



"Gatwick airport": <https://www.jewersdoors.co.uk/>

## GATWICK AIRPORT

### Location

Gatwick Airport, Horley

### Background

As one of the UK's most reputable gas infrastructure providers, Squire Energy has nurtured relationships with some of the country's largest and most respected organisations, cultivating a reputation for experience, expertise and exceeding expectations. One of these organisations is the world-renowned Gatwick Airport.

Early in 2018, Squire Energy was selected by Gatwick Airport Ltd. as the gas infrastructure provider for a commercial project supplying gas to a Boeing Hangar in the North West Zone. The second busiest airport in England, London's infamous Gatwick had humble beginnings as an aerodrome in the late 1920s, before flourishing throughout the decades to the two-terminal airport it is today, operating hundreds of flights and transporting thousands of passengers a day.

### The brief

Gatwick Airport's brief was for the installation of new services and utilities infrastructure, including gas, for a new Boeing Goldcare hangar scheduled for construction. The scope of work detailed laying a new 180mm main to connect to an existing 250mm medium-pressure (MP) main located 1200m from the hangar, as well as the installation of a new pressure reduction station (PRS) at the Boeing site boundary and 90m of 250mm low-pressure (LP) service earmarked to terminate internally in the hangar's meter room. Also required was the supply and installation of a low-pressure 23m rotary meter.

### The project

The project began in earnest, with four parties involved in the process; Gatwick Airport, Interserve (the main contractor), the groundworker INCA Force and of course, Squire Energy. The scope of work was divided into two stages; firstly, the

installation of the medium pressure main and secondly, the installation and connection of the low-pressure service to the hangar.

Plans were drawn and approved, permission was obtained and work commenced. The first priority was the excavation and installation of gas and other utilities across the summer parking compound; this section was time sensitive and had to be completed within the coming weeks, as it was due to open for the upcoming summer season. Unfortunately, Mother Nature had other plans, torrential downpours flooded the excavated trenches, as well as waterlogging the reclaimed marshland. Undeterred, dewatering agreements were made in the form of settlement tanks to remove the silt from the water, before pumping it out of the trenches. The initial pumps were too small in size and were swiftly replaced with 6-inch diameter pipes to reduce water level as quickly as possible, so that the pipes could be laid. However,

enquiries@squireenergy.co.uk  
squireenergy.co.uk



due to the inclement British weather, flooding occurred several times during the project.

Keen to stay on track with the project, the team busied itself with preparations for the eventual installation. Stacks of 12m lengths of pipework were delivered to key points along the trench and subsequently butt fused together to form 120m strings of pipe. And once the trench was ready, the strings of pipe were pulled in and joined together, before being testing thoroughly by the team until all 1100m of pipe was installed.

Furthermore, during preparations for the main connection, it was agreed that SES water would make the connection for the water supply, this required careful planning and collaboration between SEL and SES to minimise disruption to either party. During the course of these collaborative works it was discovered that the 250mm MP main in the verge along Larkin Road was two metres underground, a depth which required the installation of ground support to prevent the excavation collapsing. In addition, an abandoned 10-inch gas main was discovered during excavation, which obstructed the planned route for both the gas and water. This required the team to cut out a section of the abandoned pipe and cap either end, whilst simultaneously avoiding damage to the neighbouring water main, which contained asbestos.

Additional pressure came in the form in an audit from Lloyds of London, the aim of which was to test Squire Energy and ensure we maintain the relevant skills, competency and carry out our work to the relevant standards. This was conducted at a particularly tricky point in the timeline, during the non-routine operation (NRO) of the connection and commissioning of the

1100m of pipe. Part way through the audit and NRO, with only 30 mins to spare before the pipe was scheduled for connection and commission, instructions were received from the client to delay the commissioning of the 1100m of pipe, as further excavations were required by other utilities in close proximity to the newly laid main and they did not want to risk damaging any live gas infrastructure.

Frustrated, but in keeping with our ethos of professionalism and expertise, Squire Energy adapted to the situation. The drilling of the branch saddle was completed, and a two-metre section of pipe was commissioned to a pipeline isolation valve, where a blank spade was inserted to separate the live section from the remaining 1098m. SEL passed the audit with no complications.

Within a few months, with the audit complete, trenches unflooded and pipes laid, the pipework was retested and the blank spade was subsequently removed to result in 1100m of new pipework commissioned to the inlet of the PRS. The new 250mm LP was laid up to the hangar, where it entered via a bespoke pit entry. Finally, the meter was delivered and positioned and once the supply contract was in place, the PRS, low-pressure service and 23m rotary positive displacement (RPD) were commissioned.

Despite the onsite challenges and the complexity of the project, we approached the project with enthusiasm and expertise, with works completed on time and on budget. Andrew Bedford, Project Manager says, "We're thrilled to have been chosen to work on this ambitious project, and to build on our experience in delivering timely and efficient gas supplies across the UK."

