

# Winner First Great Western

**T**RAINS travelling on Isambard Kingdom Brunel's historic Great Western railway line are pulling into the station thanks to satellite technology. It's helping to improve fuel efficiency, offers a train driver optimum speeds to meet timetable requirements and is reducing the carbon footprint of train travel.

The ground-breaking technology which train company First Great Western is using relies on Global Positioning System (GPS) linked to a satellite orbiting some 10,600 miles above earth.

The company says it has spent considerable time and resources developing and fitting a new diagnostic system and says that its Driver Advisory System (DAS) is already proving its worth.

Andrew Mellors, Engineering Director for First Great Western, said: "The DAS is similar to a car sat nav system but with train, track and timetable data. The position of the train on the track is shown in real time using GPS. An on-board processor calculates the optimum running speed and coasting location to ensure the train arrives as booked, and with maximum energy efficiency".

It has been installed in the cabs of all of its 119 High Speed Train power car fleet.

Drivers access the equipment using a touch screen on the dashboard of their cabs.

"With trains better regulated in between timetabled stops, drivers encounter fewer restrictive signals and also have advanced warning of any speed restricts or similar," said Mr Mellors.

"Not only does this system provide clear safety improvements, but it is also helping to reduce wear and tear through reduced braking and the gradual application of force as the train speeds up.

"Fuel efficiency has also greatly improved, reducing our fuel bill, but more importantly reducing the carbon footprint of train travel," he said.

The system is also designed to prevent a bunching of train services at notorious bottle-neck locations like Reading on the Bristol to London line. Drivers

can be advised of optimum speeds on approach to bring their train into the station on time.

First Great Western's HST fleet is the largest consumer of fuel within UK rail. The company, part of FirstGroup, an international travel operator, says that a number of initiatives have been implemented in the past year to cut consumption.

"We are working hard to reduce our impact on the environment through our fuel efficiency, recycling and waste minimisation initiatives," said a spokesman.

First Great Western is one of four train operating companies bidding for the new Great Western rail franchise. The name of the successful bidder is expected to be announced by the Department of Transport in January next year with the new franchise starting next April and running for 15 years.

"The new franchise operator will be closely involved in improving rail services following the completion of the electrification and Intercity Express projects," said a spokesman for the Department. The Great Western line runs between London, the West of England and South Wales.

The innovation by the train company follows a similar system introduced by First Bus last year. Technology known as DriveGreen monitors drivers as they work their routes and was installed on 700 buses in a bid to make the environment greener and cleaner.

It involves fixing a traffic light system on to the dashboard of every bus which checks dozens of driving movements every minute, from accelerating to corner and lane handling.

The light flashes green if the bus is being driven smoothly but turns red or amber if the driver brakes too sharply or speeds off too quickly. They can make immediate changes to their driving to ensure their bus travels more efficiently to produce fewer emissions – and the passenger gets a smoother journey.

First Great Western was also a runner-up in the Apprentice of the Year Employer category in the *Post's* Business Awards.