



# Abandoned Utilities Immersive Visualisation Mapping Application

TfL Lane Rental Industry Publication



# Introduction

Underneath London's roads and pavements lie miles and miles of utility assets, all of which have been laid, repaired, and renewed several times over during London's long history. Undertaking essential maintenance of these assets contributes to disruption on London's road network. Utility providers such as water and gas have larger mains, which are sometimes abandoned and lie dormant, taking up valuable space. It is estimated that the overall length of these abandoned assets equates to 11 million metres in the UK.

To try and explore this potential opportunity the 'Abandoned Utilities' working group was established with representation from across the sector to share knowledge and provide a forum for open discussion on how these assets could be utilised, in such a way, that could be viable to all and create a no-dig option when laying

# The Project

The project sought to develop a mobile application that could use data and information relating to these abandoned assets, combined with Augmented Reality technology, to provide an immersive experience in a real life setting while out on site. Combining traditional and modern technologies, this immersive environment would enable the data to be viewed, interacted with and contextualised in real-time, allowing Work Planners to make better and more informed design decisions.

The method for viewing utility asset information hasn't changed for many years and is largely still shared via PDFs in a static 2D top-down view. Project AR aimed to convert these static images and allow the user to see them in their real-world positions. Only by viewing the exact location, contextualised within its surroundings, can effective design decisions be made.

The app was developed for iOS and Android devices and created for use anywhere within Greater London. After a short alignment procedure, any redundant assets in the vicinity are visible and the user can then interact with the data, seeing the size, material and asset owner. The app also enables email contact to be made with the owner through a single click, registering interest in the potential repurposing of the asset and initiating discussions that could lead to the avoidance of lengthy and disruptive road works. By allowing the user of the app to identify and locate information in this way, it opens a direct and quick line of communication with asset owners.







# Outcomes

The Project AR app has been distributed to members of the working group for live onsite testing. Due to the COVID-19 pandemic and social restrictions, opportunities to undertake traditional site walks and inspections have been limited.

Initial feedback from the user group has been positive, receiving unanimous agreement by all parties that a collaborative approach to repurposing these assets could, particularly in terms of telecoms, enable the roll out of ultra-fast broadband at a much quicker and cheaper rate, which in turn would be great news for consumers and businesses.

The data sets for abandoned utilities are not constrained to London, abandoned utilities could be scaled-up across the UK. A process is currently being developed on how abandoned assets could be repurposed, so that it could be adopted as a template for use by other cities and counties.

# Conclusion/ Recommendations

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## National Underground Asset Register

# TfL Lane Rental Scheme

Optimising customer journeys through the delivery of safer, innovative and sustainable roadworks



**Author**

Transport for London

Date Created: February 2021

Email: [LaneRentalFunding@tfl.gov.uk](mailto:LaneRentalFunding@tfl.gov.uk)

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