Air Quality Strategy Case Studies

MBNA Thames Clippers

MBNA Thames Clippers operates a modern fleet of passenger vessels on the River Thames. One third of the MBNA Thames Clippers fleet is now biofuel compliant as part of the business' preparation towards being able to run boats on renewable energy sources in the future, should this be viable.

The newest additions to the MBNA Thames Clippers fleet have an improved hull design that decreases drag and therefore lowers fuel consumption. Two of the most recent additions have engines that are more fuel efficient and another two craft are being constructed to achieve the same performance.

Thames Clippers is involved in running a number of projects to improve performance of its fleet, including partnering with academics and boat yards to find innovative designs for new vessels.

They have also run a retro-fitting programme to add new powertrain mechanisms to their oldest vessels in order to reduce fuel consumption and emissions. All their vessels have been fitted and this has resulted in a 50 per cent reduction in particulates, 40 per cent less Nitrogen Oxides (NOx) and Hydrocarbon (HC) emissions, for every litre of fuel used.

MBNA Thames Clippers is currently building an upgraded home port facility at Trinity Buoy Wharf, located opposite The O2. This new port facility will allow all vessels to be connected to shore power over night, rather than being powered by diesel generators. The project is estimated to save about 100,000 litres of diesel, annually. The new facility will also enable the operator to pump out waste water from the vessels and directly into the London sewer system rather than other inefficient means.

Additionally, MBNA Thames Clippers is currently in the process of constructing a new dry dock facility at Tilbury Docks which will provide a new maintenance facility much closer to London for vessels to be lifted out of the water. This facility will enable significant operational efficiencies as it will be much closer to London, whereas its current facility is about 45 miles outside the city, approximately 3–4 hours by river.

Cory Riverside Energy

Cory Riverside Energy has a fleet of tugs which takes 60,000 lorry movements from the roads every year by carrying 600,000 tonnes London's waste away to energy from waste plant in Belverdere. The tugs are powered by marine engines (originally Tier I), however the team at Cory's has adjusted the system so that the engines emit less that a Tier II marine engine.

Following their involvement in the exhaust monitoring project with the PLA in 2017, the company is already looking at the potential for installation of abatement systems to bring their engines to Tier III standards or replacing them entirely. This will mean the tugs will be ahead of the legal requirement that comes into force for new ships operating in the North Sea.

DP World London Gateway

DP World London Gateway is the new deep-sea container Port and Logistics Park on the north bank of the River Thames, at Stanford-le-Hope.

Operational since late 2013, the port handles some of the largest container vessels in the world. As a new, fully integrated logistics hub, DP World London Gateway has been able to design its operations with modern efficiency and technology from the outset. The port's environmental performance benefits from automated areas of the terminal needing minimal lighting and the use of efficient process-led, computer-driven equipment.

DP World London Gateway's sustainability strategy involves close monitoring of carbon emissions, with external verification of data and a commitment to year-on-year reductions in emissions from its operations. Initiatives to achieve this include: solar panels on all new buildings and kinetic energy recovery from crane operations. A new fleet of hybrid shuttle carriers is in operation, reducing fuel consumption by up to 30%. A fast-charge, fully electric shuttle carrier with zero NOX and CO2 emissions at the point of use is also being trialed by DP World London Gateway and Kalmar this year.

DP World London Gateway is implementing an air quality monitoring programme, which will provide data that contributes to the PLA's overall monitoring of air quality along the River Thames.