

CASE STUDY: SLOANE SQUARE, LONDON

REMIEDIATING CENTRAL LONDON'S MAINS THROUGH THE USE OF ROBOTIC TECHNOLOGY

EXECUTIVE SUMMARY

Carrying out traditional mains replacement works in Kensington and Chelsea is extremely challenging, particularly because the borough consists of high profile streets located off Sloane Square such as Chelsea Bridge Road and Sloane Street. Traditionally, street works create typical challenges including major disruption and inconvenience to London's traffic management system, local residents and businesses. As a result, ULC Robotics partnered with Cadent, and worked closely with local councillors to deliver an innovative remediation solution using CISBOT robotic technology.

PROJECT DETAIL

Cadent partnered with ULC Robotics to remediate more than 1300 joints using CISBOT, after gaining the significant support from Kensington and Chelsea Borough council. The project was completed in 44 weeks – an 80% reduction in the time traditional works would have taken.

The Sloane Square project involved 8 phases where CISBOT was deployed in almost 20 pits around the streets located off Sloane Square, working on 18", 20", 24" and 36" diameter mains. Due to the high-profile and potentially disruptive locations of work surrounding Sloane Square, ULC Robotics strategically positioned their launch locations to ensure that traffic lanes and lights were still in use on any major bus routes and that minimal disruption was caused to members of the public and road users.

Cadent would typically face challenges with replacing and maintaining their assets, including:



TIME CONSUMING AND COSTLY



INTERRUPTION TO GAS SUPPLY



DISRUPTIVE TO PUBLIC



CO2 EMISSIONS



TOTAL LENGTH REMEDIATED:

5,000m

TOTAL EXCAVATIONS:

20

TOTAL JOINTS SEALED:

1300

PROJECT DURATION REDUCED BY:

80%

" CISBOT delivers essential work to the gas network underground with minimal disruption to the public on the surface. That's great news for the public who get to enjoy the continued provision of safe and reliable gas supplies with a lot less above ground disruption as shown by our recent work in Sloane Square."

Stuart Cull, Network Supervisor, Cadent

USING INNOVATIVE ROBOTICS TO DRIVE SUCCESS

Through the use of innovative robotic technology, the following benefits were delivered during this project:

SUPPORTING NET ZERO:

Zero emissions were generated on site, as the robotic technology was deployed from solar-powered mobile command units.

MINIMISE NOISE:

ULC Robotics solar powered mobile command units also created minimal noise and the opportunity to introduce 24hr working.

REDUCED TIMES:

24h operations enabled the remediation project was completed 8 weeks ahead of schedule.

REDUCED SITES:

CISBOT eliminated the need for large scale excavations and trenching used with traditional mains replacement.

SUPPLY RELIABILITY:

There were zero interruptions to customers' gas supply as the sealing of joints was performed live in the gas mains.

ROADWAY INTEGRITY:

The minimised excavation of the roadway preserved the long-term structural integrity of the street and minimises future maintenance.



"Through the use of CISBOT the project was able to be completed within 7 months as opposed to nearly 3 years if more conventional methods of replacement were used. This is unprecedented and is one of our biggest successes so far in terms of positive network management. I applaud Cadent Gas and ULC Robotics positive and progressive approach in using innovative techniques such as CISBOT and look forward to building on our working relationship going forward."

Tony Pegrum, Network Manager, The Royal Borough of Kensington & Chelsea