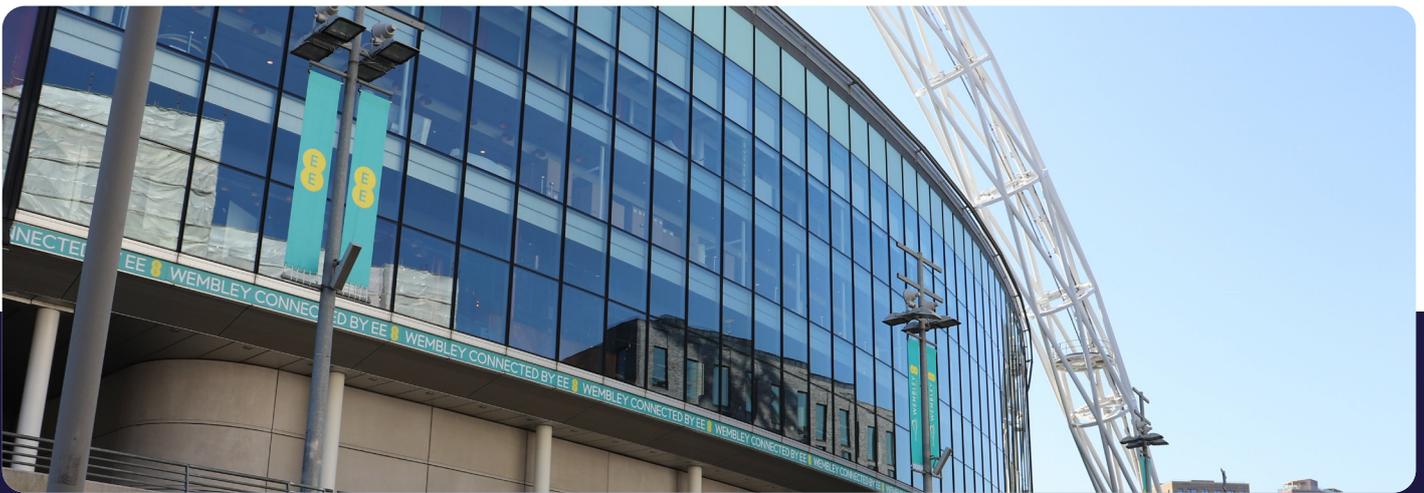


Case Study

Real-Time Dust Monitoring Helps Reduce Emissions, Improve Compliance During Wembley City Regeneration

Compliance with guidelines to reduce PM₁₀ dust emissions from construction activities



Project

Wembley City Regeneration

Services

2 x Dust Sentry

Location

London, UK

Measurements

PM₁₀

Date

2017 - 2020

Sector

Construction & Remediation



The customer



Established 1859

John Sisk & Son, member of the SISK Group, is a fifth-generation family-owned international construction company. The Group employs 1,500 people in the UK, Ireland, Europe and Middle East, and generates over £800 million in revenues. Flagship projects include Aviva Stadium Dublin, Athletes' Village Stratford, Limerick Tunnel, and Wembley Arena London.

Following the successful redevelopment of Wembley Arena, SISK was awarded several projects in the £3.8 billion Wembley City Regeneration for Quintain Estates & Development. Wembley Park is the largest single development in the UK and will transform the area around the National Stadium into a vibrant new district of London with

11,500 new homes. E03, or Canada Court, is the flagship project and on completion in 2020 will consist of 743 apartments in buildings ranging from 12 to 26 floors.

The problem

Wembley Park is located in London's Low Emission Zone and Brent Council requires dust from large scale projects to be managed to reduce particulate pollution from construction sites. Developers must comply with The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance (SPG). The SPG



includes guidance for air quality risk assessments and best practice methods for controlling dust and monitoring air quality.

On previous projects SISK used Frisbee Dust Deposition Gauges to monitor dust. However, this technique has pitfalls, such as time resolution of several weeks (rather than minutes), no 'live' data, no directional measurement component, and results require laboratory analysis of particle mass. Given the high profile of the project and need to monitor dust for up to two years, SISK required a sustainable solution that could also integrate other live parameters such as noise and vibration.

“The site team like the simple, user friendly interface and full access to air quality data from the Dust Sentry.”

Roel van Oirschot
Campbell Associates

The solution

SISK approached Campbell Associates for a modern, easy-to-use, environmental monitoring solution. Campbell Associates distribute Aeroqual dust monitors in the UK and are specialists in noise, vibration and dust (NVD). They had already installed about 100 Aeroqual dust monitors in the Greater London Area, mostly for demolition and construction projects.

For this large-scale project, SISK selected Aeroqual Dust Sentry PM₁₀ monitors because they are accurate and reliable, are UK MCERTS certified, provide real-time data, and enable trigger alerts for dust exceedances. Initially, two units were installed along the boundary of the Wembley National Stadium where the earthworks and piling was being done. During the construction phases the instruments may be relocated near other sensitive receptors. PM₁₀ dust data from the monitors is transmitted via modem to the cloud where it integrates with noise measurements. The easy-to-use interface gives access to all the environmental data in one place.



Evaluation

The SISK team like the simple, user friendly interface, and full access to air quality data from the Dust Sentries. Using the live data and alert system, they can report data on demand, respond to exceedances and mitigate dust emissions before they impact on people or environment. The solution has proven reliable and robust for the rigors of construction activities and SISK are pleased with the routine instrument service and support provided by Campbell Associates.

In recognition of their commitment to environmental sustainability, SISK has received international, national, and community accolades for this project, including a Bronze Considerate Constructors Award with special commendation for the environmental and safety aspects of the site.