National Joint Utilities Group

CASE STUDY 77: Thames Water / Optimise – Maida Vale Flood Alleviation Scheme
Winner of the Keep the Public Fully Informed Award

The National Joint Utilities Group (NJUG) is the UK industry association representing utilities solely on street works issues. The 43 utility companies and 16 utility contractors we represent are major contributors to economic growth and work to deliver gas, electricity, water and telecommunications to both individual consumers and UK plc. NJUG members need to continue to drive forward further improvements. We have therefore developed the NJUG Vision for Street Works, which revolves around seven main principles:

- Safety
- High Quality
- Minimise Disruption
- Keep the Public Fully Informed
- Sustainable Methods and Materials
- Avoid Damage to Underground Assets
- Innovation

This case study is an example of the street works sector delivering on these principles and turning the vision into reality.

Overview

Hundreds of homes and businesses in Maida Vale had experienced dramatic flooding from heavy rainfall for a number of years, which is why the Maida Vale Flood Alleviation Scheme was deemed an important and necessary project. The works spanned two years and involved new tunnels being built under Central London and two storage tanks built under local parks.

Case Study

Keep the Public Fully Informed

The schedule of works had the ability to cause a huge amount of disruption. Thames Water and Optimise ensured that they provided timely, targeted information on the progress of the project to MPs, councillors, community leaders, businesses and residents. Thames Water and Optimise ensured that they were in regular communication with customers; to also update them on the progress of the works. As well as traditional letters and face-to-face meetings, Thames Water and Optimise held weekly surgeries, created a webpage, published a bi-monthly magazine for residents giving details of road closures and bus route changes, and also arranged for regular text message updates.

A Business and Residents Liaison Group met monthly, chaired by an independent consultant to ensure impartiality. The group reviewed the works planned for the following month and the progress being made with the works. Residents had the opportunity to raise concerns and future actions could be agreed. Due to feedback from these meetings, Thames Water and Optimise improved lighting to pedestrian

walkways, and used battery power at night rather than generators in order to reduce noise. They also produced eye-catching and innovative 'business as usual banners' using photos of business owners to continue to encourage trade.

Minimise Disruption

Thames Water and Optimise made sure that the location of the new sewers and shafts were in the least disruptive locations, and above ground works were kept to a minimum. An example of this is the works carried out at the Shirland Road and Chippenham Road junction in Maida Vale, which is a complex six-way road junction, with traffic lights and pedestrian crossings. The area is surrounded by commercial and residential properties, has high pedestrian footfall, and is part of several bus routes.

The team constructed a five metre diameter, ten metre deep shaft and five connecting chambers within this junction, without closing the main thoroughfare. This was only made possible due to the collaborative workings of the design, construction and third party teams; along with Westminster Highways Authority and the Optimise supply chain. This enabled the construction process to continue whilst managing to maintain the viability of the commercial area. This allowed for an innovative way of working, which included:

- Site hoarding that incorporates crash barriers, thereby enhancing safety;
- Using drilling techniques that cause the least disruption possible*;
- Use of fully configurable four-way traffic signals which meant that the sequencing could be adjusted manually to take account of traffic conditions at any time.

*The design and construction teams worked together to use less disruptive drilling techniques for the new sewers. In one case, a technique known as 'blind' guided auger bore was used. This technique means that only one shaft has to be built and the tunnel boring machine is lowered via that shaft, drills the new sewer and then is removed from the same shaft. This offered significant health and safety benefits by enabling the road to be kept open, this avoided the requirement for extensive bus diversions around tight residential streets.

Where this system was not feasible, the team designed the locations of the two shafts required for the entry and exit of the tunnel boring machine on either side of the road, which meant we were able to avoid a road closure..