

Case Study

Customer:
The Environmental Dimension Partnership

Project:
Carrying out British Standard tree inspections

Solution:
Customised K-Mobile software running on tablets



tailor-made system, exactly replicating their tree survey workflows, that attracted Gerard. Rather than just a basic BS standard compliant system, Gerard wished the new system to be *fully* compliant to

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Gerard Dore, EDP

ensure that all collected data would be both complete and sufficiently robust if needed for enquiries or planning appeals.

When carrying out British Standard tree inspections (BS5837:2012), many tree attributes are recorded such as stem diameter and height, however, it is also a requirement to measure the tree

canopy in four directions, north, south, east and west. The old system, whilst allowing these canopy dimensions to be recorded, did not have the ability to then replicate these measurements graphically meaning that only a reasonable rather than accurate interpretation of the canopy was possible. KOREC’s K-Mobile team therefore built in a function which enabled the measurement of all four cardinal points and the creation of an accurate ellipsis of the tree canopy.

The K-Mobile development team also enhanced the system to display accurate root protection areas (RPA) around the



▲ Showing tree locations on aerial mapping

Multi-functional, British Standard Tree Inspection System

A bespoke tree survey and inspection system brings robust, high-quality and efficient BS5837:2012 compliant data capture for EDP.

The Environmental Dimension Partnership decided to upgrade from an in-house bespoke data capture system to a fully client customised KOREC K-Mobile system to replicate its workflows for tree surveys and inspections. This system, K-Mobile ‘Tree Edition’, is now available as an off-the-shelf benchmark product.

The Environmental Dimension Partnership (EDP) is an independent environmental planning and design consultancy that operates throughout the UK from its offices in the Cotswolds, Shrewsbury and Cardiff. As well as offering a full range of environmental project services, including landscape, archaeology, heritage and ecological consultancy, EDP also has a dedicated arboricultural team that provides practical and commercially-aware advice to developer and land-manager clients.

Technical lead for EDP’s Arboricultural Services and a Director of the company is Gerard Dore. As part of his work managing development projects, Gerard was aware that EDP would be even better equipped to

provide its clients with timely, accurate tree survey data if it addressed the shortfalls in its current data capture workflow.

Whilst the company had moved from pen and paper data collection some time ago, it had opted for an in-house bespoke data capture system that delivered in many areas but fell short in others. The data capture software lacked some flexibility for attribute collection, did not easily allow for the wireless transfer of data directly from site and there was no function to automatically geotag and link photos. As well as looking to rectify these drawbacks, Gerard also wished any new software to seamlessly integrate with EDP’s corporate GIS (QGIS).

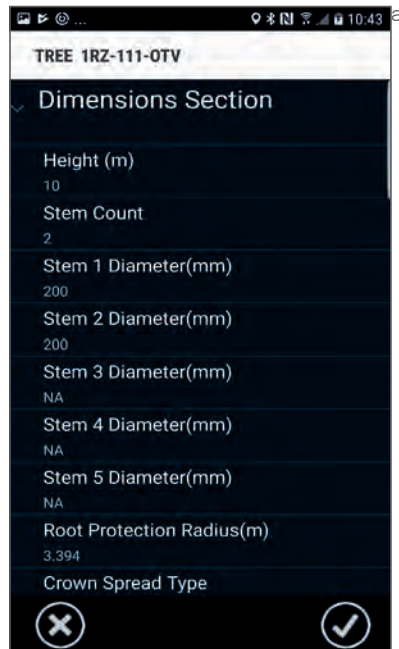
Market research led Gerard to KOREC and the company’s customisable K-Mobile data capture software. Whilst the K-Mobile software came with built-in functionality that would be suitable for environmental applications and would rectify many of the drawbacks with the old system, it was the ability to customise the solution into a



▲ Showing three captured trees – the outer rings are their root radius and crown spread.

trees and automatically generate a graphic of this information on the survey tablet. Because the number of 'stems' a tree is made up of has a bearing on the RPA calculation, the K-Mobile team was able to ensure that the software included an equation that automatically calculated this value, regardless of the number of stems. The RPA is then used to define an accurate figure as a construction buffer to protect the tree. The functionality to have this feature display on the survey tablet in the field provides an invaluable QA check.

The user-friendly interface was also a primary part of the development process. Data entry is streamlined and 'process led' through user-definable picklists including over 1000 trees in English and Latin and through prompts, for example, if an 'active pest' box is ticked the system will prompt the surveyor to pick what type of pest from



▲ Customised data form for display of data

built-in picklist and also bring up a neat text box for further comments.

Additionally, working with the KOREC team EDP developed an integrated Veteran Tree Inspection Form which provides for more detailed assessment of this important and irreplaceable feature. This function sits behind the standard inspection system and the requirement for filling out the form is triggered when the surveyor picks (Veteran) from the Age Class menu of the survey form.

Finally, Gerard required a system that would be flexible and fit for purpose no matter what level of detail each tree survey required. He can therefore select from a range of background maps including aerial mapping and OS MasterMap or even use a topo survey as a base map. He can also tailor which fields need to be completed for each project depending on the level of

information required.

From development to field use

Following the successful initial developments of the system, Gerard purchased ten K-Mobile licenses and a number of GPS enabled tablets and smartphones. The tablets provide the 0.2m accuracy required for the surveys and additionally Gerard has the option to tie data in with aerial imagery and topographical surveys, snapping to known data points. The systems are used daily by five consultants who are now equipped to digitally carry out site-based tree inspections to the British Standard.

"Our team is excited to use this new technology and it's good to know that they now have total confidence in the field data they are collecting and haven't had to do any manual checks back in the office," explains Gerard. "Their ability to transmit collected data wirelessly and securely from the field means that we can process this information far more quickly on behalf of our clients. Whilst it's difficult to truly quantify savings across our workflow, from survey to report issue, we estimate the system delivers cost and time benefits in the region of 15%. This wireless link also means that if we must change a template, we can do so remotely, updating all our surveyors at the same time so everyone is using the same version.

"Our decision to go with K-Mobile was based on cost, ease of use and its ability to replicate our existing workflow. KOREC adapted the software so that it would fit in with our daily practices and use of QGIS, rather than requiring us to change that workflow and invest in more training and software, to prepare the collected data for our GIS. The next step in development will see us applying the same principles to adapt the remaining five software licenses for our Phase 1 ecology surveys, something we're confident we can do with KOREC's continuing support."

EDP's top 5 reasons for using K-Mobile Tree Edition

- 1. Fully conforms to the requirements of British Standard BS5837:2012 with regard to site survey and data capture requirements with automated schedule and graphical outputs into Excel and QGIS.**
- 2. Clear and easy to use intuitive system which is fully customisable to suit various survey requirements from full BS5837 compliant surveys to high level asset surveys.**
- 3. A GPS integrated mapping system allowing the user to see their location on the map and to see what tree information has been recorded.**
- 4. Can be used with or without a topographical survey, enabling surveys to be undertaken using aerial images and OS mapping.**
- 5. The software can be installed on any standard handheld tablet or smart phone which is easy and light to carry around in the field.**

Contact us:

Please do get in touch for further information on any of the products or services mentioned in this case study, a demonstration, support or just a chat about your requirements.

T: **0345 603 1214**
E: **info@korecgroup.com**
www.korecgroup.com