

## 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:

**AREAs D, E, F & G, UPTON COURT PARK, SLOUGH** (as shown on the attached plan as land shaded green)

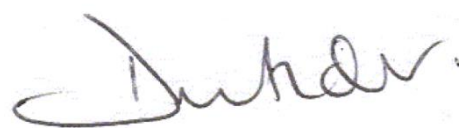
**National grid reference approximate site centre 498350, 178900**

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.**

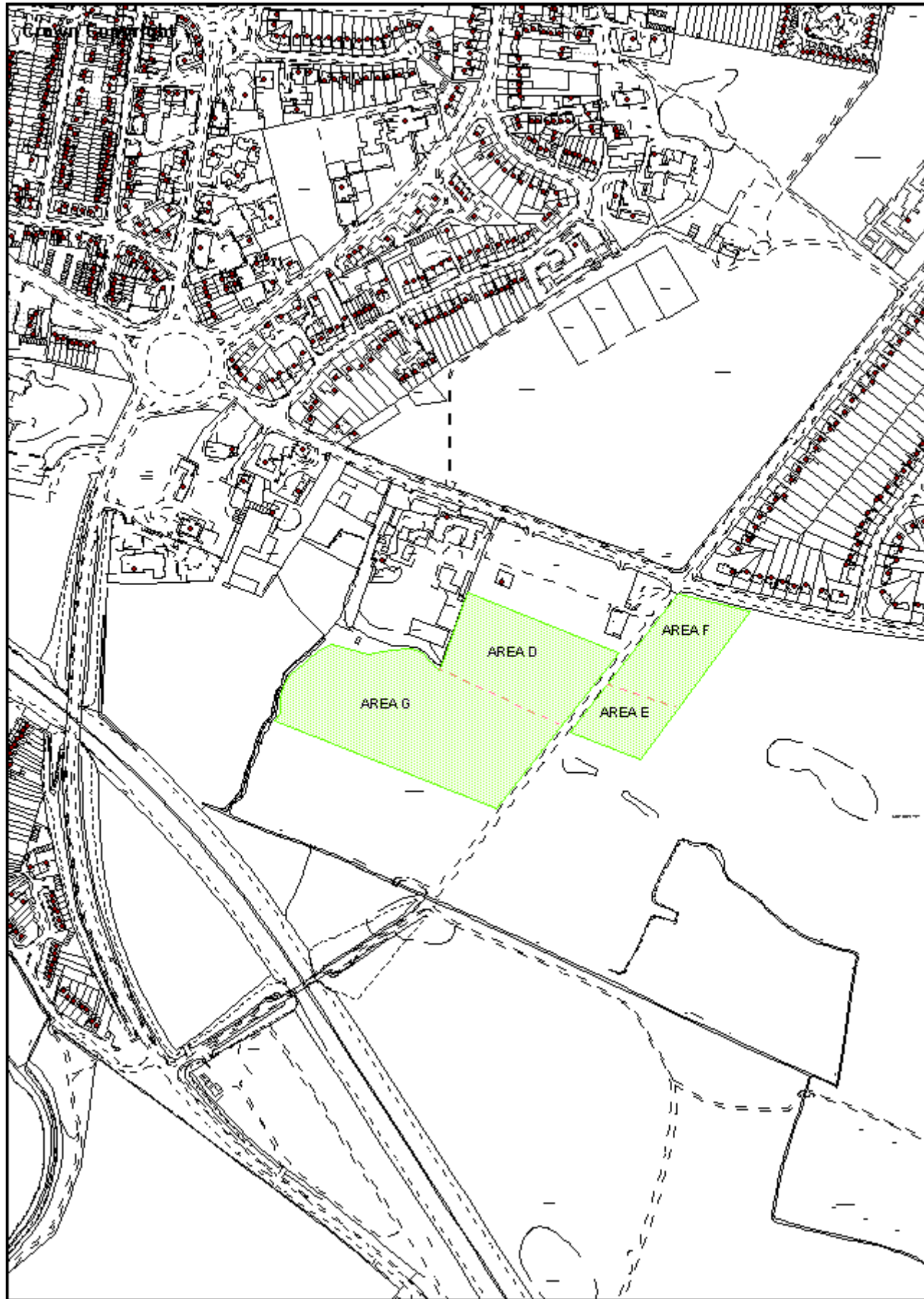
A summary of the basis on which this determination has been made is set out in the Schedule to this notification.

Date of notice 30 July 2010



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

Environmental Services, Slough Borough Council, St. Martins Place, 51 Bath Road, Slough, SL1 3UF



**Figure 1 Areas to which this Notice relates**

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## SCHEDULE

### SIGNIFICANT POLLUTANT LINKAGES

SPL number	Contaminant	Risk-driving exposure pathway	Key Receptor
1	Lead	Ingestion of soil and soil-derived dust	Site user (female child aged 0-6 years)

In combination this source-pathway-receptor linkage is 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

Atkins Ltd, *Part 2A Environmental Protection Act 1990: Detailed Inspection of land at Upton Court Park Slough*, for Slough Borough Council, May 2010.

Atkins Ltd, *Slough Borough Council, Proposed Play Area at Upton Court Park, Slough – Contamination Assessment*, December 2009.

Atkins Ltd, *Atkins Ltd, Part 2A Environmental Protection Act 1990: Preliminary Desk Study Report on Land at Upton Court Park, Slough*, for Slough Borough Council, July 2009.

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: Areas D, E, F & G, Upton Court Park, Slough is located on the western extent of Upton Court Park, at approximate grid reference of site centre: 498350, 178900.

Historical maps show that areas within Upton Court Park have historically been subject to brick earth and gravel extraction. Anecdotal evidence of localised waste deposition exists. Visual and intrusive investigations of areas within Upton Court Park have identified an extensive former gravel excavation in the north-west of the site, which has been in-filled with various waste materials. The observed age of the wastes, suggest that this in-filling occurred prior to the implementation of legislation to regulate such activities.

### SUMMARY OF THE RELEVANT ASSESSMENT OF THE EVIDENCE

Slough Borough Council previously instructed Atkins Ltd. to undertake a detailed investigation of 'Bund' structures in the east of Upton Court Park (Area A) under Part 2A of the Environmental Protection Act 1990. Soils overlying the 'Bunds' were found to contain levels of benzo(a)pyrene and lead which were considered to represent a significant risk to site users. Three Significant Pollutant Linkages (SPLs) were identified following completion of that inspection, and on that basis SBC subsequently determined that land as Contaminated Land. This inspection is referred to as Phase 1.

During the Phase 1 investigation soil samples were also taken from 'Area C' a generally flat area west of Area A. Some of these samples were found to contain elevated concentrations of lead and benzo(a)pyrene, as such further investigation of Area C was recommended.

A subsequent desk study of the remainder of Area C was undertaken by Atkins in 2009. This study identified the need for a second phase of detailed inspection under Part 2A, in order to conclude on the Part 2A status of the remainder of the site (Area C) in terms of potential risks to both human health and controlled water receptors. The majority of Area C is situated over a Priority aquifer associated with the underlying drift deposits.

Within Area C, a preliminary investigation of an area proposed for installation of children's play equipment, referred to as Area D, was undertaken in November 2009 by Atkins in advance of the main investigation. This investigation encountered an area of observed infill materials characterised by elevated concentrations of lead, arsenic and benzo(a)pyrene. The full extent of this infilled area was not identified during that investigation.

The main investigation undertaken by Atkins in February 2010 included further sampling of the soils within the remainder of Area C and to delineate the extent of the known contamination in Area D. An unbiased sampling strategy was applied to obtain good coverage of these areas. A ground borne gas survey was also undertaken as part of the investigation. Three deep boreholes were drilled to a maximum 15m depth and installed with monitoring wells to allow sampling of groundwater from the underlying aquifer. Water samples were also obtained from surface water drainage channels present at the south of the site. Soil and groundwater samples were submitted for analysis at an MCERTS accredited laboratory.

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 8,200 mg/kg) and benzo(a)pyrene (maximum reported concentration of 23 mg/kg).

No elevated concentrations of ground borne gases or vapours were reported. No significant pollutant linkages with respect to controlled waters were identified.

A further Detailed Quantitative Risk Assessment was then undertaken which utilised site-specific assessment criteria (SSACs) derived for the identified principal contaminants of concern, i.e. lead and benzo(a)pyrene, during the Phase I intrusive investigation undertaken by Atkins in 2009. 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 lead in the infilled area (Area D) appear, on the basis of the available data, to be representative of unacceptable levels of intake via ingestion of soil and soil-derived dust. As such these constitute a Significant Pollutant Linkage (SPL) with respect to lead.

The DQRA showed that the reported concentrations of benzo(a)pyrene in the infilled area (Area D) were unlikely to represent significant pollutant linkages, on the basis of the available data. 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 lead SPL would also address the elevated benzo(a)pyrene concentrations.

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.

Following these investigation Area D, has been further sub-divided by Slough Borough Council in to Areas D, E, F and G for remediation phases.

**On the basis of the evidence presented in the Atkins Ltd Report (2010), Slough Borough Council consider the concentrations of lead identified within the area of in-fill (Area D, E, F & G) represent a Significant Possibility of Significant Harm.**

## REFERENCES

Part 2A, Environmental Protection Act 1990

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, *Part 2A Environmental Protection Act 1990: Detailed Inspection of land at Upton Court Park Slough*, for Slough Borough Council, May 2010.

Atkins Ltd, *Slough Borough Council, Proposed Play Area at Upton Court Park, Slough – Contamination Assessment*, December 2009.

Atkins Ltd, *Atkins Ltd, Part 2A Environmental Protection Act 1990: Preliminary Desk Study Report on Land at Upton Court Park, Slough*, for Slough Borough Council, July 2009.

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