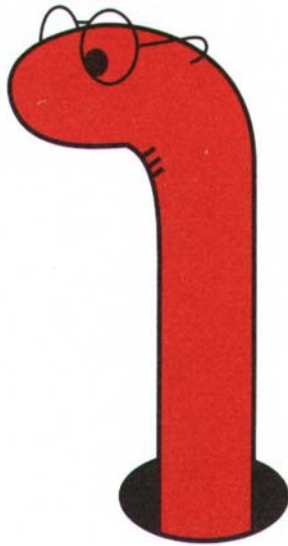


Electronic Report



WORMS EYE

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Our Ref: Heywood Old Road/M24 4QG/2017
Date: 26th April 2022

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PROPOSED APARTMENTS

342 HEYWOOD OLD ROAD, MIDDLETON, MANCHESTER, M24 4QG

PROPOSED INVESTIGATION

INTRODUCTION

A residential development is proposed. Following a Preliminary Risk Assessment (25/4/22) the objective is to design an investigation to consider contamination, landfill gas and geotechnical issues.

SITE DESCRIPTION

The site is irregular shaped, about 47 by 43m, located to the east of Heywood Old Road in Middleton and at OS Grid Reference 384445, 406609. The site is a fire damaged pub (brick and slate built), with adjacent landscaping, and carparks to the east, southeast and south. A series of cars were parked to the east of the pub.

PROPOSED DEVELOPMENT

It is proposed to build a block of ten apartments on the east of the site, with a carpark at the west. The northeast is to be a communal garden, with landscaping around the building perimeter.

INDUSTRY PROFILE

The site has had no industrial use, but made ground/demolition rubble may be present.

Source of Contaminants	Possible Contaminants
Made Ground / Demolition Rubble	Metals: e.g. copper, zinc, chromium, nickel, lead, cadmium, arsenic, Inorganic compounds: cyanide, sulphates Phenols Mineral oils, fuel oils (TPHs) Asbestos General hydrocarbons (PAHs)

CONCEPTUAL MODEL

Source	Receptors	Pathway	Potential/Likely Pollutant Linkage
Asbestos	Off-site	Migration off-site	Yes
	End-users	Inhalation	Yes
Inorganic contaminants	Householders	Direct contact, ingestion, from home grown vegetables, ingestion and inhalation of dust	Possibly
	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	Yes
	Groundwater	Migrating towards	No
	River/stream	Migrating/leaching towards	No
Hydrocarbon vapours	Construction workers	Short-term inhalation	No
	Householders	Inhalation of vapours indoors and outdoors	No
Landfill gas	End-users - in buildings	Seeping into buildings, explosion, asphyxiation	Yes
Radon	End-users - in buildings	Seeping into buildings	No

PROPOSED INVESTIGATION

Contamination

Taking into account the past use of the site it is unlikely that contamination will be present at high levels. However, low levels may be present, exceeding stringent residential thresholds in places.

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 filled pond is a specific point source for contamination and the investigation will need to target this, proposed landscape (most sensitive part of the development), proposed building and provide all round coverage.

Proposed Action

- *Drill 5 boreholes to about 6m deep.*
- *Excavate 4 trial holes up to 0.6m deep.*
- *Test 8 shallow samples (about 0.25m deep) for: heavy metals, cyanide, sulphate, PAHs, TPHs, phenols and asbestos.*
- *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

There is a nearby landfill site and a filled pond on-site. These are potential landfill/ground gas sources, posing a potential risk to the development. A gas testing programme is required.

Proposed Action

- *Install 3 gas monitoring wells.*
- *Test for methane, carbon dioxide and gas outflow on 6 occasions over 3 months.*

Foundations

A series of boreholes are required in the area of the proposed building to allow the most suitable foundations to be designed. This should include investigations close to the filled pond and the area of the former buildings

Proposed Action

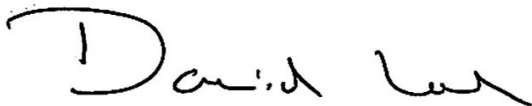
- *Supplement boreholes with 1 dynamic probe.*

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



David Lord
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