

Resiterra Regeneration site development of energy concept

In the centre of Leuven, one of the largest inner-city developments in Flanders is being built on and next to the hospital site, the Hertogensite. The Janseniushof is adjacent to the south side of the site, with a total of 103 town houses and flats under construction in Phases 3 and 4. They will be connected for heating and cooling to a cold-warmth network with collective cold-warmth sources. This technique is being used for the first time in Flanders for residential purposes

The groundwater, which is around 14°C, comes from a depth of 70 metres and is transported to a central heat pump for further heating. The system pumps the groundwater back into the ground after it has cooled down. The energy network will also draw additional heat from the river water of the Dijle to maintain the temperature of the underground water layer. The slight drop in the water temperature of the Dijle has another advantage: the number of algae in the summer is greatly reduced.

Erik Van Hoof, CEO of real estate developer Resiterra: "In this way we are creating one of the most ecological residential areas in Flanders. And a nice detail: with this technology we can not only heat all those living rooms, in the summer you can also use it for cooling."

Flemish Minister of Energy Bart Tommelein agreed for the necessary drilling on Thursday 16 November and speaks of an exemplary project for Flanders: "The aim is to implement this type of low-temperature energy network in different cities all over Flanders in due course."

The pilot project at Janseniushof can be rolled out further on the neighbouring Hertogensite, so that a second, larger network can provide around 500 residential units with low temperature heating and high temperature cooling. On the Hertogensite there are existing buildings that are being thoroughly renovated. The proposed concept is an all-electric system with no local CO₂ emissions. By way of comparison: with classic gas wall boilers, each house or flat would emit 1 tonne of CO₂ annually. However, the energy network still uses electricity as auxiliary energy for pumping and for the heat pumps. If this is green electricity, there are no CO₂ emissions associated with it either.



RESITERRA

Reference: 13036.003

Developer

Resiterra

Designer / Architect

De Gregorio & Partners

Location

Leuven

Surface

110.000 m²

Period

Study:

2014 - 2017

Sectors

Real estate

Services

Strategy & masterplan