



Decontamination and recycling of hydrocarbon and heavy metals impacted soils



Client:	Willmott Dixon Construction
Site:	South Glade Food Park (Phase 2), Nottingham
Value of Project:	£7 million
Contract Value:	£300,000
Duration:	8 Weeks
Technology Used:	<p>Regener8 – Reduction treatment of heavy metals.</p> <p>Bio-accelerator – Rapid bioremediation of hydrocarbons.</p> <p>Cementex – Guaranteed stabilization of heavy metals and phytotoxic contaminants.</p>



The site was a redevelopment of the former Southglade Waste Tip accessed directly off Gala Way. Before the Food Park development commenced, the site was utilised as a Park & Ride scheme by Nottingham City Council.

After the site strip, Dunton commenced the improvement of the ground, initially starting with the excavation and processing of 4000m³ of material to enable reuse of over 95% of the material onsite as opposed to off-site disposal as hazardous material. This was then followed by the stabilization and improvement of approximately 2000m³ of material for reuse onsite as a stone replacement below the formation level. Dunton completed the works by installing a 300mm thick piling mat for driven piles.

“Dunton were very professional and helpful in the approach to the specific site constraints and extended this approach in liaison with our design and construction teams.”

**Nick Gibb, Preconstruction Director,
Willmott Dixon**

Challenges

- Hazardous soils present onsite

Due to the previous history of the site, particularly its use as a Waste Tip, there was a **significant amount of hazardous soil onsite** which was to be taken offsite to a landfill. This would have incurred huge costs, these including transport, landfill gate fee as well as the highest rate of landfill tax.

- Poor quality soil not suitable for construction

The structural properties of the existing soils were **not suitable for construction**. This meant that the soils had to be removed from site and replaced with stone which would form the formation layers. This approach would have also attracted huge costs which include transport for the removal of existing soils, landfill gate fee, landfill tax as well as transport and material costs for the importing of the stone replacement.

Our Solution

Regener8 and Bio Accelerator

Dunton's unique Regener8 and Bio-Accelerator were used to treat the hazardous soils to rapidly degrade the contamination to a level suitable for reuse onsite. This was a direct alternative to landfilling and proved to be more cost effective.

Cementex

Dunton's unique Cementex product was used to improve the structural stability of some of the treated soils. This enabled the soil to be used as a direct replacement for stone below the formation levels onsite, thus saving the client on both export of treated soil and import of stone. This was a direct alternative to landfilling and proved to be more cost effective.



Results

