

Foreword to: CONTAMINATION TESTING AND ASSESSMENT

The following statements are designed to inform and guide the Client and other potential parties intending to rely upon this report, with the express intent of protecting them from misunderstanding as to the extent and thus the potential associated risks that may result from proceeding without further evaluations or guidance.

- 1) Unless otherwise stated in this report, the testing of soils and waters is based on a range of commonly occurring potential contaminants for the specific purpose of providing a general guidance evaluation for the proposed form of development. Thus, the range of potential contaminants is neither exhaustive nor specifically targeted to any previous known uses or influences upon the site.
- 2) The amount and scope of the testing should not be assumed to be exhaustive but has been selected, at this stage, to provide a reasonable, general view of the site ground conditions. In many cases this situation is quite sufficient for the site to be characterised for the purposes of development and related Health and Safety matters for persons involved in or directly affected by the site development works. It must be understood, however, that in certain circumstances aspects or areas of the site may require further investigation and testing in order to fully clarify and characterise contamination issues, both for regulatory compliance and for commercial reasons.
- 3) The scope of the contamination testing must not automatically be regarded as being sufficient to fully formulate a remediation scheme. For such a scheme it may be necessary to consider further testing to verify the effectiveness of the remedial work after the site has been treated. It must be understood that a remediation scheme which brings a site into a sufficient state for the proposed development ("fit for purpose") under current legislation and published guidance, may result in some contamination being left in-situ. It is possible that forthcoming legislation may result in a site being classified by the Local Authority and assigned a "Degree of Risk" related to previous use or known contamination.
- 4) The scope of the environmental investigation and contamination testing must not be automatically regarded as sufficient to satisfy the requirements in the wider environmental setting. The risks to adjacent properties and to the water environment are assessed by the regulatory authorities and there may be a requirement to carry out further exploration, testing and, possibly monitoring in the short or long term. It is not possible to sensibly predict the nature and extent of such additional requirements as these are the direct result of submissions to and liaison with the regulatory authorities. It is imperative, therefore, that such submissions and contacts are made as soon as possible, especially if there are perceived to be critical features of the site and proposed scheme, in this context.
- 5) New testing criteria are being implemented by the Environment Agency to enable a waste disposal classification to be made. The date for implementation of this Waste Acceptance Criteria (WAC) testing is July 2005. It is this testing that will be used by the waste regulatory authorities, including waste disposal sites, to designate soils for disposal in landfill sites. In certain circumstances, to satisfy the waste regulations, there may be the necessity to carry out additional testing to clarify and confirm the nature of any contamination that may be present. If commercial requirements are significant then this process may also necessitate further field operations to clarify the extent of certain features. Thus, the waste classification must be obtained from the waste regulation authorities or a licensed waste disposal site and we strongly recommend that this classification is obtained as soon as possible and certainly prior to establishing any costings or procedures for this or related aspects of the scheme.

March 2005

Site location	Imperial Works, Perren Street, London, NW5	Report No: 3956/JRCB
RESULTS OF CONTAMINATION ANALYSES ON SOIL SAMPLES		

Exploratory hole:	TP1	TP3	TP4	TP4	TP5
Depth (m):	0.50	1.30	0.40	0.65	0.70
GENERAL SUITE					
pH Value	8.0	10	6.3	8.1	8.0
w/s Sulphate 2:1 (g/l)	0.33	0.04	0.52	<0.01	0.08
Total Cyanide	<2	<2	<2	<2	<2
Monohydric Phenols	<3	<3	<3	<3	<3
Electrical Conductivity (µS/cm)	920	450	1300	580	390
Elemental Sulphur	<100	100	2300	880	<100
Speciated PAHs (Dutch 10)	11	2.8	0.21	ND	0.18
Speciated PAHs (EPA-16)	17	4.0	0.21	ND	0.56
TPH 1 C10 - C40	1300	720	1900	200	99
w/s Boron	<1	<1	1.2	<1	<1
Arsenic	38	24	13	13	14
Cadmium	41	<0.5	<0.5	<0.5	<0.5
Chromium	37	27	28	53	29
Lead	3500	1200	220	46	320
Mercury	2.7	1.1	1.4	<0.3	0.82
Selenium	0.63	<0.5	<0.5	<0.5	<0.5
Copper	1000	600	59	40	62
Nickel	40	36	15	29	14
Zinc	790	690	130	87	610
SPECIATED PAHs					
naphthalene	0.16	0.43	<0.05	<0.05	<0.05
acenaphthylene	<0.05	<0.05	<0.05	<0.05	<0.05
acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05
fluorene	<0.05	<0.05	<0.05	<0.05	<0.05
phenanthrene	1.1	0.62	<0.05	<0.05	<0.05
anthracene	0.19	<0.05	<0.05	<0.05	<0.05
fluoranthene	3.4	0.71	<0.05	<0.05	<0.05
pyrene	2.8	0.59	<0.05	<0.05	<0.05
benzo(a)anthracene	1.5	0.50	0.11	<0.05	<0.05
chrysene	1.7	0.41	<0.05	<0.05	<0.05
benzo(b)fluoranthene	2.8	0.59	<0.05	<0.05	0.38
benzo(k)fluoranthene	<0.05	<0.05	<0.05	<0.05	<0.05
benzo(a)pyrene	1.4	0.17	0.10	<0.05	0.12
indeno(1,2,3-cd)pyrene	0.32	<0.05	<0.05	<0.05	<0.05
dibenzo(a,h)anthracene	<0.05	<0.05	<0.05	<0.05	<0.05
benzo(ghi)perylene	1.4	<0.05	<0.05	<0.05	0.06
Total Dutch-10 PAHs	11.2	2.8	0.21	ND	0.18
Total EPA-16 PAHs	16.8	4.0	0.21	ND	0.56

Exploratory hole:	TP1	TP4	TP5
Depth (m):	0.50	0.65	0.70
VOC BY HEAD SPACE GC-MS			
Chloromethane	<10	<10	<10
Chloroethane	<10	<10	<10
Bromomethane	<10	<10	<10
Vinyl chloride	<10	<10	<10
Trichlorofluoromethane	<10	<10	<10
1,1-dichloroethylene	<10	<10	<10
1,1,2-trichloro-1,2,2-trifluoroethane	<10	<10	<10
Methylene Chloride	<10	<10	<10
trans-1,2-dichloroethene	<1	<1	<1
Methyl tert-butyl ether	<10	<10	<10
1,1-dichloroethane	<1	<1	<1
Chloroform	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1
1,2-dichloroethane	<1	<1	<1
cis-1,2-dichloroethene	670	3600	5400
Benzene	<1	<1	<1
Carbontetrachloride	<1	<1	<1
1,2-dichloropropane	<1	<1	<1
Trichloroethylene	330	450	450
Cis 1,3-dichloropropene	<1	<1	<1
Trans 1,3-dichloropropene	<1	<1	<1
Toluene	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1
Dibromochloromethane	<1	<1	<1
Tetrachloroethylene	<1	<1	<1
Chloro benzene	<1	<1	<1
Ethyl benzene	<1	<1	<1
p & m-xylene	<1	<1	<1
Bromoform	<1	<1	<1
o-xylene	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1
1,3,5 trimethylbenzene	<1	<1	<1
1,2,4 trimethylbenzene	<1	<1	<1
1,3-dichlorobenzene	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1
Naphthalene	<10	<10	<10

- all results expressed in mg/kg air dried basis except for pH or as indicated
- 'ND' denotes none detected

Tested by: i2 Analytical Ltd
Report No: 2430.1
Certificate date: 6th July 2004

SOIL CONSULTANTS LTD

Site location	Imperial Works, Perren Street, London, NW5	Report No: 3956/JRCB
RESULTS OF CONTAMINATION ANALYSES ON WATER SAMPLE		

Exploratory hole:	TP4
Depth (m):	0.75
GENERAL SUITE	
pH Value	8.3
Total Sulphate as SO ₄	600000
Monohydric Phenols	180
Total Cyanide	200
Electrical Conductivity (µS/cm)	3100
TPH 1 C10 - C40	1400
Total PAHs (Dutch 10)	55.69
Total PAHs (EPA-16)	60.59
Boron	<1000
Arsenic	19
Cadmium	<5
Chromium	24
Lead	150
Mercury	0.08
Selenium	21
Copper	28
Nickel	26
Zinc	110
SPECIATED PAHs	
naphthalene	50
acenaphthylene	0.32
acenaphthene	0.87
fluorene	2.1
phenanthrene	2.0
anthracene	0.63
fluoranthene	0.55
pyrene	0.70
benzo(a)anthracene	0.29
chrysene	0.29
benzo(b)fluoranthene	0.45
benzo(k)fluoranthene	0.53
benzo(a)pyrene	0.44
indeno(1,2,3-cd)pyrene	0.35
dibenzo(a,h)anthracene	0.42
benzo(ghi)perylene	0.39
Total Dutch-10 PAHs	56
Total EPA-16 PAHs	61

> All results expressed in µg/l except for pH or as indicated

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