

CLC5: Contaminated land planning guidance

Testing for imported or reused soils and fills

1. Introduction

This guidance has been written to help developers and consultants discharge the 'testing for imported or reused soils and fills' condition that the Council may apply. It is important that the requirements of the condition and this guidance are adhered to during development. Failure to discharge a planning condition may result in enforcement action, additional expenditure and delay the sale of a property.

“CLC5: Soil contamination – Testing for imported or reused soils and fills

No occupation or use of the development shall take place until a description and the results of chemical analysis for soils and/or fills used at the development site, demonstrating their suitability for use, is submitted to and approved in writing by the Local Planning Authority. Work shall be undertaken in line with the ‘Soil contamination testing for imported or reused soils and fills’ guidance.”

This is guidance only and is intended to provide an indication of what will normally enable the Council to make decisions under planning legislation. Other relevant industry guidance and standards should also be consulted where appropriate.

We would recommend that an appropriate environmental professional undertakes the work described below.

It is the responsibility of the developer to ensure that they comply with the requirements of Contaminated Land, Health & Safety, Waste Management, Environmental Damage and the Control of Asbestos Regulations. The responsibility to properly address contaminated land issues, including safe development and secure occupancy, and irrespective of any involvement by this Authority, lies with the owner/developer of the site. Whilst all reasonable care has been taken to ensure the accuracy of the information and data provided within this guidance, the Council accepts no liability for any loss or damage howsoever caused arising from any reliance placed by any other person upon the information and data contained herein.

2. Why a description and soil analysis is needed

Soil (for example within planting areas and beneath turf) and fills (for example used as sub-base beneath areas of hardstanding) may be imported or reused as part of some developments. In some instances, soils and fills may have become contaminated by substances with the potential to result in harm to people, plants or the environment.

Imported soils are often made-up from recycled materials from a variety of sources or stripped directly from fields; in some cases, the source of the materials will be unknown. Where a fraction of a made-up soil has come from an industrial or recycled source, it may be contaminated by one or more substance. Where soil has been stripped from a field, it may contain contaminants from operations such as the spreading of sewage sludge or from unrecorded historical uses. It is also possible for soil to become contaminated during its transport to or while stored on site. A provider will often provide sampling results with

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delivered soil; however, the sampling rates are typically very low and so the results may not always be representative of the soils delivered.

Most of the Royal Borough of Kensington and Chelsea (RBKC) is covered by Made Ground, which is typically a mixture of soil and demolition, household and industrial sourced waste products and so may be contaminated. Soils in gardens may also be contaminated as a result of the use of paints, lead flashing, asbestos containing materials, the spreading of pot ash and blitz bombing during the Second World War. Burning by residential and commercial properties over hundreds of years and emissions from transport have also contributed to contamination across urban areas. As a result, lead, polycyclic aromatic hydrocarbons (PAHs) and asbestos (see **Box 1**) are widely found, occasionally at levels that could harm a person regularly coming in to contact with the soil.

Box 1: Contaminants

Lead: A metal that is found naturally in rocks and associated soils. Activities such as mining and smelting, use of sewage sludge, aerial contamination from vehicle exhausts and its use in the construction industry and household products such as flashing and paint, have all resulted in the widespread presence of lead in the soil. It is relatively immobile in soils and often collects at or near to the surface. There are a range of health impacts resulting from lead exposure, with the best-known being lead poisoning and reductions in child IQ. It is also known to result in increases in blood pressure and to effect kidney function.

Polycyclic Aromatic Hydrocarbons (PAHs): PAHs are a large group of hydrocarbon compounds. They are mainly formed as a result of burning and the incomplete combustion of organic materials, for example motor vehicle engines, coal and wood fires, refuse incineration and cigarette smoke. Natural sources include volcanoes and forest fires. PAHs are found in most urban soils in the UK, largely as a result of the historic burning of coal and through the processing and use of petroleum hydrocarbons. Several PAHs are known or suspected human carcinogens.

Asbestos: Asbestos are silicate minerals made up of long and thin fibrous crystals that can be released into the atmosphere when the material is damaged or worn. It was used extensively in the UK in a range of products, including for fire protection and insulation, up until 1990 when it was banned. It is still present in many buildings and is also found in the soil as a result of the wide use of demolition materials and past building practices. Asbestos is a well-known health hazard and inhaling asbestos fibres can lead to various lung conditions, including asbestosis and cancer.

Fills (for example MOT materials, scalping or general aggregate) are often made from recycled demolition or road materials. These materials may have been sourced from buildings that previously contained asbestos, industrial sites associated with contamination and road materials may contain clinker and oil-based compounds. As a result, fills may contain asbestos and other chemicals.

3. Information needed to satisfy the planning condition

The Planning Authority requires the following work and information to discharge the 'Testing for imported or reused soils and fills' condition:

- Description and quantity of soils and fills used
- Chemical analyses demonstrating suitability for use
- Removal of contaminated soils and fills

This information may be provided during or after the completion of the development. It must, however, be provided before the occupation and/or use of the completed development.

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The remainder of this guidance sets out what is needed for each of these items.

It is important to note that this guidance takes a risk-based approach and so does not require the sampling and analyses of fills fitting the following description:

“primary virgin quarried material or coarse secondary aggregate with no fine portion or evidence of contamination”

4. Description and quantity of soils and fills used

The following information must be provided by the onsite manager:

- Details of the company that has provided a material and where it was sourced from.
- A description of the material (for example topsoil, sub soil, demolition material, MOT, scalping, sand, etc.) in line with industry best practice, for example, for topsoil BS3882.
- Confirmation of whether the material is a virgin material or has been processed, made up and/or recycled.
- The quantity of each material imported or reused.
- A description of any inclusions or evidence of contamination. Inclusions would include fragments of demolition or industrial sources materials, such as brick, concrete, clinker or asbestos. Evidence of contamination would include staining by oil/fuel, uncharacteristic colouring, debris of asbestos containing materials and clinker and pungent or pleasant odours.
- The results of any information, including chemical analyses, which were provided by the soil supplier.

5. Chemical analyses demonstrating suitability for use

The following requirements for chemical analyses must be met:

5.1 For all soils

- Imported and site sourced materials shall be sampled at a rate of 1 sample per 50m³ for each material and source.
- Where more than 10m³ of material is imported, a minimum of 3 samples must be taken.
- Analyses of soil samples must be to UKAS and MCERTs standards (where available nationally) and should include pH, soil organic matter, a standard metals/inorganic suite, organic compounds (including polycyclic aromatic hydrocarbons, aliphatic and aromatic petroleum hydrocarbon fractions, volatile and semi volatile organic compounds and an asbestos screen).
- The analyses method detection limit for each chemical of concern analysed should be sufficiently below the appropriate generic screening criteria.
- Other analyses may be required depending on the source of the material.

5.2 For fills

- Where aggregate is primary virgin quarried material or is a coarse secondary aggregate with no fine portion or evidence of contamination (including for example oil

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or asbestos contamination) and this can be demonstrated, normally no sampling or analyses of the aggregate is required.

- For fills and aggregate, sampling should typically be undertaken at the same rate as for soils. It may be acceptable to reduce the rate of sampling and analyses for some materials, where this is agreed with the Planning Authority.
- For general fills and demolition sourced materials, as a minimum, analysis should include a standard metals/inorganic suite and an asbestos screen, with other analyses being undertaken based on factors such as the source of the material and observations.
- For coarse aggregate, the fines portion should be sampled.

5.3 Assessment

- All laboratory analyses certificates must be provided.
- The results of analyses shall be compared to appropriate screening criteria. A range of generic assessment criteria are available including, for example, DEFRA Soil Guideline Values and Category 4 Screening Levels and the LQM/CIEH Suitable 4 Use Levels.
- A written assessment by a suitably qualified individual or environmental company must be provided identifying whether each material is suitable for use.
- For site sourced material the use of normal background concentrations may be considered in line with the [CLC2 guidance](#).

6. Removal of contaminated soils and fills from site

Where a soil or fill, which has been imported onto or reused from the site, is found to be visually contaminated or exceed relevant assessment criteria, either an appropriate risk assessment must demonstrate that the material is suitable to remain in use on site or else the material must be removed and replaced. Evidence must be provided to demonstrate that the unsuitable material has been removed, for example waste management certificates and receipts and certificates of analyses for the new material.