Ashfield
DISTRICT COUNCIL

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Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG - CABLE PERCUSSION

Borehole No. 4 Sheet 1 of 1

Contract No.	F11003	Method	Cable Percussion	Coordinates	1170.9 E
Project	Sutton-in-Ashfield, Mansfield	Drilling Rig	Dando		3008.7 N
		Driller	ID	Ground Level	165.20m AOD
Client		Logged by	LN	Orientation	Vertical
				Date Started	12/02/1998
Consultant	Scott Wilson Kirkpatrick			Date Completed	12/02/1998

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	SPT N & (U blows)	SPT type & depth	Install-ation
MADE GROUND: Reddish brown, silty fine to medium sand with occasional medium to cobble size pockets of reddish brown mottled grey sandy clay.				B 1.00 - 1.50	S6	S 0.50 - 0.95	
					S29	S 1.50 - 1.95	
		1.80	163.40				
MADE GROUND: Black tarmac with many gravel sized fragments of brick and clinker.				B 2.00 - 2.50			
				B 2.50 - 3.00	S30/0mm	S 2.50 - 2.50	
				B 3.00 - 3.50			
				B 3.50 - 4.50	S30/0mm	S 3.50 - 3.50	
					S29	S 4.50 - 4.95	
		4.70	160.50				
MADE GROUND: Brownish grey mottled black sandy slightly silty clay with much medium subrounded to subangular gravel and occasional rootlets with grey gleying.				B 5.00 - 5.50			
					S15	S 5.50 - 5.95	
				B 6.20 - 6.70			
—at 7.00m with brick fragments					S12	S 7.00 - 7.45	
				B 7.70 - 8.20			
					S13	S 8.50 - 8.95	
				B 9.20 - 9.70			
		9.70	155.50		S50/125mm	S 9.70 - 9.98	
		10.00	155.20				

NB All depths in metres, all diameters in millimetres.
See header sheet for details of drilling, progress and water strikes. See legend sheet for key to symbols.

Form	NH CP LOG
Version	2.00
Revised	19/12/1996

Norwest Holst Soil Engineering Ltd.

BOREHOLE LOG - CABLE PERCUSSION

Borehole No. 4 Extra Sheet

Contract No.	F11003	Method	Cable Percussion	Coordinates	1170.9 E
Project	Sutton-in-Ashfield, Mansfield	Drilling Rig	Dando		3008.7 N
		Driller	ID	Ground Level	165.20m AOD
Client		Logged by	LN	Orientation	Vertical
				Date Started	12/02/1998
Consultant	Scott Wilson Kirkpatrick			Date Completed	12/02/1998

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	SPT N & (U blows)	SPT type & depth	Install-ation
Reddish brown highly weathered sandy MUDSTONE.		10.00	155.20				
Cable Percussion boring complete at 10.00 m.							

NB All depths in metres, all diameters in millimetres.
See header sheet for details of drilling, progress and water strikes. See legend sheet for key to symbols.

Form	NH CP LOG
Version	2.00

TRIAL PIT LOGS

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

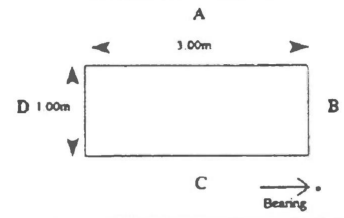
Trial Pit No. **TP1** Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	0.0 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		0.0 N
		Logged by	TR	Ground Level	155.00m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling		Notes
TOPSOIL.		0.20	154.80			
MADE GROUND: Red brown silty fine to medium sand with occasional gravel to cobble size pockets of red brown mottled grey sandy clay and angular to subrounded sandstone gravel.				B D	0.50 0.50	
		0.90	154.10	B	0.90	
MADE GROUND: Black tar with concrete. (Old Road Surface?)		0.95	154.05	D	0.90	
Trial pit complete at 0.95 m.						

Stability	Good
Shoring	None
Groundwater	None
Remarks	Trial pit terminated at 0.95m - unable to break through hard strata.

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

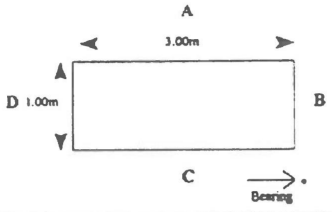
Trial Pit No. **TP2** Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	943.0 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		2919.5 N
		Logged by	TR	Ground Level	151.24m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling		Notes
TOPSOIL.		0.10	151.14			
MADE GROUND: Red brown silty fine to medium sand with occasional gravel to cobble size pockets of red brown mottled grey sandy clay and angular to subrounded sandstone gravel.		0.50	150.74	B D	0.40 0.40	
MADE GROUND: Red brown sandy clay with occasional fine to medium gravel size fragments of angular coal and brick and rootlets.		0.70	150.54	B D V	0.60 0.60 0.60	
MADE GROUND: Red brown silty fine to medium sand with occasional gravel to cobble size pockets of red brown mottled grey sandy clay.		1.10	150.14			
MADE GROUND: Black tarmac with concrete.		1.30	149.94			
Trial pit complete at 1.30 m.						

Stability	Good
Shoring	None
Groundwater	None
Remarks	1. Hand vane results taken as an average over three readings. 2. Pit terminated at 1.30m - unable to break through hard strata.

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks
0.60	70.0	18.0	

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

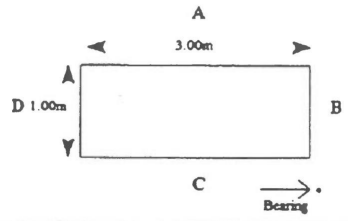
Trial Pit No. **TP3** Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	916.8 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		2990.3 N
		Logged by	TR	Ground Level	153.90m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	Notes
TOPSOIL.		0.20	153.70	B 0.40 D 0.40 V 0.60	
MADE GROUND: Red brown silty fine to medium sand with occasional gravel to cobble size pockets of red brown mottled grey sandy clay.		0.95	152.95	B 1.10 D 1.10	
MADE GROUND: Black tarmac over concrete and bricks. Very compact.		1.40	152.50		
Trial pit complete at 1.40 m.					

Stability	Good
Shoring	None
Groundwater	None
Remarks	1. Hand vane test results taken as an average over three readings. 2. Pit terminated at 1.40m - unable to break through hard strata.

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks
0.60	34.0	7.00	

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

Trial Pit No. **TP4** Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	936.7 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		3021.2 N
		Logged by	TR	Ground Level	154.66m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling		Notes
TOPSOIL.		0.20	154.46			
MADE GROUND: Red brown silty fine to medium sand with occasional to cobble size pockets of red brown mottled grey sandy clay.				B 0.50 D 0.50		
		1.40	153.26			
MADE GROUND: Black tarmac over bricks and concrete.		1.65	153.01			
MADE GROUND: Dark brown to black sandy peat with occasional gravel size fragments of angular brick and rootlets. (Relic Topsoil)		1.80	152.86	B 1.70 D 1.70		
Light brown fine to medium SAND with occasional gravel size pockets of silty sand.		2.40	152.26	B 2.40 D 2.40		
Light brown fine to medium SAND.						
(Firm) red brown mottled light grey sandy to very sandy CLAY.		3.00	151.66	B 3.10 D 3.10		
		3.50	151.16			
Trial pit complete at 3.50 m.						

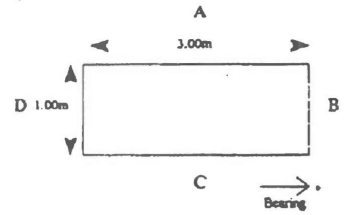
Stability: Good

Shoring: None

Groundwater: None

Remarks:

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks
3.10	0.00	0.00	Too friable f

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

Trial Pit No. **TP5** Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	991.3 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		3077.7 N
		Logged by	TR	Ground Level	154.57m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	Notes
TOPSOIL.		0.30	154.27	B 0.40 D 0.40	
Red brown to yellow brown fine to medium SAND with occasional fine to medium gravel size subrounded to rounded silicious gravel.		2.80	151.77	B 1.50 D 1.50	
Red brown fine to medium highly to completely weathered SANDSTONE, weak.		3.10	151.47		
Trial pit complete at 3.10 m.					

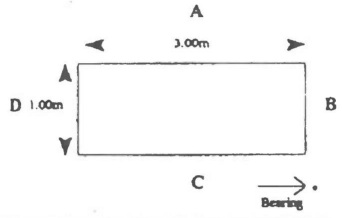
Stability: Good

Shoring: None

Groundwater: None

Remarks:

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

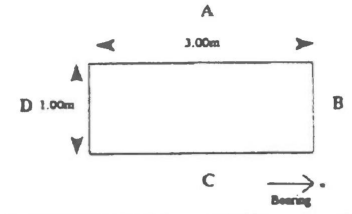
Trial Pit No. **TP6** Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	1066.7 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		3054.5 N
		Logged by	TR	Ground Level	159.03m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling		Notes
TOPSOIL.		0.20	158.83			
MADE GROUND: Dark brown to red brown silty fine to coarse sand with some gravel to cobble size pockets of clayey sand and fine to coarse ash and peat with occasional gravel size angular fragments of brick.		0.80	158.23	B D	0.60 0.60	
MADE GROUND: Red brown sandy clay with occasional gravel size pockets of clayey fine to coarse sand and occasional gravel size angular fragments of brick, coal, tiles and ceramic.		1.10	157.93	B D V	0.90 0.90 0.90	
MADE GROUND: Light brown fine to coarse sand with many cobble to small boulder sized fragments of concrete.		1.40	157.63	B D	1.35 1.35	
MADE GROUND: Red brown gravel to cobble size angular tile fragments.		1.60	157.43			
MADE GROUND: Black to yellow brown clayey fine to coarse ash sand with some gravel to cobble size pockets of sandy clay and cobble size angular concrete fragments.						
		3.80	155.23			
Trial pit complete at 3.80 m.						

Stability	Minor spalling from 1.10m
Shoring	None
Groundwater	None
Remarks	Hand vane results taken as an average over three results.

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks
0.90	37.0	12.0	

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

4.9

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

Trial Pit No. **TP7** Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	1160.1 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		3028.4 N
		Logged by	TR	Ground Level	165.24m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	Notes
TOPSOIL.		0.20	165.04		
MADE GROUND: Red brown silty fine to medium sand with occasional gravel to cobble size pockets of red brown mottled grey sandy clay.				B 0.50 D 0.50	
		0.95	164.29		
MADE GROUND: Black slightly clayey fine to coarse ash sand with occasional gravel size pockets of sandy clay with some to many gravel size angular fragments of concrete (reinforced), bricks, tiles, wood, paper and plastic.				B 1.20 D 1.20	
		3.00	162.24		
Trial pit complete at 3.00 m.					

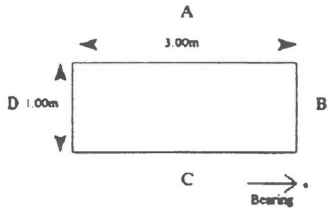
Stability: Minor spalling after 0.95m

Shoring: None

Groundwater: None

Remarks:

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

Trial Pit No. **TP8** Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	1214.8 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		2969.3 N
		Logged by	TR	Ground Level	163.62m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling		Notes
TOPSOIL.		0.20	163.42			
Red brown silty fine to medium SAND.				B	0.50	
				D	0.50	
—from 0.65m to 1.00m with some cobble size pockets of red brown very silty slightly sandy clay				B	0.80	
		1.00	162.62	D	0.80	
Red brown fine to medium SAND.						
				B	1.50	
				D	1.50	
		3.00	160.62			
Trial pit complete at 3.00 m.						

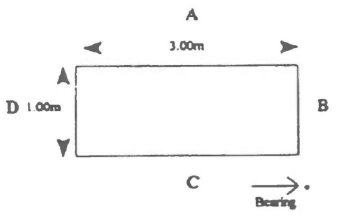
Stability: Good

Shoring: None

Groundwater: None

Remarks:

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

Trial Pit No. **TP9** Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	1103.7 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		2990.3 N
		Logged by	TR	Ground Level	158.23m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	Notes
Dark brown claycy TOPSOIL with occasional rootlets.		0.20	158.03	B 0.40 D 0.40 V 0.50	
MADE GROUND: Black to dark grey very silty organic clay with some gravel to cobble size pockets of red brown sandy clay and occasional gravel size angular fragments of brick and coal.		0.90	157.33		
MADE GROUND: Dark brown to black claycy fine to coarse ash sand with many gravel to cobble size fragments of lead, tiles, concrete, clinker, wood and brick. —from 1.40m light brown with plastic and paper				B 1.30 D 1.30	
		3.10	155.13	B 3.00 D 3.00	
Trial pit complete at 3.10 m.					

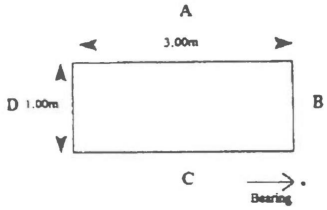
Stability: Minor spalling after 0.90m

Shoring: None

Groundwater: None

Remarks: Hand vane results taken as an average over three readings.

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks
0.50	58.0	18.0	

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

Trial Pit No. **TP11** Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	997.3 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		2961.7 N
		Logged by	TR	Ground Level	155.56m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	Notes
Dark brown sandy clayey TOPSOIL with occasional rootlets.		0.10	155.46		
MADE GROUND: Red brown silty fine to medium sand.				B 0.50 D 0.50	
		1.10	154.46		
MADE GROUND: Dark brown silty fine to coarse ash sand with many gravel to boulder size angular fragments of concrete, bricks, wood, paper, plastic, sandstone, steel (drums and reinforcement bars) and cloth.				B 1.50 D 1.50	
		3.00	152.56		
Trial pit complete at 3.00 m.					

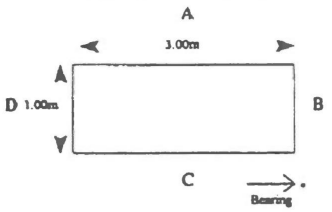
Stability: Minor spalling after 1.10m

Shoring: None

Groundwater: None

Remarks:

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

Norwest Holst Soil Engineering Ltd.

TRIAL PIT LOG

Trial Pit No. **TP12**
Sheet 1 of 1

Contract No.	F11003	Method	Machine Excavated	Coordinates	1041.1 E
Project	Sutton-in-Ashfield, Mansfield	Equipment	JCB		3007.0 N
		Logged by	TR	Ground Level	157.12m AOD
Client				Date Started	09/02/1998
				Date Completed	09/02/1998
Consultant	Scott Wilson Kirkpatrick				

Description of Strata	Legend	Depth Below G.L.	O.D. Level	Sampling	Notes
TOPSOIL		0.10	157.02		
MADE GROUND: Red brown silty fine to medium sand with gravel to cobble size pockets of red brown mottled grey sandy clay.				B 0.50 D 0.50	
		1.50	155.62		
MADE GROUND: Black fine to coarse ash sand with many gravel to boulder size fragments of brick, concrete, tile, wood, cloth, paper and steel.				B 2.00 D 2.00	
		3.50	153.62		
Trial pit complete at 3.50 m.					

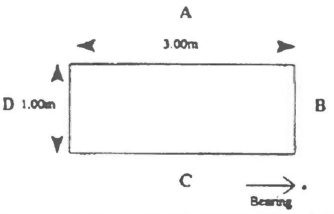
Stability: Minor spalling after 1.50m

Shoring: None

Groundwater: None

Remarks:

Sketch Plan of Trial Pit



Hand Vane Test Readings

Depth	HV Peak	HV Remoulded	Remarks

REMARKS - All depths in metres, all soil strengths in KPa.
See legend sheet for key to symbols and abbreviations.
All bearings given relate to magnetic north

Form	TP LOG
Version	2.00
Revised	07/07/1997

APPENDIX C

ENVIRONMENTAL LIABILITIES

1 General

It is considered that the major heads of liability are as follows:-

- criminal liability and liability for clean-up under the Environment Act 1995;
- criminal liability and liability for clean-up under the Water Resources Act 1991;
- criminal liability under the waste management licensing requirements of the Environmental Protection Act 1990;
- civil liability under common law.

2 Environment Act 1995

Under the Environmental Act 1995, new contaminated land clean-up provisions were introduced by the insertion of Part IIA into the Environmental Protection Act 1990. These provisions, however, need to be considered in the light of current Government policy on contaminated land clean-up.

3 Government Policy

The Government's Policy on contaminated land is set out in its paper "Framework for Contaminated Land" [DoE 1994]. The policy emphasises the distinction between prevention of future pollution (for which there is considerable existing legislation) and dealing with the legacy of previous contamination of land. In respect of this latter category, the policy reaffirms the "suitable for use" approach to the control and treatment of contamination. This approach requires remedial action only where:-

- the contamination poses unacceptable actual or potential risks to health or the environment; and
- there are appropriate and cost effective means available to do so, taking into account the actual or intended use of the site.

As part of its policy, the Government believes that the normal process of development and re-development of land provide the best means of tackling past contamination. The policy states that "improvements to the condition of land can, in most circumstances, be created through the voluntary, commercial activities of the private sector without the need for direct intervention by regulatory authorities". Planning Policy Guidance Note 23, "Planning and Pollution Control", [DoE 1994] sets out the general requirements for dealing with contamination when a site is subject to a change of use. In such cases, the aim is to ensure that the land is made suitable for the proposed use, i.e. that unacceptable

actual or potential risks to health or the environment are dealt with appropriately and cost effectively and subsequent regulatory action is avoided.

The new provisions contained in the Environment Act 1995 were introduced to provide a system of regulation and control of land affected by past contamination where that land could not be regarded as suitable for its present use and was not being dealt with by other regulatory regimes such as pollution or planning controls. In draft Guidance issued by the DoE in May 1995, it is stated that "the Government expects that these provisions will be used only where there is a failure through other means to deal with actual threats to health or the environment". Our comments in this Report on the clean-up provisions of the Environment Act 1995 should accordingly be considered with this in mind.

4 Definition of Contaminated Land

For the first time under English law, there is a statutory definition of contaminated land, namely:-

"any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, or under the land, that -

(a) significant harm is being caused or there is a significant possibility of such harm being caused; or

(b) pollution of controlled waters is being, or is likely to be, caused."

"Harm" is defined in the Act to mean harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property.

In determining whether the land is contaminated land, and what constitutes "significant harm" and whether there is a "significant possibility" of such harm being caused, local authorities will be required to follow Guidance issued by the Secretary of State for the Environment. Draft Guidance issued in May 1995, emphasised a "risk based" approach to the determination of whether the land is "contaminated land". This requires the local authority to perform a risk assessment involving:-

- identifying possible sources of harm (for example, the possible presence of substances under the land);
- identifying the presence of possible targets for the harm (for example, the close proximity of humans);
- establishing a plausible pathway by which the source could attack the target (for example, through airborne migration, skin contact or ingestion).

The draft Guidance requires confirmation that harmful substances are actually present in on or under the land and some estimation of the risk of harm being caused by relevant sources to the targets using detailed risk assessment techniques.

As mentioned above, this Guidance is in draft form (revised September 1996) at present and is currently being finalised with a view to publication.

5 Local authority's duty to inspect

The role of the local authority has already been mentioned. The Act places a duty on every local authority to inspect its area periodically to identify contaminated land. This is closely akin to existing statutory nuisance procedures. If such land is identified, the local authority must determine whether it is to be designated as "contaminated land" or as a "special site". Further Guidance is expected from the DoE as to what will constitute a special site. It is likely, however, that these will be old landfill sites, tar works or such sites which pose a serious risk of harm to the environment. These sites will be the responsibility of the new Environment Agency on the basis that it will have greater resources and expertise to oversee their remediation.

6 Who is the responsible "appropriate person"

When a local authority identifies contaminated land it is under a statutory duty to serve a remediation notice on the "appropriate person". This notice will specify what should be done by way of remediation.

The appropriate person is defined in the Act as the person who "caused or knowingly permitted" the substances to be in, on or under contaminated land.

Importantly, in terms of dealing with historic contamination, if this person cannot be found then the appropriate person will be the owner or occupier of the land for the time being.

The owner, for the purposes of the Act, is the person entitled to receive the rack rent of the land (i.e. to receive the market value or occupational profits from the land). The definition of owner excludes a mortgagee not in possession. A mortgagee who does take possession, therefore, would qualify as an owner for the purposes of potential liability under a remediation notice.

7 Limitations on liability

Cost

In determining the works to be specified in the remediation notice, the enforcing authority may only require such works which it considers reasonable having regard to the cost which is likely to be involved and the seriousness of the harm or pollution of

controlled waters in question. The question of what is reasonable in this context, is to be the subject of Guidance.

Consultation

Before a remediation notice can be served, the enforcing authority has a duty to "reasonably endeavour" to consult the person on whom the notice is to be served and relevant owners and occupiers. No remediation notice may be served for a period of three months from the date of identification of the contaminated land in question unless there is an imminent danger of serious harm or serious pollution of controlled waters being caused. The three month period is to allow for the process of consultation between relevant parties with a view to voluntary remediation being commenced.

Proportional liability

The contaminated land provisions move away from the general principle of English law, that of joint and several liability, and an appropriate person will be liable for the proportion of the contamination for which he is responsible. Any remediation notice must state the proportion of the cost of the remediation works which different appropriate persons must bear. Guidance is to be published on this aspect of liability as well.

Owner/occupier off-site liability

An owner or occupier of land which appears to have been affected by substances escaping from other land in circumstances where the owner or occupier did not cause or knowingly permit this, cannot generally be required in a remediation notice to carry out remediation where those substances have contaminated or are threatening to contaminate other land or controlled waters. However, an exception to this may arise if the owner or occupier has caused or knowingly permitted the escape of the substances to other land (for example, by carrying out site development works which disturb the contamination). The initial legal advice we have received on the drafting of the relevant provisions of the Environment Act which deal with this issue, is that it is obscure and not altogether easy to state what effect it will have in practice. This may become clearer once detailed Guidance is issued by the Secretary of State for the Environment.

When a remediation notice is inappropriate

There are a number of circumstances described in the Act when a remediation notice would be inappropriate. These are where:-

- there is nothing by way of remediation which could be specified in a remediation notice;
- the authority is satisfied that voluntary remediation work is already underway or in prospect (for example, as part of redevelopment);

- it appears that the person on whom the notice should be served is the authority itself;

- the authority is permitted to carry out the works itself (for example, where there is imminent danger of serious harm or the authority has failed to identify the appropriate person).

8 **Criminal Liability**

If a person on whom an authority has served a remediation notice fails to carry out, without reasonable excuse, any of the requirements of the notice, then they shall be guilty of a criminal offence. Where the land to which the notice relates is industrial, trade or business premises, the offence is punishable on summary conviction by a fine not exceeding £20,000 with daily increments thereafter. The Act contains appeal and hardship provisions.

9 **Water Resources Act 1991**

Offences

The Water Resources Act 1991 sets out a number of offences which will be committed by allowing liquid matter to enter water which is controlled under the Water Resources Act. This includes both surface water and groundwater bodies. The offences potentially relevant to this site are:-

- causing or knowingly permitting any poisonous noxious or polluting matter or any solid waste to enter controlled waters.

- causing or knowingly permitting (without the consent of the NRA) any trade effluent or sewage effluent to be discharged into controlled waters.

Criminal Liability

A conviction for these offences will result, on summary conviction, in imprisonment for a term not exceeding 3 months or a fine not exceeding £20,000 or to both. A conviction on indictment will result in imprisonment for a term not exceeding two years or a fine or both. Directors, managers or other officers of a company committing an offence may be held directly liable for the offence and may be convicted in their own right.

Precautions Required

Care will have to be taken to ensure that the existing outfalls and any new ones are covered by consents and that the consent conditions are complied with. In addition to pollution of surface water by surface water drainage from the site, consideration needs to be given to the potential for pollution of surface water bodies and groundwater due to contaminated groundwater plumes migrating outside the site boundary.

Powers of NRA and SEPA to Effect Clean-up

Section 161 of the Water Resources Act originally gave the NRA the power to carry out a clean-up or preventive works where controlled waters were being polluted or threatened with pollution. The NRA was then entitled to recover the cost of the clean-up from the person who had caused or knowingly permitted the pollution. The NRA, with its limited resources, was understandably reluctant to spend money on clean-up and then have to try to recover it.

New provisions in the Environment Act 1995 attempt to redress this situation. The existing power remains available to the new Environment Agency as successor to the NRA, but the Agency will in future have further power to serve so-called "works" notices. Works notices will operate in a similar way to the remediation notices introduced under the Environment Act for contaminated land clean-up.

Works notices can be served on any person who has caused or knowingly permitted any poisonous, noxious or polluting matter or any solid waste matter to be in or likely to enter controlled waters. They can require:-

- preventive works to avoid potential pollution;
- removal or disposal of polluting matter;
- remedying or mitigating of pollution; and
- restoration, so far as is reasonably practicable, of waters, flora and fauna to their state prior to the pollution event.

Under the new provisions, the Environment Agency is entitled to undertake investigations to identify the source of the polluting matter and the identity of the person who has caused or has knowingly permitted it to be present in or near controlled waters. If, as a result of such investigation, the Agency serves a works notice which is not subsequently quashed on appeal or withdrawn, it can recover the cost of such investigation.

As with contaminated land remediation notices under the Environment Act, the Agency is required to use reasonable endeavour to consult with the proposed recipient of the notice. However, whereas the Environment Act specifies a three month consultation period before a remediation notice can be served, there is no requirement for a set period of consultation under the works notice regime.

Failure to comply with the requirements of a works notice will be a criminal offence punishable in the same way as outlined above. If criminal remedies are thought to be ineffectual, the Agency also has power to seek a High Court injunction. Alternatively, it may carry out the works itself and recover the reasonable costs and expenses incurred from the recipient of the notice.