PUBLIC REGISTER OF CONTAMINATED LAND SITES

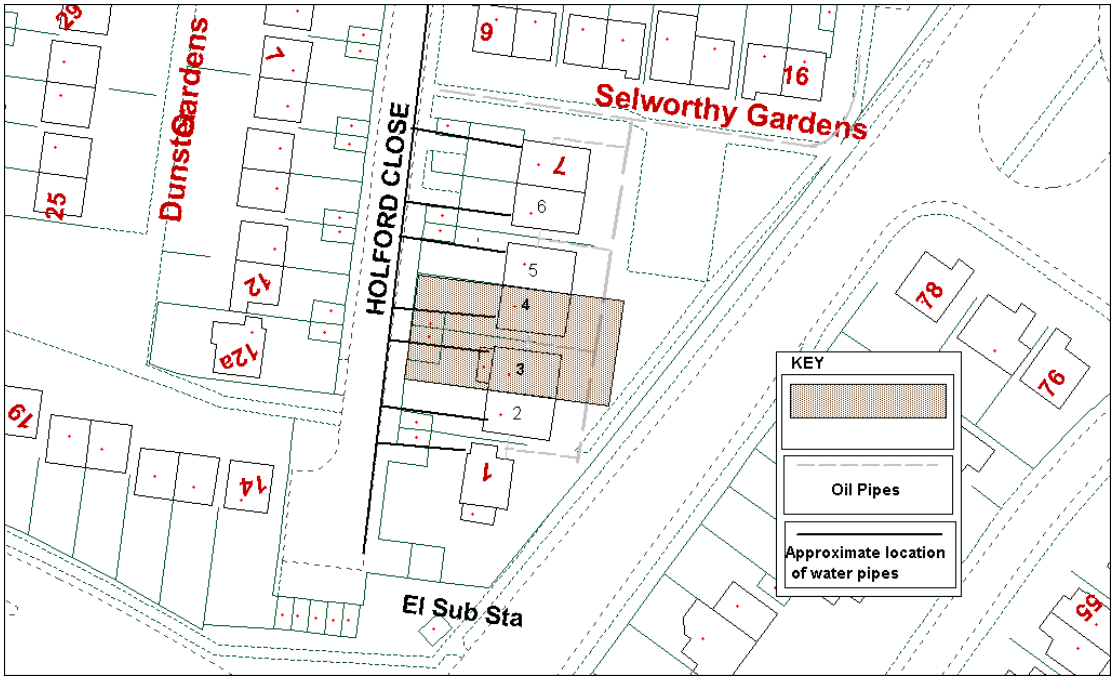
ENVIRONMENTAL PROTECTION ACT 1990: PART IIA

ENVIRONMENTAL PROTECTION ACT 1990: PART IIA: PUBLIC REGISTER DETAILS

SITE INFORMATION

Location: Land at 3 & 4 Selworthy Gardens, Nailsea, North Somerset
Grid Reference: ST 471701
Area: 384 m^2

Plan:



Current use: Residential Property

Description of Significant Pollutant Linkage:

Source Fuel oil leak – kerosene.

Between the 1960s and 1980s about 500 – 600 houses used kerosene as their main source of heating fuel. The fuel was supplied by Insection Ltd before the company was taken over in 1992 by Central Fuel Supplies. Fuel is fed to the houses via steel service pipes on a dead end dogleg system, which is served by a central kerosene tank in Ash Hayes Drive. Currently there are now only 32 properties on the same network implying that there is a mass of redundant pipes that could still contain substantial volumes of kerosene. North Somerset Council now has evidence to support the suspicion that one of these pipes is leaking and has been for at least a period of four years.

Kerosene is a substance this office is very familiar with, see the attached CIRS (Chemical Incidence Response Service) factsheet for a chemical summary. Discussions with the CIRS have indicated that this is a

serious health hazard and must be treated as such. In particular, ingestion has very serious health implications.

Pathway

- Soil to water supply pipes.

This is a known pathway, particularly with plastic (unprotected) water supply pipes. The kerosene can penetrate the plastic pipe and thus contaminate the water. The water company have confirmed the black alkethene supply pipes to both properties run directly under the spill area. In addition, there is a potential for back syphonage which could affect other supplies. Bristol water's sampling results have found levels exceeding the acceptable limit for hydrocarbons in drinking water (10μg/l). No. 3 had 1.78 mg/l and No. 4 had 28 μg/l.

- Inhalation of fumes

Air quality samples taken in Nos. 3 and 4 all exceed the short term limit of 10 mg/m^3 in cases of exposure beyond one year (see accompanying results). The occupant of No. 3 has been experiencing fumes for a period of at least 3 years and it is not yet sure how long the residents at the other two properties have been exposed.

- Penetration of fumes

Kerosene fumes will penetrate the building structure, particularly within the foundations.

Receptors

- Human beings

The occupants of No.'s 3 and 4 are elderly ladies and it is not known how long they have been exposed to kerosene both in the air and in the water supply. Chronic exposure to kerosene can lead to adverse health effects of a serious nature.

- Property in the form of buildings

In addition the buildings of No.'s 3 and 4 may not be capable of being used for the purpose for which it is intended.

Conceptual Model:

Source		Pathway		Receptor
Fuel oil (kerosene) leak	→	Soil to water supply	→	Occupiers of No.'s 3 and 4
Fuel oil (kerosene) leak	→	Inhalation of vapours	→	Occupiers of No.'s 3 and 4
Fuel oil (kerosene) leak	→	Penetration of vapours	→	Building fabric

See attached map.

Significant Harm:

Having identified the pollutant linkage, it can be seen there is a definite likely scenario whereby the contaminant could be ingested by the occupiers of No.'s 3 and 4. The harm that could be caused is severe; human systemic effects by ingestion have been identified as: somnolence, hallucinations, coughing, nausea, vomiting and fever.

The pollutant linkage is clear and there is a significant possibility of significant harm. Therefore, this spill has resulted in land which is contaminated under the definition of the new regime.

SITE SPECIFIC GUIDANCE

Date: 10th November 2000
Reference: 26/SEL/00 - 01

CONTAMINATION INVESTIGATION

Date: May 2001
Reference: 26/SEL/01-02
Prepared by: Integral Environment for and on behalf of Curtins Consulting Engineers.

REMEDIATION STATEMENT

Date: October 2002
Reference: 26/SEL/02-03
Prepared by: Curtins Consulting Engineers, signed by appropriate persons

REMEDIATION STATEMENT – REVISION A

Date: August 2003
Ref: 26/SEL/02-03 (Revised)
Prepared by: Curtins Consulting Engineers, signed by appropriate persons

VALIDATION REPORT FOR WORKS CARRIED OUT BETWEEN FEBRUARY 2003 AND DECEMBER 2004

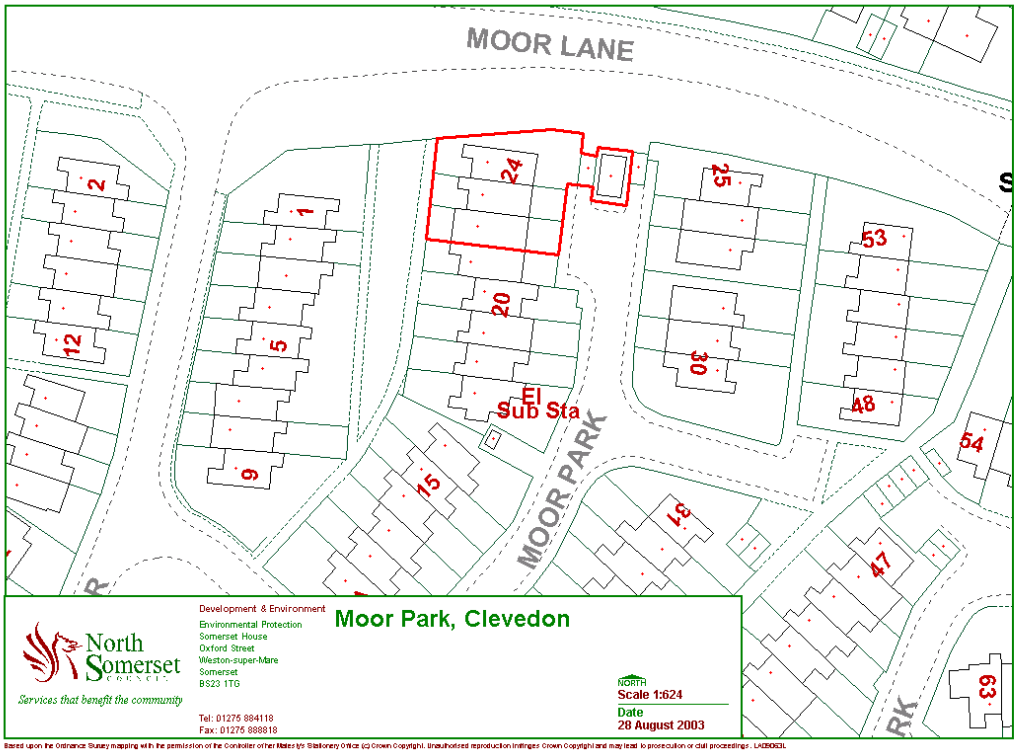
Date: March 2005
Ref: 26/SEL//04-05
Prepared by: Curtins Consulting Engineers

CERTIFICATE OF REMEDIATION

Date: March 30th 2005
Ref: 26/SEL/ 04-05
Signed by Curtins Consulting Engineers

ENVIRONMENTAL PROTECTION ACT 1990: PART IIA: PUBLIC REGISTER DETAILS

Location: Land at Moor Park, Clevedon, North Somerset
Grid Reference: ST412708
Area: 507 square meters



Current use: Residential

Description of Significant Pollutant Linkage

Conceptual Model

Source		Pathway		Receptor
Fuel oil (kerosene) leak	→	Inhalation of vapours	→	Occupiers of No.'s 22, 23 & 24
Fuel oil (kerosene) leak	→	Penetration of vapours	→	Building fabric

Source

- Fuel oil leak – kerosene.

In the 1980s these houses used kerosene as their main source of heating fuel. Fuel is fed to the houses via steel service pipes on a dead end dogleg system, which is served by a central kerosene tank in Moor Park. Currently there are no properties on the same network implying that there is a mass of redundant pipes that could still contain substantial volumes of kerosene.

Discussions with the CIRS have indicated that this is a health hazard and must be treated as such.

Pathway

- Inhalation of fumes

Air quality samples taken in Nos. 22, 23 and 24 all exceed the limit prescribed by the CIRS of 1 mg/m^3.

- Penetration of fumes

Kerosene fumes will penetrate the building structure, particularly within the foundations.

Receptors

- Human beings

The occupants of No.'s 22, 23 and 24

- Property in the form of buildings

The buildings of No's 22, 23 and 24 are not be capable of being used for the purpose for which it is intended.

Significant Harm

Having identified the pollutant linkage, it can be seen there is a definite likely scenario whereby the contaminant could be inhaled by the occupiers of Nos. 22, 23 and 24. The harm that could be caused is severe; human systemic effects have been identified as somnolence, hallucinations, coughing, nausea, vomiting and fever.

SITE SPECIFIC GUIDANCE

Date: 12th June 2003
Reference: 13/MOO/03-04

CONTAMINATION INVESTIGATION

Date: 30th July 2003
Reference: 13/MOO/03-04B
Prepared by: Hydrock Consultants

REMEDIATION STATEMENT

Date: January 2004
Reference: 13/M00/03-04C
Prepared by: Hydrock Consultants Ltd