GPT Environmental Management Services

Diesel Spill Response & Remediation Case Study

Summary

Our emergency response team were called following the discovery of oil in a lagoon on a large construction site adjacent to a SSSI.

The emergency response prevented any further oil from escaping site, however a large amount of contamination was present in the lagoon and the ground on site and a substantial remediation project was necessary to remove the contamination.

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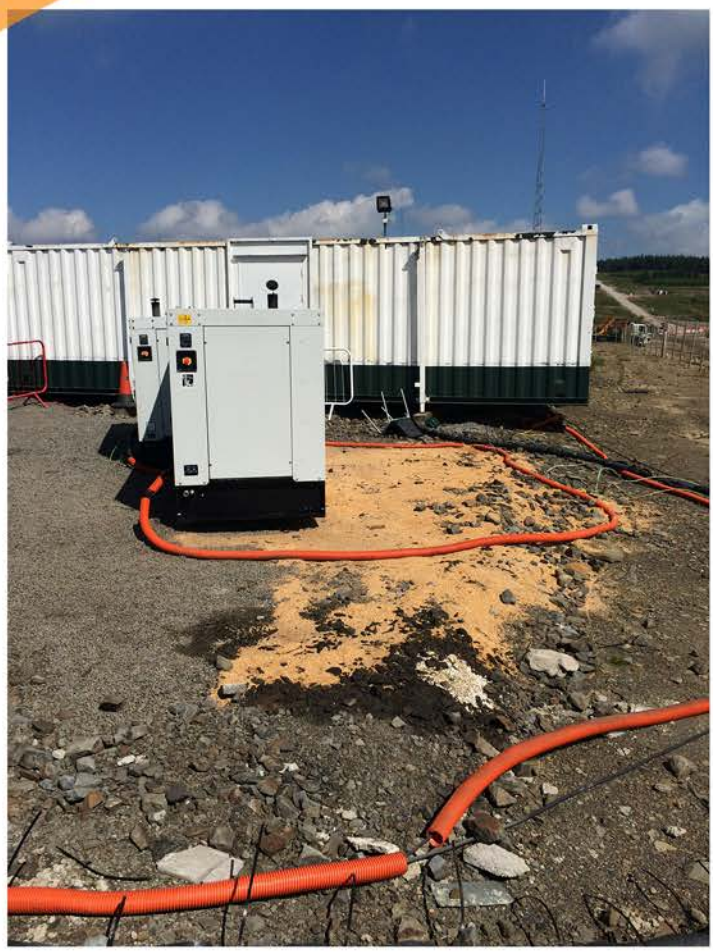


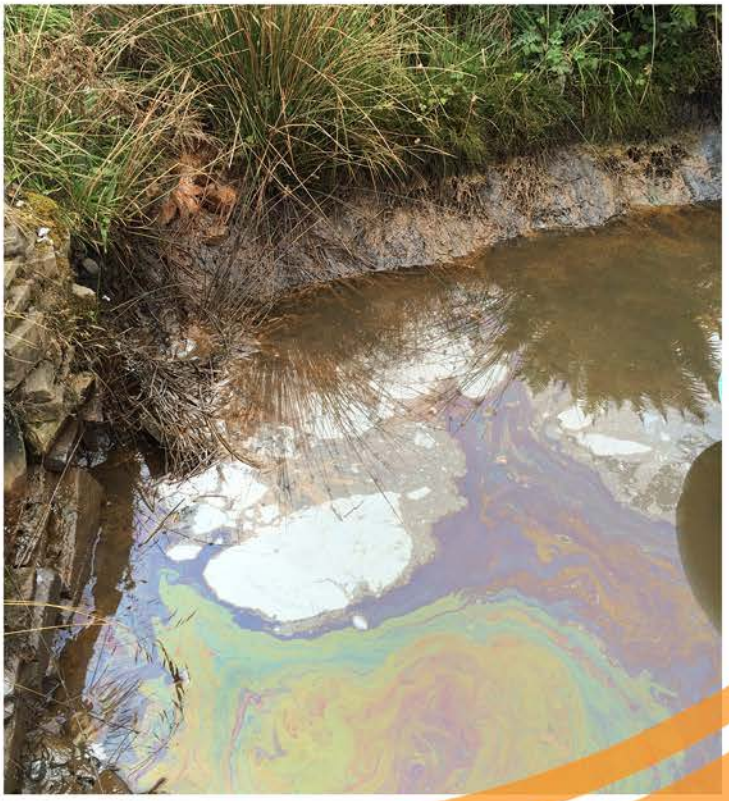
Initial Incident & Response

We were called to a spill following the discovery of oil in a lagoon on a large construction site adjacent to a SSSI.

Upon arrival controls were immediately deployed in the form of oil absorbent booms preventing contaminated discharges leaving site.

Assessment of the site led to the source of the leak being identified as a diesel generator. The generator was integrally bunded but the bund had filled with rainwater and had not been emptied, allowing diesel to overflow the bund and escape onto unmade ground.

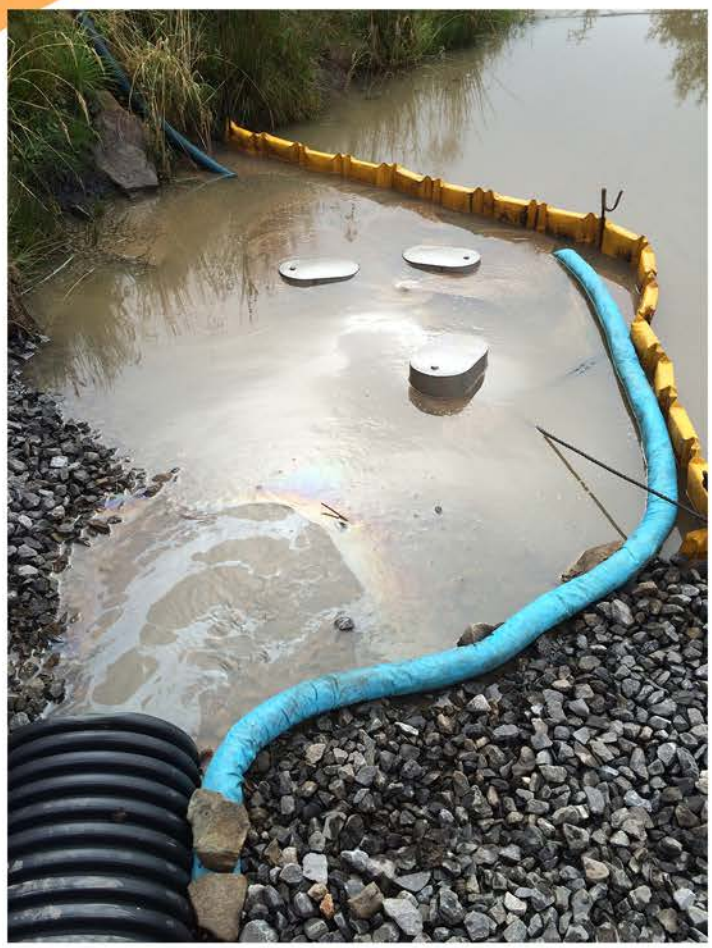
The contaminated lagoon was located approximately 35 metres away from the generator which indicated that the generator had been leaking for an extended timeframe and therefore a significant area of contamination in the ground between the generator and the lagoon was identified.



Remedial Actions

The first stage in remediating the site was to remove as much ground contamination as possible; approximately 22 tonnes of contaminated soil was removed; however any further removal was limited by site infrastructure.

Subsequent remedial options to recover the known residual contamination were assessed via a treatment matrix. Flushing with recycled water was considered the most appropriate secondary remediation and this was agreed with the environmental regulator Natural Resources Wales.



The oil selective booms were regularly maintained to ensure they remained effective at preventing further contaminant migration and promoting oil recovery, however the amount of free oil in the lagoon was of sufficient quantity to necessitate the installation of an oil water separator and skimmer to enhance the recovery process.

Semi-permanent booms were deployed to effectively dam the oil allowing the build up to be skimmed and recovered. The system was enhanced and accelerated by installing a second pump that transferred treated surface water back to the source zone, flushing residual contamination to the control point.

Oil recovery continued for 14 weeks with over 1,000 litres of oil recovered in total.

Validation Sampling

To ensure contaminant levels were returned to an acceptable level, 4 sample locations were established and regular samples were taken from these locations and sent for laboratory analysis.

Once all of the sample locations showed TPH contamination below detection levels and with the agreement of the Regulator, the oil water separator was decommissioned.

Oil selective booms were replaced on the outlet of the lagoon and left in situ to provide a defence against possible future spills on site.