

SECURING ALL ACCESS POINTS

PROTECTING THE ICONIC RIVER THAMES FOR LONDON'S PROSPERITY

The Thames Tideway Tunnel is a £4.2 billion super-sewer construction project, designed to stop London's iconic River Thames from being polluted by millions of tons of raw sewage every year, leaving it at its cleanest in a century.

Tideway, the company formed to build, operate and maintain the new tunnel, is upgrading London's sewerage system to cope with the demands of the city now and for the next 150 years.

One of the project's key legacy objectives is to help rejuvenate London's river economy, commercially and recreationally. River transport will be used on an unprecedented scale in modern times to transport 90 percent – 4.2 million tons – of the excavated tunnel material.

THE PROJECT

The Thames Tideway Tunnel, the biggest infrastructure project ever undertaken by the UK water industry, will help capture overflowing sewage that would have previously entered the river.

Starting in Acton, West London, the main tunnel largely follows the route of the River Thames to Limehouse, where it splits, north east to Abbey Mills Pumping Station near Stratford, East London and south to Greenwich. At Abbey Mills the Tideway Tunnel will be connected to the recently constructed Lee Tunnel, which will transfer the sewage to Beckton Sewage Treatment Works.

Tideway's construction is split into three Zones: West, Central and East.

Tideway selected AMAG Technology's Symmetry Access Control system to provide the physical security and technology services for the three consortia building the tunnel. G4S Secure Solutions UK is securing the project as a fully integrated partner and is part of the decision-making team for security across all 21 construction worksites. G4S SSUK protects the pedestrian and vehicle entrances with patrols. AMAG's software and hardware technology controls access to the inner zones.

The three consortia are; BMB (Balfour Beatty, BAM Nuttall and Morgan Sindall) which has the contract for the shorter western tunnel drive, FLO (Laing O'Rourke and Ferrovial Agroman) which has the largest Central section drive and CVB (Costain, Vinci and Bachy joint venture) won the eastern section. All three have slightly different mobilization and construction timescales.

Once fully operational, construction will span 21 large, complex worksites across 15.5 miles (25km) from the storm tanks in Acton to Abbey Mills pumping station. The preliminary construction works are currently underway at the four key drive sites with work started at a further nine sites across London.

G4S Tideway Project Account Director, Tarquin Halse, said: "The tactical and operational planning that has gone into providing the security at each of the sites and as part of the whole project is immense. We are working closely with all of our partners to ensure that ramp up is smooth and that our around-the-clock security is thorough and highly-responsive, all of which is monitored from our central London command center."

INTEGRATED SECURITY SECURES SITES

Each site entrance on the project is assembled in a specially adapted, reclaimed cargo container. These solid steel structures were chosen for their size and strength. Within each, G4S built a customized entrance system into the container. Inside the container are offices where employees manage the day-to-day operations of the project.

AMAG Technology's Symmetry Access Control software and Symmetry M2150 Intelligent Controllers secure all pedestrian perimeter access points, turnstiles and internal container site access points.

Every Tideway construction site is organized into zones, each of which has its own level of security access clearance and construction workers must go through additional Symmetry security checks to gain access. The zone closest to the tunnel construction site has the highest level of restrictions, so that only those directly involved in the tunnel construction with the correct training and credentials, are able to enter that zone.

At peak construction, G4S expects there to be many 100s of people passing through the different Symmetry access controlled zones within each of the large work sites on a daily basis.

At the perimeter, individuals gain access by swiping their Symmetry access card only.

To pass through the next layer of security and enter the site, they must swipe their access card and present their palm to a biometric reader. Symmetry integrates with Ingersoll Rand/Schlage Handkey biometric readers to provide dual authentication for a more secure entrance system. Every person who works at the site must present an access card and a handprint simultaneously, and can only enter when both forms of identification are provided. The biometric reader scans the person's handprint, matches it up with their access card, and only allows entrance when the two match.

Within the sites, card readers are installed on doors and turnstiles to restrict movement. Individuals must have the appropriate credentials to gain access to restricted zones or areas.

An Avigilon intelligent camera system integrates with Symmetry Access Control and surveys the surrounding areas day and night, learning from its environment. Avigilon cameras and motion sensors are installed at every Tideway construction site as part of the security and monitoring framework. This is part of an integrated surveillance system which also includes automated number plate recognition, intruder detection and infrared, to enable visibility in bad weather, fog and darkness without using white light.

This integrated security network sends data to G4S's command centre, where it is collected and assessed using data analytics software in real-time. A proactive approach mitigates incidents or safety issues, and the data is acted upon when and where necessary.



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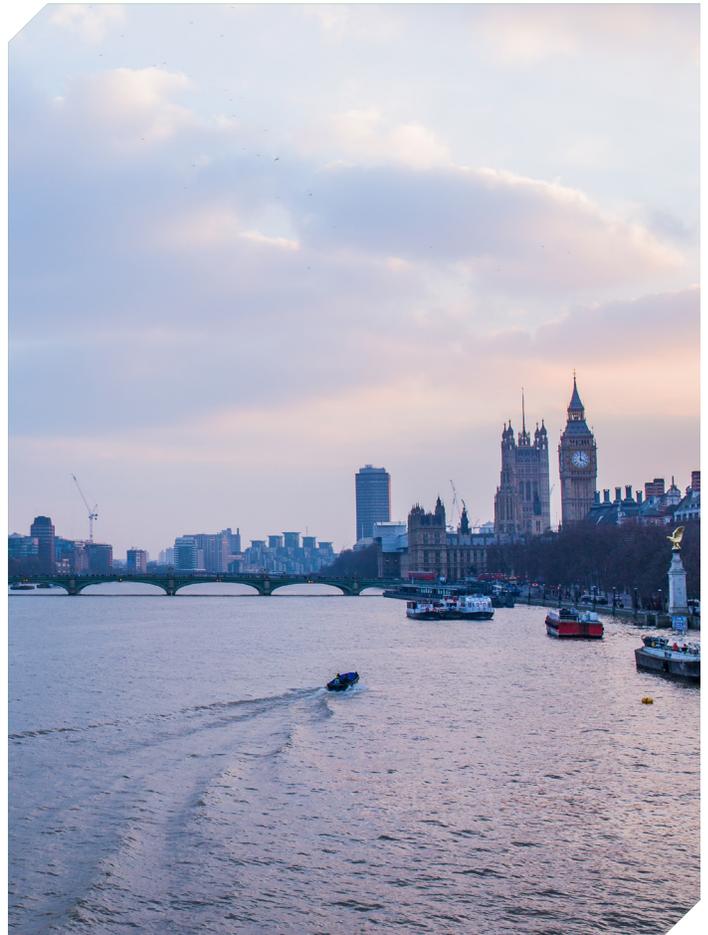
It is really important that our security solution works in line with Tideway's focus on health and safety across all the sites. The Symmetry access security is key to knowing exactly who is on the site at all times, whether they are in the right zone and that they have the correct security clearance.

Tarquin Halse, G4S Tideway Project Account Director

“Our command, control and communications center is at the heart of the network of surveillance and security that we provide. When fully operational, all of the voice and video security data collected from across the sites will be checked, analyzed and reacted on by our highly trained team of security officers and managers,” Halse said.

The high-definition cameras survey and analyze the entrance and perimeter activity constantly. The cameras interpret and learn what 'normal' behavior looks like. If a person enters the site area it does not recognize, the system will flag this. It will recognize any unusual behavior, such as a person climbing a fence, and will send an alarm via Symmetry to the Command Center.

Tarquin Halse said; “It is really important that our security solution works in line with Tideway's focus on health and safety across all the sites. The Symmetry access security is key to knowing exactly who is on the site at all times, whether they are in the right zone and that they have the correct security clearance. This is supported by our highly trained, well managed and construction orientated security personnel on site.”



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