

PRESENTATION BY
MR FÜRNER ABOUT
SOPHIENHOF ...
← DEMONSTRATING
A SIMPLE TEST FOR
LOW EMISSIVITY
COATING ON THE
TRIPLE GLAZED UNITS

19.00	Dinner in hotel with members of the Passivhaus Institut
17.30	depart
16.30	arrive
15.00	Meet in reception to visit Passivhaus Institut
14.15	depart
13.45	arrive
12.30	depart
09.55	arrive
09.55	depart

Passivhaus field trip: October 2010
* Room 2/4
Wf: BP-STP3p3ys@t-com.de
scan with
fakes of things . com app



THE PASSIVHAUS AESTHETIC ? ...



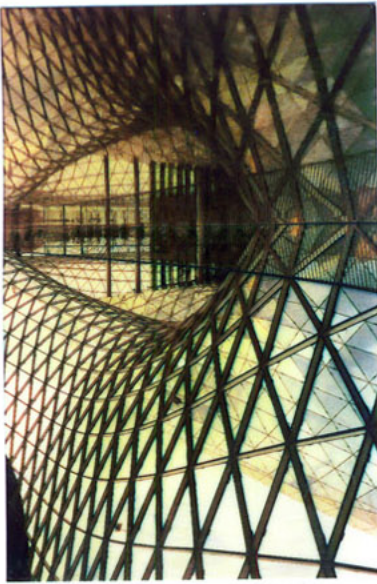
A: SOPHIENHOF,
BOCKENHEIM
B: ROTLINDSTRASSE,
FRANKFURT



A common theme of the buildings we visited was the need to ensure all external projections were separate structures altogether. ...

Skills for Climate Change Passivhaus technology field trip

Rob Annable, Axis Design



↓ St. Josef church by Rudolf Schuster
... renovated for regional response to materials/form
Frankfurt shopping centre by Mario Botta

OTHER BUILDINGS OF INTEREST

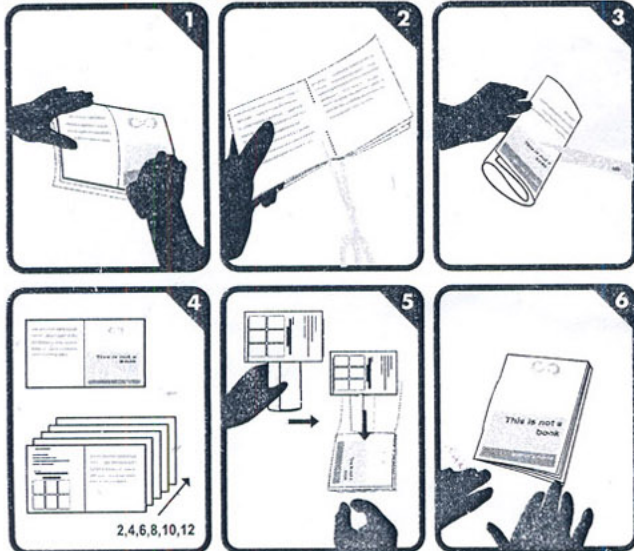


2010-09-28

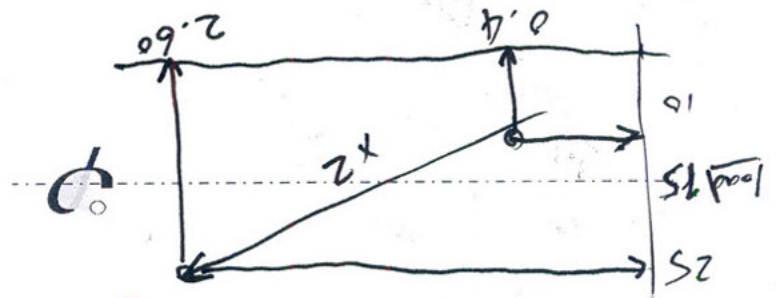
created Axis Design Architects Ltd to support the Passivhaus technology study visit



made with www.bookleteer.com from proboscis



3. Move from .4 to 2.6 doubles energy
air tightness



RELATIVE HUMIDITY > 30%

Notes:

Internatrand conf: May 2011

Notes:

ig-passivhaus.de : 'tag der passivhauser'
database of passivhaus open days - 10/12 NW

1. insulate to 0.15 walls / 0.8 windows
 2. avoid thermal bridges
 3. triple glazing / 50-55% value (sunlight transmitted)
 4. air tight ≤ 0.6
 5. MVHR $\geq 75\%$
- = heating energy demand $\leq 15 \text{ kWh/m}^2$
= max heating load $\leq 10 \text{ W/m}^2$

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Air tightness test

robannable

10 September 2010

Pro Clima founder demonstrates building air tightness importance

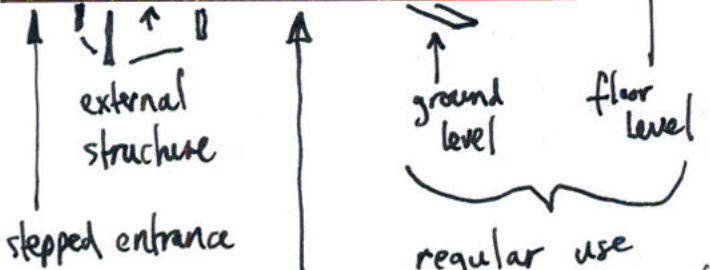
0:05 / 2:41

door blowers test

Wicon test

Lofthol Mell

http://tinyurl.com/air-tightness



SHUTTERS:

(crucial to avoid summer overheating - must be external)

regular use of basement level allows insulation detailing to be dealt with above ground.

Day 2	Thursday 30 th September 2010	Breakfast in hotel	Meet in reception	Coch to Schwezingen	depart	08.45	09.00
		Visit to Pro Clima training facility for training / discussion with Lofthol Mell and Jens-Lueder Herms on techniques to meet passivhaus standards, with Hands-on examples	Visit includes lunch	depart	14.30		
		Coch to Ludwigsplatz Brunck Quarter		arrive	15.00		
		Thilo Cunz Architect LUVWGE consult GmbH will explain the process of regenerating this 1920's estate of workers housing, including refurbishment, demolition and rebuild to near passivhaus standard		depart	16.00		
		Coch to Hohleogstrasse		arrive	16.30		
		Hohleogstrasse, Andre Zaman of LUVWGE consult GmbH will explain how this refurbishment met passivhaus standards		depart	18.00		
		Return to Darmstadt		arrive	18.45		19.30

* "RAATHER DIFFUSION TIGHT."

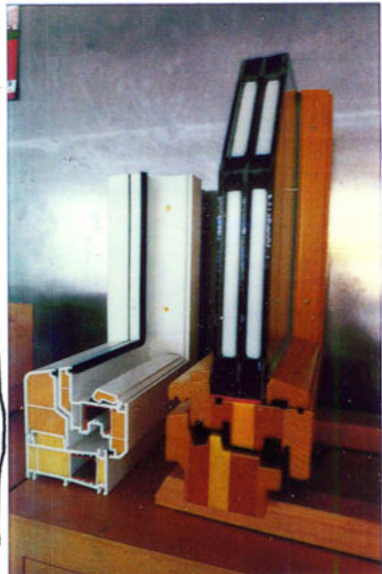
Passivhaus field trip: October 2010

M&E spec:

- COMFORTABLE AIR TEMP > 16.5 °C
- LOW NOISE < 25 dB

CAPITAL VS. RETURN

SETTLES AT 180mm AT TODAY'S ENERGY COST



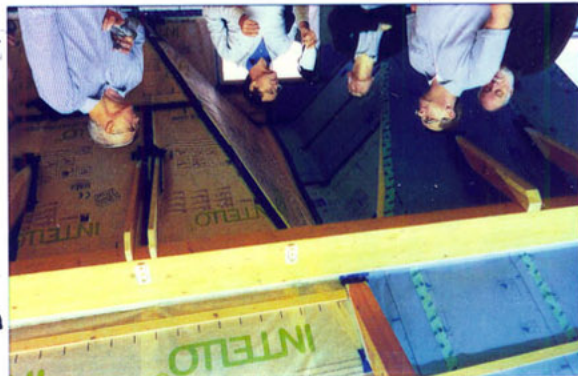
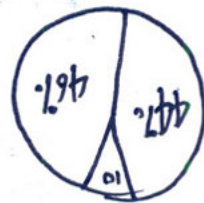
WINDOWS @ 0.8 max



oil storage tanks @ ROTUNDSTRASSE



[causes of damage]
 Misc. - 10%
 Workmanship - 46%
 Design - 44%



GLUE
 ON CAR

INTELO GUST FIBRE
 ↑ REINFORCED

DBT

TIMBER DRYING BY 10% = $1000 \text{ g/m}^2 \text{ water}$

Notes:

(A)

MOISTURE CAUSES:

CONSEQUENCES OF FAULTY AIR TIGHTNESS

Notes:

(A)

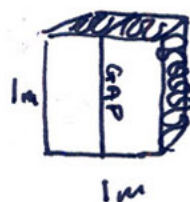
- COLD AIR ENTERING IN WINTER CAN KEEP HUMIDITY AS LOW AS 10% - IDEAL SHOULD BE 40-60%.



MOISTURE INGRESS!

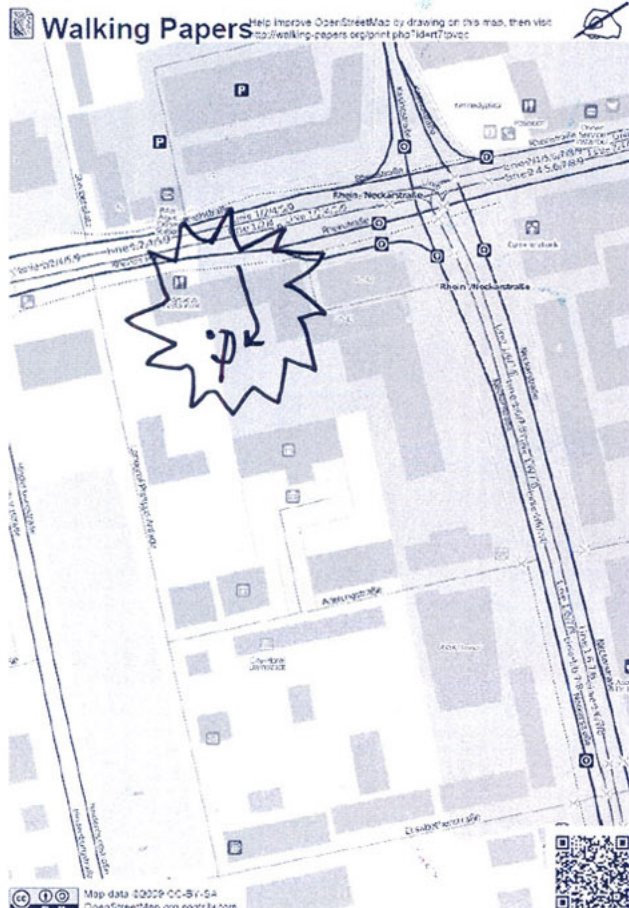
PRO-CLIMA: MICHAEL FÖRSTER

(A)

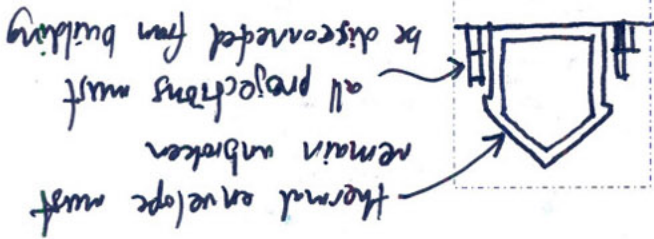
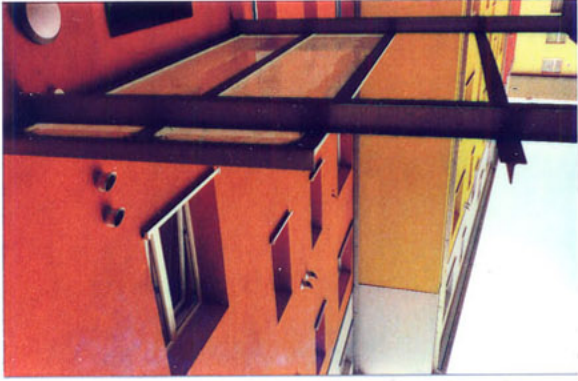


without gap = u-value 0.3
 with 1mm gap = u-value 1.44
 performance reduced by 4.8

passivhaus institute entrance



... and rendered, external insulation meant that buildings looked similar regardless of region or type.



example of controlled M+E install reducing number of breaks in fabric.

soil pipe connection



ROTLENDSTRASSE REFURB:



bath waste?



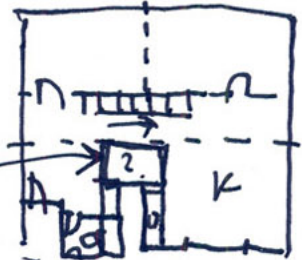
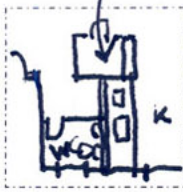
NEW BUILD PASSIVHAUS ↑



NOISY? OPEN FROM KITCHEN ↑

(B)

SERVICE CORE



£1600 per m²

MULTI-PURPOSE TAPE - TESCO VANIA (A)

Bus 30	depart	14.17
Train to Frankfurt Int. airport	arrive	14.41
Arrive airport	depart	15.00
Lufthansa flight LH4904 Frankfurt International (FRA) Birmingham (BHX)	depart	17.10
depart	arrive	17.40
Train to Rolindstrasse	depart	14.10
Mr. Friesen of AGG FRANKFURT HOLDING will explain the project. (since 2007) of a housing complex from the 1950s. Repaired oil and includes Cnp plant run on	depart	11.45
Object Werk on behalf of Klimatours for Frankfurt City Council to Sophienhof in Bockenheim. Mr. Uresch will explain the project. Visit includes refreshments. Friesen, the architect who worked on	depart	09.34
Train to Bockenheim	arrive	10.00
Train to Frankfurt Hauptbahnhof	depart	9.24
Checkout and depart on foot to Darmstadt Hauptbahnhof	arrive	9.07
Breakfast at hotel	depart	8.30
Friday 1 st October 2010		
Day 3		

Passivhaus field trip: October 2010
notes, images and audio shared at:
www.evernote.com/pub/leverson/public