APPENDIX B

Environmental data

Environmental Search

Site Description

Priory Campus
Pontefract Road
Lundwood
Barnsley
S71 5PN

Grid Reference: **436994, 406948**

Client Reference

Soil Environment Services Ltd
The Nanotechnology Centre
Herschel Building
Kings Road
Newcastle upon Tyne
NE1 7RU

Date: 2nd August 2010
PO Number: SES/PC/PR/1#1

Environment Agency

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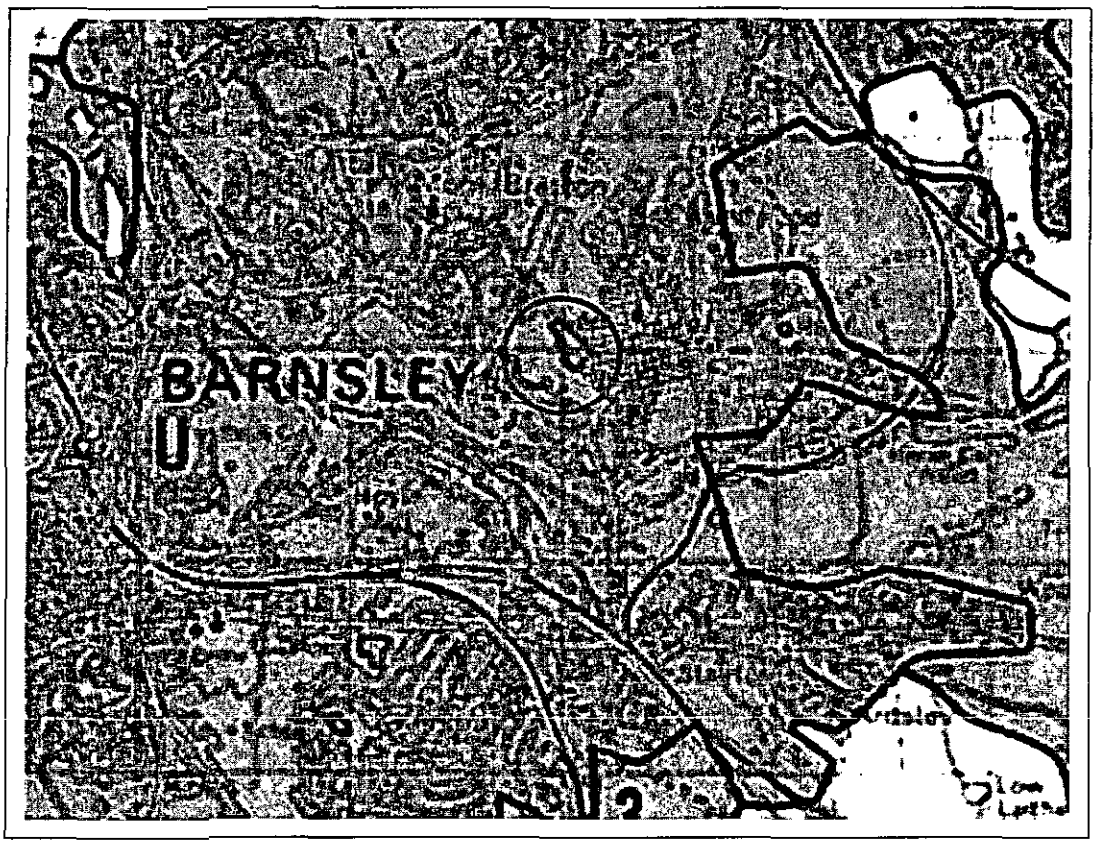
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Data Set	*0-250m*
AEA Technology	
Air Quality	n/a
British Geological Survey	
1:50,000 Solid Geology	n/a
Borehole Index	n/a
Mines, Quarries and Shallow mining	n/a
Natural Subsidence	n/a
Radon Protection Measures	none required
Coal Authority	
Coal Fields	n/a
Conservation Sites	
National Parks	n/a
Areas of Outstanding Natural Beauty	n/a
National Nature Reserves	n/a
RAMSAR Sites	n/a
Sites of Special Scientific Interest	n/a
DEFRA	
Nitrate Vulnerable Zones	n/a
Nitrate Sensitive Areas	n/a
Environmentally Sensitive Areas	n/a
Environment Agency	
Abstractions Licences	n/a
Discharge Consents	n/a
Hazardous Waste	n/a
Radioactive Consents	n/a
IPC Authorisations	n/a
Pollution Inventory	0
Pollution Incidents	0
Prosecutions & Enforcements	n/a
River Quality Assessment	n/a
Flood Risk	n/a
Groundwater Vulnerability	✓
Waste Treatment Sites	0
Waste Carrier & Broker	n/a
Landfill	2
National Radiological Protection Board	
Radon Risk	0-1%
Radiocommunication Agency	
Mobile Phone Base Stations	n/a
Other	
Fuel Sites	0

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Groundwater Vulnerability

Records within 0 – 250m



Source: *Environment Agency, 1997*

Geological Classification

Minor Aquifer (Variably permeable) – all brown shading

Fractured or potentially fractured rocks, which do not have a high primary permeability, or other formations of variable permeability including unconsolidated deposits. Although these will seldom produce large quantities of water for abstraction, they are important for local supplies and supplying base flow to rivers.

Soil Classification

Soils of high leaching potential (dark brown shading) – these soils have little ability to attenuate diffuse source pollutants and in which non-adsorbed diffuse source pollutants and liquid discharges have the potential to move rapidly to underlying strata or to shallow groundwater.

Subclass 3 - Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but which have some ability to attenuate adsorbed pollutants because of their clay or organic matter contents.

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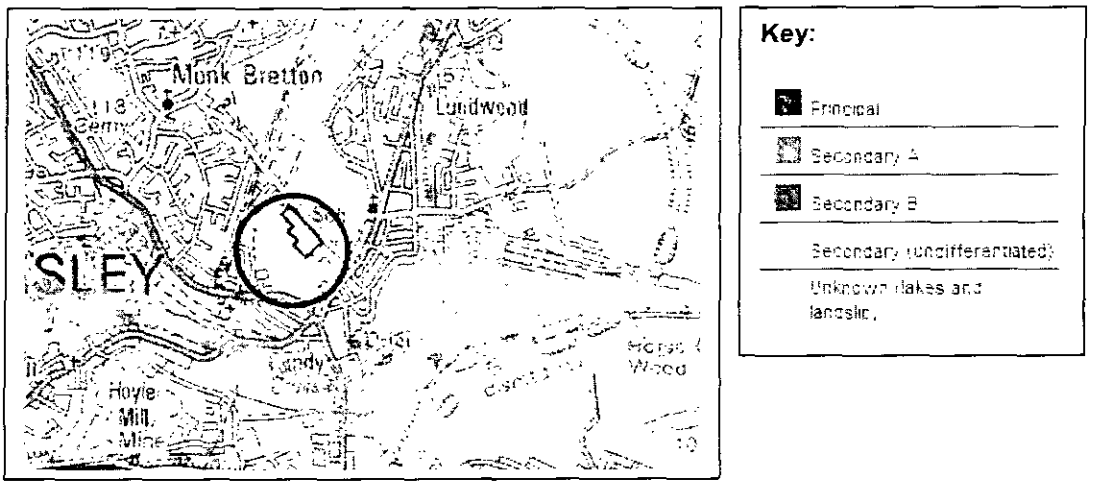
NB. Soil information for urban areas and restored mineral workings is based on fewer observations than elsewhere. A worst case vulnerability classification (high / H) is therefore assumed for these areas and for current mineral workings. All are given a designation HU until proved otherwise.

Soils of low leaching potential (pale brown shading) – soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants. Lateral flow from these soils may contribute to groundwater recharge elsewhere in the catchment. They generally have high clay or organic matter contents.

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Aquifer - Superficial Drift Designations

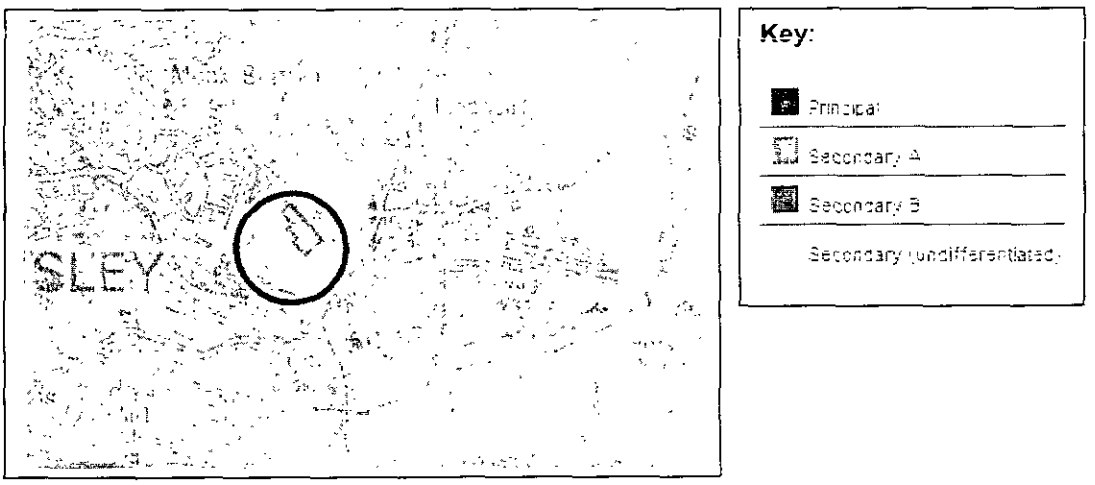
Records within 0 – 250m



Source: *Environment Agency, 2010*

Aquifer - Bedrock Designations

Records within 0 – 250m



Source: *Environment Agency, 2010*

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New Aquifer Designations

From 1 April 2010, the Environment Agency's Groundwater Protection Policy will be using aquifer designations that are consistent with the Water Framework Directive. These designations reflect the importance of aquifers in terms of groundwater as a resource (drinking water supply) and their role in supporting surface water flows and wetland ecosystems.

Superficial (Drift)	Permeable unconsolidated (loose) deposits e.g. sands and gravels
Bedrock	Solid permeable formations e.g. sandstone, chalk and limestone

Principal Aquifers

These are layers of rock or drift deposits that have high intergranular and/or fracture permeability, meaning they usually provide a high level of water storage. They may support water supply and /or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.

Secondary Aquifers

These include a wide range of rock layers or drift deposits with an equally wide range of water permeability and storage. Secondary aquifers are subdivided into two types:

Secondary A Permeable layers capable of supporting water supplies at a local rather than strategic scale and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

Secondary B Predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.

Secondary (Undifferentiated) Has been assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

Unproductive Strata

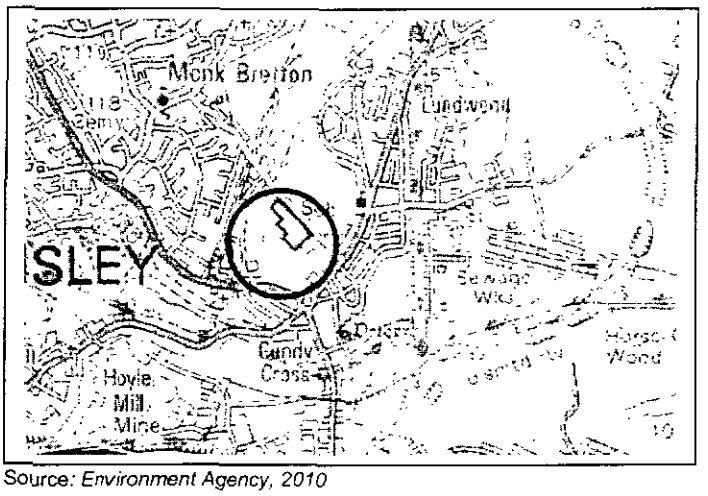
These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow.

NB: Only principal and secondary aquifers are displayed as coloured areas on the maps. Un-shaded areas on bedrock designation map will be unproductive strata. However, for un-shaded areas on the superficial (drift) designation map, there will be no distinction between areas of unproductive strata and areas where no drift is present. Please refer to geological survey maps to distinguish between the areas. The new maps do not provide information on surface soils, please refer to the groundwater vulnerability maps if you are assessing activities on undisturbed natural soils (e.g. agricultural land) an need the soil classes. In these situations, please disregard the geological classes and combine the soil information with the new aquifer designations.

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Groundwater (Source Protection Zones)

Records within 0 – 250m



Source: *Environment Agency, 2010*

Key:

Groundwater source protection zones

- Inner zone
- Outer zone
- Total catchment
- Special interest

Water abstraction management areas (CAMS)

- Managing water resources
- Thames Corridor
- Midland Corridor

NB. The Environment Agency does not restrict activities that may pollute water supplies in this area.

Explanation of Zones

The shape and size of a zone depends on the condition of the ground, how the groundwater is removed, and other environmental factors.

Inner Protection Zone:
Any pollution that can travel to the borehole within 50 days from any point within the zone is classified as being inside this zone. This applies at and below the water table. This zone also has a minimum 50m protection radius around the borehole. These criteria are designed to protect against the transmission of toxic chemicals and water-borne disease.

Outer Protection Zone:
The outer zone covers pollution that takes up to 400 days to travel to the borehole or 25% of the total catchment area, whichever area is the biggest. This travel time is the minimum amount of time that the Environment Agency estimate pollutants need to be diluted, reduced in strength or delayed by the time they reach the borehole.

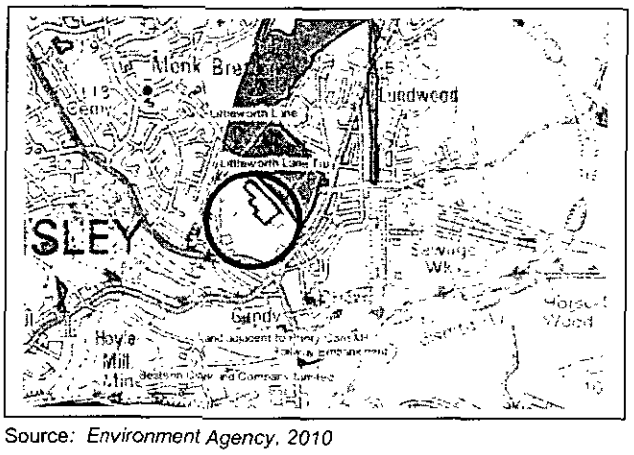
Total Catchment:
The total catchment is the total area needed support removal of water from the borehole and to support any discharge from the borehole.

Zone of special interest:
This is usually where local conditions mean that industrial sites and other polluters could affect the groundwater source even though they are outside the normal catchment area.

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Active and Historical Landfill

Records within 0 – 250m



Source: *Environment Agency, 2010*

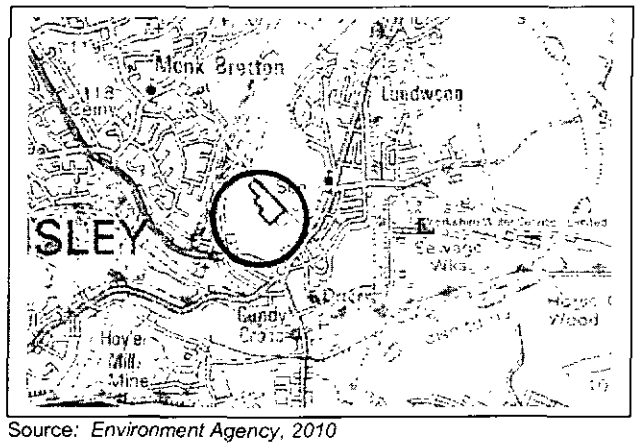
Please Note
The data in this report is based on information currently supplied to Environmental Data Analytics by its data providers. Environmental Data Analytics cannot guarantee the accuracy or the completeness of any information supplied to it by its data providers. If there are any queries regarding the information provided, please contact the data provider cited in each section for more detail or clarification.

Site Name:	Littleworth Lane
Site Address:	Monk Bretton, Barnsley
Site Operator:	Barnsley Metropolitan Borough Council
Last Waste Received:	31 Dec 1996
Type of waste buried:	*Household* - Waste from dwellings of various types including houses, caravans, houseboats, campsites, prisons and wastes from schools, colleges and universities.

Site Name:	Littleworth Lane Tip
Site Address:	Lundwood, Barnsley, Yorkshire
Site Operator:	Barnsley Metropolitan Borough Council
First Waste Received:	31 Dec 1930
Last Waste Received:	11 Jun 1972
Type of waste buried:	*Inert* - Waste which remains largely unaltered once buried such as glass, concrete, bricks, tiles, soil and stones. *Industrial* - Waste from a factory or industrial process. It excludes waste from mines, quarries and agricultural wastes. *Commercial* - Waste from premises used wholly or mainly for trade, business, sport, recreation or entertainment. Excludes household and industrial waste. *Liquids/sludge* - Industrial wastewater, sewage sludge and chemical wastes mixed with municipal solid waste.

Industrial Pollution

Records within 0 – 250m



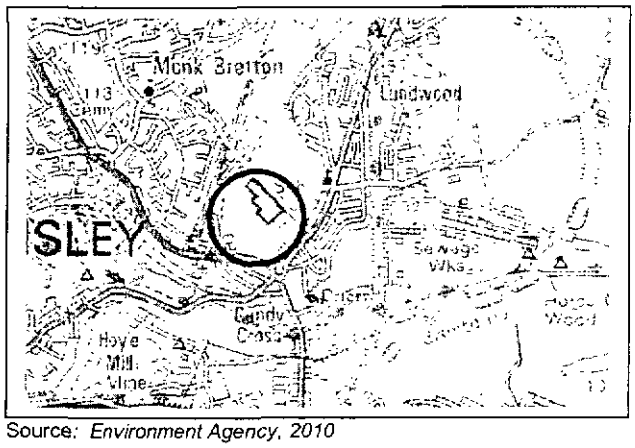
Source: *Environment Agency, 2010*

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NB. According to Environment Agency data, there are no pollution inventory or waste treatment sites within 250m.

Pollution Incidents

Records within 0 – 250m



Source: *Environment Agency, 2010*

NB. According to Environment Agency data, there have been no pollution incidents within 250m of the site.

National Radiological Protection Board

Records within 0 – 250m

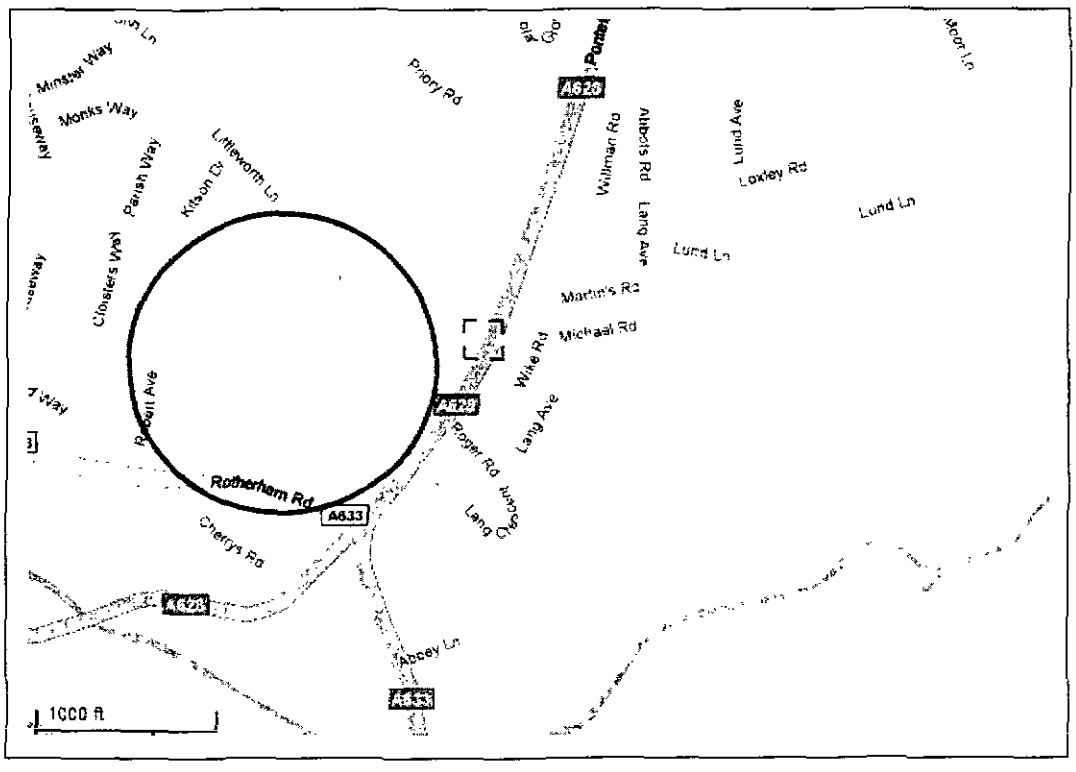
- Site is not within a radon affected area
- 0-1% probability of the property being above the action level for radon
- No requirement under the Building Regulations for radon protection in new buildings and extensions at the property location

For further advice, please contact the Health Protection Agency:

Telephone	01235 831600
Fax	01235 833891
Email	rpd@hpa-rp.org.uk

Fuel Sites

Records within *0 – 250m*



NB. According to Experian Catalist data, there are no fuel sites within 250m.

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Disclaimer for report

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1. The report is based on the address and or grid reference supplied at the time of ordering. The grid reference shown on the cover represents the centre of the search area.
2. The information in the report is supplied under licence to Environmental Data Analytics from various sources including: Environment Agency and British Geological Survey.
3. This report is a search of statutory and non-statutory sources of information which does not include any on-site survey or inspection of the property or its environs. Accordingly, the report cannot in any way provide information as to the actual state of the property or land.
4. The data in this report is based on information currently supplied to Environmental Data Analytics by its data providers and or derived from publicly available records. Environmental Data Analytics cannot guarantee the accuracy or the completeness of any information supplied to it by its data providers.
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6. The data provided in the report are derived from the above mentioned sources and are specifically cited in the report. Environmental Data Analytics does not claim that these sources represent an exhaustive or comprehensive list of all the sources that might be consulted.

Environment Agency

1. Enforcement and Prosecution Data – The information is primarily for Agency internal use only and there are concerns over compliance with the Data Protection Act. It is hoped that this issue will be resolved by the Agency in the near future.
2. While most information may be available, there are instances where the site operator considers the information to be commercially confidential. This only occurs when the Agency agrees the information can be classified as commercially confidential.
3. All intellectual property right in the data and information are owned by the Environment Agency.

Groundwater Vulnerability Maps

All maps involve a compromise between the representation of natural complexity and ease of interpretation of the map. Such compromises place limitations on the resolution and precision of map information. In this case, the variety of soils, geological strata and potential contaminants that have to be covered is wide, and the classification used is, o necessity, generalised.

Individual sites and circumstances will always require further and more detailed assessments to determine the specific impact on groundwater resources. The maps only represent conditions at the surface and therefore where the soil and/or underlying formations have been disturbed or removed, for example during mineral extraction, the vulnerability class may have been changed. Hence, where there is evidence of disturbance there will be a need to determine groundwater vulnerability using more site-specific data.

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