



# Lightning Protection Upgrade – HVI Power Aerial Installation





# Lightning Protection Installation on Digesters 1-4

Thames Water Utilities, Digesters 1-4, Maple Lodge STW



**Client:** Thames Water Utilities

**Location:** Digesters 1-4, Maple Lodge STW

**Project:** Lightning Protection Upgrade

## Scope of Works

- Installation
- Work in conjunction with other contractors i.e civils team, scaffolding team, Crane team, MEWP driver to upgrade the existing Lightning Protection System.



## The Task

Power Testing Ltd successfully won the contract to upgrade the existing Lightning Protection System on Digesters 1-4 at Maple Lodge STW.

Works involved installing 10no. HVI Power Lightning Protection Aerials and 2no. 25m Freestanding Lightning Protection Masts.

The installation of 22no. Earth pits with 2 Earth Electrodes installed in each pit. 10no. Aerial locations were marked out using the specification drawings.

Service drawings and a CAT & Genny was used to mark out the Earth pit locations. Once locations were marked, the civils team dug trenches for the tape and pits to be installed.

12no. Earth Bars were installed at each of the aerial locations and a Grey HVI cable was installed around each tank linking the earth bars to ensure ultimate Lightning Protection. Grey Insulated Copper Tape was installed from the Earth Bars to the Earth Pits with a high

The complete system was then tested and achieved an overall reading of 0.12 Ohms.

**The client was delighted with the speed and accuracy whilst installing the new system. He was very impressed with how hard the team worked and thanked PTL for how he was always kept in the loop with works.**

## Project Achievements

- Worked closely with TWU to minimise operational risks & disruption to the onsite services.
- Careful planning and coordination to ensure the job run smoothly.
- Efficient project management involving third parties.
- Ensured the compatibility of the new Lighting Protection System.
- Successful transfer of the old protection system to the new system.

