

## Premises for the Beginn

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- 12.000 Accommodations needed in 1990
- City Expansion only in Pichling possible
- Idea of a „Solar City“

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## Solararchitecture

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- Low energy construction method
- Partial passivehouse standard
- Min. heating energy Demands
- Compact style
- Very good Insulation
- Solar energy (passive/active)
- ecological. parts catalogue

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## Traffic

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- Walk- and Bicycle lanes
- Tram connection
- Rapidbus
- by-pass Ebelsberg
- medium-term quick railwaybound public transport

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## Energy supply

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- solar panels
- district heat

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# Disposal

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- Pilotproject „Effluent free settlement “
- Grey water cleaning in Plant cleaning facilities
- Rainwater cultivation

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Foto: Magistrat Linz

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Apartments: 1,298 apartments  
Public transport: tram, bus

[credit: MAG Linz]

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## Solar City Linz Pichling



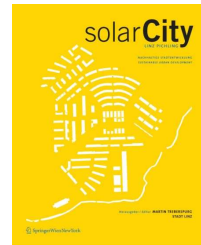
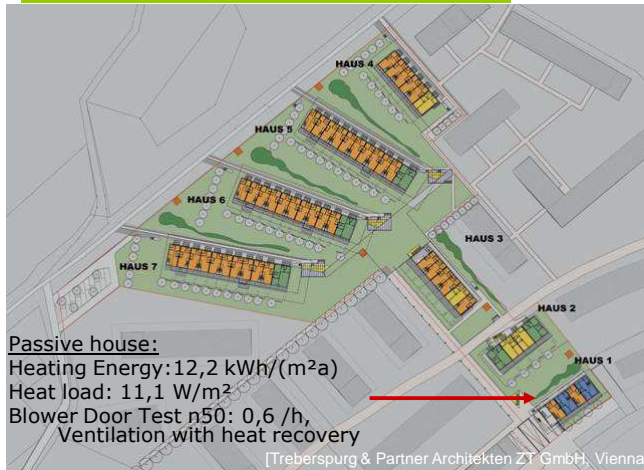
**2003 FIRST PASSIVE HOUSE IN UPPER AUSTRIA!**

Developer: EBS Wohnungsgesellschaft mbH Linz

Architects: Treberspurg & Partner Architects ZT GmbH

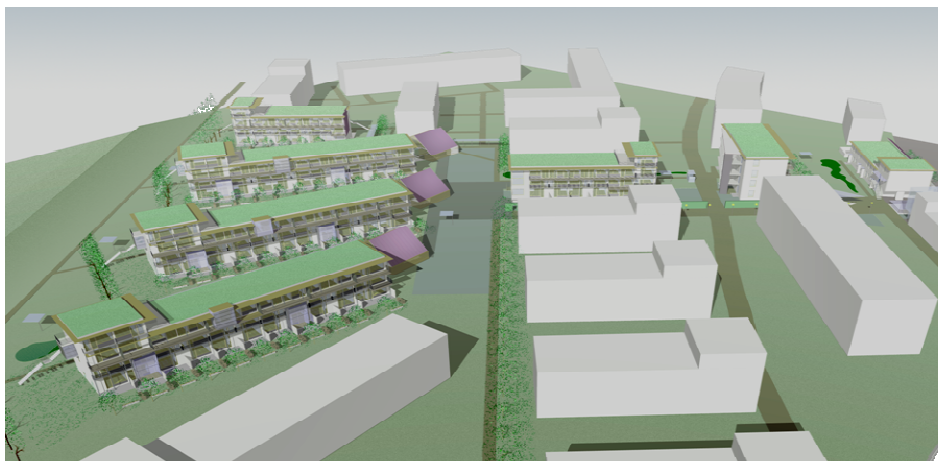
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# Solar City Linz Pichling



**Solar City book:**  
**ENGLISH &**  
**GERMAN,**  
**PUBLISHER:**  
**SPRINGER**

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House 2, 4-7:  
 Low energy House  
 Heating energy demand:  
 30-32 kWh/m<sup>2</sup>a  
 Standard-heater

House 3:  
 Almost-Passivehouse  
 Heating energy demand:  
 < 20 kWh/m<sup>2</sup>a  
 Decentral ventilation  
 smaller heater

HOUSE 1:  
 Passivehouse  
 Heating energy demand:  
 < 15 kWh/m<sup>2</sup>a  
 Decentrale ventilation  
 mit earth preheating  
 unit

93 Wohneinheiten

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**Passivehouse-Residential facilities**  
 12,2 kWh/m<sup>2</sup>a  
 Wohnhausanlage Solarcity Linz

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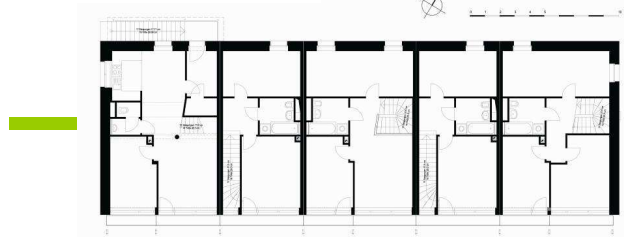
## Wohnhausanlage der EBS, solarCity Linz-Pichling

**Bauträger:** EBS Wohnungsgesellschaft mbH Linz  
**Planung:** Treberspurg & Partner Architekten ZT GmbH

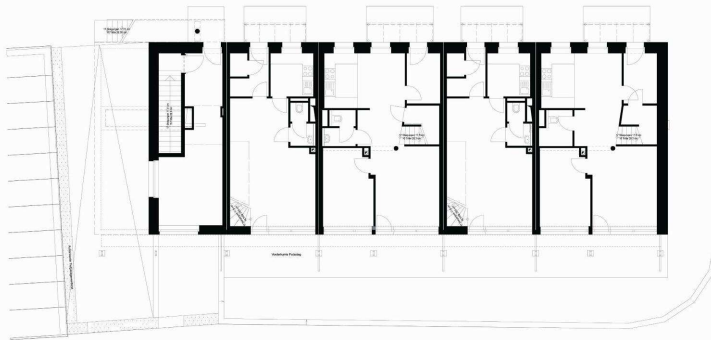


**WHA EBS [Foto: MAG Linz]** — **Quelle: HdZ-Bericht (9/2004): Treberspurg, Mühlhng, Hammer, et al. 2004**  
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## GEBÄUDEKONZEPT



Grundriss 1. OG



Grundriss EG

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# Kindergarden

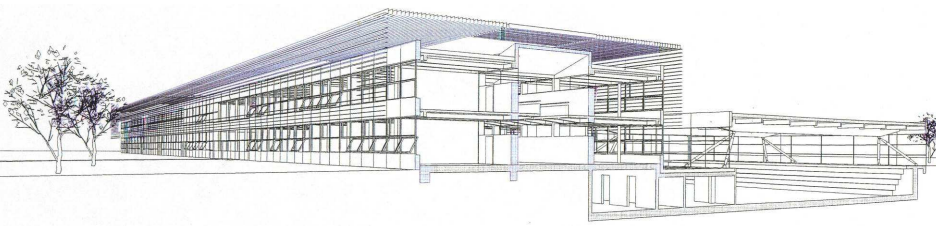


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# Counseling Centre



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## School center

- Volksschule/Hort (1. Bauetappe: 6/4)(12/8/12)
- Start: Herbst 2001
- Planing: Michael Loudon, (A)
- Developer: Bank Austria CA-Leasing, Universale Bau AG
- Reinforced concrete frame construction, prefabricated

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## School center



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## Town center



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## Planner/Developer

- 19 Architecture offices (GB, D, A)
- 2 Technician offices
- 12 nonprofit building Associations
- 3 Developers Infrastructure
- Municipality Linz
- Linz AG

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## Costs

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	ATS	EURO
Housing	1.700.000.000,-	123.000.000,-
Infrastructure	1.000.000.000,-	73.000.000,-
<b>Total</b>	<b>2.700.000.000,-</b>	<b>196.000.000,-</b>

**Eurofigher**

**109.380.000,-**  
(Quelle: [www.airpower.at](http://www.airpower.at))

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## PH-RESIDENTIAL HOUSING ROSCHEGASSE

Pantucekgasse Roschegasse 20, 1110 Vienna

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Type:	social residential building
Developer:	a:h, gemeinn. Siedlungsgenoss. Altmannsdorf - Hetzendorf
Design&Planning:	Treberspurg & Partner Architekten ZT GmbH
Completion:	2006
Size:	9.900 m <sup>2</sup> living space, 114 apartments, common areas, underground car park
Heating Energy:	7,3 kWh/(m <sup>2</sup> a) (PHPP)
Netto building costs:	1.212 EURO/m <sup>2</sup> living space

**Dez./2006 biggest social residential Passive House!**

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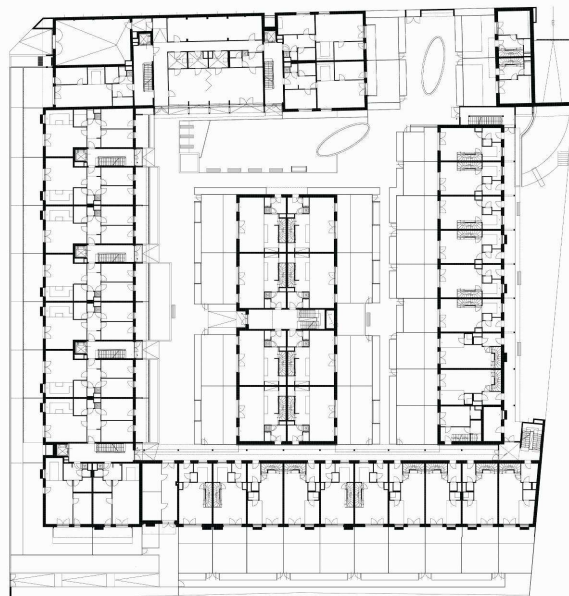
## PH-RESIDENTIAL HOUSING ROSCHEGASSE

Pantucekgasse Roschegasse 20, 1110 Vienna



[Treberspurg & Partner Architekten ZT GmbH, Vienna]

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Ground plan

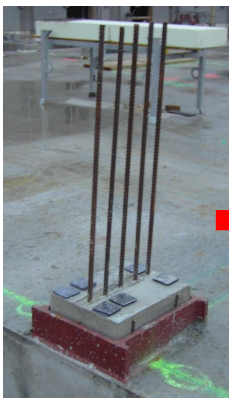
© Treberspurg & Partner Architekten ZT Ges.m.b.H.

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### Construction Details Foundation

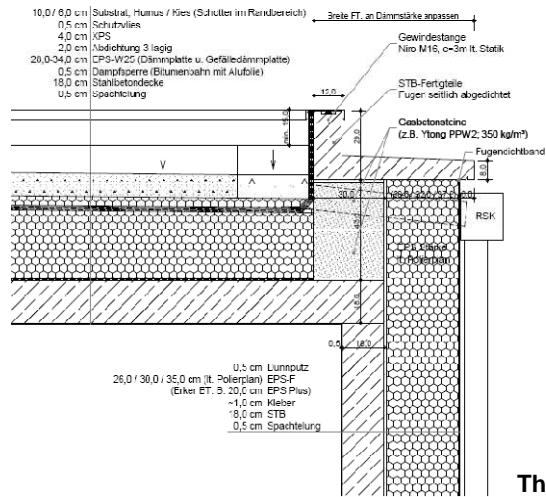


**Thermic detached base-points above cellar**

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## Construction Details Attic



**Thermic detached attic connection**

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## Construction Details Attic

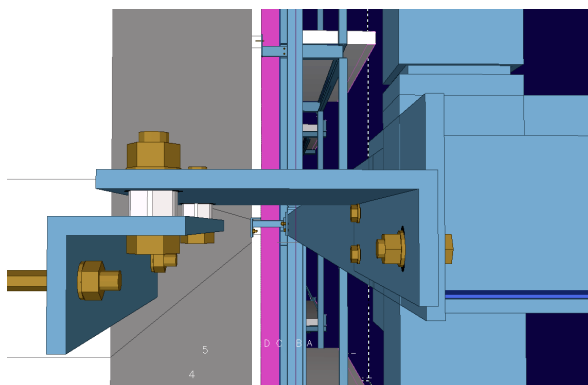


**Thermic detached attic connection**

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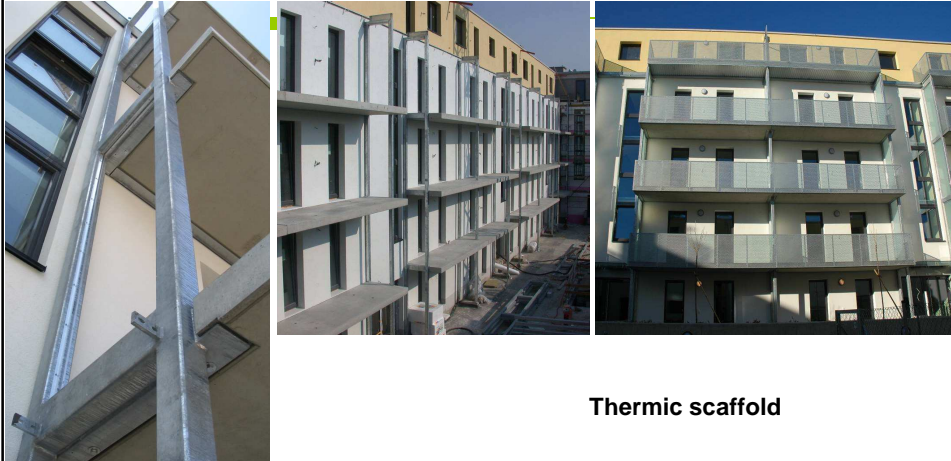


**Construction Details**  
**Loggia scaffold – access balcony - anchoring**



**Detail Anchoring**

## Construction Details



**Thermic scaffold**

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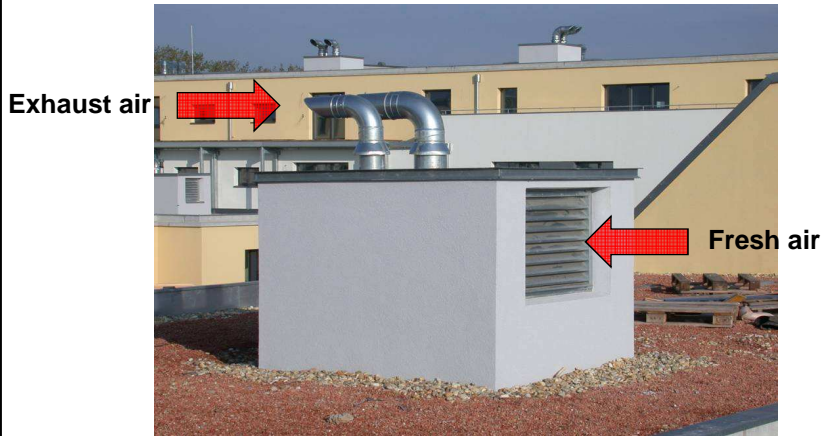
## BUILDING SERVICES CONCEPT

- decentralised ventilation compact system with PH- Compactinstruments Aeorsmart S of Drexel & Weiss in every apartment.
- air preheating through 11 geothermal sensors in 100 m depth, Solezwischenkreis and heat exchanger on the roof as fresh air-exhausts.
- A small electrical radiant heater in the bathroom, an electrical radiator, controlled by the compact instrument for peak demand
- Photovoltaic cells on the southern façade

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## BUILDING SERVICES CONCEPT

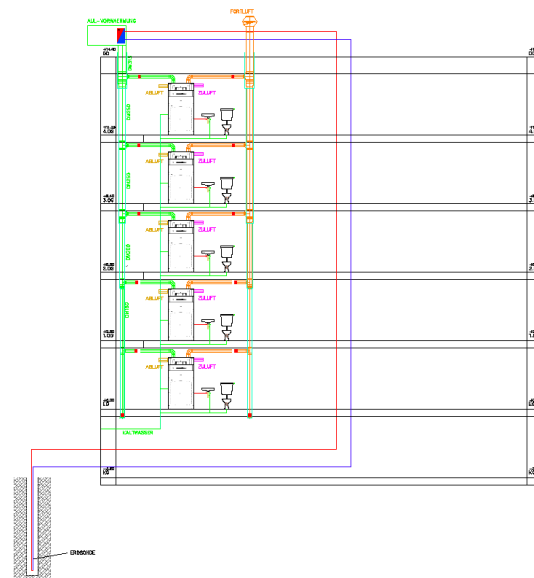


### Ventilation facilities at the Roof

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## BUILDING SERVICES CONCEPT Function ventilation

- Passivhouse ventilation through decentralised ventilation instruments in every apartment
- Air preheating through heat exchangers and geothermal energy sensors
- Warm water preparation decentralised due to hydro-extractors



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