

# TRM PFAHLSYSTEME FACTSHEET

Residential Development



## New Residential Development in Niederau, Wildschöna

- + 335 ductile driven piles of types 170/9.0 and 118/7.5 were installed
- + Design load up to 780 kN per pile
- + Soil conditions: alternating layers of silt, sand, and gravel
- + Completion scheduled for autumn 2025
- + Construction period: 1 year

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## The Initial Situation

Tirolia Immowelt GmbH planned the construction of a residential complex with 36 units in the Niederau district of the Wildschönau region in Tyrol. Due to the sloped terrain and the planned partial basement, subsurface investigations revealed challenging soil conditions with alternating layers of silt, sand, gravel, and peat. The low bearing capacity

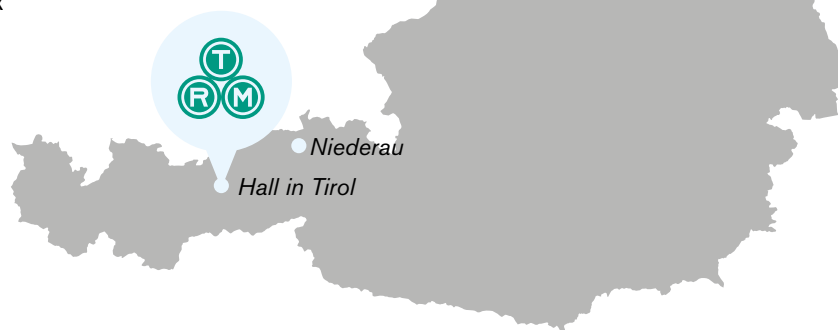
and the presence of organic interlayers made conventional shallow foundations unsuitable. Therefore, a deep foundation concept was developed early on to ensure reliable load transfer and the implementation of rigid floor slabs.



Challenging soil conditions with alternating layers



Due to the challenging soil conditions and the sloped terrain in Niederau, a conventional foundation was not feasible for the new residential complex





## Deep foundation

Due to the heterogeneous and partially low-bearing soil layers at the Niederau project site, deep foundation using ductile driven piles was required. To ensure reliable load transfer for the „Hochquartier Niederau“ residential complex, approximately 335 grouted piles of types TRM 170 and TRM 118 were installed. These piles transfer the building

loads into load-bearing gravel layers at depths of up to 10 meters. The piles achieve design loads of up to 780 kN. The execution is being carried out by Hollaus Bau GmbH, based on the design by the Private Geotechnical Institute.



Deep foundation using ductile driven piles



Installation of isolated foundations after pre-excitation



**Do you have any questions?** Our experts will be happy to advise you.

