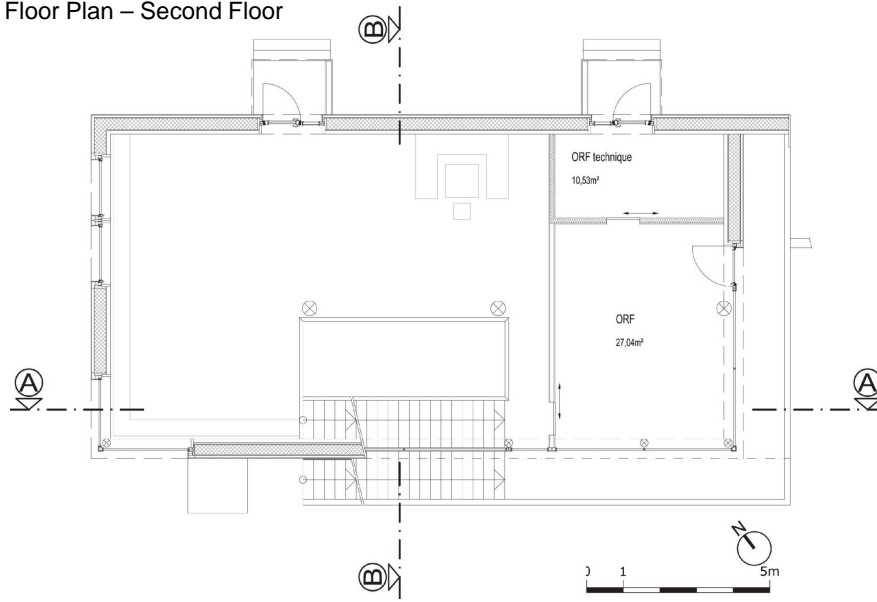
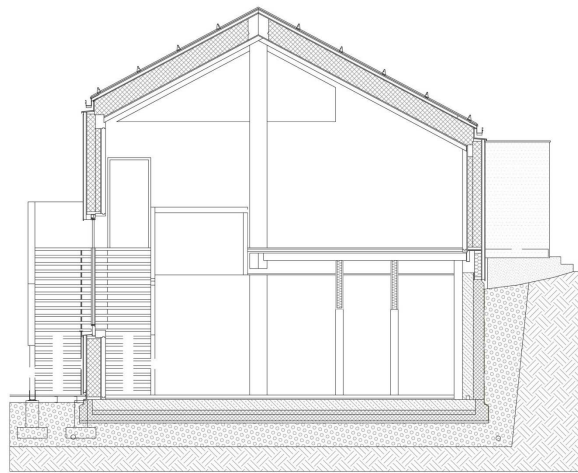


Floor Plan – Second Floor



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**Cross section B M 1:100**

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## AWARDS, PRIZES, QUALITY CERTIFICATES

The quality of the Austria House was awarded several times

ENERGY PERFORMANCE: Passive House Planning Package (PHPP). Passive House Institute Darmstadt



KLIMA:AKTIV Awarded by the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management for Passive House Quality

DGNB – Pre-Certificate. International seal of quality for sustainable buildings. First building awarded by ÖGNI (World Green Building Council Austria)



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## Team & Partners:



### Architect

Treiberspurg & Partner Architects ZT GmbH, 1140 Vienna

### Austrian Passive House Group APG:

Ingenieurbüro Reiner, Bezau (Coordination)  
 drexel und weiss – innovative compact comfort ventilation system, Wolfurt  
 Optiwin Fenster+Türen, - PH-Windows, Ebbs  
 Sohm Holzbautechnik, Timber Construction, Alberschwende  
 Zweiraum Werbeagentur, Imst (Marketing)

### Partner in Canada

Sea to Sky Consulting, Vancouver  
 Dürfeld Log Construction, Whistler (Construction)

### Projectpartner

Resort Municipality of Whistler, Whistler Blackcomb Foundation,  
 Österreichisches Olympisches Comité (ÖOC),  
 BOKU-Wien, Uni Innsbruck, ORF, klima:aktiv, WKO, SOS Kinderdorf,  
[www.oesterreichhaus.at](http://www.oesterreichhaus.at)



(credit: Ira Nicolai)

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## MOUNTAIN REFUGE USING PASSIVE HOUSE TECHNOLOGY „SCHIESTL-HOUSE“

Hochschwab Mountain, Styria 2154 m

Developer: Austrian Tourist Club, Vienna

Architect: GP-ARGE pos architekten and Treberspurg & Partner Architekten ZT GmbH, Vienna



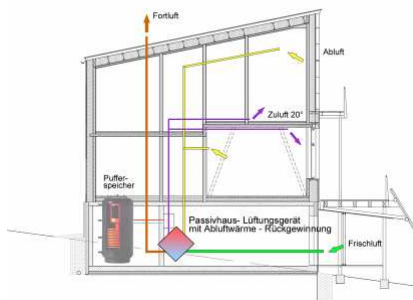
[Treberspurg & Partner Architekten ZT GmbH, Vienna]

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## MOUNTAIN REFUGE USING PASSIVE HOUSE TECHNOLOGY „SCHIESTL-HOUSE“

Hochschwab Mountain, Styria 2154 m

### HEATING AND VENTILATION



### HOT WATER SUPPLY



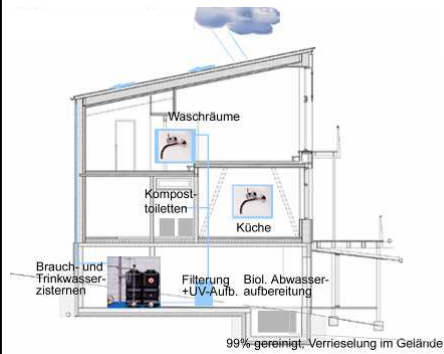
[Treberspurg & Partner Architekten ZT GmbH, Vienna]

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## MOUNTAIN REFUGE USING PASSIVE HOUSE TECHNOLOGY „SCHIESTL-HOUSE“

Hochschwab Mountain, Styria 2154 m

WATER SUPPLY ( RAIN WATER) AND BIOLOGICAL WASTE WATER SYSTEM

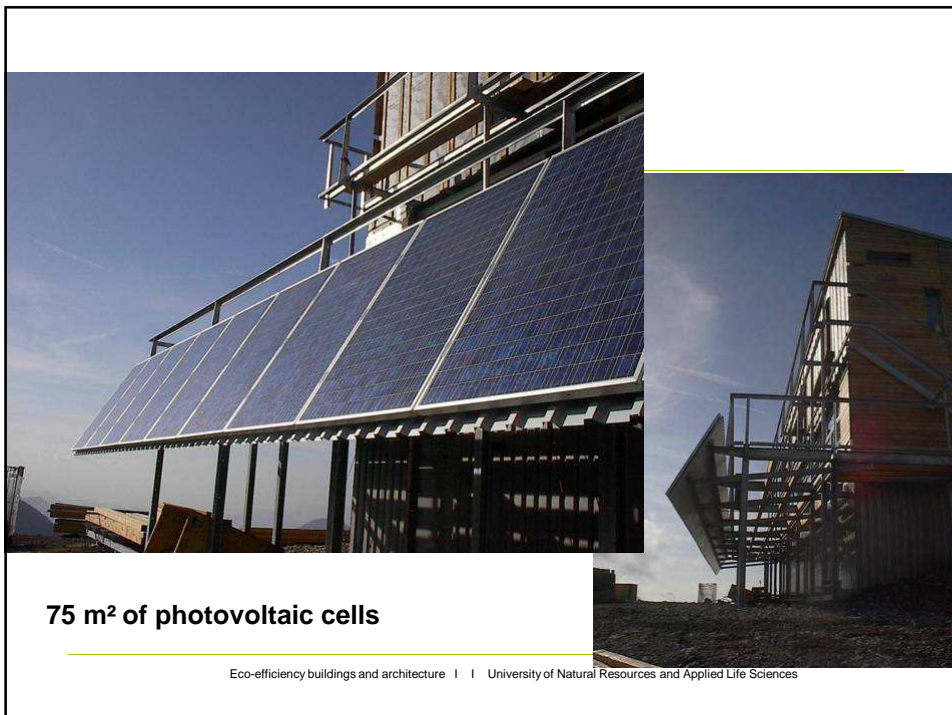


ELECTRIC POWER SUPPLY WITH PHOTOVOLTAIC SYSTEM



[Treberspurg & Partner Architekten ZT GmbH, Vienna]

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75 m<sup>2</sup> of photovoltaic cells

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# MOUNTAIN REFUGE USING PASSIVE HOUSE TECHNOLOGY „SCHIESTL-HOUSE“

Hochschwab Mountain, Styria 2154 m

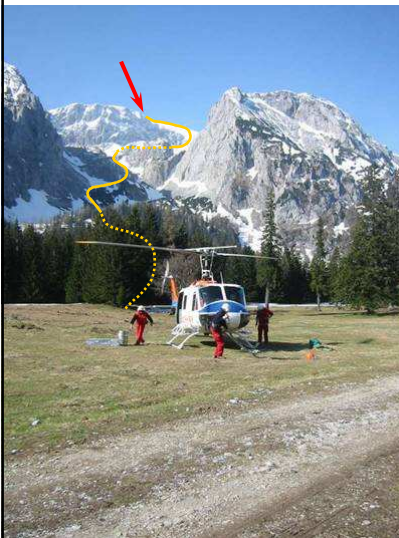


[Treberspurg & Partner Architekten ZT GmbH, Vienna]

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CW15

## May 2004: Transportation of building site equipment



blasting of excavation  
03th of June 2004

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**CW15** Baustelleneinrichtung:

Dirket Sichtverbindung zwischen Edelbodenalm und Bauplatz, Flugzeit 3min, Gehzeit knapp unter 2 Stunden

Baumaschinen mußten auf Transportkapazität der Helikopter zerlegt werden und zusammengebaut werden ( tlw. eigene Monteure)

Christian Wolfert; 23.4.2005

## MOUNTAIN REFUGE USING PASSIVE HOUSE TECHNOLOGY „SCHIESTL-HOUSE“ Hochschwab Mountain, Styria 2154 m

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January 2006

[Treberspurg & Partner Architekten ZT GmbH, Vienna]

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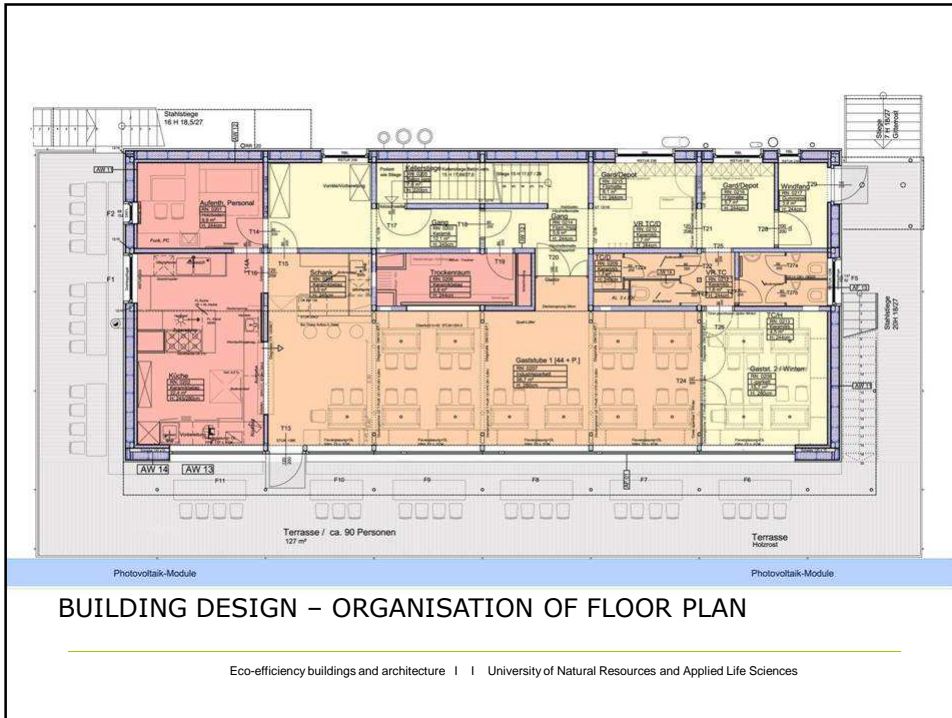
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**...AGAIN AND AGAIN...  
BAD WEATHER!!**



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CW16



**Details of the wall-elements:  
Joints of elements with pre-  
mounted air sealing and vapor  
barrier foils**

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**CW16**

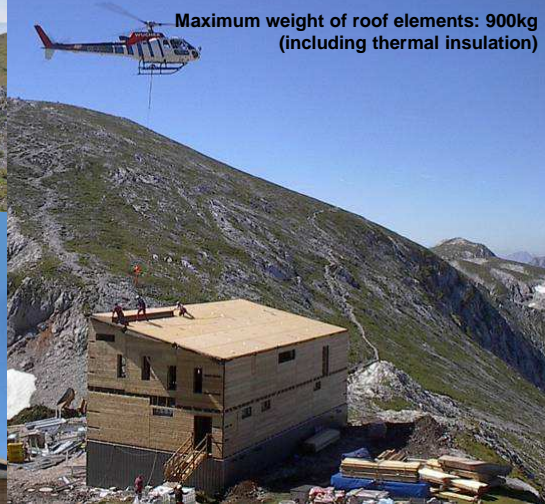
Alle Steher der tragenden Querschotten wurden sind bereits im Werk mit Dampfbremse umwickelt worden, damit beim Aufbrungen der Dampfsperre an dem Außenwänden keine Schwachstellen entstehen.

Auch die Windsperre wurde mit großen Überständen im Werk montiert, einerseit zu Schutz vor Witterung auf der Baustelle und andererseits zur leichteren Verbindung (Verklbung) untereinander  
Christian Wolfert; 26.4.2005

**Roof assembling  
September 2004**



**Mounting of all 15 roof elements within only a few minutes:  
requires maximum concentration of carpenters  
and helicopter pilot**



**Maximum weight of roof elements: 900kg  
(including thermal insulation)**



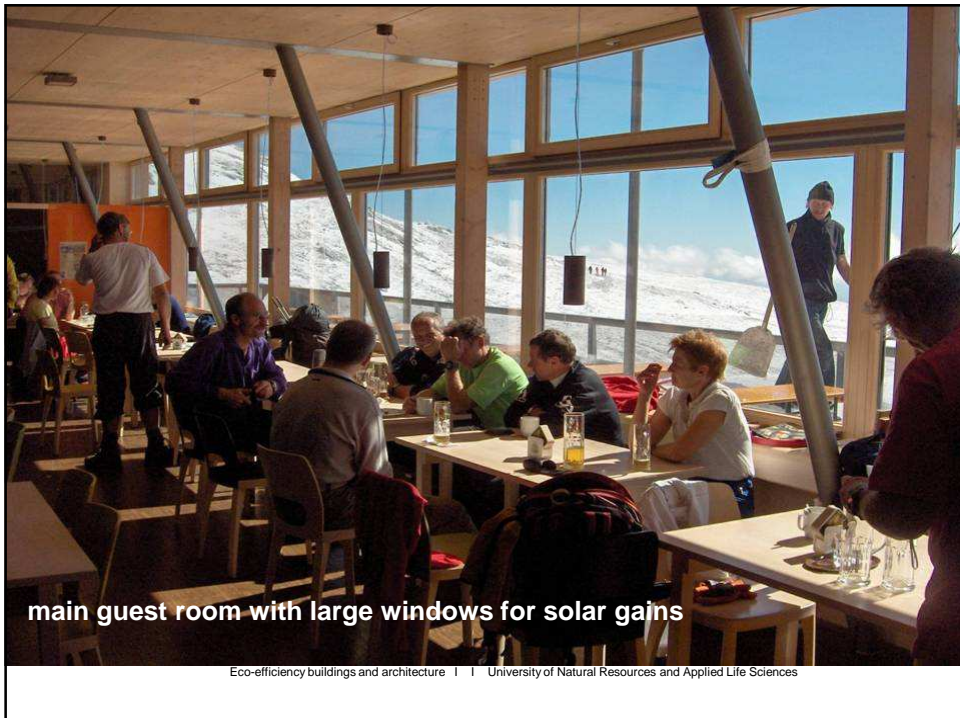
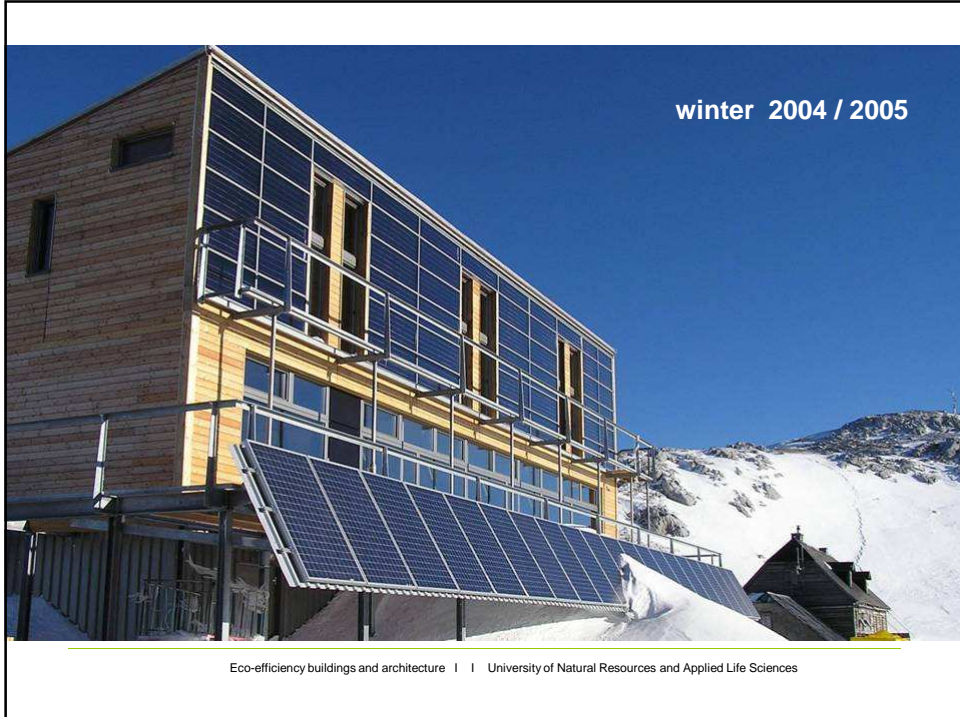
**CW17**

Alle Dachelemente werde zuerst zur Baustelle geflogen und dann innerhalb kürzester Zeit montiert

Dachelemente bestehen aus DJI-Trägern , komplett fertig mit Wärmedämmung und oberer und unterer Beplankung.

Riesige Erleichterung von allen Beteiligten.

Christian Wolfert; 26.4.2005



view from the north east

january 2006



snow and ice covering as additional thermal insulation

Exhaust ventilator of the kitchen and radiation measurement units on the roof



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## STATE OF THE ART



„1-liter car“  
80% energy saving

„1-liter house“ = Passivhouse  
since 1991  
90% less heating energy



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## FAMILY HOUSE PENKA

3911 Rappottenstein 34, NÖ

### OBJECT DATA

Type:	New building of Passive House
Constructor:	Fam. Penka
Planung:	Treberspurg & Partner ZT GmbH
Completed:	2000/2001
Size:	203 m <sup>2</sup>
Heating energy demand :	14 kWh/(m <sup>2</sup> a)
Netto Building Costs:	ca. 24.000 EURO

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Ventilation system mit earth collector, heat recovery and fresh air preheating unit

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## Development



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## PH-RESIDENTIAL HOUSING Vorgartenstraße



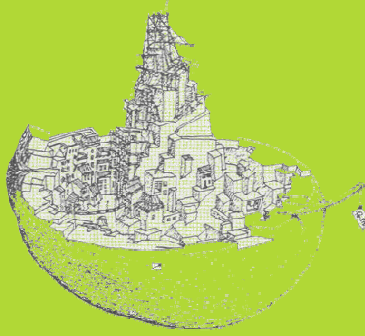
[Treberspurg & Partner Architekten ZT GmbH, Wien]

### OBJECT INFORMATION

Object: 61 Apartments, 19 Workplaces, 1 Kindergarden  
Developer: Kallco Bauträger GmbH  
Planning: Treberspurg & Partner Architekten ZT GmbH, Wien  
Bauphysic: Technisches Büro Wilhelm Hofbauer  
Completion: Juni 2011  
Heating Energy : 7 kWh/(m<sup>2</sup>a) gemäß OIB RL

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## Green roofs



## Examples of green roofs

„Neubau einer Wohnhausanlage“, Wintergasse 53, 3002 Purkersdorf

Planning: DI Georg Reinberg, DI Martin Treberspurg, Ausführungsplanung und Bauaufsicht gemeinsam with Arch. Jörg Riesenhuber

Completed: 1984

- Refurbishment of an old villa inc. new roof (apartment) + 2 new buildings (apartments)
- 10 app. + common rooms
- Grass roofs



[Source: REINBERG]

## Examples of green roofs

„Neubau einer Wohnhausanlage“, Wintergasse 53, 3002 Purkersdorf



[Source: REINBERG]

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## Examples of green roofs

„Neubau einer Reihenhausanlage“, Kamillenweg - Haselnussweg, 1220 Wien

Planning: Arge Architekten Reinberg – Treberspurg - Raith

Completed: 1991

- 10 app + community centre
- Grass roofs



[Source: TREBERSPURG]

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## Examples of green roofs

„Sanierung und Aufstockung eines Biedermeierhauses“, Lange Gasse 43, 1080 Wien

Planning: Arch. DI Georg Reinberg

Completed: 1998

- Renovation and und stockpiling in protected area
- 7 app, 1 shop as well as medical offices
- Through new roofing of the courtyard with grass – compensation of the missing green space



[Source: REINBERG]

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## Examples of green roofs

„Sanierung und Aufstockung eines Biedermeierhauses“, Lange Gasse 43, 1080 Wien



[Source: REINBERG]

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## Spar Supermarket



Engerthstraße 230A, 1020 Vienna  
Used space: 684 m<sup>2</sup>  
Green space: 1.105 m<sup>2</sup>  
- 230 m<sup>2</sup> for sport

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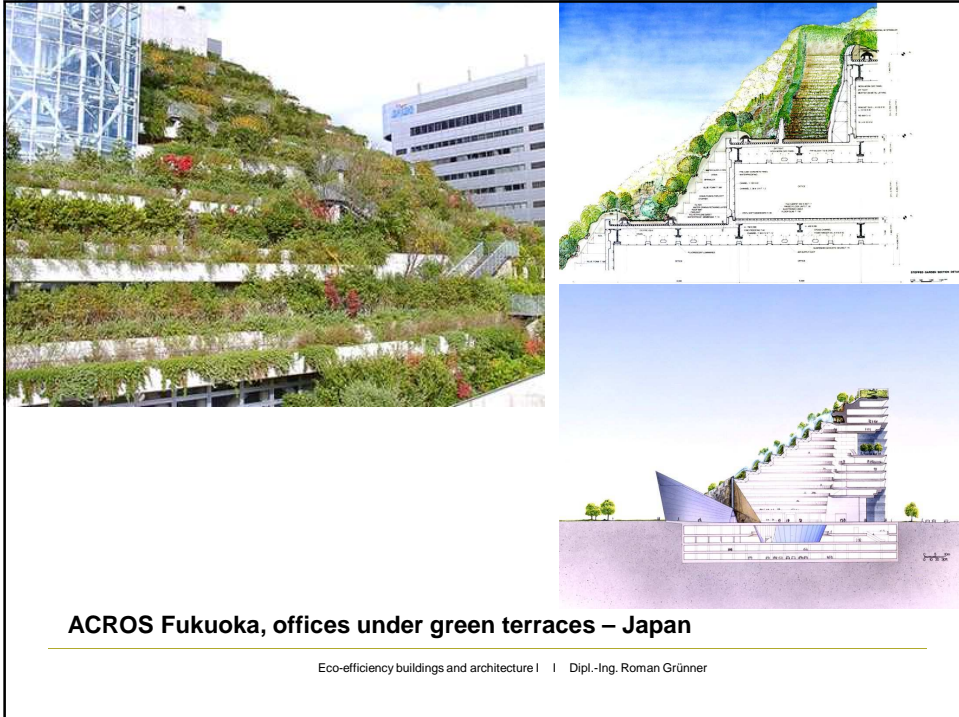


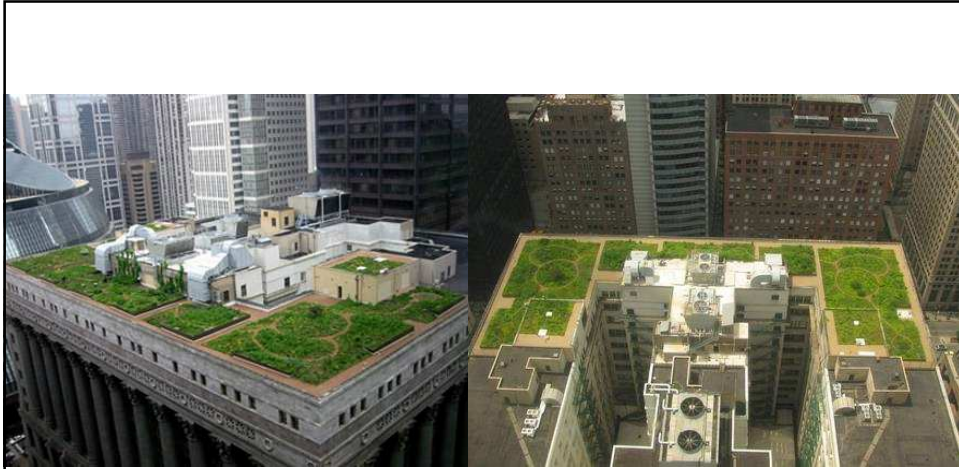
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### ACROS Fukuoka, offices under green terraces – Japan

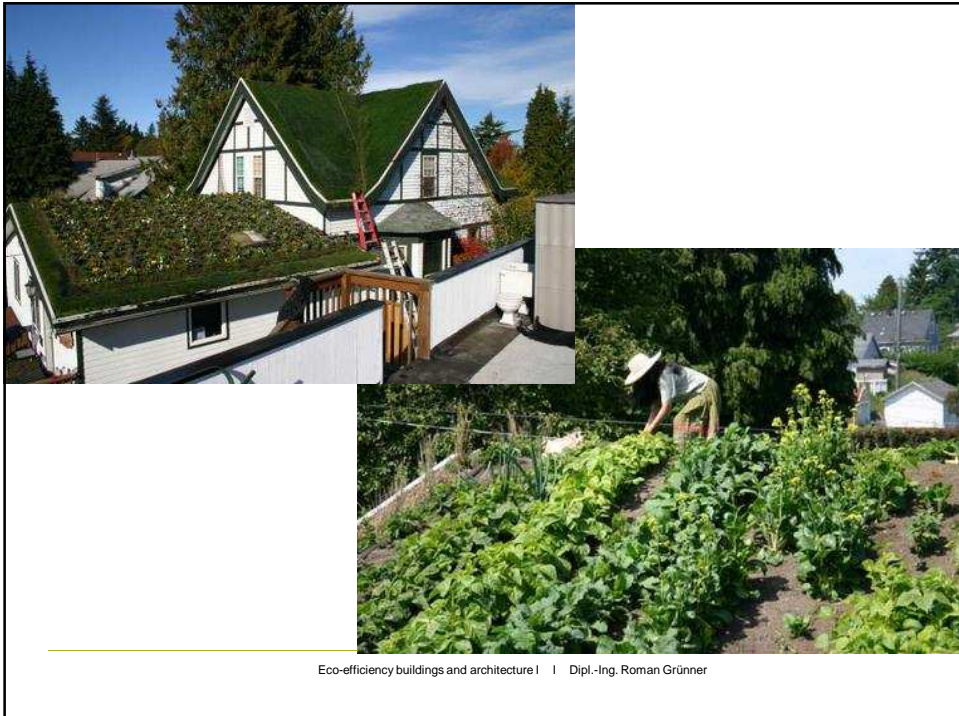
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**Chicago City Hall** – the coolest place to be, thanks to this \$2.5 million rooftop garden (*not* open to the public – the 11-storey drop might have something to do with this).

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## Green Walls

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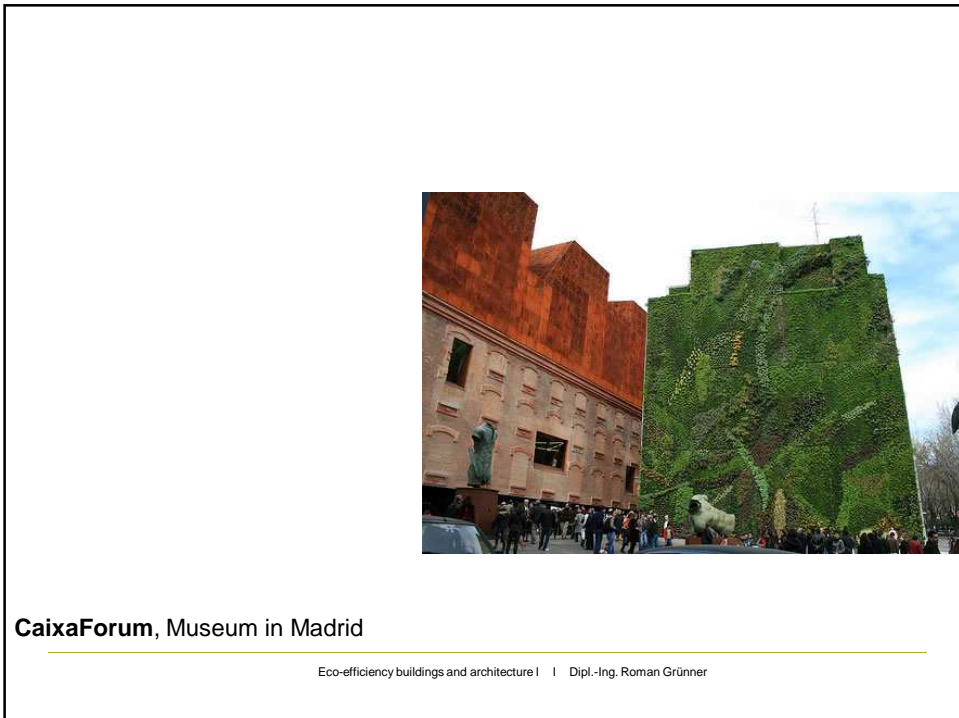
**Patrick Blanc's unique vertical garden**

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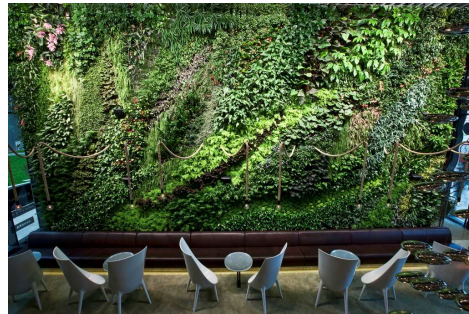
**Musée du quai Branly / Quai Branly Museum , Paris**

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**CaixaForum, Museum in Madrid**

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**J&T Bank Cafee, Bratislava**

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**Plants don't need earth: only water, minerals, light and carbon dioxide".  
Based on this simple axiom, Patrick Blanc built his first vertical garden in  
1988, specifically in La Villette in Paris.**

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## 22 KAISERMÜHLENSTRASSE, Wien

### Neubau einer Wohnhausanlage in Passivhausqualität

Bauträger:	BWS Gruppe
Architektur:	Treberspurg & Partner Architekten ZT GmbH
Bauphysik:	Technisches Büro Hofbauer
Fertigstellung:	2014
Nutzfläche:	24.500 m <sup>2</sup>
Umfang:	264 Apartments, 4 offices, 4 business units
Baukosten:	34,8 Mio. EURO
Energiekennzahl:	13 kWh/m <sup>2</sup> a

Ressourcenorientiertes Bauen | Univ. Prof. Arch. DI. Dr. Martin Treberspurg

## Wohnhausanlage Kaisermühlenstraße, 1220 Wien

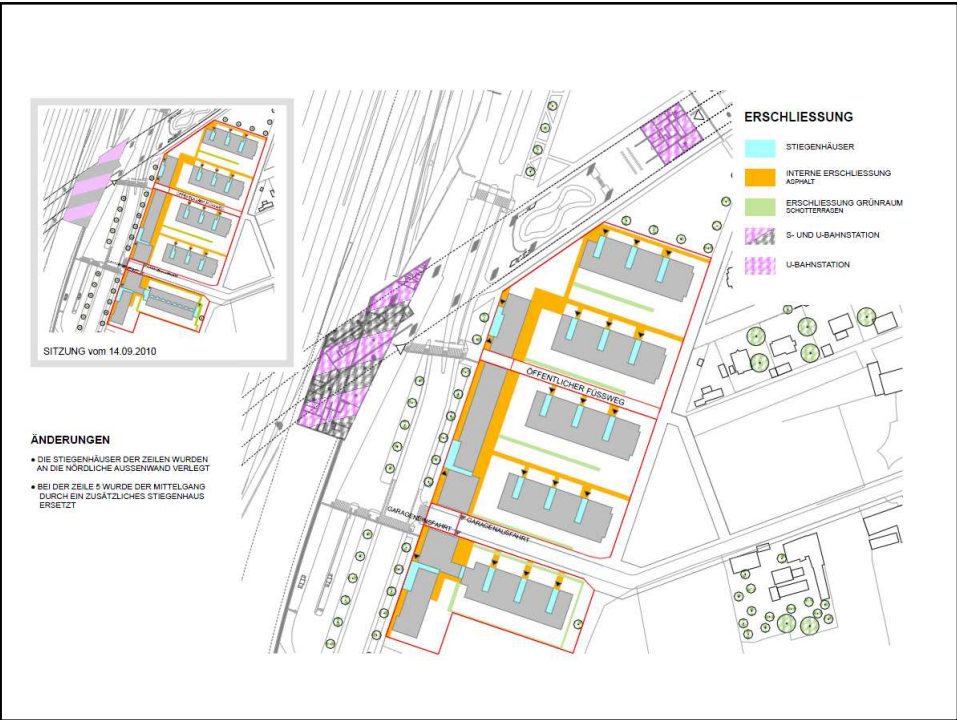
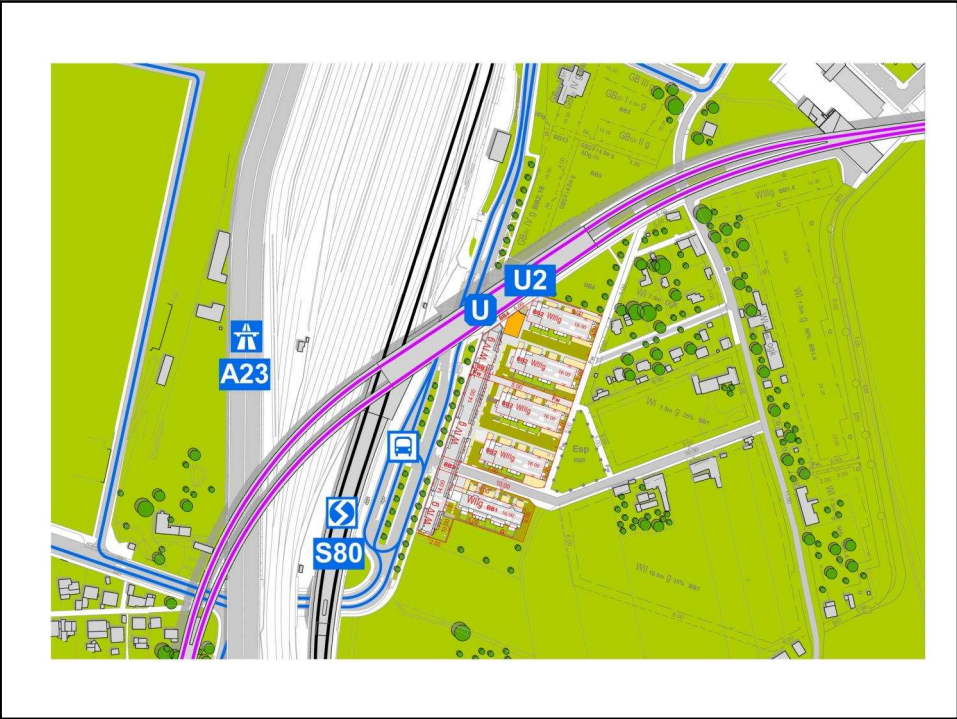
Eckdaten:  
 Passivwohnhausanlage mit 270  
 Wohnungen  
 eingeschossigen Tiefgarage

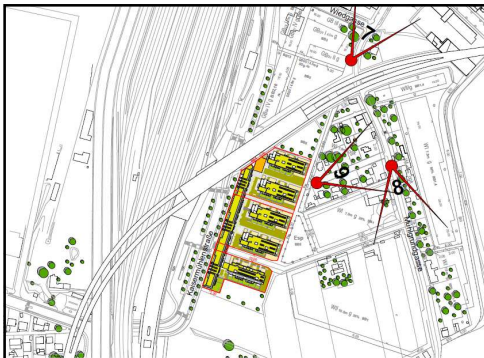
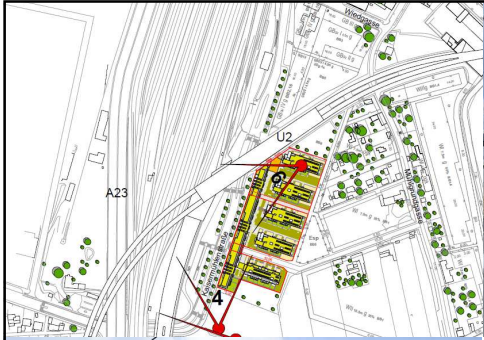
Anzahl Wohnungen	270	Stk
Fläche pro Wohnung	80	m <sup>2</sup> /Wo
Gesamtfläche	21.600	m <sup>2</sup> /Wo

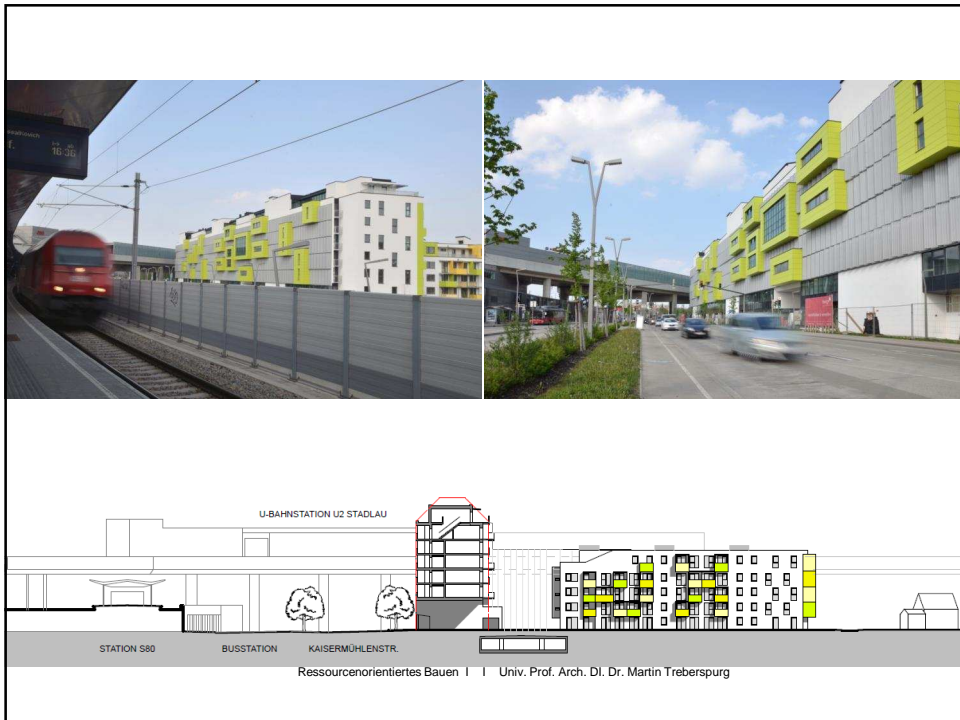
Luftwechsel nominal	0,35	h <sup>-1</sup>
Luftmenge nominal	19.656	m <sup>3</sup> /h
WW-Verbrauch / Wohnung	150	l/d

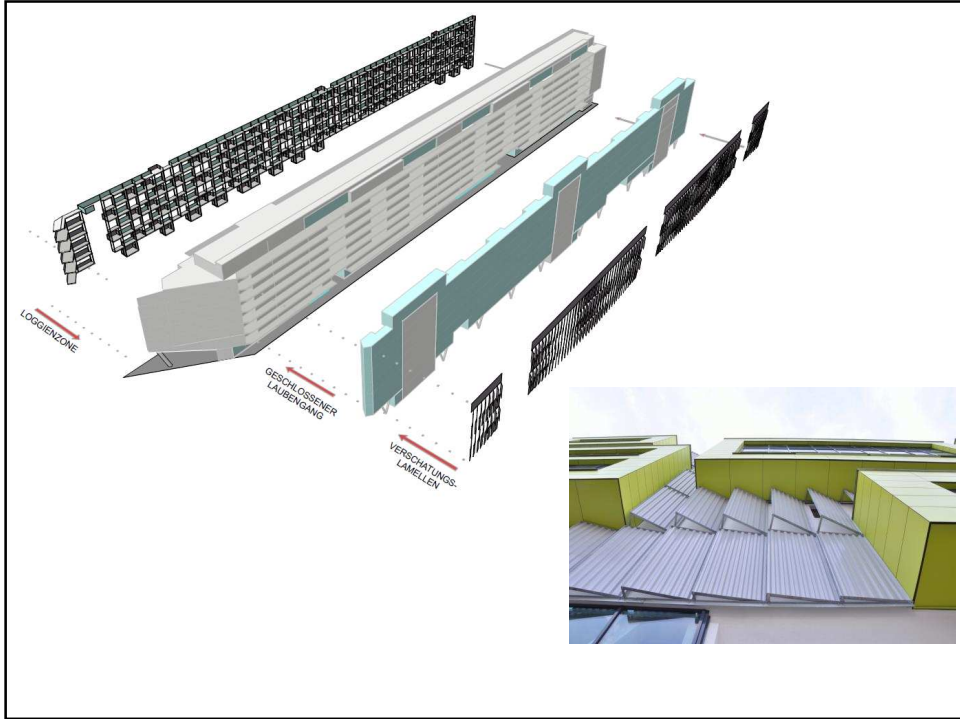
Bauträger: BWS  
 Planung: Treberspurg & Partner ZT  
 GmbH  
 Haustechnikplanung: Thermo Projekt  
 Haustechnische PlanungsGmbH

Ressourcenorientiertes Bauen | Univ. Prof. Arch. DI. Dr. Martin Treberspurg











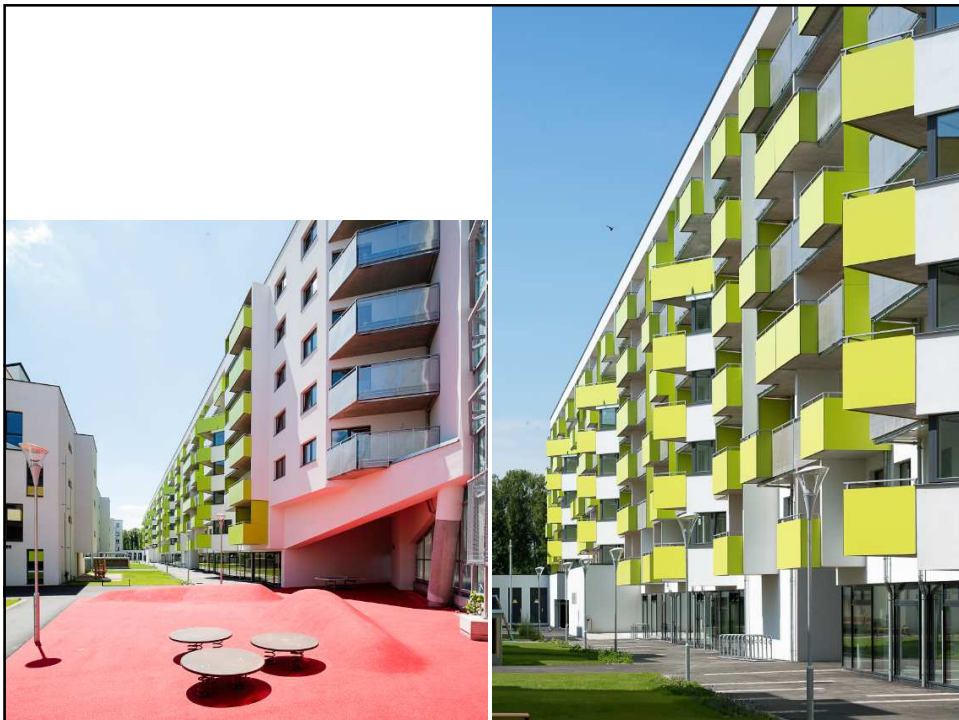




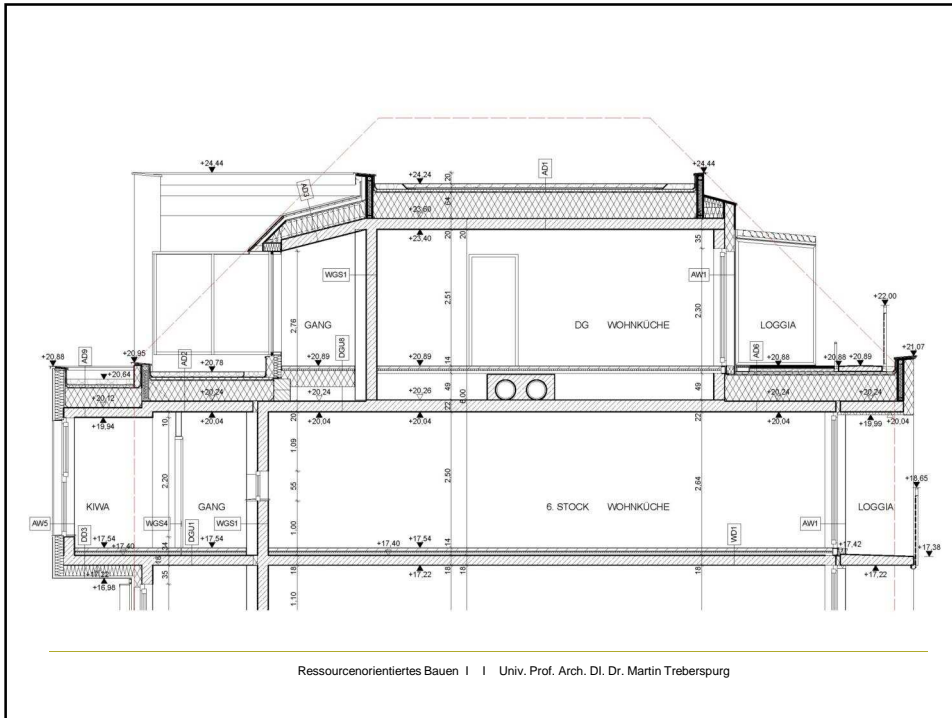
East view (courtyard)



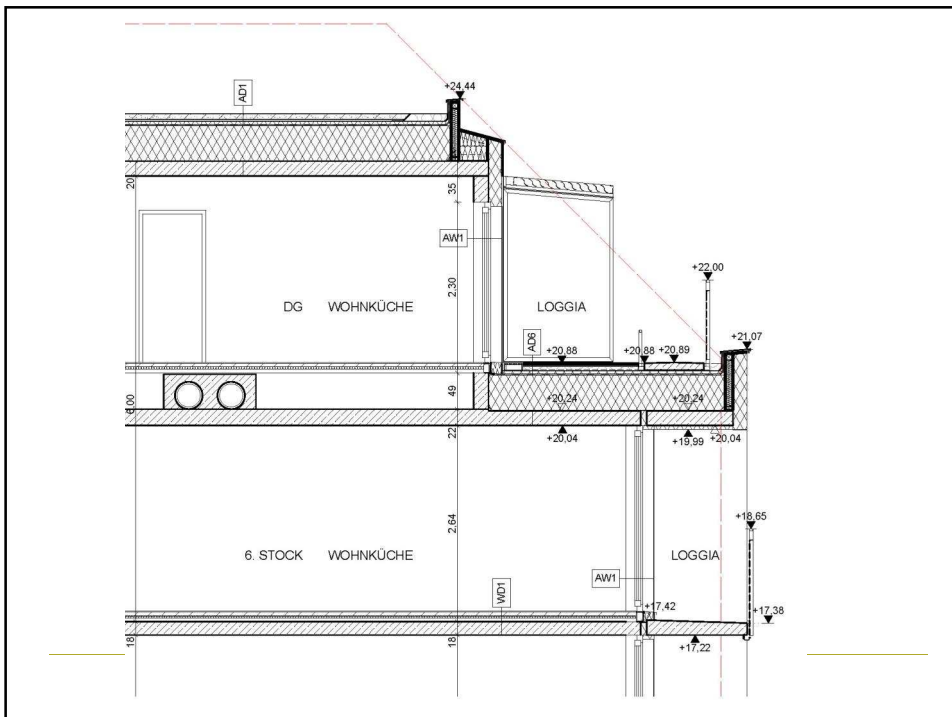
Ressourcenorientiertes Bauen | Univ. Prof. Arch. DI. Dr. Martin Treberspurg

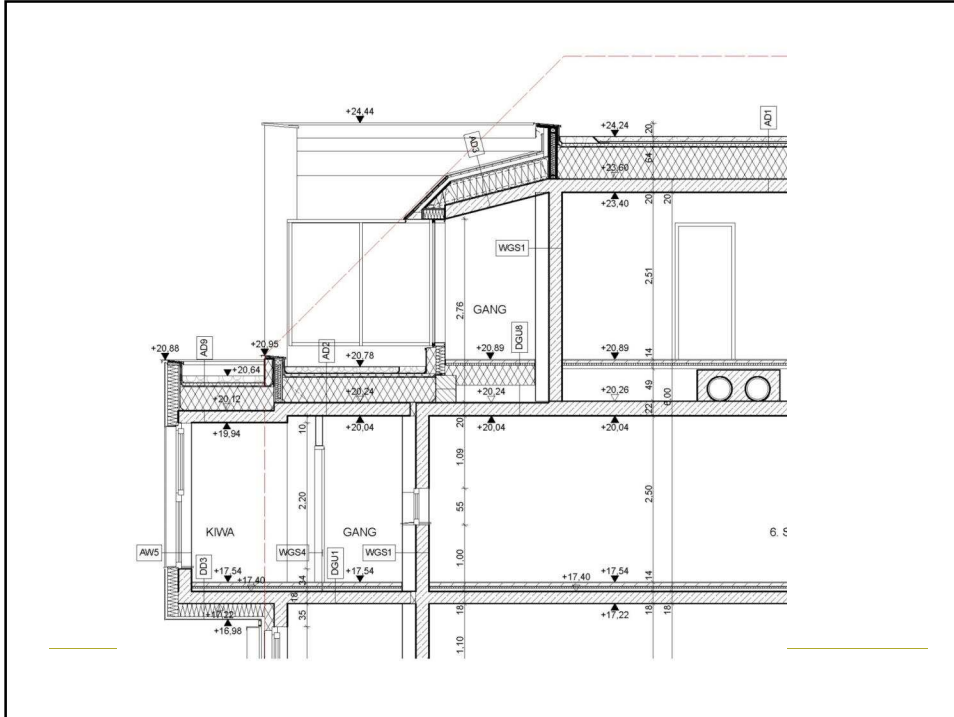






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**Thank you for your attention**