



HEATHROW

Clean Vehicles Partnership

Ferrovial Agroman UK Heathrow CVP Case Study



The journey to a greener fleet

Ferrovial Agroman UK is actively working on ways to minimise carbon emissions, noise and vibration at Heathrow Airport through good practices and innovation. As a leading construction company operating across the UK and Ireland, Ferrovial Agroman UK is part of the Clean Vehicles Partnership (CVP) at Heathrow Airport and has made substantial investments in low emissions technology.

Here, Ferrovial explains some of the steps that the company has taken to reduce emissions on its journey to a greener fleet.





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Implementing a hybrid excavator



Ferrovial's hydraulic-hybrid excavator uses 66 tons less CO₂ than the standard model over the course of a year. This is the equivalent of taking 20 diesel cars off the road.

Ferrovial Agroman UK is actively working on ways to minimise carbon emissions, noise and vibration through good practices and innovations in on site plant and machinery.

As proof of this commitment, at Q6 Ferrovial introduced a hydraulic-hybrid excavator (336F XE, 35ton) to reduce carbon emissions and minimise the consumption of natural resources.

The excavator uses energy derived from a kinetic recovery system that generates power when the machine is swing-braking. This energy is then returned to the system when it accelerates during working conditions, aiding upper structure rotation to reduce the engine's load.

This model offers a range of benefits over conventional diesel and other hybrid solutions.

- The hydraulic-hybrid excavator puts as much power to the ground as our standard 36-ton machine, yet it consumes up to 20% less fuel. It therefore produces lower CO₂ emissions and greater efficiency and productivity with less resource consumption.





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- The engine meets Stage IV emission standards, reducing NOx emissions to comply with European emissions requirements and exceeding Heathrow Airport's requirements. It also has the flexibility of running on either ultra-low sulphur diesel (ULSD) with 10ppm of sulphur or less, or biodiesel (B20) blended with ULSD.
- It reduces noise and vibration levels.
- An overfill indicator rises when the tank is full to help the operator avoid spilling.
- Compared to an equivalent diesel only excavator, the Hybrid 336F XE saves up to 20% in fuel use and produces up to 66 tons less CO₂ than the standard 336E over the course of a year. This is the equivalent of taking 20 diesel cars off the road. It also saves projects 20% on the purchase of diesel.

Solar panels

To meet our commitment to reducing carbon emissions by 20% by 2020, and in line with Heathrow Airport's sustainability strategy, Ferrovial Agroman UK has installed 100% solar powered lighting towers on sites across the airport.



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These provide the following benefits over conventional diesel and other hybrid solutions.

- Zero noise: The unit makes no noise and is ideal for sensitive operations, for example during night-working or in sensitive locations (cabins, terminals, etc.)
- Zero fuel: No storage of fuel or need to refuel, with no risk of spillages.
- Minimal manpower: Easy deployment with no need to fill the diesel tanks, clear spills or service engines.
- Remote control and monitoring: A web portal allows the unit to be switched on or off at set times. The portal also provides reports on carbon savings, energy generated and energy consumed over weekly, monthly, quarterly or other regular intervals.
- After just the first two weeks of the trial the use of two solar tower lights had reduced CO₂ emissions by 804 Kg and eliminated the use of 300 litres of diesel.
- The use of solar tower lights saves money on the purchase of white diesel and on maintenance and manpower.

By using hybrid and renewable energy technologies, Ferrovial Agroman UK continues to demonstrate its commitment to good practice and the implementation of alternatives to diesel and fuel energy.

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To find out how to join the Clean Vehicles Partnership (CVP) and receive free support on how to reduce emissions and secure sustainable growth, contact heathrow_cvp@ricardo.com

CVP is delivered by Ricardo on behalf of Heathrow Airport Limited to support the sustainability goals outlined in Heathrow 2.0.



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Making every journey better