

## Fine-scale rainfall measurement and prediction to enhance urban pluvial flood management



## **Pilot location: LEUVEN (BE)**

The drainage area of Leuven is situated about 20 km east of Brussels. It is spread over 6 different municipalities, the most important ones being Leuven, Herent and Bertem. Leuven as capital of the province of Vlaams-Brabant is an important regional centre of administrative and business services and is the seat of Belgium's oldest university (KU Leuven).

The project will be split up in two phases:

	Main municipalities(villages)	Characteristics
Phase 1 (northern area)	Herent (Centre/Winksele) Leuven (Wilsele/Wijgmaal)	Approx. pop. 25000 Approx. area 30 km
Phase 2 (whole drainage area)	As above +	Approx. pop. 135000 Approx. area 120 km
	Leuven (Centre/Kessel-Lo/Heverlee) Bertem (Centre/Leefdaal) Lubbeek (Linden)	

The two main rivers crossing the area are the rivers Dijle and Voer; especially in the city centre of Leuven the Dijle is highly branched and has created a fairly flat and completely urbanised valley; some of the outer areas are more rural, and the Voer valley in Bertem is somewhat more steep and narrow, causing the urbanised area to be situated mainly along the river.









In recent years, urban flooding has been mainly situated in the vicinity of the central wastewater treatment plant, where the whole sewer system comes together in the lowest point of the area.

In the outer areas, sewer systems occasionally flood as a result of sudden inflows of surface runoff (overland flow) from the steeper parts of the valleys.

Extensive flooding in the city centre has been rare in the past years, but the protection of the city's high patrimonial value remains an important objective.

Besides protecting against flooding, the sewer system is managed and operated with a view to minimising pollution from combined sewer overflow spills and optimising the performance of the major sewage pumping stations.





