

ENVIRONMENTAL PROTECTION ACT 1990, SECTION 78b
NOTICE OF DETERMINATION THAT LAND IS CONTAMINATED
LAND

In accordance with Part 2A of the Environmental Protection Act 1990, Slough Borough Council has determined that the land at:

BUNDS (Area A), UPTON COURT PARK, SLOUGH (as shown on the attached plan as land shaded green)

National grid reference approximate site centre 499030, 178647

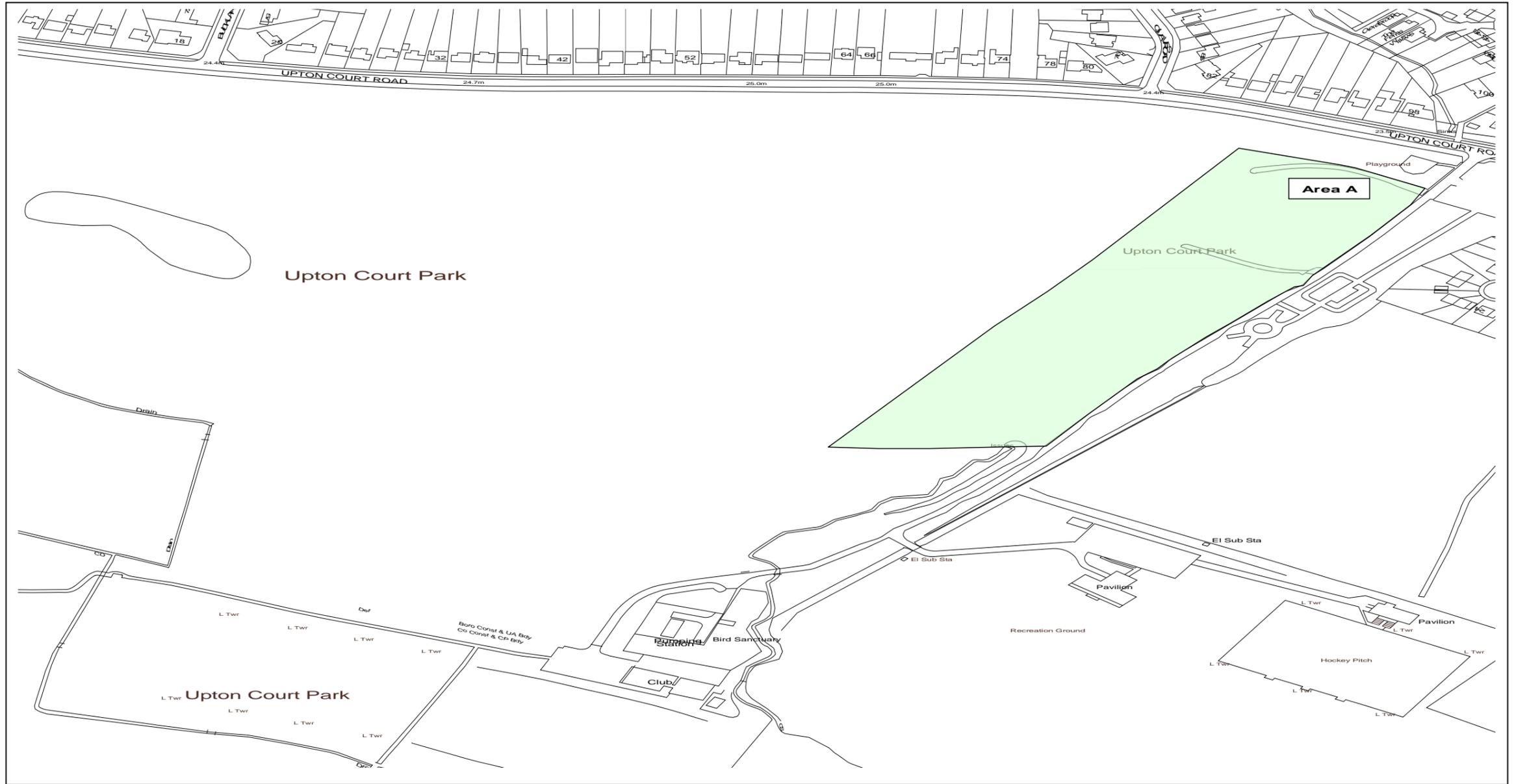
Is **CONTAMINATED LAND**, as defined by section 78A(2) of the Environmental Protection Act 1990, because:

Slough Borough Council has identified the presence of a contamination source, a pathway, and a receptor with respect to the current use of the land. The Council is satisfied that as a result of this pollution linkage a significant possibility of significant harm exists, with no suitable and sufficient risk management arrangements in place to prevent such harm.

A summary of the basis on which this determination has been made is set out in the Schedule to this notification.

Date of notice 23 July 2009.

Denise Alder
Strategic Director of Green and Built Environment
Slough Borough Council



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SCHEDULE

SIGNIFICANT POLLUTANT LINKAGES

| SPL number | Contaminant | Risk-driving exposure pathway | Key Receptor |
|------------|----------------|---|---|
| 1 | Benzo(a)pyrene | Ingestion of soil and soil-derived dust | Site user (female child aged 0-6 years) |
| 2 | Benzo(a)pyrene | Dermal contact | Site user (female child aged 0-6 years) |
| 3 | Lead | Ingestion of soil and soil-derived dust | Site user (female child aged 0-6 years) |

In combination these source-pathway-receptor linkages are considered to represent a Significant Pollution Linkage, indicative of a significant possibility of significant harm to human health.

SUMMARY OF EVIDENCE UPON WHICH DETERMINATION HAS BEEN BASED

CL Associates letter report dated 2 November 2004.

Southampton Oceanography Centre, Geosciences Advisory Unit for Gamma Spectrometry and XRF analysis, report dated 3 September 2004.

Atkins Ltd, *Part 2A Environmental Protection Act 1990: Detailed Inspection of land at Upton Court Park Slough*, for Slough Borough Council, July 2009.

DESCRIPTION OF POTENTIALLY CONTAMINATIVE ACTIVITY AT THE SITE

The site being determined: Area A 'Bunds', Upton Court Park, Slough is located at the eastern edge of Upton Court Park, at approximate grid reference of site centre: 499030, 178647.

The bunds were placed along the eastern boundary of the park, to deter unauthorised vehicle access on to the park itself. Anecdotal evidence of localised historic waste deposition within the area of the bunds exists. Works undertaken to increase the height of the bunds exposed rubble and very poor soils, which were subsequently reused together with imported material to re-build the bunds. Slough Borough Council identified the site as a high priority for inspection following concerns raised by members of the public when they found deposits of clinker scattered on the surface of the bunds.

SUMMARY OF THE RELEVANT ASSESSMENT OF THE EVIDENCE

An initial visual inspection was undertaken by Slough Borough Council's Contaminated Land Officer, six samples of material were also retrieved by the officer during this inspection and submitted for laboratory analysis. The results of this analysis were used as the basis for an initial Detailed Quantitative Risk Assessment undertaken by CL Associates and reported in their letter report of 2 November 2004. The results of this risk assessment identified concentrations of organic contaminants (specifically benzo(a)pyrene) within the bund materials at concentrations which may have the potential to affect site users.

Atkins Ltd. undertook a comprehensive investigation, on behalf of Slough Borough Council, of surface soils within the bunds and two other areas within Upton Court Park, where it was thought related earthworks had been undertaken. The purpose of this investigation was to characterise the type and extent of contamination present, and to advise whether the area of the bunds should be determined to be 'contaminated land'.

Further sampling of the surface soils within the main bunds and surrounding areas, potentially affected during the earthworks. An unbiased sampling strategy was applied to obtain good coverage of these areas. Soil samples were submitted for analysis at an MCERTS accredited laboratory. A ground borne gas survey was also undertaken as part of the investigation.

The assessment of data was undertaken following a tiered approach, in accordance with current Government guidance. An assessment of the data against generic assessment criteria developed by Atkins Ltd for a Park land use identified a number of Potential Pollutant Linkages (PPLs) which required further assessment in order to establish whether any of those linkages comprise Significant Pollutant Linkages (SPLs), i.e. whether they meet the statutory definition of Significant Possibility of Significant Harm, and therefore whether the land could be determined as Contaminated Land under Part 2A of the Environmental Protection Act 1990. The principal contaminants of concern were lead (maximum reported concentration of 2,000 mg/kg) and benzo(a)pyrene (maximum reported concentration of 89 mg/kg). No elevated concentrations of ground borne gases or vapours were reported.

A further Detailed Quantitative Risk Assessment was then undertaken which entailed derivation of site-specific assessment criteria (SSACs) for the identified principal contaminants of concern i.e. lead and benzo(a)pyrene. These SSACs were then used as the basis for a statistical assessment of the analytical data in order to confirm whether the distribution of lead and benzo(a)pyrene were representative of potentially significant contamination.

This DQRA showed that the reported concentrations of benzo(a)pyrene in the main bunds (Area A) appear, on the basis of the available data, to be representative of unacceptable levels of intake via ingestion of soil and soil-derived dust and via dermal contact. As such these constitute Significant Pollutant Linkages (SPLs) with respect to benzo(a)pyrene.

It was not possible to confirm with a high level of certainty whether the lead concentrations reported at the site represent a SPL associated with the ingestion of soil and soil-derived dust, however given that the risk-driving exposure pathways are the same for both lead and benzo(a)pyrene, it is considered reasonable that remedial actions to break the benzo(a)pyrene SPL would also address the tentative lead linkages.

Part 2A of the Environmental Protection Act 1990 gives Local Authorities responsibility for deciding whether or not land meets the statutory definition of Contaminated Land as given in that Act. Local Authorities can exercise their judgement in making this decision, provided this is based on sound scientific evidence and reasonable consideration of the site and local conditions.

On the basis of the evidence presented in the Atkins Ltd Report (2009), Slough Borough Council consider the concentrations of benzo(a)pyrene identified within the main bund materials (Area A) represent a Significant Possibility of Significant Harm.

REFERENCES

Part 2A, Environmental Protection Act 1990

CL Associates. November 2004. Detailed Site Specific Contamination Risk Assessment for Bund Upton Court Park, Slough. Ref. LR/24187/001/MFC.

Geosciences Advisory Unit. September 2004. Gamma Spectrometry and XRF Analysis of a Clinker Sample. Ref. GAU483.

DEFRA, Department for Food, Environment and Rural Affairs, 2006, Circular 01/2006, Environmental Protection Act 1990: Part 2A, Contaminated Land, DEFRA.

Environment Agency. 2004. Model Procedures for the Management of Contaminated Land. CLR 11.

DEFRA, 2008. Guidance on the Legal Definition of Contaminated Land.

DEFRA, 2005. Soil Guideline Values and the Determination of Land as Contaminated Land under Part IIA. Contaminated Land Advice Note CLAN 2/05. September 2006.

Atkins Ltd. July 2009. Part 2A Environmental Protection Act 1990: Detailed inspection of land at Upton Court Park, Slough.