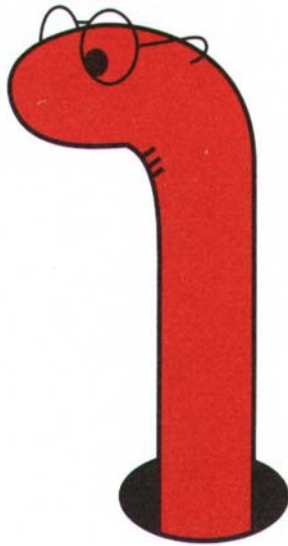


Electronic Report



WORMS EYE

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Our Ref: Castle Hill Crescent / OL11 4HZ / 2025
Date: 23 April 2025

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1 CASTLE HILL CRESCENT, ROCHDALE, OL11 4HZ

PROPOSED INVESTIGATION

INTRODUCTION

A residential development is proposed. Following a PRA (23/4/25) the objective is to design a suitable investigation to consider contamination, landfill gas and geotechnical issues.

SITE DESCRIPTION

The site is an irregular shape, about 52 by 25m, located to the southwest of Castle Hill Crescent in Rochdale and at OS Grid Reference 389160, 412760. The site slopes down to the southeast and has a split level house at the northwest/middle with a partially built extension at its southwest. At the southeast/southwest of the house, is a flagged patio and flat roof, over a lower ground floor room. The southeast of the site is a grass lawn and the northwest is a concrete surfaced area with a storage container and kennel at the northwest.

The site is on the southeast side, and towards the base, of a small hill. The land falls away from the southwest, and site to the southeast then northeast.

PROPOSED DEVELOPMENT

It is proposed to build a three storey apartment block at the centre of the site, at the lower level. There will be car parks at the southeast (at the lower level), and northwest (about 2.5m high than ground floor level), with communal landscaping at the southwest and surrounding landscaped areas.

INDUSTRY PROFILE

The site has had no industrial use but made ground may be present, especially at the southeast.

Source of Contaminants	Possible Contaminants
Made Ground	Metals: 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	End-users	Inhalation	Possible
	Off-site	Migration off-site	Possible
Inorganic contaminants	Householders	Direct contact, ingestion, 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, 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	No
Landfill gas	End-users (inside)	Seeping into buildings, explosion, asphyxiation	Yes
Radon	End-users (inside)	Seeping into buildings	No

PROPOSED INVESTIGATION

Bearing in mind the layout of the site we recommend undertaking future investigations after demolition of the existing house, and after on site concrete has been removed.

Contamination

Taking into account the site history it is expected that contaminants will be present at raised levels. High levels are not expected, or expected to exceed appropriate thresholds over a wide area, but levels may exceed 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 southeast (former sand pit) is a specific point sources for contamination and the investigation will need to target this, proposed garden/landscaping, proposed building and provide all round coverage.

Proposed Action

- Drill 6 boreholes to about 6m deep and excavate 3 trial holes up to 0.6 – 1.0m deep.
- Test 9 shallow samples (about 0.25m deep) and 3 deeper samples for: heavy metals, cyanide, sulphate, PAHs, TPHs, phenols and asbestos.
- Test 3 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 filled areas from which a low gas risk is considered possible. A gas testing programme is required.

Proposed Action

- *Install 4 gas monitoring wells.*
- *Test for methane, carbon dioxide and gas outflow for an initial 6 occasions over 3 months.*
- *Review findings and length of testing 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.

Proposed Action

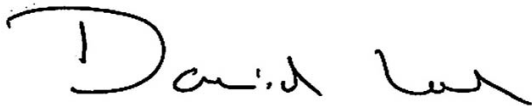
- *Supplement boreholes with 2 dynamic probes.*

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, MIEEnvSc, AIEMA