



CASE STUDY

Client: PMC Construction & Development Services Ltd

Date: 2021-2022

Nature of works: Site Investigations & LNAPL Recovery Works

Contract Value: £222K

Former Railway Wharf, Timber Yard & Aggregate Depot

Kingston Wharf, Shoreham-by-Sea

Soilfix were instructed to carry out a programme of site investigation, oil containment & recovery works in advance of a mixed-use development.

THE CHALLENGE

Several phases of site investigation were required to determine the ground conditions & extent of flood defences present and their bearing on the proposed development scheme. A free-phase oil (LNAPL) plume was also present on the site boundary adjacent to the tidal River Arun and required a programme of delineation, containment and remediation to satisfy the Planning Conditions for the site.

OUR SOLUTION

The following 'one stop' investigation & remediation package was completed by Soilfix to satisfy planning objectives and the client's information requirements:

- Attaining relevant permits for works, including a Flood Risk Activities Permit (FRAP) and the deployment of Soilfix's Mobile Treatment Permit;
- Window sampling, trial pitting and trenching across the site to enhance the overall understanding of existing ground conditions including supplementary investigation of the river defences to indicate their construction, condition and potential mass obstructions;
- Advancement of deep cable-percussive boreholes to support geotechnical assessments for pile design;
- Detailed quantitative risk assessment (DQRA) modelling to support EA approval of a cost effective, risk-based, strategy for the LNAPL plume;
- Installation of dual-purpose LNAPL monitoring / recovery wells and subsequent LNAPL monitoring with assessment of the influence of tidal fluctuations upon groundwater levels below the site;
- LNAPL recovery trials to establish the most suitable technique for the site;
- Design and installation of a 30m length, low-permeability Subterranean Barrier to 7mbegl to prevent continued migration from LNAPL from the identified off-site source;
- Oil recovery using belt-skimmers, field pumps and oil-selective absorbents; and,
- Direct-push injection of RegenOx and Petrocleanze™ into the remaining on-site oil plume to enhance recovery of residual free-phase contamination (to below measurable thickness).

Investigation works provided crucial information to enable the client to assess the feasibility of the ongoing River Defence design, whilst the LNAPL recovery works were completed to the satisfaction of the EA and Local Authority in advance of ongoing development. No Health, Safety or Environmental Incidents were recorded during the site works.



**FOR FURTHER INFORMATION
PLEASE CONTACT:**

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