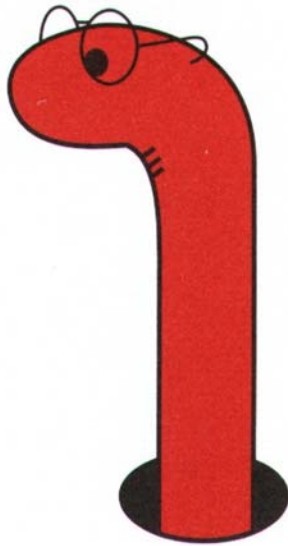


Electronic Report



WORMS EYE

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Our Ref: Paradise Street / BL0 9BS / 2022
Date: 2nd March 2022

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16 – 18 PARADISE STREET, RAMSBOTTOM, BL0 9BS
PROPOSED INVESTIGATION

INTRODUCTION

A residential development is proposed. Following a PRA (28/2/22) the objective is to design a suitable investigation to consider contamination, landfill gas and geotechnical issues.

SITE DESCRIPTION

The site is a rectangular plot, 11 by 16m, located to the southeast of Paradise Street in Ramsbottom and at OS Grid Reference 379150, 417020. The site comprises three commercial units, mostly single storey but part two storey along the southeast side, at the northeast end of a block of terraced properties. The units are used to store building materials (mainly timber, brick, roof tiles). There are no obvious signs of contamination.

PROPOSED DEVELOPMENT

It is proposed to demolish the existing building, and build a block of three terraced properties. The northeast property will have a refuse/cycle store and utility/storage room at ground level. The middle and southwest properties will have outdoor space to their rear (Southeast).

INDUSTRY PROFILE

Relevant industry are an unknown works, smithy, engineers and garage workshop.

Industry	Possible Contaminants
Engineers, Smithy, Garage Workshop	Metals: copper, zinc, chromium, nickel, lead, cadmium, arsenic, Inorganic compounds: cyanide, sulphates Phenols VOCs Mineral oils, fuel oils (TPHs) Acids Asbestos PCBs General hydrocarbons (PAHs)

CONCEPTUAL MODEL

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

PROPOSED INVESTIGATION

As the site is fully developed, the investigation is most suited to being undertaken post demolition.

Contamination

Taking into account the past use of the site it is thought likely that contamination will be present on the site. High levels are not expected but low levels, exceeding residential thresholds, may be present and an intrusive investigation is required tests to confirm the presence/absence and extent of contamination on the site.

Proposed Action

- *Drill 4 boreholes to about 6 metres deep.*
- *Test 4 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.*
- *Screen the boreholes for VOC using hand-held PID monitor.*
- *Test the 2 worst case samples from the PID screen, >5ppm, for a more detailed analysis. Maximum 1 per BH.*

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

There are nearby areas of filled ground, possible made ground below the site are a potential ground gas risk, a very low risk being anticipated. At this stage it is considered that gas monitoring is not required.

However, it is recommended that the underlying made ground is assessed for its organic content, and thickness, and the potential risks reassessed before a decision is made on the need for gas protective measures.

Radon

Radon protection measures are not required.

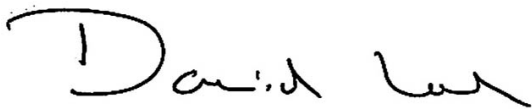
Foundations

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.

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', with a stylized flourish at the end.

David Lord
BSc (Hons)
FGS, MEnvSc, AIEMA