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TOTTENHAM HOTSPUR STADIUM

Location

Tottenham Hotspur Stadium,
London

Background

With over 2,000 completed projects in our 15 years in the gas infrastructure industry, we've worked on an incredible variety of developments – some small, some big and some which are truly larger-than-life. The new Tottenham Hotspurs Football Club Stadium is one such project. In 2014, we were invited by Tottenham Hotspur Football Club to quote for the installation of the gas infrastructure for the redesigned football club stadium. We won the bid.

Neatly nestled within the paved labyrinths of Tottenham, London, the old stadium was somewhat of a relic, having been built just before the turn of the 20th century. During its 118-year history, it's hosted thousands of competitive Spurs games, some England national football matches, and even a few boxing and baseball events throughout the decades.

However, as the world welcomed in the new millennium, it became clear that White Hart Lane was in serious need of redevelopment, as other major Premier League clubs announced their plans for expansion. Keen to maintain its reputation as one of the country's best-loved clubs, as well as accommodate a growing fan base, Tottenham Hotspurs Football Club submitted an application for the new stadium. It took some time and plenty of negotiation, but finally, in 2014, the approval for the new stadium was granted.

The brief

With plans to demolish White Hart Lane and to start anew, Squire's task was two-fold; temporary re-routing and eventual disconnection of the old stadium gas supply, as well as the installation of

a brand-new gas connection. Due to host over 62,000 fans over nine floors, the new stadium is a pioneering example of innovative design; a retractable grass pitch disappears to reveal an artificial surface for use in NFL American Football games, as well as other high-profile events.

A project of this scope and scale required a carefully-selected team from Squire Energy, working closely with the contracted constructors, Mace, to ensure coordination across the site. The sheer size of the project was not the only complicating consideration. Its location in the bustling streets of North London also proved a challenge, as the team had to factor in significant pedestrian footfall and heavy traffic flow, whilst maintaining minimum disruption. Work was



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scheduled for completion in three phases, with Phase 1 starting early in 2016, as construction of the new stadium began directly adjacent to the old one, whilst the last few matches of the season were being played.

The project

From the outset, it was clear that this project was going to require careful coordination and meticulous planning. With the stadium in a prime location, the team had to divert around several existing utilities supplies, as well as plan for automatic bollards which were schedule for future installation. The team were given a precise route from Tottenham Hotspurs Football Club, with GPS reference points to follow, as they carefully threaded through the ground and installed the pipework.

The specification for the new gas installation was a low-pressure supply, using a standard SDR17 250ml, 10-inch pipe polyethylene pipe to the length of approximately 50 metres. Although it was a low-pressure supply, due to the size of supply, a bespoke entry was made from 200ml 8-inch steel to connect the gas supply into the building. In fact, the entrance point for the gas supply proved to be a challenge, as it was in a delivery bay, resulting in lots of stopping and starting to accommodate delivery vehicles.

The stadium's proximity to Tottenham High Road meant that Squire had to trench across four busy lanes of traffic to connect the newly installed gas pipes to the existing main supply.

To avoid bringing one of Tottenham's main roads to a standstill, the team excavated the ground lane by lane to allow a continuing flow of traffic in both directions. Starting at the near-side of the stadium, the ground was dug out, pipes were laid and concrete filled in, before moving across the width of the road in increments over three weeks. At the same time, the team liaised with a groundwork contractor providing communications for the club, with Squire carving out the ducts for the communications cables across the High Road, to avoid it being dug up twice.

As well as the installation of a new supply, we were also tasked with taking care of the existing gas connection. Tottenham made the decision to simultaneously demolish the old stadium, as it was building the new. This meant when the old West Stand was knocked down, Squire were asked to temporarily re-route the existing gas to the still- standing half of the stadium before disconnection when White Hart Lane was reduced to rubble. Simple enough in theory, but in practice, it meant diverting the supply down a side road, excavating the ground whilst negotiating parking suspensions and traffic flow, all with minimum disruption to the public over two weeks.

With the stadium now open, we're still on hand to offer advice and assistance, in keeping with our ethos of always providing of exemplary customer service and absolute professionalism in all the work we do.