminium.org) | | | |
| General | 155 | 8.24 | 9.16 | Assumed (UK) ratio of 25.6% extrusions, 55.7% Rolled & 18.7% castings. Worldwide average recycled content of 33%. |
| Virgin | 218 | 11.46 | 12.79 | |
| Recycled | 29.0 | 1.69 | 1.81 | |
| Cast Products | 159 | 8.28 | 9.22 | Worldwide average recycled content of 33%. |
| Virgin | 226 | 11.70 | 13.10 | |
| Recycled | 25.0 | 1.35 | 1.45 | |
| Extruded | 154 | 8.16 | 9.08 | Worldwide average recycled content of 33%. |
| Virgin | 214 | 11.20 | 12.50 | |
| Recycled | 34.0 | 1.98 | 2.12 | |
| Rolled | 155 | 8.26 | 9.18 | Worldwide average recycled content of 33%. |
| Virgin | 217 | 11.50 | 12.80 | |
| Recycled | 28 | 1.67 | 1.79 | |
| Asphalt | | | | |
| Asphalt, 4% (bitumen) binder content (by mass) | 2.86 | 0.059 | 0.066 | 1.68 MJ/kg Feedstock Energy (Included). Modelled from the bitumen binder content. The fuel consumption of asphalt mixing operations was taken from the Mineral Products Association (MPA). It represents typical UK industrial data. Feedstock energy is from the bitumen content. |
| Asphalt, 5% binder content | 3.39 | 0.064 | 0.071 | 2.10 MJ/kg Feedstock Energy (Included). Comments from 4% mix also apply. |
| Asphalt, 6% binder content | 3.93 | 0.068 | 0.076 | 2.52 MJ/kg Feedstock Energy (Included). Comments from 4% mix also apply. |
| Asphalt, 7% binder content | 4.46 | 0.072 | 0.081 | 2.94 MJ/kg Feedstock Energy (Included). Comments from 4% mix also apply. |
| Asphalt, 8% binder content | 5.00 | 0.076 | 0.086 | 3.36 MJ/kg Feedstock Energy (Included). Comments from 4% mix also apply. |
| Bitumen | | | | |

Extract from: www.circularecology.com - free download of their inventory of carbon and energy (ICE) database.


SHOP
LOCAL



y mapping. Crown Copyright ©1999 All rights reserved.








8 17:41

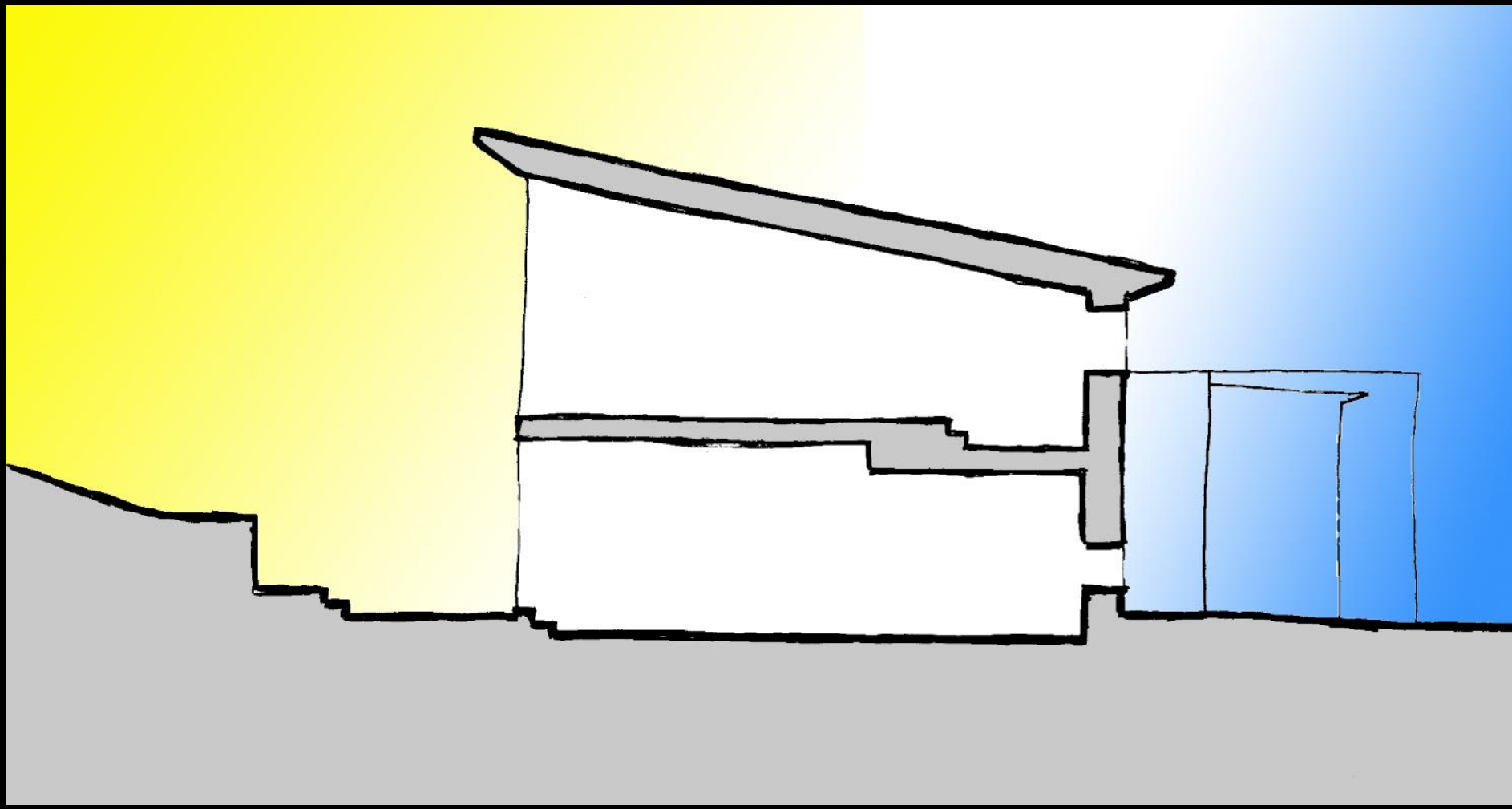

8 17:41
VE03 DXV

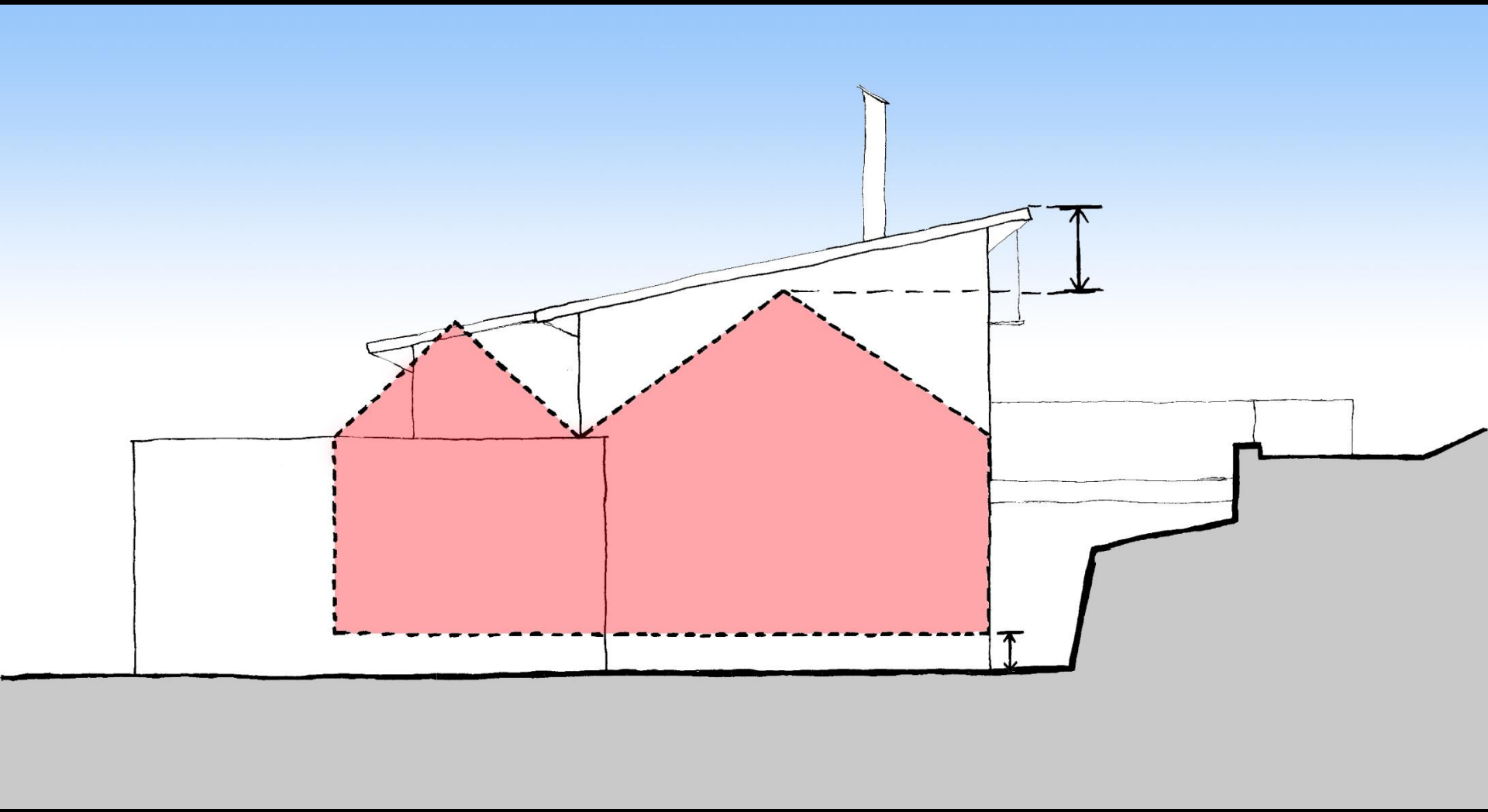


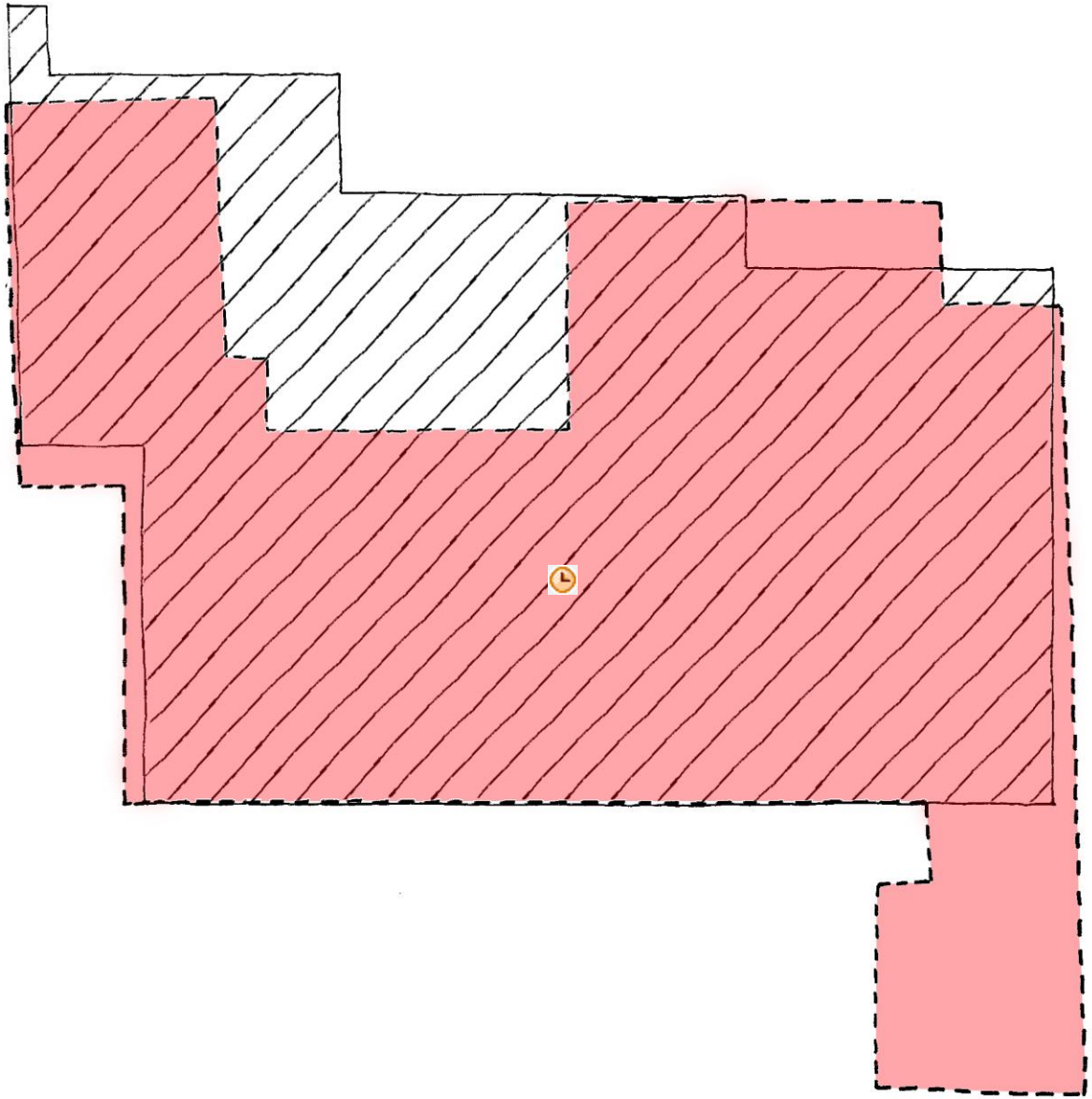

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12 11:46

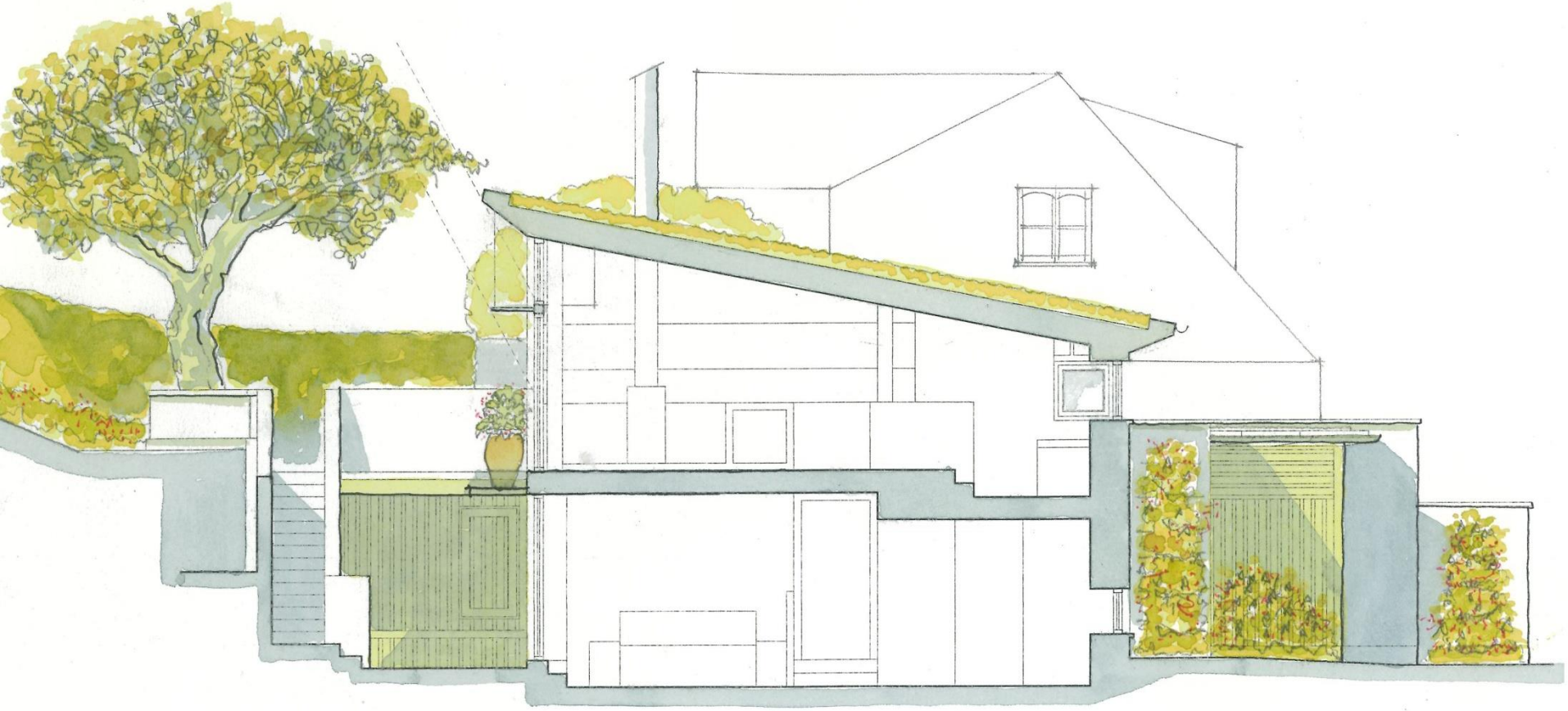

Occupants’ feedback







REVISIONS



PROJECT: THE ORCHARD, HOLFORD

CLIENT: MR. JOHN CARTER

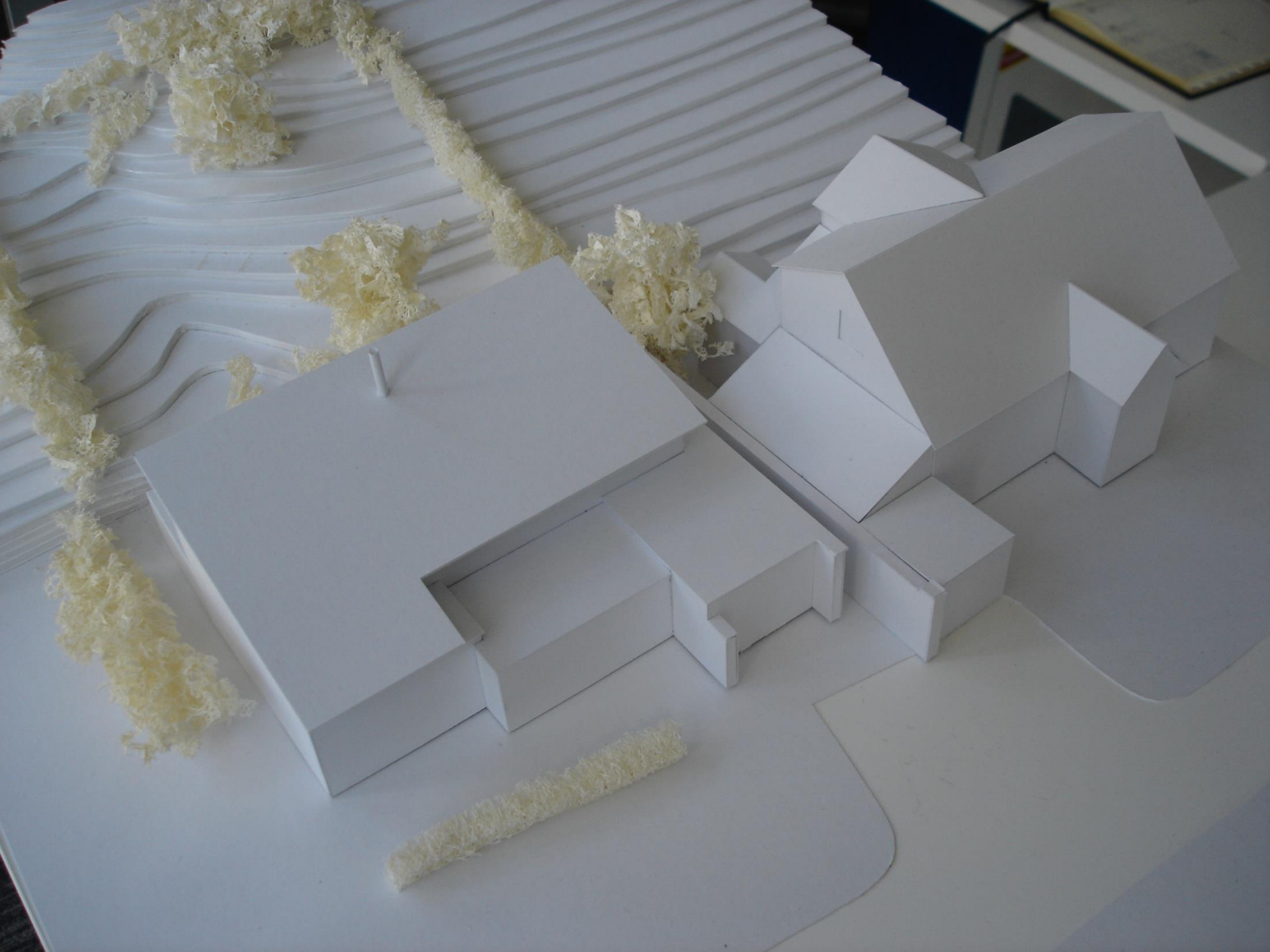
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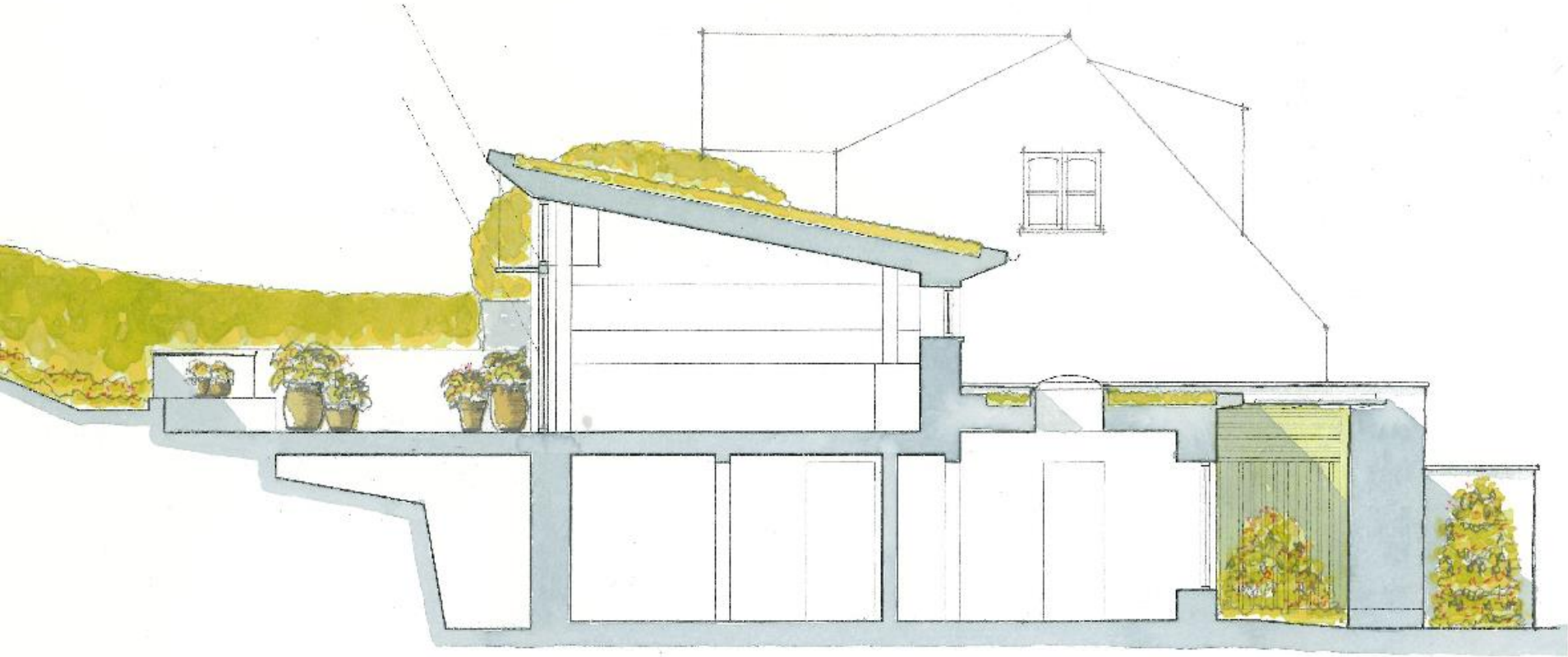
**PENTAN** PARTNERSHIP
Architects
22 Cathedral Road Cardiff CF11 9LJ
t: 029 2030 9010 f: 029 2030 9011
info@pentan.co.uk

| DATE | SCALE | DRNG No. | REV |
|---|---|---|---|
| MAR '09 | 1:50 @ A3 | 2968/PA/014 | |

NOTES: Do not scale. All dimensions are in millimetres unless stated otherwise.

12 11:22





PROJECT THE ORCHARD, HOLFORD

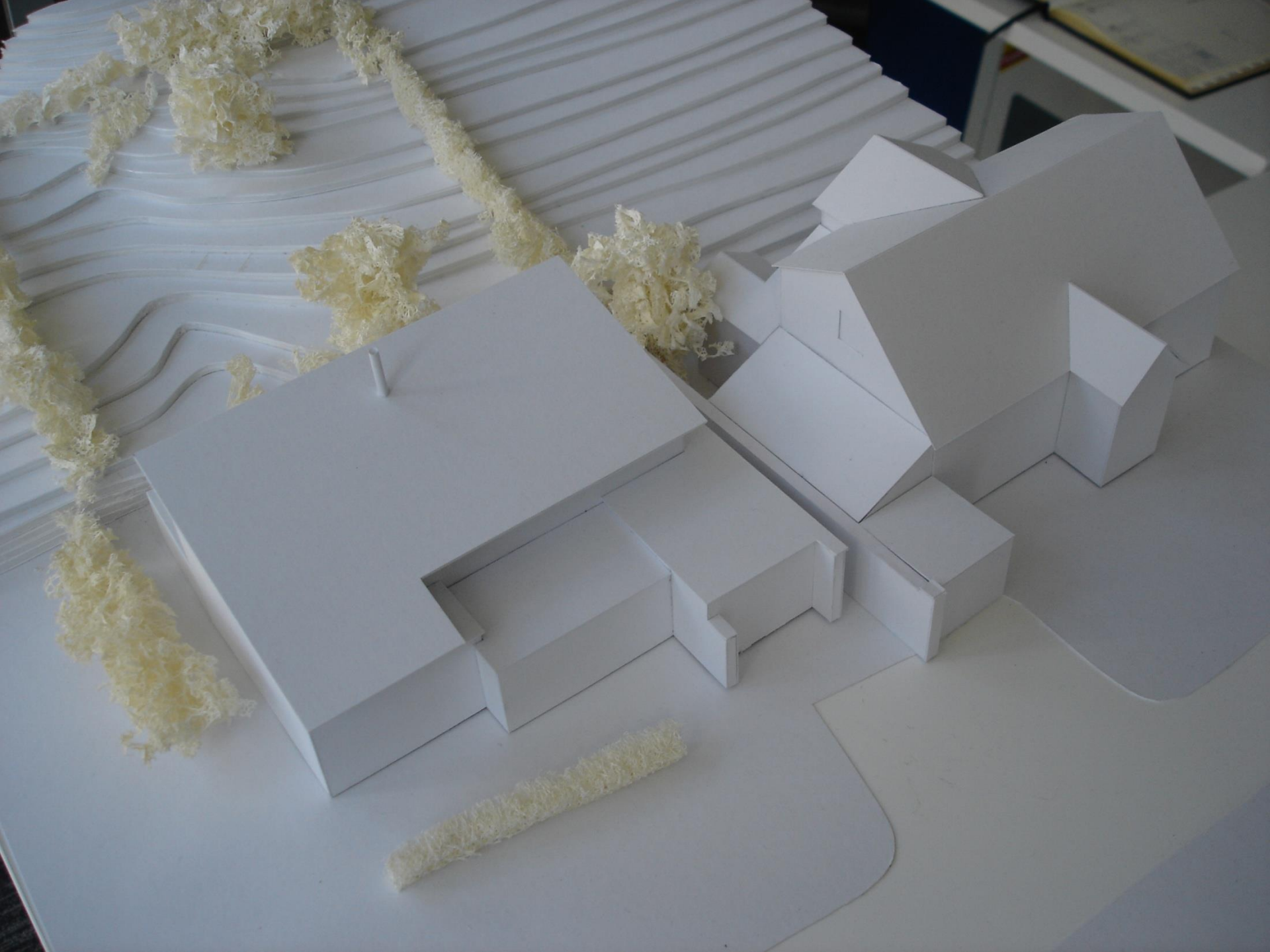
CLIENT MR JOHN CARTER

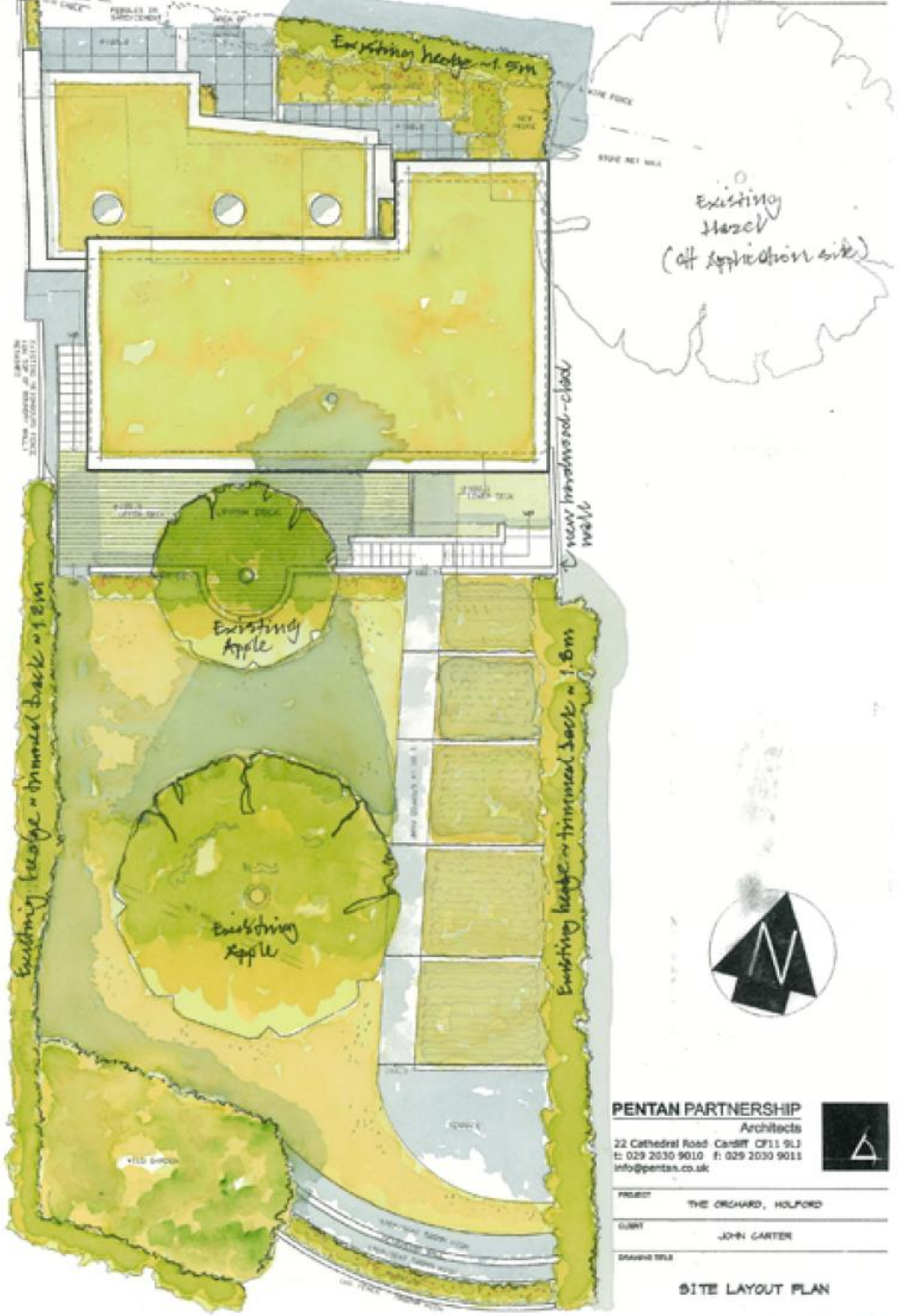
DRAWING TITLE SECTION B,B

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| MAR '04 | 1:50 @ A3 | 2960/PA/015 | |

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PROJECT: THE ORCHARD, HOLFORD

CLIENT: JOHN CARTER

DRAWING TITLE: SITE LAYOUT PLAN

| DATE | SCALE | DRWG No. | REV |
|---|---|---|---|
| MAR '09 | 1:100 @ A3 | 3960/PA/002 | |

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To insert an image, unprotect the PHPP workbook. Remember this is normally locked to prevent accidental alterations of formula and links. Make sure to re-protect as soon completed.

Fill in all of the yellow cells with the general project details.

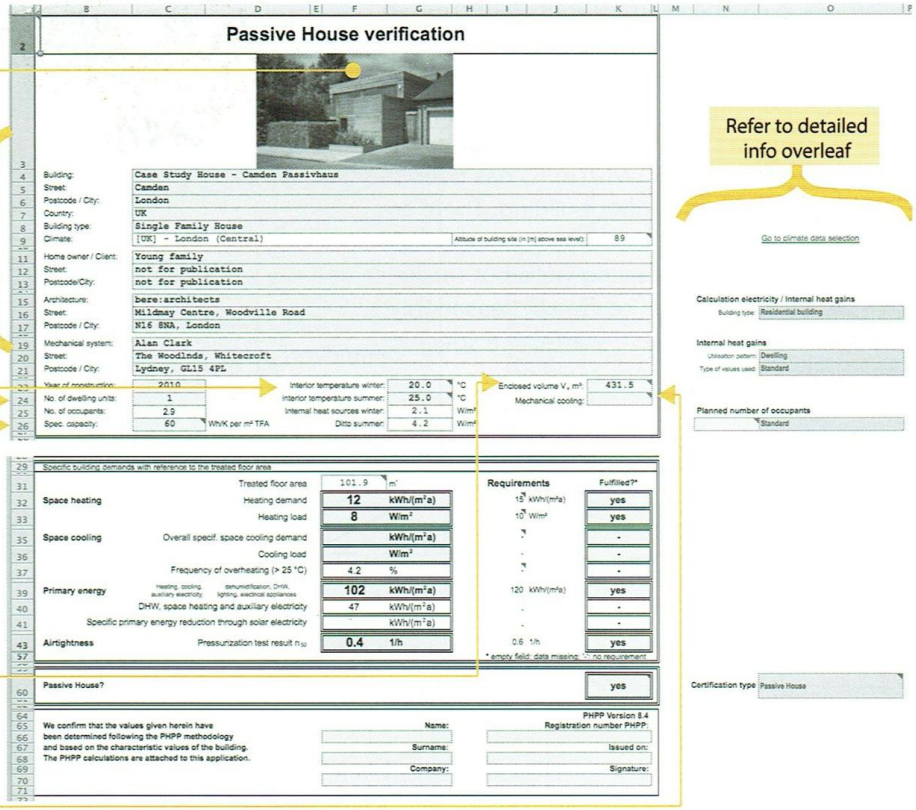
The set temperatures can be changed in certain instances through agreement with PHI. It is recommended that these remain unchanged.

Add the number of units to be included in this PHPP.

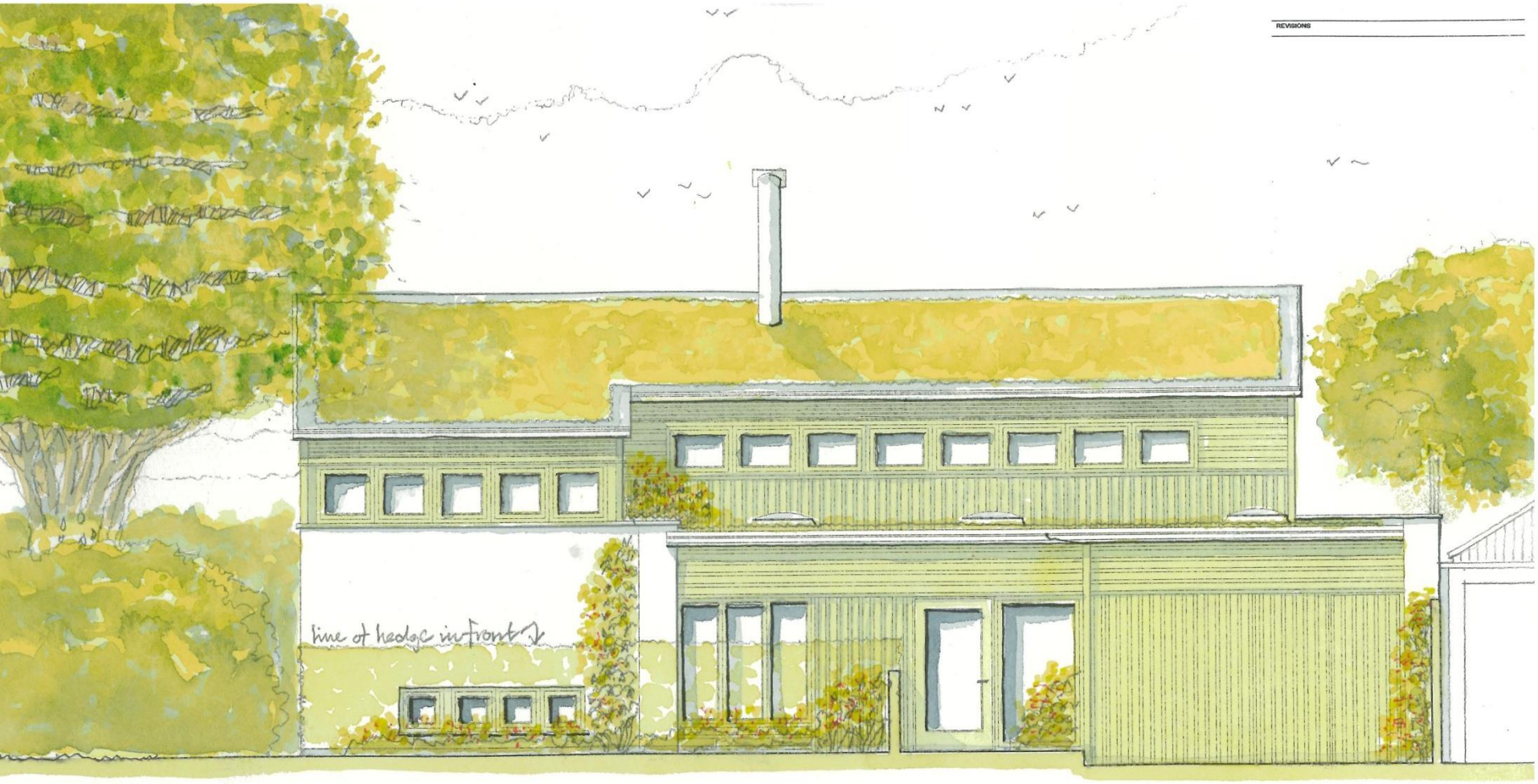
For the 'spec. capacity' refer to figure 3.5

The gross enclosed volume is everything enclosed by the external face of the external walls; this can be filled in now if this information is known or added later.

Check this box only if mechanical cooling is required (not normally required in the UK).



REVISIONS




PROJECT THE ORCHARD, HOLFORD

CLIENT MR. JOHN CARTER

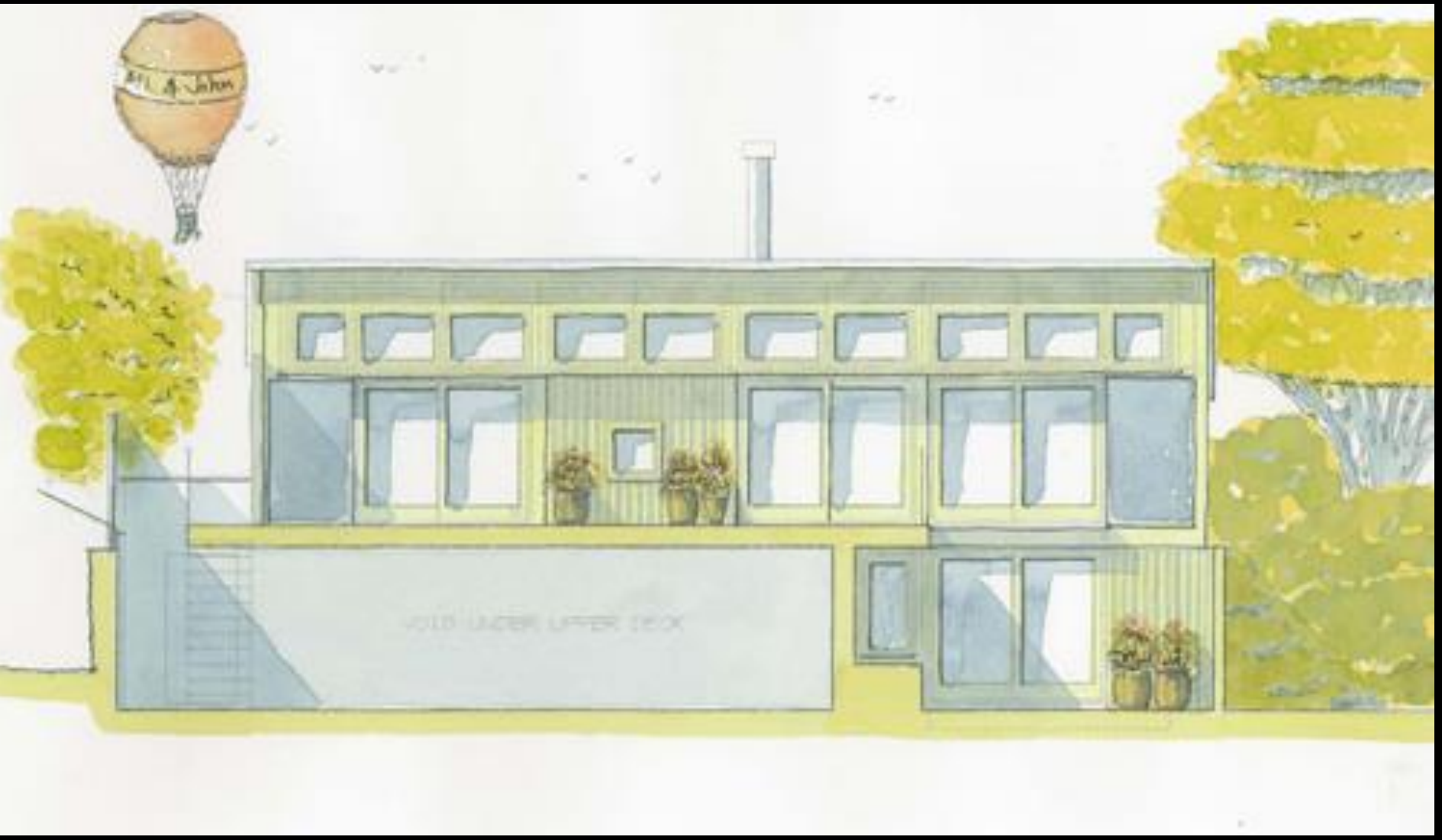
DRAWING TITLE

NORTH ELEVATION

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Bill & John







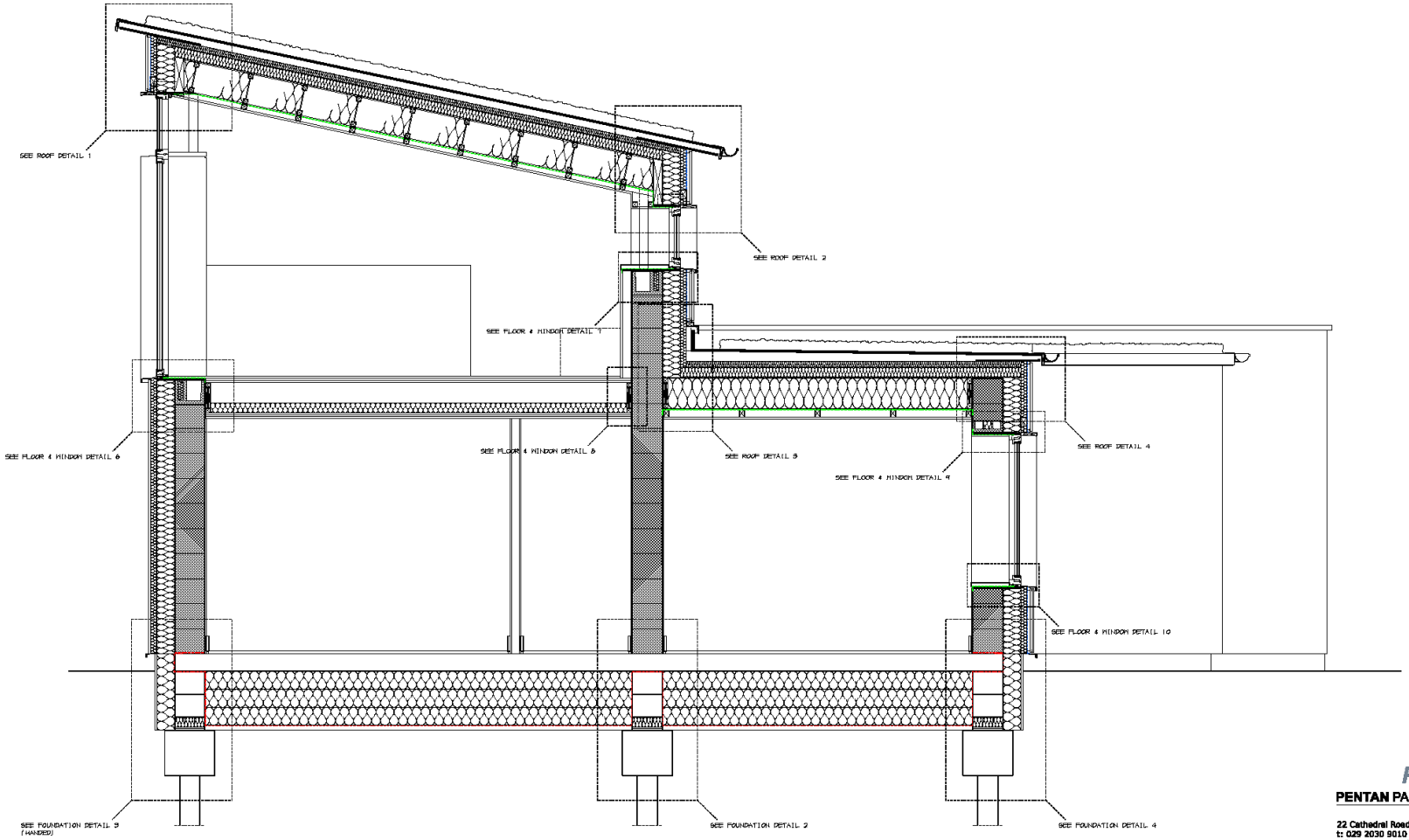



PRESS


MOPLAN



REVISIONS




PRELIMINARY

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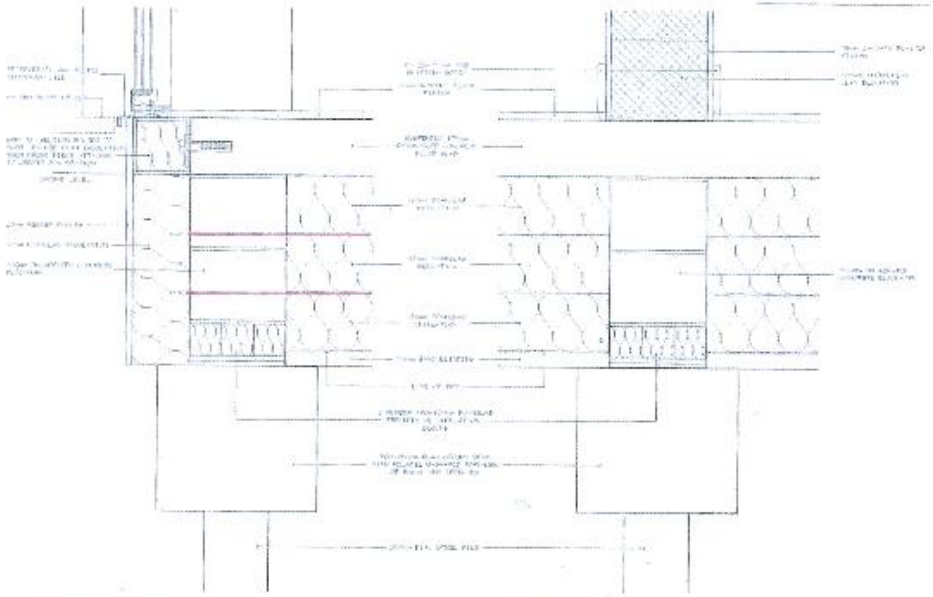
PROJECT
THE ORCHARD, HOLFORD

CLIENT
JOHN & ALI CARTER

DRAWING TITLE
SECTION B-B

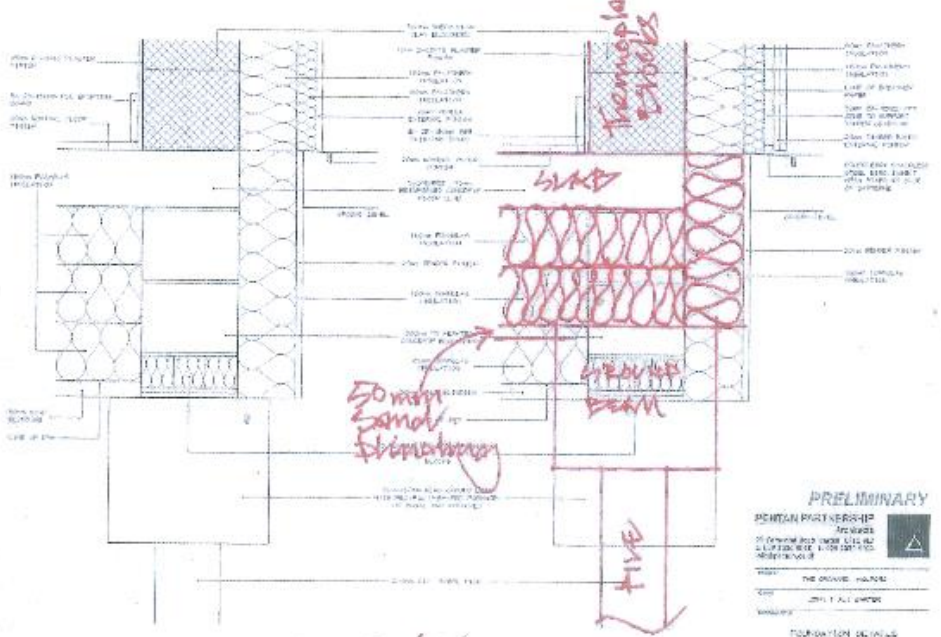
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|---|---|---|---|
| JUN '11 | 1:20 @ A1 | 2960/CP/041 | |

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FOUNDATION DETAIL 1

FOUNDATION DETAIL 2




FOUNDATION DETAIL 3

13.02.17

FOUNDATION DETAIL 4

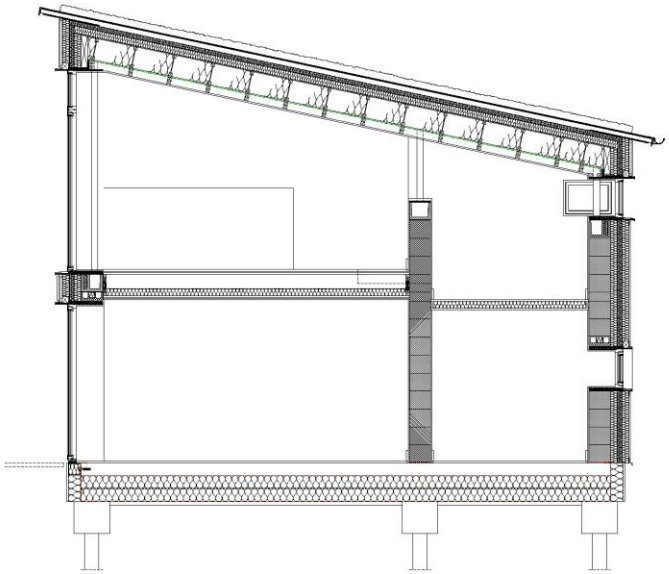
PRELIMINARY

PENTAN PARTNERSHIP
ARCHITECTS

FOUNDATION DETAILS

REVISIONS

A SECTION AMENDED TO NEW HALL CONSTRUCTION 20 SEP '12




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PROJECT THE ORCHARD, HOLFORD

CLIENT JOHN & ALI CARTER

DRAWING TITLE

SECTION A-A

| DATE | SCALE | DRAWING No. | REV |
|---|---|---|---|
| JAN '11 | 1:20 @ A1 | 2168/CP/040 | A |

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FOAMGLAS FLOOR BOARD T4+













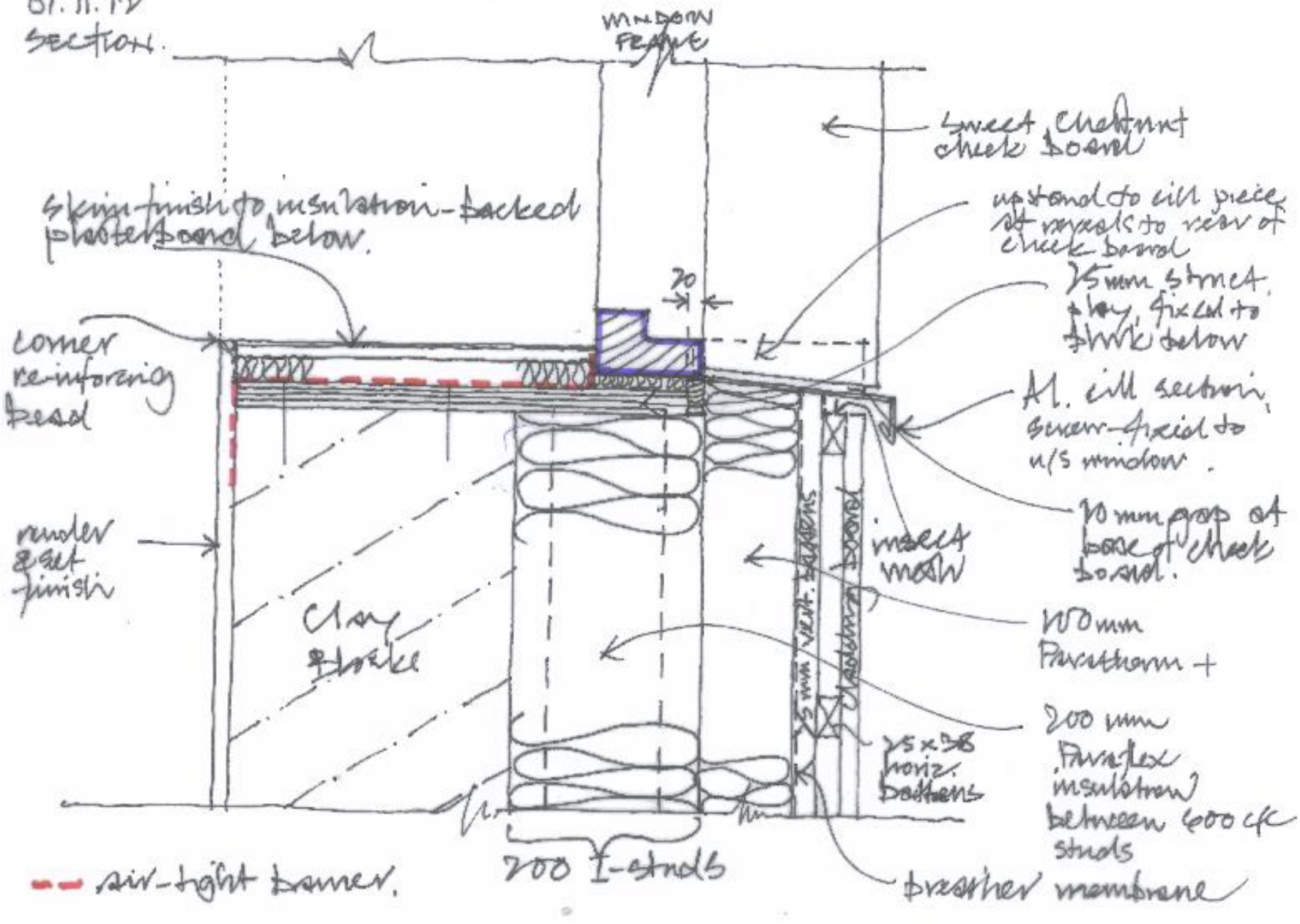




1 : 5

01.11.'12

SECTION.

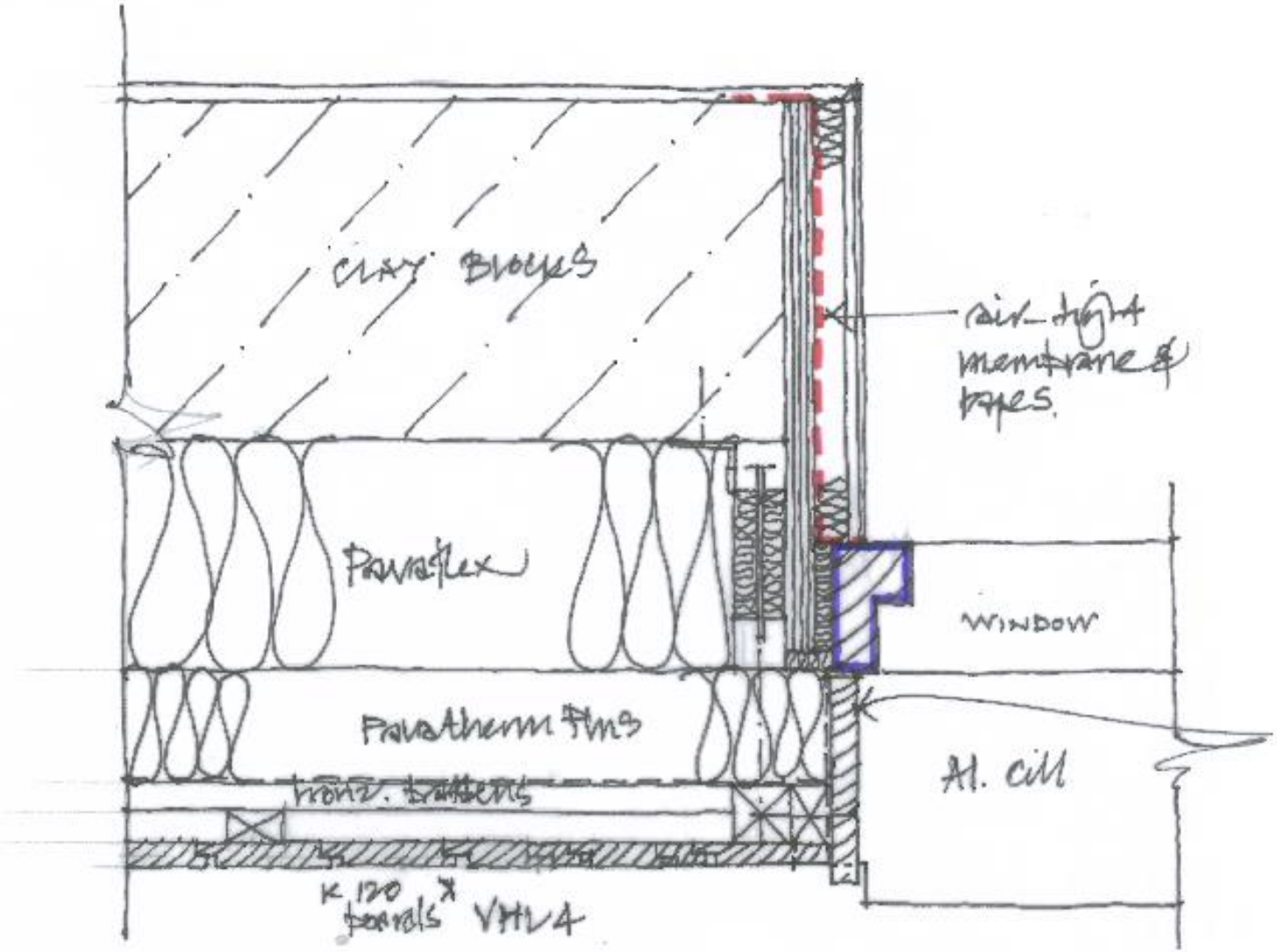



CaberfixD4

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01.11.'17

PLAN NEW.






SIGA-Sicrall
www.siga.ch



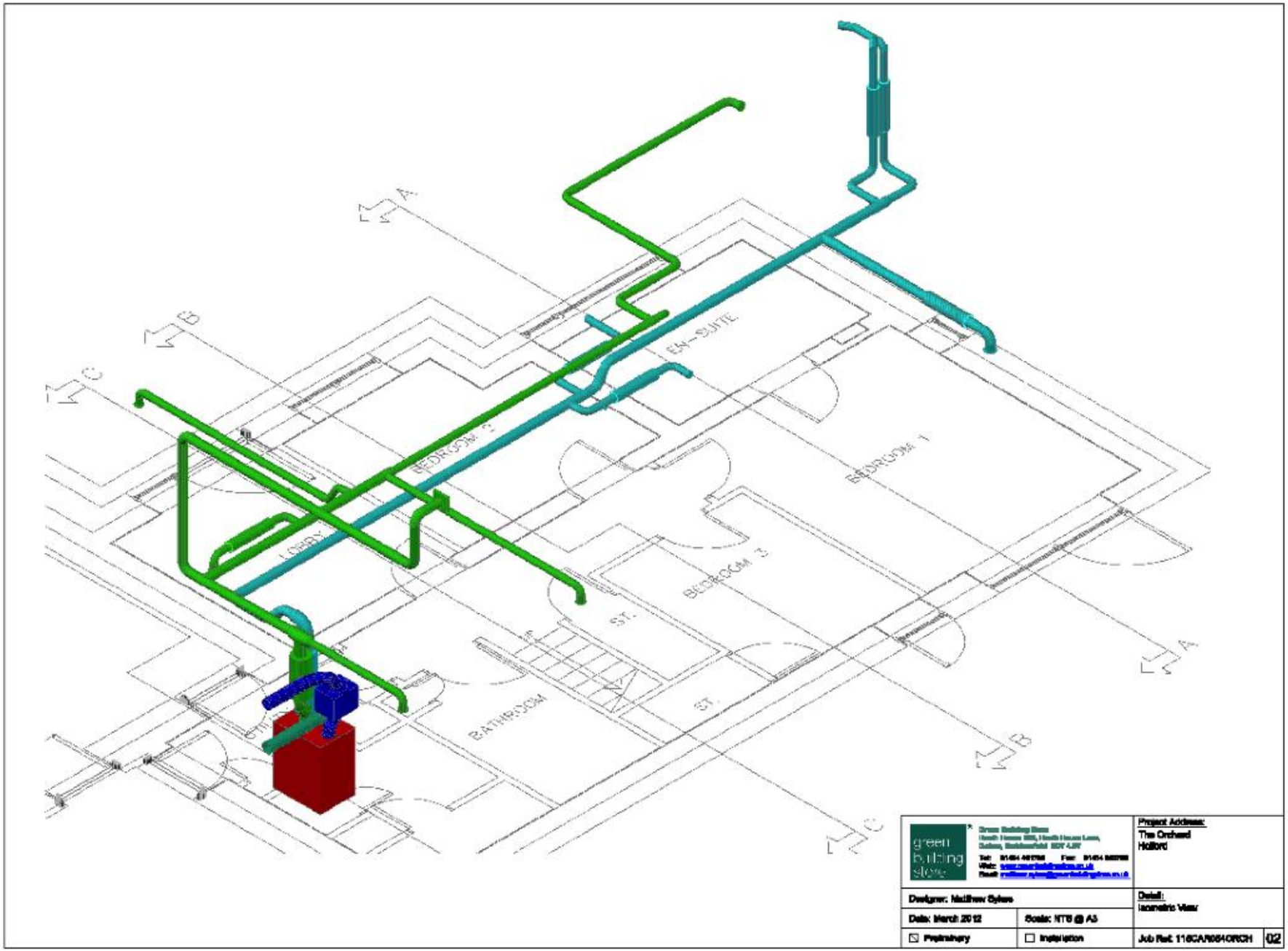



trend






Air Testing
South West




green building store

Project Address:
The Orchard
Holford

Designer: Matthew Sykes

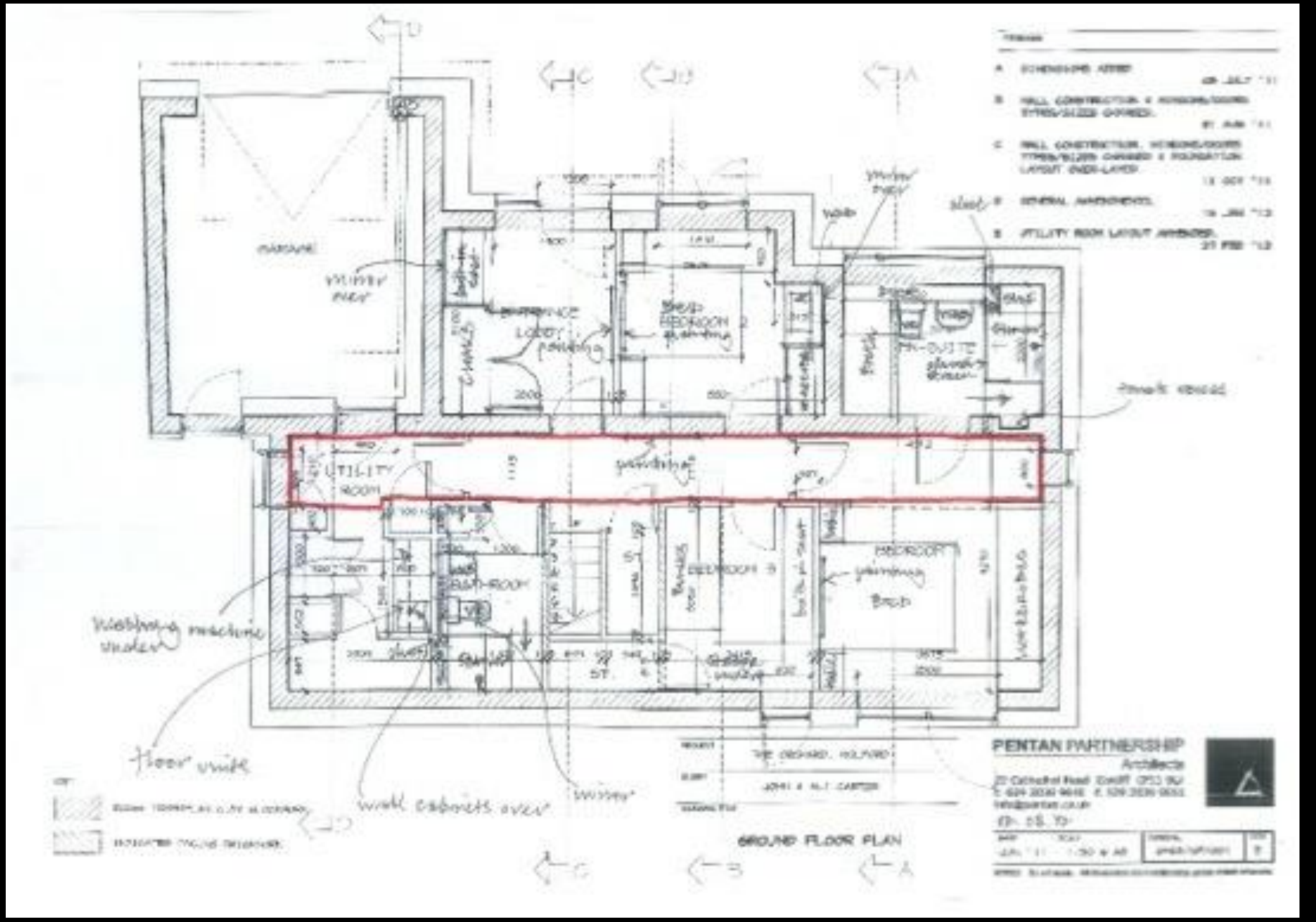
Detail:
Isometric View

Date: March 2012

Scale: NTS @ A3

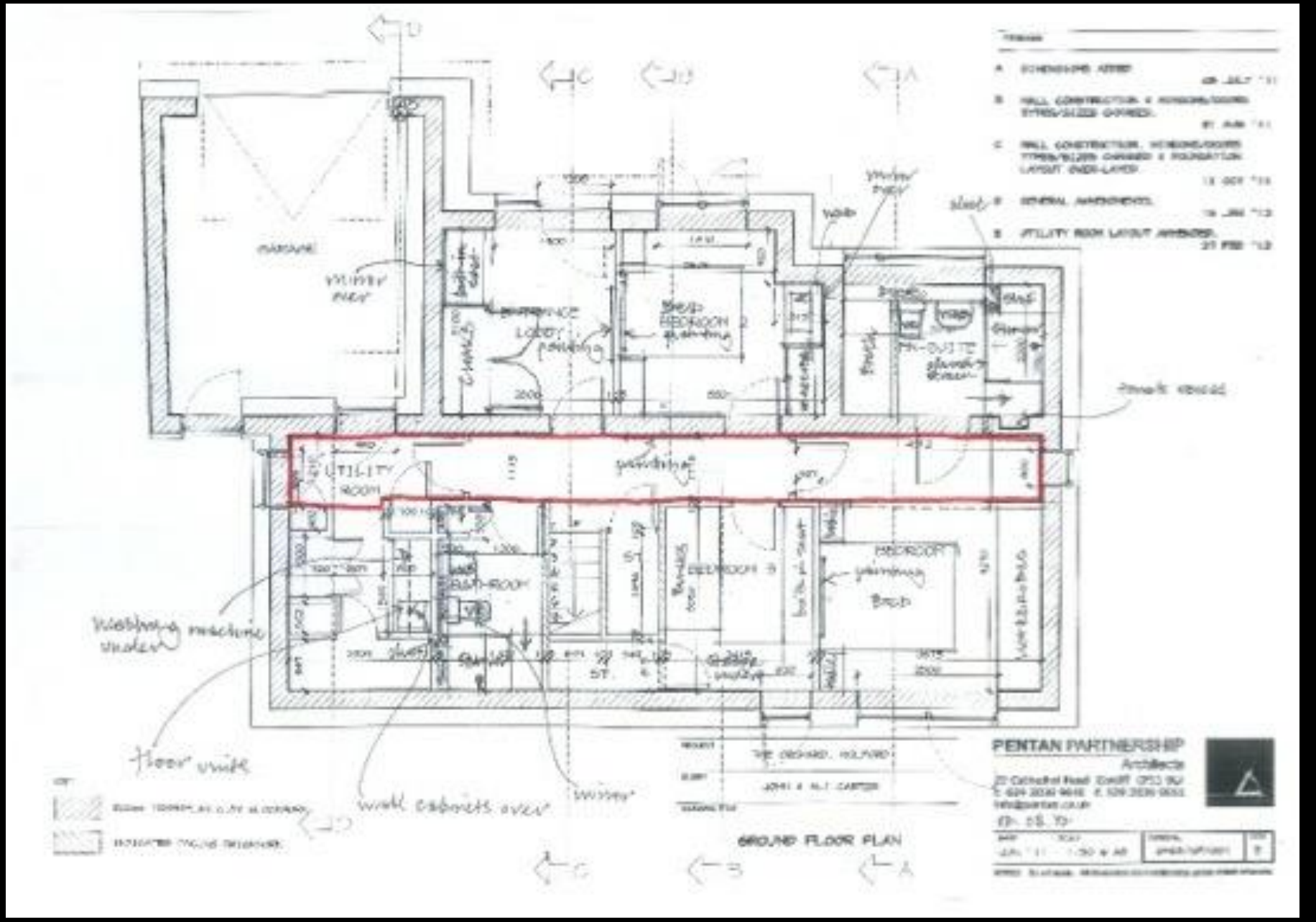
☒ Preliminary ☐ Instruction

Job Ref: 116CA/0604/0R2H 02


UTILITY ROOM
BATH-ROOM
BEDROOM
BEDROOM 3
BEDROOM
ENSUITE
LOBBY
CHANGE
WINDOW
washing machine
floor units
wall cabinets over
GROUND FLOOR PLAN
PENTAN PARTNERSHIP
Architects


Tyvek
Tyvek
Tyvek
Tyvek
Tyvek
Tyvek




UTILITY ROOM
BATH-ROOM
BEDROOM
BEDROOM 3
BEDROOM
ENSUITE
LOBBY
CHANGE
WINDOW
washing machine
floor units
wall cabinets over
GROUND FLOOR PLAN
PENTAN PARTNERSHIP
Architects


TESCON





rotinnel
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CHARD

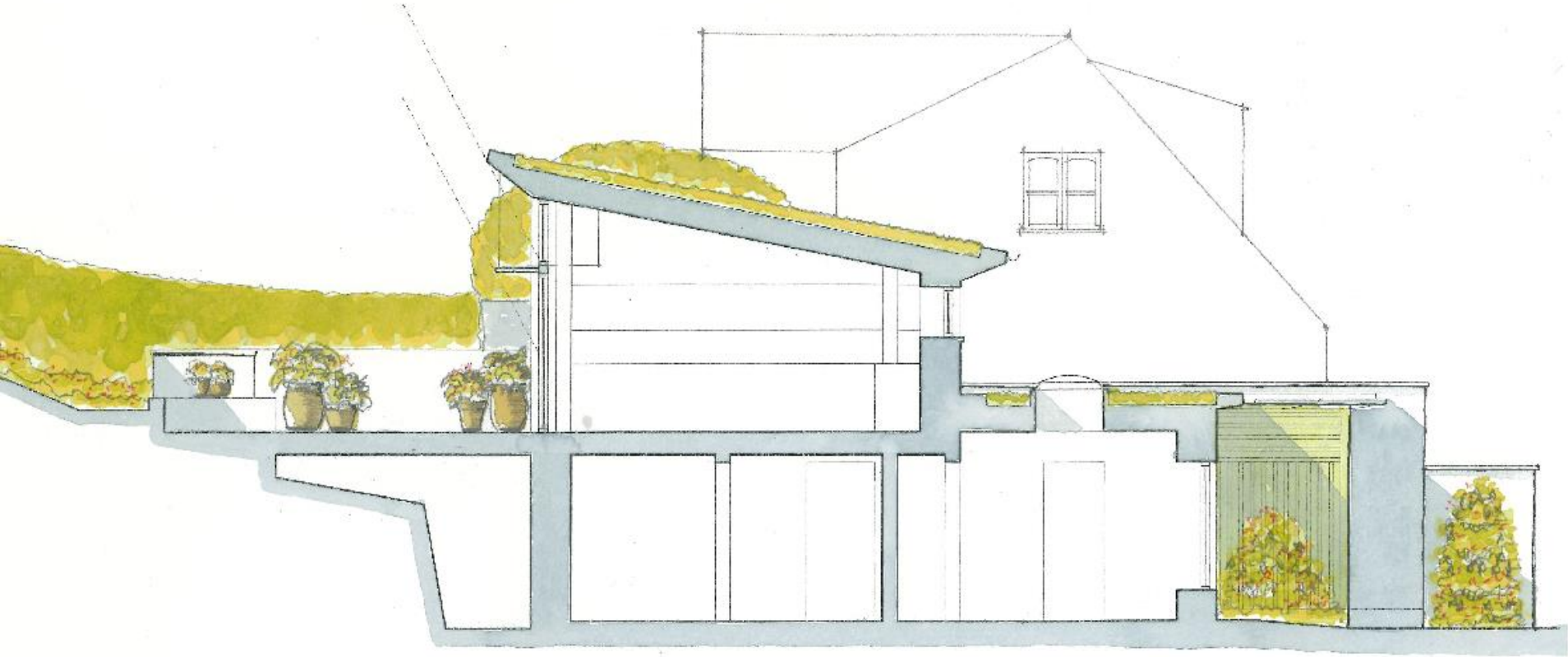












PROJECT THE ORCHARD, HOLFORD

CLIENT MR JOHN CARTER

DRAWING TITLE SECTION B,B

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|---|---|---|---|
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# PoE?

## Qualitative:

Feels connected to place;

Quality of light and views;

Thick external walls feel protective;

‘Cabin’ and ‘cave’ strategy working well – especially in terms of temperature stratification. (Cooler bedrooms, warmer living spaces.)

## Quantitative:

Total annual energy consumption 65-70 kWh/sq.m./annum.

Total annual energy cost circa £1200.



# Take the One Planet Challenge

## If everyone lived as we do in the UK we'd need three planets to support us.

That's why we need One Planet Living. But the good news is reducing your environmental impact to a sustainable level is possible and can give you a better quality of life. The ten One Planet Living principles cover all aspects of your life from saving energy and reducing waste to your health and happiness. People all around the world are taking up the One Planet Living challenge.

## Calculate your impact

Use our questionnaire to calculate your ecological footprint and carbon emissions. We've got two options; choose the quick and easy version (5 minutes) or the full calculator (15 minutes) which gives more accurate results and a detailed action plan.

## Your Action Plan

After calculating your impact you'll get a personalised Action Plan packed with practical things you can do to achieve One Planet Living. We've included links to useful information and products that will make it easier for you to shrink your footprint.

Get Started ▶

Get Started and Calculate Your Impact

Already started using the One Planet Living Calculator? Retrieve your details here.




### 10 principles of sustainability

This Calculator & Action Plan is based on the 10 One Planet Living principles. Your Action Plan will help you achieve One Planet Living.

ONE PLANET LIVING®

Frequently Asked Questions | Find Out More

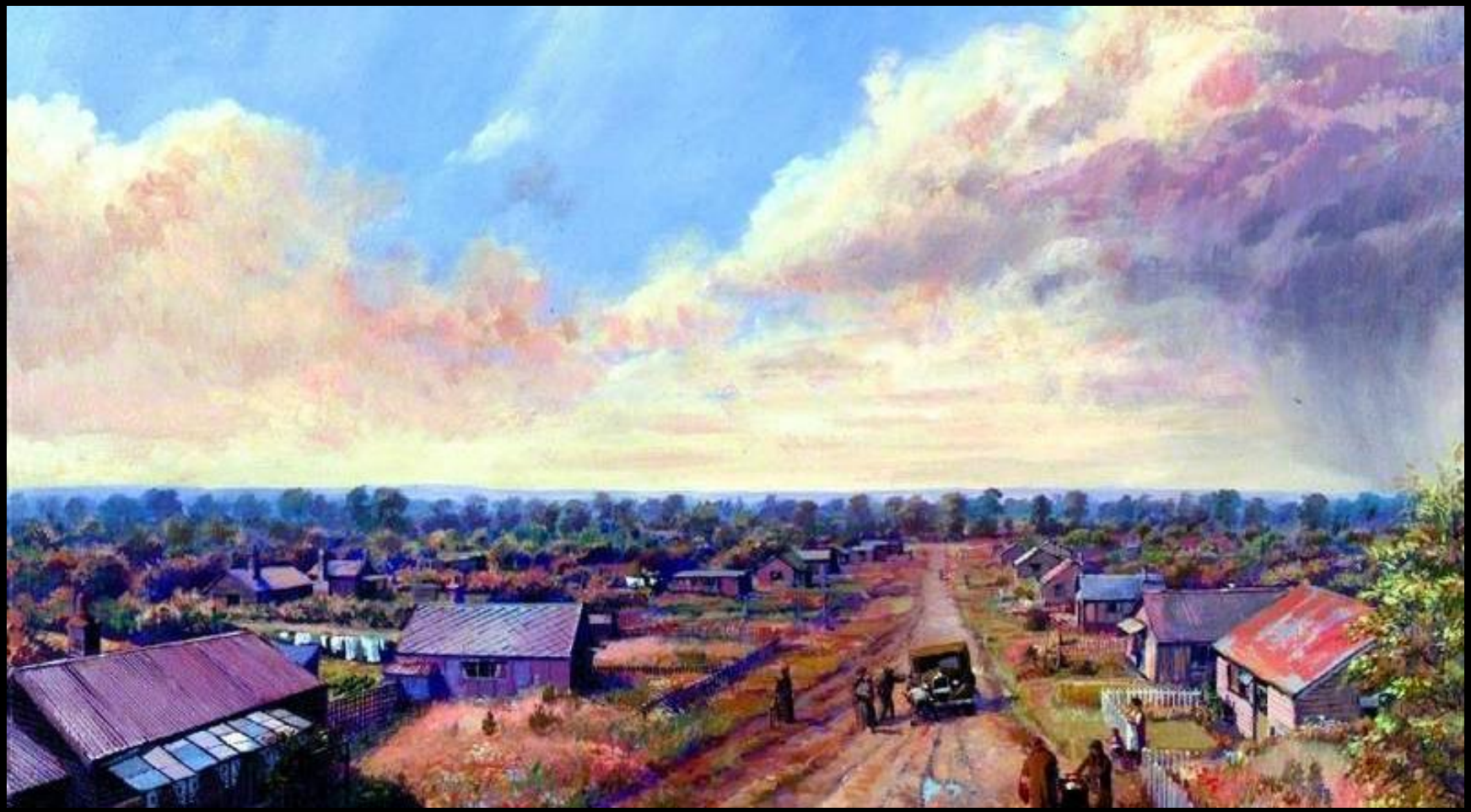
# One Planet development Wales



# One Planet Living Developments

- The key requirement, for consideration as a One Planet residential development is that over a reasonable period of time (no more than 5 years) the land should provide for the minimum needs of the inhabitants in terms of income, food, energy and waste assimilation, and must be the sole residence of the inhabitants.  Any planning application must be supported by a management plan produced by a “competent person”.

# Arcadia for all



- “I cannot imagine any other desirable view of the future than an ecologically adapted form of life where architecture returns to early Functionalist ideals derived from biology. Architecture will again take root in its cultural and regional soil. This architecture could be called Ecological Functionalism ……. After the decades of affluence and abundance, architecture is likely to return to the aesthetics of necessity in which elements of metaphorical expression and practical craft fuse into each other again; utility and beauty again united.” (Juhani Pallasmaa, *From Metaphorical to Ecological Functionalism.*)


FreakingNews.com