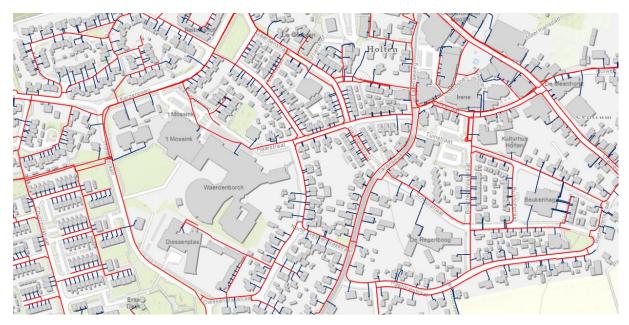At Siers Infraconsult we do many jobs pertaining to underground infrastructure, such as engineering, work preparation, surveying, and more. One part of our work is gas leak detection.

In order to look for gas leaks we utilize a person called a 'gaslekzoeker'. The gaslekzoeker -equipped with detection equipment, GPS and a tablet- goes and walks over the gaspipes to check the air for presence of gas. The gaslekzoeker has to check the gas pipe up to the house connection (this means that the gaslekzoeker walks up to the façade of the house). The entire gas network is checked in this way.

The gaslekzoeker uses a car and bike which can be tactically placed along the route to make the route more efficient and to avoid walking over the same pipe twice. The gaslekzoeker also utilizes an Android tablet to access data and edit it where necessary. This is done via the ArcGIS Fieldmaps app. In the backend ArcGIS and Python are used to prepare, visualize and process data.

Here an example of a gas network:

Intern responsibilities

In a best case scenario, the gaslekzoeker will walk over the pipes just once. However, it is hard and sometimes impossible to plan a route in such a way. When it comes to planning the best route, there is a lot of room for improvement. The intern's job will be to create a tool for calculating the most efficient route for our gaslekzoekers, in order to optimize the process of gas leak detection at Siers Infraconsult.