

More by river, reducing on-road freight



ECONOMY



ENVIRONMENT



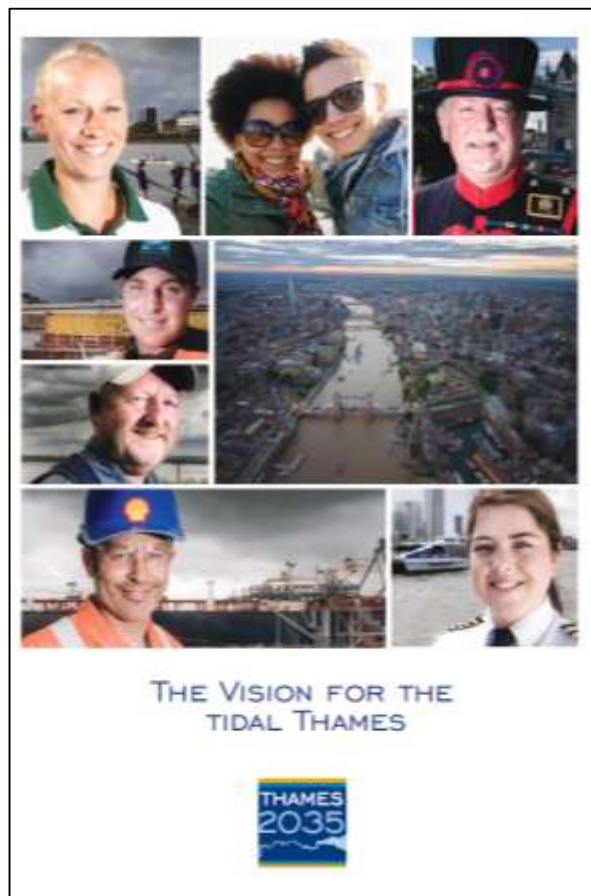
HEALTH, SAFETY & WELLBEING



PEOPLE

PLACE





Theme - Environment

Objective: Protect and enhance the environment

Direct benefits: Improved water quality

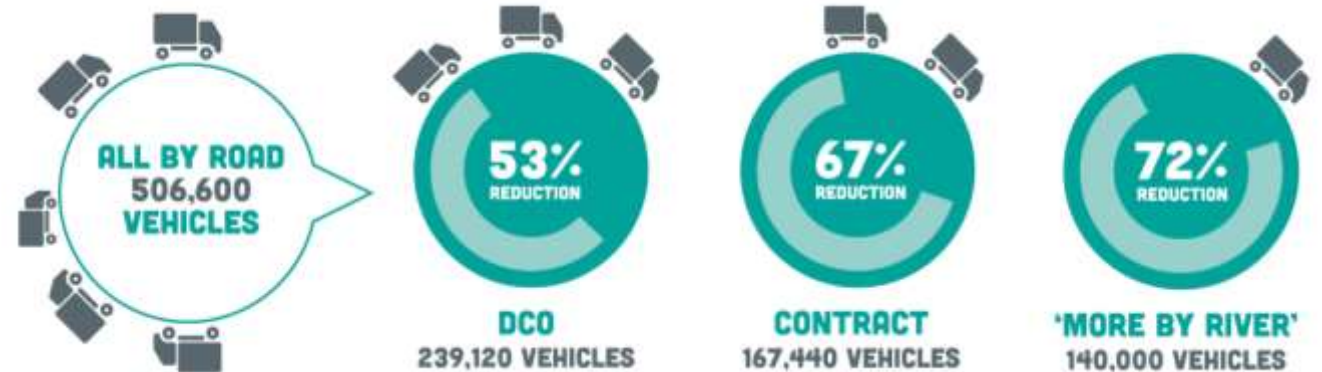
Public realm

Indirect benefits: Reduced carbon

Reduced congestion

Improved air quality

Supports river strategy



Results to date: 38,000 two way movements avoided to date

86% less NO₂ and 90% less CO₂ than HGV equivalent

5% reduction in carbon footprint

Telematics being introduced

Theme - Economy

Objectives: Improved competitiveness and vitality for London

Contribute to the rejuvenation of London's river economy

Improving the UK's exportable knowledge base; encourage innovation

Indirect benefits: Upskilled workforce

Improved marine infrastructure

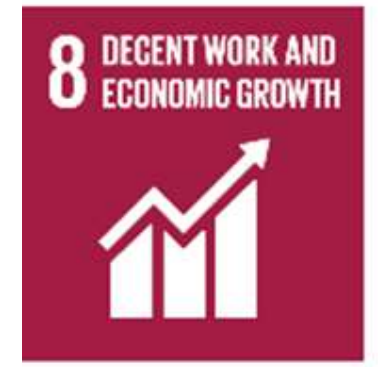
Results to date: Thames Skills Academy

Innovation – tug simulator, hydrofraise, BIM, i3p

New fleet of tugs and barges

£775M in Green Bonds

BES 6002 Ethical Labour Standard



Air Quality monitoring

On average one large barge can carry the equivalent to 50 HGVs worth of material.

Emission monitoring was carried out in November 2017 to compare (g per tonne km) against the equivalent Euro V and Euro VI HGVs.

SeaG8 Felix of London with 2008 Volvo Penta D16-MH 441kW engine.

Larger barges modelled.

Pollutant emissions monitored: nitric oxide (NO), nitrogen dioxide (NO₂), nitrogen oxides (NO + NO₂), carbon monoxide (CO) and carbon dioxide (CO₂).

Air Quality

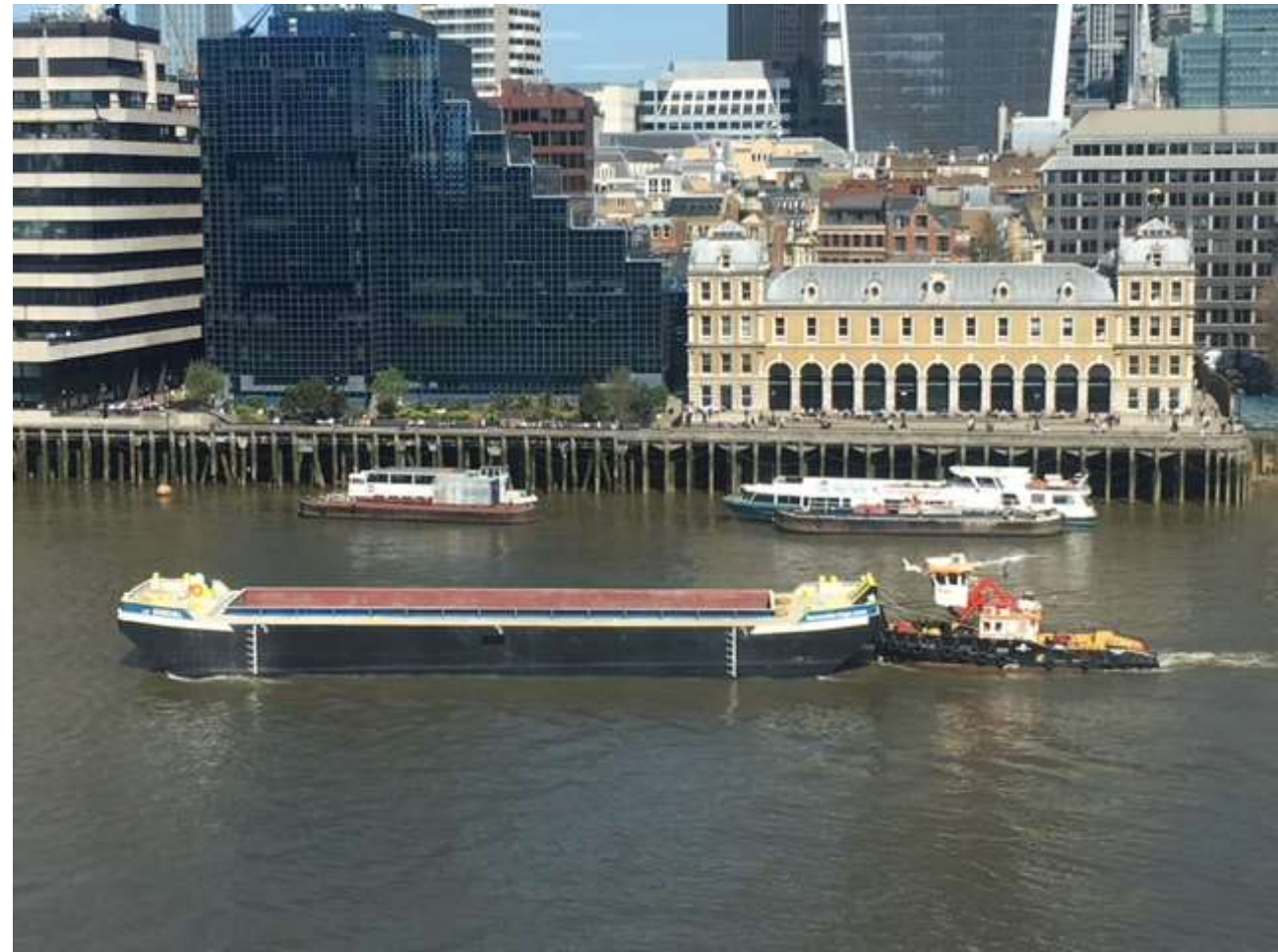


Air Quality results

River transport produces less emissions than the road equivalent (per tonne km), even when compared with Euro VI HGVs.

When using a 75% engine load 1000 tonne barge

- 54% less NO_x
- 52% less NO
- 86% less NO₂
- 95% less CO
- 90% less CO₂



Air Quality results

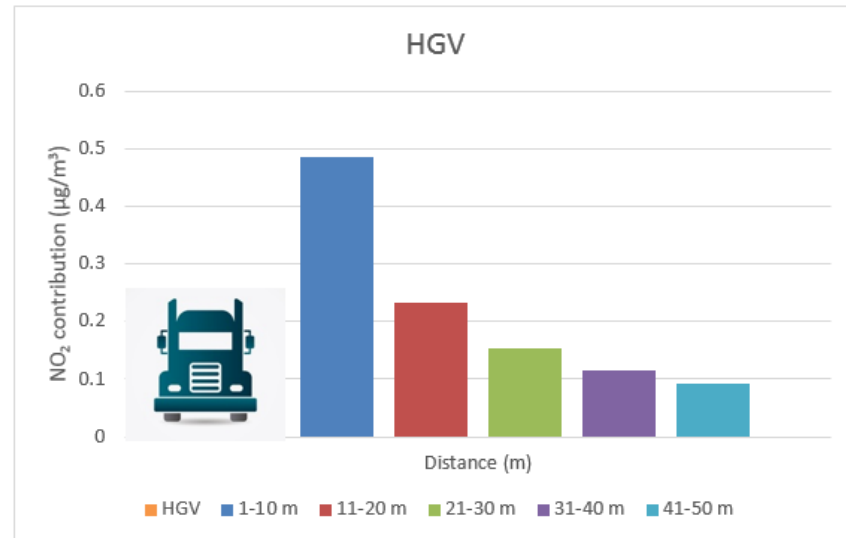
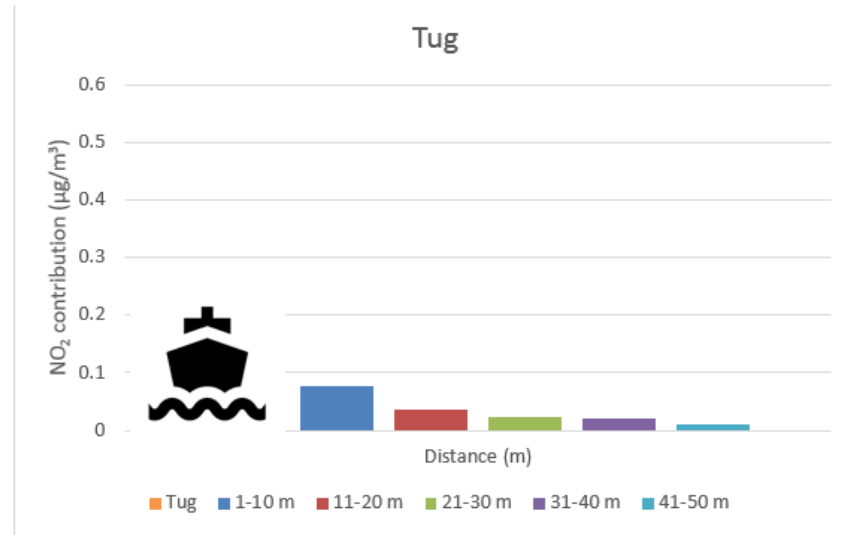
The benefits are slightly lower, for some pollutants, when using smaller barges.

When using a 75% engine load 800 tonne barge

- 47% less NO_x
- 35% less NO
- 91% less NO₂
- 95% less CO
- 87% less CO₂



Dispersion modelling



Next steps

CRT[®] System - Continuously Regenerating Trap



