



## Multiple Site Fuel Oil Tank Measurement for Safety & Savings

Pulsar Measurement have supplied The Wrightington, Wigan and Leigh NHS Trust with Modbus-enabled Ultra 5 non-contacting ultrasonic measurement systems as the first phase of a project to monitor and control fuel oil stocks across four major hospitals. The new systems will allow staff to monitor and re-order fuel oil from a central location, improving safety by removing a need to access the tanks, reducing the risk of over-ordering and fuel stagnation, and improving efficiency.

A major hospital typically contains significant fuel oil stock on site, and in the case of Wigan's Royal Albert Hospital, amounting to 80,000 L (21,134 gal) over two tall tanks. Besides providing some fuel to feed the main dual-fuel boilers, hospitals also maintain emergency back-up electricity generators and are required, by law, to store enough fuel on site to run them for a minimum of three days in case of power-cuts. Fuel oil is therefore an

important commodity, with a total of more than 200,000 L (52,834 gal) held across four sites within the Trust. Tank gauges and dipsticks have been in use, meaning that staff had to access the top of these high, vertical tanks to take measurements which were then recorded manually, with the potential for an accident to occur.

Phase two of the project took place at Leigh Infirmary, which has two fuel oil tanks totaling 40,000 L (10,567 gal) capacity. Pulsar supplied Ultra 5 level controllers with a local display of volume, volt free contacts for alarm use, optional Modbus connectivity, and an ultrasonic transducer was selected that mounted to the top of the 6 m (19.69 ft) high vessels. The transducer emits an ultrasonic pulse that reflects from the liquid surface, and the same transducer picks up the reflected signal and precisely measures the time-of-flight to calculate the distance to the surface. The Ultra 5 controller then uses a pre-programmed routine to convert that measurement to display the contents of the tank - in this case in liters. The Ultra 5 controllers are wall-mounted locally to the tanks so that staff can easily read off the measurement without needing to access the tank itself, while the Modbus connection provides the ability to link the signals to a desktop display.



*"We are really pleased with the Pulsar Measurement Equipment and the advice and support we got. Our people no longer have to climb the tanks, and our aim is to manage stocks and regulate deliveries right across the Trust from a desktop system."*

Mark Hogan, Trust Engineer, NHS

Commenting on the installation, Trust Engineer Mark Hogan said, "We are really pleased with the Pulsar Measurement Equipment and the advice and support we got. Our people no longer have to climb the tanks, and our aim is to manage stocks and regulate deliveries right across the Trust from a desktop system."

## More Information



**Ultra 5 Level Controller:**  
<https://pulsarmeasurement.com/ultra-5>

**dB Transducer Series:**  
<https://pulsarmeasurement.com/db-transducer>



**Wrightington, Wigan and Leigh NHS Trust:**  
<https://www.wwl.nhs.uk/>

Wrightington, Wigan and Leigh Teaching Hospitals NHS Foundation Trust is a major acute trust serving the people of Wigan and Leigh. Innovative and forward thinking, the trust is dedicated to providing the best possible healthcare for the local population in the Wigan Borough and surrounding areas.



dB6 with front-nose threads for easy connection to an existing outlet on the top of the tank

## Delivering the Measure of Possibility

Pulsar Measurement offers worldwide professional support for all of our products, and our network of global partners all offer full support and training. Our facilities in Malvern, UK and Largo, USA are home to technical support teams who are always available to answer your call or attend your site when required. Our global presence, with direct offices in the UK, USA, Canada, and Malaysia, allows us to create close relationships with our customers and provide service, support, training, and information throughout the lifetime of your product.

By taking a step forward in echo processing technology, Pulsar Measurement addresses applications previously thought to be beyond the scope of ultrasonic measurement. This technology improves signal processing at the transducer head which has made it possible to increase resistance to electrical noise, enabling the transducer to 'zone in' on the true echo.

For more information, please visit our website:

[www.pulsarmeasurement.com](http://www.pulsarmeasurement.com)



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