

**LAKE 4 PUMPING STATION  
THAMESMEAD, LONDON  
ENVIRONMENT AGENCY**

## BIG Biodiversity Project of the year: Small Scale

### Project overview

Lake 4 Pumping Station protects 10000 homes and businesses from flooding. TEAM2100 are undertaking major mechanical and electrical upgrades to enhance the efficiency and performance of the pumping station.

### What were the biodiversity conditions on site, prior to the enhancement?

The site is situated on the bank of a lake and meters from the Thames in East London. Fish, birds, foxes and insects occupy the habitat.

### What were the reasons behind this project ?

- Two of the screw pumps (which are used for the day to day operation of the station) are driven by electric motors, gearboxes and belt/pulley systems powered by the incoming electrical supplies.
- The remaining two screw pumps (which are used as an emergency standby should the two duty screw pumps be unavailable) are driven by individual engines, gearboxes and belt/pulley systems.
- The engines are redundant and therefore 2 screw pumps are inoperable. Therefore the purpose of this project is to make the all 4 pumps active with improved efficiency and performance by upgrading the mechanical /electrical equipment.



*Above fig Lake - 4 Pumping Station*



*Above figure – Picture of a duck in the lake*

### What were the biodiversity measures taken?

The learnings taken from the Lake 4 pumping project will be replicated on the future pumping station projects that will continue to be part of TEAM2100.

### Bird Feeder

The site team have purchased 2 bird feeders and installed them behind the office cabins. It is filled with bird feeds. It has created the following benefits:

- Provided a nutritious food source for the birds.
- Helped birds to survive .
- Helped birds during migration
- Helped compensate for habitat loss and climate change.

### Further information

The bird feeders were installed in mid march, since then there has been a noticeable increase in the number of birds on site as shown in the picture on the right. Going forward, this is something that is hoped to be rolled out onto other projects within TEAM 2100. In addition the bird feeders allowed the site team gain knowledge in biodiversity.

### Project Team

- Environment Agency (client)
- Jacobs formerly CH2M (designer)

### What was the motivation for carrying out the enhancement?

TEAM2100 as an integrated design team aim to continually improve and enhance the assets of the Thames estuary. By incorporating small and consistent environmental and biodiversity enhancements on our projects we can provide larger benefits for the client in regards to environmental gains.



*Bird Feeder on the cabins (In March 2018).*



*Vegetation around site*



*Bird Feeder on the cabins (In April).*