



RIVER COLNE WATERCOURSE CROSSING
SLOUGH ROAD, IVER

Team - Power | **Value** - Multi-million | **Voltage** - 132kV
Client - Undisclosed | **Duration** - 21 days | **Date** - Feburary 2025

Pre-construction

This Project installed a cable crossing over the River Colne and Colne Brook to connect to the Iver Substation. Bridge-mounted and Horizontal Directional Drilling (HDD) methods were ruled out, leaving open-cut excavation as the only option. Nearly two years of planning included design, permits, and ecological surveys to protect wildlife. Minimal vegetation was cleared under supervision, and lighting was limited to safeguard nocturnal species.

Construction

Construction began in February 2025 and was scheduled for 21 days. The work was split into two phases, involving multiple contractors. Dams were built to span 60% of the river width, allowing a 10% overlap for duct installation. Once the dam frames were in place, impermeable sheeting and submersible pumps were used to dewater the area. After reducing water levels, fish were safely relocated, and excavation began. The ducting was laid, backfilled, and the dam repositioned for the second phase.

Post-construction

The project was completed successfully within the 21-day schedule. Environmental measures, including fish relocation and pollution control, were effective. The silt curtain performed well and will be used in future projects. Key lessons learned will help improve planning and execution for similar works.



Cable

Crossing

Dam

River

Open cut

Dewatering

Excavation

Environmental

Permit

Pumps

Ecology

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CHALLENGES AND SOLUTIONS

Limited Engineering Options

An open-cut river crossing was selected as the most viable method. Despite its higher environmental risks, it was executed with meticulous planning and ecological safeguards.

Balancing infrastructure needs with environmental protection

Extensive ecological planning and mitigation measures were implemented, including habitat surveys, species monitoring, and strict environmental controls to minimise impact.

