



**Environmental
Management
Services**

Site Investigation Case Study Phases I & II

Pre-Aquisition Survey

We were commissioned to undertake a pre-acquisition survey by a client in the process of purchasing a vacant industrial property.

Soil vapour surveying, hand augering and trial pitting were conducted. The investigation revealed significant soil contamination including hydrocarbons, arsenic, copper, lead and zinc; as well as significant hydrocarbon contamination in the groundwater.

Based on the findings of the survey the client withdrew their purchase offer due to the high environmental and human health risks posed by the contamination.



We were commissioned to undertake a pre-acquisition survey by a client in the process of purchasing a vacant industrial property. They were in the final stages of the property purchase when they were made aware that contamination may exist on site.

We recommended an intrusive investigation in order to establish the severity and extent of any contamination on site as a result of historic use by previous tenants.

The current owner of the land had previously used the site as a generator hire facility, part of which involved the cleaning and maintenance of large generators. There was visible oil staining both internally and externally and the client was concerned that this contamination had migrated into the ground.

Phase I Desktop Survey & Site Walkover

During the Phase I survey the previous usage of the site was ascertained as far back as 1878. As much information as possible was gathered on the past processes used on site which found the likely contaminants were oils and heavy metals.

The layout of the site was established through studying the site plans and confirmed during the site walkover by the visual surface evidence of contamination. This allowed identification of Potential Areas of Concern (PAOCs) in order to target our sample points in the phase II intrusive survey.





Phase II Intrusive Site Investigation

Soil vapour surveying, hand augering and trial pitting were selected as the basis for the intrusive investigation, providing a cost effective means of achieving the investigation's objectives.

A total of seven trial pits were advanced to a maximum depth of 0.90m, the majority of these were surrounding the wash bay which showed significant oil staining and had no drainage. The lack of drainage suggested that oily run off had been entering the unmade ground for approximately 20 years.

Where restricted access meant we were unable to advance trial pits a hand auger was used to obtain soil samples. A total of three hand auger holes were advanced to a maximum depth of 0.70m.

In all locations soil samples were collected and groundwater samples were taken where present.

Significant contamination was identified and reference thresholds used for soil contaminants were selected based on the assumption that the future use of the site would be commercial / industrial.

Significant exceedances of the generic assessment criteria (GACs) were observed with hydrocarbon contamination found to be as high as 180,000 ppm. We also discovered elevated levels of Arsenic, Copper, Lead and Zinc.

The groundwater sample results and soil vapour surveys both found significant levels of hydrocarbon contamination believed to be mineral oil and diesel.

Following the issuing of the report the client withdrew their purchase offer based on the high environmental and human health risks posed by the contamination.

