



Delivering 'value added' intelligence

For one enterprising business, the digital capture of gully data is proving a winner in delivering a 'value added' intelligence-based drainage maintenance programme to a key client. Richard Gauchwin reports

Value for money, improving processes, efficiency savings and best use of resources are the drivers behind Calderdale Council's recent award of a gully cleaning and maintenance contract to West Yorkshire-based Enviroflow Management.

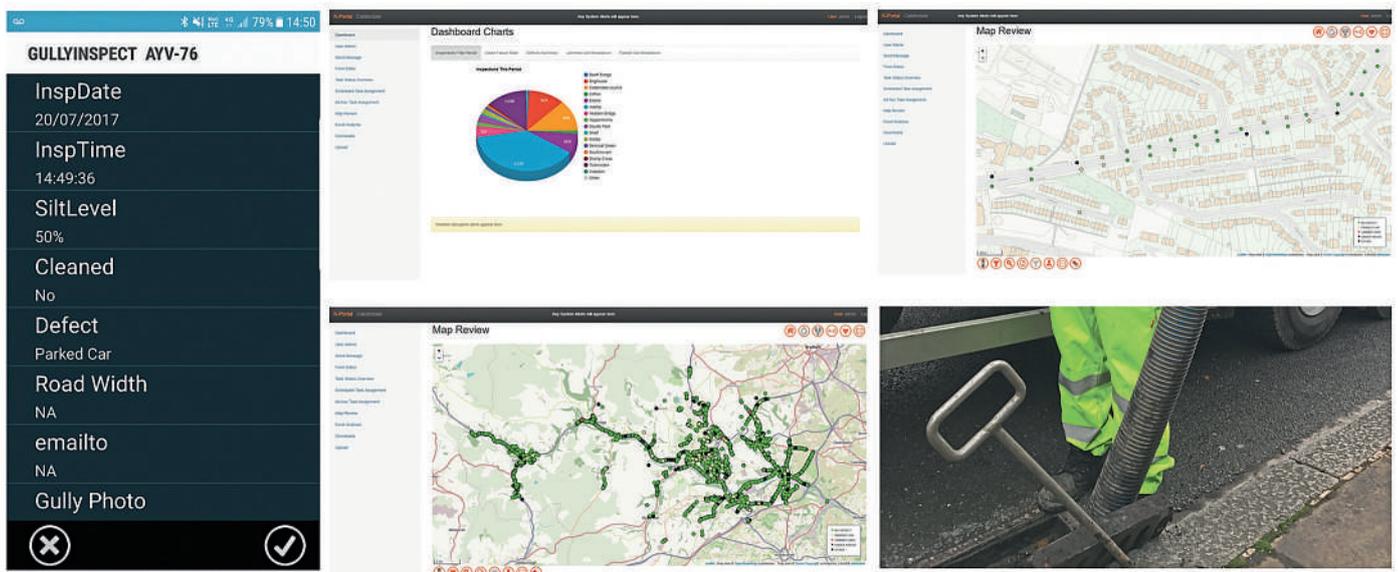
Enviroflow Operations Director Mark Jordan felt that a successful bid would be based on providing Calderdale with 'added value' in the form of a continuous data collection exercise. This would enable Calderdale to build a history of each gully under its care and develop a proactive gully cleansing schedule based on silt levels and behaviour, rather than one based on habitual maintenance.

Going digital

However, the success of this approach would be reliant on high quality, accurate data collection, something which would require the

council to abandon pen and paper based data collection a process which was time consuming and lacked detail and positional accuracy in favour of digital data collection.

Whilst Mark had researched and trialled various mobile GIS data capture systems previously, he had found their complexity to be more suitable for engineers than Enviroflow's gully cleaning operatives for whom data collection was a secondary rather than primary task. However, during a more recent search for a system, Mark had contacted KOREC, a Trimble distributor with an in-house software development team. The KOREC team had recently released K-Gully, a full, gully recording and reporting system designed specifically to tackle the challenges of the drainage cleansing and maintenance market by taking into account the requirements of client and contractor alike.



Above left: Typical K-Mobile data capture form. Top centre: Dashboard charts. Top right and lower centre: Interactive maps mean that project progress can be easily visualised and interrogated. Lower right: There are hundreds of thousands of gullies across Calderdale that are emptied and cleansed as part of the Council's proactive maintenance programme.

The K-Gully system comprises a handheld Trimble GNSS with K-Mobile data collection software on-board designed to fulfil the contractor's data collection obligations and a K-Gully portal which allows logged in Calderdale staff to visualise, manage and interrogate the Enviroflow collected information.

In the field

Mark felt that the data collection side of the work would be key to the success of the overall project. K-Mobile was selected because the form could be easily customised to provide drop down menus and tick boxes that would ensure the integrity of the data collected.

A typical record would include two types of information. Firstly, an accurate GNSS recorded position backed up by descriptive location information, all selected from picklists such as the street and ward, and secondly, all the relevant attribute information required to build up an individual gully's history. This could include silt levels, cleansing dates, defects, a geotagged photograph etc. Additionally, if a gully was deemed to have a dangerous defect, the K-Mobile software would automatically email this information to Calderdale for immediate action. Otherwise collected data could be synchronised at any point during the day and sent via the cloud. This would ensure that Calderdale received automatically generated daily progress reports and overall project reports without having to wait for Enviroflow to generate them.

During the month-long trial, an Enviroflow drainage team was equipped to undertake the data capture with a KOREC-supplied rugged Trimble Geo7

handheld GNSS capable of cm accuracy. Designed to withstand the daily rigours of use in an outdoor environment, the high accuracy of the unit ensured that the council had complete confidence in the positional data collected.

In the office

Back in the office the K-Gully portal aspect of the system allows Calderdale Council staff full visibility of the history of each gully as a separate inspection record, almost as it happens. Via the portal, logged in staff can use the system to assign new jobs (and send them via the cloud to Enviroflow field operatives), monitor existing projects and produce high quality informative reports. If a blocked gully is reported, staff can use the Google maps and StreetView function to assess the area around the site for details such as over grown vegetation, potential invasive roots or if traffic management is required to undertake work. The system also includes a 'raindrop' button to alert field operatives if a storm is imminent in their area so that they can react to local weather conditions.

"Accuracy, evidence and quality"

Following the success of the trial, Enviroflow was awarded the Calderdale gully cleansing and maintenance contract and the system is now in daily usage. "K-Gully is a system designed specifically for this type of work," explains Mark Jordan. "Calderdale Council has a tight budget but we can help them meet their key performance criteria with this solution. By building up a history of each gully, the cleansing schedule can become 'intelligent' with work based on need rather than habit. For example, gullies prone to high silt levels can be placed on a three-month schedule rather than a 12 month one.

Using K-Gully we can also provide Calderdale with complete visibility of the work done by our field crews through K-Portal."

Mark continues, "The K-Mobile on-board software offers extensive functionality and yet it couldn't be simpler to use. For us this was a key requirement. Our operatives were up and running without the need for any specialist training beyond a short phone call to get them started and rarely have problems. What's particularly impressive is that they are carrying out a major data collection project collecting highly accurate, attribute-rich data and yet the impact on their primary job function has been minimal. They feel more involved with the work they are doing and that, in itself, brings rewards. K-Gully delivers accuracy, a high quality of data, and evidence of work done. For Calderdale Council and ourselves, that's a win-win situation."

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