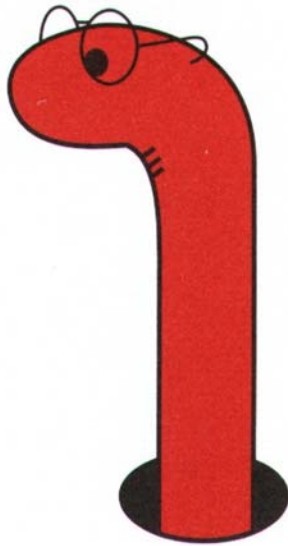


Electronic Report



WORMS EYE

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Our Ref: Baildon Road/OL12 7NB/2022
Date: 20 September 2022

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LAND OFF BAILDON ROAD, ROCHDALE, OL12 7NB
PROPOSED INVESTIGATION

INTRODUCTION

A residential development is proposed. Following a PRA (20/9/22) the objective is to design a suitable investigation to consider contamination and geotechnical issues.

SITE DESCRIPTION

The site is a rectangular plot, 17 x 15m, located to the southeast of Baildon Road in Rochdale, and at OS Grid Reference 387737, 414073. The site comprises a domestic garage colony having two garages with suspected asbestos sheet roofs at the southwest, and the remainder being hardcore or overgrown grass surfaced. There is a sub-station and garage to the northeast, and houses to the southeast, southwest and northwest. The area slopes down to the southeast.

PROPOSED DEVELOPMENT

It is proposed to build a block of three town houses on the northwest of the site, having gardens to the rear (southeast) and landscaping to the front (northwest).

INDUSTRY PROFILE

The site is a domestic garage colony with adjacent sub-station.

Industry	Possible Contaminants
Domestic Garage Colony	Metals: copper, zinc, chromium, nickel, lead, cadmium, arsenic, Inorganic compounds: cyanide, sulphates Phenols Mineral oils, fuel oils (TPHs) Asbestos General hydrocarbons (PAHs)
Sub-station	PCBs

CONCEPTUAL MODEL

Source	Receptors	Pathway	Potential/Likely Pollutant Linkage
Asbestos	End-users	Inhalation	Yes
	Off-site	Migration off-site	Yes
Inorganic contaminants	Householders	Direct contact, ingestion, from home grown vegetables, ingestion and inhalation of dust	Yes
	Groundwater	Leaching towards	No
	River/stream	Leaching towards	No
Sulphate	Building fabric	Concrete directly in contact with soil	Possible
Hydrocarbons	Householders	Direct contact, ingestion, from home grown vegetables, ingestion and inhalation of dust	Yes
	Service pipes	Seeping into drinking water pipes	Yes
	Groundwater	Leaching towards	No
	River/stream	Leaching towards	No
Hydrocarbon vapours	Householders	Inhalation of vapours indoors and outdoors	No
Landfill gas	End-users (inside)	Seeping into buildings, explosion, asphyxiation	No
Radon	End-users (inside)	Seeping into buildings	No

PROPOSED INVESTIGATION

Contamination

The history of the site suggests contaminants are unlikely to be present at high levels, but low levels which exceed stringent residential thresholds, are expected.

An intrusive investigation is required, consisting of boreholes/trial holes and tests to confirm the presence/absence and extent of contamination on the site. The sub-station is a point source for PCBs and the investigation will need to target this, proposed gardens (most sensitive part of the development), proposed houses and provide all round coverage.

Proposed Action

- *Drill 4 boreholes to about 6 metres deep and 1 TH to about 1m deep.*
- *Test 5 shallow samples (about 0.25m deep) for: heavy metals, cyanide, sulphate, PAHs, TPHs, phenols and asbestos.*
- *Test 2 shallow samples for PCBs.*
- *Test 2 deeper samples for a suite of contaminants suitable for selecting water pipes.*

Controlled Waters

No risk to controlled water is expected and no further action is considered necessary at this stage. This may need to be reviewed following the soil tests.

Landfill Gas/Ground Gas

The findings show no credible, on or off-site, landfill or ground gas sources and therefore no gas risk to the development. Subject to approval with the Local Authority, gas testing is not needed and no special precautions are required.

Radon

Radon protection measures are not required.

Foundations

A series of boreholes are required in the area of the proposed building to allow the most suitable foundations to be designed. Plasticity tests are required to confirm the shrinkage potential of the clay.

Proposed Action

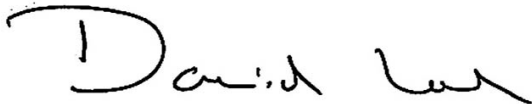
- *Carry out plasticity tests on 2 samples of clay.*

General

The PRA, and these proposals, should be issued to the Local Authority for their comments before proceeding with the investigation.

Yours faithfully

on behalf of Worms Eye Ltd

A handwritten signature in black ink, appearing to read 'David Lord'.

David Lord
BSc (Hons)
FGS, MEnvSc, AIEMA