

## Grease Trap Detection with ike:

Hutt City, located 30 minutes north of Wellington, New Zealand, has a large number of restaurants and takeaway food businesses with grease traps requiring regular inspection by City Council officials.

These grease traps are installed in a building's drainage system to stop grease, fat, oil, wax or debris from entering and polluting the city's sewer system. The key threat is that if such materials cause blockages in the system, backups and overflows are likely to occur and cause wide-scale damage and disruption. To avoid this, the grease traps and interceptors are designed to separate greasy materials from wastewater so that they can be easily removed before they enter the sewer system.

Whilst detailed implicit information about the spatial location of grease traps is known by experienced staff and allows them to undertake the thorough inspections required, there is the obvious risk that this information will be lost if a staff member leaves the City Council. With the help of ike, a special mapping project was undertaken to capture and record both the location and appearance of each individual grease trap requiring inspection.

Most of these traps are located underground, in laneways near tall buildings. As a result, this may have posed a problem for traditional GPS, due to 'satellite shadow' – read our smart technology article on avoiding satellite shadow with ike.

ike's unique integrated laser offset meant that there were no such issues with ike. City Council Inspections and Enforcements Officers used ike304 to successfully capture the required spatial information, along with corresponding geo-tagged photographs of each grease trap location. There were no major problems in determining accurate locations of the grease traps due to ike's unique stand-off, point and shoot data capture capabilities.

ike was equipped with a specially designed ArcPad data form to store the grease trap data. Data was then placed in a ArcPad shapefile and linked to each photograph, so a detailed map including the location and a photograph of each grease trap in the city now exists. Users can now load the shapefile, display the locations on a map and view images on screen – meaning this important inspection process is now future-proof and able to be carried out with increased efficiency