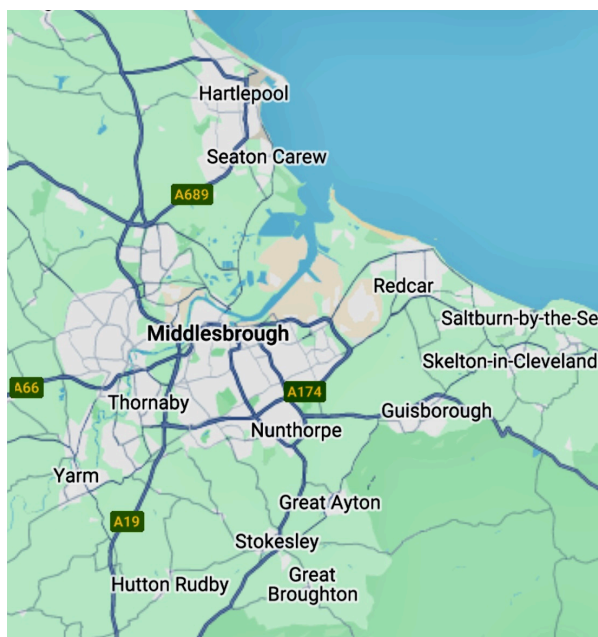


Teesside Industrial Cluster



Map showing the Teesside area

Overview

The Teesside Cluster is located in the Tees Valley region of north-eastern England. It's a major industrial hub with a focus on energy, chemicals and heavy industry.

The area faces environmental challenges, including growing water demand and the need for sustainable water management. Collaborative efforts between industry, Northumbrian Water and the Environment Agency are addressing these.

Key initiatives include:

- **Industry** plans to develop new raw water and wastewater treatment plants to meet increasing demand.
- **Northumbrian Water** has conducted a consultation, and updated water supply models, revising future industrial water demand estimates from 25Mld to 190 Mld by 2030.
- **The Environment Agency** has initiated a cumulative impacts study on air quality to support ongoing industrial expansion while ensuring environmental sustainability.

Key Environmental Capacity Challenges

Water quality

- Climate change is likely to impact water quality in Teesside, which will require stricter pollutant limits and more complex permit assessments.
- Existing water quality issues and limited wastewater treatment capacity make additional discharges difficult, especially in a warming climate.

Water availability

- Teesside has reliable consumptive abstraction 50 to 70% of the time, although supply for future deployments is uncertain.
- While Teesside currently has enough water supply, climate change could impact future availability due to saline intrusion and groundwater recharge.

Air quality

- Low-carbon technologies might emit unmonitored pollutants, impacting air quality.
- Inadequate baseline monitoring and unclear emissions reporting can delay plant operations and complicate permitting, especially when new projects combine with existing industrial emissions.

Recommendations

To effectively deploy low-carbon technology in the Teesside Industrial Cluster we need to prioritise environmental capacity challenges and strategic planning to tackle water and air quality challenges and promote sustainable development.

Innovation

- **Review emission limits:** Review and implement emission limits for wastewater discharges to address water quality challenges.
- **Incorporate pollution prevention in early project design:** Include robust pollution prevention measures and land remediation efforts in the early design phase of projects to improve water quality.

Collaboration

- **Invest in water infrastructure upgrades:** Improve wastewater treatment facilities and expand sewer capacity to handle additional discharges and accommodate stricter nitrogen nutrient limits.
- **Enhance air quality monitoring:** Establish a comprehensive air quality monitoring system to detect and manage emissions from low-carbon technologies, including unmonitored pollutants like ammonia and amines.
- **Improve disclosure practices:** Ensure transparency and accuracy in emissions disclosure to avoid delays in plant operation.