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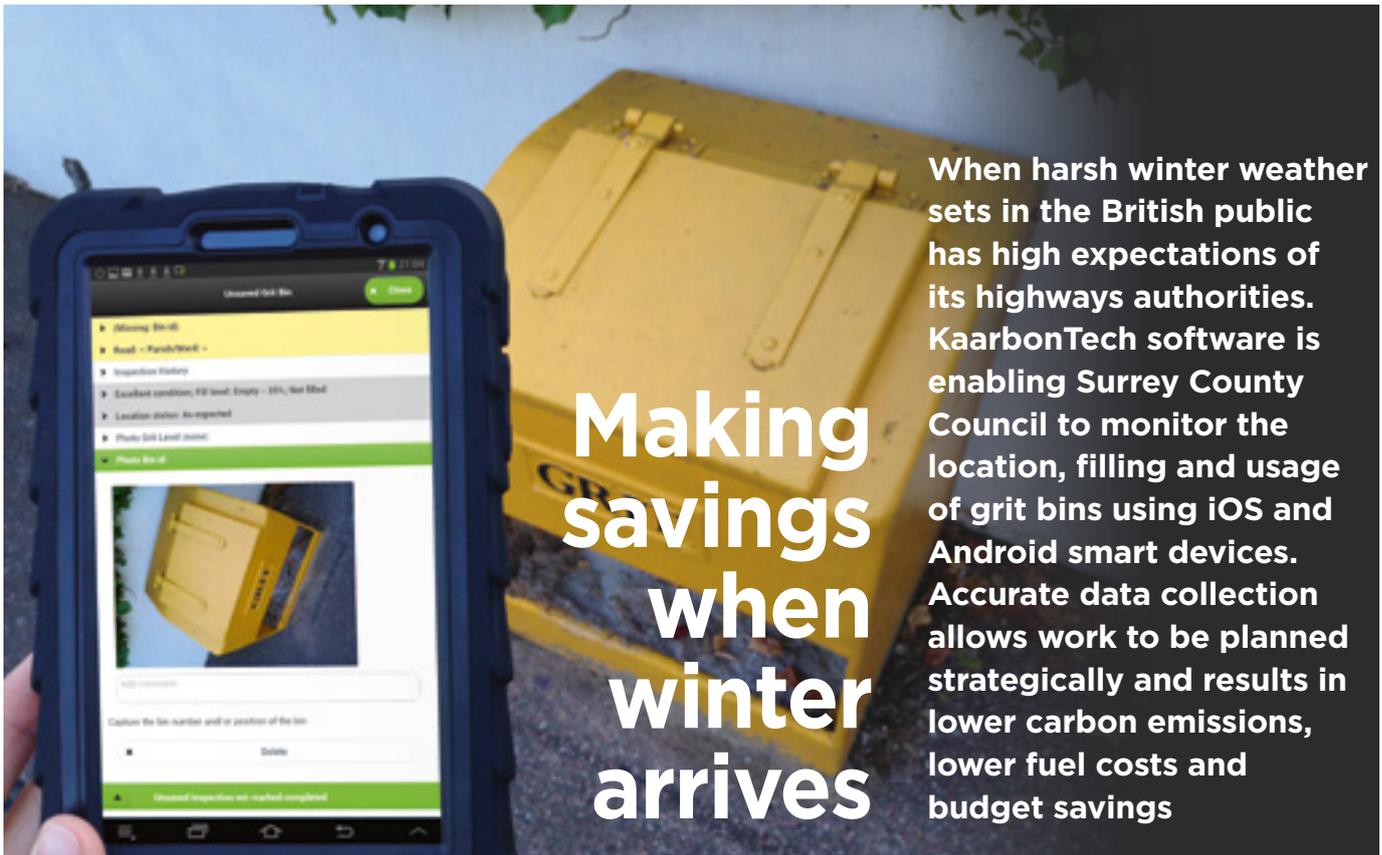
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Making savings when winter arrives

When harsh winter weather sets in the British public has high expectations of its highways authorities. KaarbonTech software is enabling Surrey County Council to monitor the location, filling and usage of grit bins using iOS and Android smart devices. Accurate data collection allows work to be planned strategically and results in lower carbon emissions, lower fuel costs and budget savings

The traditional yellow grit bin is a familiar part of the street scene. A recent survey by the Local Government Association found that 77 per cent of highways authorities in England and Wales, use community grit bins to enable members of the public to access salt.

There is no legal duty requiring councils to provide grit bins but they undoubtedly benefit local communities that would not normally receive immediate help during severe weather or snow.

Cllr Peter Box, chair of the Local Government Association's economy and transport board, observed in January 2014 that, *"Councils will treat as many roads as possible and have also filled thousands of community grit bins and recruited volunteers to help people clear pavements, paths and side streets when needed."*

Surrey County Council is one of these authorities, and looks after more than 1,800 grit bins across its network.

Difficult road junctions, slopes or acute bends along with points of concentrated pedestrian commuter use and isolated communities off the priority networks are given priority for the siting of grit bins. This variety of locations means that keeping the bins in good condition and filled has traditionally been a time consuming job.

Accurate data is needed

Tony Casey is highways maintenance team leader at Surrey County Council.

He said: *"As a highways authority we needed to identify more time efficient methods of tracking both grit usage and the physical condition of the bins, and demonstrate cost effectiveness."*

In summer 2013, the council took the decision to adopt a new digital software system developed by the firm KaarbonTech. The software enables Casey and his team to monitor the location, filling and usage of grit bins using Android smart devices.

Managing director of KaarbonTech is Mark Entwistle who adds: *"Wireless handheld devices are used by teams to record bins in need of repair and/or filling before allocating work packages wirelessly to a team in the field. Carbon emissions are reduced as work can be planned more strategically resulting in fewer journeys and lower fuel costs."*

The software allows inspection criteria to be tailored to the asset e.g. grit bin or street light and data can be captured using voice, video and photo whilst GIS is used to ensure accuracy of location. Digital connectivity means that teams can share inspection details immediately and patterns of usage can be tracked and analysed ready to be incorporated into future years planning. The complete inspection history of assets across the authority's network can be downloaded within 15 to 30 seconds. Data can be viewed by council ward, specific transport corridors or tailored to meet specific objectives.

The system can also be viewed and used offline whilst being easily updated once reconnected.

Once collected data relating to the grit bins, or other assets, can be laid over an OS Mastermap and/or aerial imaging to both provide perspective and aid analysis. KaarbonTech software is also used for gully cleaning and management making this viewing option particularly relevant when factoring in environmental features such as areas of flood risk.

The ongoing consistent recording of data will also enable decisions to be made about the value of retaining unused grit bins and possible redeployment to areas where usage is high. The location data will also enable accurate monitoring of grit bins displaced from their original location.

Enquires from councillors or members of the public about the filling or condition of specific grit bins can be answered accurately and trigger action as required.

Casey added: *"Our teams have found accessing the software on site using wireless handheld devices easy to use. The quality data collected has enhanced our ability to plan in a more targeted way and is now a key part of our winter maintenance plan."*

The council calculates that using the KaarbonTech system has delivered a saving of £50,000 between August and December 2013. Surrey is not alone in looking to technological innovations and this is a trend and market that is expected to grow as more authorities focus on targeted winter maintenance. ➔