Resolving legacy contamination

ULIFE

Major energy company, UK

Client: Major energy company Location: Eastern England

Challenge

Remediation of soils and groundwater contaminated with light and heavy-end hydrocarbons. The project was part of an ongoing strategy by the client to resolve legacy contamination.

As the contamination was located around live, nationally-critical fuel infrastructure, careful planning was required to ensure the safest possible working practices were maintained.

The works were further complicated by:

- The site being on low-lying ground, prone to flooding
- Water voles and adders in areas of the site
- Managing the needs of multiple landowners and stakeholders along the length of the pipeline

Solution

McAuliffe implemented a stringent health and safety programme, organising bespoke, client-specific training for operatives and safety briefings at the start of every shift. Given the sensitive nature of the site, the team put a specific protocol in place to respond to near misses and incidents.

Ahead of mobilisation of McAuliffe's in-house fleet of intelligent plant, the team produced a deployment form using its environmental permit (mobile treatment) and submitted a Materials Management Plan (MMP) to CL:AIRE.

Once the excavation profile was uploaded onto intelligent machinery, need for manual setting out was negated and plant could survey the works as excavations progressed. To ensure accurate, safe working, the exact locations of live services were uploaded directly onto excavation plant. McAuliffe engineers also placed restrictions on dig extents and levels, preventing contact with services during soil excavation.

A new, bespoke 10m3/hr groundwater treatment plant, designed and built in our Italian factory, was installed onsite to pump ditches dry and combat flooding from heavy rainfall.

Contaminated groundwater was pumped through a separation/carbon absorption filter, with full telemetry within the plant ensuring the team would be immediately informed of any mechanical issues. The water removal programme was carefully sequenced to ensure water voles would not be disturbed.

The team excavated and bioremediated hydrocarbon-contaminated soils in its treatment area, reprofiling the site with treated soils to suit the long-term needs of the client.

To improve the surrounding environment, material was transported from adjacent areas and used to generate landscaped zones, improving the drainage and reducing flood risk.

RESULTS

- Contamination reduction targets safely
 achieved
- Delivered project on time and on budget
- 3D GPS-enabled remediation delivery

