

Ten HS2 construction sites go completely diesel-free

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HS2 has announced that 10 sites are now diesel free, smashing the project's original target of one diesel-free site in 2022. It also puts it well on track towards fully diesel-free construction sites by 2029.

Earlier this year, the Canterbury Road Vent Shaft in South Kilburn, managed by Skanska Costain STRABAG joint venture (SCS JV), became HS2's first diesel-free site. Also managed by SCS, the Euston Approaches and Victoria Road Crossover Box sites have achieved diesel-free status.

Align - a joint venture formed of Bouygues Travaux Publics, Sir Robert McAlpine, and VolkerFitzpatrick, have also announced that seven of their 14 sites are now diesel-free. These include five vent shaft sites along the route of the 10 mile Chiltern tunnels in Buckinghamshire, and two sites involved in the construction of the Colne Valley Viaduct.

Transport Minister Huw Merriman said: "HS2 will help to transform the future of construction, decarbonise transport and help us deliver Net Zero, and leave as little trace as possible by planting millions of trees and creating innovative, low-carbon solutions for removing waste from construction sites.

“This is yet another important milestone in the journey towards diesel-free construction, as HS2 ensures this project has a minimal impact on the environment and local communities while transforming journeys for decades to come.”

To explain how the project will continue on its journey to achieve 100 per cent diesel-free construction sites by 2029, HS2 has published its ‘Diesel-free Plan: Building a net zero future’. It details HS2’s journey to diesel-free construction sites and a new ratings system which ranks all sites from diamond to bronze, so progress can be mapped over the next few years.

Andrea Davidson, HS2 Ltd’s Head of Environmental Sciences said: “Our ambitious goal is to eliminate diesel on all HS2 construction sites by 2029. One of the first targets in our Net Zero Carbon Plan was to achieve one diesel-free site during 2022, so we’re thrilled to see ten sites already reaching this major milestone supported through the hard work from our on-site teams.

“Our ‘Diesel-free Plan: Building a net zero future’ explains how we will reach our goal by improving efficiencies, switching to cleaner fuels, using renewable power such as solar, using the latest cleanest and fully-electric machinery, and continuing to collaborate with the wider industry to set new standards and push the boundaries of green innovation.”

After achieving the first diesel-free site on the HS2 project in May, SCS JV aim to be fully diesel-free by the end of 2023 using a combination of mains electricity, fully electric machines, renewable energy and biofuels.

Their first site – Canterbury Road Vent Shaft in South Kilburn, is connected to mains electricity on a 100 per cent renewable energy tariff. This powers one of the UK’s first 160 tonne emissions-free fully electric crawler crane, as well as other electric plant such as electric compressors, with the rest of the machinery using sustainably sourced biofuels (HVO) as a direct replacement for diesel.

At HS2’s Euston Approaches, also managed by SCS JV, the world’s first all-electric, high-capacity BAUER drilling rig cuts 1,200kg of CO2 per day and reduces noise by 50%, bringing massive environmental benefits and adding momentum to HS2’s ambition to cut carbon and reduce impacts to surrounding residents.

In addition, one of the tower cranes in the Euston Area has been fitted with the PUNCH Flybrid ‘flywheel’ energy recovery system, which stores and kinetic energy to use when needed to downscale peak energy demand and therefore cut energy consumption. This technology recently won the award for the Carbon Net Zero Initiative of the Year and the overall Initiative of the Year Awards at the British Construction Industry Awards.

SCS’s third diesel-free site, Victoria Road Crossover Box has a mains electricity connection, is deploying electric equipment and making use of sustainably sourced biofuels (HVO). The site recently successfully completed trials for two GeoPura 250kVA hydrogen power units (HPUs) – cutting carbon and improving air quality for workers and the local community.

James Richardson, Managing Director of SCS JV said: “We are proud to be pioneers of diesel-free

construction, and we are committed to seeking out and adopting new technology and ways of working to eliminate diesel on construction sites. This all starts with a shift in mindset and a belief that our industry can have a cleaner, greener future.”

As well as seven of Align’s 14 sites becoming diesel-free, their 136 acres (80 football pitches) Chiltern Tunnels South Portal, HS2’s largest construction site, is also well on its way to becoming 100 per cent diesel-free next year. On the site, over 120 pieces of plant including dumpers, tractors, excavators, pumps and crushers are all operating using sustainably sourced biofuels (HVO).

In addition, there’s a range of fully electric plant such as telehandlers and excavators, renewable energy sources such as solar, and site safety gates powered by hydrogen, all reducing carbon impacts and improving local air quality.

Adetunji Lawal, Align JV’s Carbon and Energy Manager said: “Our strategy is to move to diesel-free operations across all of our construction sites, so we’re thrilled to say that half of our sites are now diesel-free. In addition, on our extensive Chiltern Tunnel South Portal site, all of the earthworks activities that represent 70 per cent of our fuel consumption are now 100 per cent diesel free. We estimate that Align will be able to deliver carbon savings that equate to 80,000 tonnes by the end of the project, supporting HS2’s zero carbon ambitions.”

HS2’s ‘Diesel-free Plan: net zero future’ explains how the project will achieve 100% diesel-free construction sites by 2029, and details a new ratings system which ranks all sites from diamond to bronze, so progress can be mapped over the next few years. Progress will be reported in the Environmental and Sustainability Progress Reports in future years.

It highlights that by the end of 2022, all joint ventures working on the HS2 Main Work Civils will have a plan in place to accelerate their own diesel-free ambitions. Through 2023, HS2 will continue to facilitate green innovation trials on its sites, aiming to achieve additional diesel-free sites. Between 2024 and 2029, HS2 will continue to work with the industry to pioneer cleaner and greener ways of working, unblock challenges and increase the use of reliable, proven diesel-free alternatives.

Photo credit: HS2 Ltd