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AEAT/4496 Final

Banbury Gas Works - Site Investigation

A report produced for S Grundon (Services) Limited

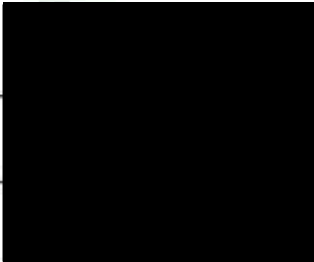
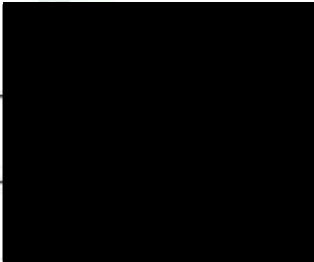
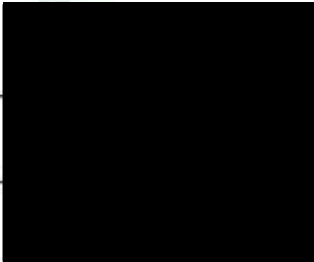
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Customer	S Grndon (Services) Limited
Customer reference	
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6 Sampling and Analysis Plan

6.1 SAMPLING LOCATIONS

In total 64 trial pits were excavated and 18 boreholes drilled with 14 monitoring wells installed. A provisional sampling plan was proposed for the site as part of the original work programme. In light of the information collected during the desk study and site reconnaissance the sampling plan was amended to take account of the additional information of the layout of the gas production areas but also to take account of the fact that part of the gas production areas were located off-site on land that is already leased by Grindon. As a result some of the proposed sampling locations were repositioned to provide adequate cover over the southern end of the current Grindon yard area. The rationale was further reinforced by the fact that contamination was also noted in some of the earlier sampling locations along the boundary of the current Grindon site.

Whilst providing a good coverage of the entire site area under investigation the sampling and analysis plan focussed upon the main operational areas. Thus the north eastern and central north areas were sampled at a higher density than the southern area of the site. The sampling locations are shown at Figure 2.

6.2 METHODOLOGY

6.2.1 Trial Pits

In total 64 trial pits were excavated across the site up to a maximum depth of 3.5m, using a JCB mechanical digger. Geological logs were recorded for each pit and photographs were taken of most trial pits to provide visual evidence of contamination found (Appendix 2). Samples were taken with a trowel from the excavated material. The trial pits were backfilled on completion in reversed order of excavation.

6.2.2 Monitoring Wells/Boreholes

Eighteen boreholes were excavated using AEA Technology's solid stem rotary auger drilling rig. Fourteen were installed with 50mm HDPE well pipe surrounded by fine sand and gravel and sealed with a bentonite cap. Well covers were cemented to leave the well flush with the ground.

6.2.3 Sampling Procedure

Three soil samples were taken from each completed trial pit and five from each borehole. These were placed in appropriate containers and stored at reduced temperatures until delivery to AEA Technology Analytical Laboratories.

Soil samples were taken at varying depths in order to provide a representative view of soils and strata across the site. Within the trial pits, a sample was taken near surface, a second at approximately 1 m below ground level, and a third towards the base of the trial pit. Samples would generally be taken where contamination was suspected, or at a change in geology.

If water was encountered within the trial pits, samples were taken using the bucket of the JCB, these were taken into 1 litre amber glass bottles and a glass vial. These were then stored in cool boxes before delivery to the laboratory

Groundwater samples were taken from each of the monitoring wells following development of the well to provide a representative sample. This was undertaken by removing a minimum of three well volumes of standing groundwater. Samples from each well were taken in containers that would not interfere with the integrity of the sample, prior to submission to the laboratory for analysis.

7 Field Observations

7.1 SURFACE CONDITIONS

Surface conditions varied throughout the site, the northern end of the site is used for scrap storage and there is abundant scrap metal and building rubble on hard standing. The area around the north and eastern boundary are at an elevated elevation as indicated by Figure 5 which summarises the relative topography of the site. The levels are not referenced to a ordnance datum level but were measured relative to a fixed feature at the site.

The central area of the site is also used for storage and there is evidence of burning taking place. This part of the site is used regularly by the current lease holders for metal storage.

The south eastern end of the site containing the dismantled railway has been allowed to regenerate and is covered in grass and occasional shrubs and trees.

7.2 GROUND CONDITIONS

Several underground structures and waste deposits were discovered during excavations at the site. The ground conditions encountered during the site investigations are summarised as trial pit, borehole and monitoring well logs at Appendix 2

Most trial pits within the northern end of the site encountered abundant made ground between surface and 2.4m below ground level (bgl). This included broken building rubble and scrap metal, as well as coke/ash deposits. This appeared to have been scattered liberally when the site was decommissioned. Some subsurface building structures were also discovered at this end of the site. Trial pits TP16, TP17, TP23, TP26, TP27 all encountered the remains of foundations and walls, the possible location of the old gas holder and associated buildings. This area also indicated significant contamination, from the former gas production and by-product storage operations or as a result of infilling when the site was levelled. Both visual and olfactory evidence indicated contamination in many of the trial pits in this area some of which contained free product such as coal tar and phenolic odours.

TP14 contained a red brick underground structure which opened up into an underground culvert/void filled with water. This is believed to be a structure associated with the former gas works. There was no odour associated with the water.

7.2.1 Geology

Made Ground

Made Ground existed from surface to depths of 3.0m in some areas although it usually terminated at around 1 – 1.5m bgl. This usually comprised a sandy gravel matrix and, in most of the sampling locations, contained abundant brick and concrete rubble with some metal fragments and other debris. There was also large quantities of coke/clinker material scattered across the site, the majority of which was associated with the former routes of railway lines across the site. This was particularly true of the railway which ran along the eastern boundary

of the site where the demarcation between the ash and clinker based made ground could be seen quite clearly against the underlying natural strata described below.

Alluvium

Alluvial deposits at the site comprised cohesive strata comprising a dark grey soft to firm clay with varying amounts of organic matter. These deposits were present at the site at depths of between approximately 1.0 and 3.0m bgl, although it should be noted that this varied across the site. There was some evidence of the near surface layers of the alluvium below the made ground being contaminated with organic contamination such as PAHs etc, particularly at the northern and central areas of the site.

River Terrace Gravels

River Terrace Deposits at the site comprised gravels with a mixture of sand in varying proportions. These deposits are likely to be associated with former river course in the area and there is the potential that both the deposits and groundwater contained within are likely to be in hydraulic continuity with the adjacent river and also the ditch which has been constructed along the north eastern boundary of the site. The existence of perched groundwater at this level means that the groundwater may act as a pathway between sources and receptors. River Terrace Gravels were only encountered in a few trial pits and contamination was noted in TP3 and TP36.

Lower Lias

The River Terrace Gravels are in turn underlain by Lower Lias Deposits comprising a firm to stiff grey silty clay was noted in the monitoring wells at depths of between 8.0 and 10.0m hgl.

7.2.2 Groundwater Conditions

Groundwater at the site was encountered within the River Terrace Gravels and also as perched groundwater within the Made Ground. It is clear that in some instances across the site the two groundwater tables are connected. Visual and olfactory examination noted minimal evidence of contamination with the exception of the central and northern end of the site where clear evidence of a hydrocarbon odour and sheen were noted on groundwater from monitoring wells MW3, MW6 and MW8.

7.2.3 Visual and Olfactory Contamination

Contamination was observed at various locations around the site, with gross coal tar contamination evident at the north western end of the site. This was present from just below surface and appears to extend to the base of most of the trial pit sampling locations in that area although the liquid properties of the contamination meant that the exact final depth of the contamination was difficult to determine.

There are a number of trial pits along the eastern boundary of the site which contain abundant deposits of coke and ash associated with the railway lines which existed in this area of the site.

8 Soil and Water Analytical Results

8.1 ASSESSMENT CRITERIA

In order to assess the analytical results and the risk that any contamination may pose, results were compared with guideline values and standards for the assessment of contaminated land. The recognised criteria used in this investigation are:

- Interdepartmental Committee for the Redevelopment of Contaminated Land (ICRCL 59/83) 'Guidance on the Assessment and Redevelopment of Contaminated Land'.
- Dutch Standards

ICRCL guidelines provide Threshold Trigger Concentrations (TTCs) for a number of contaminants with which to compare results and therefore aid the interpretation of results and assess their significance. Values are given for some contaminants that are potentially hazardous to health, and those which are phytotoxic, but not normally hazardous to health. A threshold concentration is given, below which the soil is regarded as uncontaminated. If results exceed this then further investigation into the risks posed is recommended. For some other compounds e.g. phenols and cyanides there are also Action Trigger Concentrations (ATCs) above which they may represent an unacceptable risk or hazard and remedial action may be required. At present there are no ATCs for heavy metals and both TTCs and ATCs are tentative values figures and should therefore only be used as guidelines.

Values vary depending on the proposed end use of the site, land to the north-east of the site is to be developed for domestic housing and there are allotments to the east, therefore, results have been compared against the more sensitive end use ICRCL trigger concentrations for domestic gardens and allotments

In recognition of the limitations of the ICRCL guidelines the DOE's Contaminated Land Research Program commissioned the development of a generic model capable of determining site-user exposures to contaminants. The Contaminated Land Exposure Assessment (CLEA) model was developed but is yet to be published. It is understood that this may be published in July 1999. The CLEA model may include some contaminant concentration information. It is not possible to indicate whether these will be more or less stringent than existing ICRCL or other European guidelines.

As the ICRCL guidelines are limited and do not provide values for all compounds that have been analysed, the Dutch Standards for soil contamination has also been referred to in this assessment. The Dutch Standards refer to two degrees of contamination:

- **Background Levels;** and
- **Intervention Levels.**

These values are purely guidelines and have no statutory status and are not mandatory in the UK. These values have been referred to in some cases in this assessment due to the lack of any

other guidelines for some contaminants. Assessment has been made with reference to the Dutch levels, only where other guidance has not been possible.

The groundwater analysis results have been assessed using both the Dutch Standards, similar to those used for soil, and the UK Drinking Water Standards, which although do not strictly apply in this case as the water is not for human consumption, are deemed the most suitable for use. The leach test results were compared to the UK Drinking Water Standards and Dutch Standards as a means of assessment.

8.2 SOIL RESULTS

Results are attached at Appendix 5

8.2.1 Metals/Metalloids

Potentially Hazardous to Health.

When compared with ICRCCL threshold trigger concentrations and the Dutch Intervention Levels, results show that soils are contaminated with heavy metals in a number of areas and at various depths across the site.

The main area of metal contamination is located in the north-west corner of the site in the vicinity of the old gas holder. This is associated with the made ground possibly used to in fill the base of the old gas holders. Levels greatly exceed the recommended values set out in both the ICRCCL and the Dutch guidelines.

There is also localised metal contamination within the central area of the site. This is currently used as metal storage on land standing. However, it is also believed to be the location of the former production areas including the old retort house when the gas works were in existence.

Results also show some isolated areas of metal contamination on the site. During excavations, buried scrap and rubble was uncovered at near surface in most areas and what appeared to be an old tip was located in the vicinity of TP64. This is supported by the analytical results which show elevated levels of cadmium, lead and various phytotoxic metals (see below).

Arsenic contamination levels are above the ICRCCL threshold value in almost all soil samples. This is believed to be elevated due to naturally occurring arsenic in the ground and is only significantly elevated at two sampling locations TP1 - 280mg/kg; TP23A and TP26 290mg/kg and 310mg/kg. Levels of lead in the soil are high, especially in TP23, TP26 and TP27 where concentrations reach 22,000 mg/kg. This is compared with an ICRCCL threshold value of 500 mg/kg. Samples were also analysed for cadmium, chromium, mercury, selenium. The results show elevated levels are mainly found within the areas discussed above.

Phytotoxic metals

Similarly, the main areas of phytotoxic contamination are associated with the gas storage area at the north-west end of the site, and the central gas production area. Levels of copper and zinc indicated significant contamination within several areas of the site, TP16 showed level of zinc elevated to 11,000 mg/kg. This can be compared with the ICRCCL threshold value of 300 mg/kg. There are also elevated levels in the central and southern areas of the site including the southern most corner of the site within TP64 where levels of zinc are as much as 10, 000

mg/kg compared with an ICRL threshold value of 300. This isolated result is likely to be a result of clinker within the sample.

8.2.2 Inorganic Contaminants

Sulphate

Sulphate levels on the site are high, particularly in TP6 at 1.9m and TP25 at 0.8m where levels are 12,000 mg/kg and 15,000 mg/kg respectively. This exceeds the ICRL Action level of

10,000 mg/kg. Both trial pits are located within the area of the old gas holder at the north-west end of the site.

Elemental Sulphur

All results were below the recommended guidance levels set out by the ICRCCL apart from trial pit 25/0.8mbgl where levels of 6700ppm were present. Although above the threshold level of 5000ppm, this is still well below the action level of 20,000 ppm.

Asbestos

This was detected in three soil samples, asbestos cement sheeting was evident on the surface in the vicinity of trial pit 11, analysis shows that this is Amosite and Chrysotile. Asbestos was also detected within trial pits 61 and 62 where Crocidolite, Chrysotile and Amosite are present near surface.

Ammonia

Results showed levels of ammonia on the site to exist between <3 and 870 mg/kg (TP58 at 3m depth). There are no standards with which to compare levels of ammonia on the site. However as shown in the preliminary semi-quantitative risk assessment in Section 10.0 there is a significant potential risk.

Total Cyanide

Cyanide contamination exists in the north west area and also in TP58, 63, MW 8 and BH 53. These are localised hot spots of contamination at depths of between 1.5 and 3 meters below ground level, which shows contamination is present within the natural alluvium.

8.2.3 Organic Contaminants

Total Monohydric Phenols

Levels ranged from <0.1 to 14 mg/kg, this shows minimal phenol contamination when compared with the ICRCCL action level of 200 mg/kg for phenols.

Diesel Range Organics (DRO)

There are no guidelines for total petroleum hydrocarbons from either the ICRCCL or Dutch framework but a number of US States use a value of 100mg/kg of TPH in soil to assess risk. Compared with this, there are areas of the site which are heavily contaminated with diesel range organics. Contamination is mainly confined to the north-west area between depths of 0.4 and 3.3 mbgl. (TP2 5000mg/kg, BH40 4500mg/kg, However, there is also gross DRO (10,000mg/kg) contamination in other areas including BH40, located at the site perimeter on the area currently leased by Grundon. This is present at 2.95m bgl. There are also gross DRO concentrations at TP3 11,000mg/kg, TP23 0.4m 100,000 mg/kg. These high levels of DRO's are associated with weathered coal tar. Results are illustrated as figure 3.1.

Total Polycyclic Aromatic Hydrocarbons (PAHs)

Samples were analysed for a total PAH screen using UV methods, total USA EPA PAH's using GC-FID and total a breakdown of individual PAH's present. Again PAH contamination is concentrated in the area associated with the old gas holder at the north-west corner of the site where PAH levels are as high as 9200 mg/kg (TP27a/0.6m). The PAH contamination is associated with the made ground/fill in this area. There is an isolated hot spot

of PAH contamination within TP57 at 3m bgl and within BH53 at 1.5 – 2.0mbgl. This clearly indicates that some migration of organic contamination is likely to be occurring away from the source areas. Results are illustrated as figures 3.2 and 3.3.

BTEX Compounds

When compared with Dutch guidelines for Benzene, Toluene, Ethylbenzene and Total Xylenes in soil, it can be seen that there are minimal levels of BTEX contamination which do not exceed the Dutch Intervention levels.

PCB's

Samples taken from BH53, adjacent to the electrical substation show no Polychlorinated Biphenyls (PCB's) contamination within the surrounding soil.

8.3 GROUNDWATER RESULTS

Groundwater samples from each of the 14 monitoring wells and the five trial pits which were sampled during their excavation were submitted for laboratory analysis. The groundwater analysis results are summarised in Appendix 5. The groundwater monitoring programme aimed to establish a boundary assessment of groundwater quality with selected samples also collected from where visual and olfactory evidence indicated potential source areas of contamination.

8.3.1 Metals/Metalloids

The concentrations of metals in the vast majority of cases were below the respective detection limits and relevant intervention guidance values. Some of the groundwater samples exhibited levels above the Dutch background levels but below the Intervention levels. Exceptions to this include the high levels of boron up to 6400µg/l at MW3 and elevated levels of metals at MW12 and MW39 (200µg/l and 77µg/l of nickel respectively) and TP13 (where level of zinc were 980µg/l). On the whole levels of metals within the groundwater were generally low.

8.3.2 Inorganic Contaminants

pH, Conductivity and TOC

The pH of groundwaters ranged from 6.7 to 7.8, which is neutral to slightly acidic. The relatively high suspended solids figures are indicative of the fact that during the development of the wells prior to the collection of groundwater samples significant quantities of fine silt and sand ingressed into the wells. The conductivity results reflects this although the levels are within normal ranges.

Total Cyanide

Levels of total cyanide were within the range <0.01 to 0.48mg/l which although above the Dutch Background level none exceeded the Intervention Level of 1.5mg/l.

Sulphate

Levels of sulphate 17mg/l to 1100mg/l which in the majority of instances exceeds the UK Drinking Water Standard of 250mg/l. These levels do not however constitute significantly elevated values and should be borne in mind when reviewing sulphate levels in soil and groundwater in light of any proposed underground concrete structures to be placed at the site. Levels should be reconfirmed when construction details and layout are known.

Sulphide

Concentrations of sulphide were in all instances below the respective detection level <0.2 to <3 mg/l

Ammonia

The majority of groundwater samples indicated elevated levels of ammonia when compared to the UK drinking water standard of 0.5mg/l. The majority of the groundwater samples ranged from 4 to 44mg/l with three exceptions at MW8, MW11 and TP18 where values were 260mg/l, 210mg/l and 130mg/l respectively.

3.3.4 Organic Contaminants

Phenol

In all but one of the groundwater sampling locations, MW8, levels of phenol were generally very low and near to or below the limits of detection. The majority of values were below 2µg/l, except at MW8 where a value of 45µg/l was detected. All of the sampling locations indicated levels which were well below the Dutch Intervention Level of 2000µg/l. Groundwater samples can thus be regarded as not contaminated with regards to phenols. Results are illustrated as figure 4.1.

Diesel Range Organics (DRO)

There are no guidance values or standards from either the ICRL or Dutch Standards for DRO or Total Petroleum Hydrocarbons. Based upon guidance values from the USA and based upon experience in the UK, levels of TPH of which DRO are part of above 150µg/l may pose a risk. Concentrations ranged from <10µg/l to 80µg/l in the vast majority of groundwater samples. Three sampling locations indicated elevated levels of DRO associated with Polycyclic Aromatic Hydrocarbons (PAHs). Sampling locations MW5 and MW8 indicated significant levels of DRO of 19,000µg/l and 13,000µg/l respectively whilst sampling location MW39 indicated slightly elevated levels, 330µg/l of DRO. Results are illustrated as figure 4.2.

Total Polycyclic Aromatic Hydrocarbons (PAHs)

Groundwater samples were analysed for the US EPA 16 priority pollutant PAHs that also parallel with the Dutch Standards for PAHs. The Dutch standards were used for comparative purposes. Four of the sampling locations exhibited levels above the Dutch Intervention values for individual PAHs. Two of the sampling locations indicated gross PAHs of between 1164.5µg/l at MW39 and 1311µg/l at MW3. Additionally significantly elevated levels of PAHs MW8 and MW6 were 213.74µg/l and 171.37µg/l respectively. Results are illustrated as figure 4.3.

BTEX Compounds

BTEX compounds were in the majority of sampling locations below the respective detection limits and Dutch Standards. Gross contamination with BTEX was noted at sampling locations TP1 (1,628,000µg/l) and TP18 (26,000µg/l) within the north western corner of the site. Significant contamination was also detected within sampling locations MW8 (1410µg/l) and

100µg/l at MW3. The elevated of BTEX concentrations at sampling locations TP1, TP18 and MW8 all indicate contamination with coal tar. Results are illustrated as figure 4.4.

8.3.5 Leachability Test Results

Three spoil samples from TP10, TP23 and BH53 were submitted for laboratory analysis for a variety of criteria. These are summarised in Appendix 5.

Generally the leach test results did not exceed the current guidelines for heavy metals with the exception of TP10 at 0.2m depth. Slightly elevated levels of sulphate and ammonia were also noted at all three locations.

Appendix 1

Envirocheck Report

**EnviroCheck Report on:**

The Tramway Industrial Estate
BANEURY
Oxfordshire

National Grid Reference :

446600, 240100

Prepared For :

AEA Technology
Building E6
Culham Laboratories
ABINGDON
Oxon
OX14 3DB

Your Reference :

Jonathan Owens



Summary

Environmental Setting

Industrial Setting

Useful Contacts

BGS Borehole Order Form

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does to the potential sources of contamination. For this reason, Landmark's Site Sensitivity Data Sheet places great emphasis on statutory data provided by the Environment Agency and the Scottish Environmental Protection Agency; it also incorporates data from English Nature (and the Scottish and Welsh equivalents), the Environment Agency (and the Scottish equivalent) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The data sheets is produced by querying the legend database to 1km from a single point provided by the client.

Landmark has geocoded and plotted the data to 1m accuracy where possible. Where this isn't the case, data is geocoded to ~± 100m accuracy. In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 100m in accordance with Landmark's agreements with a number of Data Suppliers.

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Data Type	50m	250m	500m	1000m
Water				
Water Abstractions				
Discharge Consents			✓ 2	✓ 4
Refill or Discharge Consents				
Precautions relating to Controlled Waters				
Pollution Incidents to Controlled Waters			✓ 5	✓ 27
Nearest Surface Water Feature	✓			
Waste				
Landfill Sites				
BGS Recorded Landfill Sites				
Waste Treatment or Disposal Sites				
Waste Transfer Sites			✓ 3	✓ 1
IPC Registered Waste Sites				
Statutory / Authorisation				
Integrated Pollution Controls				
Air Pollution Controls		✓ 1		✓ 5
Registered Radioactive Substances				✓ 1
Prosecutions relating to Authorised Processes				
Enforcement and Prohibition Notices				
Planning Hazardous Substance Consents				
Planning Hazardous Substance Enforcements				
Other				
Planning Applications (of possible contaminative uses)			✓ 2	✓ 6
BGS Recorded Mineral Sites				
BGS Boreholes				✓ 39
Sites of Special Scientific Interest				
Potentially Contaminative Industrial Use				✓ 3

Water Abstractions identified, whose centres are more than 1000 metres (but less than 2000 metres) from the centre of the site: 2



Map ID	Details	Estimated Distance from Site	Source	NRIR
	Water Abstraction Operator: K.J. Clancy & Sons Ltd Licence No: 28/39/14/02/06 Location: Sulistal Lodge Farm, Twyford Abstraction: Agriculture (General) Source: River Water Daily Rate: 27 cubic metres Yearly Rate: 4598 cubic metres Details: L.A.S. (Miscellaneous Water)	1600	EA	447000 209100
	Water Abstraction Operator: Thames Water Utilities Ltd Licence No: 20/39/14/02/40 Location: Gainsbury Mill, Banbury, Oxfordshire Abstraction: Public Water Supply Source: River Daily Rate: 35459 cubic metres Yearly Rate: 3506800 cubic metres Details: Not Given	750	EA	445000 241700
	Most Sensitive Groundwater Resource Non Aquifer		EA/SEPA	
	Randon Affected Area Between 3% and less than 10% of homes are above the Action Level		NRPB	
1	Discharge Consent Operator: C/o Allen Property Type: N/A Location: Floor 01 Plot 7c, Thorpe Drive, Banbury, Oxfordshire Catchment Area: N/A Discharge Reference: CTWC.0230 Issued: 26th July 1993 Discharge Type: Discharge Of Other Matter-Grid Drainage Discharge: Freshwater Stream/River Environment: Received Water: Not Given	770	EA	447100 240700
2	Discharge Consent Operator: Western Counties Construction Ltd Property Type: N/A Location: Tramway Business Park, Tramway Road, Banbury, Oxfordshire Catchment Area: N/A Discharge Reference: CATW.0217 Issued: 6th October 1989 Discharge Type: Discharge Of Other Matter Site Drainage Discharge: Freshwater Stream/River Environment: Received Water: Not Given	400	EA	446200 240100
3	Discharge Consent Operator: Thames Water (S + W) Property Type: N/A Location: Outlet B, Banbury Sew, Banbury, Oxfordshire Catchment Area: N/A Discharge Reference: CTCR.1867 Issued: 27th April 1982 Discharge Type: Sewage Effluent Discharge: Freshwater Stream/River Environment: Received Water: Not Given	700	EA	447300 240100
4	Discharge Consent Operator: S Brimble (Services) Ltd Property Type: N/A Location: Grindon Depot, Marton Street, Banbury, Oxfordshire Catchment Area: N/A Discharge Reference: CNTM.1007 Issued: 30th July 1993 Discharge Type: Trade Effluent Discharge-Site Drainage Discharge: Freshwater Stream/River Environment: Received Water: Not Given	280	EA	445500 240300



Map ID	Details	Estimated Distance from Site	Source	NGR	
5	Discharge Consent				
	Operator	Uk Petroleum Products Ltd	680	EA	448100 240400
	Property Type	N/A			
	Location	Petroleum Depot, Station Approach, Banbury, Oxfordshire			
	Catchment Area	N/A			
	Discharge Reference	CNTM 1127			
	Issued	26th October 1993			
	Discharge Type	Trade Effluent Discharge-Site Drainage			
Discharge Environment	Freshwater Stream/River				
Received Water	Not Given				
6	Discharge Consent				
	Operator	Thames Water Utilities Ltd	520	EA	447000 239700
	Property Type	N/A			
	Location	Banbury Stw, Banbury, Oxfordshire			
	Catchment Area	N/A			
	Discharge Reference	CNTD 0021			
	Issued	2nd November 1999			
	Discharge Type	Sewage Effluent			
Discharge Environment	Freshwater Stream/River				
Received Water	Not Given				
33	BGS Borehole				
	BGS Reference	SP43NE 11	1000	BGS	446500 238100
	Drilled Length	4 metres			
Bore Name	DOWSETT MINERALS BH S4 BANBURY				
34	BGS Borehole				
	BGS Reference	SP44SE 121	890	BGS	448700 241200
	Drilled Length	3.04 metres			
Bore Name	EAST OF DAVENTRY ROAD BANBURY				
35	BGS Borehole				
	BGS Reference	SP44SE 124	660	BGS	446000 240300
	Drilled Length	36.88 metres			
Bore Name	UNITED DAIRIES DEPOT BANBURY				
36	BGS Borehole				
	BGS Reference	SP44SE 125	860	BGS	447200 240700
	Drilled Length	0 metres			
Bore Name	OVERTHORPE ROAD OXFORDSHIRE				
37	BGS Borehole				
	BGS Reference	SP44SE 153	1000	BGS	447500 240100
	Drilled Length	6 metres			
Bore Name	M40 BODICOTE-BANBURY SECTION 176				
38	BGS Borehole				
	BGS Reference	SP44SE 155	1000	BGS	447600 240400
	Drilled Length	4 metres			
Bore Name	M40 BODICOTE-BANBURY SECTION 160				
39	BGS Borehole				
	BGS Reference	SP44SE 154	970	BGS	447600 240100
	Drilled Length	3 metres			
Bore Name	M40 BODICOTE-BANBURY SECTION 150				
40	BGS Borehole				
	BGS Reference	SP44SE 289	780	BGS	447200 240300
	Drilled Length	3 metres			
Bore Name	OVERTHORPE IND ESTATE TP 1				
40	BGS Borehole				
	BGS Reference	SP44SE 290	780	BGS	447200 240600
	Drilled Length	2 metres			
Bore Name	OVERTHORPE IND ESTATE TP 2				
40	BGS Borehole				
	BGS Reference	SP44SE 291	780	BGS	447200 240600
	Drilled Length	2 metres			
Bore Name	OVERTHORPE IND ESTATE TP 3				
40	BGS Borehole				
	BGS Reference	SP44SE 292	780	BGS	447200 240600
	Drilled Length	2 metres			
Bore Name	OVERTHORPE IND ESTATE TP 4				



Map ID	Details		Estimated Distance from Site	Source	NGR
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 288 3 metres OVERTHORPE IND ESTATE TP 5	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 284 3 metres OVERTHORPE IND ESTATE TP 6	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 295 3 metres OVERTHORPE IND ESTATE TP 7	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 296 3 metres OVERTHORPE IND ESTATE TP 8	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 297 3 metres OVERTHORPE IND ESTATE TP 9	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 298 2 metres OVERTHORPE IND ESTATE TP 10	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 299 3 metres OVERTHORPE IND ESTATE TP 11	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 300 3 metres OVERTHORPE IND ESTATE TP 12	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 301 2 metres OVERTHORPE IND ESTATE TP 13	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 302 3 metres OVERTHORPE IND ESTATE TP 14	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 303 2 metres OVERTHORPE IND ESTATE TP 15	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 304 3 metres OVERTHORPE IND ESTATE TP 16	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 305 3 metres OVERTHORPE IND ESTATE TP 17	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 306 2 metres OVERTHORPE IND ESTATE TP 18	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 307 2 metres OVERTHORPE IND ESTATE TP 19	780	BGS	447200 240600
40	BGS Borehole BGS Reference Drilled Length Bore Name	SP449E 308 2 metres OVERTHORPE IND ESTATE TP 20	780	BGS	447200 240600



Map ID	Details		Estimated Distance from Site	Source	NGR
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 300 2 metres OVERTHORPE IND ESTATE IP 21	780	BGS	447200 240600
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 310 2 metres OVERTHORPE IND ESTATE IP 22	780	BGS	447200 240600
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 311 2 metres OVERTHORPE IND ESTATE IP 23	780	BGS	447200 240600
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 312 7 metres OVERTHORPE IND ESTATE BH 1	780	BGS	447200 240600
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 313 9 metres OVERTHORPE IND ESTATE BH 2	780	BGS	447200 240600
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 314 9 metres OVERTHORPE IND ESTATE BH 3	780	BGS	447200 240600
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 315 5 metres OVERTHORPE IND ESTATE BH 4	780	BGS	447200 240600
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 316 5 metres OVERTHORPE IND ESTATE BH 5	780	BGS	447200 240600
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 317 9 metres OVERTHORPE IND ESTATE BH 6	780	BGS	447200 240600
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 318 8 metres OVERTHORPE IND ESTATE BH 7	780	BGS	447200 240600
40	<i>BGS Borehole</i> BGS Reference Drilled Length Bore Name	SP445E 319 8 metres OVERTHORPE IND ESTATE BH 8	780	BGS	447200 240600



Map ID	Details	Estimated Distance from Site	Source	NCH
7	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Oil - Unknown Note: Confirmed As A Pollution Incident Incident Date: 4th August 1989 Incident Reference: W1080412 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	500	EA	446100 240100
7	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Miscellaneous - Unknown Note: Confirmed As A Pollution Incident Incident Date: 20th June 1983 Incident Reference: W1930359 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	600	EA	446100 240100
8	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Unknown Sewage Note: Confirmed As A Pollution Incident Incident Date: 9th November 1989 Incident Reference: W1890558 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	610	EA	446100 240200
9	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 20th June 1992 Incident Reference: W1920340 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	610	EA	446100 240200
9	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 28th February 1980 Incident Reference: W1902108 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	610	EA	446700 241000



Map ID	Details	Estimated Distance from Site	Source	NGR
10	<p><i>Pollution Incident to Controlled Waters</i></p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Miscellaneous - Unknown Note: Confirmed As A Pollution Incident Incident Date: 19th March 1990 Incident Reference: W1900144 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	720	EA	446000 240500
10	<p><i>Pollution Incident to Controlled Waters</i></p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Miscellaneous - Unknown Note: Confirmed As A Pollution Incident Incident Date: 20th March 1990 Incident Reference: W1900148 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	720	EA	446000 240500
10	<p><i>Pollution Incident to Controlled Waters</i></p> <p>Name: Unknown Operator Property Type: N/A Location: Station Road, Banbury Authority: Environment Agency Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 16th March 1992 Incident Reference: W1920107 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 2 - Significant Incident</p>	720	CA	446000 240500
11	<p><i>Pollution Incident to Controlled Waters</i></p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Miscellaneous - Unknown Note: Confirmed As A Pollution Incident Incident Date: 25th June 1990 Incident Reference: W1900346 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	780	EA	446000 240600
12	<p><i>Pollution Incident to Controlled Waters</i></p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 26th June 1990 Incident Reference: W1900339 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	600	EA	446000 240100



Key ID	Details	Estimated Distance from Site	Source	NOR
12	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Chemicals - Unknown Note: Confirmed As A Pollution Incident Incident Date: 1st July 1984 Incident Reference: W1940560 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	600	EA	445000 240100
12	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Lock Authority: Environment Agency Thames Region Pollutant: Miscellaneous - Unknown Note: Confirmed As A Pollution Incident Incident Date: 19th October 1990 Incident Reference: W190541 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 2 - Significant Incident</p>	920	EA	445000 240700
13	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Miscellaneous - Unknown Note: Not Given Incident Date: 21st October 1990 Incident Reference: W190531 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	920	EA	445900 240700
13	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Lock, Banbury Authority: Environment Agency Thames Region Pollutant: Miscellaneous - Unknown Note: Confirmed As A Pollution Incident Incident Date: 24th October 1995 Incident Reference: W195056 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	920	EA	445900 240700
13	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: Not Given Incident Reference: W1930493 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	920	EA	445900 240700



Ref ID	Details	Estimated Distance from Site	Source	NCII
14	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Chemicals - Unknown Note: Confirmed As A Pollution Incident Incident Date: 23rd November 1990 Incident Reference: W190559 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	320	FA	446000 240000
15	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Unknown Sewage Note: Confirmed As A Pollution Incident Incident Date: 20th February 1991 Incident Reference: W1910065 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	320	EA	446700 240000
15	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Bridge Street, Banbury Authority: Environment Agency Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 14th April 1992 Incident Reference: W1920202 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	710	EA	446100 240000
16	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Chemicals - Unknown Note: Confirmed As A Pollution Incident Incident Date: 7th October 1992 Incident Reference: W1920515 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	710	EA	446100 240000
17	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 20rd July 1992 Incident Reference: W1920386 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	630	EA	446000 240000



MRP ID	Details	Estimated Distance from Site	Source	NGR
18	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Chemicals - Unknown Note: Confirmed As A Pollution Incident Incident Date: 11th December 1992 Incident Reference: W1920026 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	650	EA	445600 240400
19	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Tramway Authority: Environment Agency Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 4th October 1990 Incident Reference: W1920521 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	410	EA	446200 240000
20	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Bus Station Authority: Environment Agency Thames Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 13th October 1990 Incident Reference: W1920644 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	1000	EA	446600 240700
21	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Chemicals - Unknown Note: Confirmed As A Pollution Incident Incident Date: 12th September 1994 Incident Reference: W1940517 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 2 - Significant Incident</p>	810	EA	446900 242500
22	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Unknown Sewage Note: Confirmed As A Pollution Incident Incident Date: 21st April 1995 Incident Reference: W1950208 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	920	EA	446000 240800



Map ID	Details	Estimated Distance from Site	Source	NGR
23	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Unknown Sewage Note: Confirmed As A Pollution Incident Incident Date: 5th August 1995 Incident Reference: W1990499 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 2 - Significant Incident</p>	600	EA	446000 240300
24	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Miscellaneous - Unknown Note: Confirmed As A Pollution Incident Incident Date: Not Given Incident Reference: W1990149 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	580	EA	446100 240400
25	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environmental Agency Thames Region Pollutant: Chemicals - Unknown Note: Confirmed As A Pollution Incident Incident Date: Not Given Incident Reference: W1940296 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	700	EA	445900 240350
26	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Thames Region Pollutant: Miscellaneous - Other Note: Not Given Incident Date: 18th May 1996 Incident Reference: W1580235 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	410	EA	446200 240200
27	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Authority: Environment Agency Anglian Region Pollutant: Oils - Unknown Note: Confirmed As A Pollution Incident Incident Date: 20th January 1999 Incident Reference: W1890037 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	860	EA	447400 239800



Map ID	Details	Estimated Distance from Site	Source	NGR
29	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Gw Authority: Environment Agency Thames Region Pollutant: Unknown Sewage Note: Confirmed As A Pollution Incident Incident Date: 1st February 1993 Incident Reference: W1193000 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 3 - Minor Incident</p>	520	EA	447000 230700
29	<p>Pollution Incident to Controlled Waters</p> <p>Name: Unknown Operator Property Type: N/A Location: Banbury Str Authority: Environment Agency Thames Region Pollutant: Chemicals - Unknown Note: Confirmed As A Pollution Incident Incident Date: Not Given Incident Reference: W1320553 Catchment Area: N/A Received Water: N/A Cause: N/A Severity: Category 2 - Significant Incident</p>	410	EA	446700 239700
30	<p>Waste Transfer Site</p> <p>License Holder: S Graddon (waste) Ltd License Reference: QU07149 Site: Menton Street Depot, Station Road, Banbury, Oxon Operator: Goults Grove, Ewelme, Oxon OX10 6PJ Authority: Environmental Agency - Thames Region West Area Site Category: Transfer License Status: License has been superseded by a new licence or a significant modification</p> <p>Waste types on Site:</p> <p>Authorized waste</p> <ul style="list-style-type: none"> Aliphatic Hydrocarbons Aromatic Hydrocarbons Clinical - As in Control Waste Regs 82 Contaminated Pallets/Bags/Sacks Empty Used Containers Epoxy Resins (Not Finished Prod'S) Fats, Waxes And Greases Food Processing Wastes/Scrap Fuel Oil Hydrocarbons (Not Fuel's/Oils/Greases) Interceptor Pfl Wastes Ion-Exchange Resin Wastes Kerosene And Derv. Lates, Lates/Rubber So 'Ns/Gums'Ns Mineral Oils Oil/Water Mixtures Oxon Cat.A - Inert 'Non-Decomp.' Oxon Cat.B' Gen. 'Slow Decomp.' Paint Waste Polyester Resins (Not Finished Prod'S) Polymers/Materials, Products/Scrap Polyurethane Printing Industry Wastes/Ink Vegetable And Other Oils Water (Contaminated) <p>Prohibited waste</p> <ul style="list-style-type: none"> Hospital Theatre Waste Household Waste/Bim'H Ex Trade/Ind'Com Liquid/Sudge Waste N.O.S. Special Wastes Waste N.O.S. 	500	EA	446500 240500



Map ID	Details		Estimated Distance from Site	Source	NGH
30	<p>Waste Transfer Site</p> <p>License Holder: S Granham (waste) Ltd Licence Reference: OCC/149 Site: Medon Street, Lupton, Station Road, Banbury, Oxon Operator: Gouds Grove, Ewelme, Oxon OX10 5PJ Authority: Environment Agency - Thames Region West Area Site Category: Transfer Licence Status: Site is operational as far as is known</p> <p>Waste types on Site: Authorised waste: Clinical Wastes Drummed/Pack/D/Pellet/D Waste Liquid in Bulk Tanks Oxon Cat. A Inert "Non-Decomp" Oxon Cat. B Gen. "Slow Decomp." Oxon Cat. D Diff. Gen. Waste Comprising Waste which is Special in 18% Regs But Not in 1980 Regs Comprising Prohibited waste: Clinical Wastes Drummed/Pack/D/Pellet/D Waste Liquid in Bulk Tanks</p>		700	EA	446300 240500
31	<p>Waste Transfer Site</p> <p>License Holder: Daniel Brown Builders Licence Reference: OCC/110 Site: Overthorpe Hoard Industrial Estate, Banbury, Oxon OX10 8EW Operator: Authority: Environment Agency - Thames Region West Area Site Category: Transfer Licence Status: No valid license (activity exempted under EPA) Waste types on Site: Authorised waste: Max Storage in Licence Waste Solvents</p>		540	EA	446600 240500
32	<p>Waste Transfer Site</p> <p>License Holder: Transfer Recycling & Skiptone Ltd Licence Reference: OCC/153 Site: Thorpe Mead, Overthorpe Industrial Estate, Banbury, Oxon Operator: Orchard House, Lloyds Gate Lane, Charlton St Peter, Bucks SL9 9TT Authority: Environment Agency - Thames Region West Area Site Category: Transfer Licence Status: Site is operational as far as is known Waste types on Site: Authorised waste: Max Waste Permitted By Licence Oxon Cat. A Inert "Non-Decomp." Oxon Cat. B Gen. "Slow Decomp." Oxon Cat. C Putresc. "Decomp/Poll." Prohibited waste: Waste H.O.S.</p>		390	EA	448900 240300
41	<p>Air Pollution Control</p> <p>Name: Carbody Ltd Location: Lower Cherwell Street, Banbury, Oxfordshire OX16 8AY Authority: Cherwell District Council Permit Reference: CDC19/93 Permit Date: 15th December 1993 Process Type: Local Authority Air Pollution Control Description: PG6/10 Coating manufacturing Status: Application has been authorised and any conditions apply to the operator</p>		770	LPR	445900 240500
41	<p>Air Pollution Control</p> <p>Name: SGM Coachworks Location: Unit 1 Lower Cherwell Street, Banbury, Oxon OX16 8AY Authority: Cherwell District Council Permit Reference: CDC4/95 Permit Date: 7th September 1995 Process Type: Local Authority Air Pollution Control Description: PG6/10 Coating manufacturing Status: Application has been authorised and any conditions apply to the operator</p>		770	LPR	445900 240500
42	<p>Air Pollution Control</p> <p>Name: Crumpton Plastics Location: Thorpe Way, Banbury, Oxfordshire OX16 8SP Authority: Cherwell District Council Permit Reference: CDC24/93 Permit Date: 4th November 1993 Process Type: Local Authority Air Pollution Control Description: PG6/20 Di-isocyanate processes Status: Application has been authorised and any conditions apply to the operator</p>		590	LPR	446900 240600



map ID	Details	Estimated Distance from Site	Source	NGR
<i>Air Pollution Control</i>				
43	<p>Name: Morans Ltd Location: 5 Hazlemere Road, Banbury, Oxfordshire OX16 8T1 Authority: Cherwell District Council Permit Reference: CDC2083 Permit Date: 30th November 1993 Process Type: Local Authority Air Pollution Control Description: PCRV10 Coating manufacturing Status: Application has been authorised and any conditions apply to the operator</p>	570	LPR	448000 240200
<i>Air Pollution Control</i>				
44	<p>Name: RMC UK Ltd Location: Milton Street, Banbury, Oxfordshire OX16 8RN Authority: Cherwell District Council Permit Reference: CDUS193 Permit Date: 22nd March 1993 Process Type: Local Authority Air Pollution Control Description: PCO/Blending, packing, loading and use of bulk cement Status: Application has been authorised and any conditions apply to the operator</p>	130	LPR	445000 240200
<i>Air Pollution Control</i>				
45	<p>Name: Swan Foundry Ltd Location: Swan Close Road, Banbury, Oxfordshire OX16 8AL Authority: Cherwell District Council Permit Reference: CDC75A23 Permit Date: 25th October 1993 Process Type: Local Authority Air Pollution Control Description: PC2/4 Iron, steel and non-ferrous metal foundry processes Status: Application has been authorised and any conditions apply to the operator</p>	675	LPR	445000 240100
<i>Registered Radioactive Substance</i>				
46	<p>Name: Abranc Ltd Location: Units 4-5, Haslemere Way, Banbury, Oxfordshire OX16 8TF Authority: Environment Agency Thames Region Permit Reference: A12941 Dated 5th July 1993 Process Type: Registration under S7 RSA for the keeping and use of radioactive materials (was NDAG0 S1) Description: Registration under s7 or s10 NSA for 1 or more closed sources => 4 Terahertz sources also for storage in tanks Status: Application has been authorised and any conditions apply to the operator</p>	570	EA	448000 240200
<i>Planning Application (of possible contaminative use)</i>				
47	<p>Name: Light Industrial (Conversion) Location: Unit 2a, Edward Street Business Centre, Banbury, Oxfordshire OX16 8SN Authority: Cherwell District Council Description: Light Industrial Application Ref: 96/1134/F Dated 5th July 1996 Status: Detailed Plans Approved Site Area: 0.00 hectares</p>	410	LPR	448000 240500
<i>Planning Application (of possible contaminative use)</i>				
48	<p>Name: Light Industrial (Extension) Location: Units 1 & 2, Compton Plastics Ltd, Thrope Way, Banbury, Oxfordshire OX16 8SP Authority: Cherwell District Council Description: Light Industrial Application Ref: 96/1002/F Dated 15th July 1996 Status: Detailed Plans Submitted Site Area: n/a</p>	380	LPR	446000 240500
<i>Planning Application (of possible contaminative use)</i>				
49	<p>Name: Light Industrial (Alterations) Location: Units 4-5, Haslemere Way, Banbury, Oxfordshire OX16 8TF Authority: Cherwell District Council Description: Light Industrial Application Ref: 96/1133/F Dated 31st October 1996 Status: Detailed Plans Submitted Site Area: n/a</p>	570	LPR	448000 240200
<i>Planning Application (of possible contaminative use)</i>				
50	<p>Name: Light Industrial (Alterations) Location: Peter Haining Engineers, Thrope Lane, Banbury, Oxfordshire OX16 8UT Authority: Cherwell District Council Description: Light Industrial Application Ref: 97/0237/F Dated 1st May 1997 Status: Detailed Plans Submitted Site Area: n/a</p>	610	LPR	446000 240600

App ID	Details	Estimated Distance from Site	Source	NGR
50	<i>Planning Application (of possible contaminative use)</i> Name: Light Industrial (Fate/New) Location: Thorpe Lane Plot 14, Overthorpe Road Industrial Estate, Banbury, Oxfordshire OX16 8UJ Authority: Cherwell District Council Description: Light Industrial Application Ref: 90/0124/F Dated 1st January 1998 Status: Unfused Plans Submitted Site Area: 0.00 hectares	610	LPR	448000 240600
51	<i>Planning Application (of possible contaminative use)</i> Name: Workshop (Extension) Location: Carbody Banbury Ltd, Thorpe Lane, Banbury, Oxfordshire OX16 8UT Authority: Cherwell District Council Description: Workshops (Purpose B1) Application Ref: 95/1562/F Dated 20th October 1995 Status: Unfused Plans Submitted Site Area: n/a	660	LPR	448000 240700
52	<i>Planning Application (of possible contaminative use)</i> Name: Workshop Location: Thorpe Mead, Overthorpe Industrial Estate, Banbury, Oxfordshire Authority: Cherwell District Council Description: Workshops (Purpose B1) Application Ref: 88/0883/F/11 Dated 17th April 1998 Status: Detailed Plans Submitted Site Area: 0.00 hectares	430	LPR	448000 240400
53	<i>Planning Application (of possible contaminative use)</i> Name: Workshop (Gunn) Location: The Gungalow, Station Mill, Station Approach, Banbury, Oxfordshire OX16 8AB Authority: Cherwell District Council Description: Workshops (Purpose B1) Application Ref: 98/0849/F Dated 10th June 1998 Status: Detailed Plans Submitted Site Area: n/a	650	LPR	448100 240500
54	<i>Potentially Contaminative Industrial Use</i> Name: Dominion Oils Ltd Location: Tramway Road, Banbury, Oxfordshire OX16 8TD Classification: Wholesale non-agricultural intermediate products, inc. waste/scrap	510	Thomsons Trade Directory	446100 240200
55	<i>Potentially Contaminative Industrial Use</i> Name: Antelope Garage Limited Mobil Location: Windsor Street, Banbury, Oxfordshire OX16 8AJ Classification: Fuel: retail sale of automotive fuel	760	Galiliet Petroleum Station Database	445900 240700
56	<i>Potentially Contaminative Industrial Use</i> Name: U.K. Petroleum Products Ltd Location: Station Approach, Banbury, Oxfordshire OX16 8AB Classification: Wholesale non-agricultural intermediate products, inc. waste/scrap	570	Thomsons Trade Directory	446100 240400
57	<i>Potentially Contaminative Industrial Use</i> Name: Cherwell Street Service Station Fint Location: Cherwell Street, Banbury, Oxfordshire OX16 8BA Classification: Fuel: retail sale of automotive fuel	610	Catalist Petroleum Station Database	445800 240500
58	<i>Potentially Contaminative Industrial Use</i> Name: Banbury Service Station Texaco Location: 58 Middleton Road, Banbury, Oxfordshire OX16 8DQ Classification: Fuel: retail sale of automotive fuel	730	Catalist Petroleum Station Database	446300 240800
59	<i>Potentially Contaminative Industrial Use</i> Name: Generec Engineering Location: Unit 8 Thorpe Close, Banbury, Oxfordshire OX16 8SW Classification: Electricity production & distribution (inc. large transformers)	700	Thomsons Trade Directory 1995	447100 240800
60	<i>Potentially Contaminative Industrial Use</i> Name: Components For Industries Location: 3a Thorpe Way, Banbury, Oxfordshire OX16 8SP Classification: Paints, varnishes, printing inks, mastics, & sealants (manufacture)	640	Thomsons Trade Directory 1997	446900 240500
61	<i>Potentially Contaminative Industrial Use</i> Name: Dowco Location: Swan Close Road, Banbury, Oxfordshire OX16 8AQ Classification: Metals: treatment & coating inc. electroplating	670	Thomsons Trade Directory 1997	445900 240700
62	<i>Potentially Contaminative Industrial Use</i> Name: Elite Surface Finishing Ltd Location: Thorpe Way, Banbury, Oxfordshire OX16 8XS Classification: Metals: treatment & coating inc. electroplating	600	Thomsons Trade Directory 1995	446900 240700

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National Radiological Protection Board

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Oxfordshire
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Telephone 01235 831600
Fax 01235 833691



Ordnance Survey

Romsey Road
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Hampshire
SO16 4GU

Telephone 01703 792000
Fax 01703 792404

Report Reference: 14406-1**Site Address:** The Tramway Industrial Estate, BANBURY, Oxfordshire**Company Name:****Grid Reference:** 446600 290160**APC Authorisation Part B**

The following company(s), have Air Pollution Control authorisations as shown below, however, from the information supplied, Landmark is unable to provide a National Grid Reference for the record(s).

Name Elm Grove Garage
Address Station Rd., , Cropedy, Oxfordshire, OX
Authority Cherwell District Council
Permit Reference: Not Given
Permit Date
Process Type Local Authority Air Pollution Control
Description PG1/1 Waste oil burners, less than 0.4MW net rated thermal input
Status Not Given

Name Landrover Parts & Service
Address Edgecote Lane., , Wardington, Oxfordshire, OX
Authority Cherwell District Council
Permit Reference NOT GIVEN
Permit Date
Process Type Local Authority Air Pollution Control
Description PG1/1 Waste oil burners, less than 0.4MW net rated thermal input
Status Not Given

Name Smiths Limestone Ltd
Address Ardley Quarry, , Ardley, Bicester, Oxfordshire, OX
Authority Cherwell District Council
Permit Reference CDC26/93
Permit Date 27-Jan-97
Process Type Local Authority Air Pollution Control
Description PG 3/16 Mobile screening and crushing processes
Status Application has been authorised and any conditions apply to the operator

EA (Water) Prosecutions

The following company(s) have been prosecuted as shown below, however, from the information supplied, Landmark is unable to provide a National Grid Reference for the record(s).

Name Avon Tippitt & Hobbs Contracting Limited
Address Bloxham Brook, BANBURY, Oxfordshire, OX16

Authority	Environment Agency, Thames Region
Details	Environment Times Vol 4, Issue 3, For polluting the Bloxham Brook with silt, when silt pumped from an excavated trench got into the surface water drains leading to the brook.
Hearing Date	12-Feb-98
Verdict	Guilty
Fine	£4,000.00
Costs	£3,062.00

CLIENT DETAILS

Order No. ES14406-1

Customer Ref: Jonathan Owens
 AEA Technology
 Building 26 Culham Laboratories
 ABRINGDON
 Oxon OX14 3JH

SITE DETAILS

Grid Reference 446600 240100

The Stanway Industrial Estate

BANBURY
 Oxfordshire

KEY TO THE LEGEND DATABASE

SITE SETTING

- ✕ Specified Site
- Buffer
- Reference Number
- Several of Type at Location
- ▲ Pylon or Mast

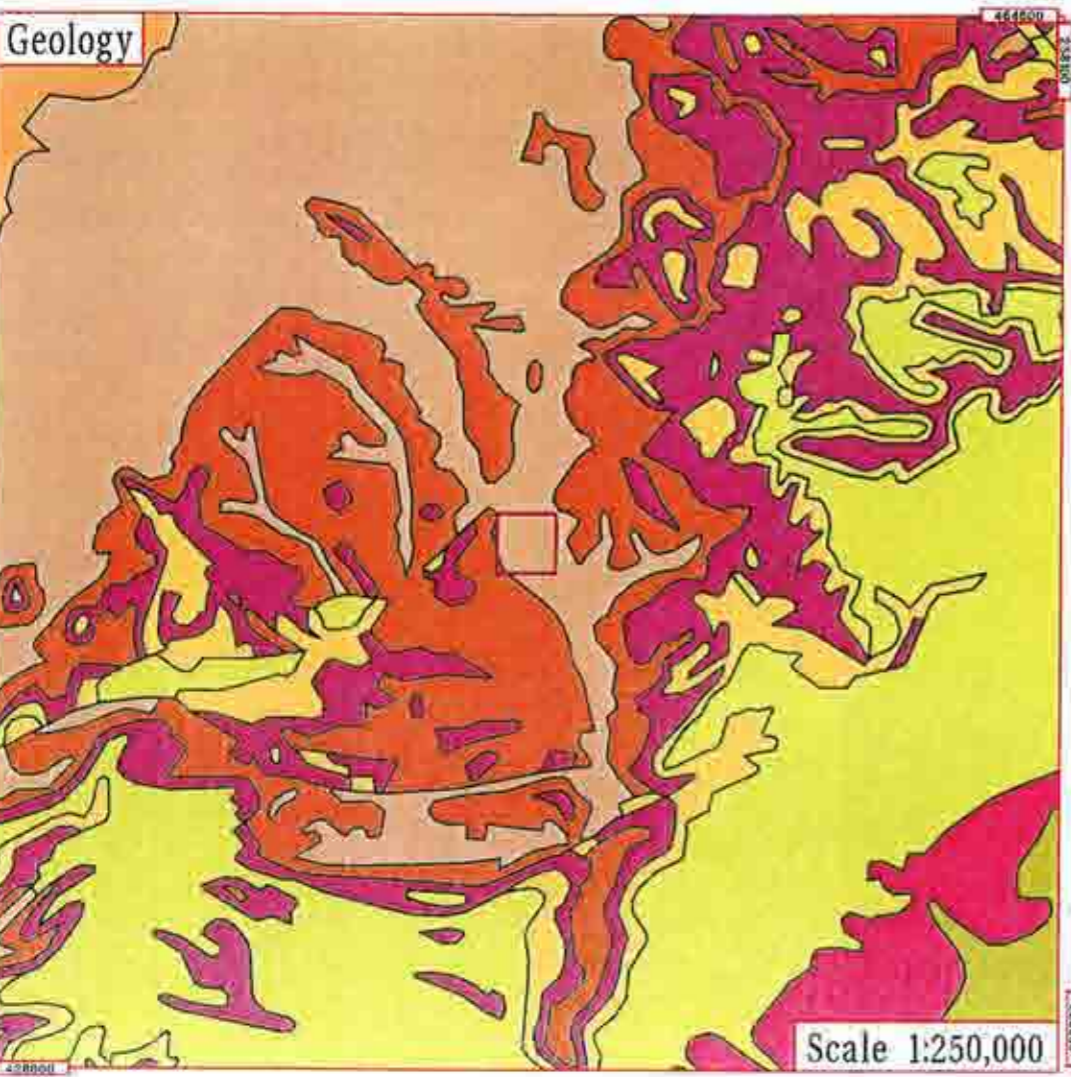
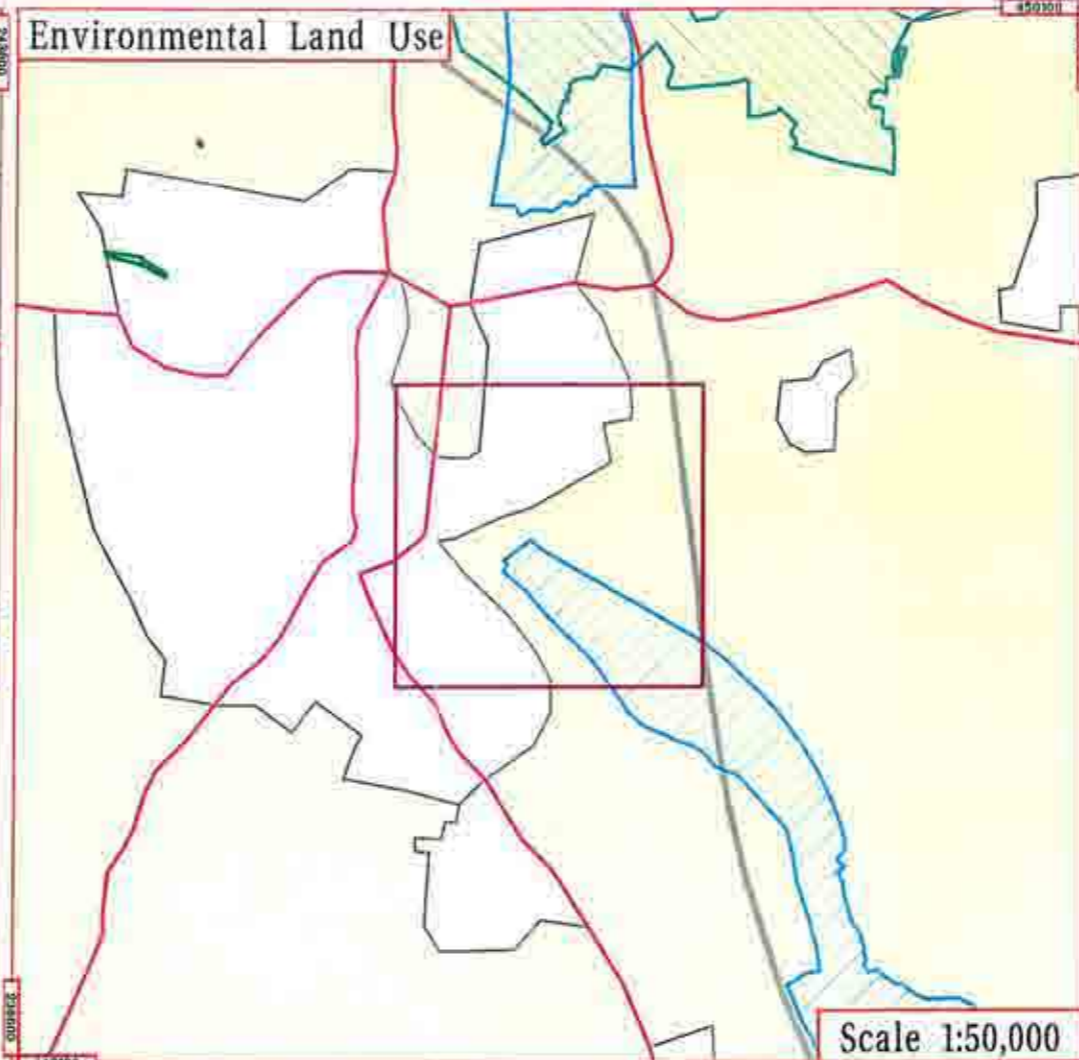
ENVIRONMENTAL SETTING

- ⊗ Landfill
- ▼ BGS Recoded Landfill Site
- ▼ BGS Recoded Mineral Site
- ▲ BGS Burial Site
- ~ River Network and Water Feature
- ◆ Water Abstraction
- ◆ Discharge Consent
- ⊙ Site of Special Scientific Interest

INDUSTRIAL SETTING

- ▲ Integrated Pollution Control
- ▲ Air Pollution Control
- ◆ Red List Discharge Consent
- ▲ Enforcement or Prohibition Notice
- ▲ Prosecution Relating to Authorised Process
- ▲ Registered Radioactive Substance
- ✕ Planning Application (of Possible Contaminative Use)
- Waste Treatment or Disposal Site
- Waste Transfer Site
- ▲ Integrated Pollution Control Registered Waste Site
- ✕ Planning Hazardous Substance Consent
- ✕ Planning Hazardous Substance Enforcement
- ★ Potentially Contaminative Use
- ◆ Prosecution Relating to Controlled Waters
- Pollutive Incident Relating to Controlled Waters

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CLIENT DETAILS Order No. ES14406-1
 Customer Ref: Jonathan Owens
 AEA Technology
 Building E6 Culham Laboratories
 ABINGDON
 Oxon OX14 3DB

SITE DETAILS Grid Reference 446600 240100
 The Tramway Industrial Estate

 BANBURY
 Oxfordshire

General Legend

Urban Areas
 Motorways
 Extent of search

Guide to the Flood Plain and River Network Map

0 - 1 m estimated 100 yr flood depth
 1 - 2 m estimated 100 yr flood depth
 over 2 m estimated 100 yr flood depth
 River Network and Water Feature

The flooded areas have been generated using a generalised technique and should not, by themselves, be used to infer that specific areas are or are not at risk of inundation. Flood risk at any specific location may be influenced by local factors - not least flood defences - that have not been taken into account.

Guide to the Environmental Landuse Map

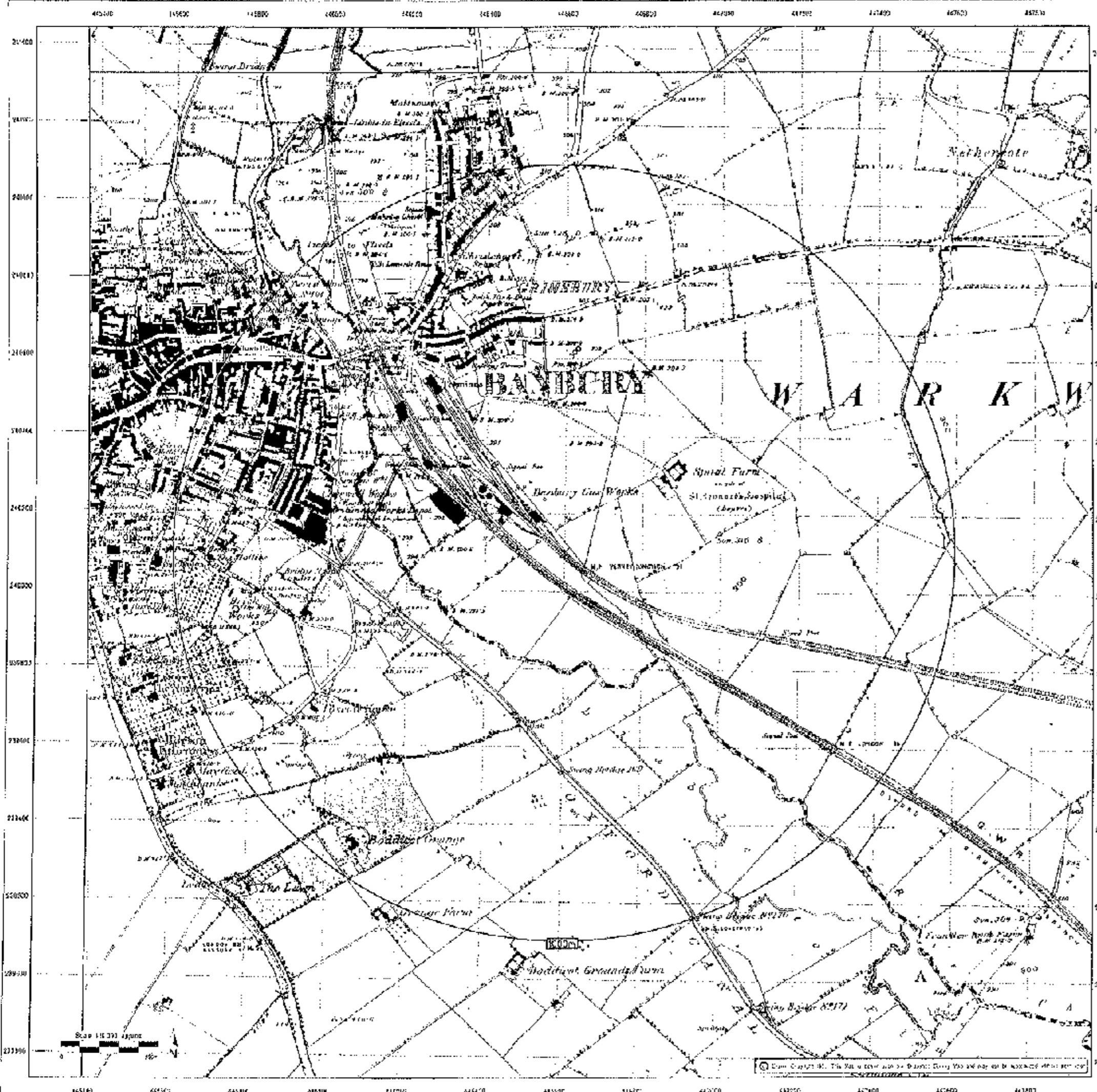
Area of Outstanding Natural Beauty
 Local Nature Reserve
 Forest Park
 Nitrate Sensitive Area
 Marine Nature Reserve
 National Park
 Nitrate Vulnerability Zone
 Site of Special Scientific Interest
 National Nature Reserve
 Environmentally Sensitive Area

Guide to the Geology Map

Middle Lias
 Great Oolite
 Oidhaven, Blackheath, Woolwich, and Reading and Thames beds
 Lower Lias
 Triassic mudstones (including Keuper Marl, Dogger and Rhaetic)
 Upper Lias
 Oxford Clay and Kellaways Beds
 London Clay
 Kinrosside Clay and Amottill Clay
 Interior Oolite
 Chalk including Red Chalk
 Upper Greensand and Gault
 Corallia
 Conglomerate
 Water / Unclassified Geology

Guide to the River Quality Map

River Quality B
 River Quality A
 Sea
 Canal Quality C
 Canal Quality D
 River Quality C
 River Quality D



EnviroCheck

Environmental Site Sensitivity Data

CLIENT DETAILS

Order No. EH14406-1

Contract Ref: Jonathan Davis
 AEA Technology
 Building 16 Culham Laboratories
 ABBINGTON
 OXON OX14 3DB

SITE DETAILS

Grid Reference 446800 240100

The Tramway Industrial Estate

BANBURY
 Oxfordshire

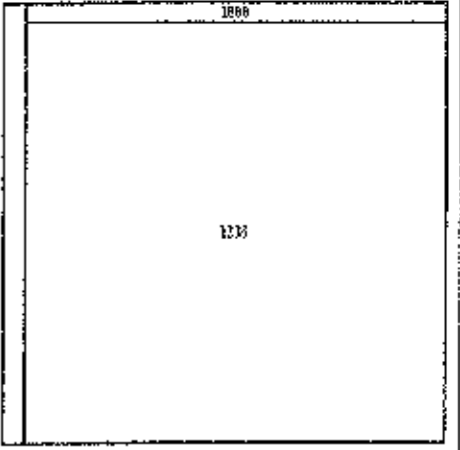
Historical Map Legend

Quarry	Shingle	Railway over Road	Road over Railway
Gravel Pit	Sand Pit	Level Crossing	Railway over River
Other Pitt	Mixed Wood	Road over River or Canal	Road over Stream
Marsh	Rough Pasture	Sunken Road	Raised Road
Arrow denotes flow of water	Sketched Contour	Instrumental Contour	

NORTHAMPTONSHIRE county

The 25000 scale maps above were reproduced from maps produced by the Ordnance Survey for England, Wales and Scotland in the 1850s. In 1853 the 25000 scale was adopted for mapping of the county. These maps were used to produce the 1:25000 scale. The published maps given on the right therefore show sites which were also the 25000 scale. Errors in the OS maps were based on the Cassini Map, with subsequent errors of a single county or group of counties, giving rise to significant inaccuracies in early maps.

In 1911 a Provisional Edition was produced which showed the 25000 mapping from 1850 to 1911. The maps appear undistorted, with all military camps and other strategic sites marked. The maps were produced in conjunction with the Ordnance Survey. In 1960, the 1:25000 maps were produced using the Ordnance Survey's Photogrammetric System. The resulting maps are more accurate than the 1850s maps, appearing every 10 years or so for other sites.



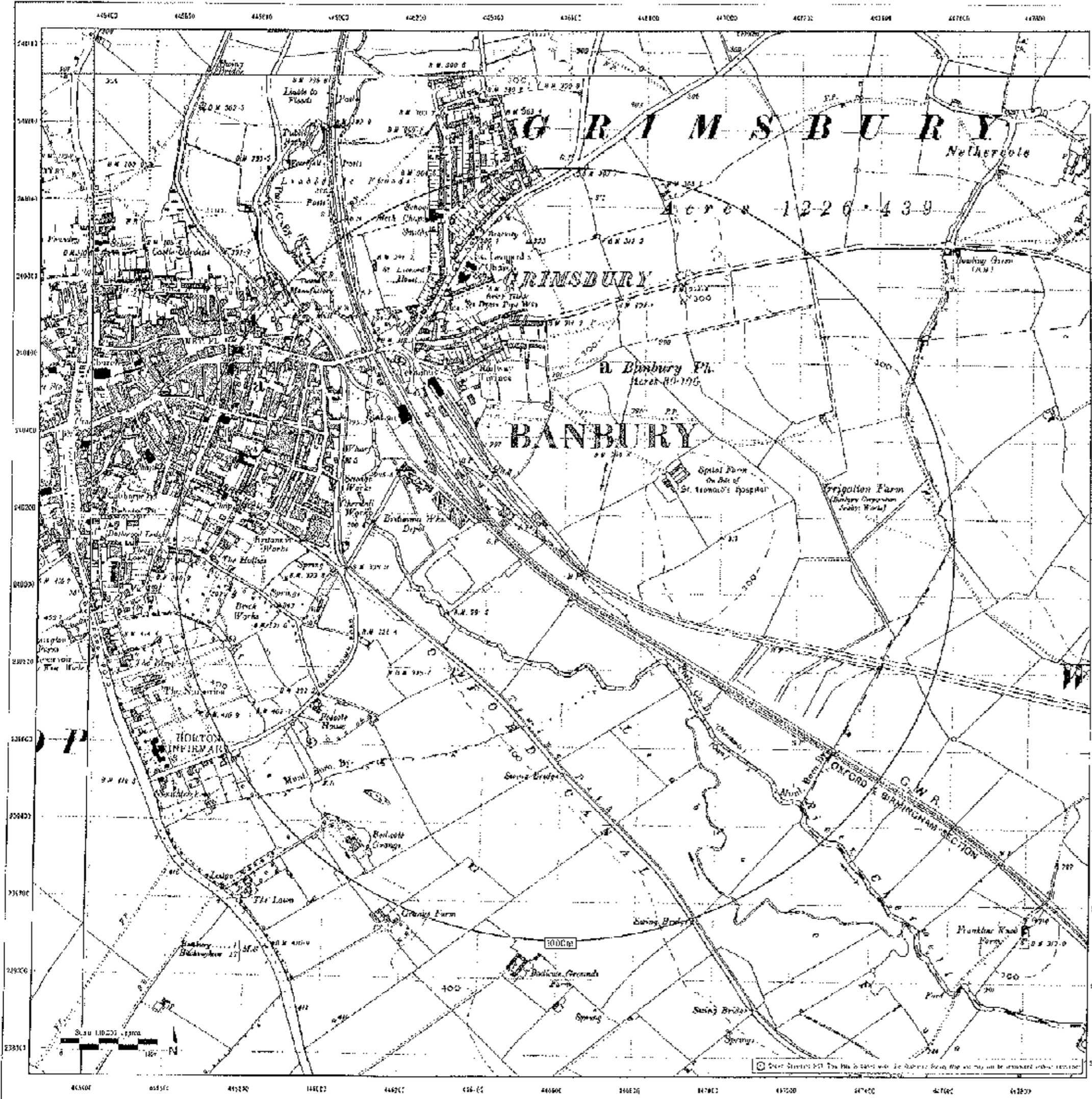
Date of Publication



Ordnance Survey
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CLIENT DETAILS Order No. E114406-1



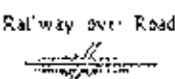
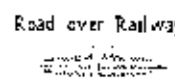


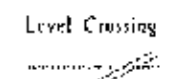


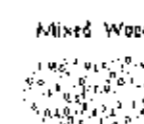
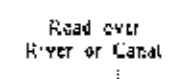
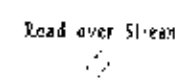
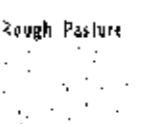
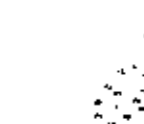
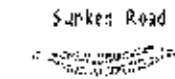
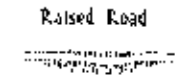
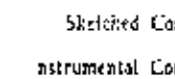

Customer: Mr Jonathan Owens
 ABA Technology
 Building 16 Culham Laboratories
 ABINGDON
 OXON OX14 3DB

SITE DETAILS Grid Reference 446600 240100

The Crayway Industrial Estate

BANBURY
 Oxfordshire

Historical Map Legend

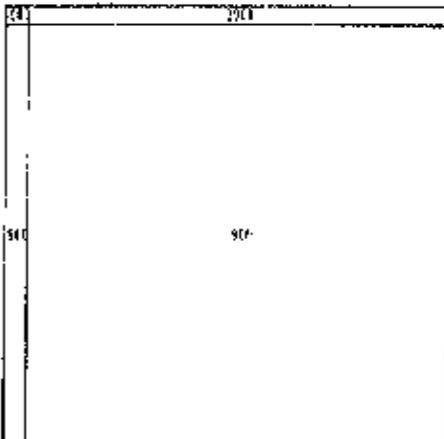
			
			
			
			
			

→ Arrow denotes flow of water

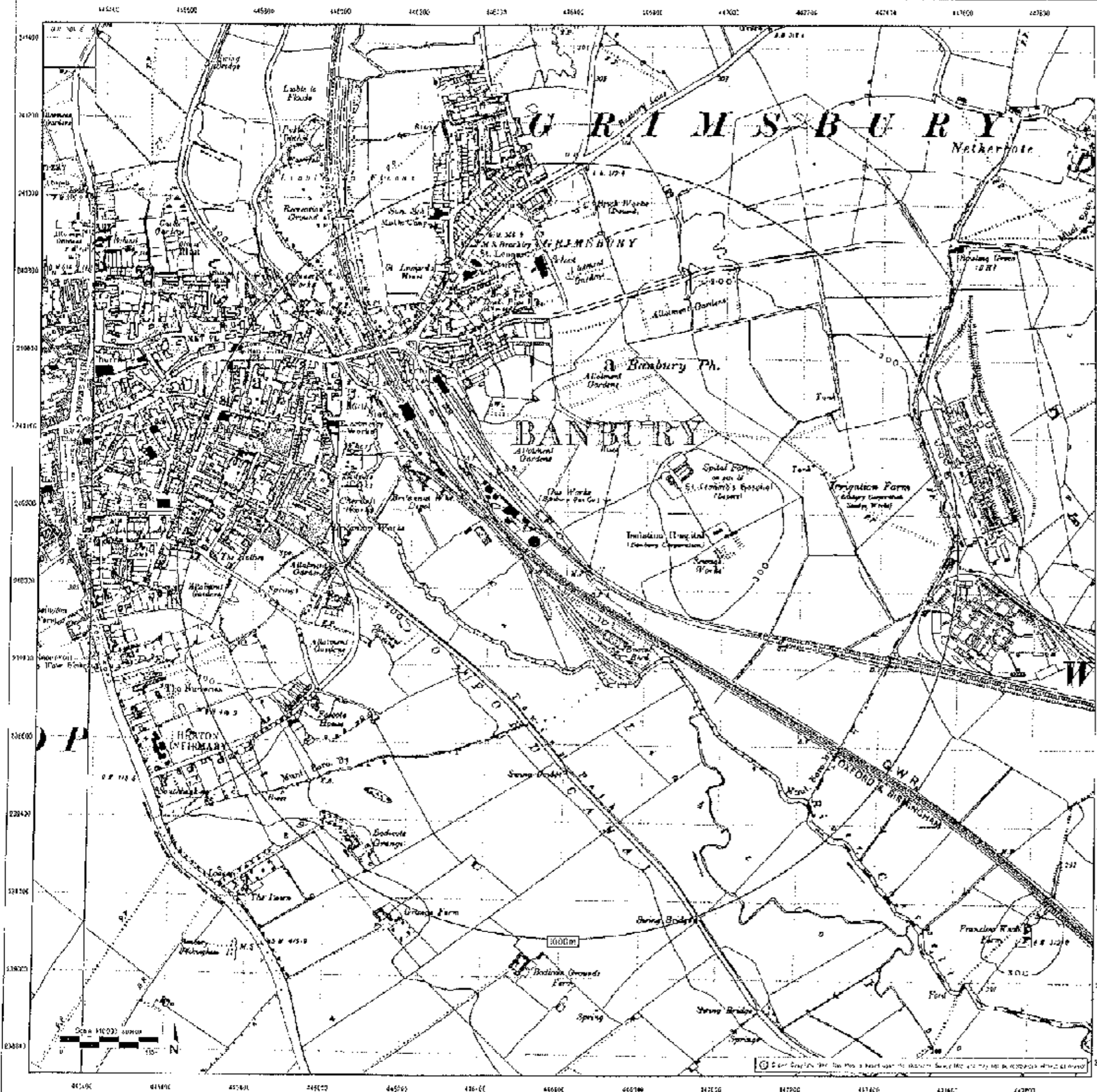
OXFORDSHIRE COUNTY

This historical map shows were reproduced from maps predominantly held at the time adapted for England, Wales and Scotland in the 1840s. An 1848 the 1:2500 scale was adopted for mapping urban areas, that maps were used to update the 1:2500 maps the published title gives on the right the date is often more recent than the surveyed date. Before 1848, if OS maps were based on the Cassin's edition, with subsequent maps of a single survey or group of surveys, giving rise to high-level inaccuracies in building areas.

In the late 1980s, a 'revision' edition was produced, which updated the 1:2500 mapping from a number of sources. The maps appear unaltered, with all military camps and other features removed. These maps were initially associated with the National Grid. In 1970, the first 1:2500 maps were produced using the Transverse Mercator projection. The results were corrected and reprinted, with 20% edition appearing every 10 years or so for urban areas.



Date(s) of Publication



EnviroCheck

Environmental Site Sensitivity Data

CLIENT DETAILS Order No. EH14406-1
 Customer Ref: Jonathan Owens
 NEA Technology
 Building 16 Caversham Laboratories
 ABINGDON
 Oxon OX10 3DE

SITE DETAILS Grid Reference 446000 243600
 The Parkway Industrial Estate
 BANBURY
 Oxfordshire

Historical Map Legend

Quarry	Shingle	Railway over Road	Road over Railway
Gravel Pit	Sand Pit	Level Crossing	Railway over River
Other Pits	Mixed Wood	Road over River or Canal	Road over Stream
Rough Pasture	Marsh	Sunken Road	Raised Road
		Sketched Contour	Instrumental Contour

Arrow denotes flow of water

OXFORDSHIRE county
 The historical maps shown were reproduced from maps predominantly held at the scale adopted by England, Wales and Scotland in the 1800s. In 1928 the 1:25,000 scale was accepted for mapping with areas those maps were used to update the 1:50,000 maps. The published data given on the right therefore is often more recent than the original data. Before 2004, all OS maps were based on the Control Triangulation with independent surveys of a single section or group of sections giving rise to significant scale errors in boundary areas.
 In the late 1990s, a European Edition was produced, which updated the OSNED mapping from a number of sources. This maps appear as shaded areas on all modern maps and other digital data sources. These maps are a valuable complement to the historical data. In 2003, the first 1:25,000 map was produced using the European Triangulation. The resulting ground truth data, however, will now allow the original map to be updated to the latest data.

Date(s) of Publication



Value Added Reseller

Environmental Information Group Limited
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EnviroCheck

Environmental Site Sensitivity Data

CLIENT DETAILS

Customer Ref: Jencikan Owens
AEA Technology
Building 88 Culham Laboratories
ABINGDON
OXON OX14 3DU

Order No. EI14400-1

SITE DETAILS

The Tramway Industrial Estate

Grid Reference 446600 240100

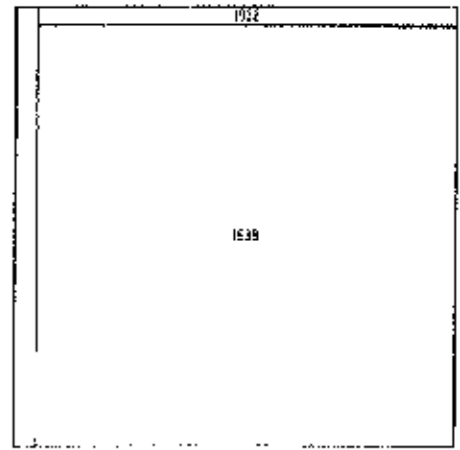
BANBURY
Oxfordshire

Historical Map Legend

Arrow denotes flow of water

NORTHAMPTONSHIRE county
The historical maps shown were reproduced from maps taken from a copy held at the web address for Oxford, Wales and London in the 1960s to 1980s. The 1850s edition was adopted for mapping later maps. These maps were used to plan the 1:25,000 maps. The published date given on the right therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini projection, with subsequent surveys of a scale less than 1:25,000 being projected onto the Cassini projection. This may result in significant inaccuracies in outline shapes.

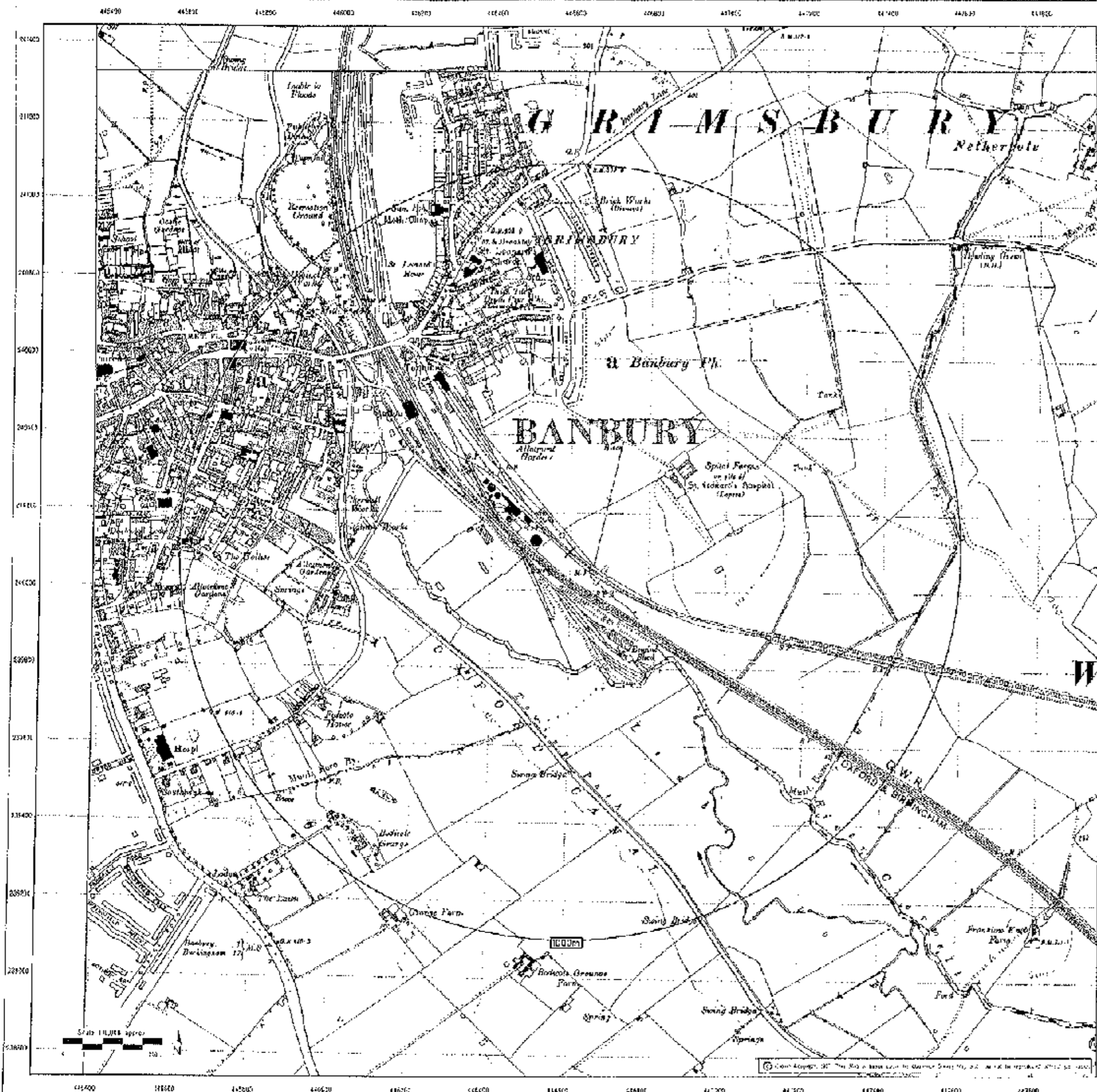
In the late 1970s, a Revised Edition was produced, which updated the 1:25,000 edition with a number of sources. The maps appear individual, with military camps and other sites being revised. These maps are generally correlated with the National Grid. In 2001, the first 1:25,000 maps were produced using the Transverse Mercator projection. The revised ground data used will therefore not now be used appearing every 6 years or so for other maps.



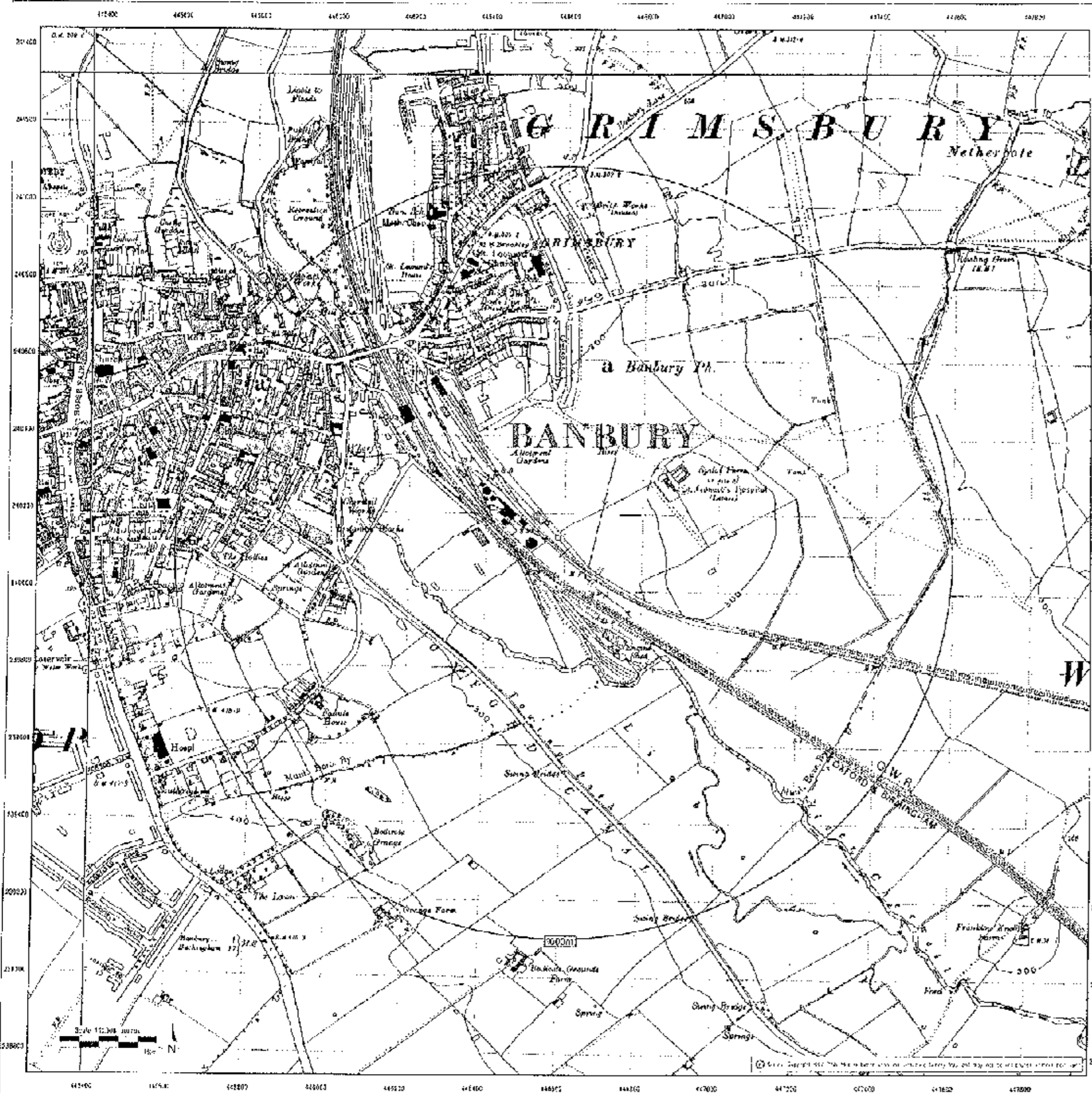
Date(s) of Publication

Ordnance Survey
Value Added Reseller

Environmental Information Group Limited
1 Abbey Court, Eagle Way, Swanton
Peterborough PE1 2JY
Tel: 01753 650111 Fax: 01753 650112



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EnviroCheck

Environmental Site Sensitivity Data

CLIENT DETAILS Order No. EI-M4400-1
 Customer Ref: Jonathan Owens
 SEA Technology
 Building 88 Colliers Laboratories
 ABINGDON
 Oxon OX14 3DH

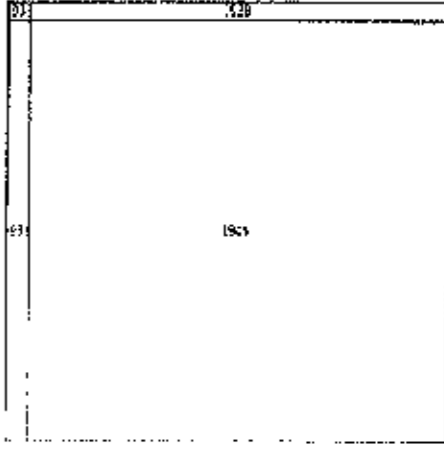
SITE DETAILS Grid Reference 446600 240000
 The Tramway Industrial Estate
 BANBURY
 Oxfordshire

Historical Map Legend

Quarry	Shingle	Railway over Road	Road over Railway
Gravel Pit	Sand Pit	Level Crossing	Railway over River
Other Pits	Road over River or Canal	Road over Stream	Sinker Road
Mixed Wood	Rough Pasture	Raised Road	Sketched Contour
March	Instrumental Contour	Arrow denotes flow of water	

OXFORDSHIRE county
 The Historical maps shown were reproduced from maps produced under the 1st and 2nd editions of the Ordnance Survey. The maps were produced in the 1840s. In 1854 the 25,000 scale was adopted for maps of urban areas. These maps were used to update the 1840s maps. The printed date given on the right hand side of the map sheet is the date of the survey. Since 1947, all OS maps have been based on the Geoid Acreage, with subsequent updates of a single county or group of counties. Any error in significant inaccuracies in urban areas.

In the late 1980s, a National effort was produced, which updated the 1840s maps using a number of sources. The maps appear to have been produced using a number of sources. The maps were produced using a number of sources. The maps were produced using a number of sources. The maps were produced using a number of sources.



Date(s) of Publication



Ordnance Survey
 The National Mapping Agency
 Victoria Road, Southampton
 SO9 7BA
 Tel: 01703 600000 Fax: 01703 600001



EnviroCheck

Environmental Site Sensitivity Data

CLIENT DETAILS

Customer: Ref Jonathan Owens
AEA Technology
Building 66 Culham Laboratories
ABINGDON
OXON OX14 2DE

Order No. EH14406-1

SITE DETAILS

The Tramway Industrial Estate

Grid Reference 446600 240'00

BANDDOLLY
Oxfordshire

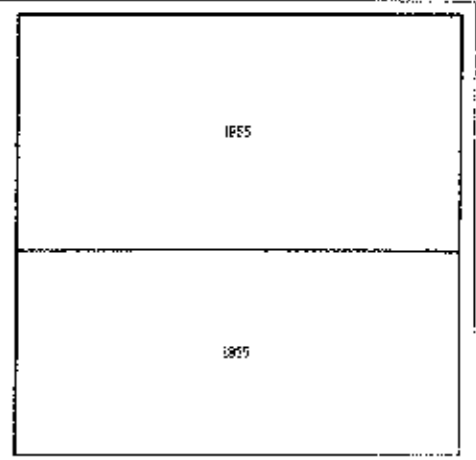
Historical Map Legend

Quarry	Shingle	Railway over Road	Road over Railway
Gravel Pit	Sand Pit	Level Crossing	Railway over River
Other Pits		Road over River or Canal	Road over Stream
Mixed Wood	Rough Pasture	Road over Stream	Sunken Road
Marsh		Sunken Road	Raised Road
		Sketched Contour	Instrumental Contour

Arrow denotes flow of water

Ordnance Survey Plan

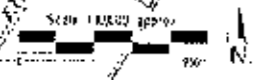
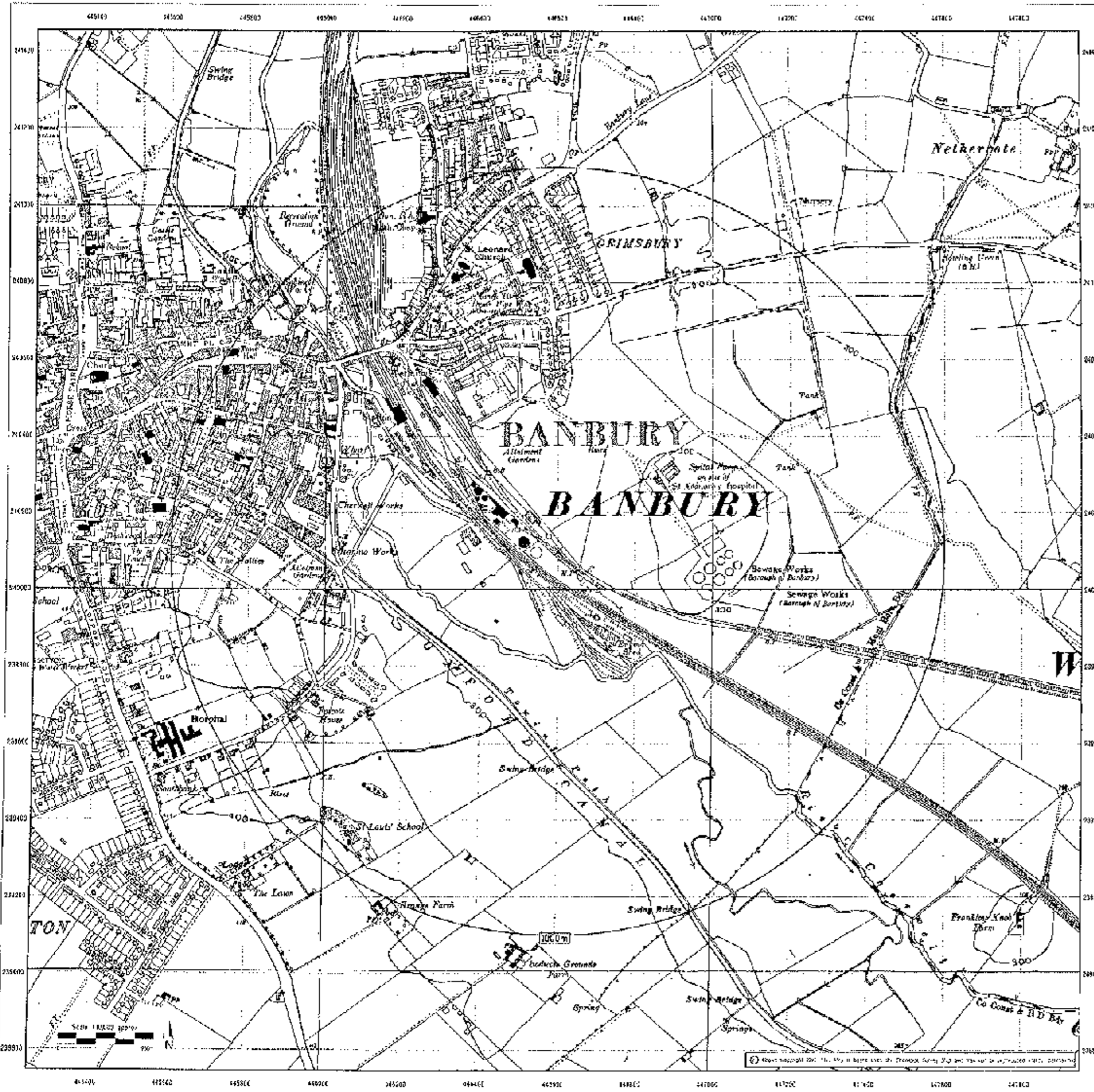
The historical maps shown were reproduced from maps published by the Ordnance Survey in 1865 and 1885. The 1865 map was the 1:50,000 scale map which was used for the 1:25,000 scale map. The 1885 map was the 1:25,000 scale map which was used for the 1:10,000 scale map. The 1865 map was the 1:50,000 scale map which was used for the 1:25,000 scale map. The 1885 map was the 1:25,000 scale map which was used for the 1:10,000 scale map. The 1865 map was the 1:50,000 scale map which was used for the 1:25,000 scale map. The 1885 map was the 1:25,000 scale map which was used for the 1:10,000 scale map.



Date(s) of Publication

Value Added Reseller

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CLIENT DETAILS Order No. EH'1108-1



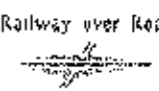
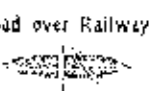

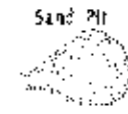
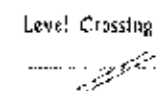


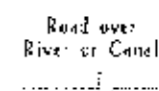
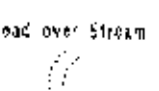
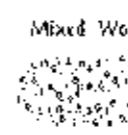

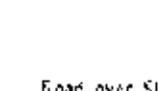
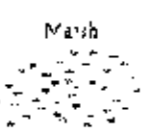
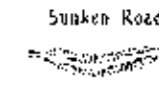
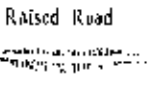
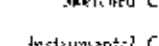
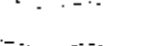
Customer Ref: Jonathan Owens
 AEA Technology
 Building 28 Colham Laboratories
 ABINGDON
 Oxon. OX14 3UB


SITE DETAILS Grid Reference 445600 240100

The Trainway Industrial Estate

BANDBY
 Oxfordshire

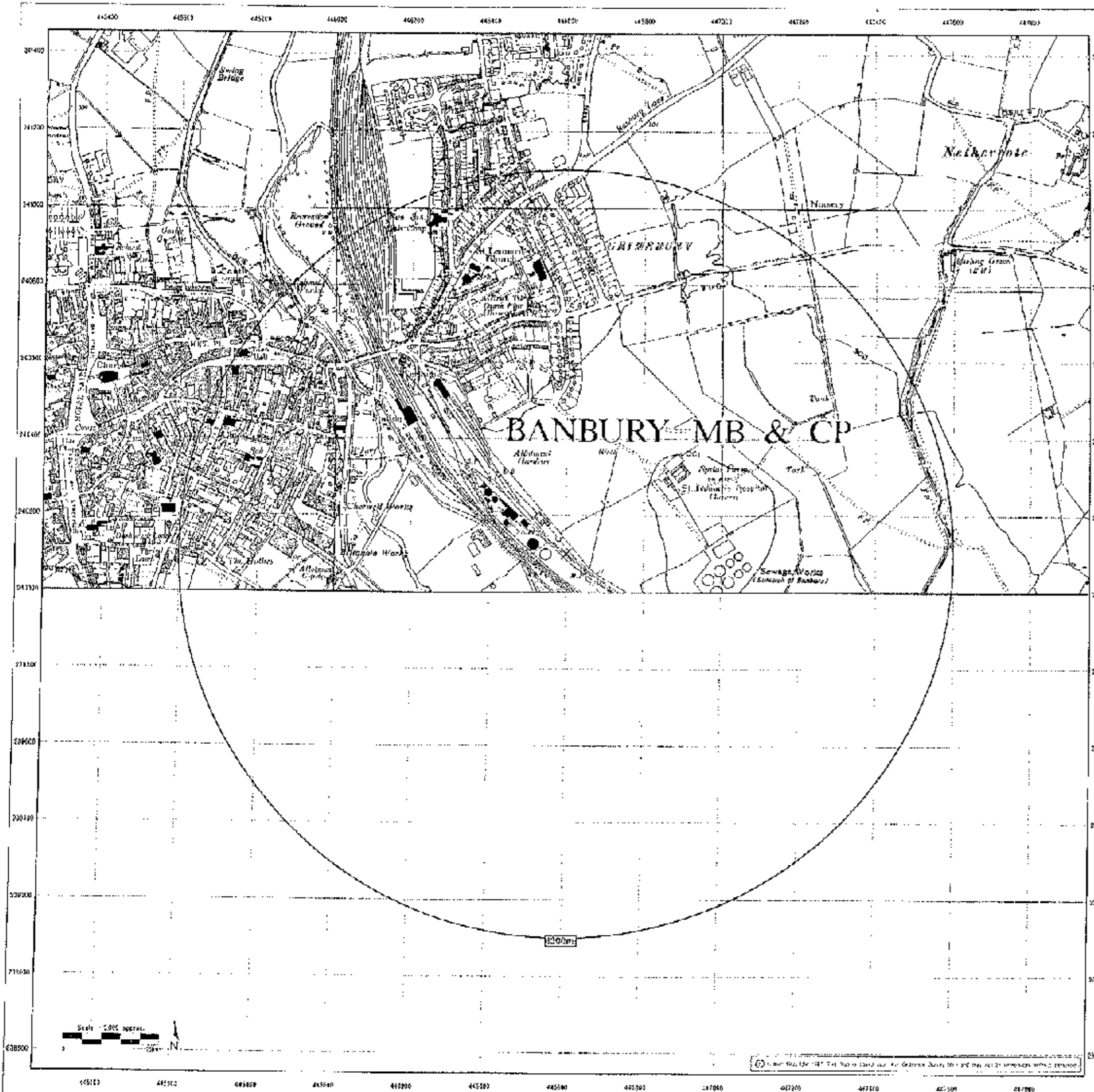
Historical Map Legend

 Quarry	 Shingle	 Railway over Road	 Road over Railway
 Gravel Pit	 Sand Pit	 Level Crossing	 Railway over River
 Other Pits		 Road over River or Canal	 Road over Stream
 Mixed Wood	 Rough Pasture	 Road over Stream	
 Marsh		 Sunken Road	 Raised Road
		 Sketched Contour	 Instrumental Contour

 Arrow denotes flow of water

Ordnance Survey Plan
 The historical maps shown were reproduced from maps predominantly held at the scale adopted in England, Wales and Scotland in the 1840s. In 1854 the 1:2500 scale was adopted for mapping urban areas; these maps were used to produce the 1:2500 map. The 1:2500 map is the first of its kind to be published in the UK since the survey of the 1840s. All OS maps were based on the Central British Isles, which included a grid of a high water or mean of low water, plus the 12 significant intertidal or outlying areas.
 In the mid 1970s a fractional edition was produced, which updated the 1:2500 mapping for a number of years. The maps appear as double-lined, all military maps are refer to a single line reference. These maps were initially used with the National Grid. In 1976 the first 1:2500 maps were produced using the Ordnance Survey's new system. The system was updated with the addition of a new edition appearing every 2 years of all the urban areas.

Date of Publication





EnviroCheck

Environmental Site Sensitivity Data

CLIENT DETAILS

Customer Ref: Jonathan Owens
ARA Technology
Building 36 Culham Laboratories
OXFORD
OX4 3DQ

Order No. E-11408-1

SITE DETAILS

The Tramway Industrial Estate

Grid Reference 446600 240100

DANBURY
Oxfordshire

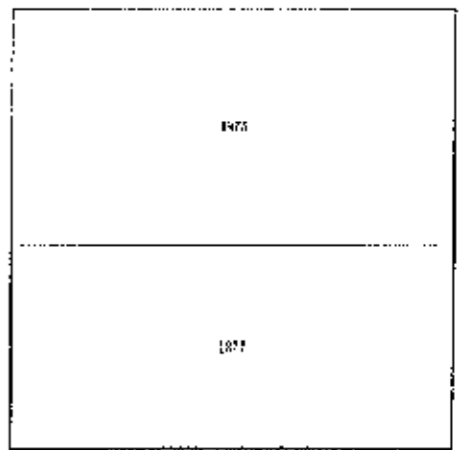
Historical Map Legend

Arrow denotes flow of water

Ordnance Survey Plus

The historical maps shown were reproduced from maps produced by the Ordnance Survey for England, Wales and Scotland in the 1840s, in 1856 the 25:50 scale was adopted for mapping Great Britain. These maps were a milestone in the history of mapping. The historical data given in this report is taken from the 1840s maps. The Ordnance Survey maps were based on the Great Trigonometrical Survey of the 18th century, which was a survey of a single country in parts of Britain, plus a series of smaller surveys in other areas.

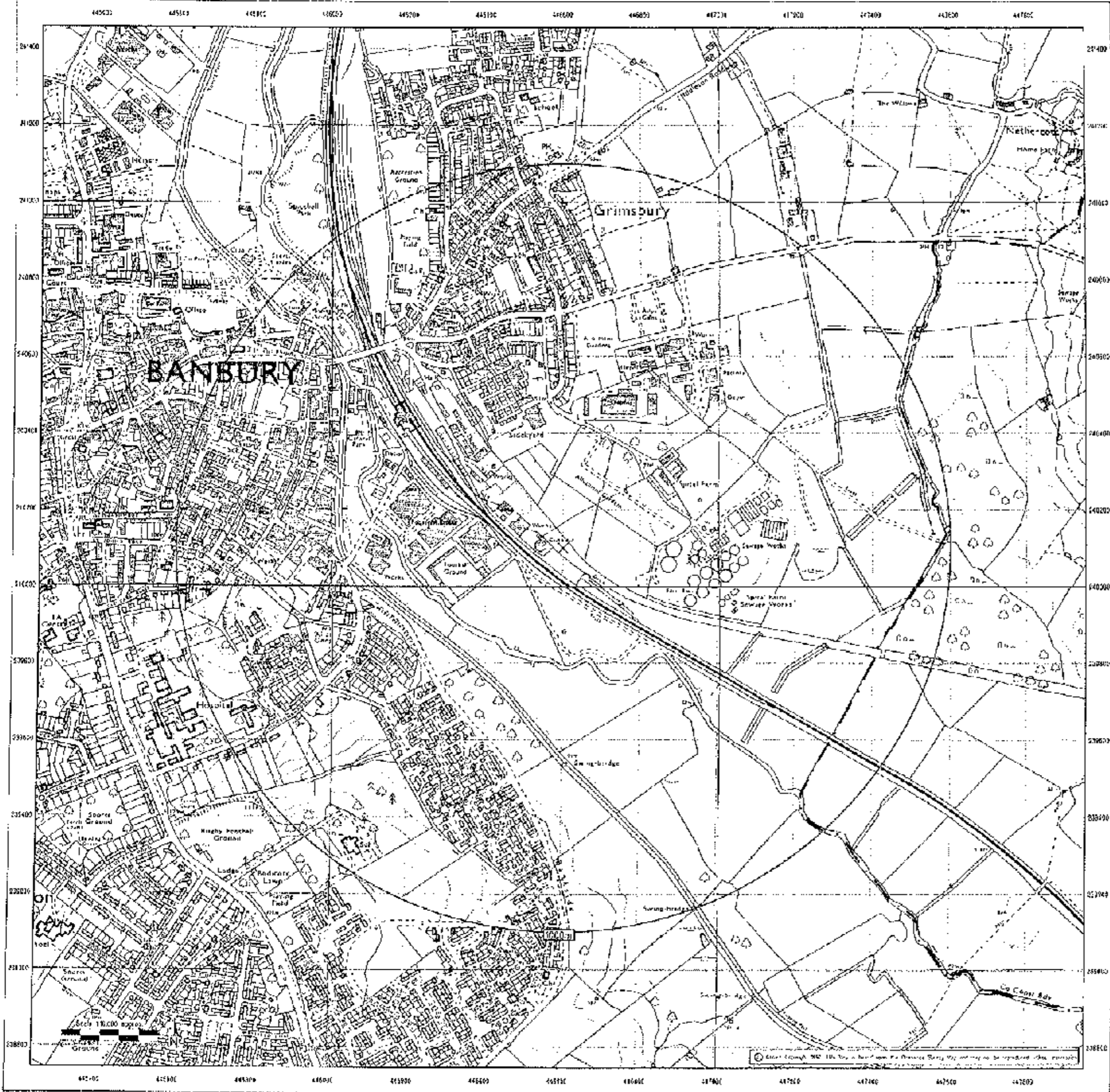
In the late 1840s a 'Provisional Edition' was produced, which showed the 25:50 mapping from a number of sources. The maps appear unaltered, with all railway lines and other structures shown. These maps were used in conjunction with the National Grid. In 1971 the first 1:50,000 scale map was produced using the Ordnance Survey data. The original maps continued until recently, with new editions appearing every 10 years or so for urban areas.

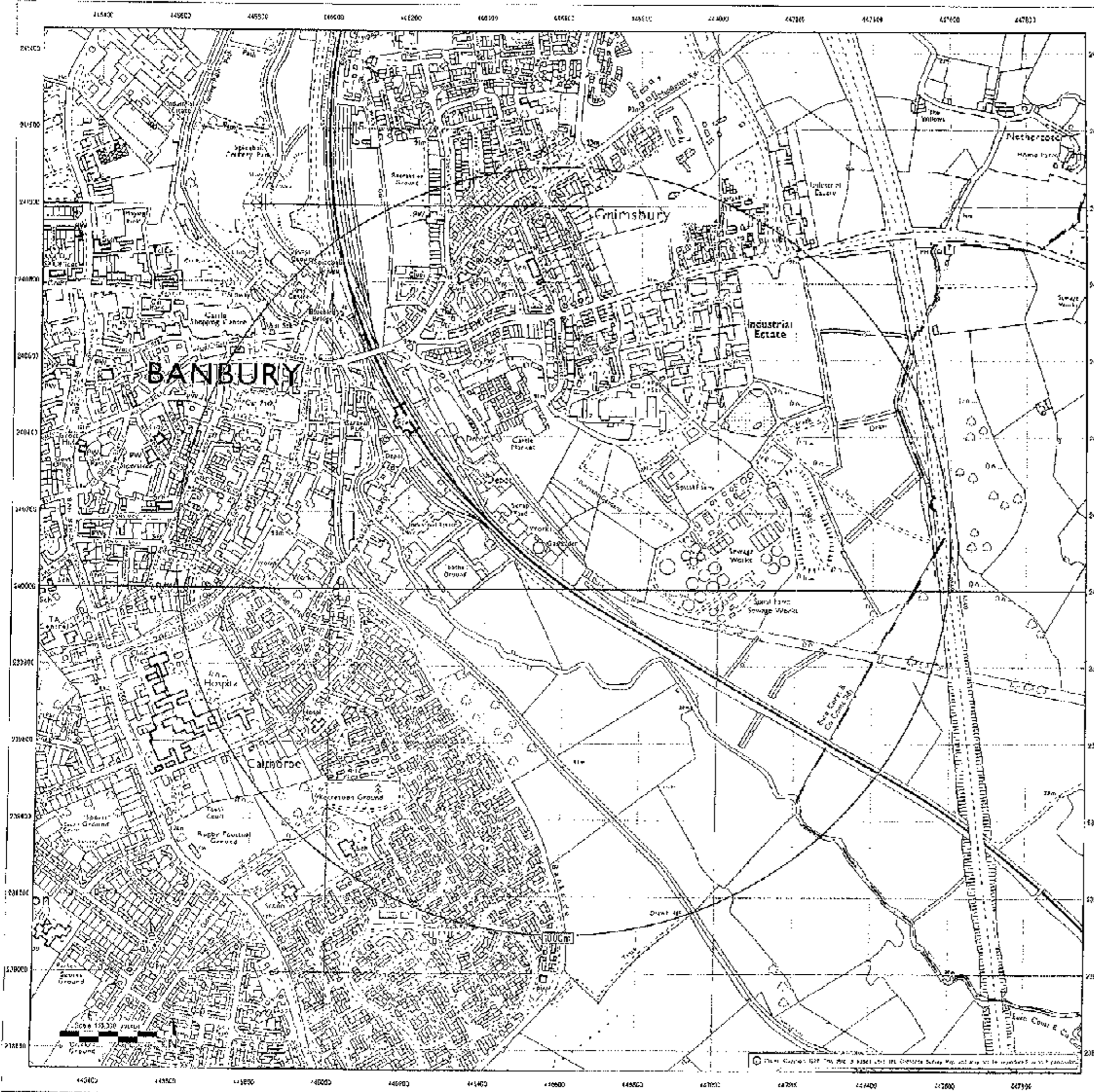


Date(s) of Publication

View Aerial Basemap

Landmark Information Group Limited
7 Abbot Court High Way, Sutton
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EnviroCheck

Environmental Site Sensitivity Data

CLIENT DETAILS

Order No. EH14406-1

Customer Ref: Jonathan Owens
 AEA Technology
 Building 66 Culham Laboratories
 ABBINGDON
 Oxon OX14 3DD

SITE DETAILS

Grid Reference 446600 240100

The Railway Industrial Estate

BANBURY
 Oxfordshire

Historical Map Legend

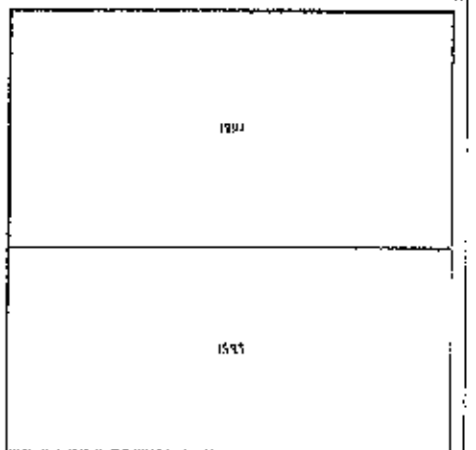
Clutter	Shingle	Railway over Road	Road over Railway
Grave Pit	Sand Pit	Level Crossing	Railway over River
Other Pits	Mixed Wood	Road over River or Canal	Road over Stream
Rough Pasture	Marsh	Sunken Road	Raised Road
		Sketched Contour	Instrumental Contour

→ Arrow denotes flow of water

Ordnance Survey Part

The 1:50,000 maps shown were reproduced from maps produced in 1955 in the scale adopted for England, Wales and Scotland in the 1950s. In 1955 the 1:50,000 scale was obsolete, but mapping which dates from that time was used to produce the 1:50,000 maps. The publication of a map in the 1950s is also some years later than the survey date. In 1958 all 25 maps were based on the Control Photographs, with a vertical control of a 10% or so of points, giving rise to an significant inaccuracies in parking areas.

In the late 1960s a final edition was produced, which updated the 1:50,000 mapping from a number of sources. The maps appear unaltered, with all military camps and other strategic sites removed. These maps were initially mapped in 1960 by the Ordnance Survey. In 1970 the 1:50,000 maps were produced using the Topographic Survey System. The 1:50,000 series remained until recently, with new editions appearing every 15 years or so in some areas.



Date(s) of Publication



Value Added Tax 958445



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 7 Abbe Close, Epsom, Surrey
 Surrey E9 2BQ
 Telephone 01832 442229 Fax 01832 517000

Appendix 2

Trial Pit/Borehole Logs

1

2

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	K GAS	WATER	DESCRIPTION	Depth	LEGEND	MOLE
0.3m	Disturbed Soil			Dark brown sandy topsoil with abundant roots and debris (MADE GROUND)			
1.0				Dark brown and black coarse loose sandy medium gravel with abundant ash and clinker. Occasional red brick and concrete.	1.0		
1.6m	Soil			Strong hydrocarbon predominantly phenolic associated with oil stained fill. Free tar oil product on surface of water. Pipe located at 1.2m undamaged. Trial pit relocated slightly to avoid any damage. Bricks more frequent with depth (MADE GROUND)			
2.0m	Soil			Grey sandy fine clay with occasional gravel at 2.0m. Some slight oil staining at surface. (Alluvium)	2.0		
3.0				log completed at 2.20m.	3.0		

REMARKS: Fast water ingren at 1.2m.
Only water samples taken (1L + 2 vials)



CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 1
PROJECT: Banbury Gas Works

CLIENT: Gredons
PROJECT No: 32163001

CALLER: NMS
LOGGER: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAC	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.2	Soil			Brown medium sand in loose clay matrix. Abundant nickel debris (MADE GROUND) Cement and soft brick horizon (MADE GROUND)			
1.0				Dark grey-black sandy matrix with medium to large rounded gravel. Damp at 1.0m	1.0		
1.4	Soil			Strong hydrocarbon odour at 1.0m. Strong phenolic odour. Free product with water.			
2.0				Pipe encountered at 2.0m. No damage observed (MADE GROUND)	2.0		
3.0				log completed at 2.0m.	3.0		

REMARKS: Water Ingress at 1.0m.



CULHAM, ABINGDON, OXON
TELEPHONE: 01235 483 181

TRIAL PIT NUMBER: TP 2
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HMS

LOGGER: (U)

SCALE
1:45 approx.


TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LOGS/NO	HOLE #
0.3	Soil			Brown unconsolidated sandy topsoil with abundant roots (MADE GROUND) Concrete and red brick fragment (MADE GROUND)			
1.0	Soil			Dark brown-black stained medium subangular gravel in sandy matrix. Abundant ash occasional with clinker. Some brick and metal all included (MADE GROUND). Compacted concrete - pale yellow/grey (MADE GROUND)	1.0		
2.0				Brown/grey loose coarse sandy clay with gravel occasional. (MADE GROUND)	2.0		
3.0	Soil			Darker brown grey silty sand matrix with gravel. Black oily stained appearance associated with volatile hydrocarbon odour. Possibly phenolic. More sandy with depth. (MADE GROUND) TERRACE GRAVELS?	3.0		
				log completed at 3.2m.			

REMARKS: Water ingrown at 1.0m

	TRIAL PIT NUMBER: TP 3	DRILLER: UMS
	PROJECT: Banbury Gas Works	LOGGER: CW
CLIENT: Grundons	SCALE 1:45 approx.	
CULHAM, ABINGDON, OXON. TELEPHONE: 01235 493 181	PROJECT No: 32163001	

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LAGER	HOLE
0.3	Silt			Grass cover with medium dense brown coarse sand gravel with abundant roots and occasional gravel (MADE GROUND)			
1.0				Medium sandy matrix with gravel (subrounded) including brick fragments and concrete (MADE GROUND).	1.0		
1.1	Silt			light grey/yellow very sandy sil. Occasional gravel and orange sand occasional (MADE GROUND).			
2.0				Black loose v. sandy clay with occasional gravel. Hydrocarbon Odour. (Alluvium)	2.0		
2.5	Silt						
3.0				Fine grey brown clay Very silty. (Alluvium.)	3.0		

REMARKS



CULHAM, ABINGDON, OX10N
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 4
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRAWER: HMS
LOGGER: CW

SCALE
1:45 approx

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.3	Soil			Brown sandy loam with coarse granular (MADE GROUND)		X	
1.0				Medium brown soft clayey sand with abundant gravel. Soil and concrete fill with occasional black contamination strong phenolic and rony odour. (MADE GROUND)	1.0	X	
1.9 2.0	Soil			loose black clayey sand with abundant medium gravel. (MADE GROUND)		X	
2.0				Orange clayey sand very loosely compacted and wet at 3.0m. Only hydrocarbon odour. (Aluminum?)	2.0	X	
3.0					3.0		
3.3	Soil						
				log completed at 3.40m.			

REMARKS

Water ingren at 3.2m
 Pit sides collapsing at 2.5m depth



CULHAM, ABINGDON, OXON.
 TELEPHONE 01235 463 187

TRIAL PIT NUMBER : TP 5
 PROJECT : Banbury Gas Works

CLIENT : Grundons
 PROJECT No: 32163001

DRAWN: MMS
 LOGGER: CW

SCALE
 1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LOGGING	HCL #
0.4	Sid			Concrete cover (MADE GROUND).			
1.0				Medium to large gravel, with bricks, rubble, concrete pieces in black stained sandy matrix. Predominant grey silt and strong phenolic odour. (MADE GROUND).	1.0		
1.9 2.0	Sid			Soft brown sand with subrounded gravel, becoming sandier with depth. Bricks, concrete rubble and metal fill at 2.0-2.6m. Water ingren with free product. (MADE GROUND)	2.0		
2.6	Sid			log completed at 2.6m.	3.0		

REMARKS

Free water ingren at 2.0m



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 6
PROJECT: Eanbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HNS
LOGGER: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.4	Snd			Concrete cover (MADE GROUND). Soft medium gravelly sand. Abundant concrete and red brick building rubble. (MADE GROUND)			
1.0				Dark grey/black stained gravel in sandy clay matrix. (Alluvium)	1.0		
1.6	Snd			Brown/orange slightly sandy gravel. Wet at 2.6-2.7m. Shoen on water. NO predominant colour. (Alluvium).	2.0		
3.0	Snd			log complete at 3.0m	3.0		

REMARKS

Water ingress 2.7m Settled at 3.0m



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 7
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HANS
LOGGER: (W)

SCALE
1:45 approx

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.2	Sid			(Concrete cover (MADE GROUND)) loose gravel and rubble in sand matrix (MADE GROUND)			
1.0				Soft medium brown clayey sand with abundant medium rounded gravel. Black fair staining and strong phenolic hydrocarbon odour. Becoming wet with more prominent gravelly material with depth (MADE GROUND)	1.0		
1.5	Sid						
2.0				Yellow/light brown soft sandy clay with small rounded gravel (Alluvium)	2.0	X O X X Y X X U X X X X X X X	
2.7	Sid			log complete at 2.70m.			
3.0					3.0		

REMARKS



CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 8
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRAWN: DMS
LOGGED: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LOGGING	HOLE
0.3	Soil			Concrete cover (MADE GROUND).			
1.0				Black clay clayey sand. Abundant brick and concrete rubble. Strong phenolic hydrocarbon odour - fair. Red brick foundation of underground structure in building (MADE GROUND).	1.0		
2.0				Orange/yellow damp clayey sand with fine-medium rounded gravel. Slight hydrocarbon odour. (Alluvium).	2.0		
2.4	Soil						
2.9 3.0	Soil			log completed at 2.9m.	3.0		

REMARKS: Water seepage at 2.5m.



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 131

TRIAL PIT NUMBER: TP 9
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HWS
LOGGER: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEAKAGE	MOLE
0.2	leach Soil			Green color. brown grey topsoil with sandy clay matrix. (MADE GROUND)			
				Black rock / linker fill, damp (MADE GROUND)			
1.0, 0	Soil			Soft orange sandy gravel. Rise at 0.7m. left intact (MADE GROUND)	1.0	X X	
				grey/brown soft sandy clay (Alluvium).		X X	
2.0				Dark grey/brown loose sandy gravel (medium to large rounded). Black stained horizon at 30-31m - no colour. (Alluvium)	2.0	X X	✓
3.0	3.1 Soil			log completed at 3.0m.	3.0	O O	

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE. 01235 463 181

TRIAL PIT NUMBER: TPI0
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HMS
LOGGER: CW

SCALE
1:45 approx

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	W GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
Surface	Soil			Concrete cover with rebar on surface (MADE GROUND)			
0.3	Soil			Bricks in orange coarse clay sand matrix. Painted pipe (MADE GROUND)			
				Black skinned sand with brick fragments (MADE GROUND)	1.0		
				Concrete structure at 0.8m (MADE GROUND)			
				log complete at 0.8m.			
2.0					2.0		
3.0					3.0		

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 11
PROJECT: Banbury Gas Works

CLIENT: Grundens
PROJECT No: 32163001

DRILLER: HSM
LOGGER: JO

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LOGGING	HOLE
				Concrete cover (MADE GROUND)		 	
				Bricks in orange and black coarse sand matrix (MADE GROUND)		 	
1.0				Concrete obstruction (MADE GROUND)	1.0		
				log complete at 0.7m			
2.0					2.0		
3.0					3.0		

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 11A

PROJECT: Banbury Gas Works

CLIENT: Grundons

PROJECT No: 32163001

DRILLER: ASM

LOGGER: JO

SCALE

1:45 approx

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.3	Soil			Red brick and concrete cover (MADE GROUND)		[X]	
1.0				Brown sandy matrix with fine + medium gravel with abundant brick and concrete fill. Pipe with some residual tar liquor. (MADE GROUND)	1.0		
1.5	Soil			Slight skin on water ingren at 1.0m.		[X]	
2.0				Blue-grey firm sandy clay slight hydrocarbon odour. Becoming more sandy and gravelly with depth. Water ingren at 2.5 with strong hydrocarbon odour.	2.0		
2.6m	Soil + Bulk Sample			(Alluvium)		[X]	
3.0				log complete at 2.6m	3.0		

REMARKS

Obstruction at 2.6m, possibly gravel.



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 12
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HSM
LOGGER: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	W GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
1.0				Concrete cover (MADE GROUND)	1.0		
				Black ash (MADE GROUND)			
2.0	water			Red bricks - part of foundation or floor of building. Concrete and brick structure (MADE GROUND).	2.0		
				log complete at 1.8m			
3.0					3.0		

REMARKS

Water ingrown at 1.2m
Settled at 1.8m.



TRIAL PIT NUMBER: TP 13
PROJECT: Banbury Gas Works

DRILLER: ASM
LOGGER: (A)

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 161

CLIENT: Grundens
PROJECT No: 32163001

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0-2	Soil			Concrete cover (MADE GROUND)		X	
				Dark brown sand with abundant gravel (MADE GROUND)			
1.0				Red bricks, part of foundation for building (MADE GROUND)	1.0	X	
				Reef at 0.8m of underground culvert. Water depth at 1.2m (MADE GROUND)			
2.0				log complete at 1.2m	2.0		
3.0					3.0		

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 14
PROJECT: Banbury Gas Works

CLIENT: Grundens
PROJECT No: 32163001

DRILLER: HSM
LOGGER: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.2	Soil			Dark brown sandy clay with abundant roots (MADE GROUND)			
				Dark brown coarse sand with slight hydrocarbon odour (MADE GROUND)			
1.0				Brown sandy clay with abundant rubble and scrap metal (MADE GROUND)	1.0		
1.5	Soil			Dark brown/black gravel in sandy clay. Slight hydrocarbon odour. Scrap metal. (MADE GROUND)		X	
2.0				Firm grey clay with occasional orange mottles (Alluvium)	2.0		
3.0	Soil			Dark grey sandy clay becoming wetter with depth. Hydrocarbon odour. More gravelly at 3.0m. (Alluvium)	3.0		
				log complete at 3.4m.			

REMARKS

Water unquen at 0.6m.
possible field drain at 1.2m.



CULHAM, AILINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 15
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HSM

LOGGER: CW

SCALE
1:45 approx

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEDFNO	HOLF
0-1	Soil			Dark brown sand with abundant metal and rock debris fill. (MADE GROUND)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
				Concrete foundation (not visible in logs)			
1.0				White/pale grey concrete, slow program (MADE GROUND)	1.0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1-1	Soil			Red pinches with black/grey sandy gravel matrix. For staining (MADE GROUND) + phenolic odour.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.0				Grey/brown fine sandy clay with occasional gravel (grounded) len consolidation odour better with depth. (Alluvium)	2.0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.0					3.0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.6	Soil + water			log complete at 3.6m.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

REMARKS

Water ingram at 0.8m.



CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 16
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HSM
LOGGERS: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	MOLE
0.1	Soil			Brown clayey sand typical with metal waste P.U. (MADE GROUND)			
				Dark brown/black sandy gravel with abundant scrap metal waste (MADE GROUND)			
1.0					1.0		
1.2	Soil			Dark brown stained gravel in clayey sand matrix with strong hydrocarbon odour. Red brick foundations in side of trial pit (MADE GROUND)			
2.0					2.0		
				Orange/brown firm sandy clay with occasional rounded medium gravel Hydrocarbon odour and strong water with depth. (Alluvium)			
2.9	Soil				3.0		
3.0				log complete at 3.0m.			

REMARKS



CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 161

TRIAL PIT NUMBER: TP 17
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HSM
LOGGER: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LOGS	COL #
0-2	Soil			Brown clayey sand. Abundant rocks (MADE GROUND)		X	
				Block strawed coke fragments with ash and clinker (MADE GROUND)		X	
1.0					1.0		
1.1	Soil			Pale grey concrete with gravel (MADE GROUND)		X	
				Blue grey firm sandy clay with pale orange mottles. Slight hydrocarbon odour. (Alluvium)		X	
2.0					2.0	X	X
				Dark brown soft sandy clay hydrocarbon odour. (Alluvium)		X	
						X	X
3.0					3.0	X	
				Soft grey sandy clay. Water ingren with hydrocarbon odour and steam. Floating product. (Alluvium)		X	X
4.2m	Soil + Water			log complete at 4.2m		X	

REMARKS

Water ingren at 3.1m.
log complete at 4.2m.



CULHAM, ABINGDON, OXON
TEL: PHONE 01235 463 161

TRIAL PIT NUMBER: TP 18
PROJECT: Barbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HSM
LOGGER: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.2	Soil			Concrete (MADE GROUND)			
0.6	Soil			Black stained medium rounded gravel. Strong raw odour and sheen. (MADE GROUND)			
1.0				Unconsolidated medium round gravel (MADE GROUND)	1.0		
				Dark brown sandy clay with occasional small rounded gravel (MADE GROUND)			
2.0				Dark grey/black stained sandy clay. Strong hydrocarbon odour with sheen on surface (Alluvium)	2.0	X . X X .	
2.7	Soil			Loose gravelly sandy clay with dark grey/black staining. Hydrocarbon odour (Alluvium)		X . X X .	
3.0					3.0	X . X X .	
3.5	Soil			Orange/brown sandy gravel (Alluvium) log complete at 3.5m		X O X O X O X O X	

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 19

PROJECT: Banbury Gas Works

CLIENT: Grudons

PROJECT No: 32163001

DRILLER: HNS

LOGGER: CW

SCALE

1:45 approx


TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LOGNO	HOLE
0.2	Soil			Dark brown chunky sand (MADE GROUND)		X	
				Black coke fill with ash residuum (MADE GROUND)		X	
1.0 1.2	soil			Brown grey sandy clay. Firm structure (Alluvium)	1.0	X X X X X X X X X X	
2.0				Dark grey firm sandy clay with fissured appearance. (Alluvium)	2.0	X X X X X X X X X X X X	
3.0 3.0	Soil			Orange-brown sandy gravel Wet at 3.0m (Alluvium)	3.0	X X X X X X X X X	
				log complete at 3.2m			

REMARKS

	TRIAL PIT NUMBER: TP 20	DRILLER: HSM
	PROJECT: Banbury Gas Works	LOGGER: CW
CULHAM, ABRINGDON, OXON. TELEPHONE: 01235 463 181	CLIENT: Grundons	SCALE
	PROJECT No: 32163001	1:45 approx

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	DEPTH	LEGEND	HOLE
0.2	Sand			Brown clayey sand with abundant rocks (MADE GROUND)			
1.0				Dark brown gravel in clayey sand matrix. Brick fragments with ash and black clinker (MADE GROUND)	1.0		
1.1	Sand						
2.0				Dark grey firm sandy clay with coke/ash pockets. Finer clay with depth. Damp at 2.7m (MADE GROUND)	2.0		
3.0				light orange brown clayey sand with abundant gravel. Gravel more predominant with depth. (Alluvium)	3.0		
3.0	Soil Water						
				log complete at 3.4m.			

REMARKS

Water ingren at 2.7m.



CULHAM, ASINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 21
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HSM
LOGGER: CW

SCALE
1:45 approx

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LOGGED	HOLE
0.2	Soil			Gravel (cover with brown sand) (MADE GROUND)			
				Dark brown clougy sand with abundant metal fill. (MADE GROUND)			
1.0					1.0	X	X
1.1	Soil			Dark grey sandy clay with occasional gravel and red brick fragments (MADE GROUND)		X	X
				Firm sandy clay with fused appearance. (Alluvium)		X	X
2.0					2.0	X	X
				Clay, light grey with some occasional orange mottles (Alluvium)		X	X
				Dark grey firm clay (Alluvium)		X	X
3.0					3.0	X	X
3.0	Soil			Grey medium gravel on sandy clay matrix (Alluvium)			
				Orange sandy gravel (Alluvium)			
				Log complete at 3.0m.			

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE. 01235 463 101

TRIAL PIT NUMBER: TP 22
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRAWN BY: JSM
LOGGER: CW

SCALE
1:45 approx

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	NOTE
				Cream color. BRNMM clayey sand with brick, cable and springs (MADE GROUND)			
				Black coke and ash fill. (MADE GROUND)			
1.0				log terminated at 0.5m	1.0		
2.0					2.0		
3.0					3.0		

REMARKS Concrete obstruction at 0.5m.

	TRIAL PIT NUMBER : TP 23 PROJECT : Banbury Gas Works	DRILLER: HSM LOGGER: JO
	CLIENT : Grundons PROJECT No: 32163001	SCALE 1:45 approx.
CULHAM, ABINGDON, OXON. TELEPHONE. 01235 463 181		

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LOGGED	MOLE
0.45	back Soil			cream colour Dark brown clumpy sand with brick rubble glass and metal fill (MADE GROUND)			
1.0				Black tar staining on brick fill with strong phenolic odour Sandy Clay matrix (MADE GROUND)	1.0		
1.7	Soil			Sandy clay with brick fill Very strong phenolic odour with black tar staining. Rotten egg odour - possibly hydrogen sulphide (MADE GROUND)	2.0		
2.0				log complete at 1.7m			
3.0					3.0		

REMARKS

Concrete base at 1.7m.



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 23A
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HSM

LOGGER: JD

SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.3	Silt			Brown sandy gravel (made ground)		XXXX	
				Brown orange sandy clay More sandy texture with depth. (Alluvium)	1.0	X X	
1.0	Silt			Wet clayey sand, light orange brown. Well sides collapsing at 1.6m due to water seepage at 1.8m (Alluvium)	2.0	X X	
2.0	Silt			Gravel large in orange sand matrix (Alluvium)		X X	
				log complete at 2.2m	3.0		

REMARKS

Trial pit collapsing at 2.2m.



CULHAM, ABINGDON, OXON
TELEPHONE: 01235 453 181

TRIAL PIT NUMBER: TP 24
PROJECT: Barbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HSM
LOGGER: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAD	WATER	DESCRIPTION	Depth	LEGEND	NOTE
0.8 1.0	Soil			<p>Crumb cover brown clayey sand with metal + brick waste (MADE GROUND)</p> <p>Black stained core fragments and inclusions in clayey sand matrix. Very strong phenol odour with rotten eggs (hydrogen sulphide). Free bar with stain on surface of material excavated. (MADE GROUND)</p>	1.0		
2.0	Soil			Black stained sand with occasional gravel. Slight hydrocarbon odour. (Alluvium)	2.0		
3.0				Medium gravel in sandy matrix. clump with some calcareous at 3.0m.	3.0		
3.30	Soil water			log complete at 3.30m			

REMARKS

Water ingren at 2.5m



CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 25
PROJECT: Banbury Gas Works
CLIENT: Grindons
PROJECT No: 32163001

DRILLER: HAMS
LOGGER: JO
SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	SOLE
				Gravel cover. Brown clumpy sand with brick and metal fill (MADE GROUND)			
1.0	Soil			Black shamed bricks in clayey sand matrix. Tar and hydrocarbon sheen on bricks. Pipe located at 0.8m. Relocation of trial pit to avoid damage to pipe. External concrete wall located at 1.3m.	1.0		
1.3				Excavation to depth of 1.7m concrete floor located + presented further program (MADE GROUND)			
1.7	Soil				2.0		
2.0							
3.0					3.0		

REMARKS



AEA TECHNOLOGY
ENVIRONMENT

GULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 26
PROJECT: Banbury Gas Works
CLIENT: Grundons
PROJECT No: 32163001

DRAWN: HWS
LOGGER: JO
SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	REFNO	HOLE
0.4	Soil			Gravel cover Brown clays sand with occasional medium rounded gravel and metal fill (MADE GROUND)			
				Concrete-reinforced slightly (MADE GROUND)			
1.0	Soil leach			light grey broken concrete and rubble (MADE GROUND)	1.0		
2.0				Black stained gravel in sandy matrix. Strong hydrocarbon odour with visible tar. Empty pipe at 0.8m. More clayey matrix with depth. Some isolated pockets of liquid tar. (MADE GROUND)	2.0		
3.0				log complete at 1.2m.	3.0		

REMARKS

large pipe obstruction at 1.2m



TRIAL PIT NUMBER: TP 27
PROJECT: Banbury Gas Works

DRILLER: HMS
LEUGER: (W)

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

CLIENT: Grundens
PROJECT No: 32163001

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.6	Soil			Brown sandy gravel with bricks and broken concrete fill (MADE GROUND)			
1.0				Black stained ash and coke in clayey sand matrix. Occasional gravel and rubble (MADE GROUND)	1.0		
1.4	Soil			Dark grey firm sandy clay (MADE GROUND)			
2.0				Dark grey/black gravelly coarse sand (MADE GROUND)	2.0		
3.0				Dark grey/black soft clayey sand with abundant medium gravel. Black staining + coal tar at 2.1m. (MADE GROUND)			
3.3	Soil leach			Black stained loose coarse sand. Strong hydrocarbon odour (MADE GROUND - ALUMINUM?)	3.0		
3.5	Blank soil			Grey sandy clay fissured (ALUMINUM)			
				log complete at 3.6m			

REMARKS

Skw Water upstem at 0.4m. Fast upstem of brown coal tar at 2.1m



AEATECHNOLOGY
ENVIRONMENT

CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 27A
PROJECT: Banbury Gas Works
CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HWS
LOGGER: CW
SCALE: 1:45 approx

WELL RECORD

Sheet 1 of 1

17-11-98

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% CAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.4 m	SOIL			Concrete			
1.0				Medium dense black clayey ash and brick rubble (MADE GROUND)	1.0		
2.0 m	SOIL			Medium dense brown silty sandy CLAY	2.0		
2.75 m	SOIL			(MADE GROUND / ALLUVIUM ?)	3.0		
3.5 m	SOIL			Firm to stiff grey and brown silty CLAY with occasional	4.0		
4.0 m				firm - medium sandy gravel (MADE GROUND / ALLUVIUM)	5.0		
4.5 m	SOIL			Soft to firm grey and black silty CLAY, very strong coal tar smell (MADE GROUND / ALLUVIUM)	6.0		
5.0					7.0		
6.0					8.0		
7.0					9.0		
8.0					10.0		
9.0					11.0		
10.0							
11.0				OBSTRUCTION AT 4.5m			

REMARKS
 Groundwater seepage at 3.1m
 Obstruction at 4.5m

AEA TECHNOLOGY

ENVIRONMENT

CULHAM, ABINGDON, OXON.
 TELEPHONE: 01235 463 181

BOREHOLE NUMBER: MW 28

PROJECT: Banbury Gas Works

CLIENT: Grundons

PROJECT No: 32163001

DRILLER: AEA

LOGGER: MSK

SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA		
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	DEPTH	LEGEND
0.4	Sid			Handstanding coarse bedrock and other building rubble with dark brown and clayey sand matrix (MADE GROUND)		
1.0				Brown orange gravelly sand (MADE GROUND)	1.0	
1.1	Sid			Dark grey stiff sandy clay with pinnacles (Alluvium)		
2.0				grey brown sandy gravel (Alluvium)	2.0	
3.0				log complete at 3.1m	3.0	
3.1	Sid					

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 29

PROJECT: Banbury Gas Works

CLIENT: Grundens

PROJECT No: 32163001

CALLER: HWS

LOGGER: CW

SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	1 PPHHC	HOLE
0.3	Soil			Brown clayey sand with abundant roots (Coke and ash fill with broken rubble + bricks (MADE GROUND))			
1.0				Brown coarse sand (MADE GROUND)	1.0		
	Soil			Grey brown sandy clay. Stiffer clay with depth with rustled appearance at 1.4m (Alluvium).		X . X - X . X . X	
1.9 2.0				Darker grey stiff clay. Firmest appearance. (Alluvium).	2.0	- X - X - X	
3.0				Brown/orange clayey sand (Alluvium)	3.0	- X - - X -	
3.4				log complete at 3.4m.		X . X	

REMARKS



AEATECHNOLOGY
ENVIRONMENT

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 20
PROJECT: Eanhury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

CALLER: MMS
LOGGER: JO

SCALE
1:45 APPROX.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	N GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.5	Soil water			Red brick cover with broken concrete and building waste infill (MADE GROUND)			
1.0				Broken concrete infill (MADE GROUND)	1.0		
2.0				Large gravel in sandy matrix with broken red brick and concrete (MADE GROUND)	2.0		
3.0				log complete at 0.8m	3.0		

REMARKS

Concrete obstruction at 0.8m



CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 161

TRIAL PIT NUMBER: TP 31

PROJECT: Banbury Gas Works

CLIENT: Grundons

PROJECT No: 32163001

DRAWN: HMS

LOGGER: CW

SCALE

1:45 approx

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	N GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.3	Soil			Concrete cover (MADE GROUND)			
				Dark brown / black calc fragments in coarse sandy matrix (MADE GROUND)			
1.0				large rounded gravel in clay brown sand matrix (MADE GROUND)	1.0		
1.5	Soil			Silt sandy clay green/grey colour. (Alluvium)			
2.0				Suff grey silty clay with blue mottled appearance. (Alluvium)	2.0		
3.0	Soil			Brown coarse sand with gravel (RIVER TERRACE DEPOSITS)	3.0		
3.0				Log complete at 3.15m.			

REMARKS

Water ingren 3.10m.



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 32
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HMS
LOGGER: JD

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	Lbs SAND	HOLE
0.2	Soil			Grass cover with dense brown sandy topsoil. Some wood and street metal fill (MADE GROUND)			
1.0				Black stained sand with abundant coke. Irregular pockets of wood, metal and brick fill (MADE GROUND)	1.0	X	X
				Brown coarse sand with occasional subrounded medium gravel, becoming more silty at 0.6m (MADE GROUND).		X	X
1.9 2.0	Soil			Blue grey firm sandy clay with occasional sand and gravel occasional. (Alluvium).	2.0	X	X
2.8 3.0	Soil			Brown/black stained sand with slight sulphur colour. Brown sand at 3.2m (Alluvium)	3.0	X	X
				log complete at 3.3m			

REMARKS

Water ingren at 3.3m.

AEATECHNOLOGY
ENVIRONMENT

CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 381

TRIAL PIT NUMBER: TP 33
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: JMS
LOGGER: JD

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0-3	Soil			Concrete cover (MADE GROUND)			
				Blade dry cohesionless ash in large gravel matrix. Slight organic colour. (MADE GROUND)			
1.0				Firm brown/grey sandy clay with occasional brown mottles	1.0		
				Small fine gravel in occasional with some broken concrete. (MADE GROUND)			
1.8	Soil			light brown sandy clay with brown and grey mottles (Alluvium)	2.0		
2.0				light green/grey sandy clay (Alluvium)			
3.0				Dark brown coarse sand with occasional rounded medium gravel (RIVER TERRACE DEPOSITS)	3.0		
3.15	Soil			log complete at 3.15m.			

REMARKS

Water ingren at 3.15m.



CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 34
PROJECT: Barbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRAWN: HNS
LOGGER: JO

SCALE
1:45 approx

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LOGGING	HOLES
0.3	Soil			Concrete cover (MURK GROUND)			
				Black earth and clinker in moist coarse sand matrix MURK GROUND			
1.0				Grey/brown firm sandy Clay (Alluvium)	1.0	X X	
1.7	Soil			Stiff grey/brown silty clay Black/blue mottled appearance. Slight organic odour. Slightly moist. (Alluvium)	2.0	X X	
2.0				Grey/brown gravel in soft clay matrix (River TERRACE DEPOSITS)		X X	
3.0					3.0	O X O X O X O X O	
3.0	Soil			log complete at 3.0m.			

REMARKS

Slight water ingression at 2.5m



CULHAM, ABBINGDON, OXON.
TEL 01235 463 181

TRIAL PIT NUMBER: TP 35
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRAWN BY: HNS
LOGGER: JD

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	W GAS	WATER	DESCRIPTION	Depth	LOGGING	MOLE
0.2	Soil			Crust cover with gravelly sand matrix (MADE GROUND)			
1.0				Ash and coke in black stained gravelly sand with red brick and metal. Full redundant pipe at 0.5m (MADE GROUND)	1.0		
1.3	Soil			Brown sandy gravel with building rubble and metal. Full (MADE GROUND)			
2.0				Dark grey/brown sandy clay. Slight hydrocarbon odour at 0.7-1.0m. Denser and stiffer more silty clay with depth. Finest appearance. (Alluvium)	2.0		
3.0				Dark black stained coarse sand with abundant medium subrounded gravel. (River terrace deposits)	3.0		
3.4	Soil			log completed at 3.5m.			

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 485 181

TRIAL PIT NUMBER: TP 36
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRAWN: HMS
LOGGER: CLO

SCALE
1:45 approx.

TRIAL PIT RECORD


Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAG	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.5 -0.9	Soil			Concrete (MADE GROUND) loose sand and gravel (MADE GROUND)			
1.0 1.2	Soil			Grey sand and gravel with some occasional clay pockets. (MADE GROUND)	1.0		
2.0				fairly stiff silty clay. Strong phenolic coal tar odour to 3.0m. (Alluvium)	2.0		
2.8 3.0	Soil			log complete at 3.0m.	3.0		

REMARKS

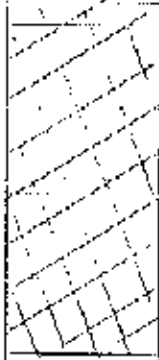

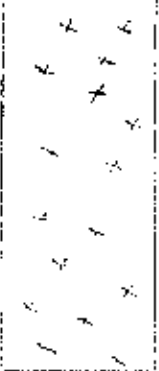
Groundwater seepage at 0.95m Strong coal tar odour

	TRIAL PIT NUMBER: TP R437	DRILLER: JAVAP
	PROJECT: Banbury Gas Works	LOGGER: MSK
CLIENT: Grundons	SCALE 1:45 approx.	
PROJECT No: 32163001		
CULHAM, ABINGDON, OXON. TELEPHONE: 01235 463 181		

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
				CONCRETE			
0.55m	SOIL			Best to firm black sandy silty clay with prominent local tor columns (made ground)			
1.0				Medium dense light brown sand and gravel (made ground)	1.0		
1.7m	SOIL			Firm to stiff grey and brown silty clay (Alluvium)			
2.0				Firm to stiff black silty clay, strong natural organic matter odour, becoming grey at 2.10m (Alluvium)	2.0		
2.9m	SOIL				3.0		
3.0							

REMARKS No groundwater encountered



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

BOREHOLE NUMBER: BH 58

PROJECT: Banbury Gas Works

CLIENT: Grundons

PROJECT No: 32163001

DRILLER: AEA

LOGGER: MSK

SCALE

1:45 approx.

WELL RECORD

Sheet 1 of 1

17. 11. 98

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.8m	SOIL			Firm brown silty sandy clay with metal, plastic gravel and brick fragments (MADGE GROUND)	1.0		
1.7m	SOIL				2.0		
2.6m	SOIL			Firm to stiff grey and brown silty CLAY (ALLUVIUM)	3.0		
4.0	SOIL			Soft to firm brown silty clay (ALLUVIUM)	4.0		
5.0				at 2.4m becoming a sandy and gravelly silty CLAY	5.0		
6.0					6.0		
7.0				Medium dense brown sand with occasional fine to medium gravel (RIVER TERRACE GRAVELS)	7.0		
8.0					8.0		
9.0					9.0		
10.0				Stiff grey fissured silty CLAY (LOWER LIAS CLAY)	10.0		
11.0					11.0		

REMARKS Groundwater seepage at 3.3m



BOREHOLE NUMBER: MW 39

PROJECT: Banbury Gas Works

DRILLER: AEA

LOGGER: MSK

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

CLIENT: Grundons

PROJECT No: 32163001

SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
				Brick and concrete rubble (MADE GROUND)			
0.85 1.0	Soil			Firm black sandy clay with occasional brick fragments. Prominent coal far below (MADE GROUND)	1.0		
1.8 2.0	Soil			Firm grey sandy clay (Alluvium)	2.0		
2.95 3.0	Soil			Fairly stiff grey silty clay with very strong phenolic coal far below. (Alluvium)	3.0		

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP BH 40

PROJECT: Banbury Gas Works

CLIENT: Grundons

PROJECT No: 32163001

DRILLER: JA/AP

LOGGER: NSK

SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	Air	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.2	Soil			Crumb cover, light brown humic topsoil (MADE GROUND)			
1.0				Orange/brown coarse sand with medium subrounded gravel. (MADE GROUND)	1.0		
1.8	Soil			Grey/blue soft to firm clay with brown and red mottled appearance. (Alluvium)			
2.0				Dark grey/blue more sandy clay. Some occasional knobbles + fissured areas. Some blue stiff silty clay pockets. (Alluvium)	2.0		
3.0				light brown gravelly sand (RIVER TERRACE GRAVELS)	3.0		
3:10	Soil			log complete at 3.0m.			

REMARKS Water upen at 3.0m.



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 41
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

CRI: JFR: HMS

LOGGER: JO

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.3	Soil			Concrete cover (MADE GROUND)			
				Black cobbles fragments in stained sandy matrix. (MADE GROUND)			
1.0				Brown/grey soft to firm sandy clay with brown mottles. Wood fragments at 0.9m (MADE GROUND)	1.0		
1.95	Soil			Dark grey/black sandy clay with preserved plant roots at 1.8m. Slightly organic at 2.3m. (Alluvium)	2.0		
3.0	Soil			Dark grey sandy gravel. (RIVER TERRACE DEPOSITS)	3.0		
3.0m	Soil			log complete at 3.0m.			

REMARKS

Water ingren at 2.95m.

AEA TECHNOLOGY
ENVIRONMENT

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 483 181

TRIAL PIT NUMBER: TP 42
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HWS
LOGGER: JO

SCALE
1:45 approx.

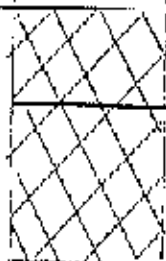
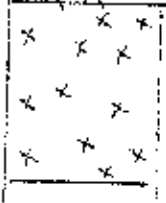

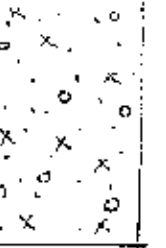
TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LOG NO	HOLE
0.3	Soil			Crust cover with dark brown loose sandy topsoil with abundant metal + brick fill (MADE GROUND)			
1.0				Dark grey/black loose sandy gravel. Ash fill with occasional brick and metal fill. (MADE GROUND)	1.0		
1.2	Soil						
2.0				Black grey material at 0.8m with strong hydrocarbon odour. Firm light grey clay with orange mottles with pockets of orange sandy gravel at depth. (Alluvium)	2.0		
3.0				Stiff silty clay with grey/blue mottles (Alluvium)	3.0		
3.7m	Soil + Water			Orange clumpy sand with loose wet sandy gravel at 3.7m. (River terrace deposits) log complete at 3.7m.			

REMARKS

Water unquen at 3.7m.

AEATECHNOLOGY
ENVIRONMENT

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 43

PROJECT: Banbury Gas Works

CLIENT: Grundons

PROJECT No: 32163001

DRILLER: LMS

LOGGR: CW

SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH TYPE % GAS WATER

DESCRIPTION

Depth

LEGEND

HOLE

1.0

1.3

Soil +
Water

2.0

3.0

large concrete slabs and red
brick in building infill
(MADE GROUND)
1.3m concrete obstruction

1.0



log complete at 1.3m.

2.0

3.0

REMARKS

AEATECHNOLOGY
ENVIRONMENT

CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 44

PROJECT: Banbury Gas Works

CLIENT: Grundons

PROJECT No: 32163001

DRILLER: JMS

LOGGER: CW

SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	W GAS	WATER	DESCRIPTION	Depth	LOGGING	HOLE
0.35	Soil			Concrete cover (MADE GROUND)			
				Black stratified sandy clay with coke fragments. Slight organic odour. (MADE GROUND)			
1.0				light brown sandy clay Some grey/blue mottled at 0.8m. (MADE GROUND)	1.0		
1.5	Soil			Soft to firm silty clay with darker grey mottles some occasional small rounded gravel (Alluvium)			
2.0				Firm brown/orange silty clay (Alluvium)	2.0		
3.0				light brown sandy gravel with occasional grey streaked appearance. (RIVER TERRACE DEPOSITS)	3.0		
3.1	Soil			log complete at 3.10m.			

REMARKS

Water ingren at 2.60m.



TRIAL PIT NUMBER: TP 45
PROJECT: Banbury Gas Works

DRILLER: LMS
LOGGER: JD

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 381

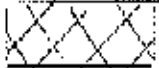

CLIENT: Grundons
PROJECT No: 32163001

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	REF.
				Concrete cover (MADE GROUND)			
0.55	Sand			large gravel in grey/brown sandy matrix. Saturated with obstruction of concrete at 1.0m. Slight sheen on accumulated water. (MADE GROUND)	1.0		
1.0				log complete at 1.0m.			
2.0					2.0		
3.0					3.0		

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE. 01235 493 181

TRIAL PIT NUMBER: TP 46
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: WMS
LOGGER: JD

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.5	Soil			Gravel cover. Brown sandy gravel. Metal and brick rubble (MADE GROUND)			
				Broken concrete and road brick (MADE GROUND)			
1.0	Soil			Red orange soft sandy gravel (MADE GROUND)	1.0		
				Dark brown fine silty clay with slight organic odour. (Alluvium)			
2.0				Loose wet grey clayey sand (Alluvium)	2.0		
				Orange loose wet sandy gravel (Lower Terrace Deposits)			
3.0					3.0		
3.3	Soil			log complete at 3.3m.			

REMARKS

	TRIAL PIT NUMBER: TP 47 PROJECT: Banbury Gas Works	DRILLER: AMS LOGGER: JO
	CLIENT: Grundens PROJECT No: 32163001	SCALE 1:45 approx.

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181


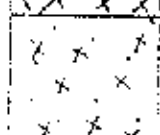
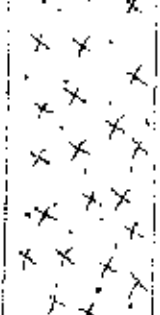

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0-11 m	SOIL			Grass cover with dark brown gravelly sand topsoil. Abundant brick and metal fill. (MADE GROUND)			
0-7m	SOIL						
1.0				Orange/brown very sandy clay with abundant gravel (MADE GROUND)	1.0		
2.0				Grey firm silty clay with occasional black streaks. Slightly organic odour. (Alluvium)	2.0		
2-2m	SOIL						
3.0				Loose wet grey sand (RIVER TERRACE DEPOSITS)	3.0		
3-3m	SOIL						
				log complete at 3.3m			

REMARKS

0.8m steel main pipe, left intact, no damage. Relocation of trial pit slightly below 0.8m.



TRIAL PIT NUMBER: TP 48
PROJECT: Banbury Gas Works

DRILLER: HMS
LOGGER: CW

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

CLIENT: Grundons

PROJECT No: 32163001

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOL #
0.4m 1.0	SOIL			Cream color. Dark brown gravelly sand and vests (MADE GROUND) Dark orange/brown clay coarse sand (MADE GROUND)	1.0		
1.4m 2.0	SOIL			Firm blue/grey silty clay with organic odour. Some occasional small rounded gravel. (Alluvium)	2.0		
3.03m	SOIL			Damp coarse orange sand (River TERRACE DEPOSITS)	3.0		
				log complete at 3.2m.			

REMARKS

Water stable at 3.1m.

	TRIAL PIT NUMBER: TP 49 PROJECT: Banbury Gas Works	DRILLER: HNS LOGGER: JO
	CLIENT: Grundons PROJECT No: 32163001	SCALE 1:45 approx.

GULFAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

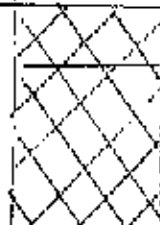
SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	ROI #
-------	------	-------	-------	-------------	-------	--------	-------

0.8m SOIL

(Grass cover with dark brown black sandy clayey gravel (MADE GROUND))



1.0

Orange brown very sandy small, medium and large gravel (MADE GROUND)

1.0

1.2m SOIL

Grey stiff clay with occasional black seams of black organic peaty clay and occasional pockets of orange sand. Becoming darker and looser with depth (ALLUVIUM)

2.0

2.0

3.03.0m SOIL

Orange wet loose sandy gravel (RIVER TERRACE DEPOSITS)

3.0

Log complete at 3.10m

REMARKS



TRIAL PIT NUMBER: TP 60
PROJECT: Barbury Gas Works

DRILLER: LMS
LOGGER: (W)

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

CLIENT: Grundons
PROJECT No: 32163001

SCALE
1:45 approx.

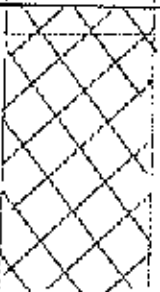
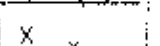

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HCI #
0.25	SOIL			Grass cover over track stained sand and abundant roots and pebbles (MADE GROUND)			
1.0				Coarse, light brown orange sand and sub-rounded medium pebbles (MADE GROUND)	1.0		
				Firm blue clay with black mottles soft at 2.0m becoming more sandy and wet with depth (Alluvium)			
2.0	SOIL				2.0		
3.0					3.0		
3.2m	SOIL						
Log complete at 3.2m							

REMARKS



TRIAL PIT NUMBER: TP 51
PROJECT: Banbury Gas Works

DRILLER: Hms
LOGGER: JC

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 403 181

CLIENT: Grundons
PROJECT No: 32163001

SCALE
1:45 approx.


TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	DEPTH	LEGEND	HOLE
0-1m	SOIL			Dark brown sandy topsoil (MADE GROUND)			
				Orange sandy gravel (MADE GROUND)			
1.0				Grey firm to soft clay with fissures. Becoming loose/ curmay at 1 m, contains	1.0	X X	
1.4m	SOIL			Seams of black peaty clay with slight organic odour (Alluvium)		X X X	
2.0				Becoming wet loose grey sandy clay (alluvium)	2.0	X X	
2.7m	SOIL					X X X	
3.0					3.0	X X X	

Log complete at 2.8m

REMARKS



TRIAL PIT NUMBER: TP 52
PROJECT: Banbury Gas Works

DRILLER: HMS
LOGGER: CW

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181


CLIENT: Grundons
PROJECT No: 32163001

SCALE
1:45 approx.


WELL RECORD

Sheet 1 of 1

16.11.98

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.3 - 0.75m	SOIL			CONCRETE			
1.0 - 1.50			✓	Medium dense ash and clinker in a brick	1.0		
2.0m	SOIL			Sanitary clay and brick matrix. Prominent tar odor at 2m	2.0		
3.03m	SOIL			(MADE GROUND)	3.0		
4.0 - 5.0				Medium dense gravel and sand, Tar odor.	4.0		
6.0				(MADE GROUND)	6.0		
7.0					7.0		
8.0					8.0		
9.0					9.0		
10.0					10.0		
11.0					11.0		

REMARKS: Groundwater seepage at 1.2m

	BOREHOLE NUMBER: BH 53	DRILLER: AEA
	PROJECT: Banbury Gas Works	LOGGER: MSK
CULHAM, ABINGDON, OXON. TELEPHONE: 01235 463 181	CLIENT: Grundons	SCALE 1:45 approx.
	PROJECT No: 32163001	


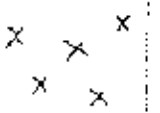
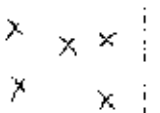
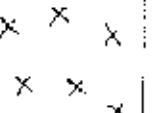
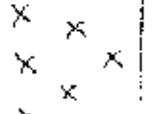
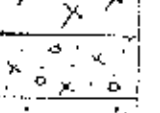
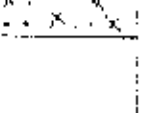
TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HULLS
0-1m	SOIL			Grass cover and dark brown sandy TOPSOIL (made ground)			
1.0-1.0m	SOIL			Orange, very loose small-medium and some large gravel with occasional boulders (made ground)	1.0		
				Grey, very stiff clay (ALLUVIUM)			
2.0				Grey wet sandy gravelly loose clay (ALLUVIUM)	2.0		
				Pale brown, loose, damp sandy clay becoming wetter and more yellow with depth (ALLUVIUM)			
2.7m	SOIL						
3.0					3.0		
				log complete at 3.1m			

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 54

PROJECT: Banbury Gas Works

CLIENT: Grundons

PROJECT No: 32163001

DRILLER: HmS

LOGGER: CW

SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.3m	SOIL			Grass cover over dark brown with small pebbles and roots (MADE GROUND)			
1.0				Coarse, light brown sand with abundant pebbles (MADE GROUND)	1.0		
2.0	SOIL			Grey to blue silty clay (firm) slight organic odour, fissured with occasional subangular gravel, more consolidated with depth. (Alluvium)	2.0		
3.0				More unconsolidated and sandy clay layer of grey to blue clay (Alluvium)			
3.2m	SOIL			Becoming lighter brown loose damp coarse gravel in sandy matrix at 3.0m (RIVER TERRACE GRAVELS)	3.0		
				Log complete at 3.2m			

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 55

PROJECT: Banbury Gas Works

CLIENT: Grundons

PROJECT No: 32163001

DRILLER: HMS

LOGGER: JO

SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% OAC	WATER	DESCRIPTION	Depth	LEGEND	HOI #
0.2m	SOIL			Grass cover over dark brown block loose sandy gravel (MADE GROUND)			
1.0	1.0m			Orange unconsolidated loose gravelly sand. (MADE GROUND)	1.0		
2.0				Blue grey firm-stiff clay becoming more crumbly with depth. Numerous fissures and pockets of blue-green sandy clay (ALLUVIUM)	2.0		
2.3m	SOIL			Blue/green/grey very sandy soft clay becoming very loose at 2.3m			
3.0				Wet, very loose small-medium light brown sandy gravel.	3.0		
				Log complete at 3.1m			

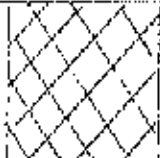
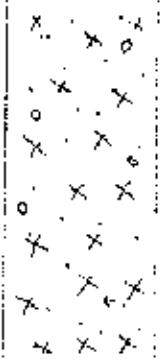
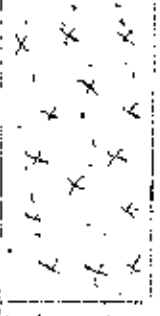

REMARKS

	TRIAL PIT NUMBER: TP 56	DRILLER: HMS
	PROJECT: Banbury Gas Works	LOGGER: CW
CULHAM, ABINGDON, OXON. TELEPHONE: 01235 463 181	CLIENT: Grundens	SCALE: 1:45 approx.
	PROJECT No: 32163001	

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.3m	SOIL			Grass cover over medium brown very sandy fine-medium coarse gravel with some large boulders (MADE GROUND)			
0.9m 1.0	SOIL			Light brown-grey stiff silty clay with occasional gravel and orange mottles becoming softer and less consolidated with depth. (ALLUVIUM)	1.0		
2.0				Grey very sandy loose clay with layers of black organic matter. Becoming less consolidated with depth. (ALLUVIUM)	2.0		
3.0 3.0m	SOIL			Loose very sandy wet grey-brown fine-medium gravel. Black layer of med-coarse gravel at 3.0m. (RIVER TERRACE GRAVELS)	3.0		

REMARKS

Log complete at 3.1m



CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 57
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001

DRILLER: HMS


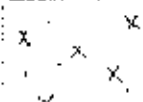
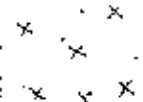
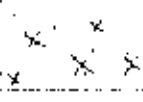
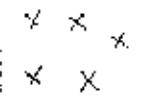
LOGGER: CWJ

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.4m	SOIL			Gross cover over brown sandy soil with concrete and brick fragments (MADE GROUND)			
1.0				Black stained sand and coke fragments. Hydro-carbon odour and sulphur odour (MADE GROUND)	1.0		
2.0				Light green-grey silty soft-firm clay with bare mottles. Becoming firmer with depth with occasional sandy bands (ALLUVIUM)	2.0		
2.1m	SOIL			Black stained streak of base / grey ^{firm} clay with fissures (ALLUVIUM)			
3.030m	SOIL			Becoming moist at 2.7m slight shear and hydro-carbon odour at 3.0m.	3.0		
				Log complete at 3.0m			

REMARKS



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 161



TRIAL PIT NUMBER: TP 58
PROJECT: Banbury Gas Works
CLIENT: Grindans
PROJECT No: 32163001

DRILLER: HMS
LOGGER: JD
SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.3m	SOIL			Glass cover and roots (MADE GROUND)			
1.0				Light grey sandy CLAY with abundant small rounded gravel, bricks, cardboard, metal, and wood fill in black and brown banded matrix. Boulders and broken concrete, carpet and plastic pipe. (MADE GROUND)	1.0		
1.8m 2.0	SOIL			Sandy CLAY, light brown, loosely consolidated. Some dark staining at 2.3m (ALLUVIUM)	2.0		
3.0				Pit sides collapse, log complete at 2.3m	3.0		

REMARKS

Water ingress at 1.5m
Pit sides unstable and continual collapse at 2.3m



TRIAL PIT NUMBER: TP 59

PROJECT: Banbury Gas Works

DRILLER: tms

LOGGER: JO

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 187

CLIENT: Grundons

PROJECT No: 32163001

SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOOK
0-3m	SOIL			Grass cover and humus (MADE GROUND)			
1.0				Light brown coarse SAND with small to medium pebbles, broken steel pipe at 0.1m (sawn at both ends) (MADE GROUND)	1.0		
2.0				Sandy brown/light grey CLAY with occasional brown mottles (ALLUVIUM)			
2-2.0m	SOIL			Sandy CLAY with brown sandy occasions at 1.7m (ALLUVIUM)	2.0		
3.0				Blue grey former silty clay (ALLUVIUM)			
3-3.0m	SOIL			Light brown small gravel in sandy matrix, moist at 2.8m (RIVER TERRACE DEPOSITS)	3.0		
				Log complete at 3.3m			


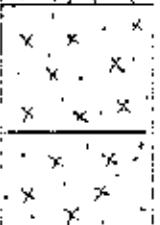
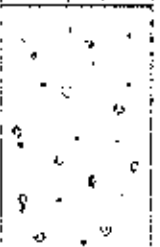

REMARKS Water ingress at 2.90m

	TRIAL PIT NUMBER: TP 60	DRILLER: HMS
	PROJECT: Banbury Gas Works	LOGGER: JO
CULHAM, ABINGDON, OXON. TELEPHONE: 01235 463 181	CLIENT: Grundens	SCALE 1:45 approx.
	PROJECT No: 32163001	


TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.3m	SOIL			Orange brown loose sandy gravel TOP SOIL (MADE GROUND)			
0.5m	SOIL WATER						
1.0				Concrete obstruction - relocate			
1.4m	SOIL			Black coke/lash deposits in medium to coarse gravel and fill. Hydro-Carbon odour, water seepage at 0.4. (MADE GROUND)	1.0		
2.0				Dark grey silty firm CLAY becoming less consolidated with depth (ALLUVIUM)	2.0		
2.5m	SOIL			Medium grey to brown sandy CLAY with occasional small angular gravel (ALLUVIUM)	3.0		
3.0				Orange wet loose SAND with occasional small gravel becoming more gravelly with depth (RIVER TERRACE DEPOSITS)			

REMARKS
 Surface water settled at 0.60 m.
 Log complete at 2.5m

	TRIAL PIT NUMBER: TP 61	DRILLER: HNS
	PROJECT: Banbury Gas Works	LOGGER: CW
CULHAM, ABINGDON, OXON. TELEPHONE: 01235 463 181	CLIENT: Grundons	SCALE: 1:45 approx.
	PROJECT No: 32163001	

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	ROLE
0.2m	SOIL			Grass cover over dark brown loose sandy gravel topsoil (MADE GROUND)			
1.0				Orange brown very loose sandy medium to coarse GRAVEL (MADE GROUND) (Relocate due to red-brick obstruction at 0.6m)	1.0		
1.6m	SOIL			Large cement, bricks and boulders with some metal debris and rusted drum water seepage at 1.2m (MADE GROUND)	2.0		
2.5m	SOIL			Light grey very soft clayey SAND (ALLUVIUM)			
3.0				Orange soft very loose unconsolidated clayey SAND (ALLUVIUM)	3.0		
				Loose grey black sandy med-large GRAVEL, very wet and unconsolidated at 2.8m (RIVER TERRACE DEPOSITS)			
				Grey loose wet med-coarse SAND (RIVER TERRACE DEPOSITS)			

REMARKS

Log complete at 2.9m



AEATECHNOLOGY
ENVIRONMENT

CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 62
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001


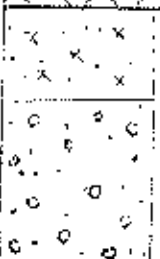
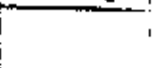
DRILLER: HMS
LOGGER: CW

SCALE
1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0-3m	SOIL			Grass cover over light brown sandy topsoil and bricks lumps of concrete, tyre and wire with metal fragments and rocks. (MADE GROUND)	1.0		
1-8m	SOIL			Silty green/grey clay. (MILLNUM)	2.0		
2-8m	SOIL			Light brown damp sands with occasional gravel (RIVER TERRACE DEPOSITS)	3.0		
				Log complete at 2.8m			

REMARKS Pit sides collapsing at 2.8m
Water ingress at 2.65m



TRIAL PIT NUMBER: TP 63
PROJECT: Banbury Gas Works

DRAWER: HMS
LOGGER: JO

CULHAM, ABINGDON, OXON
TELEPHONE: 01235 463 181

CLIENT: Grundons
PROJECT No: 32163001

SCALE
1:45 approx.

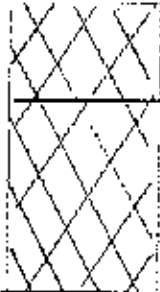
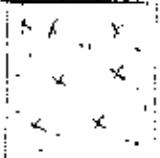
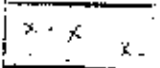

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	NOTE
0-4m	SOIL			Grass cover over medium brown sandy clay with occasional gravel (MADE GROUND)			
1.0				Dark brown sandy clay with abundant rubble / metal / paper waste (MADE GROUND)	1.0		
1.5m	SOIL			Dark grey crumbly loose clayey sands (organic clay) (Alluvium)			
2.0					2.0		
2.3m	SOIL			Light grey/brown soft very sandy clay (Alluvium)			
3.0				Orange/yellow wet very sandy medium GRAVEL becoming loose and more wet with depth (RIVER TERRACE GRAVELS)	3.0		
				Log complete at 2.3m			

REMARKS

Well sides collapsing at 1.8m



CULHAM, ABINGDON, OXON.
TELEPHONE: 01235 463 181

TRIAL PIT NUMBER: TP 63A

PROJECT: Banbury Gas Works

CLIENT: Grundons

PROJECT No: 32163001

DRAWER: HMS

LOGGER: CW



SCALE

1:45 approx.

TRIAL PIT RECORD

Sheet 1 of 1

FIGURE NUMBER

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.2m	Soil			GRASS COVER over dark brown sandy clayey TOPSOIL. 3we pondery substance (light-med blue in socket) at 0.2m	1.0		
1.0				Abundant brick and metal rubble. Red brick base at 0.6m. large metal debris. (MADE BRANNO)			
2.0	2.0m Soil			Dark grey brown loose soft sandy CLAY (ALUMINUM)	2.0		
3.0	3.0m Soil			Pink / Orange loose soft clayey SAND, becoming less consolidated with depth (RIVER TERRACE DEPOSITS)			
				Log complete at 3.0m			

REMARKS

Water Ingress at 2.4m



GULFHAM, ASINGDON, OXON.
TELEPHONE: 01235 463 161

TRIAL PIT NUMBER: TP 64.
PROJECT: Banbury Gas Works

CLIENT: Grundons
PROJECT No: 32163001



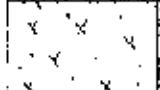

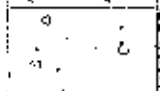

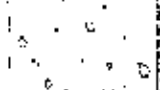

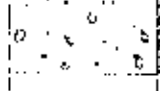

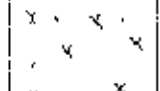

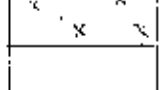

DRAWN: WMS
LOGGER: (W)

SCALE
1:45 approx.

WELL RECORD

Sheet 1 of 1

13.11.98

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.6m	SOIL			CONCRETE (MADE GROUND)			
1.0				Soft to firm brown silty sandy CLAY with occasional brick fragments (MADE GROUND)	1.0		
1.5m	SOIL						
2.0					2.0		
2.5m	SOIL			Soft to firm brown silty CLAY (ALLUVIUM)	3.0		
3.0							
3.5m	SOIL			Medium dense brown orange firm to medium SAND with traces of gravel (RIVER TERRACE DEPOSITS)	4.0		
4.0							
5.0				Becoming a very sandy GRAVEL at 3.2m (RIVER TERRACE DEPOSITS)	5.0		
6.0m	SOIL				6.0		
7.0				firm grey fissured silty CLAY (LOWER LIAS CLAY)	7.0		
8.0					8.0		
9.0				log complete at 6.0m	9.0		
10.0					10.0		
11.0					11.0		

REMARKS: Groundwater seepage at 2.2m



WELL NUMBER: BH MW1
 PROJECT: BAMBURY GAS WORKS
 CLIENT: GRUNDONS
 PROJECT No: 32163001

DRILLER: AEA
 LOGGER: MSK
 SCALE

WELL RECORD

Sheet 1 of 1

13.11.98

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.8m	SOIL			Loose lumps calcareous (MADE GROUND)	1.0		
2.0m	SOIL			firm brown silty clay with occasional gravel and brick fragments, slight coal tar odour (MADE GROUND)	2.0		
2.5m	SOIL				3.0		
3.8m	SOIL			firm to stiff brown silty clay (ALLUVIUM)	4.0		
5.0				Medium dense brown firm to medium sands (RIVER TERRACE GRAVELS)	5.0		
6.06m	SOIL			Stiff grey fissured silty clay (LOWER LINS CLAY)	6.0		
7.0					7.0		
8.0				Log complete at 6.0m	8.0		
9.0					9.0		
10.0					10.0		
11.0					11.0		

REMARKS: Groundwater seepage at 2.4m



WELL NUMBER: BH MW2
 PROJECT: BANBURY GAS WORKS
 CLIENT: GRUNDONS
 PROJECT No: 32163001

DRILLER: AET
 LOGGER: MSK
 SCALE

WELL RECORD

Sheet 1 of 1

16 11 98

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.75m 1.0	SOIL			Soft to firm brown sandy CLAY with brick fragments (MADE GROUND)	1.0		
1.5m 2.0	SOIL			Soft to firm brown sandy CLAY (ALLUVIUM)	2.0		
2.85m 3.0	SOIL			Soft to firm grey and black silty CLAY (strong coarseter odour and staining) (ALLUVIUM)	3.0		
4.0				Medium dense grey/black sandy firm-medium sub-angular GRAVEL (RIVER TERRACE GRAVELS)	4.0		
5.0				Stiff grey fissured silty CLAY (LOWER WAS CLAY)	5.0		
6.0				some coarseter odour	6.0		
7.0					7.0		
8.0					8.0		
9.0					9.0		
10.0					10.0		
11.0				Log complete at 6.0m	11.0		

REMARKS

Groundwater seepage at 3.5m



WELL NUMBER: BH MW3
PROJECT: BANBURY GAS WORKS
CLIENT: ERUDONS
PROJECT No: 32163001

DRILLER: AEA
LOGGER: MSA
SCALE

WELL RECORD

Sheet 1 of 1

13.11.98

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	DEPTH	LEGEND	HOLE
0.0 - 0.8 m	SOIL			Concrete	0.0		
1.0				Soft to firm brown sandy silty CLAY with abundant gravel and prominent phenol color (MADE GROUND)	1.0		
1.5 - 3.0 m	SOIL			Soft to firm grey brown and black silty CLAY (ALLUVIUM)	2.0		
3.03 - 4.0 m	SOIL			Near surface sample has phenol color, less or no smell at 3.0m	3.0		
4.5 m	SOIL			Medium dense grey brown clayey fine-medium sub angular SAND and GRAVEL (RIVER TERRACE GRAVELS)	4.0		
6.0 - 6.0 m	SOIL			Firm to stiff grey fissured CLAY (LOWER HAS CLAY)	5.0		
7.0				Log-complete at 6.0m	6.0		
8.0					7.0		
9.0					8.0		
10.0					9.0		
11.0					10.0		
					11.0		

REMARKS: Groundwater seepage at 4.15m



WELL NUMBER: BH MW 4
 PROJECT: BANBURY GAS WORKS
 CLIENT: GRUNDONS
 PROJECT No: 32163001

DRILLER: AEA
 LOGGER: MSK
 SCALE

WELL RECORD

Sheet 1 of 1

12.11.98

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.7m	SOIL			Concrete			
1.0				Soft firm black and grey to brown sandy CLM/ with occasional gravel (MADE GROUND)	1.0		
1.6m	SOIL				2.0		
2.0					3.0		
3.0				Firm grey and medium brown silty CLM and light brown and dark organic CLM (Alluvium)	3.0		
3.5m	SOIL				4.0		
4.0					5.0		
5.0					6.0		
6.0	SOIL			Becoming medium dense/ soft grey and light brown clayey firm medium sub-angular GRAVEL (RIVE TERRACE DEPOSIT)	6.0		
7.0					7.0		
8.0					8.0		
9.0				Firm to stiff grey fissured silty CLAY (LOWER LMS CLAY)	9.0		
10.0					10.0		
11.0				Log complete at 6.0m	11.0		

REMARKS: Groundwater seepage at 3.4m - slight organic/ petroleum odour.



NETCEN

CLM HAM, ABINGDON, OXON
OX14 3DB 01235 46 31 25

WELL NUMBER: BH MW 5
PROJECT: BANBURY GAS WORKS
CLIENT: GRUNDONS
PROJECT No: 32163001

DRILLER: AEA
LOGGER: MSK

SCALE

WELL RECORD

Sheet 1 of 1

16.11.98

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAC	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.8m 1.0	SOIL			Firm brown and black Sandy C. A. with bricks and concrete (made ground)	1.0		
2.0	SOIL			Medium dense brown sandy gravel (made ground)	2.0		
3.0	SOIL			Firm to stiff grey silty CLAY (Alluvium)	3.0		
4.0	SOIL			Soft brown clayey sands with abundant gravel becoming grey at 3.4m slight tan color at 3.5 - 4.0m (River terrace deposits)	4.0		
5.0					5.0		
6.0	SOIL			Stiff grey fissured silty clay (Lower lias clay)	6.0		
7.0					7.0		
8.0					8.0		
9.0					9.0		
10.0					10.0		
11.0					11.0		

REMARKS: Groundwater seepage at 2.4m



WELL NUMBER: BH MW6
 PROJECT: BANBURY GAS WORKS
 CLIENT: GRUNDONS
 PROJECT No: 32163001

DRILLER: AEA
 LOGGER: MSK
 SCALE

WELL RECORD

Sheet 1 of 1

12.11.98

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% CAC	WATER	DESCRIPTION	Depth	LEGEND	NO. P.
0.85m	SOIL			Concrete			
1.0				Soft to firm grey black silty clay with black glass and concrete fragments and wood sleeper fragments (MADE GROUND)	1.0		
2.0					2.0		
2.5m	SOIL			Soft - firm grey brown silty CLAY (ALLUVIUM)	3.0		
3.0					4.0		
4.0				Medium dense grey black clayey firm-medium sand and GRAVEL	5.0		
5.0					6.0		
6.0				Slight organic colour (RIVER TERRACE GRAVELS)	7.0		
7.0				Stiff grey fissured silty CLAY (LOWER LIMS)	8.0		
8.0					9.0		
9.0				log complete at 5.4m	10.0		
10.0					11.0		
11.0							

REMARKS

Groundwater seepage at 2.45m and 1.0m. No recovery between 2.5-4.5m therefore unable to collect sample.



NETCEN

CULHAM, ABINGDON, OXON
OX14 3DB 01235 46 31 29

WELL NUMBER :

BH MW 7

PROJECT : BANBURY GAS WORKS

DRILLER: AEA

LOGGER: MASK

CLIENT : BRINDONS

SCALE

PROJECT No: 32163001

WELL RECORD

Sheet 1 of 1

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE #
0.55m	SOIL			Concrete	1.0		
1.15m	SOIL			Soft to firm grey/black silty sandy clay with fine-medium gravel and black. (MINE GROUND)	2.0		
2.75m	SOIL			Soft to firm green-grey fissured silty clay with occasional made ground mixed in near surface. (Alluvium)	3.0		
4.5m	SOIL			1.8m becoming darker in color and soft grey/black organic matter smell.	4.0		
5.06m	SOIL			Medium coarse soft to firm grey clay with fine-coarse gravel, slight contamination occur (RIVER TERRACE GRAVELS)	5.0		
				Log complete. cut 6.0m	6.0		
				Firm to stiff grey silty clay	7.0		
					8.0		
					9.0		
					10.0		
					11.0		

REMARKS

Groundwater seepage at 3.15m, + hole collapsed to 4.0m.



NETCEN

CLIFTON, ABINGDON OXON
OX14 3DB 01235 46 21 29

WELL NUMBER: BH MW 8

PROJECT: BANBURY GAS WORKS

CLIENT: GRUNDONS

PROJECT No: 32163001

DRILLER: AEA

LOGGER: MSK

SCALE

WELL RECORD

Sheet 1 of 1

16.11.98

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.4m	SOIL			Soft to firm black and grey ash, cunker and gravel in a black sandy clay matrix (MADE GROUND)	1.0	[Cross-hatched pattern]	[Hole diagram]
1.0					2.0		
1.5m	SOIL			Firm brown and grey sandy CLAY (Alluvium) becoming firm-stiff grey silty clay at 1.2m (Alluvium)	3.0	[Horizontal lines pattern]	[Hole diagram]
2.0					4.0		
2.9m	SOIL			Medium dense brown clayey sands with abundant GRAVEL becoming medium dense brown sandy gravel at 3.8m (RIVER TERRACE GRAVELS)	5.0	[X pattern]	[Hole diagram]
3.0					6.0		
4.0				Firm to stiff grey fissured silty CLAY (LOWER LMS CLAY)	7.0	[Vertical lines pattern]	[Hole diagram]
4.5m	SOIL				8.0		
5.0				Log complete at 6.0m	9.0	[Vertical lines pattern]	[Hole diagram]
6.0m	SOIL				10.0		
6.06m					11.0		

REMARKS: Groundwater seepage at 2.8m



NETCEN

CULHAM, ABINGDON, OXON
OX14 9DB 01235 46 31 29

WELL NUMBER: BH MW9

PROJECT: BANBURY GAS WORKS

CLIENT: GRUNDON'S

PROJECT No: 32163001

DRILLER: AEA

LOGGER: NISW

SCALE

WELL RECORD

Sheet 1 of 1

13.11.98

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	NO. #
0.55m	SOIL			Medium dense brown sandy fine-medium gravel (MADE GROUND)	1.0		
1.35m	SOIL				2.0		
2.6m	SOIL			Firm brown and grey silty CLAY with occasional black organic matter. (ALLUVIUM)	3.0		
4.0m	SOIL				4.0		
5.8m	SOIL			Soft to firm black and grey organic silty CLAY (ALLUVIUM)	5.0		
6.0m	SOIL				6.0		
7.0m				Medium dense grey firm to medium clayey sand and GRAVEL (RIVER TERRACE GRAVELS)	7.0		
8.0m					8.0		
9.0m				Firm to stiff grey fissured silty CLAY (LOWER LIAS)	9.0		
10.0m					10.0		
11.0m				Log complete at 6.0m	11.0		

REMARKS: Groundwater seepage at 3.0m



NETCEN
 CULHAM, ABINGDON, OXON
 OX14 3DD 01235 46 37 29

WELL NUMBER: BH MW10

PROJECT: BANBURY GAS WORKS

CLIENT: BRINDONS

PROJECT No: 32163001

DRILLER: AEA

LOGGER: MSK

SCALE

WELL RECORD

Sheet 1 of 1

13.11.98

SAMPLING AND TESTS

STRATA

DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	NO. E
0.55m	SOIL			Medium dense orange brown fine - medium sand and occasional gravel (MADE GROUND)	1.0	[Symbol: X's]	
1.0					2.0		
1.5m	SOIL			Firm - stiff orange brown and grey silty CLAY with occasional black organic matter (ALLUVIUM)	3.0	[Symbol: X's]	
2.0					4.0		
2.8m	SOIL			bleaching black organic sand and clay layer (ALLUVIUM) (LOCAL CONTAMINATION?)	5.0	[Symbol: X's]	
3.0					6.0		
4.0				Medium dense grey and brown fine - medium sand and fine - coarse sub-angular GRAVEL (RIVER TERRACE GRAVELS)	7.0	[Symbol: X's]	
4.2m	SOIL				8.0		
5.0				Stiff grey fissured silty CLAY (LOWER LIAS CLAY)	9.0	[Symbol: X's]	
5.9m	SOIL				10.0		
6.0					11.0		

REMARKS: Groundwater seepage at 3-5m



NETCEN

CULHAM, ABINGDON, OXON
OX14 3DB 01235 46 31 29

WELL NUMBER: BH MW11

PROJECT: BANBURY GAS WORKS

CLIENT: GRUNDONS

PROJECT No: 52163001

DRILLER: AEA

LOGGER: MSK

SCALE

WELL RECORD

Sheet 1 of 1

13.11.98

SAMPLING AND TESTS				STRATA			
DEPTH	TYPE	% GAS	WATER	DESCRIPTION	Depth	LEGEND	HOLE
0.55m	SOIL			Soft to firm brown sandy clay with brick and asbestos sheeting fragments (MADE GROUND)	1.0		
1.0					2.0		
1.5m	SOIL			Medium dense brown fine-medium sandy gravel (MADE GROUND)	3.0		
2.0					4.0		
3.0				Soft to firm grey and black silty CLAY with some organic matter (ALLUVIUM)	5.0		
3.2m	SOIL				6.0		
4.0				Medium dense sandy fine-medium sand and gravel (RIVER TERRACE GRAVEL)	7.0		
4.85m	SOIL				8.0		
5.0				Firm to stiff grey fissured silty CLAY (LOWER LIAS CLAY)	9.0		
6.0					10.0		
7.0				Log. complete at 6.0m	11.0		
8.0							
9.0							
10.0							
11.0							

REMARKS: Asbestos sheeting fragments on surface
Groundwater at 2.8m



NETCEN

CULHAM, ABINGDON, OXON
OX14 3DB 01235 4831 29

WELL NUMBER: BH MW 12

PROJECT: BANBURY GAS WORKS

CLIENT: GRUNDON'S

PROJECT No: 32163001

DRILLER: HEA

LOGGER: MSK

SCALE

Appendix 3

Levelling Data

ID	TYPE	GROUND LEVEL	DEPTH TO WATER LEVEL	
BH37	BH	0.73	0	
BH38	BH	0.88	0	
BH40	BH	0.67	0	
BH53	BH	0.06	0	
MW01	MW	0.12	-1.07	-1.07
MW02	MW	0.06	-1.12	-1.12
MW03	MW	1.05	-1.25	-1.25
MW04	MW	0.88	-1.09	-1.09
MW05	MW	0.68	1.09	-1.09
MW06	MW	0.15	-0.99	0.99
MW07	MW	0.68	-0.97	-0.97
MW08	MW	0.76	-1.12	-1.12
MW09	MW	0	0	
MW10	MW	0.52	-1.26	-1.26
MW11	MW	0.41	-1.53	-1.53
MW12	MW	0.56	-0.4	-0.4
MW28	MW	0.85	-1.25	-1.25
MW39	MW	0.72	1.18	1.18
TP01	TP	0.29	0	
TP02	TP	0.72	0	
TP03	TP	0.93	0	
TP04	TP	0.84	0	
TP05	TP	0.32	0	
TP06	TP	0.09	0	
TP07	TP	-0.11	0	
TP08	TP	0.35	0	
TP09	TP	0.12	0	
TP10	TP	-0.04	0	
TP11	TP	0.04	0	
TP12	TP	0.14	0	
TP13	TP	0.2	0	
TP14	TP	0.41	0	
TP15	TP	1.07	0	
TP16	TP	0.03	0	
TP17	TP	0.92	0	
TP18	TP	0.83	0	
TP19	TP	0.92	0	
TP20	TP	0.67	0	
TP21	TP	0.85	0	
TP22	TP	0.69	0	
TP23	TP	0	0	
TP23a	TP	0.62	0	
TP24	TP	-0.33	0	
TP25	TP	0.76	0	
TP26	TP	0.76	0	
TP27	TP	0.1	0	
TP27a	TP	-0.01	0	
TP29	TP	0.75	0	
TP30	TP	0.91	0	
TP31	TP	0.79	0	

ID	TYPE	GROUND LEVEL	DEPTH TO WATER LEVEL
TP32	TP	0.82	0
TP33	TP	0.81	0
TP34	TP	0.79	0
TP35	TP	0.78	0
TP36	TP	0.79	0
TP41	TP	0.9	0
TP42	TP	0.70	0
TP43	TP	0.78	0
TP44	TP	0.76	0
TP45	TP	0	0
TP46	TP	0.72	0
TP47	TP	0.7	0
TP48	TP	0.59	0
TP49	TP	0.57	0
TP50	TP	0.47	0
TP51	TP	0.75	0
TP52	TP	0.46	0
TP54	TP	0.52	0
TP55	TP	0.27	0
TP56	TP	0.58	0
TP57	TP	-0.1	0
TP58	TP	0.74	0
TP59	TP	0.19	0
TP60	TP	0.28	0
TP61	TP	0.72	0
TP62	TP	0.26	0
TP63	TP	0.35	0
TP64	TP	0.62	0
TP65	TP	-0.05	0

Appendix 4

Monitoring Well Data

Well Volumes

Monitoring Well	Date	Water Level	Base of Well	Standing Depth	Purge Volume	Comments
1	16/11/98	1.19	2.88	1.69	10.14	
2	17/11/98	1.18	3.28	2.1	12.6	
3	17/11/98	2.3	4.7	2.4	14.4	Strong HC Odour (More volatile)
4	16/11/98	1.97	4.2	2.23	13.38	
5	17/11/98	1.77	2.73	0.94	5.64	
6	17/11/98	1.14	3.04	1.9	11.4	Sheen, Slight HC odour
7	16/11/98	1.65	3.3	1.65	8.9	
8	16/11/98	1.88	3.05	1.17	7.02	Strong HC odour, Dark black colour, Sheen
9	16/11/98	1.5	3.4	1.9	11.4	
10	16/11/98	1.78	3.68	1.9	11.4	
11	16/11/98	1.94	4.4	2.46	14.76	
12	16/11/98	0.96	3.9	2.94	17.64	
28	17/11/98	1.92	3.68	1.74	10.44	
39	17/11/98	1.9	4.83	2.73	16.38	

Rising Head

MW3		MW5		MW7	
Elapsed Time (Seconds)	Depth to Water (m)	Change in height (m)	Elapsed Time (Seconds)	Depth to Water (m)	Change in height (m)
0	2.73		0	2.7	
30	2.66		10	2.65	
60	2.61		20	2.61	
90	2.59		30	2.58	
120	2.56		40	2.54	
150	2.55		50	2.5	
180	2.54		60	2.47	
240	2.52		90	2.38	
300	2.5		120	2.3	
360	2.49		150	2.24	
420	2.48		180	2.19	
480	2.475		210	2.14	
540	2.47		240	2.12	
600	2.465		270	2.09	
660	2.46		300	2.07	
720	2.455		330	2.05	
780	2.45		360	2.03	
840	2.445		420	2	
900	2.44		480	1.98	
			540	1.965	
			600	1.96	
			660	1.945	
			720	1.94	
			1020	1.915	
			1200	3.37	
			1800	3.3	
			2400	3.23	
			3000	3.18	

Appendix 5

Analytical Results

CONTENTS

Soils
Groundwater
Leach tests
Particle Size Distribution

Bantury Sci Analysis Results

Your Reference		Our Reference		P2240.4		P240.4		IP250.3		IP250.4		IP2740.5		IP2740.5		IP2740.5		IP2740.5		IP2740.5	
Moisture Content		Moisture Content		CM762	DN1267	CM1271	CM1274	CM1275	CM1274	CM1277	CM1279	CM1280	CM1283	CM1285	CM1287	CM1287	CM1287	CM1287	CM1287	CM1287	CM1287
Stones		1	1	25	29	14	15	25	15	27	18	17	17	22	33	15	15	15	15	15	15
Loss on Ignition		1	1	32	4.9	57	57	37	57	50	41	6.8	6.8	18	44	3	3	3	3	3	3
Arsenic		2	2	280	10	55	69	15	11	20	5.4	1.3	1.3	2.2	2.8	1.5	1.5	1.5	1.5	1.5	1.5
Cadmium		0.4	0.4	25	0.48	23	23	18	18	4.4	1.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Chromium		0.3	0.3	140	88	54	54	95	430	81	93	28	28	70	320	57	57	57	57	57	57
Copper		0.4	0.4	2100	21	62	62	2300	1300	870	31	11	11	25	520	13	13	13	13	13	13
Mercury		2	2	5.6	41	3.8	3.8	3.5	7.7	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Nickel		0.7	0.7	180	41	26	26	110	250	97	130	26	26	45	62	35	35	35	35	35	35
Lead		2	2	22000	35	480	480	19000	3000	950	38	18	18	49	520	11	11	11	11	11	11
Selenium		0.2	0.2	9200	110	180	180	4800	420	420	420	420	420	420	420	420	420	420	420	420	420
Water Soluble Boron		0.2	0.2	7.8	1	2	2	2.5	7.7	3.7	2.2	2	2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total Sulphate		100	100	4000	1100	15000	15000	3800	2400	2800	1400	300	300	300	300	300	300	300	300	300	300
Ammonia		3	3	43	43	43	43	43	43	43	420	140	140	20	43	3	3	3	3	3	3
Total Cyanide		0.1	0.1	33	1.7	410	410	94	6.4	42	0.8	0	0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Monohydric Phenols		0.1	0.1	6.3	2.1	4.6	4.6	5.9	9.5	4.6	1.6	2	2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Diesel Range Organics		1	1	100000	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total PAH Screen by UV		3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total PCB's as Arochlor 1254		20	20	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Naphthalene		5	5	130	130	36	36	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Acenaphthylene		5	5	720	720	190	190	450	450	450	450	450	450	450	450	450	450	450	450	450	450
Acenaphthene		5	5	530	530	74	74	490	490	490	490	490	490	490	490	490	490	490	490	490	490
Fluorene		5	5	380	380	300	300	410	410	410	410	410	410	410	410	410	410	410	410	410	410
Phenanthrene		5	5	320	320	350	350	280	280	280	280	280	280	280	280	280	280	280	280	280	280
Anthracene		5	5	2700	2700	140	140	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Fluoranthene		5	5	310	310	260	260	220	220	220	220	220	220	220	220	220	220	220	220	220	220
Pyrene		5	5	580	580	220	220	920	920	920	920	920	920	920	920	920	920	920	920	920	920
Benzo (a) anthracene		5	5	500	500	110	110	420	420	420	420	420	420	420	420	420	420	420	420	420	420
Chrysene		5	5	480	480	19	19	420	420	420	420	420	420	420	420	420	420	420	420	420	420
Benzo (b) fluoranthene		5	5	110	110	64	64	87	87	87	87	87	87	87	87	87	87	87	87	87	87
Benzo (k) fluoranthene		5	5	510	510	100	100	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Benzo (e) pyrene		5	5	250	250	82	82	230	230	230	230	230	230	230	230	230	230	230	230	230	230
Indeno (1,2,3-cd) pyrene & dibenzof(a,h) anthracene		6	6	260	260	70	70	220	220	220	220	220	220	220	220	220	220	220	220	220	220
Benzo (ghi) perylene		5	5	120	120	33	33	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Total USEPA PAH's by GC-FID		80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Total BTEX Compounds		0.5	0.5	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Benzene		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Toluene		0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Ethylbenzene		0.1	0.1	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total Xylenes		0.2	0.2	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Elemental Sulphur		100	100	5700	5700	5700	5700	5700	5700	5700	5700	5700	5700	5700	5700	5700	5700	5700	5700	5700	5700
Asbestos		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Banbury Soil Analysis Results

Your Reference		TP2410.3		TP3502.3		BH3711.2		BH3712.8		B-3811.7		BH4011.3		BH4012.3		TP4311.2		TP4311.2		TP4512.1		TP4512.1	
Our Reference		LoD	CN1295	CN1299	CN1322	CN1459	CN1460	CN1462	CN1469	CN1470	CN1471	CN1471	CN1471	CN1530	CN1530	CN1531	CN1531	CN1531	CN1531	CN1531	CN1531	CN1531	CN1531
Moisture Content	Units	LoD																					
Stonics	% Av	0.1	16	21	21	22	20	20	20	20	17	17	25	19	20	20	19	19	19	19	19	19	19
Loss on Ignition	% Av	1	70	25	36	24	5.6	2.7	2.7	2.7	30	30	23	30	35	35	40	40	40	40	40	40	
Asenic	% Av	0.1	8	5.4	7.7	6.9	4.4	4.9	4.9	5.5	5.5	3.4	3.8	3.8	5.5	5.5	4.4	4.4	4.4	4.4	4.4	4.4	
Cadmium	mg/kg	2	50	5.6	32	7.7	22	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	
Chromium	mg/kg	0.4	3.5	<0.4	13	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	
Copper	mg/kg	0.5	190	66	330	41	5.8	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	
Lead	mg/kg	0.4	270	40	440	25	16	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
Mercury	mg/kg	2	41	<1	1.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Nickel	mg/kg	0.7	120	52	250	48	36	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	
Lead	mg/kg	2	430	30	1300	37	18	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
Selenium	mg/kg	20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
Zinc	mg/kg	0.2	160	120	2800	160	52	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	
Water Soluble Boron	mg/kg	0.5	3	2	4.5	1	0.4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Total Sulphate	mg/kg	100	2300	1300	2600	1100	1200	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	
Ammonia	mg/kg	3	<3	300	<3	4	10	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	
Total Cyanide	mg/kg	0.1	46	44	3.3	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
Monocyclic Phenols	mg/kg	0.1	2.3	7.8	2.0	2.7	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Diesel Range Organics	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total PAH Screen by UV	mg/kg	1	34	370	-	-	-	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	
Total PCB's as Arochlor 1254	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Naphthalene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acenaphthylene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Acenaphthene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fluorene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phenanthrene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Anthracene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fluoranthene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pyrene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo (a) anthracene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chrysene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo (b) fluoranthene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo (k) fluoranthene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo (g) pyrene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Indeno (1,2,3-cd) pyrene & Dibenzof(a,h) anthracene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo (ghi) perylene	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total USEPA PAH's by GC-FID	mg/kg	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total BTEX Compounds	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Toluene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ethylbenzene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Xylenes	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Elemental Sulphur	mg/kg	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Asbestos	mg/kg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Banbury Soil Analysis Results

Year Reference	LOIS	TP47.1	TP48/2.2	TP49/C.3	TP50/3	TP51/3	TP52/0.1	TP53/5.0	TP54/2.7	TP55/0.3	TP56/H	TP57/3	TP58/3
Cor Reference	LOD	CN1322	CN1326	CN1328	CN1333	CN1335	CN1337	CN1472	CN1474	CN1475	CN1477	CN151	CN153C
Molature Content	% W	37	31	32	32	32	10	-	17	13	20	15	22
Loss on Ignition	% W	37	18	38	35	10	48	-	42	26	5.3	43	33
Arabic	% W	8.1	9.6	7.1	5.1	7.4	6.3	-	4.2	2.2	7.3	2.8	6.1
Cadmium	mg/kg	10	<0.4	12	22	11	50	-	30	13	<0.4	33	34
Chromium	mg/kg	65	66	66	55	67	36	-	62	22	62	53	71
Copper	mg/kg	32	16	48	159	17	290	-	14	20	23	39	28
Mercury	mg/kg	41	41	41	41	41	41	-	41	41	41	41	41
Nickel	mg/kg	43	33	49	44	41	76	-	48	29	42	67	62
Lead	mg/kg	63	30	56	40	22	2000	-	25	19	17	22	21
Selenium	mg/kg	<20	<20	<20	<20	<20	<20	-	<20	<20	<20	<20	<20
Zinc	mg/kg	120	94	180	58	100	900	-	96	58	120	98	110
Water Soluble Boron	mg/kg	2.5	2	0.7	0.8	0.9	0.8	-	0.6	0.3	2.4	0.3	2
Total Sulphate	mg/kg	1320	1600	1400	1000	1720	1300	-	1400	900	700	500	1300
Ammonia	mg/kg	5	41	30	4	71	4	-	51	4	<3	280	872
Total Cyanide	mg/kg	0.6	1.5	0.9	0.1	0.6	0.9	-	0.8	0.1	<0.1	0.8	26
Monocyclic Phenols	mg/kg	6.6	12	1.9	0.8	2.5	2.6	-	1.2	0.3	<0.1	-	2.7
Diesel Range Organics	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-
Total PAH Screen by US	mg/kg	3	-	-	33	-	-	-	-	-	-	-	-
Total PCB's as Arochlor 1254	mg/kg	0	-	-	-	-	<20	-	-	-	10	660	175
Naphthalene	mg/kg	5	-	-	-	-	120	-	-	-	-	-	-
Acenaphthylene	mg/kg	5	-	-	-	-	71	-	-	-	-	-	-
Acenaphthene	mg/kg	5	-	-	-	-	27	-	-	-	-	-	-
Fluorene	mg/kg	5	-	-	-	-	73	-	-	-	-	-	-
Phenanthrene	mg/kg	5	-	-	-	-	270	-	-	-	-	-	-
Anthracene	mg/kg	5	-	-	-	-	150	-	-	-	-	-	-
Fluoranthene	mg/kg	5	-	-	-	-	300	-	-	-	-	-	-
Pyrene	mg/kg	5	-	-	-	-	270	-	-	-	-	-	-
Benzo (a) anthracene	mg/kg	5	-	-	-	-	150	-	-	-	-	-	-
Chrysene	mg/kg	5	-	-	-	-	170	-	-	-	-	-	-
Benzo (b) fluoranthene	mg/kg	5	-	-	-	-	29	-	-	-	-	-	-
Benzo (k) fluoranthene	mg/kg	5	-	-	-	-	310	-	-	-	-	-	-
Benzo (e) pyrene	mg/kg	5	-	-	-	-	130	-	-	-	-	-	-
Indeno (1,2,3-cd) pyrene & Dibenzo (ah) anthracene	mg/kg	5	-	-	-	-	140	-	-	-	-	-	-
Benzo (ghi) perylene	mg/kg	5	-	-	-	-	72	-	-	-	-	-	-
Total USEPA PAH's by GC-FID:	mg/kg	80	-	-	-	-	2272	-	-	-	-	-	-
Total BTEX Compounds	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-
Total Xylenes	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-
Elemental Sulphur	mg/kg	100	-	-	-	-	-	-	-	-	-	-	-
Asbestos	-	-	-	-	-	-	-	-	-	-	-	-	-

Banbury Soil Analysis Results

Your Reference Our Reference		MW26.0 CN:407	MW21.5 CN:429	MW19.85 CN:443	MW15.0 CN:386	MW10.5 CN:384	MW5.6 CN:388	MW0.8 CN:440	MW0.2 CN:444	MW0.0 CN:445	MW12.5 CN:382	MW76.4 CN:384
Units	LoD	16	18	20	31	14	26	18	10	23	33	24
% w/w	0.1	58	24	9.7	94	17	1.9	9.3	11	21	38	29
% w/w	0.1	5.3	6.7	4.7	1.6	5.4	7.1	5.7	4.7	5.5	9.6	6.8
mg/kg	2	65	41	23	46	15	32	32	26	53	14	28
mg/kg	0.4	0.81	1.2	0.4	0.72	0.7	0.4	0.87	0.62	0.87	0.58	0.59
mg/kg	0.3	63	73	35	76	70	78	71	48	72	40	61
mg/kg	0.4	23	100	35	29	24	28	90	33	32	37	55
mg/kg	2	41	41	41	41	41	41	41	41	41	41	41
mg/kg	0.7	66	62	30	70	24	34	71	32	74	44	52
mg/kg	2	41	320	50	26	33	42	26	270	100	43	31
mg/kg	20	420	420	420	420	420	420	420	420	420	420	420
mg/kg	0.2	130	100	140	190	160	170	140	92	150	240	140
mg/kg	0.2	2.8	4.8	5.5	2.4	1	2.5	2	2	2	3.9	2
mg/kg	100	1000	1700	800	900	1100	1400	1000	420	2000	2200	1300
mg/kg	3	43	10	10	4	10	43	3	43	56	43	150
mg/kg	0.1	1.1	34	8.3	4.8	2.2	0.4	0.1	1.0	52	0.3	0.6
mg/kg	0.1	0.6	1.4	1.7	0.3	0.3	3.6	0.1	0.6	0.8	2.4	1.7
mg/kg	3	20	70	70	70	48	70	2	720	70	70	31
Total PCB's as Arochlor 1254	20	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	5	46	45	45	45	45	45	45	45	45	45	45
Acenaphthylene	5	12	46	46	46	46	46	46	46	46	46	46
Acenaphthene	5	45	45	45	45	45	45	45	45	45	45	45
Fluorene	5	6	45	45	45	45	45	45	45	45	45	45
Phenanthrene	5	74	45	45	45	45	45	45	45	45	45	45
Anthracene	5	20	45	45	45	45	45	45	45	45	45	45
Fluoranthene	5	20	6	6	45	45	45	45	45	45	45	45
Pyrene	5	10	45	45	45	45	45	45	45	45	45	45
Benzo (a) anthracene	5	83	3	3	45	45	45	45	45	45	45	45
Chrysene	5	16	7	7	45	45	45	45	45	45	45	45
Benzo (b) fluoranthene	5	14	3	3	45	45	45	45	45	45	45	45
Benzo (k) fluoranthene	5	160	45	45	45	45	45	45	45	45	45	45
Benzo (g) perylene	5	62	7	7	45	45	45	45	45	45	45	45
Indeno (1,2,3-cd) pyrene & Dibenzof(a,h)anthracene	5	79	22	22	45	45	45	45	45	45	45	45
Benzo (ghi) perylene	5	35	45	45	45	45	45	45	45	45	45	45
Total USEPA PAH's by GC-MS	80	810	62	62	48	48	7	7	143	92	41	41
Total BTEX Compounds	0.5	-	-	-	-	-	-	-	-	-	-	-
Toluene	0.1	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	0.1	-	-	-	-	-	-	-	-	-	-	-
Total Xylenes	0.2	-	-	-	-	-	-	-	-	-	-	-
Elemental Sulphur	100	-	-	-	-	-	-	-	-	-	-	-
Asbestos	-	-	-	-	-	-	-	-	-	-	-	-

Barrow Water Analysis Results

Customer Reference	Units	MWTSWATER	DIVSWATER	KWTSWATER	KWTSWATER	MUBAWATER	MUSWATER	MWTSWATER	MWTSWATER	MWTSWATER	MWTSWATER	MWTSWATER	MWTSWATER	MWTSWATER	MWTSWATER
Cur Ref	LOD	CH1475	CH1475	CH1475	CH1477	CH1478	CH1479	CH1480	CH1481	CH1482	CH1483	CH1484	CH1485	CH1486	CH1487
pH		6.9	6.9	7.3	7.3	7.8	7.2	7.2	7.3	6.7	6.7	6.7	6.7	6.7	6.7
Conductivity	µS/cm	1.5	1.7	1.1	1.1	1.8	0.9	1.2	1.2	1.2	1.2	1.5	1.5	1.5	1.5
Suspended Solids	mg/L	7200	9600	3000	3000	1000	3000	13000	500	500	500	18000	4500	4500	30000
Arsenic	µg/L	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Cadmium	µg/L	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Chromium	µg/L	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Copper	µg/L	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Lead	µg/L	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Manganese	µg/L	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nickel	µg/L	10	10	5	5	10	5	5	5	5	5	5	5	5	5
Selenium	µg/L	3	3	1.5	1.5	3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Zinc	µg/L	0.6	0.6	0.3	0.3	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Boron	µg/L	30	30	15	15	30	15	15	15	15	15	15	15	15	15
Sulfate	mg/L	2	2	1	1	2	1	1	1	1	1	1	1	1	1
Ammonia	mg/L	0.1	0.1	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Sulfide	mg/L	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TOC	mg/L	2	2	1	1	2	1	1	1	1	1	1	1	1	1
Total Cyanide	mg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Phenol	µg/L	1	1	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Diethyl Range Organics	µg/L	10	10	5	5	10	5	5	5	5	5	5	5	5	5
Naphthalene	µg/L	0.025	0.025	0.0125	0.0125	0.025	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125
Acenaphthylene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Acenaphthene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Fluorene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Phenanthrene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Anthracene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Fluoranthene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Pyrene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Benzo[a]anthracene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Chrysene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Benzo[b]fluoranthene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Benzo[k]fluoranthene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Benzo[a]pyrene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Indeno[1,2,3-cd]perylene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Benzo[ghi]perylene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Benzo[e]pyrene	µg/L	0.01	0.01	0.005	0.005	0.01	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Total PAH's	µg/L	0.176	0.176	0.088	0.088	0.176	0.088	0.088	0.088	0.088	0.088	0.088	0.088	0.088	0.088
Total BTEX Compounds	µg/L	100	100	50	50	100	50	50	50	50	50	50	50	50	50
Benzene	µg/L	20	20	10	10	20	10	10	10	10	10	10	10	10	10
Toluene	µg/L	20	20	10	10	20	10	10	10	10	10	10	10	10	10
Ethylbenzene	µg/L	20	20	10	10	20	10	10	10	10	10	10	10	10	10
Total Xylenes	µg/L	40	40	20	20	40	20	20	20	20	20	20	20	20	20

* = Minimum Result

Sanbury Water Analysis Results

Customer Reference	Units	MWS WATER	MYS WATER	MWSB WATER	TF1 WATER	TP12 WATER	TP18 WATER	TP25 WATER	TP4 WATER
Our Ref		CN1485	CN1487	CN1488	CN1217	CN1248	CN1207	CN1260	CN1514
pH		6.9	7.0	5.3	-	7.8	7.4	7.5	7.2
Conductivity	µS/cm	14	0.78	0.84	-	19	0.84	3.2	1.6
Suspended Solids	mg/L	28000	14000	2000	-	11000	-	27000	11000
Arsenic	µg/L	0.2	4	2	-	13	30	5.5	19
Cadmium	µg/L	0.1	<0.1	<0.1	-	1.2	<0.1	0.5	0.2
Chromium	µg/L	5	4.9	5.8	-	4.8	4.6	4.3	4.8
Copper	µg/L	4	4	4	-	4.9	4	4	4
Lead	µg/L	0.2	0.4	<0.2	-	6	0.6	1	2
Mercury	µg/L	3	4.9	5.3	-	4.3	4.5	4	4.3
Nickel	µg/L	10	25	7.7	-	20	13	65	24
Selenium	µg/L	3	55	5	-	10	30	22	10
Zinc	µg/L	0.6	<0.6	2	-	930	39	15	<0.6
Boron	µg/L	20	1500	250	-	870	230	1200	2000
Sulphate	mg/L	2	630	17	-	1100	1500	550	550
Ammonia	mg/L	0.1	41	4	-	-	30	0.35	-
Sulphide	mg/L	0.2	<0.2	<0.2	-	-	-	-	-
TOC	mg/L	2	19	17	-	11	10	37	33
Total Cyanide	mg/L	0.1	0.05	<0.01	-	-	<0.13	1.45	-
Phenol	µg/L	1	1	1	-	-	-	3	2
Diesel Range Organics	µg/L	10	-	-	-	-	-	-	-
Naphthalene	µg/L	0.025	66	330	-	-	-	-	-
Acenaphthylene	µg/L	0.01	3.2	52	-	-	-	-	-
Acenaphthene	µg/L	0.01	34	150	-	-	-	-	-
Fluorene	µg/L	0.01	17	420	-	-	-	-	-
Phenanthrene	µg/L	0.01	4.0	200*	-	-	-	-	-
Anthracene	µg/L	0.01	3.3	200*	-	-	-	-	-
Fluoranthene	µg/L	0.01	12	150	-	-	-	-	-
Pyrene	µg/L	0.01	2	120	-	-	-	-	-
Benzo[a]anthracene	µg/L	0.01	1.2	35	-	-	-	-	-
Chrysene	µg/L	0.01	1.2	35	-	-	-	-	-
Benzo[b]fluoranthene	µg/L	0.01	0.68	14	-	-	-	-	-
Benzo[k]fluoranthene	µg/L	0.01	0.97	18	-	-	-	-	-
Benzo[e]pyrene	µg/L	0.01	1.3	21	-	-	-	-	-
Indeno[1,2,3-cd]perylene	µg/L	0.01	0.48	1*	-	-	-	-	-
Dibenz[a,h]anthracene	µg/L	0.01	0.11	2.8	-	-	-	-	-
Benzo[ghi]perylene	µg/L	0.01	0.23	6.7	-	-	-	-	-
Total PAH's	µg/L	0.175	71.37	1184.5	-	-	-	-	-
Total BTEX Compounds	µg/L	100	4700	4700	1530000	-	25000	-	-
Benzene	µg/L	20	<20	<20	800000	-	11000	-	-
Toluene	µg/L	20	<20	<20	431000	-	1900	-	-
Ethylbenzene	µg/L	20	<20	<20	72000	-	4800	-	-
Total Xylenes	µg/L	40	<40	<40	229000	-	8300	-	-

Leach Tests

Our Reference	Units	LOD	CN1239	CN1264	CN1474
Your Reference			TP10/0.2	TP23A/0.45	TP53/S.0
Arsenic	µg/l ¹	70	<70	<70	<70
Cadmium	µg/l ¹	7	<7	<7	<7
Chromium	µg/l ¹	20	<20	<20	<20
Copper	µg/l ¹	20	60	<20	<20
Iron	µg/l ¹	60	3800	500	470
Mercury	µg/l ¹	40	<40	<40	<40
Nickel	µg/l ¹	20	30	<20	<20
Lead	µg/l ¹	90	200	<90	<90
Zinc	µg/l ¹	5	240	40	30
Ammonia	mg/l ¹	0.5	1	0.9	26
Total Cyanide	mg/l ¹	0.01	0.03	<0.01	0.06
Total Monohydric Phenol	mg/l ¹	0.01	0.16	0.14	0.06
Sulphate	mg/l ¹	2	110	103	88
Conductivity	mScm ⁻¹	0.001	0.14	0.35	0.31
Total Organic Carbon	mg/l ¹	2	4	15	12
pH	pH units	0.1	7.5	7.1	7.5



PARTICLE-SIZE ANALYSIS REPORT

SAMPLE REF: SO104790

Mr Steve Gore
AEA Technology
Culham

Report Date 06-Jan-99
Date Received 10-Dec-95
Date Completed 06-Jan-99

Sample Description: 10/12/96 10:45 CN1381

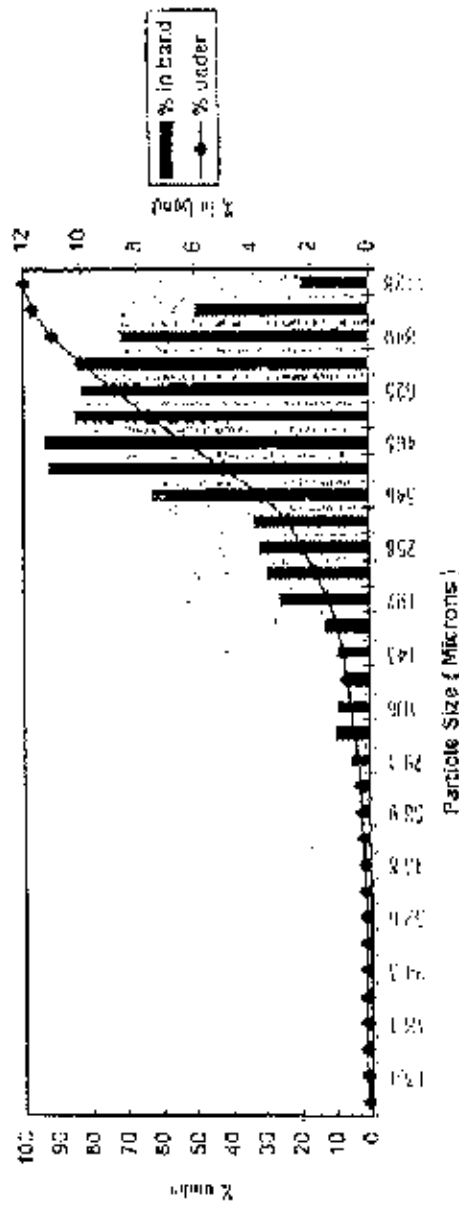
Focal length = 600 mm
Presentation = pill
Beam length = 2.3 mm
Obscuration = 0.2562

Volume concentration = 0.9796%
-log. diff. = 4.0817
Span = 1.4
Spec. surf. area = 0.0180sq.m./cc.

msw / 6m

$D(0.5) = 445.55 \mu\text{m}$
 $D(0.8) = 512.34 \mu\text{m}$
 $D(0.1) = 173.74 \mu\text{m}$
 $D(4,3) = 471.34 \mu\text{m}$
 $D(3,2) = 333.28 \mu\text{m}$

Particle size chart for Sample Reference SO104790



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Parc Exyden each Pen-y-bont ar Ogwr
Pen-y-bont ar Ogwr CF53 3NA

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2 Technology Drive
Eurogard Science Park
Eurogard City Centre, SNA

Phone: +44 (0)1656 547 557
Fax: +44 (0)1656 646 525

Particle Size (microns)	% in band	% Under
1128	2.28	100
973	5.97	97.7
840	8.57	91.7
724	9.78	83.2
625	8.94	73.4
539	10.2	63.5
465	11.3	53.2
401	11.1	42
346	7.52	30.9
299	3.83	23.4
258	3.74	19.4
222	3.5	15.7
192	3.05	12.2
165	1.48	9.14
143	1.12	7.63
123	0.85	6.54
106	1.08	5.50
91.7	1.17	4.53
79.1	0.67	3.47
68.2	0.41	2.79
58.9	0.25	2.38
50.8	0.25	2.13
43.8	0.27	1.88
37.8	0.22	1.6
32.6	0.14	1.39
26.1	0.02	1.25
24.3	0	1.23
20.9	0	1.23
18.1	0.01	1.23
15.6	0.12	1.23
13.4	0.2	1.11
11.6	0.91	0.91

Unlabeled

Jayne Wre
Inorganic Chemistry Manager - South



PARTICLE SIZE ANALYSIS REPORT
SAMPLE REF: SO104789

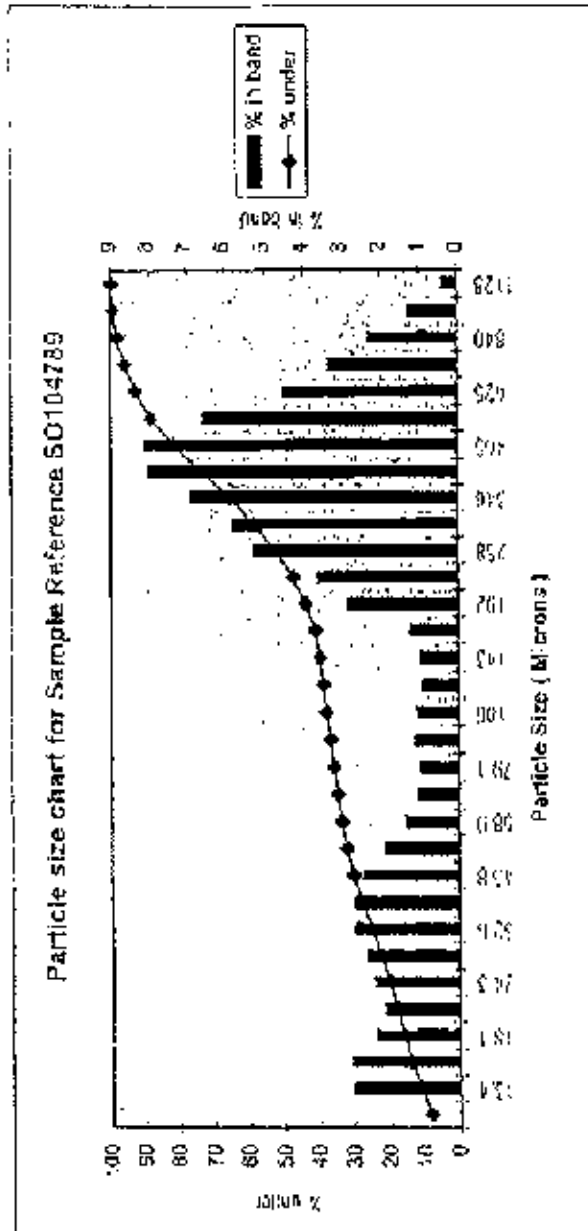
Mr Steve Gore
 AEA Technology
 Culham
 Abingdon
 Oxfordshire
 OX14 3DB

Report Date: 06-Jan-99
 Date Received: 10-Dec-98
 Date Completed: 06-Jan-99

Sample Description: 10/12/98 10:45 CN1280 TP27A/3.5m

Focal length = 600 mm
 Presentation = pil
 Beam length = 2.3 mm
 Obscuration = 0.2187
 Volume concentration = 0.1448%

Log. diff. = 2.028
 Span = 2.3
 Spec. surf. area = 0.1303sq.m./cc.



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Particle Size (microns)	% in band	% under
1128	0.41	100
973	1.25	99.6
840	2.29	98.3
724	3.33	96
625	4.52	92.7
539	6.52	86.2
465	8.11	81.6
401	8.34	73.5
346	6.69	65.5
299	5.82	58.6
258	5.3	52.8
222	3.51	47.5
192	2.85	43.9
165	1.23	41
143	0.99	39.8
123	0.95	38.8
106	1.35	37.9
917	1.12	36.8
791	0.99	35.7
682	1.06	34.7
589	1.38	33.6
503	1.94	32.2
438	2.45	30.3
375	2.68	27.8
328	2.67	25.2
281	2.38	22.5
243	2.19	20.1
209	1.93	17.9
181	2.13	16
156	2.77	13.9
134	2.73	11.1
115		8.38

Judge

Jayne Ware
 Inorganic Chemistry Manager - Solihull

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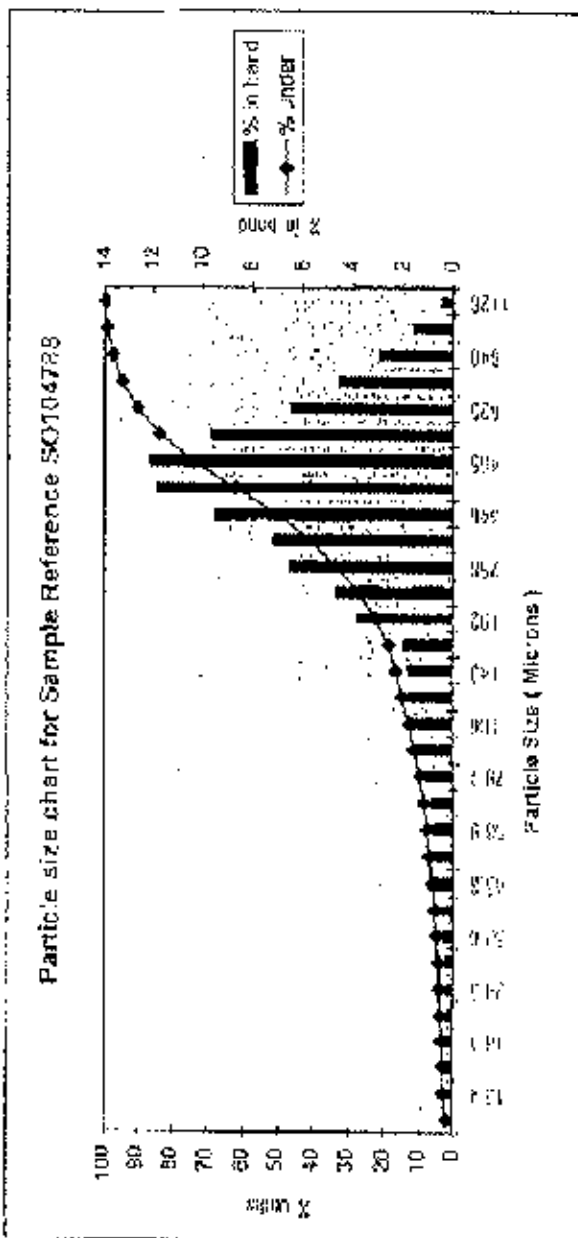
PARTICLE SIZE ANALYSIS REPORT
SAMPLE REF: SO104788

Mr Steve Gore
 AEA Technology
 Culham
 Abingdon
 Oxfordshire
 OX14 3DB

Report Date 08-Jan-99
 Date Received 10-Dec-98
 Date Completed 06-Jan-99

Sample Description: **10H2198 10:45 CNT245**
 Focallength = 600 mm
 Presentation = pil
 Beam length = 2.3 mm
 Obscuration = 0.2502
 Volume concentration = 0.50203%
 Log. diff. = 3.523
 Span = 1.6
 Spec. surf. area = 0.0345sq.m./cc.

TP12/1.5m



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Jayne Ware
 Inorganic Chemistry Manager - Swill

Appendix 6

Preliminary Quantatative Risk Assessment

Output Table 1

RBCA TIER 1/TIER 2 EVALUATION

Site Name: **Wetland Road** Job Identification: **02153001** Software: **CSI RBCA Spreadsheets**
 Site Location: **Barbours** Date Completed: **05/01/09** Version: **1.0.1**
 Completed by: **Jonathan Owens**

NOTE: values other than Tier 1 default values are shown in bold italics and underlined

Parameter	Residential (1-5 yrs)	Commercial/Industrial	Construction
ATs	70		
ATs	30	25	1
ATs	70	70	1
EC	20	20	1
EC	30	35	1
EF	350	250	100
EF	350	250	100
IRs	100	80	100
IRs	1-E+02	3-E+01	
IRs	15	20	
IRs	20	20	
SA	3-E+03	3-E+03	5-E+03
SA	2-E+03	1-E+03	
SA	1	FALSE	FALSE
SA	FALSE	FALSE	FALSE
SA	TRUE	TRUE	TRUE
SA	FALSE	FALSE	FALSE

Parameter	Residential	Commercial/Industrial	Construction
ATs	70		
ATs	30	25	1
ATs	70	70	1
EC	20	20	1
EC	30	35	1
EF	350	250	100
EF	350	250	100
IRs	100	80	100
IRs	1-E+02	3-E+01	
IRs	15	20	
IRs	20	20	
SA	3-E+03	3-E+03	5-E+03
SA	2-E+03	1-E+03	
SA	1	FALSE	FALSE
SA	FALSE	FALSE	FALSE
SA	TRUE	TRUE	TRUE
SA	FALSE	FALSE	FALSE

Parameter	Residential	Commercial/Industrial	Construction
ATs	70		
ATs	30	25	1
ATs	70	70	1
EC	20	20	1
EC	30	35	1
EF	350	250	100
EF	350	250	100
IRs	100	80	100
IRs	1-E+02	3-E+01	
IRs	15	20	
IRs	20	20	
SA	3-E+03	3-E+03	5-E+03
SA	2-E+03	1-E+03	
SA	1	FALSE	FALSE
SA	FALSE	FALSE	FALSE
SA	TRUE	TRUE	TRUE
SA	FALSE	FALSE	FALSE

Parameter	Residential	Commercial/Industrial	Construction
ATs	70		
ATs	30	25	1
ATs	70	70	1
EC	20	20	1
EC	30	35	1
EF	350	250	100
EF	350	250	100
IRs	100	80	100
IRs	1-E+02	3-E+01	
IRs	15	20	
IRs	20	20	
SA	3-E+03	3-E+03	5-E+03
SA	2-E+03	1-E+03	
SA	1	FALSE	FALSE
SA	FALSE	FALSE	FALSE
SA	TRUE	TRUE	TRUE
SA	FALSE	FALSE	FALSE

Parameter	Residential	Commercial/Industrial	Construction
ATs	70		
ATs	30	25	1
ATs	70	70	1
EC	20	20	1
EC	30	35	1
EF	350	250	100
EF	350	250	100
IRs	100	80	100
IRs	1-E+02	3-E+01	
IRs	15	20	
IRs	20	20	
SA	3-E+03	3-E+03	5-E+03
SA	2-E+03	1-E+03	
SA	1	FALSE	FALSE
SA	FALSE	FALSE	FALSE
SA	TRUE	TRUE	TRUE
SA	FALSE	FALSE	FALSE

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RBCA CHEMICAL DATABASE

Physical Property Data

CAS Number	Constituent	Type	MW	Molecular Weight (gmole)		Diffusion Coefficients (cm ² /s)		log(Koc) or log(Kd) (@ 20-25 C)	Henry's Law Constant (atm-m ³ /mol) (@ 20-25 C)	Vapor Pressure (mm. Hg) (@ 25-25 C)	Solubility (mg/L) (@ 20-25 C)	acid pKa	base pKb	ref
				ref	ref	air	water							
83-32-9	Acenaphthene	PAH	154.2	4	4.21E-02	4	7.89E-06	4	3.85	4	5.01E-03	4	3.93E+00	29
208-98-8	Acenaphthylene	PAH	152.21	4	4.39E-02	4	7.53E-06	4	4.00	4	6.51E-03	4	5.93E+00	29
7664-41-7	Ammonia	N	17.03	4	2.59E-01	4	6.93E-05	4	0.00	4	7.47E+03	4	8.95E+25	21
120-12-7	Anthracene	PAH	178.23	4	3.24E-02	4	7.74E-06	4	4.15	4	1.33E-06	4	4.60E-02	5
7440-38-2	Arsenic	N	74.5	4	N/A		N/A		2.02	24	0.00E+00	0.00E+00	4.41E+25	27
71-43-2	Benzene	A	78.1	5	9.30E-02	4	1.10E-05	A	1.53	A	5.23E-03	2.20E-01	1.73E-23	A
205-99-2	Benzo (b)Fluoranthene	PAH	252	5	2.26E-02	6	5.56E-06	7	5.74	25	1.01E-05	8.38E-04	6.67E-07	25
121-24-2	Benzo (g,h,i)Perylene	PAH	276	5	4.30E-02	6	5.65E-06	7	6.20	1	1.45E-07	5.82E-06	7.00E-04	5
237-28-9	Benzo (k) Fluoranthene	PAH	252.32	4	2.26E-02	4	5.56E-06	4	5.74	4	1.07E-06	4.45E-07	4.30E-03	4
56-35-3	Benzo(a)Anthracene	PAH	228.5	4	5.10E-02	4	9.00E-06	4	6.14	4	1.35E-06	5.74E-07	5.70E-03	5
50-32-8	Benzo(a)Pyrene	PAH	252.3	5	5.00E-02	A	5.30E-06	A	5.53	A	1.33E-09	6.30E-08	1.20E+03	5
7440-43-8	Cadmium	N	112.41		N/A		N/A		2.35	24	0.00E+00	0.00E+00	6.51E-25	27
15065-93-1	Chromium (III)	N	52		N/A		N/A		1.55	24	0.00E+00	0.00E+00	1.67E-25	27
218-21-5	Chrysene	PAH	228.2	4	2.48E-02	4	6.21E-06	4	5.30	4	1.15E-06	4.51E-07	1.50E-03	5
7440-50-3	Copper	N	63.546	14	N/A		N/A		2.47	24	0.00E+00	0.00E+00	2.95E-25	27
11-11-1	DFO	O	100		6.20E-02		7.00E-06		4.88		6.15E-04	2.58E-02	1.70E-02	
100-41-4	Ethylbenzene	A	106.2	5	7.60E-02	A	8.50E-06	A	1.98	A	7.69E-03	3.70E-01	1.52E-02	5
208-44-3	Fluoranthene	PAH	202	4	3.02E-02	4	6.55E-06	4	4.58	4	6.70E-02	2.79E+00	2.26E-01	5
85-73-7	Fluorene	PAH	166	4	3.63E-02	4	7.89E-06	4	3.86	4	1.17E-04	4.87E-03	1.69E-00	5
193-39-5	Indeno(1,2,3-c,d)Pyrene	PAH	276.34	4	2.33E-02	4	4.41E-06	4	7.53	4	5.07E-12	2.11E-10	1.17E-02	4
7439-92-1	Lead	N	207.19											
91-20-3	Naphthalene	PAH	128.2	4	7.20E-02	A	8.40E-06	A	3.11	A	1.18E-03	4.90E-02	3.29E+01	4
7440-02-0	Nickel	N	58.69		N/A		N/A		1.82	24	0.00E+00	0.00E+00	1.75E+05	27
85-01-8	Phenanthrene	PAH	178.22	4	3.33E-02	4	7.47E-06	4	4.15	4	6.05E-03	2.52E-01	1.90E+00	5
108-95-2	Phend	AP	94.1	4	8.20E-02	4	9.10E-06	4	1.44	4	4.54E-07	1.89E-25	9.30E+04	4
129-00-0	Pyrene	PAH	202.3	4	2.72E-02	4	7.24E-06	4	4.58	4	7.00E-09	2.91E-27	1.80E-21	5
108-88-3	Toxene	A	92.4	5	6.50E-02	A	9.40E-06	A	2.13	A	6.25E-03	2.60E-01	5.15E+02	29
133-20-7	Xylene (mixt isomers)	A	106.2	5	7.20E-02	A	9.50E-06	A	2.38	A	6.97E-03	2.90E-01	1.88E+02	5
7442-86-6	Zinc	N	65.39	14	N/A		N/A		1.41	24	0.00E+00	0.00E+00	6.06E+03	27

Site Name: Merton Road

Site Location: Bancury

Completed By: Jonathan Owens

Date Completed: 1/8/1999

Software version: 1.0.1

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RBCA CHEMICAL DATABASE

CAS Number	Constituent	Reference Dose (mg/kg/day)		Inhalation		Oral		Slope Factors (1/(mg/kg/day))		EPA Weight of Evidence	Constituent is Carcinogenic ?
		RD oral	RD inhal	RD inhal	RD inhal	SF oral	SF inhal	SF oral	SF inhal		
83-32-9	Acenaphthene	6.00E-02	R	-	-	-	-	-	-	D	FALSE
208-96-8	Acenaphthylene	4.00E-03	-	4.00E-02	-	-	-	-	-	D	FALSE
7684-47-7	Acrononia	2.86E-02	R	2.86E-02	R	-	-	-	-	D	FALSE
120-12-7	Anthracene	3.00E-01	A	-	-	-	-	-	-	D	TRUE
7440-38-2	Arsenic	3.00E-04	R	7.0E-03	R	1.75E+00	R	1.51E+01	R	A	TRUE
71-43-2	Benzene	-	-	-	-	7.30E-01	R	5.10E-01	R	B2	TRUE
205-99-2	Benzo (b) Fluoranthene	4.00E-03	-	4.00E-03	-	-	-	-	-	D	FALSE
191-24-2	Benzo (g,h,i) Perylene	-	-	-	-	-	-	-	-	D	TRUE
207-08-9	Benzo (k) Fluoranthene	-	-	-	-	7.30E-02	R	5.10E-02	R	B2	TRUE
56-55-3	Benzo(a)Anthracene	-	-	-	-	7.30E-01	R	5.10E-01	R	B2	TRUE
50-33-8	Benzo(a)Pyrene	5.00E-04	R	-	-	7.30E+00	R	6.10E+00	R	B1	TRUE
7440-43-9	Cadmium	1.00E+00	R	5.71E-02	R	-	-	-	-	B2	FALSE
15065-83-1	Chromium (III)	-	-	-	-	1.15E+02	A	1.15E+00	A	B2	TRUE
218-01-9	Chrysene	3.7E-02	R	3.71E-02	R	-	-	-	-	D	FALSE
7440-50-8	Copper	3.00E-02	-	3.00E-02	-	-	-	-	-	D	FALSE
11-11-1	DIRC	1.00E-01	A	2.85E-01	A	-	-	-	-	D	FALSE
100-41-4	Ethylbenzene	4.00E-02	A	-	-	-	-	-	-	D	FALSE
206-44-0	Fluoranthene	4.00E-02	A	-	-	-	-	-	-	D	FALSE
86-73-7	Fluorene	4.00E-02	A	-	-	-	-	-	-	D	FALSE
103-30-5	Indeno(1,2,3-c,d)Pyrene	-	-	-	-	7.30E-01	R	5.10E-01	R	B2	TRUE
7439-92-1	Lead	-	-	-	-	-	-	-	-	B2	FALSE
91-20-3	Naphthalene	4.00E-03	A	-	-	-	-	-	-	D	FALSE
7440-02-0	Nickel	2.00E-02	R	-	-	-	-	-	-	D	FALSE
85-01-8	Phenanthrene	4.00E-03	-	4.00E-03	R	-	-	-	-	D	FALSE
108-95-2	Phenol	6.00E-01	R	-	-	-	-	-	-	D	FALSE
129-00-0	Pyrene	3.00E-02	R	-	-	-	-	-	-	D	FALSE
108-88-3	Toluene	2.00E-01	A, R	1.14E-01	A, R	-	-	-	-	D	FALSE
1330-20-7	Xylene (mixed isomers)	2.00E+00	A, R	2.00E+00	A	-	-	-	-	D	FALSE
7440-66-6	Zinc	3.00E-01	R	-	-	-	-	-	-	D	FALSE

Site Name: Marlon Road Site Location: Banbury Completed By: Jonathan Owens Date Completed: 12/1/99

RBCA CHEMICAL DATABASE

Miscellaneous Chemical Data

CAS Number	Constituent	MCL (mg/L)	Maximum Contaminant Level reference	Permissible Exposure Limit REL (mg/m ³) ref	Relative Absorption Factors	Detection Limit (mg/L) ref	Soil Limits (mg/kg) ref	Half-life (First-Order Decay) (days)	Unsat. ref
83-32-9	Acetaphthene				1	0.05	0.65 S	204	204
208-86-8	Acenaphthylene				1	0.05	0.63 S	120	120
7664-41-7	Ammonia			1.70E+01	0	0			
120-12-7	Anthracene				1	0.05	0.63 S	322	
7440-38-2	Arsenic	5.00E-02	0 FR 46935 (13 Nov 85)	1.00E-02	0	0.01	0.053 S		
71-43-2	Benzene	5.00E-03	52 FR 20690	3.20E+00	0.5	1.002	0.005 S	720	
205-99-2	Benzo (b) Fluoranthene				1	0.05	0.66 S	1220	
191-24-2	Benzo (g,h,i) Perylene				1	0.05	0.66 S	1320	
207-08-9	Benzo (k) Fluoranthene				1	0.05	0.66 S	1300	
56-55-3	Benzo(a)Anthracene				1	0.05	0.66 S	4250	
50-32-9	Benzo(a)Pyrene	2.00E-04	57 FR 31776 (7 Jul 92)		1	0.05	0.66 S	1950	
7440-43-8	Cadmium	5.00E-03	56 FR 3526 (30 Jan 91)	5.00E-02	0	0.001	0.024 S		
15055-83-1	Chromium (III)	1.00E-01	55 FR 3525 (30 Jan 91)		0	0.01	0.017 S		
218-01-8	Chrysene	2.00E-04	A		1	0.05	0.56 S		
7440-50-8	Copper	1.30E+00	5 FR 28450 (27 Jun 81)	1.00E-00	0	0.06	0.006 S	1030	
11-11-1	CRG				0.5				
100-41-4	Ethylbenzene	7.00E-01	56 FR 3725 (30 Jan 91)	4.34E-02	0.5	0.002	0.005 S	228	
206-44-0	Fluoranthene				1	0.05	0.56 S	850	
86-73-7	Fluorene				1	0.05	0.56 S	120	
193-59-5	Indeno(1,2,3-c,d)Pyrene				1	0.05	0.56 S	1460	
7439-92-1	Lead				0				
91-20-3	Naphthalene	1.00E-01	57 FR 21775 (17 Jul 92)	5.00E+01	0.05	0.01	0.01 S	258	
7440-02-0	Nickel				1	0.05	0.115 S		
85-01-8	Phenanthrene				1	0.05	0.66 S	400	
108-95-2	Pheno			1.90E+01	0.5	0.001	0.66 S	7	10
129-00-0	Pyrene				1	0.05	0.66 S	3500	
108-88-3	Toluene	1.00E+00	56 FR 3526 (30 Jan 91)	1.47E+02	0.5	0.002	0.105 S	28	
1330-20-7	Xylene (mixed isomers)	1.00E+01	56 FR 3526 (30 Jan 91)	4.34E+02	1	0.5	0.105 S	380	
7440-66-6	Zinc				1	0	0.102 S		

Site Name: Merton Road Site Location: Garbury Completed By: Jonathan Owens Date Completed: 01/19/99

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TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

Contaminant(s)	1) Surface Medium		2) Air (Residential)		3) Exposure Medium		4) Exposure Medium		5) Average Daily Intake Rate	
	Surface Soil Conc. (ug/kg)	Resuspension (ug/m ³ /day)	Concentration (ug/m ³)	Exposure Medium (ug/m ³)	Concentration (ug/m ³)	Exposure Medium (ug/m ³)	Concentration (ug/m ³)	Exposure Medium (ug/m ³)	Concentration (ug/m ³)	Exposure Medium (ug/m ³)
Coccoltensol	5.9E+2	4.9E+4	1.2E-2	1.2E-2	2.0E-1	2.0E-1	2.4E-3	2.4E-3	2.4E-3	2.4E-3
Acetophenone	7.2E+2	4.7E+5	1.5E-3	1.5E-3	2.0E-1	2.0E-1	3.0E-4	3.0E-4	3.0E-4	3.0E-4
Acetophenone	8.7E+2	4.8E+4	1.9E-2	1.9E-2	2.0E-1	2.0E-1	3.7E-3	3.7E-3	3.7E-3	3.7E-3
Acetophenone	2.7E+3	4.6E+4	5.9E-3	5.9E-3	2.0E-1	2.0E-1	1.2E-2	1.2E-2	1.2E-2	1.2E-2
Acetophenone	3.1E+3	4.6E+4	2.2E-8	2.2E-8	7.0E-2	7.0E-2	1.5E-10	1.5E-10	1.5E-10	1.5E-10
Benzene	1.1E+1	4.6E+4	2.2E-8	2.2E-8	7.0E-2	7.0E-2	1.5E-7	1.5E-7	1.5E-7	1.5E-7
Benzene (2,3-Dimethyl)	1.1E+2	1.1E+7	6.7E-6	6.7E-6	7.0E-2	7.0E-2	6.9E-7	6.9E-7	6.9E-7	6.9E-7
Benzene (2,4-Dimethyl)	1.2E+2	2.9E+7	3.0E-6	3.0E-6	2.0E-1	2.0E-1	5.9E-7	5.9E-7	5.9E-7	5.9E-7
Benzene (3,4-Dimethyl)	5.1E+2	7.8E+7	6.7E-6	6.7E-6	7.0E-2	7.0E-2	4.7E-7	4.7E-7	4.7E-7	4.7E-7
Benzene (1,2,3,4-Tetra)	6.0E+2	9.9E+7	5.4E-6	5.4E-6	7.0E-2	7.0E-2	3.7E-7	3.7E-7	3.7E-7	3.7E-7
Benzene (1,2,3,6-Tetra)	2.9E+2	9.9E+7	4.0E-6	4.0E-6	7.0E-2	7.0E-2	2.9E-7	2.9E-7	2.9E-7	2.9E-7
Benzene (1,2,3,5-Tetra)	4.1E+1	1.4E+11	2.9E-10	2.9E-10	7.0E-2	7.0E-2	2.4E-7	2.4E-7	2.4E-7	2.4E-7
Chromium (VI)	8.2E+2	1.4E+11	3.0E-9	3.0E-9	2.0E-1	2.0E-1	2.1E-10	2.1E-10	2.1E-10	2.1E-10
Chrysene	4.8E+2	4.3E+7	1.1E-5	1.1E-5	2.0E-1	2.0E-1	7.9E-7	7.9E-7	7.9E-7	7.9E-7
Coal Tar	4.8E+2	4.3E+7	3.4E-3	3.4E-3	2.0E-1	2.0E-1	6.9E-3	6.9E-3	6.9E-3	6.9E-3
Diethylstilbestrol	1.0E+5	4.7E+5	2.2E-1	2.2E-1	2.0E-1	2.0E-1	4.2E-2	4.2E-2	4.2E-2	4.2E-2
Dibenz(a,h)anthracene	1.2E+0	4.6E+4	2.6E-5	2.6E-5	2.0E-1	2.0E-1	5.1E-6	5.1E-6	5.1E-6	5.1E-6
Fluoranthene	3.1E+2	4.8E+4	6.8E-3	6.8E-3	2.0E-1	2.0E-1	1.3E-3	1.3E-3	1.3E-3	1.3E-3
Fluorene	4.1E+2	4.7E+5	9.5E-4	9.5E-4	2.0E-1	2.0E-1	1.9E-4	1.9E-4	1.9E-4	1.9E-4
Indeno(1,2,3-cd)Pyrene	2.8E+2	6.7E+8	3.9E-7	3.9E-7	7.0E-2	7.0E-2	2.7E-3	2.7E-3	2.7E-3	2.7E-3
Lead	2.2E+4	1.4E+11	1.5E-7	1.5E-7	2.0E-1	2.0E-1	3.0E-3	3.0E-3	3.0E-3	3.0E-3
Naphthalene	1.8E+3	4.8E+4	3.5E-2	3.5E-2	2.0E-1	2.0E-1	6.9E-3	6.9E-3	6.9E-3	6.9E-3
Nitrobenzene	2.2E+3	4.4E+11	2.0E-9	2.0E-9	2.0E-1	2.0E-1	2.1E-10	2.1E-10	2.1E-10	2.1E-10
Phenanthrene	3.2E+2	6.7E+4	8.7E-3	8.7E-3	2.0E-1	2.0E-1	7.2E-4	7.2E-4	7.2E-4	7.2E-4
Phenol	1.0E+1	2.6E+5	3.8E-5	3.8E-5	2.0E-1	2.0E-1	7.4E-6	7.4E-6	7.4E-6	7.4E-6
Pyrene	9.2E+2	1.5E+7	5.2E-5	5.2E-5	2.0E-1	2.0E-1	1.0E-3	1.0E-3	1.0E-3	1.0E-3
Toluene	7.0E-1	4.9E+4	1.5E-5	1.5E-5	2.0E-1	2.0E-1	3.0E-3	3.0E-3	3.0E-3	3.0E-3
Xylene (mixed isomers)	4.9E+0	4.9E+4	1.7E-4	1.7E-4	2.0E-1	2.0E-1	2.1E-3	2.1E-3	2.1E-3	2.1E-3
Zinc	1.1E+4	4.9E+11	7.7E-9	7.7E-9	2.0E-1	2.0E-1	1.5E-3	1.5E-3	1.5E-3	1.5E-3

NOTE: ABS = Absorption Factor (0.01) BW = Body Weight (kg) SF = Exposure Frequency (Yearly)
 AF = Adsorption Factor (mg/cm²) CF = Unit Conversion Factor ST = Exposure Time (hr/day) SA = Surface Area (cm²)
 AT = Averaging Time (days) ED = Exposure Duration (yr) R = Inhalation Rate (m³/day)

TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

CONTAMINANT	1) Source Medium		2) HAP Value (µg/m³)		3) Exposure Medium		4) Exposure Factor		5) Average Daily Intake Rate (mg/kg/day)
	Substrate	Concentration	On-Site Commercial	Receptor	Outdoor Air	On-Site Commercial	On-Site Commercial	On-Site Commercial	
Acetophenone	5.9E+2	5.9E+2	5.9E+2	5.9E+2	5.9E+2	5.9E+2	2.0E-1	1.7E-3	
Acenaphthylene	7.2E+2	7.2E+2	7.2E+2	7.2E+2	7.2E+2	7.2E+2	2.0E-1	2.3E-5	
Acenaphthylene	8.7E+2	8.7E+2	8.7E+2	8.7E+2	8.7E+2	8.7E+2	2.0E-1	7.5E-3	
Anthracene	2.7E+3	2.7E+3	2.7E+3	2.7E+3	2.7E+3	2.7E+3	2.0E-1	2.3E-2	
Asenic	3.1E+2	NA	NA	NA	NA	NA	7.0E-2	NA	
Benzene	1.1E+1	2.3E+4	2.3E+4	4.4E+6	4.4E+6	4.4E+6	7.0E-2	3.1E-7	
Benzofluoranthene	1.1E+2	3.8E+9	3.8E+9	5.1E-3	5.1E-3	5.1E-3	7.0E-2	2.1E-9	
Benzofluoranthene	1.2E+2	4.4E+10	4.4E+10	2.8E-3	2.8E-3	2.8E-3	2.0E-1	5.4E-10	
Benzofluoranthene	5.0E+2	1.8E+11	1.8E+11	3.2E-9	3.2E-9	3.2E-9	7.0E-2	2.2E-10	
Benzofluoranthene	2.5E+2	2.4E+11	2.4E+11	2.1E-9	2.1E-9	2.1E-9	7.0E-2	1.4E-10	
Benzofluoranthene	4.1E+1	1.1E+11	1.1E+11	3.3E-9	3.3E-9	3.3E-9	7.0E-2	1.8E-10	
Chromiun III	5.2E+2	NA	NA	NA	NA	NA	7.0E-2	NA	
Chrysene	4.8E+2	5.2E+10	5.2E+10	5.5E-9	5.5E-9	5.5E-9	7.0E-2	8.5E-10	
Copper	4.8E+3	NA	NA	NA	NA	NA	2.0E-1	NA	
DIBO	1.0E+3	5.3E+6	5.3E+6	1.7E-2	1.7E-2	1.7E-2	2.0E-1	3.2E-3	
Fluoranthene	3.1E+2	2.9E+4	2.9E+4	5.3E-5	5.3E-5	5.3E-5	2.0E-1	1.0E-5	
Fluoranthene	4.1E+2	5.7E+4	5.7E+4	5.2E-3	5.2E-3	5.2E-3	2.0E-1	1.1E-3	
Fluoranthene	2.6E+2	5.2E+6	5.2E+6	8.0E-5	8.0E-5	8.0E-5	2.0E-1	1.6E-5	
Indeno(1,2,3-cd)Pyrene	2.2E+4	1.4E+13	1.4E+13	1.8E-11	1.8E-11	1.8E-11	7.0E-2	1.3E-12	
Lead	2.2E+4	NA	NA	NA	NA	NA	2.0E-1	NA	
Naphthalene	1.6E+2	4.5E+4	4.5E+4	3.5E-2	3.5E-2	3.5E-2	2.0E-1	6.8E-3	
Nicotine	2.8E+2	NA	NA	NA	NA	NA	2.0E-1	NA	
Phenanthrene	3.2E+2	2.1E+5	2.1E+5	1.5E-3	1.5E-3	1.5E-3	2.0E-1	2.9E-4	
Phenanthrene	1.0E+1	1.9E+6	1.9E+6	5.1E-6	5.1E-6	5.1E-6	2.0E-1	1.0E-6	
Phenanthrene	9.2E+2	3.5E+9	3.5E+9	1.1E-7	1.1E-7	1.1E-7	2.0E-1	2.1E-8	
Toluene	7.0E+1	2.2E+4	2.2E+4	3.1E-5	3.1E-5	3.1E-5	2.0E-1	6.0E-6	
Xylene (mixed isomers)	4.8E+0	2.3E+4	2.3E+4	2.1E-4	2.1E-4	2.1E-4	2.0E-1	4.1E-5	
Zinc	1.1E+4	NA	NA	NA	NA	NA	2.0E-1	NA	

NOTE: ABS = Ambient Air Sampling Factor (dmi) BW = Body Weight (kg) EF = Exposure Frequency (days/yr) FOE = Factor of Exposure
 AF = Air Force Factor (mg/m³) CF = Units conversion factor ET = Exposure Time (hr/days) SA = Soil Surface Area (m²) (dmi)²
 AT = Averaging Time (days) ED = Exposure Duration (yrs) IR = Inhalation Rate (m³/body) IR = Inhalation Rate (m³/body)

NRCA SITE ASSESSMENT

Tier 1 Worksheets:

Site Name: Madson Road

Site Location: Barbary

Completed By: Jonathan Owens

Date Completed: 10/19/99

3 OF 9

TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

GROUNDWATER: VAPOR
 REGULATIONS
 EFFECTIVE CONCENTRATION
 TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION
 CHEMICALS IN PATROL IS ACTIVE

Constituents of Concern	1) Source Medium Groundwater Conc (mg/L)		2) Media Value (mg/L) Soil conc		3) Exposure Medium Conc (mg/L) (Soil, Water, Air)		4) Exposure Multiplier (Inhalation, Dermal, Ingestion)		5) Average Daily Intake (mg/kg) (Inhalation, Dermal, Ingestion)		Toxic Chemical (CAS #, RTE, H, P, C, D, E, F, G, I, M, S, T, X, N, O, P, R, S, V, W, Y, Z)			
	Soil	Water	Soil	Water	Soil	Water	Inhalation	Dermal	Inhalation	Dermal		Inhalation	Dermal	Inhalation
Arsenic	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Benzene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Benzene (b) Fluoranthene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Benzene (b) Pyrene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Benzene (b) Fluoranthene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Benzene (b) Pyrene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Chromium (VI)	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Chrysotile	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Copper	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
CRU	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Dibenz(a,h)anthracene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Fluoranthene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Fluorene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Indeno(1,2,3-cd)Pyrene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Lead	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Naphthalene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Nickel	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Phenanthrene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Pyrene	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Polynuclear Aromatic Hydrocarbons (PAHs)	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1
Vanadium	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1	1.0E-1

NOTE: AEF = Default absorption factor (1.0)
 AF = Absorption factor (mg/m³)
 AT = Averaging time (days)
 BW = Body weight (kg)
 CF = Unit conversion factor
 ED = Exposure duration (yrs)
 EF = Exposure frequency (days/yr)
 CR = Exposure rate (mg/kg)
 IR = Inhalation rate (m³/day)

RECA SITE ASSESSMENT

Tier 1 Worksheets

Site Name: Mortan Road

Site Location: Benbury

Completed By: Jonathan Owens Date Completed: 11/3/1999

4 OF 7

TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

NEEDING EXPOSURE DATA

EXPOSURE CHARACTERISTICS

Contaminant of Concern	1) Source Medium		2) USE Value (mg/kg)		3) Exposure Medium		4) Dermal Intake (mg/kg-day)	5) Inhalation Intake Rate (mg/kg-day)
	Subsurface Soil Conc (mg/kg)	Receptor	Soil Conc (mg/kg)	Receptor	Medium: PCB Conc (mg/kg)	Soil Conc (mg/kg)		
Asenaphthene	5.9E+2	NA	1.4E+3	NA	7.9E+2	2.0E+1	1.8E+2	
Acenaphthylene	7.2E+2	NA	6.8E+5	NA	1.1E+3	2.0E+1	2.1E+2	
Anthracene	3.7E+3	NA	2.5E+3	NA	3.5E+1	2.0E+1	5.5E+2	
Argent	3.1E+2	NA	NA	NA	1.2E+0	7.0E+2	2.5E+1	
Benzene	1.0E+1	NA	1.6E+2	NA	8.3E+4	7.0E+2	4.4E+2	
Benzofluoranthene	1.1E+2	NA	2.0E+3	NA	2.7E+1	7.0E+2	1.3E+2	
Benzofluoranthene	1.2E+2	NA	4.9E+3	NA	2.5E+8	3.5E+1	4.3E+2	
Benzofluoranthene	5.1E+2	NA	1.6E+10	NA	2.8E+8	7.5E+2	3.2E+3	
Benzofluoranthene	5.0E+2	NA	2.7E+10	NA	1.8E+8	7.5E+2	1.3E+3	
Benzofluoranthene	2.5E+2	NA	1.2E+10	NA	2.0E+8	7.5E+2	1.4E+3	
Chromium (III)	4.1E+1	NA	NA	NA	NA	7.5E+2	NA	
Chromium (VI)	5.2E+2	NA	NA	NA	5.2E+8	2.5E+1	NA	
Chrysene	4.8E+2	NA	5.8E+9	NA	5.2E+8	2.5E+1	5.8E+9	
Copper	4.8E+3	NA	7.4	NA	NA	3.5E+1	NA	
DDE	1.0E+5	NA	6.8E+5	NA	1.5E+1	2.0E+1	3.9E+2	
Dibenzofluoranthene	1.2E+0	NA	1.3E+2	NA	7.5E+3	2.0E+1	7.5E+3	
Fluoranthene	3.1E+2	NA	6.4E+3	NA	4.6E+2	2.0E+1	9.5E+2	
Fluorene	4.1E+2	NA	5.9E+5	NA	7.1E+4	2.0E+1	4.5E+4	
Indeno(1,2,3-cd)pyrene	2.6E+2	NA	3.0E+12	NA	8.8E+11	7.0E+2	6.0E+12	
Lead	2.2E+4	NA	NA	NA	NA	2.0E+1	NA	
Naphthalene	1.6E+5	NA	5.2E+3	NA	3.1E+1	2.0E+1	6.0E+2	
Nickel	2.8E+2	NA	NA	NA	NA	2.0E+1	NA	
Phenanthrene	3.2E+2	NA	2.4E+4	NA	1.3E+2	2.0E+1	2.6E+3	
Phenol	1.0E+1	NA	2.3E+5	NA	4.6E+5	2.0E+1	9.0E+6	
Pyrene	9.2E+2	NA	9.8E+8	NA	9.6E+7	2.0E+1	1.9E+7	
Toluene	7.0E+1	NA	1.8E+2	NA	4.4E+3	2.6E+1	8.6E+4	
Xylenes (mixed isomers)	4.8E+5	NA	1.7E+2	NA	2.8E+2	2.0E+1	5.5E+2	
Zinc	1.1E+4	NA	NA	NA	NA	2.0E+1	NA	

NOTE: MS = Dermal Absorption Factor (dim)
 AF = Absorption Factor (mg/kg)
 AT = Averaging Time (days)

EF = Exposure Frequency (days/yr)
 ED = Exposure Duration (years)

IR = Inhalation Rate (m³/day)

SA = Skin Surface Area (cm²)

SA = Skin Surface Area (cm²/day)

RBCA SITE ASSESSMENT

Tier 1 Worksheets 8.1

Site Name: Merlon Road Site Location: Barbury Contaminated By: Jonathan Onyiah Date Completed: 1/31/2020 7 OF 9

TIER 1 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

CONCENTRATION PATHWAYS: CHEMICALS FROM SOILS ACTIVELY SURFACE SOILS ON STRUCTURES: Groundwater

Chemicals of Concern	1) Structure Building		2) Exposure Multiplier (Structure of Building) (y=day)		3) Average Daily Intake Rate (mg/kg-day) (y=day)		Soil-to-Air Ratio (Soil to Air)
	Surface Soils Conc (mg/kg)	On-Soil Concentration (mg/kg)	On-Soil Concentration (mg/kg)	On-Soil Residential (mg/kg)	On-Soil Residential (mg/kg)	On-Soil Commercial (mg/kg)	
Acenaphthene	5E+2	4E+7	4E+7	4E+7	7E+4	2E+3	
Acenaphthylene	7E+2	4E+7	4E+7	4E+7	3E+4	2E+3	
Anthracene	8E+2	4E+7	4E+7	4E+7	4E+4	4E+3	
Benzo(a)anthracene	2E+3	4E+7	4E+7	4E+7	1E+3	9E+3	
Benzo(a)fluoranthene	3E+2	1E+7	1E+7	1E+7	5E+3	5E+3	
Benzo(a)pyrene	1E+2	1E+7	1E+7	1E+7	1E+3	1E+3	
Benzo(b)fluoranthene	2E+2	4E+7	4E+7	4E+7	1E+5	4E+4	
Benzo(k)fluoranthene	5E+2	1E+7	1E+7	1E+7	8E+3	5E+4	
Benzo(a)phenanthrene	2E+2	1E+7	1E+7	1E+7	4E+3	3E+4	
Benzofluoranthene	2E+2	4E+7	4E+7	4E+7	2E+3	2E+3	
Benzofluoranthene	4E+1	4E+7	4E+7	4E+7	2E+4	2E+4	
Chromium (VI)	5E+12	7E+7	7E+7	7E+7	6E+5	5E+4	
Chrysene	4E+2	4E+7	4E+7	4E+7	2E+3	2E+3	
Copper	1E+5	4E+7	4E+7	4E+7	5E+7	3E+5	
DRC	1E+0	4E+7	4E+7	4E+7	1E+7	1E+3	
Fluoranthene	3E+2	4E+7	4E+7	4E+7	1E+4	1E+3	
Fluorene	4E+2	4E+7	4E+7	4E+7	2E+4	1E+4	
Indeno(1,2,3-cd)fluorene	2E+2	1E+7	1E+7	1E+7	4E+5	1E+5	
Lead	2E+4	4E+7	4E+7	4E+7	1E+2	1E+2	
Naphthalene	1E+3	4E+7	4E+7	4E+7	7E+4	5E+3	
Nickel	2E+2	4E+7	4E+7	4E+7	1E+4	1E+4	
Phenanthrene	5E+2	2E+7	2E+7	2E+7	1E+4	1E+3	
Phenol	1E+1	4E+7	4E+7	4E+7	4E+3	2E+2	
Pyrene	5E+2	4E+7	4E+7	4E+7	4E+3	3E+3	
Toluene	7E+1	4E+7	4E+7	4E+7	3E+7	2E+5	
Xylene, mixed isomers	4E+0	4E+7	4E+7	4E+7	2E+3	1E+2	
Zinc	1E+4	4E+7	4E+7	4E+7	5E+3	5E+3	

NOTES: K15 = Gamma absorption factor (dpm) BW = Body weight (kg) EF = Exposure frequency (days/year)
 A7 = Air to soil ratio (mg/m³/m²) CF = Unit conversion factor ET = Exposure time (hours/day)
 K1 = Average air to soil ratio SO = Exposure duration (years) IR = Intake rate (mg/kg/day)

Scale: 0.147 EQX 624
 Software: CS/MS/EX Spreadsheets
 Version: 1.01
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Site Name: Marlon Road

Site Location: Bamfury

Completed By: Jonathan Owens

Date Completed: 1/2/1920

TIER 1 PATHWAY RISK CALCULATION

OUTDOOR AIR EXPOSURE ESTIMATES

CARCINOGENIC RISK

Concentration of Contaminant	(1) EPA Carcinogenic Classification	(2) Total Carcinogenic Intake Rate (mg/kg/day) On-Site Commercial	(3) Inhalation Exposure Factor (mg/kg-day ⁻¹) Commercial	(4) Individual COG Risk (3 x 13) Or-Site Commercial	(5) Total Toxicant Intake Rate (mg/kg-day) On-Site Commercial	(6) Inhalation Reference Dose (mg/kg-day) Commercial	(7) Estimated COG Hazard Quotient (5/6) On-Site Commercial
Acenaphthylene	D				3.0E-4	4.0E-3	3.1E-2
Acenaphthylene	D				1.8E-2	2.9E-2	3.9E-1
Acrylonitrile	D						
Arsenic	A	1.9E-11	1.5E+1	2.9E-8			
Benzene	A	8.7E-4	2.0E-2	2.5E-5	2.4E-3	1.7E-3	1.4E+0
Benzo [b]fluoranthene	B2	6.8E-7	6.1E-1	4.3E-7			
Benzo [k]fluoranthene	D				6.0E-7	4.0E-3	1.5E-4
Benzo [a]anthracene	B2	4.7E-7	6.1E-2	2.0E-8			
Benzo [a]anthracene	B2	3.7E-7	6.1E-1	2.9E-7			
Benzo [b]pyrene	B2	2.8E-7	6.1E+0	1.7E-5			
Cadmium	B1	2.0E-11	8.3E+0	1.3E-10	3.1E-10	5.0E-7	1.2E-3
Chromium (III)	B2						
Chrysene	D	7.8E-7	1.2E+0	9.0E-7	5.6E-9	3.7E-2	1.5E-2
CPD	D				6.3E-2	3.0E-3	2.1E+0
Dibenz[a,h]anthracene	D				5.4E-4	2.9E-1	1.5E-3
Fluoranthene	D						
Fluoranthene	D		6.1E-1	1.8E-8			
Indeno[1,2,3-cd]pyrene	B2	2.7E-8					
Lead	B2						
Naphthalene	D						
Nitrobenzene	D				1.0E-3	4.0E-3	2.5E-1
Permethrin	D						
Permethrin	D						
Pyrene	D						
Toluene	D				1.3E-3	1.3E-1	1.1E-2
Xylenes (mixed isomers)	D				6.9E-4	2.0E+0	3.5E-2
Zinc	D						

Total Pathway Carcinogenic Risk = 2.9E-5

Total Pathway Hazard Index = 4.3E+0

RBCA SITE ASSESSMENT

Tier 1 Worksheet 3.2

Site Name: Merion Road

Site Location: Sandy

Completed By: Jonathan Owens

Date Completed: 10/1/99

2 OF 4

TIER 1 PATHWAY RISK CALCULATION

NON-CARCINOGENIC PATHWAYS

Constituents of Concern	(1) EPA Carcinogenic Classification	CARCINOGENIC RISK				(4) Individual DOC Risk (C) x (3)	(5) Total Toxicant Intake Rate (mg/kg/day) Cr-Site Commercial	(6) Total Toxicant Intake Rate (mg/kg/day) Cr-Site Commercial	(7) to risk for Relative Use Case (mg/kg/day)	(8) Inherent DOC Commercial	(9) Inherent DOC Commercial
		(2) Total Carcinogenic Intake Rate (mg/kg/day) Cr-Site Commercial	(3) Inhalation Exposure Factor (mg/kg/day)	(4) Individual DOC Risk (C) x (3)	(5) Total Toxicant Intake Rate (mg/kg/day) Cr-Site Commercial						
Acetophenone	D										
Acetylphenone	D										
Ammonia	D										
Anthracene	A	0.0E+2	5E+1	0.0E+0			2.1E-3	4.0E-3			6.3E-2
Arsenic	A	1.1E-1	2.0E-2	3.1E-2			6.9E-2	2.0E-2			2.4E+0
Benzene	B2	3.7E-8	6.1E-1	2.3E-8			3.0E-1	1.7E-3			1.4E-2
Benzo (b) Fluoranthene	D						1.0E-3	4.0E-3			2.6E-6
Benzo (k) Fluoranthene	B2	2.4E-9	6.1E-2	1.5E-10							
Benzo(a) Anthracene	B2	2.6E-9	6.1E-1	1.6E-9							
Benzo(a) Pyrene	B2	7.1E-9	6.1E+0	1.2E-8							
Cadmium	B1	0.0E+2	6.3E+0	0.0E+0							
Chromium (III)	B2	6.6E-9	7.2E+0	7.5E-3			0.0E+2	5.7E-7			0.0E+0
Chrysene	D										
Copper	D										
DRO	D						0.0E+2	3.7E-2			2.1E+0
Ethylbenzene	D						1.6E-2	3.0E-2			3.4E-1
Fluoranthene	D						6.8E-2	2.9E-1			2.4E-1
Fluorene	D										
Indeno(1,2,3-cd)Pyrene	B2	1.0E-10	6.1E-1	6.3E-11							
Lead	B2										
Naphthalene	D										
Nickel	D										
Phenanthrene	D						2.7E-3	4.0E-3			2.7E-1
Phenol	D										
Pyrene	D										
Toluene	D						1.6E-1	1.3E-1			1.4E+0
Xylene (mixed isomers)	D						8.6E-2	2.5E+0			2.5E-2
Zinc	D										

Total Pathway Hazard Index = 0.0E+0

Total Pathway Carcinogenic Risk = 3.1E-3

Total Pathway Carcinogenic Risk = 3.1E-3

0.0E+0

2.4E+2

RECA SITE ASSESSMENT

Tier 1 Worksheet: 8.2

Site Name: Mefton Road

Site Location: Banbury

Completed By: Jonathan Owens

Date Completed: 1/28/1998

3 OF 4

TIER 1 PATHWAY RISK CALCULATION

SOIL EXPOSURE PARAMETERS: CHEMICAL PATHWAYS ARE ACTIVE

Constituents of Concern	(1) EPA Carcinogenic Classification	GADMEGENIC RISK			(4) Inhalation Risk (2) x (3)	(5) Total Ingestion Intake Rate (mg/kg/day) On-Site Residential	(6) Total Ingestion Intake Rate (mg/kg/day) On-Site Commercial	(7) Individual GDC (mg/kg/day) On-Site Residential	(8) Individual GDC (mg/kg/day) On-Site Commercial
		(2) Total Carcinogen Intake Rate (mg/kg/day) On-Site Residential	(3) Oral Slope Factor (mg/kg-day) ⁻¹	(4) On-Site Residential					
Benzo(a)anthracene	D					2.5E-2	2.5E-2	3.0E-2	3.0E-2
Benzo(a)fluoranthene	D					2.4E-3	2.4E-3	4.0E-1	6.0E-1
Benzo(b)fluoranthene	D					4.3E-4	4.3E-4	3.0E-2	1.5E-2
Benzo(k)fluoranthene	D					9.2E-3	9.2E-3	3.0E-1	3.0E-2
Benzo(a)pyrene	A	5.4E-5	1.8E+0	9.5E-5	9.5E-5	1.5E-4	1.5E-4	3.3E-4	5.1E-1
Benzo(e)pyrene	A	1.0E-5	2.8E+2	3.0E-3	3.0E-3				
Benzo(g)perylene	B2	1.3E-4	7.3E-1	9.5E-5	9.5E-5				
Benzo(i)perylene	D								
Benzo(j)fluoranthene	B2	6.1E-4	7.3E-1	2.4E-5	2.4E-5				
Benzo(a)anthracene	B2	5.9E-4	7.3E-1	2.2E-5	2.2E-5				
Benzo(b)fluoranthene	B1	5.0E-4	7.3E+0						
Chromium (III)	B2					2.7E-2	2.7E-2	5.0E-4	4.0E-2
Chrysene	D	5.7E-4	1.7E+0	6.6E-4	6.6E-4				
Copper	D					2.3E-3	2.3E-3	3.7E-2	6.3E-2
DIRC	D					2.9E+0	2.9E+0	3.0E-2	6.0E-1
Dibenz(a,h)anthracene	D					9.5E-5	9.5E-5	1.0E-1	3.5E-1
Dibenz(a,h)anthracene	D					1.3E-3	1.3E-3	3.0E-2	2.6E-2
Fluorene	D					1.4E-3	1.4E-3	4.0E-2	3.4E-2
Indeno(1,2,3-cd)pyrene	B2	3.1E-4	7.3E-1	2.3E-4	2.3E-4				
Lead	B2								
Naphthalene	D					5.9E-3	5.9E-3	4.0E-3	1.5E+0
Nickel	D					1.4E-4	1.4E-4	2.0E-2	6.8E-3
Phenanthrene	D					1.1E-3	1.1E-3	4.0E-3	2.7E-1
Phenanthrene	D					2.9E-4	2.9E-4	6.0E-1	4.5E-4
Pyrene	D					3.1E-3	3.1E-3	3.0E-2	7.0E-1
Toluene	D					3.0E-3	3.0E-3	2.0E-1	7.0E-4
Xylene (m, p, o isomers)	D					1.4E-4	1.4E-4	2.0E-2	6.8E-5
Zinc	D					5.4E-3	5.4E-3	3.0E-1	7.8E-2

Total Pathway Carcinogenic Risk = 0.0E+0

Total Pathway Hazard Index = 3.7E+3

RBCA SITE ASSESSMENT

Tier 1 Worksheet 3.3

Site Name: Merton Road
 Site Location: Banbury

Completed By: Jonathan Owens
 Date Completed: 1/8/1999

TIER 1 BASELINE RISK SUMMARY TABLE

BASELINE CARCINOGENIC RISK										
EXPOSURE PATHWAY	Individual COC Risk		Cumulative COC Risk		Risk Limit(s) Exceeded?	Hazard Quotient		Hazard Index	Toxicity Lim t(s) Exceeded?	
	Maximum Value	Target Risk	Total Value	Target Risk		Maximum Value	Applicable Limit			Total Value
OUTDOOR AIR EXPOSURE PATHWAYS										
Complete:	2.5E-5	1.0E-4	2.9E-5	N/A	<input type="checkbox"/>	2.1E+0	1.0E+0	4.3E+0	N/A	<input checked="" type="checkbox"/>
INDOOR AIR EXPOSURE PATHWAYS										
Complete:	3.1E-3	1.0E-4	3.1E-3	N/A	<input checked="" type="checkbox"/>	1.8E+2	1.0E+0	2.4E+2	N/A	<input checked="" type="checkbox"/>
SOIL EXPOSURE PATHWAYS										
Complete:	2.2E-3	1.0E-4	3.7E-3	N/A	<input checked="" type="checkbox"/>	9.6E+1	1.0E+0	9.9E+1	N/A	<input checked="" type="checkbox"/>
GROUNDWATER EXPOSURE PATHWAYS										
Complete:	NC	1.0E-4	NC	N/A	<input type="checkbox"/>	NC	1.0E+0	NC	N/A	<input type="checkbox"/>
CRITICAL EXPOSURE PATHWAY (Select Maximum Values From Complete Pathways)										
	3.1E-3	1.0E-4	3.7E-3	N/A	<input checked="" type="checkbox"/>	1.8E+2	1.0E+0	2.4E+2	N/A	<input checked="" type="checkbox"/>

Calculation of Soil Screening Criteria

	Soil Screening Criteria Set II (mg/kg)	Water Target Value (mg/l)	Soil-water partition coefficient Kd (l/kg)	Henry's law constant H (unitless)	organic carbon partition coefficient Koc	octanol-water partition coefficient Kow	Ref.
PETROLEUM HYDROCARBONS							
Diesel Range Organics	0.752	0.01	75.90	2.52E-02	7.59E+04		
PAH's							
Naphthalene	0.138	0.06	2.00	1.98E-02	2000		SSG
Acenaphthylene	0.124	0.012	10.00	4.74E-03	10000		RBCA
Acenaphthylene	1.328	0.18	7.08	6.96E-02	7080		SSG
Fluorene	1.692	0.12	13.80	2.61E-03	13800		SSG
1-phenanthrene	0.173	0.012	14.13	2.52E-01	14125		RBCA
Anthracene	26.820	0.9	29.50	2.67E-03	29500		SSG
Fluoranthene#	12.876	0.12	107.00	6.60E-04	107000		SSG
Pyrene	9.477	0.09	105.00	4.51E-04	105000		SSG
Benz[a]anthracene	0.016	0.000041	398.00	1.37E-04	398000		SSG
Chrysene	0.016	0.000041	398.00	3.88E-03	388000		SSG
Benzo[b]fluoranthene#	0.050	0.000041	1230.00	4.55E-03	1230000		SSG
Benzo[k]fluoranthene#	0.050	0.000041	1230.00	3.40E-05	1230000		SSG
Benzo[a]pyrene#	0.010	0.00001	1020.00	4.63E-05	1020000		SSG
Benzo[ghi]perylene#	19.022	0.012	1584.89	5.82E-08	1584893		RBCA
Dibenz[a,h]anthracene	0.156	0.000041	3800.00	6.03E-07	3800000		SSG
Indeno[1,2,3-cd]pyrene#	0.142	0.000041	3470.00	6.56E-05	3470000		SSG
Total P.A.H. sum of #		0.0002					
VOLATILE ORGANICS							
cis-1,2-Dichloroethene	0.017	0.05	0.04	0.167	35.5		SSG
Benzene	0.004	0.01	0.06	0.220	58.9		SSG
Toluene	0.340	0.7	0.18	0.272	182		SSG
Ethylbenzene	0.200	0.3	0.26	0.323	363		SSG
p/m-Xylene	0.346	0.5	0.39	0.314	389		SSG
o-Xylene			0.36	0.213	363		SSG

* HLC for n-butylbenzene used as substitute

* HLC for chlorotoluene used as substitute

water-filled soil porosity (lwater/ls) θ_w 0.3
 air-filled soil porosity (lair/lsoli) θ_a 0.02
 dry soil bulk density (kg/l) P_b 1.8
 fraction organic carbon f_{oc} 0.001

(1) - chemfinder - internet

(2) - Schwarzenbach et al 1993 - internet

$K_{oc} = 0.63K_{ow}$ (for misc organics)

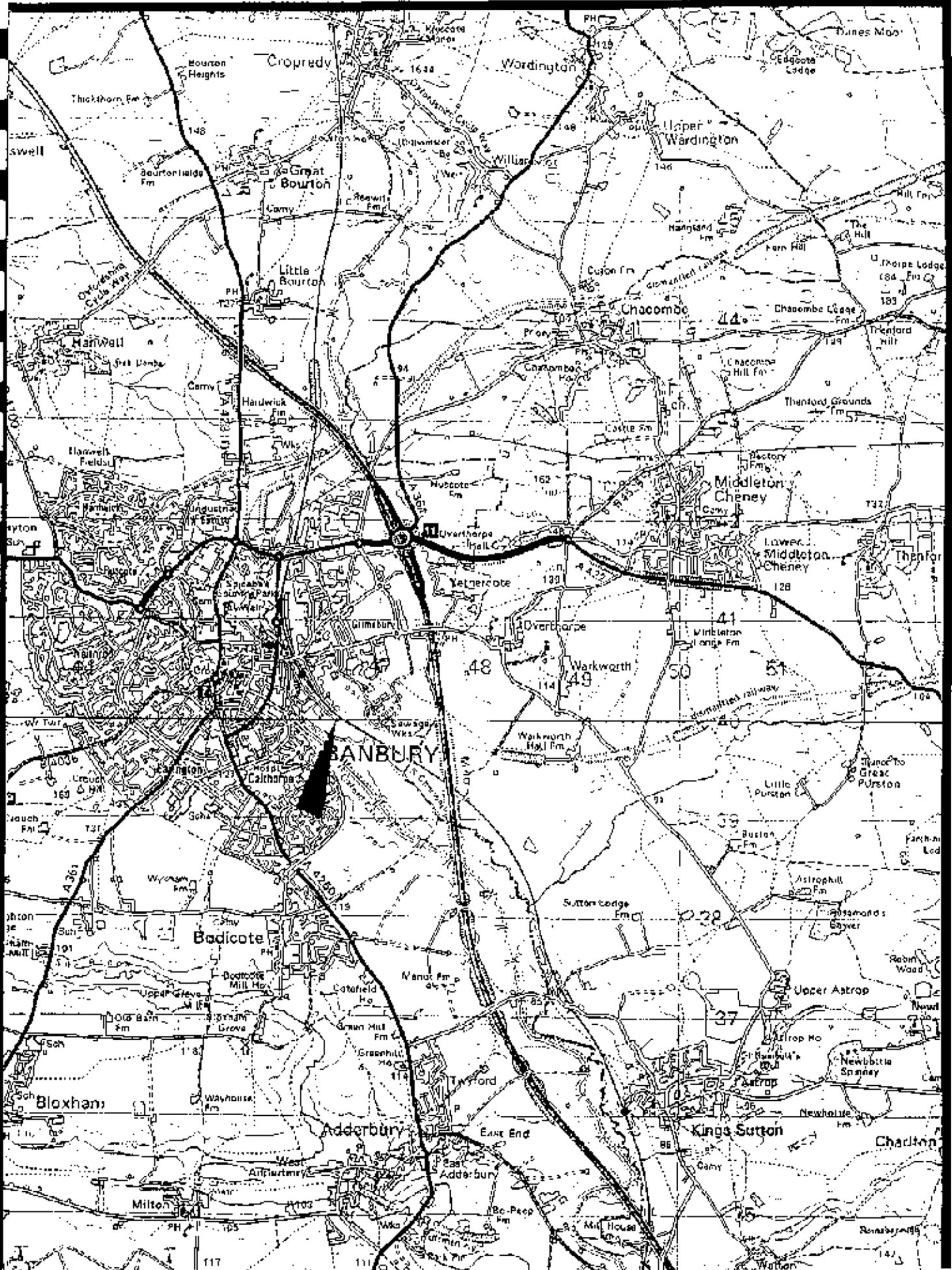
From: Fetter, GW Contaminant Hydrogeology

Appendices

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Appendix 3	Levelling Data
Appendix 4	Monitoring Well/Rising Head Test Data
Appendix 5	Analytical Results
Appendix 6	Preliminary Quantitative Risk Assessment
Appendix 7	Indicative Costs for Remedial Options

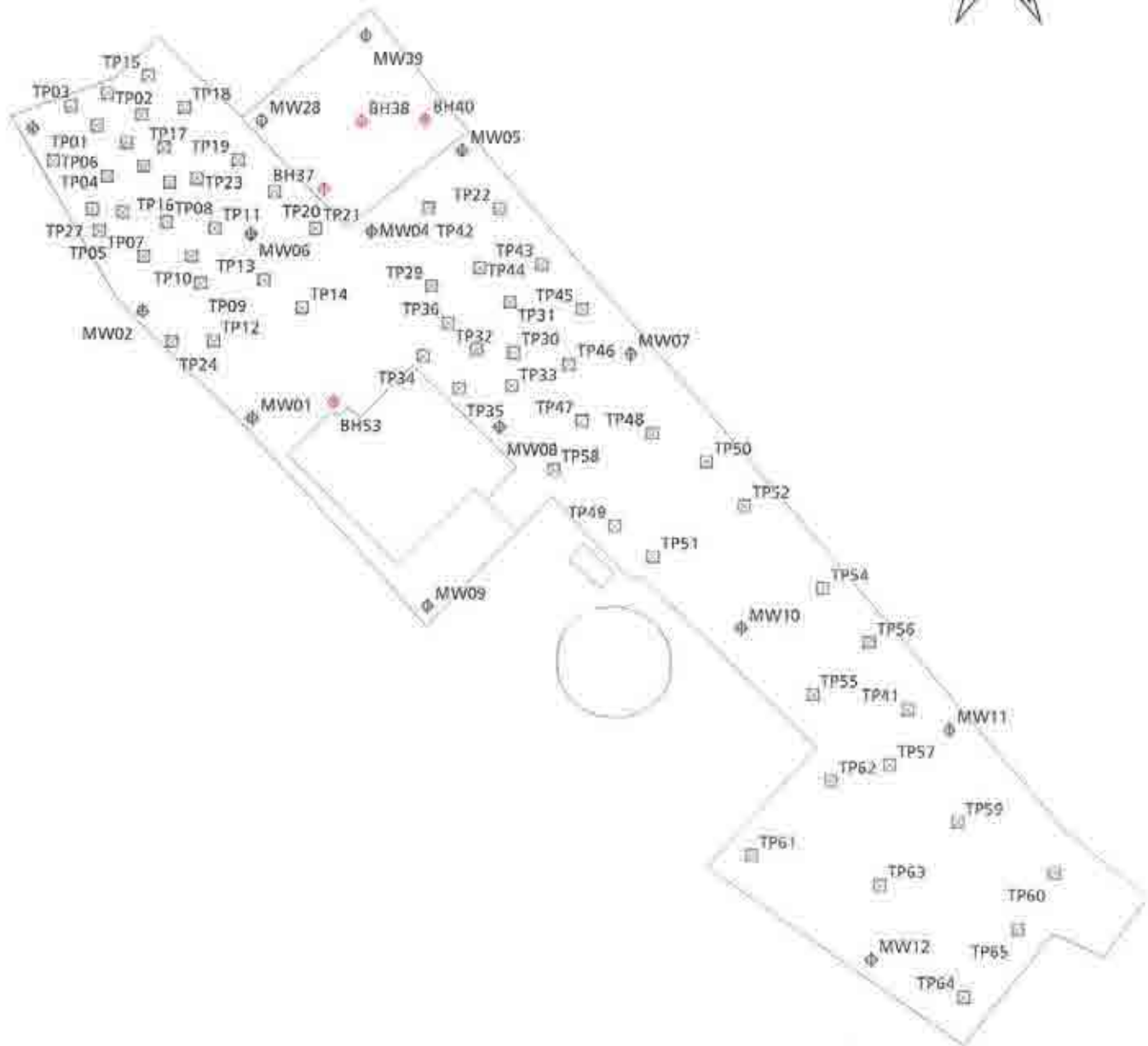
Figures



National Environmental Technology
Centre, Culham, Oxon.
Tel: 01235 463181

**FIGURE 1: SITE LOCATION MAP
FORMER GAS WORKS SITE - BANBURY**

Reproduced from Ordnance Survey Landranger 131, 1992, 1:50 000, with the permission of Her Majesty's Stationary Office, Crown copyright licence number: S1905A001
DATE: December 1998

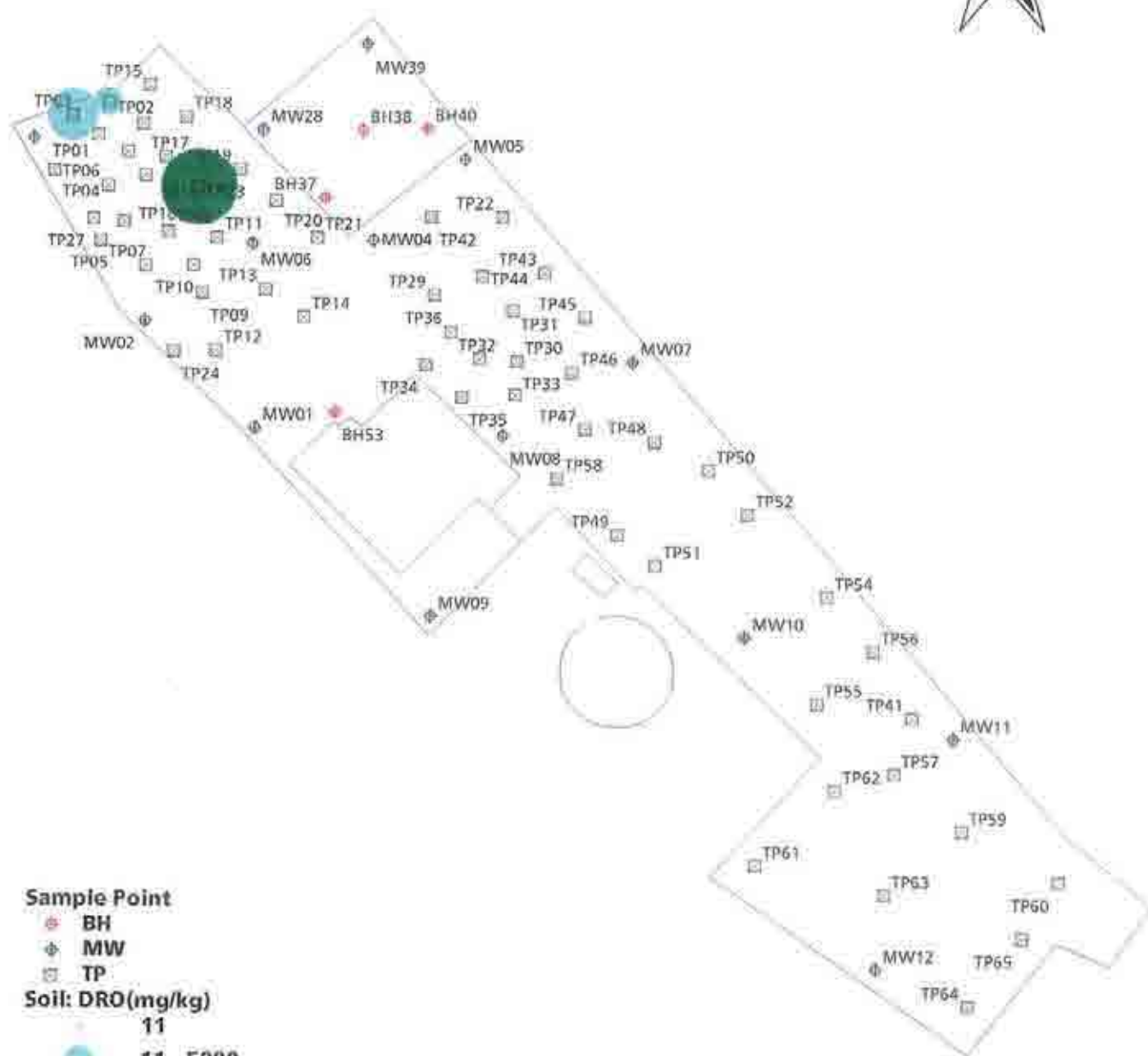


Sample Point

-  BH
-  MW
-  TP



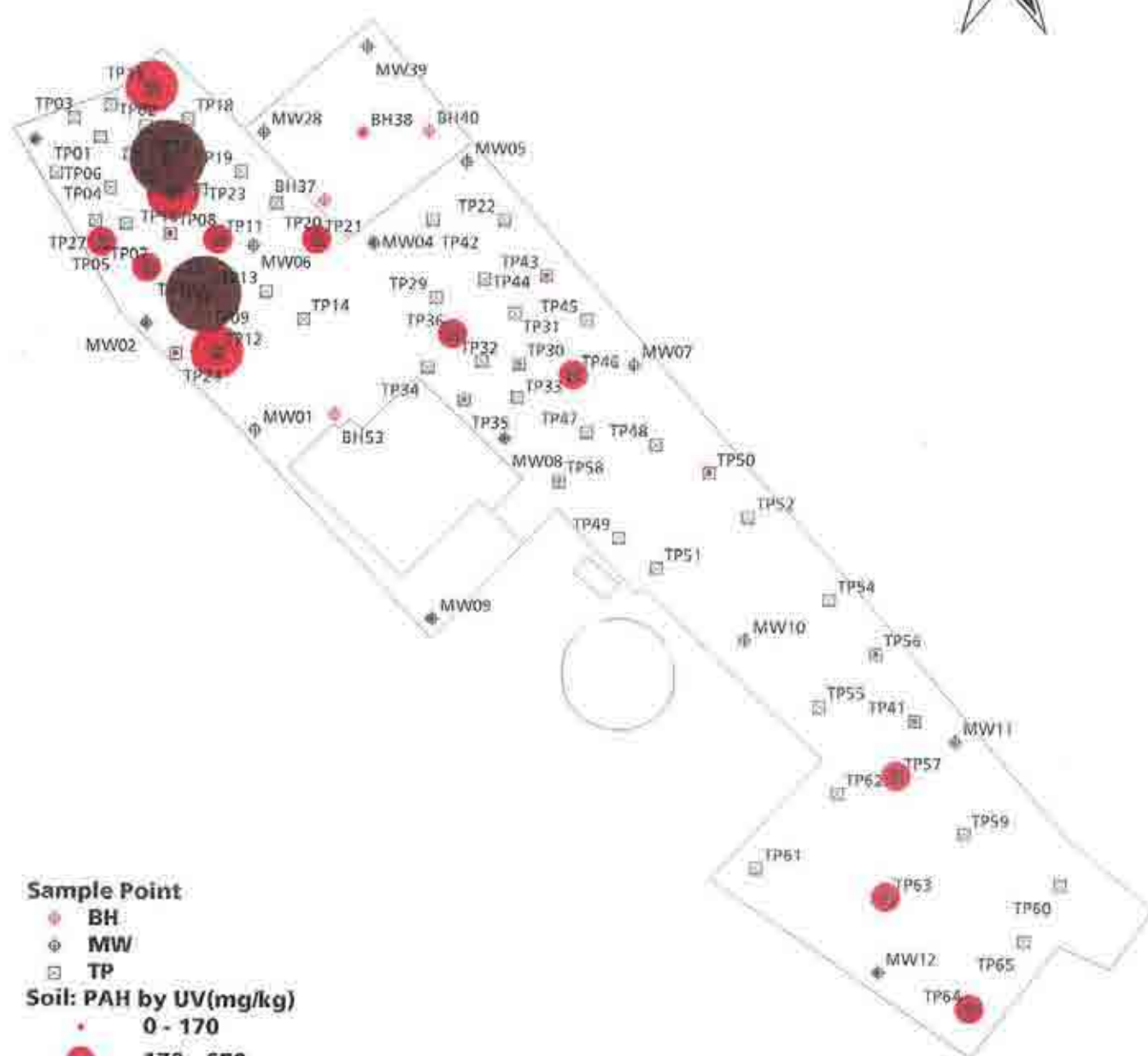
Figure 2: Borehole Locations
Project: Banbury Gasworks
Job Number: ERRB/32163001
Client: Grundons Ltd
Date: January 1999



- Sample Point**
-  BH
 -  MW
 -  TP
- Soil: DRO(mg/kg)**
-  11 - 5000
 -  5000 - 11000
 -  11000 - 100000
 - No Data



Figure 3.1: Diesel Range Organics in Soil
Project: Banbury Gasworks
Job Number: ERRB/32163001
Client: Grundons Ltd
Date: January 1999



- Sample Point**
- BH
 - ⊙ MW
 - ⊠ TP
- Soil: PAH by UV(mg/kg)**
- 0 - 170
 - 170 - 650
 - 650 - 1200
 - 1200 - 2900
- No Data



Figure 3.2: PAH by UV screen in Soil
Project: Banbury Gasworks
Job Number: ERRB/32163001
Client: Grundons Ltd
Date: January 1999

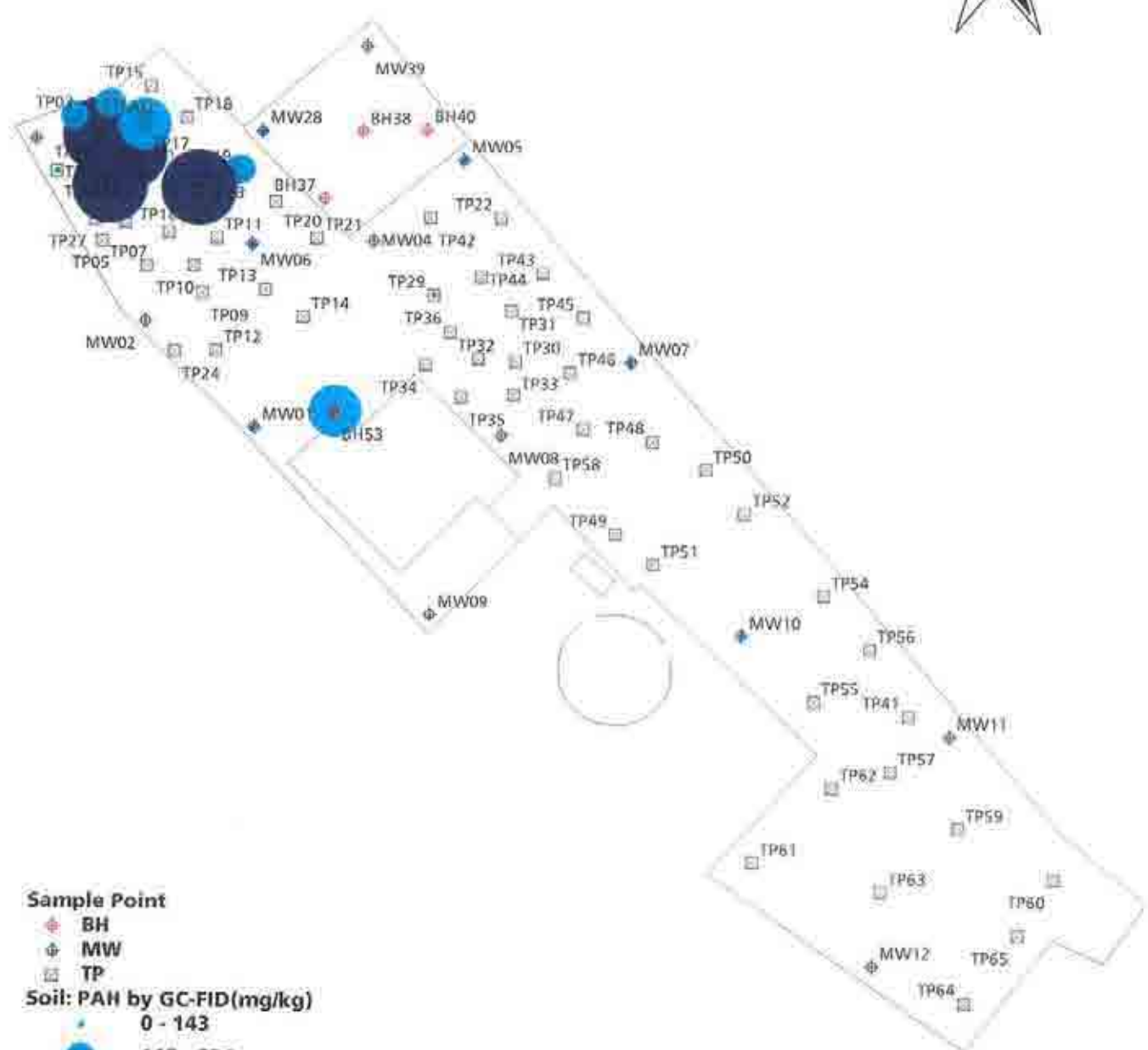


Figure 3.3: PAH by GC-FID in Soil
Project: Banbury Gasworks
Job Number: ERRB/32163001
Client: Grundons Ltd
Date: January 1999

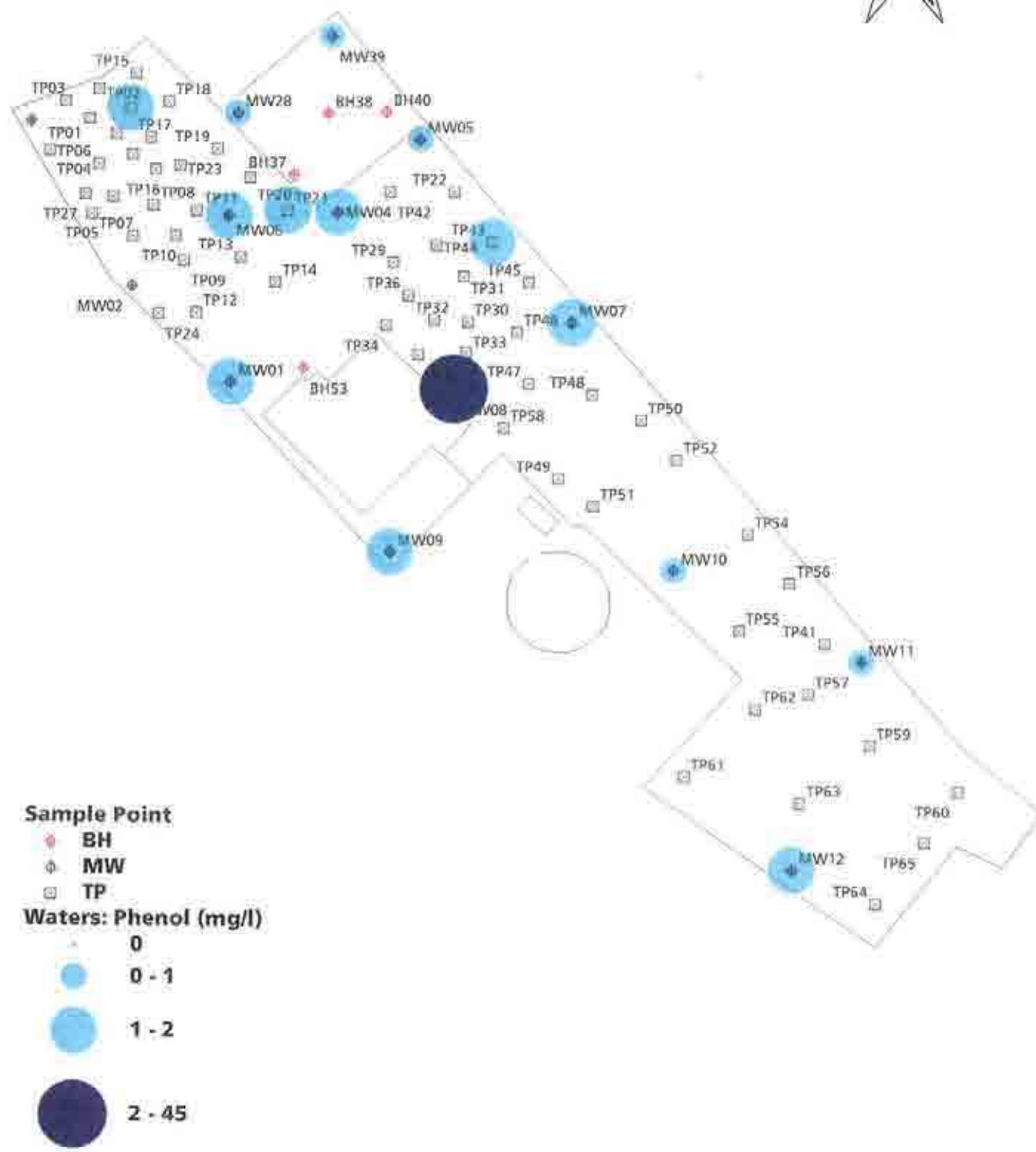
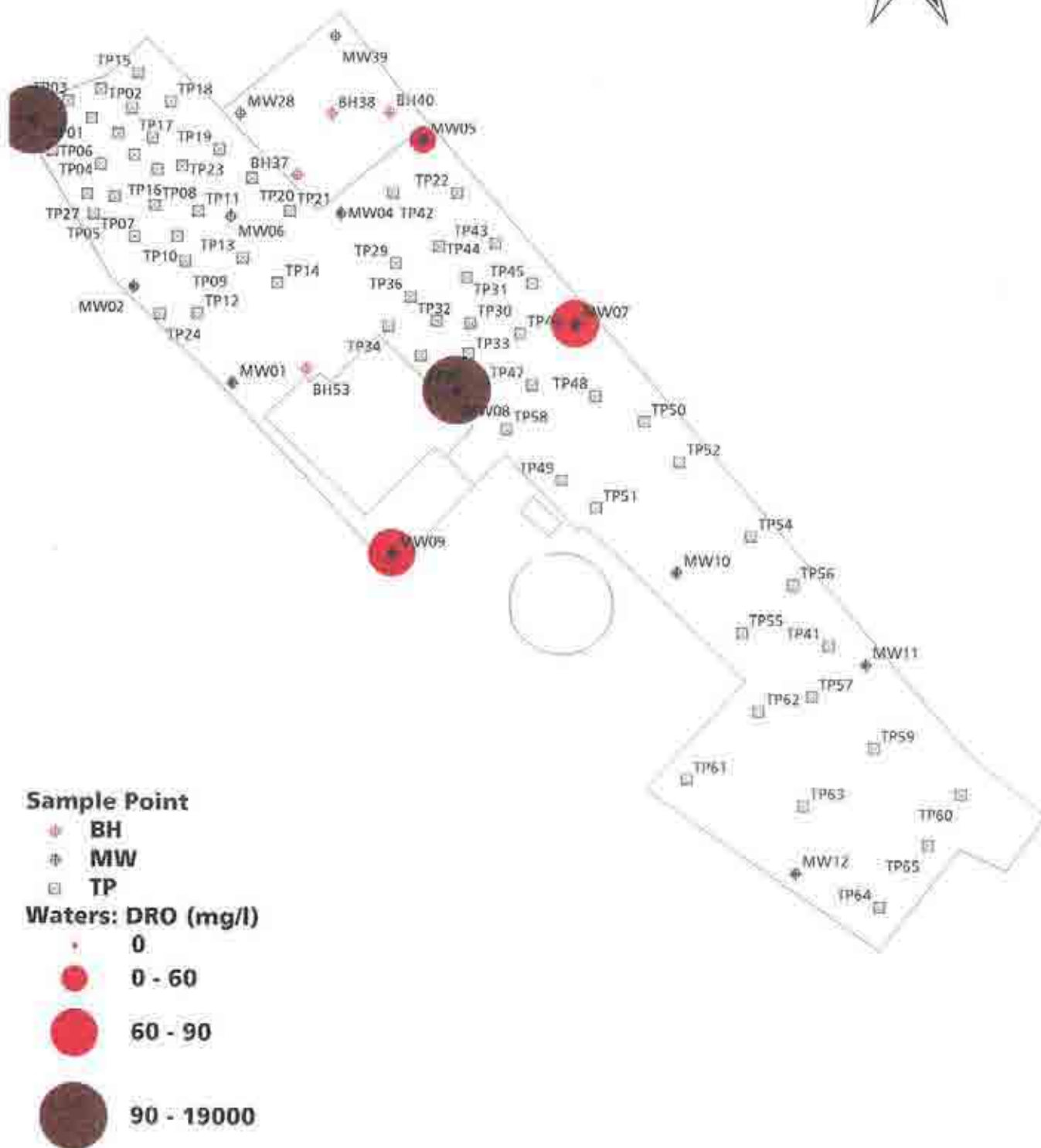
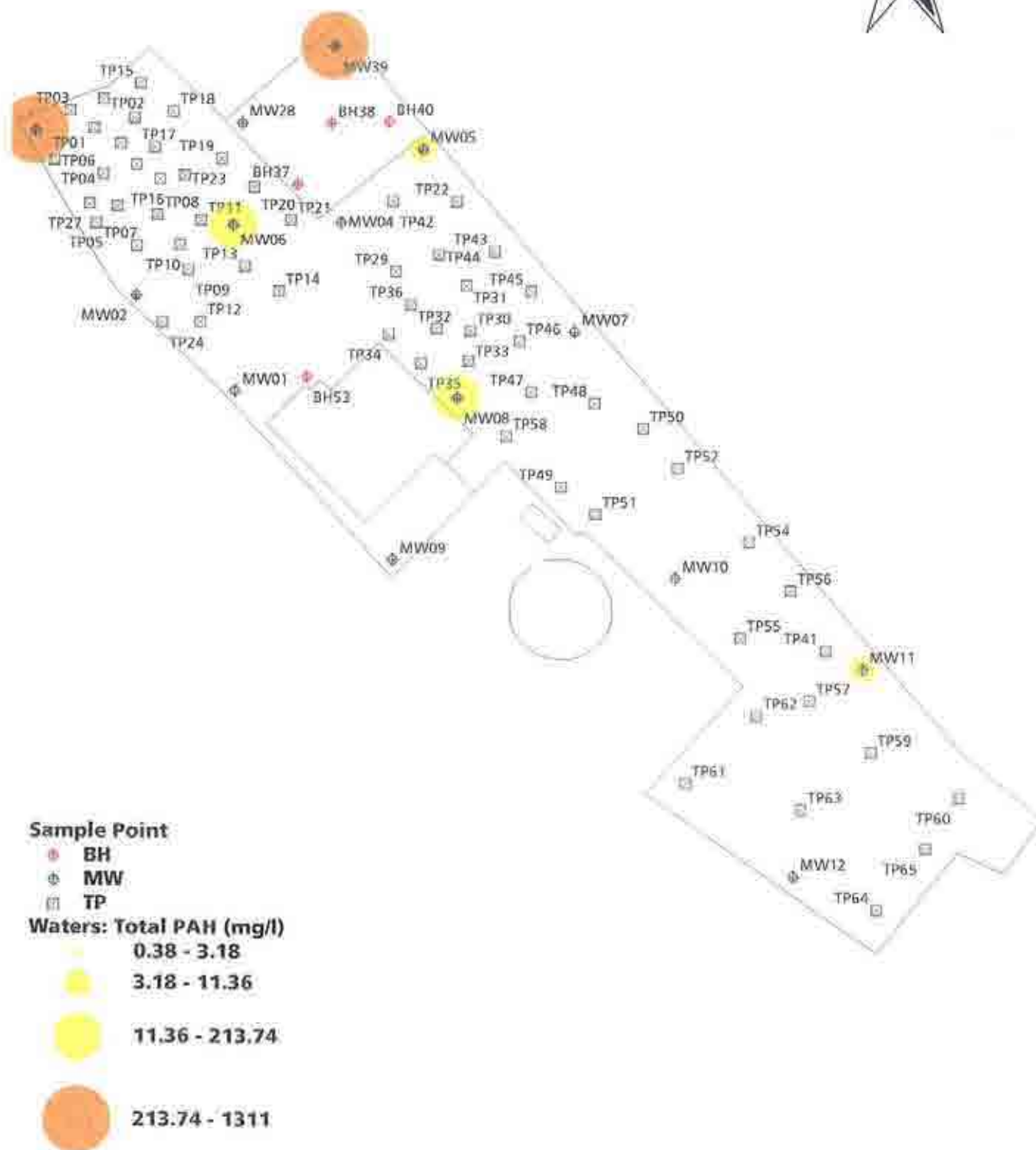
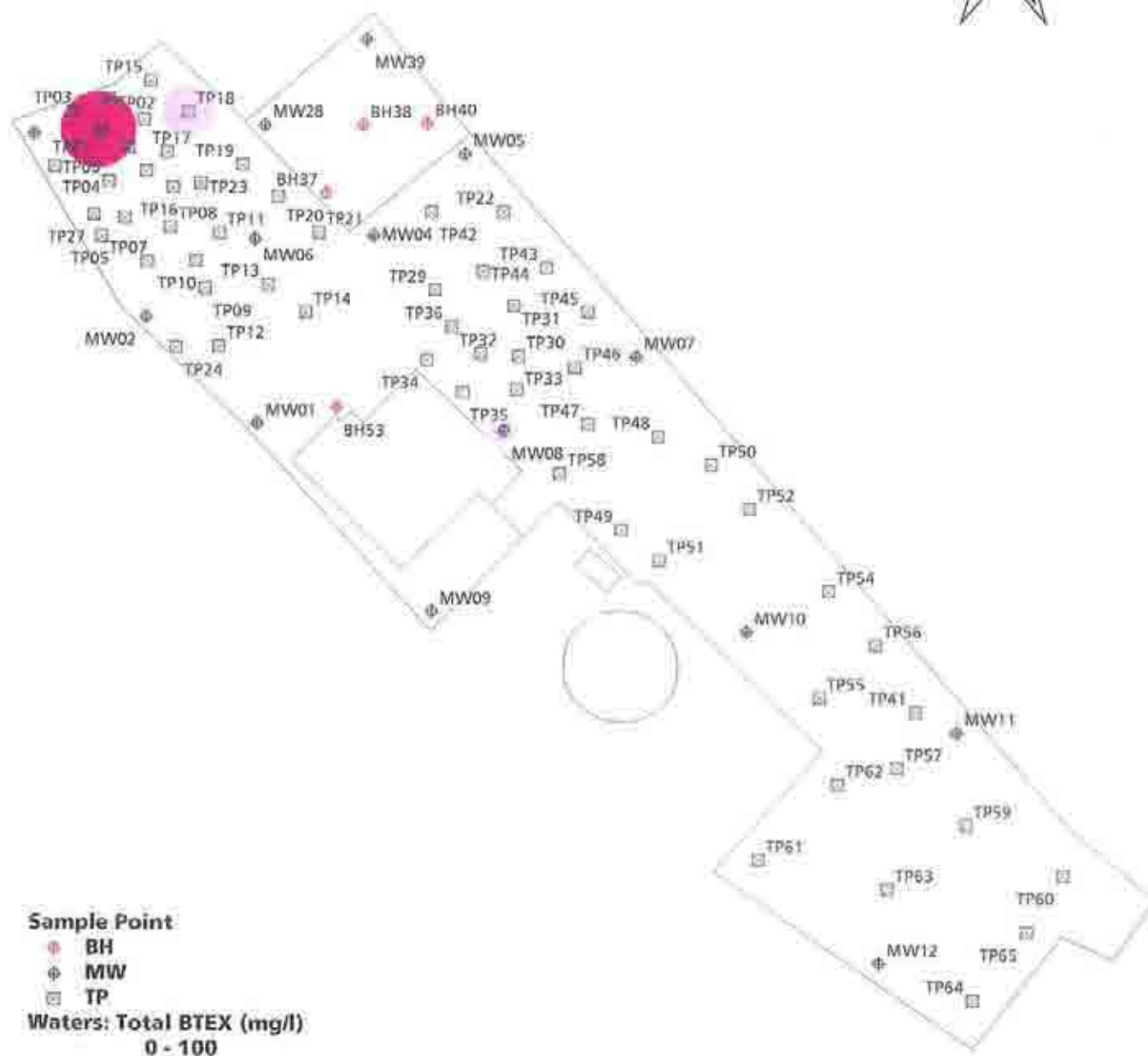


Figure 4.1: Phenols in Groundwater
Project: Banbury Gasworks
Job Number: ERRB/32163001
Client: Grundons Ltd
Date: January 1999







- Sample Point**
- ⊕ BH
 - ⊕ MW
 - ⊕ TP
- Waters: Total BTEX (mg/l)**
- 0 - 100
 - 100 - 1410
 - 1410 - 26000
 - 26000 - 1628000



Figure 4.4: Total BTEX in Groundwater
Project: Banbury Gasworks
Job Number: ERRB/32163001
Client: Grundons Ltd
Date: January 1999



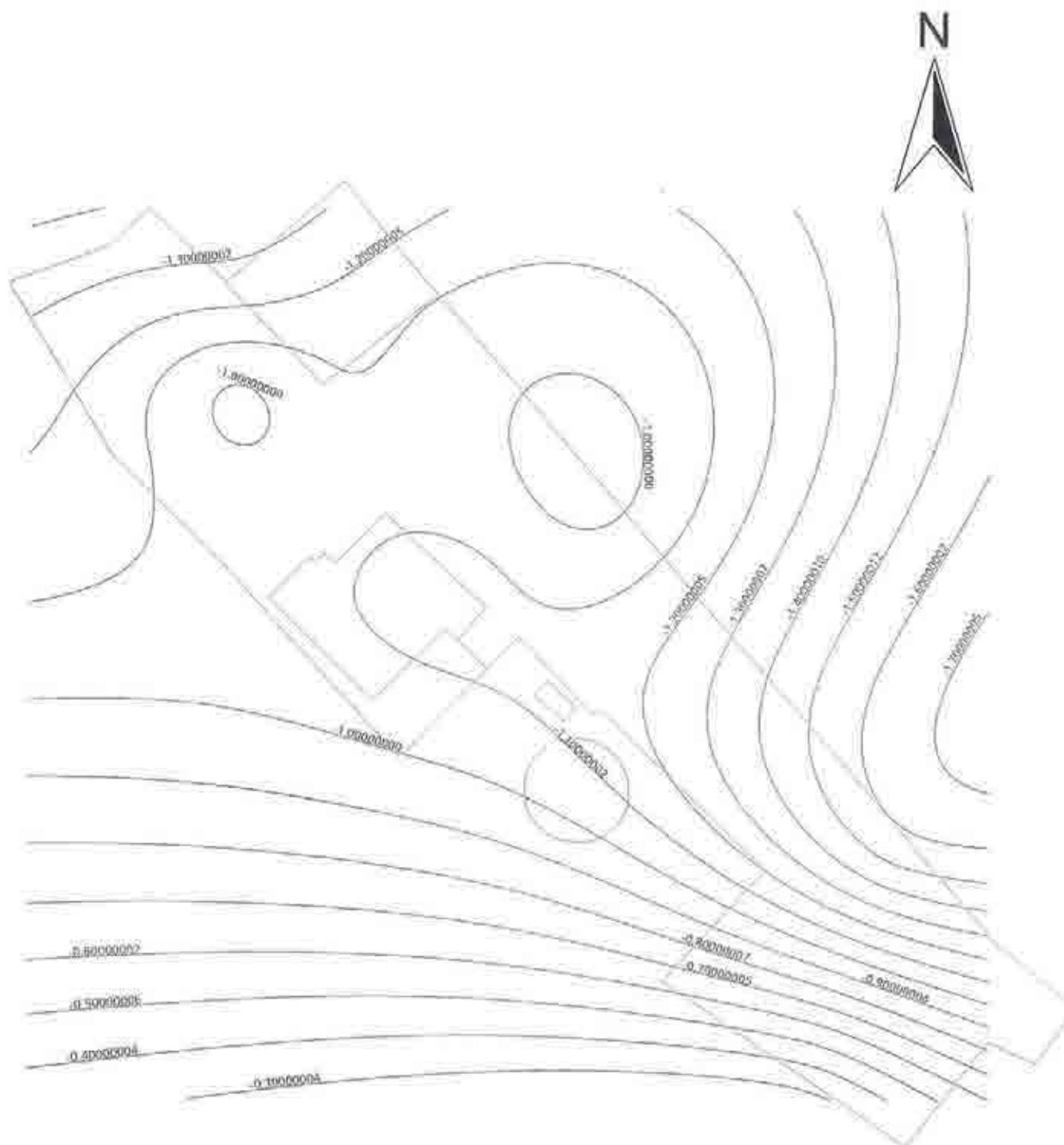
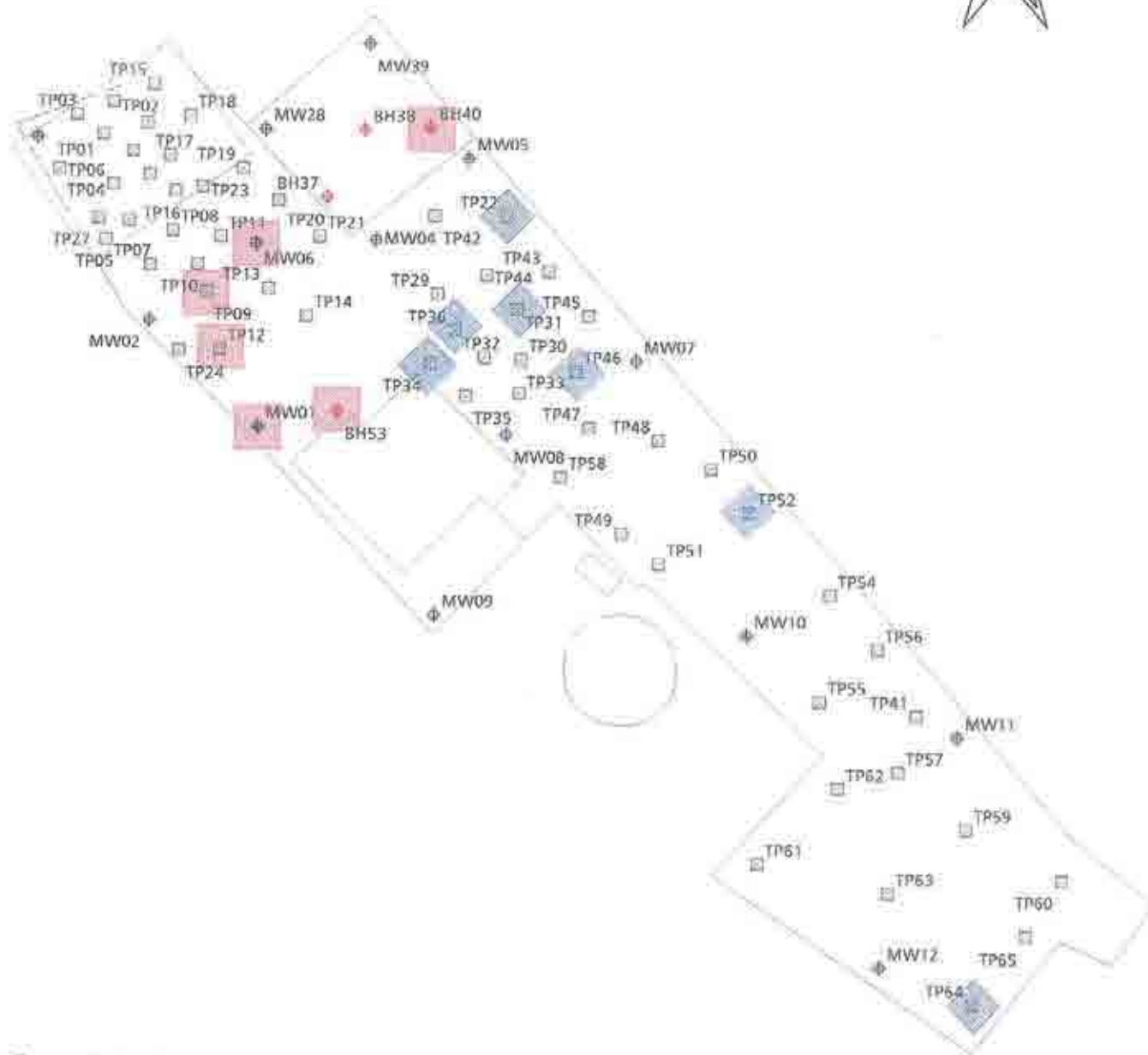


Figure 5.2: Estimated reduced groundwater contours
Project: Banbury Gasworks
Job Number: ERRB/32163001
Client: Grundons Ltd
Date: January 1999



Sample Point:

-  BH
-  MW
-  TP
-  Area1
-  Area2
-  Area3



Figure 6: Indicative Remediation Plan
Project: Banbury Gasworks
Job Number: ERRB/32163001
Client: Grundons Ltd
Date: January 1999



TP01 Contaminated building rubble from within trial pit



TP06 – Free Product



TP09 – Corner of underground red brick structure



TP06 – Example of coal tar contamination and abundant rubble



Example of coal tar contamination



Tp08 – Coal tar contamination



TP55 – Natural geology



TP52 – Natural geology



TP14 – Underground structure



TP14 – Underground cavity