



Image 1: Developed construction site "Am Bergle"
Source: <https://quartier-am-bergle-schlier.de/energiekonzept>

Project report

GERO^{therm}® DUPLEX geothermal systems

New construction
Climate-neutral residential area "Am Bergle"
DE-88281 Schlier



Image 2: Schlier urban design

Source: <https://quartier-am-bergle-schlier.de/energiekonzept>

Introduction

In the municipality of Schlier in the Ravensburg district, a climate-neutral residential area is being built on an area of 3.11 hectares with 31 single-family houses and 6 apartment buildings with 79 residential units constructed to the KfW 70 efficiency standard.

(Kreditanstalt für Wiederaufbau - [German Reconstruction Loan Corporation])

The innovative energy concept, which was developed by the municipality of Schlier in the district of Ravensburg, led by the mayoress Mrs. Liebmann, and iQ-GmbH, is not only intended to meet contemporary living requirements, but also to ensure environmental and climate protection for the next decades.

The basis of this energy concept is a so-called "cold local heating network". The flow temperature in this network is between 7° and 14° degrees Celsius and draws its energy from a geothermal probe array. With the help of the brine/water heat pumps

installed in the houses, the residents are supplied with heating warmth and hot water.



Image 3: GEROthem® DUPLEX Geothermal probes

Since this system also works the other way round, residents have the option of cooling their homes in summer without using additional energy.

The energy concept naturally also includes photovoltaic systems on the houses. These are at just right size so that the residents can cover most of their annual electricity needs with them.

To round off the concept, e-charging stations are planned in the underground garages and on the single-family houses. Intelligent control of the sector-coupled heat pumps, battery storage and e-charging stations thus enables an energy-efficient, environmentally and climate-friendly residential area.



Image 4: GEROtherm® DUPLEX mounted on a reel



Image 5: GEROtherm® DUPLEX ready for sinking

The geothermal probe array consists of 29 GEROtherm® DUPLEX geothermal probes PN16, made of PE100-RC de 40 x 3.7 mm x 150 m. The installation and sinking was carried out with a push rod with the addition of the GEROtherm® PUSH-FIX.



Image 6: GEROtherm® PUSH-FIX

Project data

Building site

Climate-neutral residential area
"Am Bergle"
31 single-family homes and
6 apartment buildings with 79
residential units
DE-88281 Schlier/Unterankenreute

Participating companies

Kienzle, Vögele, Blasberg Architects

Heinrich-Heine-Str. 9
DE-88045 Friedrichshafen
www.architekten-kvb.de

Schäffler sinnogy climate-neutral energy concepts

Kartäuserstrasse 49
DE-79102 Freiburg
www.schaeffler-sinnogy.de

Roland Reiter Planning agency Technical Building Equipment

Gaussstrasse 1
DE-88250 Weingarten
www.ib-reiter.de



TWS Technische Werke Schusstal GmbH & Co. KG

Schussenstrasse 22
DE-88212 Ravensburg
www.tws.de

EnBW AG

Durlacher Allee 93
DE-76131 Karlsruhe
www.enbw.com

BauGrund Süd Gesellschaft für Geothermie GmbH

Maybachstrasse 5
DE-88410 Bad Wurzach
www.baugrundsued.de

Products used

29 GEROtherm® DUPLEX
Geothermal probes
PN16, PE100-RC, de 40 x 3.7 mm
Length 150 m

29 GEROtherm® PUSH-FIX



HakaGerodur

HakaGerodur AG
Giessenstrasse 3
CH-8717 Benken
T +41 (0) 55 293 25 25
verkauf_ews@hakagerodur.ch
www.hakagerodur.ch