It's important for us to understand the environmental impact at our sites. EMSOL's equipment measures air quality and noise levels to help identify and manage the factors that affect them.

JUSTIN LANEY
General Manager, Fleet
John Lewis Partnership

**DRIVING SUSTAINABILITY IN THE RETAIL SECTOR**

An EMSOL Case Study covering how we worked with the John Lewis Partnership to reduce transport and site-based pollution impact.

**KEY SUCCESSES**

Throughout the project EMSOL was able to achieve the following:

- Most Polluting vehicle types identified
- Noise Pollution compliance proven
- Alternative engine & fuel type use proven
- Specific site pollution problems identified
- Optimal delivery windows identified
- Retail use case proven
- External Factors Identified

**OBJECTIVES**

The main objective of the project was to implement and test the EMSOL emissions reduction platform at the Waitrose site in Finchley, London, to establish if alternative delivery windows would drive operational efficiency and sustainability for the John Lewis Partnership (JLP). Additionally, JLP was trialling new compressed natural gas (CNG) vehicles and one electric trailer in order to reduce air and noise pollution at their sites. JLP wanted to quantify how much pollution could be reduced if their current fleet of diesel vehicles were replaced with vehicles which run on alternative fuels such as these new vehicles.

For EMSOL, the project provided an opportunity to prove our site-based emissions reduction and control platform in a retail environment whilst showcasing the EMSOL approach of quantifying the emissions from vehicles with different engine types and identifying highly polluting vehicles.

**OVERVIEW**

EMSOL installed sensors and camera technology in the loading bay area at Waitrose’s Finchley site in London to monitor noise levels, air quality and vehicle movements. The data was then aggregated and analysed to quantify the environmental impact and to identify causes of pollution.

By intelligently combining the data analytics with the real-time vehicle location data, EMSOL were able to determine pollution events and attribute these to certain vehicles. Further insight on the vehicle and engine types was provided to assess the impact on site pollution. Project insight was used to evolve the EMSOL product road map and produce an upgraded version of the EMSOL product entitled ‘The EMSOL Impact Platform’ which is now being used on other sites across London.
Tackling pollution from the transport supply chain

SUPPLYING LESS EMISSIONS

A key part of any emissions reduction strategy is reducing the direct impact of the supply chain on air and noise pollution. Tackling pollution from the transport supply chain is a big opportunity for businesses and can tick two vital objectives. Firstly, transitioning to clean, low impact deliveries will result in lower polluting emissions and a reduced climate impact. This is perfect for organisations working towards net-zero goals that include Scope 3 emissions from the supply chain. Secondly, these changes will directly improve local air quality resulting in a healthier and cleaner local environment for workers, customers and local communities.

The pollutants which directly damage respiratory health are different from those which impact global warming, but are just as critical. NO2, PM2.5, PM10 and ultra-fine particles are emitted from petrol and diesel engines. Unlike CO2, these pollutants directly harm humans in the local area creating an exposure risk for the workforce, local community and customers.

DIESEL vs CNG

EMSOL EVIDENCED:

Diesel vehicles caused 4.6 times more PM10 concentration than CNG vehicles

EVIDENCING IMPROVEMENT

EMSOL were able to prove that JLPs use of CNG and electric vehicles significantly lessened air pollution at the site. In fact, concentrations of NO2, PM10 and PM2.5 were all recorded to be significantly less when CNG vehicles were present when compared to diesel engines.

Entire fleet upgrades are expensive and this evidence has allowed JLP to justify investment in CNG vehicles and prove their reduced environmental impact. Armed with scientific data from EMSOL, JLP can prove a Scope 1 emissions reduction at this site - powerful for stakeholder and financial reporting, brand credibility and of course - the environment.
Responsibility operators & good neighbours

**NOISE POLLUTION**

Noise pollution seriously affects relations with neighbours and the local communities we work in and is more than a quality of life issue. The level of noise pollution in our urban environments can cause serious and long-term harm to health.

EMSOL EVIDENCED:

Compliance with HSE control of noise at work regulations

EMSOL’s 24 hour monitoring of noise levels throughout the project identified that the average background noise level on site was 68dB or below. JLP are successfully controlling noise on site within safe limits and can now prove to their community and stakeholders that they are operating as responsible neighbours at this site.

**WINDOWS OF OPPORTUNITY**

This project enabled EMSOL to present JLP with site specific peak and trough pollution time windows. EMSOL also identified vehicles operating out-with their agreed delivery time slots. With access to this data on the EMSOL dashboard, JLP are able to adjust their scheduling, moving supply activity to the identified trough pollution windows. Additionally they can now enforce third party delivery time slots and in doing so, JLP will lower average pollution levels at the site and improve local air quality.

EMSOL EVIDENCED:

Alternative time slots for deliveries to reduce pollution impact

Want to learn more?
Visit our website or request a meeting with one of the team.

WWW.EMSOL.IO  SALES@EMSOL.IO