



Lippeverband –
Hamm
urban drainage

The Lippeverband water management company is responsible for waste water disposal in Hamm. The solution from BARTHAUER helps keep the sewer network intact.

Waste water disposal is among the fundamental obligations of municipal administrations in Germany. In Hamm, Westphalia this aspect was assigned to a local water management company, the Lippeverband, a few years ago. The numerous tasks in day-to-day operations have to be carefully planned, documented and updated. They range from cleaning the pipeline network to rodent management to challenges for historical reasons, such as subsidence since the end of mining. This is where the sewer network cadastre department comes in. With the proven software package from Barthauer Software GmbH, it has access to a reliable and flexible technology basis.

A good sewer network functions so that citizens don't notice it

Hamm with a population of around 180,000 is located in the heart of Westphalia in the eastern Ruhr region. While responsibility for the electricity, gas, water and district heating networks rests with the municipal utility, the Lippeverband is in charge of urban drainage. Within this association, a total of 70 employees in the planning, construction, operation and sewer cadastre departments handle all of the tasks for the Hammer district. Ongoing operation in particular requires the reliable cleaning of sewers and drains in the streets as well as the maintenance of special structures. Hamm has plenty of the latter: a total of 151 facilities with four sewage works, 62 pumping stations, 32 rainwater treatment plants, 23 rainwater detention basins, 28 rainwater overflows and much more. They require regular inspection, repair and modernisation – along with the corresponding detailed documentation. .

The foundation: software by market leaders

Different tasks require software that is precisely tailored to the respective needs: The best respective tools are required so that every employee can perform their tasks properly. In this case, a suitable geographic information system (GIS) as the basis, along with professional software for the sewer cadastre. The users in Hamm chose a two-tier solution early on. ArcGIS by ESRI for analysis and information, and a proven CAD solution from Autodesk for planning work. In both cases they have the ideal foundation for the BaSYS software from Barthauer. This is where the advantages of the multi-platform system really become clear: The user sees a uniform interface on the screen no matter what system is behind it. This is very user-friendly and users can concentrate fully on their own responsibilities. It is made possible by a Microsoft SQL database underlying both systems.

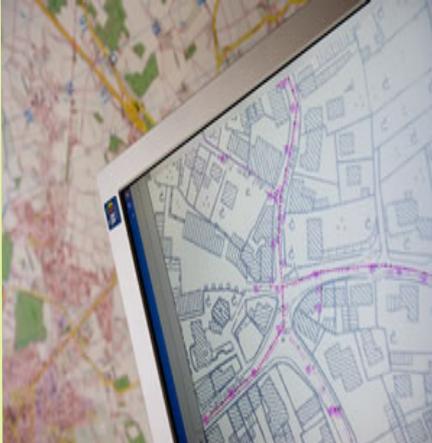
No meter of pipe is forgotten

Repairing, expanding and modernising the sewer network and everything connected to it: Coordinating and tracking these ongoing employee activities means urban drainage for Hamm requires an optimised planning basis. This is where the colleagues from the sewer network cadastre department come in. Eight full and five information licenses are available to handle urban drainage tasks. The system is installed on around 30 workstations. Thanks to network licensing, the flexible use of the modules on the different workstations is supported.

A typical task in the course of the everyday administration of sewer data is condition classification. Here the videos from the investigations of external companies are transferred to BaSYS, the lines are

Use of BaSYS components

- **Masterand condition data module**
- **Remediation planning**
- **ISYBAU 01/96, 06/01, 2006**
- **Link to AutoCAD (Autodesk) for data capture, planning etc.**
- **ArcGIS (ESRI) link for analysis and information**
- **MS SQL database**



visualised in the GIS and then the network sections are assigned to various damage classes according to the results. This is used to determine the respective need for action.

There is no all-in-one solution for every purpose ...

Or is it? At least they are working on that in Hamm: Urban drainage works so well with the BaSYS modules that the standard scope has been expanded with special tools developed in house, coming pretty close to a customised, ideal solution. For ambitious power users like Hamm, an open system such as BaSYS is ideal since it allows the most unusual, non-standard tool ideas to be added easily. Additional verification routines are one example. These are used when newly recorded or reviewed data that go beyond the ISYBAU standard are imported into the system.

In Hamm the orders for optical sewer inspections, so-called TV inspections, are contracted out to external companies. Being able to process the supplied data without any problems is even more important as a result. With a concrete requirements profile, little room for error by the service providers remains. In addition to a prescribed survey format, PIETS also provides them with a programme used to review the format again before the data are delivered to the sewer network cadastre department. This is made possible by the original ISYBAU interface in the Barthauer software, which makes importing data much simpler.

Naturally not only the videos of the TV inspection are linked to the graphics data of the sewer network, but also all corresponding attribute data in the background. This includes information on shafts, reaches, structures and the surroundings as well as their ownership. A privately owned sewer is displayed in a different colour in the analysis.

It is precisely these details that can be individually modified by the user in BaSYS. Line and object colours are individually assigned for the various planning stages. Completed objects for example can be shown in blue while those still under construction or with incomplete basic data are displayed in red. The

drawing rules, labelling and other design possibilities are highly variable. The input can be saved under a so-called model for future use.

What's next?

The BaSYS module for planning the remediation of sewer networks is already awaiting deployment. It will be implemented in Hamm when the opportunity presents itself and then uniform software will be available for this area as well. One thing is for sure: Anything that does not fit exactly will be made to fit! Once again BaSYS offers a full range of possibilities for individual adaptation if the standard tools should

That's convincing:

- Multi-platform solution – runs on all leading GIS/ CAD systems
- Uniform interface – improves user acceptance
- Open interfaces – supporting the development of additional tools
- ISYBAU interface for straightforward data import
- Video integration independent of the GIS/ CAD system
- Variable drawing and design rules

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