

SPECIFICATION
FOR A CONTAMINATION SITE INVESTIGATION & RISK ASSESSMENT
FOR
LAND ADJOINING 23 JAGGER LANE, EMLEY MOOR,
HUDDERSFIELD, HD8 9SY

Purpose

To comply with conditions 6 and 7 of planning consent 2012/62/90390/E for the demolition of existing buildings and erection of 2 no. detached dwellings.

Assumptions

- Site area is approximately 0.29 hectares;
- Pre-existing buildings relating to former depot and builders yard remain;
- No surface water features (ponds, streams) are believed to exist within the site;
- Unrestricted access available for excavation plant and equipment;
- Available water supply for the washing down of drilling equipment between exploration hole locations.

Previous Reports

- 'Phase 1 Contamination Audit' for the site on behalf of the client prepared by A.L.H Environmental Services and dated February 2012.

Historical Uses

On Site	Surrounding Area
Brick works with 2 no. ponds (pre 1850/90) Depot Builders yard	Open land / agriculture Residential Coal mining Commercial uses (Emley Moor Business Park)

Anticipated Geology

Made Ground (fill material) including ash and other unknown fill to approximately 1.5 m, above clay.
Pennine Lower Coal Measures

Strategy

Internal inspection of the existing asbestos cement clad building within the site which was not accessed during the Phase 1, followed by the excavation of trial pits set out at approximate equal spacing across the site and adjusted in places to target features of interest identified from the Phase 1. The locations of the trial pits presently proposed are identified on the attached plan and include the following:

- TP1 & TP2 – Former ponds;
- TP3 – Waste oil tank;
- TP4 – Possible fuel tank;
- TP5 – Burnt remains of caravan / trailer.

The collection of 2 samples from small mounds of unspecified material are also proposed.

Fieldwork

- Location of underground utilities to be identified on site by client;
- Mechanical excavation of up to 6 shallow trial pits by JCB 3CX (or similar) to depths of up to 3.0m at locations shown on the attached plan on which the proposed buildings are delineated (the existing buildings are also shown by a dashed line);
- Collection of up to 20 or more soil samples and preliminary screening for volatile vapours using a calibrated MiniRAE photo-ionisation detector (PID);
- Chemical analysis of up to 12 soil samples by a UKAS and MCERTS accredited laboratory;
- Allowance for possible leachability testing on selected samples (if contaminants of concern are identified);
- Site supervision and recording by an experienced Chartered Environmental Surveyor.

The number of samples selected for chemical analysis (in this case 12 soil samples) is based on what is believed will be required to provide a reasonable assessment. However, if unforeseen ground conditions are encountered which indicate that analysis on additional samples is warranted, agreement will be sought from the client before proceeding with any additional testing.

Chemical Analysis Suite

Soils*
pH (acidity / alkalinity)
Metals (arsenic, boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc)
Sulphate (water soluble and total)
Sulphide
Total cyanide
Free cyanide
Thiocyanate
Total phenol
Total and speciated polyaromatic hydrocarbons (PAHs)
Soil organic matter
Total petroleum hydrocarbons CWG / Aliphatic Aromatic split (6 samples)
Volatile organic compounds (6 samples)
Asbestos containing materials and fibres (6 samples)

Note: The above is an indication of the scope of testing, but may be varied according to conditions encountered on site

*The soil parameters selected for analysis may vary between samples

Contamination Assessment

A generic quantitative risk assessment (GQRA) in respect of human health will be undertaken in which the chemical analysis results for soils will be compared to the generic assessment criteria (GAC) values available under the following

- The revised soil guideline values (SGVs) from the Contaminated Land Exposure Assessment (CLEA) methodology originally issued by the Department for Environment, Food and Rural Affairs (DEFRA) in March 2002.
- Generic assessment criteria (GAC) values from research undertaken by Land Quality Management Limited in collaboration with the Chartered Institute of Environmental Health, 2nd edition dated July 2009.
- Soil Generic Assessment Criteria for Human Health Risk Assessment published by Contaminated Land: Applications in Real Environments (CL:AIRE), dated January 2010.



In respect of any leachate testing on soils, the chemical analysis results will be compared to the GAC values available under the Water Supply (Water Quality) Regulations 1989 and 2000 (UK Drinking Water Standards), Environmental Quality Standards (EQS) for inland surface waters, the Drinking Water Directive, the Surface Water Directive and the Surface Waters (Abstraction for Drinking Water) (Classification) Regulations 1996. Reference will also be made to the Environmental Quality Standards presented as Appendix A in the Environment Agency's guidance 'H1 Annex D – basic surface water discharges' v2.2 December 2011.

Reporting

The results of the investigation will be incorporated into a comprehensive report which will be prepared in accordance with Contaminated Land Report (CLR) 11 '*Model Procedures for the Management of Land Contamination*' published by the Environment Agency dated September 2004.

The Environment Agency 'GPLC' (Guiding Principles for Land Contamination) series of guidance notes dated March 2010 will also be consulted.

The report will include a Conceptual Site Model to identify potential pollution linkages incorporating a risk assessment in accordance with Ciria Report C552. The report will also provide recommendations for any remedial works (with Remediation Strategy) or further investigations as appropriate.

A level of environmental risk will also be awarded based on the proposed use of the site in accordance with the following risk hierarchy:-

- HIGH :** Significant risk of contamination without remediation. Precludes all but the least sensitive of development, e.g. car parking. Significant potential for environmental pollution. Remediation measures expensive. Site investigation required.
- MEDIUM :** Risk of contamination but allowing non-sensitive development, e.g. commercial, for reasonable costs of remediation, although more sensitive development, e.g. housing, may require substantial remedial measures. Potential for environmental pollution. Site investigation may be required.
- LOW :** Little risk of contamination where all development options are likely to be possible with little or no remediation measures. Little potential for environmental pollution. Confirmatory site investigation may be required.

Scope provided by

Nick Pickard BSc CEnv MRICS
Chartered Environmental Surveyor
AC Environment Solutions Limited

Tel: 01709 711850
Mob: 07847 254463
Email: info@ACEnvironment.co.uk



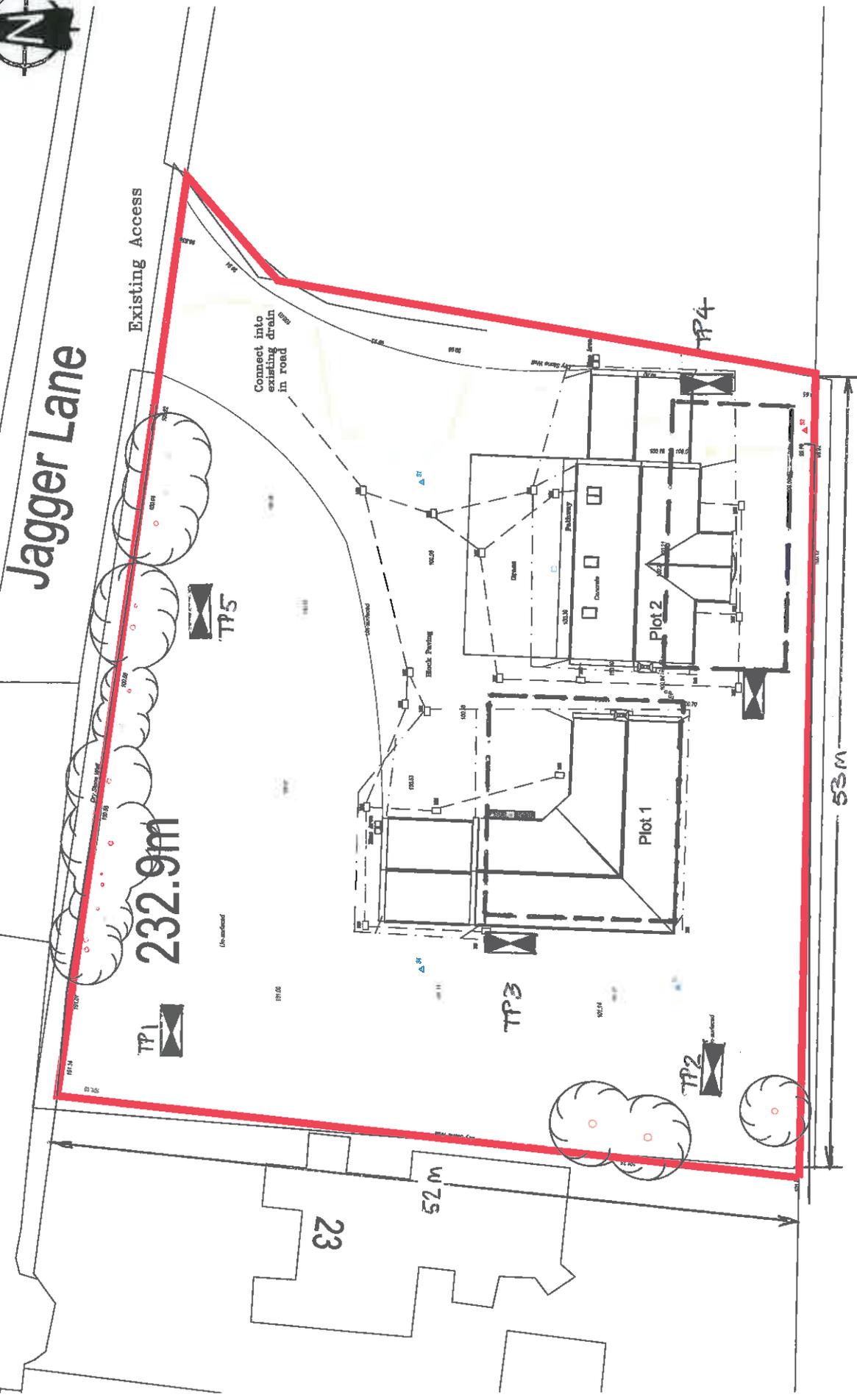
Jagger Lane

Existing Access

Connect into existing drain in road

232.9m

53m



Site plan

Scale: NTS