



ADVISORY NOTICE PLANNING

Advisory Notices are issued to assist in the interpretation of the Development Act 1993

December 2001

Site Contamination

This Advisory Notice is an update and replacement of Planning Practice Circular 2 which was issued in September 1997.

Introduction

The purpose of this document is to remind planning authorities of their responsibilities in relation to addressing site contamination through the Plan Amendment Report (PAR) process and when assessing development applications.

Background

Potential exists for significant problems to arise where land has been rezoned or development approved on sites which have subsequently been found to have soil or ground water contamination problems. The associated public health and environment risks associated with the redevelopment of contaminated land can be avoided through early identification of sites which may previously have been used for contaminating activities.

The problems associated with site contamination from previous industrial uses are generally well known, but other site uses, such as disposal or intense use of chemicals in rural and urban areas, land which has had a history of deposition of waste, fill material that may be contaminated or regional or district scale stormwater retention may also result in site contamination.

A National Environment Protection (Assessment of Site Contamination) Measure¹ (NEPM) was made by the National Environment Protection Council (NEPC) on 10 December 1999. The desired environmental outcome of this Measure is to "provide adequate protection of human health and the environment, where site contamination has occurred, through the development of an efficient and effective national approach to the assessment of site contamination". Schedule A of the NEPM contains a flow chart depicting the recommended general process for assessment of site contamination and Schedule B contains ten general guidelines for the assessment of site contamination. The NEPM can be viewed or downloaded from the NEPC web-site @ www.nepc.gov.au.

This Advisory Notice provides direction to meet the purpose and desired environmental outcome of the NEPM with respect to planning practice. This Notice also provides some direction on how to obtain information, in the preliminary stages, that should trigger the assessment of site contamination in accordance with the NEPM and to satisfy the recommendations of the Environment Protection Authority (EPA).

When a council or the Minister proposes to rezone land, it is proper planning practice that the health, safety and environmental implications of site contamination are given due consideration to ensure that the land is suitable for the form of land use proposed.

Similarly, a reasonable level of care is required when the relevant authority (pursuant to the Development Act 1993) is assessing a development application. When the relevant authority has a reason to suspect that the subject land is, or has the potential to be contaminated, it is essential that an applicant be requested to demonstrate to that authority that the site is suitable for the use proposed.

It is important that appropriately qualified and experienced persons assess the suitability of a site for a proposed use. In this regard, the EPA endorses the use of independent Environmental Auditors (Contaminated Land)² (appointed by the Victorian Environment Protection Authority) as appropriate persons to assess the suitability of a site for the intended use, particularly where a more sensitive land use is proposed. The Auditor issues a Site Audit Report which states, in the opinion of the Auditor, that the site is suitable for the intended use(s), or for certain stated use(s) and also states any conditions pertaining to the use(s). The Auditor provides a copy of the Site Audit Report to the relevant planning authority. For the development or continuation of an existing

¹ NEPMs are statutory instruments which represent a broad policy-setting framework as defined in the National Environment Protection Council Act 1994 (Commonwealth). Once a NEPM is made by the NEPC it automatically becomes an Environment Protection Policy (EPP) pursuant to Section 28A of the Environment Protection Act 1993.

² The EPA can be consulted with regard to Environmental Auditors (Contaminated Land) recognised by the EPA to conduct audits in SA



commercial, industrial or similar use, assessment by an experienced environmental consultant should generally be acceptable. The consultant's report however, should state that the site assessment has been carried out in accordance with Schedules A and B of the NEPM and should include definitive statements that, in regard to site contamination, the site does not pose unacceptable risks to human health and the environment taking into account the intended use(s).

The following procedures should be adopted when preparing Plan Amendment Reports (PARs) and assessing development applications. In general, the issue of site contamination should be highlighted in the preparation of PARs, where this is appropriate. The issue should be pursued further at the development application stage when the suitability of the proposed use can also be considered (ie. in terms of risk to health and the environment). A more detailed site assessment should be required from the landowner, developer or applicant once a potential for contamination has been identified.

The EPA may be consulted in the preparation of PARs and when assessing development applications. However, the EPA recommends that specialist assistance should be sought from environmental consultants and/or environmental auditors in this regard.

Plan Amendment Reports

Where a PAR is being prepared which affects existing industrial or commercial land, or land which has a known history of a potentially contaminating activity (See **Appendix 1** as a guide), the investigations should report on the suitability of the affected land for the use proposed. In this situation, specialist assistance would generally be required from environmental consultants experienced in the assessment of site contamination. Such investigations should include a detailed history of the land and existing condition of the site (Refer to Schedules A and B of the NEPM).

If in the course of investigations, evidence of site contamination becomes apparent or if site contamination is suspected, it is advisable to include principles of development control in the zone policies that identify how the land might safely be developed (ie. what form of development might be appropriate). These principles may apply generally within the zone or to specific sites depending on the situation and the availability of information.

Where no industrial, commercial, agricultural or other potentially contaminating activity is known to have been conducted on land affected by a PAR or where there are no known existing records that indicate otherwise, this should be stated in the PAR.

Development Applications

When an application is received pursuant to the *Development Act 1993* involving any site which may have been contaminated through industrial, commercial, agricultural, site filling or other potentially contaminating activity (See **Appendix 1**), the relevant authority should request that applicants examine and report on the land use history and the condition of the site (Refer to Schedules A and B of the NEPM).

If a site has been used for any of the activities listed in **Appendix 1** (or any other potentially contaminating activity) or the preliminary site assessment reveals that contamination is suspected or identified, then the relevant authority should request a site assessment to be undertaken in accordance with Schedules A and B of the NEPM.

The relevant authority should, in this event, defer Provisional Development Plan consent until detailed information is provided by the applicant in accordance with Section 39 of the *Development Act 1993*, and the recommendations of the EPA in regard to assessment and auditing, as previously stated in this Advisory Notice. The costs incurred in the provision of advice and services are borne by the applicant or owner of the affected site.

As the primary relevant authority and one which has the benefit of local knowledge, Councils should endeavour to retain information on the previous land uses and possible sources of contamination to assist in the early identification of site contamination (refer to principle (5) of the NEPM).

Land uses and activities that have the potential to result in site contamination and lists of Government agencies with knowledge of aspects of contamination are contained as a guide for relevant authorities and applicants (See Appendices 1 and 2).

Appendix 1

Examples of potentially contaminating activities and industries

Activities which have the potential to contaminate include:

- Disposal of wastes and chemical substances (controlled or uncontrolled)
- Accidental spillage of wastes and chemical substances
- Leaking during plant operation, storage or transportation of raw materials, finished products or wastes
- Spreading of sewage sludge
- Deposition from the atmosphere from an industrial site
- Migration of contaminants into a site from neighbouring land, either as a vapour, leachate or movement of liquids through the soil
- Use of agricultural chemicals
- Existence of fill that may be contaminated

Specific Industries, commercial activities and land uses which have demonstrated a greater likelihood of giving rise to contamination include:

- Acid/alkali plant and formulation
- Agricultural/horticultural activities
- Airports
- Asbestos production and disposal
- Battery manufacture, storage and recycling/disposal
- Chemical manufacture and formulation
- Defence works
- Drum re-conditioning works
- Dry cleaning establishments
- Electrical manufacturing, including transformers
- Electroplating, heat treatment and galvanising premises

- Engine works
- Explosive industries
- Fertiliser manufacturing plants
- Foundries
- Gas works
- Iron and steel works
- Landfill (waste deposits) sites
- Metal treatment
- Mining and extractive industries
- Oil production, treatment and storage
- Paint formulation and manufacture
- Pharmaceutical manufacture and formulation
- Pesticide manufacture and formulation
- Power stations
- Railway yards
- Scrap yards
- Service stations
- Sheep and cattle dips
- Smelting and refining
- Tanning and associated trades
- Transport/storage areas
- Waste treatment plants in which solid, liquid, chemical, oil, petroleum, or hospital wastes are incinerated, crushed, stored, processed, recovered or disposed of
- Wood preservation

Note: This list has been adapted from the *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites*, January 1992 and the *National Environment Protection (Assessment of Site Contamination) Measure*, December 1999. It is not exhaustive, and the presence of contamination on any particular site can only be confirmed by adequate site assessment.

Appendix 2

Site contamination matters should generally be directed to independent Environmental Auditors (Contaminated Land) who have been endorsed by the EPA to 'sign-off' on sites and their suitability for intended uses. However, situations may arise where additional information is required.

If additional information is required there are State Government agencies who may be able to provide this information. The following agencies have legislation that relates to hazardous chemicals and therefore may be of assistance.

The list is divided. Group 1 covers agencies controlling the storage, sale or use of hazardous substances. It is likely that these agencies will have direct knowledge of where and how hazardous substances may have been used. Group 2 covers agencies that may have indirect knowledge regarding hazardous substances. Group 3 covers agencies that may be able to provide general information on related issues.

Group 1

Department for Administrative and Information Services – Workplace Services

Dangerous Substances Act 1979-80
Occupational Safety Health and Welfare Act 1986
Explosives Act 1936

Primary Industries and Resources SA

Agricultural Chemicals Act 1955-78
Stock Medicines Act 1939-78
Stock Foods Act 1941-72

Department of Human Services

Controlled Substances Act 1984
Radiation Protection and Control Act 1982
Ionising Radiation Regulations 2000
Health Act 1935
Public and Environmental Health Act 1987

Workplace Services

- has records relating to dangerous substances storage sites and licences

Rural Farm Chemicals Program

- has a list of registered properties (use of hazardous chemicals [primarily organochlorines] on rural and farm properties)

Environmental Health Branch:

Hazardous Substances Section

- provides specialist advice on the toxicity of hazardous substances
- provides advice on human health risk assessments, site assessment procedures and analytical issues, and on the derivation and use of health-based investigation levels for soil contaminants
- provides information on exposure assessment methodologies

Radiation Section

- provides advice on disposal of radioactive substances (any disposal of radioactive substances requires approval from the Department of Human Services), the establishment of suitable codes of practice for environmental radiation protection, and on rehabilitation and management measures for existing users of radioactive substances in addition to those found on contaminated sites
- provides environmental radiation monitoring and assessment

Appendix 2 continued...**Department for Environment and Heritage***Environment Protection Act 1993***Environment Protection Agency**

- retains a public register (pursuant to S.109 of the Environment Protection Act) containing environmental authorisations, details of incidents causing or threatening serious or material environmental harm, details of any environment protection order, clean-up order or clean-up authorisation, and details of prosecutions and other enforcement action

Group 2**Primary Industries and Resources SA***Mines and Work Inspection Act 1920**Petroleum Act 1940***Office of Mineral & Energy Resources**

- information relating to the award, management and rehabilitation of mineral and petroleum exploration and production tenements

SA Water*Water Works Act 1932**Sewerage Act 1929***Trade Waste Section**

- has details of land use operations and chemicals stored on-site and treatment and disposal methods
- has a hazardous materials storage register and records relating to spillage incidents

SA Metro Fire Service*SA Metro Fire Service Act 1936***Transport SA***The Environment Protection (Sea Dumping)**Act 1984***Property Services Branch and Marine****Facilities Branch**

- has limited information on current and previous DMH land (ie. waterfront and reclaimed land)

Group 3**Department for Water Resources***Water Resources Act 1997***Groundwater Section**

- general information relating to groundwater resources
- maintains the State's groundwater wells data base and can provide information on groundwater occurrence and hydrology
- responsible for refusing well drilling permits in areas where access to underground water would create a risk to the human and animal health

Further information**Department for Transport, Urban
Planning and the Arts****Planning SA**

136 North Terrace
GPO Box 1815 Adelaide SA 5001
Telephone: 8303 0600
www.planning.sa.gov.au/advisory_notices

Contact:**Environment Protection Agency**

Technical Services Section
Level 6, 77 Grenfell Street, Adelaide SA 5000
Telephone: (08) 8204 2000

Assessment

Development Assessment Branch, Planning SA
Telephone: (08) 8303 0732 Fax: (08) 0303 0753

Policy

State Policy Branch, Planning SA
Telephone: (08) 8303 0602 Fax: (08) 0303 0627

Health Issues

Environmental Health Branch, Department of Human Services
Telephone: (08) 8226 7100 Fax: (08) 8226 7102
Website @ www.health.sa.gov.au/pehs/environ-health-index.htm

National Environment Protection Council

Website @ www.nepc.gov.au
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