

Osborne

Hydrotreated Vegetable Oil (HVO) reduces carbon emissions by 90%

“Using HVO has been an easy, hassle-free process with a smooth transition via procurement.

It has been rewarding to save carbon emissions whilst improving air quality. Especially important as our site is next to a primary school and care home. In comparison with the diesel crane generator, you can clearly see and smell the difference in the exhaust emissions”

Jim McCormick, Senior Project Manager, Renaissance



PROJECT

Renaissance

CUSTOMER

BNJC

LOCATION

Brighton & Hove

CONTRACT

JCT Traditional

COMPLETION

2022

VALUE

£25 million

Issue

The Renaissance Project includes a synagogue, nursery, classroom, café, apartments and town houses in the heart of Hove, East Sussex.

It is situated in a populated area, flanked by a care home, primary school and residential properties, making air quality of great importance. Using diesel fuel creates carbon emissions which lead to climate change and Particulate Matter (PM) and NOx which cause air pollution and the associated health issues.

To meet the Osborne Net Zero by 2035 target, large and rapid carbon savings must be made.

Due to limitations in electrical supply, the crane was powered by 300kVA diesel generator. As a result, the project's carbon footprint was above expected for its size and type. The need for diesel industrial heaters to dry the plaster to meet programme, would exasperate both the carbon and air quality issues.

Solution

HVO fuel is a drop-in replacement for diesel, with a longer shelf life. It is produced by recycling waste vegetable oil.

Fuelling the industrial heaters by HVO would reduce carbon emissions by approx. 90% and improve air quality by decreasing up to 30% NOX and 80% PMs.

Outcome

Approval to use HVO was easily and quickly obtained from the heater hire company.

HVO was used to power 3 industrial heaters, each 10 kVA for 10 weeks.

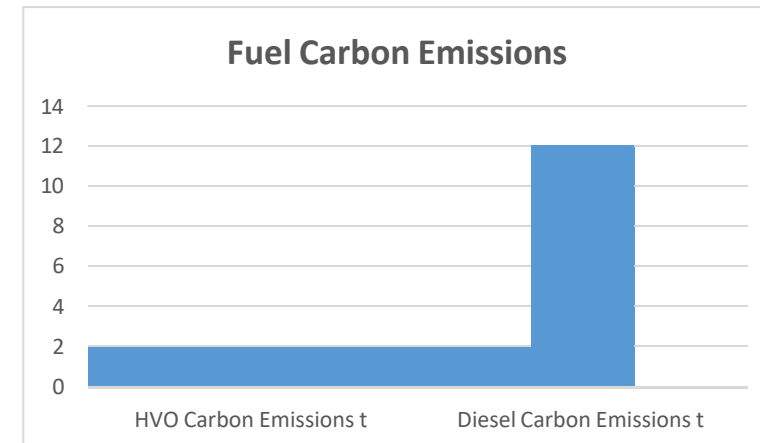
Feedback from the project team stated it was simple to use as it is exactly the same as diesel and there were no running issues.

There was one instance when HVO supply was potentially disrupted due to

geographical location. This was overcome by sourcing a new supplier which also resulted in a lower cost pence per litre. HVO was cost effective due to the red diesel tax rebate revocation and volatile crude oil prices.

Carbon emissions were reduced by approx. 90% as per the table below and air quality increased.

Fuel Use Total Litres	3575
HVO Carbon Emissions †	0.88
Diesel Carbon Emissions †	12.12



To capture 1 tonne of carbon emissions, 50 trees must grow for a year.