



MINTON TREHARNE & DAVIES LIMITED

Consulting Scientists, Mariners & Engineers
Analytical & Testing Laboratories
Public Analysts

Test Report R20-25732 75892

Mark James Building Contractors Ltd

664 Newport Road

Rumney

CF3 4DF

FAO Mr Mark James

Page 1 of 5

23/04/2020

We Hereby Certify that we attended at a portion of the rear garden of 874 Newport Road, Rumney, Cardiff, on the 7th April 2020 and collected a sample of garden soil for subsequent testing. The sample was taken by us as five sub surface samples from various locations of the plot, to nominal depths of approximately 0.5m and mixed to provide one common sample for testing. The sample was sub contracted to a competent body for testing as detailed below and we have been supplied with the following results. Sample identified as:

874 Newport Rd, Rumney, Cardiff – rear garden soil

Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	29
Total mass of sample received	kg	0.001	NONE	1.8
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
General Inorganics				
pH - Automated	pH Units	N/A	MCERTS	6.7
Total Cyanide	mg/kg	1	MCERTS	< 1
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	40
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.020
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	20.0
Sulphide	mg/kg	1	MCERTS	< 1.0
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	61
Elemental Sulphur	mg/kg	5	MCERTS	< 5.0
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	0.5
Loss on Ignition @ 450°C	%	0.2	MCERTS	9.9
Carbonate as CaCO ₃	%	0.1	NONE	0.4

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0
----------------------------	-------	---	--------	-------

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.29
Anthracene	mg/kg	0.05	MCERTS	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.83
Pyrene	mg/kg	0.05	MCERTS	0.90
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.85
Chrysene	mg/kg	0.05	MCERTS	1.2
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.0
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.93
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.77
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.58
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.83

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	8.25
-----------------------------	-------	-----	--------	------

Heavy Metals / Metalloids

Aluminium (aqua regia extractable)	mg/kg	30	ISO 17025	11000
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	3.9
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.5
Boron (water soluble)	mg/kg	0.2	MCERTS	2.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.5
Chromium (hexavalent)	mg/kg	4	MCERTS	4.7
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23
Copper (aqua regia extractable)	mg/kg	1	MCERTS	42
Iron (aqua regia extractable)	mg/kg	40	MCERTS	17000
Lead (aqua regia extractable)	mg/kg	1	MCERTS	150
Manganese (aqua regia extractable)	mg/kg	1	MCERTS	330
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.6
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	16
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.7
Tin (aqua regia extractable)	mg/kg	1	MCERTS	5.4
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	220
Calcium (aqua regia extractable)	mg/kg	20	ISO 17025	10000
Magnesium (aqua regia extractable)	mg/kg	20	ISO 17025	3400

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0

Petroleum Hydrocarbons

TPH C10 - C40	mg/kg	10	MCERTS	46
---------------	-------	----	--------	----

VOCs

Chloromethane	µg/kg	1	ISO 17025	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0

Test Report R20-25723 page 4 of 5

Tribromomethane	µg/kg	1	NONE	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0

SVOCs

Aniline	mg/kg	0.1	NONE	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1

4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2
Fluorene	mg/kg	0.05	MCERTS	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	0.29
Anthracene	mg/kg	0.05	MCERTS	< 0.05
Carbazole	mg/kg	0.3	MCERTS	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	0.83
Pyrene	mg/kg	0.05	MCERTS	0.90
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.85
Chrysene	mg/kg	0.05	MCERTS	1.2
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.0
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.93
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.77
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.58
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.83

Note: sample taken may not be fully representative of all of the site and all depths of soil. Further testing detail available upon request if required.

For MINTON TREHARNE & DAVIES Ltd

Paul Skinner B.Sc.

Manager B/C dept'.