

Kittybrewster, Aberdeen: UK's largest hydrogen vehicle refuelling station



Aberdeen City Council has partnered with BOC to deliver a commercially viable hydrogen refuelling station to power one of the city's fleet of hydrogen buses.

BOC worked with the council to design, build and operate a tailored, state-of-the-art hydrogen refuelling station at the council's Kittybrewster site. The facility produces green hydrogen from electrolysis on site – a process that extracts hydrogen from water using electricity generated from renewables.

The hydrogen is stored as a compressed gas until it is needed and then pumped into vehicles, much like refuelling a petrol or diesel vehicle.

BOC worked closely with the council to implement key safety measures from the outset including a thorough risk assessment that was shared with the public, along with BOC's safety record and details of the safety measures installed such as continuous leak monitoring.

The station opened in 2015 and was originally designed to refuel single-deck buses. In 2018 it was scaled up to offer public refuelling of cars and vans at 700 bar, and in 2019 it was upgraded again to accommodate double decker buses.

The site has the capacity to produce 360kg of hydrogen daily - that is enough for the fleet of 15 buses to travel up to 350km each day emitting nothing more than clean water produced from the tail pipes.

Kittybrewster is one of Europe's highest performing hydrogen bus refuelling stations and it is accessible to all hydrogen-fuelled vehicles.

Over the initial four-year period, a small fleet of just 10 buses saved over 1,000 tonnes of carbon dioxide compared to running the latest Euro 6 diesel engines, helping to improve air quality in the city. There is also potential to provide energy storage and grid balancing services in the future.

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Video link - [Kittybrewster, Aberdeen: Europe's largest hydrogen bus refuelling station - YouTube](#)

