

SpillAway Sustainability Live! – Award Entry

Customer: Barratt Homes, Bristol.



Site: Spanbourn Avenue, Chippenham

Type: Brownfield, Ex-Industrial

Consultant: SPC Group

Challenge:

The heating oil tank of an ex-industrial unit had split, leaving high levels of historical contamination in the soils adjacent to the tank. Geo-analytical testing, performed by Robson Liddle, showed these soils to have contamination hot spots as high as 21,000 PPM of heating oil over an area covering 200m². High levels of VOC release, caused by the sites interruption, were causing high odour levels and disturbing neighbouring homes and needed addressing quickly.

In addition to the primary area of contamination, excavated topsoils around the site were found to have minor levels of hydrocarbon contamination.

Solution:

Full bioremediation of the site using SpillAway Range products. Methodology and implementation management by SPC Group.

Methodology:

1) Heating Oil

The contaminated soils were first fully excavated. The resulting pit was enlarged to a 250m³ capacity (10m x 10m x 2.5m) and a geotechnical liner was placed to prevent any leachate.



The soils were then back-filled into the pit as the groundworkers applied SpillAway Liquid Remediate and Dry Remediate directly to the soil.

The operation was overseen by SPC Group personnel to ensure that the products were correctly implemented, but was otherwise executed in-house by Barratt contractors.

Five days after the initial implementation, SpillAway HC300 was over-sprayed as

the soil was turned using a digger. All Plant at the site was washed down using the SpillAway products to ensure there was no transfer of contaminated soil around the site.

2) Topsoil

All remaining topsoils were excavated and over-sprayed with SpillAway Liquid Remediate. These treated soils were then redistributed around the site.

Results:

As a highly porous and absorbent product, Dry Remediate was able to absorb all VOC's and negate odours within two days. Hydrocarbon contamination levels were reduced from 21,000 PPM to between 56 PPM and non-detectable within 60 days. Needless to say, these levels were by far above and beyond what Barratt had hoped for.

Verification:

All testing carried out independently by Robson Liddle, Geotechnical consultants.

Summary:

- Site works continued throughout process with no delays to building schedule.
- Environmental savings - Problem solved on site; no transfer to landfill, no transport on motorways.
- Financial savings – Bioremediation costs were less than 10% of comparative dig and dump costs. (Typical dig and dump costs including landfill tax, waste handling fees, haulage and backfill for this region are £300 - £400 per tonne. SpillAway implemented in full for less than £30 per tonne).



Products:



Liquid Remediate™ can be used either as a stand alone product for small scale spills such as equipment leaks, or as the 1st phase "soil-washer" in large scale projects. Natural solubalisers in the product help it to un-adhere contaminants from the soil, allowing more surface contact with the products microbes, resulting in quicker bioremediation.



Using a highly absorbent microscopic powder to carry the bacterial content of this product, **Dry Remediate™** is the perfect product for shallow level and ex-situ projects. Simply till Dry Remediate™ into soil and activate with water. Dry Remediate™ can also be used to stiffen and stabilise sludge, allowing for the safe transportation of contaminated sludges, whilst the presence of water will release oxygen from the powder, helping bio-degradation and further improving carbon footprints.



HC-300™ is our full strength bioremediation formula for use on brownfield regeneration or disaster recovery projects. With an active content of almost exclusively non-spore forming bacteria, HC-300™ is used as a heavy shock treatment and can bring even the most heavily contaminated sites to within permissible levels within 60-90 days.

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