



## **Tidal Thames Environment and Heritage Conference**

*The River Users' perspective: Using the river to bring about improvements to the environment*

**31 January 2019**

Tanya Ferry

Environment Goals Update

# Progress of the Vision Goals

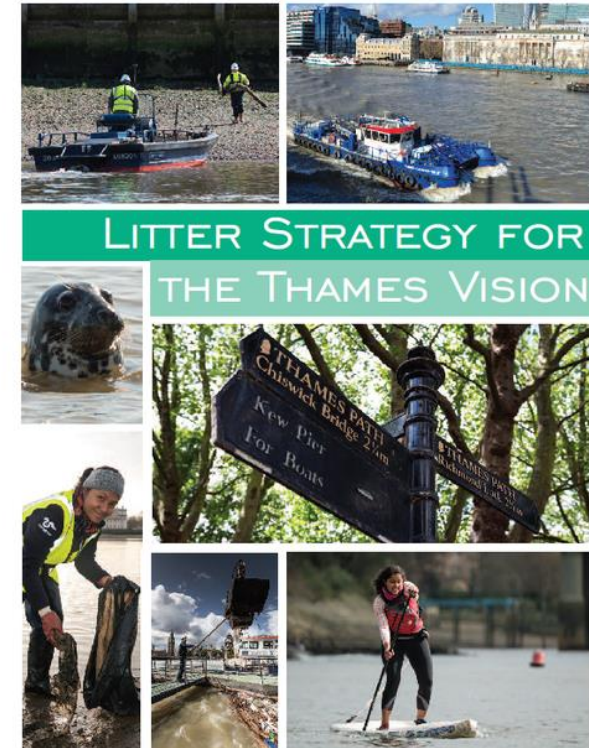
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Cleanest since the Industrial Revolutions, with improved Habitats and awareness of Heritage

- Water Quality – Litter
- Biodiversity and connections between them
- New Technology to reduce ports environment impact

# Water Quality & Litter

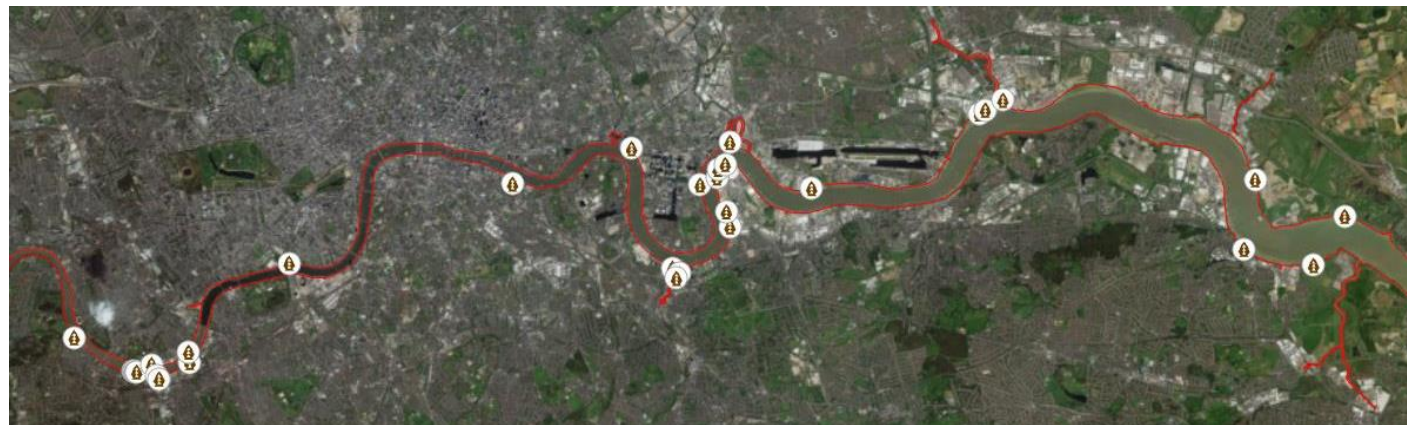
- Litter Strategy
- New structure for the Thames Litter Forum
  - 4 working groups
  - Over 40 members
- Increased external interest on litter in the Thames



# Biodiversity and Invasive species

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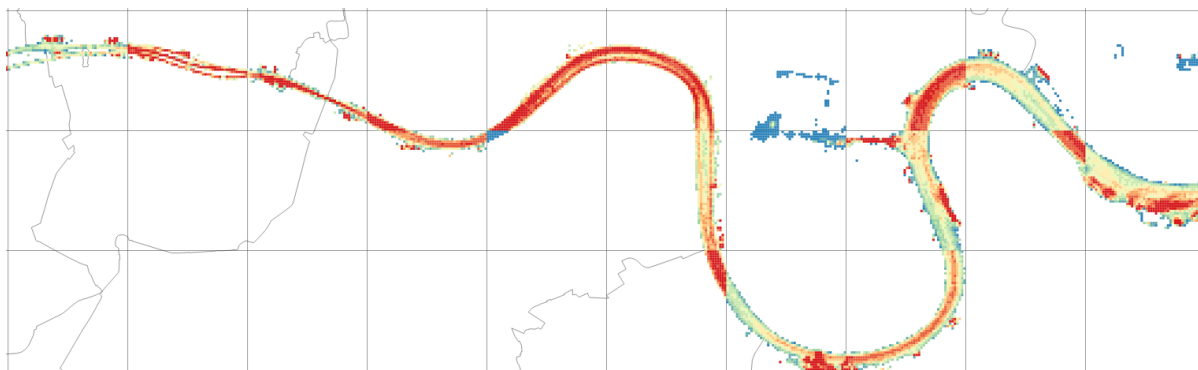
- Vision Biodiversity Group
  - new Chair
- Vision INNS Group
  - draft INNS Strategy
  - Contributing to Regional Plans
- Connectivity
  - Mapping habitat enhancements



- 1<sup>st</sup> Natural Capital Account
- Estuary Edges

# Green Technologies and Air Quality

- Early production and implementation of ports strategy
- Increase in visiting ships qualifying for green tariff
- Increase discounts for greener ships from 2019
- Continued investigation into shore power
- Dispersion modelling



**1.6 Emission Factors**  
*From the ship's emission calculation tool (greenpeace.com/level2019)*

**1.6.1 Auxiliary engines**

Engine	Max	Max EF (at 100% RPM)	EF (at 100% RPM)	EF (at 75% RPM)	EF (at 50% RPM)
Low speed	1000	10.0	10.0	10.0	10.0
High speed	1000	10.0	10.0	10.0	10.0

**1.6.2 Main engines**

Engine	Max	Max EF (at 100% RPM)	EF (at 100% RPM)	EF (at 75% RPM)	EF (at 50% RPM)
Low speed	1000	10.0	10.0	10.0	10.0
High speed	1000	10.0	10.0	10.0	10.0

**1.6.3 Fuel dependent EFs**

EF	CO2 (t/tonne fuel)	CO (t/tonne fuel)	CH4 (t/tonne fuel)	N2O (t/tonne fuel)	NOx (t/tonne fuel)	SOx (t/tonne fuel)	PM10 (t/tonne fuel)	PM2.5 (t/tonne fuel)	PM10-2.5 (t/tonne fuel)	PM2.5-10 (t/tonne fuel)	PM10-2.5-10 (t/tonne fuel)
Low speed	3.15	0.05	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
High speed	3.15	0.05	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

**1.7 Auxiliary calculations (per visit)**

Parameter	Value
Power (kW)	3,500
EF (g/kWh)	700
Duration (hr)	0.6
NOx (kg)	1,470
SOx (kg)	210
PM10 (kg)	210
PM2.5 (kg)	210
PM10-2.5 (kg)	210
PM2.5-10 (kg)	210
PM10-2.5-10 (kg)	210

**1.8 Main engine calculations (per visit)**

Parameter	Value
Power (kW)	3,500
EF (g/kWh)	700
Duration (hr)	0.6
NOx (kg)	1,470
SOx (kg)	210
PM10 (kg)	210
PM2.5 (kg)	210
PM10-2.5 (kg)	210
PM2.5-10 (kg)	210
PM10-2.5-10 (kg)	210

# Looking forward

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- Monitoring of air quality, biodiversity and litter
- Investigating designs of collectors
- Investing in habitat improvements
- Environmental reporting
- Pilot cutter hybrid
- Green fuel trials
- Monitoring of exhaust





