Managing Contaminated Sites

Victorian Auditor-General's Report | December 2011 | 2011-12:16

VICTORIA

Victorian
Auditor-General

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Ordered to be printed

VICTORIAN
GOVERNMENT PRINTER
December 2011

PP No 90, Session 2010–11

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ISBN 978 1 921650 97 0

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Victorian Auditor-General's Office

Auditing in the Public Interest

The Hon. Bruce Atkinson MLC
President
Legislative Council
Parliament House
Melbourne

The Hon. Ken Smith MP
Speaker
Legislative Assembly
Parliament House
Melbourne

Dear Presiding Officers

Under the provisions of section 16AB of the *Audit Act 1994*, I transmit my report on the audit *Managing Contaminated Sites.*

Yours faithfully

D D R PEARSON
Auditor-General

7 December 2011

Contents

Audit summary

Contaminated sites are land, and in most instances groundwater, where chemical and metal concentrations exceed those specified in policies and regulations. The location and number of contaminated sites in Victoria is not accurately known, as this information is not routinely collated. The most recent desktop assessment in 1997 estimated there were around 10 000 contaminated sites in Victoria.

Contamination in Victoria has generally been caused by the management practices of earlier generations when environmental regulations were less onerous on polluting activities. Depending on the nature and extent of the contamination, and how the site is used, contaminated sites may pose imminent or long-term risks to human health and the environment.

Potentially contaminated and known contaminated sites are regulated through a framework that encompasses the *Planning and Environment Act 1987*, the *Environment Protection Act 1970*, and a range of complementary regulatory instruments. Around 80 per cent of situations involving contaminated sites are dealt with through the planning element of the framework, and the remaining 20 per cent are dealt with through the environment protection element.

This audit, first foreshadowed in our 2009–10 Annual Plan, and commenced in March 2011, examined how contaminated and potentially contaminated sites are managed, particularly where a 'sensitive use' of the land is involved.

Conclusion

The Department of Planning and Community Development (DPCD), the Environment Protection Authority (EPA) and councils are not effectively managing contaminated sites, and consequently cannot demonstrate that they are reducing potentially significant risks to human health and the environment to acceptable levels.

This is largely because the complex regulatory framework that has evolved to deal with contaminated sites has significant gaps, and key elements lack clarity. In many cases, this has led to a lack of accountability and responsibility, and subsequent inaction.

In this audit we identified a range of cases that demonstrate the adverse consequences that flow from a lack of accountability and clarity, and gaps in the framework. Most notably we identify cases of inaction by responsible entities in dealing with contamination; this inaction being driven in part by an undue emphasis on avoiding legal and financial liability, rather than protecting human health and the environment.

Indeed, Case Study 1 is in itself a case study of significant mismanagement, with the possibility that human health has been impacted as a result. The hope is that this, and the other case studies in Appendix A, are not typical. However, there is little assurance that this is the case.

Past inaction has contributed to the inconsistent interpretation and application of the framework by councils and DPCD. Councils have also contributed to these poor outcomes through their lack of rigour in applying their own internal systems and processes to manage the risks associated with the development and management of contaminated sites.

Significantly, no one entity is accountable for oversight of the effectiveness of the regulatory framework in operation. Further, responsibility for managing the high-risk sites has been neither clearly defined nor accepted by any entity.

High-risk sites are those known to be contaminated, and that pose long-term rather than imminent risks. They include sites where the party responsible for contamination is known or can afford to clean the site (legacy sites), and where the responsible party cannot be identified or insolvency prevents clean-up (orphan sites). For orphan sites not proposed for redevelopment, contamination will remain unmanaged unless the state steps in.

Framework weaknesses have been known for at least 10 years, yet action to systematically address them began only within the last year. While these reviews are a positive initiative, they are being planned in an ad hoc manner and occurring in isolation from one another. This further demonstrates the need for leadership and for effective coordination across the system.

The ability to assess and mitigate health, environmental and financial risks associated with contamination is also being hampered by the lack of complete and reliable information on the number and location of contaminated sites, and the nature and extent of contamination. The responsible entities have been neither proactive nor systematic in obtaining this information. Until this information is known, agencies cannot reliably plan and prioritise actions.

Findings

The contaminated sites regulatory framework

The framework's regulatory instruments, established and updated over a 20-year period, have evolved separately and have been implemented in an ad hoc basis by the EPA and DPCD in response to specific issues and circumstances.

In several instances, the instruments and their interplay have made the framework unnecessarily complex and unclear. This is particularly so for the Environmental Audit Overlay, Ministerial Direction No.1 for Potentially Contaminated Land and *Potentially Contaminated Land: General Practice Note* in relation to the requirements for, and guidance around, environmental audits and assessments.

In addition, there are many gaps in the framework—most of which have been known to DPCD and the EPA since at least 2000—that have affected the operation of the framework. These gaps relate primarily to the coverage of the regulatory framework, and the lack of any requirement to report contaminated sites to regulatory agencies; even if risks to human health and the environment are known. Actions to address these gaps only commenced in late 2010.

Governance of the contaminated sites system

Oversight and accountability

With around 100 entities involved in regulating and managing contaminated sites, clear accountability for the development, operation and effectiveness of the overall system is critical. Single point accountability, where one entity oversees the system and processes, and is accountable for its performance, is an effective approach to good governance.

There is, however, no single entity responsible for oversight of the planning and management of potentially contaminated and contaminated sites, or for assessing the effectiveness of the system or framework. The contaminated sites regulatory system operates instead in an uncoordinated way, with each entity managing contamination issues in isolation from the others. As a consequence, there is not a cohesive statewide strategic approach to the planning and management issues associated with potentially contaminated and contaminated sites.

Roles and responsibilities

Clear roles and responsibilities minimise the risk of overlap and duplicated effort. They also establish accountability and attribute responsibility for the success or failure of initiatives. While roles have been established under legislation and the contaminated sites framework, these are not clearly understood or agreed by all stakeholders. In addition, there are gaps in the roles where no agency is accountable or responsible.

The EPA is responsible for regulating contaminated sites where the contamination poses an imminent danger to human health or the environment, and it has issued either a pollution abatement notice or clean-up notice. It also regulates contaminated sites owned or managed by entities that it licenses.

However, there is no agency responsible for oversight of the system in relation to sites that are known to be contaminated and where the risks to human health and the environment may be long-term rather than imminent. Nor does any one entity have oversight of the management of orphan sites.

Issues around the management of orphan sites have been known for at least 11 years, particularly in relation to the lack of responsibility and gaps in the legislation, and there has been a range of recommendations made to address them. Very little action has been taken and many of the issues remain, especially the ongoing risks to human health and the environment.

Risk management

Risk management is fundamental to effective public sector administration. It enables entities to systematically identify and manage risks and opportunities, and also to prioritise actions. Risks can apply at an organisation or statewide level.

For the management of potentially contaminated and contaminated sites, key inputs into managing risks include knowing where these sites are, whether they are contaminated, the extent and type of contamination and the potential impact on human health, the environment or amenity.

There is no systematic approach within the three councils audited, the EPA and across the state public sector generally, to identify and assess the risks from potentially contaminated and contaminated land. Risk management activities are limited and do not take a statewide perspective—even though this is a statewide issue.

An absence of information about contamination across Victoria means that risk management activities are not adequately informed. As a consequence, there is no assurance that the current regulatory approach is the appropriate approach to manage risks associated with site contamination.

Applying the regulatory framework

Across the audited planning authorities (entities that prepare planning scheme amendments) and responsible authorities (entities that make decisions on planning permit applications), processes and systems to assess and approve planning applications do not provide adequate assurance that there is compliance with framework requirements.

Each authority had implemented systems and processes for the assessment and approval of planning applications. However, there were significant variations within and between the councils audited in terms of the consistency, transparency and rigour of the decisions.

Variation in processes between councils largely stem from differences in interpreting the ambiguity or gaps in the framework. The differences within councils were largely due to a lack of rigour in applying internal processes and systems.

Technical capability

One of the key issues in effectively implementing the framework is the lack of guidance under the framework about how responsible and planning authorities should assure themselves that the land is fit for its intended use.

To perform this work effectively and to appropriately inform planning decisions, planning and responsible authorities need to understand the regulatory framework. They also need to reliably comprehend and purposefully deal with the findings and recommendations from environmental site assessments and audits, while also assuring themselves that the assessments and audits are technically sound.

Around 80 per cent of contaminated site issues are being dealt with by councils, as planning and responsible authorities, however, the councils audited did not have the technical capability required to manage the complex issues associated with contaminated sites.

To address gaps in their technical capability, councils rely heavily on legal advice to clarify planning and legal issues. They do this to minimise not just the risk of an incorrect decision, but also to minimise their potential liability associated with potentially contaminated and contaminated sites.

Funding

Addressing contamination can be expensive. There are costs involved in undertaking assessments and audits, and significant costs involved in cleaning up contaminated sites. The majority of these costs are borne by the private sector through the planning processes, driven by commercial interests. However, there are also significant costs to the state and councils. This is particularly so where Crown land or municipal-owned land has been identified as contaminated, or where the state has to step in to clean sites as a last resort—typically for orphan sites.

The aggregate cost to the state and councils for remediation of all contaminated sites is unknown because of the lack of complete and reliable information about contamination. Councils advise that the cost of assessing and cleaning up is more than is available in their budgets, and that the lack of available funding to manage contaminated sites is an impediment to managing the risks.

The state government and councils, however, cannot reliably determine and prioritise their financial liabilities until environmental site assessments of all known sites are completed. Until this is done, they cannot substantiate claims that inadequate resourcing has contributed to historically poor management of contamination issues or inaction around known contaminated sites that pose a risk to human health and the environment.

Adherence to the framework

Effective compliance monitoring and enforcement action should assure the community that those developing or building on contaminated sites adhere to conditions designed to protect human health and the environment.

The framework requires councils and other responsible authorities to undertake compliance monitoring activities for planning scheme amendment provisions and planning permit conditions. Despite this requirement, there is no routine compliance monitoring, and consequently little enforcement activity. This is primarily because these entities have not adequately resourced or prioritised these activities.

Monitoring audit conditions

The main compliance monitoring activities that councils should undertake relate to environmental audit conditions. These conditions must be implemented for the site to be suitable for its proposed use, and typically relate to the development or ongoing management of a site. They include concreting contaminated soil exposed areas or capping contaminated soils on site. Ongoing management conditions include the continued management and monitoring of the groundwater and vapours, or refer to the monitoring and maintenance of equipment to manage contamination issues.

None of the three councils audited undertook routine, risk-based compliance monitoring, and as such they could not demonstrate whether statements of audit conditions are being complied with. Compounding this, if the councils wanted to undertake routine risk-based monitoring, their systems are not adequate to support such monitoring. They did not have systems to record audit conditions, and they therefore lacked the basic information required to inform compliance monitoring.

All councils audited acknowledged the need to improve compliance and enforcement activities and procedures associated with contaminated sites. Brimbank City Council and Yarra City Council identified the need for more proactive compliance activities and have indicated that it is an area of high priority, including increasing resources for these activities.

Recommendations

Number	Recommendation	Page

1.	The Department of Planning and Community Development, assisted by the Environment Protection Authority and in consultation with councils, should:
	• undertake a systematic and coordinated review of the entire regulatory framework for the management of potentially contaminated and contaminated sites to improve clarity and address gaps, including:
	  • the wording, application and use of the Environmental Audit Overlay
	  • the application of the framework for planning permits and planning scheme amendments, and the types of use to which it applies
	  • the use, content, guidance material and peer review of environmental site assessments
	  • establishing mandatory reporting requirements
	• establish processes to capture information about framework and system issues, and processes to address issues in a timely way
	• establish a performance framework to assess the efficiency and effectiveness of the contaminated sites framework and system.
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2.	The Department of Planning and Community Development should: • assume responsibility and accountability for the leadership, coordination and oversight of the contaminated sites framework • establish mechanisms and processes to improve the leadership, coordination, oversight and accountability of, and for, the contaminated sites framework and system • clarify and communicate responsibilities within the framework so that they are clear and understood.	34
3.	The Environment Protection Authority should: • develop mechanisms and processes that enable the identification and recording of contaminated land • assess the risks of these sites • prioritise high-risk sites and actions to manage the associated risks.	34
4.	Councils, with the support of the Department of Planning and Community Development, should: • develop systems to capture ongoing site conditions to inform their compliance monitoring activities around the development, management and clean-up of contaminated sites • develop compliance monitoring programs and enforcement processes, consistent with better practice, and perform these activities on a routine basis • assess the level of expertise and financial resources required to accurately manage and clean up high-risk sites.	42

Submissions and comments received

In addition to progressive engagement during the course of the audit, in accordance with section 16(3) of the *Audit Act 1994* a copy of this report, or relevant extracts from the report, was provided to the Department of Planning and Community Development, the Environment Protection Authority, Brimbank, Maribyrnong and Yarra city councils, and the Department of Sustainability and Environment with a request for submissions or comments.

Agency views have been considered in reaching our audit conclusions and are represented to the extent relevant and warranted in preparing this report. Their full section 16(3) submissions and comments, however, are included in Appendix B.

1 Background

1.1 Contaminated sites

Contaminated sites are land, and in most instances groundwater, where chemical and metal concentrations exceed those specified in policies and regulations.

Contamination in Victoria has generally been caused by management practices of earlier generations when environmental regulations were less onerous on polluting activities than is the case now. Common sources of contamination include industrial activities, such as the manufacture of munitions or batteries, mining, chemical storage, landfills, petrol stations and agricultural activities.

Typically, there are three ways in which contamination may affect sites:

- contaminants attach to, or are contained within, the soil
- contaminants leach from the soil into surface or ground waters, which may be static, or migrating onto or off the site
- airborne contaminated gases emanating from contaminants in the soil and groundwater.

1.1.1 Risks from contaminated sites

Depending on the nature and extent of the contamination, and how the site is used, contaminated sites may pose imminent or long-term risks to human health, and the environment.

Sites that pose an imminent risk have concentrations of contaminants that require immediate attention to prevent danger to human health or the environment. Sites that pose a long-term risk have levels of contaminants where exposure over a long period of time is known to result in a risk to human health or the environment.

Human health risks

Human health risks range from minor health problems, such as allergic reactions and hypersensitivity, to serious health problems, such as cancer, respiratory illness, reproductive problems and birth defects. For example, the health risks identified from the high levels of lead contamination at the Ardeer Battery site included potential detrimental impacts on human organs and organ systems.

The risks largely depend on the contaminant and its concentration, the exposure pathway, the level of exposure, and the vulnerability of the exposed population.

Human health risks are more likely to occur where there is a high risk that people will come into contact with contaminants in the soil, groundwater or the vapours these contaminants generate. Ministerial Direction No.1 for Potentially Contaminated Land (MDN-1) has identified that the highest risk of this occurring is with uses of the land identified as sensitive. These include residential use, child care centres, pre-school centres and primary schools.

Environmental risks

Environmental risks from contaminated sites generally result from contaminants leaching into the soil, ground and surface waters. This can lead to the degradation of soil, water and air quality and impact upon their uses.

Contamination of groundwater can prevent it from being used for drinking, irrigation or stock supplies. Contamination of soil can impact upon plant growth, reducing crops and leading to erosion. In other cases, contamination can result in odours making recreational areas unusable, or even affecting the way a place looks by degrading the aesthetic values of an area.

1.1.2 Location and number of contaminated sites

The location and number of contaminated sites in Victoria is not accurately known, as this information is not routinely collated. The most recent desktop assessment, reported in a 1997 ANZAC *Fellowship Report* for the then Department of Foreign Affairs and Trade, estimated there were around 10 000 contaminated sites in Victoria based on limited industrial site history information.

The location of potentially contaminated and contaminated sites varies, and includes metropolitan, regional and rural areas. Since previous industrial activity is a significant source of contamination, the majority of contaminated sites in metropolitan Melbourne are likely to be concentrated in historically industrial municipalities, such as Brimbank, Maribyrnong, Melbourne, Moreland and Yarra.

In regional and rural Victoria, towns and cities historically involved in gold mining and agricultural activities—such as sheep dipping and the unregulated use of pesticides and herbicides—are likely to have significant numbers of contaminated sites.

1.1.3 Types of contaminated sites

There are two main types of contaminated sites—those that are potentially contaminated and those that are known to be contaminated.

Potentially contaminated sites are sites that may be contaminated due to past waste disposal, industrial, agricultural and commercial uses of the land. While the past use of the land is an indicator of potential contamination, confirmation can only be obtained through sampling of the soil, groundwater or air.

Establishing whether land is contaminated typically occurs when there is a change in the land use to a more sensitive use—for example, from industrial to residential use—through the land use planning system.

Known contaminated sites are sites where a preliminary site assessment or an environmental audit has been undertaken, and has identified contamination. Where contamination has been identified, there may be a requirement to clean-up the site, depending on its intended use and the potential human health and environmental risks. Within this category there are developed and undeveloped sites.

Special categories of known contaminated sites are **orphan sites** and **legacy sites**. Orphan sites are those where the party responsible for the contamination is unknown, is insolvent or unable to pay the clean-up costs. Legacy sites are those where the party responsible for the contamination is known, or can afford to clean the site. Typically, these are sites contaminated prior to environmental regulation being introduced in the 1970s and are a legacy of poor industrial, agricultural, waste disposal and commercial practices during this period.

1.2 Regulating contaminated sites

Potentially contaminated and contaminated sites are regulated through a framework that encompasses the *Planning and Environment Act 1987* (P&E Act), the *Environment Protection Act 1970* (EP Act), and a range of complementary policies, directions and practice notes, and an environmental audit system.

1.2.1 *Planning and Environment Act 1987*

The provisions of the P&E Act provide the principal mechanisms by which Victoria's broader planning objectives are achieved. Under the P&E Act, councils and the Department of Planning and Community Development (DPCD), on behalf of the Planning Minister, act as:

- **responsible authorities**—making decisions on planning permit applications, which permit certain land uses or developments
- **planning authorities**—preparing planning scheme amendments, which zone large areas of land to allow for its redevelopment for a different use, such as from an industrial zone to a residential zone.

DPCD also makes recommendations for the approval of planning scheme amendments for the Minister for Planning's consideration.

Sections 12(2) (b) and 60(1) (e) of the P&E Act require a planning authority, when preparing an amendment to the planning scheme, or a responsible authority, when deciding on a planning permit application, to take into account any significant effects that the amendment or permit might have on the environment or the environment might have on the use or development. This includes site contamination issues.

State Planning Policy Framework

The State Planning Policy Framework (SPPF) comprises general principles for land use and development in Victoria, and details the state's policies for key land use and development activities including settlement, environment, housing, economic development, infrastructure, and particular uses and development. Planning and responsible authorities are required to take account of, and give effect to, the principles and policies contained in the SPPF so that there is integrated decision-making.

Clause 15.06 of the SPPF under the Victoria Planning Provisions refers to soil contamination and the need for potentially contaminated sites to be suitable for their intended future uses and developments, and that contaminated sites are used safely.

The SPFF also requires responsible authorities, when considering permit applications for use of sites known to have been used for industry, mining or storage of chemicals or gas or liquid fuels, to request adequate information from planning applicants on the potential for contamination to have adverse effects on future site uses.

Ministerial Direction No.1 for Potentially Contaminated Land

MDN-1 applies to the rezoning of potentially contaminated land for a sensitive use. MDN-1 defines a sensitive use as:

- residential properties
- child care centres
- pre-school centres
- primary schools
- agriculture or public open space.

Where planning authorities are preparing an amendment that allows a potentially contaminated site to be used for a sensitive use, the planning authority must satisfy itself that the environmental conditions of that site are, or will be, suitable for that use.

To meet the obligations of MDN-1, planning authorities must undertake an environmental audit consistent with the requirements established under section 53X of the EP Act. The environmental audit requirement only applies to residential properties, child care and pre-school centres, and primary schools.

Environmental Audit Overlay

The Environmental Audit Overlay (EAO) is a mechanism that planning and responsible authorities use to gain assurance that land is suitable for a use that may be adversely affected by contamination. The EAO requires that before a sensitive use commences, or before the construction or carrying out of buildings and works in association with a sensitive use commences on a site, the proponent provides this assurance through the environmental audit system.

Potentially Contaminated Land: General Practice Note

Potentially Contaminated Land: General Practice Note provides guidance to planning authorities in identifying and managing potentially contaminated and contaminated sites, in the context of the planning process. The Practice Note was developed to address both potentially contaminated and contaminated site issues for planning permit applications, and to clarify the appropriate level of assessment for permits and scheme amendments associated with contamination issues. It also addresses issues around when to, or when not to, apply the EAO.

1.2.2 *Environment Protection Act 1970*

The EP Act is Victoria's primary environment protection legislation, with a basic philosophy of preventing pollution and environmental damage by setting environmental quality objectives and establishing programs to meet them.

The EP Act also provides for the statutory appointment of environmental auditors and outlines their responsibilities so that environmental audits of contaminated sites are conducted in accordance with the Environment Protection Authority (EPA) requirements.

The environmental audit system

The EPA administers the environmental audit system, which includes the appointment of environmental auditors to the EPA Contaminated Sites Auditor Panel and the review of audits undertaken.

An **environmental audit** assesses the nature and extent of harm, or the risk of harm, to the environment posed by an industrial process or activity, waste, substance or noise. Planning and responsible authorities, government agencies and the private sector use the system to provide assurance that potentially contaminated and contaminated sites are suitable for their intended use, or to advise what is required to make a site suitable for its intended use.

Environmental audits must follow relevant EPA environmental audit guidelines and standards, and undertake sampling and analysis of soil, and possibly groundwater, surface water and air. They are conducted by auditors who must demonstrate expertise and extensive experience in contaminated land matters, plus an understanding of the EP Act and associated statutory policies, regulations and guidelines, in order to provide the best assurance available that the site is suitable for its intended use.

Environmental audits result in either a certificate or a statement of environmental audit:

- a **certificate** is issued for a site when the environmental condition of the land is suitable for any use; it is essentially a clean bill of health for the site
- a **statement** is issued where, following an audit, an environmental auditor is of the opinion that the land is not suitable for all possible uses, but is suitable for a specific use or development.

A statement of environmental audit may contain conditions relating to the development or ongoing management of the site so that contamination does not adversely impact the use, the users or the environment.

Environmental site assessments

Environmental assessments complement environmental audits, although they are not governed by the EP Act. Environmental assessments are completed by environmental consultants or professionals, and may include anything from a desktop review of the site, to a full site history and soil, groundwater and air sampling and analysis.

The rigour of the site assessment is dependent on the assessor, as there is no certification or established guidelines as to what a site assessment should contain. The *National Environment Protection Measure* defines a site assessment as a review to determine whether site contamination poses an actual or potential risk to human health and the environment, either on or off the site, to the current or proposed land use. The *National Environment Protection Measure* sets out recommended processes to undertake site assessments for contamination including preliminary site assessments and risk assessments, however, they are recommended processes and assessors may undertake the assessments differently.

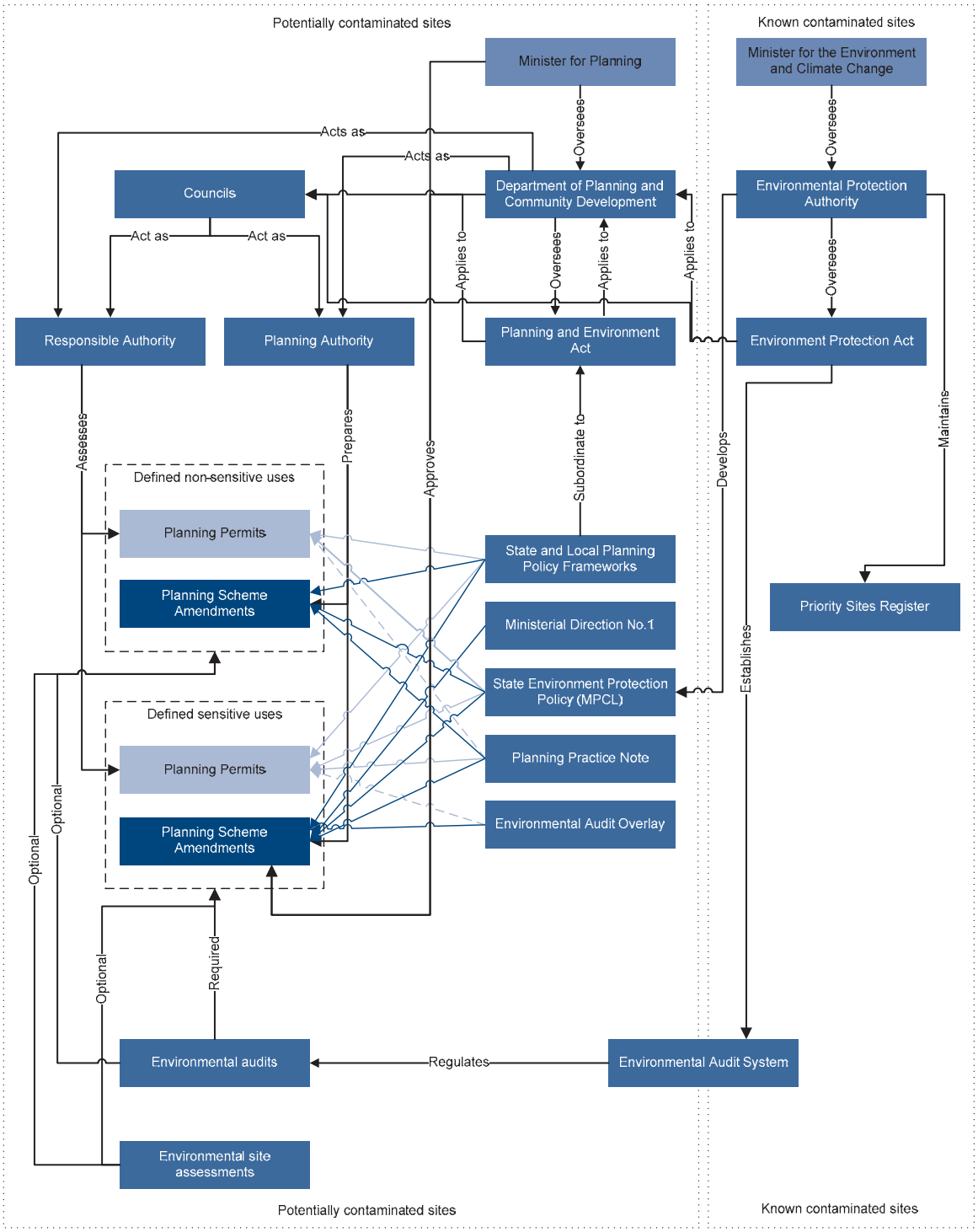
State Environment Protection Policy—Prevention and Management of Contamination of Land

The *State Environment Protection Policy—Prevention and Management of Contamination of Land* links EPA's environmental audit system and the land use planning system under the P&E Act. The policy provides a statutory framework for protecting people and the environment from the effects of land contamination.

The policy sets in place measures to prevent and manage contamination. It reinforces the requirement of an audit, where a potentially contaminated site may be used for a sensitive use, irrespective of whether the planning decision relates to a planning permit or a planning scheme amendment. It identifies mechanisms so that conditions attached to statements of environmental audit are met.

Figure 1A underscores the complexity of the contaminated sites regulatory framework. It includes the relevant entities, the regulatory instruments for potentially contaminated and contaminated sites, and the situations to which they apply.

Figure 1A
Contaminated sites regulatory system



Note: Dashed coloured lines indicate that the regulatory instrument may apply. Solid colour lines indicate that the instruments do apply. Dark blue lines apply to planning scheme amendments and light blue lines apply to planning permits.

Source: Victorian Auditor-General's Office.

1.3 Managing contaminated sites

Councils, the EPA and DPCD are the key public sector entities responsible for the management of contaminated sites. Private sector environmental auditors and suitably qualified personnel support them in this role.

Councils

Councils, as planning and responsible authorities, are responsible for regulating the planning and development of potentially contaminated and contaminated sites in accordance with the P&E Act. In addition, councils are responsible for managing and developing council owned and managed sites so that they do not result in unacceptable risks to the environment or human health as a result of contamination.

Department of Planning and Community Development

DPCD's main role is to support the ongoing effective operation of the state's planning system. It has two overarching responsibilities that are central to this function:

- monitoring and improving the overall performance of the state's planning system
- providing key statewide planning services essential for maintaining and supporting the effective operation of the system.

To meet its responsibilities, DPCD provides a number of services. These include:

- managing the ongoing development and maintenance of the P&E Act and associated regulations
- managing the Victoria Planning Provisions
- processing amendments to planning schemes
- providing advisory and statutory support services to councils and stakeholders
- supporting the Minister for Planning's role as a planning and responsible authority.

Environment Protection Authority

The EPA is responsible for regulating known contaminated sites under the EP Act. These sites are considered incompatible with their current or approved use without active management to reduce the risk to human health and the environment. It does this through a number of mechanisms:

- developing, administering and managing the audit system, including the appointment of environmental auditors
- investigating contamination in all sites that come to its attention, to determine if further action is required
- issuing and administering clean-up and pollution abatement notices so that these sites are cleaned up to an appropriate level
- developing and administering the Priority Sites Register—a register of known contaminated sites that have been issued with a clean-up notice or pollution abatement notice
- registering and recording a list of all completed environmental audits on its website
- administering the Contaminated Sites Fund—a fund for the management and clean-up of high-risk contaminated sites.

1.4 Audit objective and scope

The audit examined how contaminated and potentially contaminated sites were managed, particularly where a sensitive use of the land is involved.

The audit reviewed the activities of DPCD, the EPA, Brimbank City Council, Maribyrnong City Council and Yarra City Council.

1.4.1 Audit approach

The audit examined whether:

- contaminated sites are managed in accordance with the regulatory framework, as outlined in the provisions of the P&E Act and the EP Act.
- environmental audits are conducted in accordance with the EPA's environmental audit system, and reviewed in a timely manner by appropriately qualified people
- risk-based monitoring of compliance occurs, followed by appropriate enforcement action for non-compliance.

The audit was performed in accordance with the Australian Auditing and Assurance Standards. The total cost of this audit was $390 000.

2 The contaminated sites regulatory framework

At a glance

Background

Recognising the need to manage risks associated with contaminated sites, successive governments have developed a range of regulatory tools with the key objective of protecting human health and the environment.

Conclusion

There are significant gaps and lack of clarity in the regulatory framework for contaminated sites. Accordingly, there is little assurance available that risks to human health and the environment are being managed effectively.

Findings

- A regulatory framework has been in operation for contaminated sites since the late 1980s.
- Lack of clarity and gaps in relation to identification, management, clean-up and reporting have resulted in different interpretations and inconsistent application of the framework by key authorities and agencies; and at times inaction to address known health or environmental risks.
- Issues associated with the framework have been known to the Department of Planning and Community Development (DPCD) and the Environment Protection Authority (EPA) since between 2000 and 2005, however, only some are now being addressed.
- Past efforts to address weaknesses in the framework have been ad hoc, and continue to be addressed in isolation from one another, rather than through a systematic review.

Recommendation

DPCD, assisted by the EPA and in consultation with councils, should:

- undertake a systematic and coordinated review of the entire regulatory framework for the management of potentially contaminated and contaminated sites to improve clarity and address gaps
- establish processes to capture information about framework and system issues, and processes to address issues in a timely way
- establish a performance framework to assess the efficiency and effectiveness of the contaminated sites framework.

2.1 Introduction

Victoria's industrial and manufacturing heritage, combined with lower environmental standards for much of the last century, mean that parts of metropolitan Melbourne are contaminated. This is particularly so for suburbs in the inner east, north and west.

Improved environmental standards since the 1970s, and changing demography, increase the pressure to clean up these sites so they can be redeveloped, and to protect the environment. Recognising the need to manage potential human health and environmental risks, successive governments have developed a range of regulatory tools for contaminated sites. Development of specific planning and regulatory instruments started in 1989, in response to concerns with residential developments occurring on contaminated land.

The regulatory framework addresses sites that are potentially contaminated or contaminated, with planning and responsible authorities mainly applying it to sites being redeveloped for sensitive uses. As such, the contamination status of land is assessed only if there is an interest in redeveloping or changing a site's use. The framework applies also to known contaminated sites that the Environment Protection Authority (EPA) has identified, either through its own monitoring activities or notification.

The framework consists of two Acts—the *Planning and Environment Act 1987* (P&E Act) and the *Environment Protection Act 1970*—that are supported by a range of specific planning and regulatory instruments:

- the State Planning Policy Framework—contaminated soils
- Ministerial Direction No.1 for Potentially Contaminated Land (MDN-1)
- an Environment Audit Overlay (EAO)
- *Potentially Contaminated Land: General Practice Note* (the Practice Note)
- a *State Environment Protection Policy—Management of Potentially Contaminated Land*
- the Environmental Audit System.

The protection of human health and the environment is a key objective of Victoria's regulatory framework for contaminated sites.

2.2 Conclusion

Elements of the regulatory framework, including the key planning concept of 'sensitive use', the environmental audit overlay and its application, and audits and site assessments, are unclear. In addition, significant gaps exist in the planning and development instruments used to identify and manage potentially contaminated sites, and the legislation as it relates to the management, reporting and clean-up of existing contaminated sites.

This provides little assurance that the framework's key objective is being met. Inaction resulting from known gaps has increased the risk of human health being adversely affected and the probability of environmental damage occurring.

The complexity and lack of clarity of the framework has led directly to divergent interpretations across councils and the Victorian Civil and Administrative Tribunal (VCAT)—an avenue of appeal for planning decisions. Between 2002 and 2010, we identified 25 cases heard by VCAT that highlighted issues with the planning system as it relates to potentially contaminated sites, including:

- questions of interpretation about regulatory instruments as they relate to planning applications
- how regulatory instruments should be applied in planning situations
- roles and responsibilities of EPA
- calling for a review or redrafting of the EAO.

Planning and responsible authorities also need to rely heavily on legal advice to clarify issues relating to the framework, including the use of the framework's tools, their interplay, roles and responsibilities, and liabilities under the framework. Adding to the complexity is council legal advice that conflicts with VCAT interpretations.

The known gaps and a lack of clarity within the regulatory framework, which were identified between 2002 and 2005, persist and the little action taken to address them has been ineffective.

2.3 Clarity and complexity of the framework

The framework's regulatory instruments, established and refined over a 20-year period, have been developed separately and implemented on an ad hoc basis by the EPA and the Department of Planning and Community Development (DPCD) to resolve specific issues or improve clarity.

In several situations, the instruments and their interplay have made the framework unnecessarily complex and unclear. This is particularly so for the EAO, MDN-1 and the Practice Note in relation to the requirements for, and guidance around, environmental audits and assessments.

Environmental Audit Overlay

An overlay applies further planning provisions to a site or area to address a single issue or a related set of issues. An EAO is typically applied to potentially contaminated or contaminated sites, which means an environmental audit is required before any use, construction or building works start.

There are a range of issues associated with the EAO, its application and the tools developed under the framework to provide guidance.

The framework states that the EAO should be applied only after a planning authority has identified whether land is potentially contaminated prior to, or at the time of rezoning. The EAO and the Practice Note are unclear as to how planning authorities identify that the land is contaminated. This lack of clarity has resulted in a range of issues associated with the use of the EAO, including uncertainty about:

- the type of assessment required prior to applying the EAO
- how to apply the EAO—for example, site by site, or on a precinct basis
- whether to apply the EAO or use another tool
- if and when to remove the EAO.

As a consequence, none of the audited agencies have adequately assessed known industrial, and other, potentially contaminated sites available for residential development to inform its decisions about applying an EAO. In addition, each agency interprets and applies the EAO differently, resulting in different outcomes for the same or similar issues.

Ambiguous wording of the EAO in relation to whether it applies to new uses or new and existing uses and the definition of buildings and works, combined with a lack of discretion once it is applied, has caused an increased regulatory burden and substantial costs to proponents—not commensurate with the risks associated with the works and use. Any works, including minor redevelopment works, which are proposed to an existing building where an EAO applies, require an audit. Environmental audits can range in cost from $10 000 to $30 000 for small, uncomplicated sites. Figure 2A provides examples of EAO application.

Figure 2A
Application of the Environmental Audit Overlay

Yarra City Council applies the EAO over large areas containing numerous sites, possibly covering sites that are not contaminated. Applying the EAO in this way subjects any site within the area to an audit, irrespective of the type of works and their potential to disrupt the soil or groundwater. This has resulted in situations where Yarra City Council requires an audit in areas that are shown to have only ever been used for residential purposes, and/or where works result in no disruption to the soil—for example, upper level works to a second storey house.

Brimbank and **Maribyrnong City Councils** apply the EAO on a site by site basis, but not consistently for similar planning issues.

DPCD did not apply the EAO over the Docklands area, as they submitted it may result in a decrease in the market value of the land.

Source: Victorian Auditor-General's Office.

The inconsistent way the agencies included in this audit apply the EAO provides little assurance that, where potentially contaminated sites are used for sensitive uses, the risks to human health and the environment are adequately managed. There is also little assurance that planning authorities are applying the EAO in accordance with the framework's requirements.

Environmental audits and assessments

Environmental audits and assessments are key elements of the regulatory framework. They provide planning and responsible authorities with information on whether, and to what extent, a site is contaminated to inform decisions about the redevelopment of a site.

Audits

The regulatory framework is clear that an environmental audit by an EPA appointed auditor must be undertaken for a planning scheme amendment where there is a change in zoning to allow sensitive uses. Planning and responsible authorities rely on the integrity of the EPA's auditor appointment system and review processes to provide assurance that the audit and auditor has complied with relevant legislation, standards and guidelines and formed appropriate conclusions and recommendations in issuing either a certificate or statement of audit.

However, there is less clarity around the timing of an audit during the planning process. Under MDN-1, planning authorities can approve a delay in undertaking an audit 'under difficult or inappropriate circumstances'. It is unclear what is meant by 'difficult' or 'inappropriate'.

In practice, certificates or statements of audit are not required before planning authorities approve an amendment. The lack of clarity around the timing diminishes transparency around decisions to delay audits, and creates difficulty in determining whether the decision was based on genuine difficult or inappropriate circumstances, or due to pressure that applicants apply due to the holding costs associated with proposed developments.

It also results in limited assurance that the land is suitable for the intended use even though planning approval has been given. This can lead to the poor management of risks to human health and the environment posed by these sites during their development process and can prove costly for developers who have not factored in the required clean-up costs.

Planning and responsible authorities stated that it is difficult, or unreasonable, to request an audit of a planning applicant or developer in the majority of cases prior to giving approval, due to the costs associated with undertaking an audit where no planning assurance can be given that the development will be allowed to proceed. This approach indicates that planning and responsible authorities define potential costs for applicants as 'difficult' or 'inappropriate' when it comes to environmental audits.

Site assessments

There is a lack of clarity and guidance under the framework about whether a site assessment or an audit is required for planning permit applications, and for uses other than those defined as sensitive under MDN-1 for planning scheme amendments. This is significant, because the approach chosen can lead to quite different outcomes given varying levels of rigour in the different assessment options.

Site assessments ranged from a simple desktop site planning history assessment, to a more rigorous assessment including soil and groundwater testing and a detailed site history assessment of past use—leading to varied levels of assurance about the past history and contamination status of the site.

If an assessment is undertaken, there is a lack of clarity and guidance about what form of site assessment a planning or responsible authority should require the applicant to undertake.

Determining whether an assessment is technically adequate rests with the planning or responsible authority. These authorities do not generally have the technical capacity to assess the complex technical issues associated with contaminated sites. This differs from audits, where the expertise and responsibility rests with the auditor.

Under the framework, peer reviews of site assessments by qualified environment professionals are recommended 'where appropriate' to assist planning and responsible authorities to assure themselves of the technical adequacy of a site assessment. However, the framework is unclear about what 'appropriate' is. Site assessments were peer reviewed in an ad hoc and inconsistent manner by the responsible authorities. Given the lack of technical expertise and the ambiguity around what is 'appropriate', it is likely that deficient assessments will not be identified or reviewed.

Sensitive uses

The fundamental objective of the regulatory framework is the protection of human health. Central to this objective is the definition of 'sensitive use' in the planning tools in the framework, which recognises the risk that any contamination will adversely impact upon a use that has been identified as sensitive, including the people associated with the use. Generally, an audit is required for any planning application where there is a change to a sensitive use. This provides assurance that the use of the site will not pose a health risk to any person, particularly children, who uses or comes into contact with the site.

However, little assurance can be given that the framework is achieving its objective of the protection of human health, as the definition of a sensitive use under the framework is narrow and does not address a range of uses that pose a health risk where contamination of the land may be present.

MDN-1 defines 'sensitive use' as residential use, a child care centre, a pre-school centre or a primary school. For these situations, an environmental audit is required to assess the contamination and determine subsequent action in order to protect children who use the site as a result of the development.

Alongside the defined sensitive uses, MDN-1 also identifies public open space and agriculture as uses that planning authorities must 'deliberately satisfy themselves that the environmental conditions of the land are suitable for those uses'. It does not provide guidance to planning authorities on how this should be done.

Adding to the lack of clarity around the issue of sensitive uses, the Practice Note states that an environmental site assessment is required for public open spaces and agricultural uses if there is insufficient information available to determine whether an audit is required. None of the guidance identifies what is sufficient information.

Non-defined sensitive uses

The regulatory framework does not adequately address the issue where the proposed change in land use is to a non-sensitive use, as defined under the framework, but where there are still potential health and environmental risks associated with the use if contamination is present.

The Practice Note indicates that if the potential for contamination of a site is low to medium where the proposed use is a non-sensitive use, such as a worship centre, playground, open space or retail office, then an environmental audit or assessment is not required. Rather, actions to address potential contamination default back to provisions within the P&E Act, which require planning and responsible authorities to consider the effect of the development on the environment or the effect of the environment on the development.

Human health risks have been identified as a result of vapour intrusion caused by volatile organic compounds, soil contamination and groundwater, which can impact upon the health of users of non-sensitive uses. There is no obvious trigger under the framework that requires an assessment of the contamination status of a site subject to a planning scheme amendment or planning permit application involving a non-sensitive use. However, it is equally as important to consider the hazards of intrusive subsurface vapours that might impact the health of occupants inside a secondary school, worship centre or industrial factory, as would be the case for occupants of a residential building or a primary school.

Planning and responsible authorities have identified a range of issues associated with the narrow definition of a sensitive use as defined under the framework, and have adopted their own approaches to address these issues. Figure 2B highlights these.

Figure 2B
Approaches to managing gaps in the framework associated with the narrow definition of sensitive use

Yarra City Council applies the EAO across not only zones allowing sensitive uses, but also zones previously zoned industrial or that allow mixed uses, to provide assurance that health risks are assessed through an audit.
Maribyrnong City Council's local policy for managing contaminated sites applies to both sensitive and non-sensitive uses.
Brimbank City Council requires an environmental audit where playgrounds are part of an application, which is not a defined sensitive use under MDN-1.
DPCD requires an audit for any application that has an educational centre or informal outdoor recreation in the Docklands area.

Source: Victorian Auditor-General's Office.

2.4 Gaps in the framework

In addition to the complexities and issues with the framework, there are a range of gaps in the framework—many of which have been known to DPCD and the EPA since at least 2000—that have affected the operation of the framework.

Ministerial Direction No.1 for Potentially Contaminated Land

In some cases, sites that are contaminated or potentially contaminated are not identified before redevelopment or use. MDN-1 only applies to planning scheme amendments to allow for change to a new sensitive use planning zone. This means it only takes effect when there is a change to planning zones from a non-sensitive use, such as industrial, to a sensitive use, such as residential.

MDN-1 does not apply to potentially contaminated land that is already zoned to allow for a sensitive use, such as residential land with current industrial uses. This land still meets the definition of 'potentially contaminated land' under MDN-1, but is not captured in the 'requirement for an audit' if the amendment is not considered to allow a sensitive use to occur for the first time. It also does not apply to planning permit applications associated with a sensitive use, and as a consequence it does not capture the redevelopment of sites where the contamination status of the land may not be suitable for the proposed sensitive use. This is because there is no specific requirement for an audit to be undertaken.

Figure 2C
Case study 4—Department of Planning and Community Development

A planning permit was required for a new high density residential development in inner Melbourne. A site assessment was completed, which indicated that the condition of the land would not pose a risk to residents and, therefore, an audit was not required. The EPA recommended the assessment be peer reviewed. However, the responsible authority chose not to follow the recommendation, and works started on the redevelopment.

Upon demolition, the site was found to be heavily contaminated. An EPA review of the assessment found it was inadequate, and ordered that an audit be undertaken to assess the suitability of the site for the intended use.

The trigger to require either an audit or assessment for a sensitive use associated with a planning permit application is unclear under the framework, leading to situations such as this. Exacerbating the issues in this case is that planning approval was issued before a site assessment or audit was undertaken. It is now unclear whether this site is appropriate for its intended use, even though approval was given and works started.

Source: Victorian Auditor-General's Office.

In the absence of a coordinated effort to address gaps around the framework, and particularly MDN-1, councils have developed specific actions to meet the objectives of the P&E Act. These include Maribyrnong City Council's local policy for contaminated sites, Yarra City Council's application of the EAO over all potentially contaminated sites, which effects both planning scheme amendments and planning permits, and Brimbank City Council's legal advice framework to support decision-making around both amendment and permits associated with potentially contaminated land.

While the councils audited have shown initiative to address the gaps in MDN-1 and others under the regulatory framework, the lack of a systematic, coordinated statewide solution has resulted in varying planning outcomes, regulatory overburden and, at times, significant costs to both council and the proponent not commensurate with the risks posed by the development.

Neither MDN-1, nor any other regulatory instrument under the framework applies to potentially contaminated sites that were zoned to allow a sensitive use before 1989. While the requirements of the *Environment Protection Act 1970* apply where there is reason to suspect potential contamination, there is no obvious requirement within the planning tools under the framework for either an audit or site assessment for a redevelopment within a zone that already allows for sensitive use, even though the site has never been assessed for contamination issues. This creates the situation where potential risks to human health, associated with sensitive uses built on contaminated land before 1989, are not being addressed.

Community use sites

A range of community use sites available to the public do not fall under the framework's definition of a sensitive use, which triggers the need for an audit or site assessment to address contamination issues. Types of community use sites that do not fall within the definition include playgrounds, secondary schools and open space, even though those using them are likely to include children—the very group sensitive use processes are designed to protect.

These community use sites can expose people to contaminants or vapours that can result in significant health risks—not any less serious than those from the sensitive uses defined under the framework. For example, a school may be built on contaminated land where vapours from the contaminants may pose a risk to students' health due to long-term exposure. One council audited is currently monitoring vapour levels within a school from neighbouring contaminated land to assess any health risks posed.

There is also no provision within the framework requiring councils to test for contamination at pre-existing community use sites that come within the definition, such as childcare and kindergarten centres that are not currently undergoing redevelopment or licence renewal.

All councils audited identified a duty of care and a due diligence process for existing children's services, but action to address this risk varied from extensive to little or no action, as shown in Figure 2D.

Figure 2D
Due diligence process applied by councils to community use sites

Yarra City Council implemented a rigorous process and policy for all community use sites, including child care centres and playgrounds, supported by active community engagement. It has also adopted a broader definition of sensitive use than that in the framework, to include playgrounds and open space—areas that may involve sensitive uses.
Maribyrnong City Council has undertaken soil testing at its child care centres, and where risks are identified is managing these as a priority. It has also adopted a broader definition of sensitive use than that used in the framework. Maribyrnong City Council has not assessed any other community based sites.
Brimbank City Council has met the requirements under the Department of Health guidelines for soil testing for new child care centres or where there is a proposal to alter or extend an existing centre, but has not undertaken a soil or site assessment for all its child care centres or community use sites. It applies the sensitive use definition included in the framework.
DPCD has included the requirement to undertake an audit for an educational centre or informal outdoor recreation area in the Docklands Planning Scheme.

Source: Victorian Auditor-General's Office.

Building and occupancy permits

While the *Building Act 1983* and the Building Commission's practice notes oblige building surveyors to satisfy themselves that all requirements of the planning scheme are met prior to issuing a building or occupancy permit, it is unclear when, how and to what extent they must inform themselves about the status of land with respect to contamination before issuing a certificate of occupancy.

Legal advice to Maribyrnong City Council identified this as an issue, and recommended that councils should educate building surveyors on these issues. Other councils have not identified this as an issue and Maribyrnong City Council is yet to follow up on its legal advice.

Ministerial exemptions

The Minister for Education and the Minister for Health are exempt from the planning framework requirements under the P&E Act. This means that they are not required to adhere to the provisions and instruments associated with the P&E Act for contaminated land, even though they may own or manage land used for a sensitive use. This exemption dates back to the early 1980s when the complexity of issues surrounding the development and use contaminated sites were not known or understood.

Mandatory reporting

There are known contaminated sites currently used for a sensitive use (residential), or used by the public (playgrounds and public open space), which pose or potentially pose a risk to human health or the environment.

Not all of these known sites are recorded on the EPA's priority sites register—a register of contaminated sites that the EPA knows about, and has issued clean-up or pollution abatement notices for—and, as such, the community is unaware of the sites' contamination status. This is because there is no requirement for owners, managers, councils or developers to report this to any agency or notify the community—even if the sites pose an imminent human health or environmental risk.

Without the EPA being aware of these sites, it is unable to make an assessment as to whether a clean-up notice is required and, therefore, inclusion on the priority sites register. However, even if the EPA was notified, but the risk was considered long-term rather than imminent, there is no clear requirement under the framework for these sites to be cleaned up or to allocate responsibility for their management.

This is a significant gap, and one that could result in immediate and long-term harm to both human health and the environment through allowable inaction. Figure 2E provides examples of known contaminated sites not reported, and not on any public register.

Figure 2E
Examples of unreported, known contaminated sites

Case study 1 of 5

Site A is a residential area within the **City of Maribyrnong**. It includes 22 properties that are known to be built on contaminated land. Maribyrnong City Council first identified the contamination in 1994, but did not report it to the EPA until 1998. Furthermore, 12 of these properties pose a potential health risk to children as contaminant levels exceeded recommended criteria, and a further four pose an actual risk due to children residing at these properties. The remaining six properties are potentially contaminated, with potential health risks.

Case study 2 of 5

Site B is a public use/open space site in the **City of Yarra**. It is adjacent to the Yarra River and adjoins an uncontaminated council owned reserve used for public open space with a BBQ and picnic tables. The **Department of Sustainability and Environment** manages the site on behalf of the Crown.

An assessment in 2004 rated the potential for site contamination as very high. This rating was based on the previous industrial land use of the site, and visual inspection of exposed topsoil at one location on the site. The inspection found debris and fill material, and soil colour that indicated the possible presence of contamination by heavy metals and hydrocarbons.

Case study 5 of 5

Site E is a former quarry site and now a reserve in the **City of Maribyrnong**. The site is known to be contaminated due to the past quarrying history, resulting in soil contamination and vapours. The site now includes two recreation centres and grassed open areas with public seating. One of the recreation centres is used by older people, while the other is used for outside school hours care. Residential properties abut the reserve, including two neighbouring properties located over the old quarry footprint.

The status of the site's contamination is only known to the Maribyrnong City Council. There has been no communication with property owners whose houses are located on the footprint of the old quarry, or surrounding residents. As there are no mandatory reporting requirements, Maribyrnong City Council is not required to report the site to the EPA or any other agency.

Note: Appendix A contains further information on the five case studies detailed in this report.
Source: Victorian Auditor-General's Office.

In 2007, the EPA estimated that another 10 to 20 instances like Case Study 1 exist across metropolitan Melbourne, where residential properties were built on old private quarries or landfills. These sites have not been further identified, assessed or cleaned up.

Site transactions

Property and title laws do not require the recording of the status of the site in terms of contamination on the title when selling a site, even if contamination is known. This further contributes to the difficulty of obtaining information for prospective buyers around the site status. There is no mechanism in place to inform owners and occupiers of the contamination status of the site following a change of ownership or change of tenant, except via a section 32 notice, which identifies whether an audit of the site has been undertaken.

2.5 Actions to address gaps in the framework

Timely reviews of the effectiveness of regulatory instruments are critical for providing regulators with assurance that the intended objectives are being met. Reviews also provide opportunities to make necessary changes.

Despite DPCD and the EPA knowing since at least 2000 that there were weaknesses with the regulatory framework, there has only been action to address the significant gaps and issues in the framework since late 2010. A number of reviews have now commenced or are planned.

While these reviews are a positive initiative, they are being planned in an ad hoc manner and occurring in isolation of one another. This further demonstrates the need for leadership and for greater coordination across the system.

2.5.1 The Department of Planning and Community Development review of planning tools

The Minister for Planning appointed a Ministerial Advisory Committee in March 2011 to examine the existing planning controls and processes for potentially contaminated sites and make recommendations as appropriate to:

- update and clarify the planning processes and guidelines pertaining to planning for potentially contaminated sites
- amend the planning controls by incorporating greater flexibility to better reflect the intent of the regulatory environmental audit system
- address any other matter that the advisory committee considers will improve planning outcomes.

An issues and options paper was released for comment in September 2011. This paper identified a range of issues similar to those identified in this report, as they relate to the planning tools for potentially contaminated sites—specifically the EAO, MDN-1 and the concept of 'sensitive use'. A final report is expected to be completed in late 2011 or early 2012.

2.5.2 The Environment Protection Authority review initiatives

The EPA undertook a range of reviews between 2010 and 2011, both directly and indirectly addressing the way it manages known contaminated sites:

- ***Compliance and Enforcement Review 2010***—The review identified a range of issues around how the EPA undertakes its compliance and enforcement activities. All 114 recommendations of the review have been accepted and around 22 of these will have a direct impact on the EPA's management of contaminated sites.
- ***The EPA's Five-Year Plan 2011–16***—The plan identifies objectives, actions and measurable outcomes for the next five years. One of the key actions under the five-year plan is to critically review the EPA's regulatory approach to contaminated sites, including the audit system, tools, procedures, integration with the planning system, and instigation of priority regulatory reforms.
- ***Internal operational review of contaminated sites management 2011***—The review identified 19 key risks associated with the EPA's role and responsibilities, tools, and systems for the management of contaminated sites. It has identified actions where the controls to manage the risks are currently inadequate.
- ***Review of the State Environment Protection Policy for the Management of Contaminated Land***—The Department of Sustainability and Environment and the EPA are jointly undertaking a review of the current function, structure, content, management and effectiveness of statutory policies under the *Environment Protection Act 1970*, including State Environment Protection Policies. The review itself is not a specific review of the content of the contaminated land State Environment Protection Policies.

No specific time frames or resource plans have been approved for the initiatives relating specifically to contaminated sites.

Recommendation

1. The Department of Planning and Community Development, assisted by the Environment Protection Authority and in consultation with councils, should:
   - undertake a systematic and coordinated review of the entire regulatory framework for the management of potentially contaminated and contaminated sites to improve clarity and address gaps, including:
     - the wording, application and use of the Environmental Audit Overlay
     - the application of the framework for planning permits and planning scheme amendments, and the types of use to which it applies
     - the use, content, guidance material and peer review of environmental site assessments
     - establishing mandatory reporting requirements
   - establish processes to capture information about framework and system issues, and processes to address issues in a timely way
   - establish a performance framework to assess the efficiency and effectiveness of the contaminated sites framework and system.

3 Governance of the contaminated sites system

At a glance

Background

Contaminated sites are managed by a range of entities through a complex and incomplete framework. In this system, where the entities are working toward the same objective, there is a need for sound governance.

Conclusion

The governance arrangements for the regulatory framework and the contaminated sites system are undermined by a lack of oversight and accountability for the effective operation of the framework.

Findings

- No entity has taken clear leadership of this area and roles and responsibilities lack clarity.
- No single entity is responsible for overseeing the contaminated sites framework, or for assessing its effectiveness.
- There are a number of known contaminated sites posing a risk to human health, for which no one is responsible, resulting in inaction.
- There is a lack of information across the state on the location, number and status of contaminated sites. As a consequence, there is no assessment of the risk these sites pose, in terms of human health, the environment and costs.

Recommendation

The Department of Planning and Community Development should:

- assume responsibility and accountability for the leadership, coordination and oversight of the contaminated sites framework
- establish mechanisms and processes to improve the leadership, coordination, oversight and accountability of, and for, the contaminated sites framework and system
- clarify and communicate responsibilities under the framework so that they are clear and understood.

3.1 Introduction

Contaminated sites are managed by a number of entities through a complex and incomplete framework. This system, in which multiple entities work toward the same objective, requires sound, coherent governance.

To be effective, the governance arrangements need to be underpinned by clearly understood roles and responsibilities, a clear understanding of the risks, and information on how well the system is performing.

3.2 Conclusion

The governance arrangements are undermined by a lack of oversight and accountability for the effective operation of the framework, and undermined by unclear and unknown roles and responsibilities within the framework.

Because no one has been allocated responsibility, and no one is accountable for addressing these weaknesses, we found cases where little meaningful action had taken place to address known contamination.

The health, environmental and financial risks from contamination are potentially significant. However, the ability to adequately assess and mitigate this risk is hampered by a lack of information on the number and location of contaminated sites, and the nature and extent of contamination. The responsible entities have been neither proactive nor systematic in obtaining this information.

The efficient and effective operation of the framework requires single point accountability in order to oversee its performance in managing the risks associated with potentially contaminated and contaminated sites across Victoria. This includes establishing clear responsibilities for the framework's application, review and performance.

3.3 Oversight and accountability

Around 100 public sector entities are involved in regulating and managing contaminated sites. This includes the 79 councils, the Environment Protection Authority (EPA), the Department of Planning and Community Development (DPCD), the Victorian Civil and Administrative Tribunal, and various advisory committees, panels and other bodies.

With the large number of entities involved, clear accountability for the development, operation and effectiveness of the system is critical. Single point accountability, where one entity oversees the system and processes and is accountable for its performance, is an effective approach to good governance.

There is, however, no single entity responsible for overseeing the planning and management of potentially contaminated and contaminated sites, or for assessing the effectiveness of the system or framework. The contaminated sites regulatory system operates instead in an uncoordinated way, with each entity managing contamination issues in isolation of the others. As a consequence, there is no statewide strategic or consistent approach to planning and management issues associated with potentially contaminated and contaminated sites.

The regulatory framework is complex and it relies on the effective coordination of the two key pathways for the assessment and management of potentially contaminated and contaminated sites—one relating to the planning and development system for potentially contaminated sites, governed by the *Planning and Environment Act 1987* (P&E Act), and the other relating to known contaminated sites, governed by the *Environment Protection Act* 1970 (EP Act).

While the framework is intended to deal with the issue of contamination, this is made more challenging because two different state entities administer it, and each report to different ministers. Adding to the complexity is that each element of the framework relies on the other. For example, planning matters rely on tools that the EPA administers under the EP Act, and this has created confusion among planning and responsible authorities about roles and responsibilities. This makes it difficult to establish which entity is responsible for governance of the framework.

This diffusion of oversight needs to be addressed by assigning the responsibility to one entity to be accountable for the regulatory framework, including allocating and clarifying roles and responsibilities.

3.3.1 Clarity of roles and responsibilities

In any system where the stakeholders are working together for a common purpose—in this case preventing and cleaning contamination, and preventing unacceptable risks to human health and the environment—roles and responsibilities should be clearly understood.

Clear roles and responsibilities minimise the risk of overlap and duplicated effort. They also establish accountability and attribute responsibility for the success or failure of initiatives.

While roles have been established under legislation and the contaminated sites framework, these are neither clearly understood nor agreed by all stakeholders. There are also role gaps where no agency is accountable or responsible.

The Department of Planning and Community Development's role

DPCD, through its responses to previous VAGO audit recommendations, has acknowledged its lead role in the monitoring and oversight of the planning system—including the extent to which councils are fulfilling their obligations under the P&E Act in implementing the system.

In addition, DPCD performs a range of other roles in relation to contaminated land. DPCD develops, maintains and disseminates elements of the regulatory framework, including:

- developing and reviewing the Victoria planning provisions for potentially contaminated sites
- developing planning tools, such as the Environment Audit Overlay and *Potentially Contaminated Land: General Practice Note*
- providing training for planners about potentially contaminated and contaminated site planning responsibilities.

Despite this, DPCD does not consider that its role extends to overseeing and monitoring councils' performance in relation to the effective implementation of the planning framework for potentially contaminated and contaminated sites.

Given the acknowledgement of its role as the overseer of the planning system in the 2009 *Discussion Paper on opportunities to modernise the Planning and Environment Act 1989*, including the extent to which councils are fulfilling their obligations under the Act, and its responses to past VAGO performance audits, DPCD is the logical agency to fill this accountability void.

The Environment Protection Authority's role

While the role of the EPA in relation to contaminated sites is clearly described within the contaminated sites framework, it is not well understood by the system's stakeholders.

The EPA's role in relation to contaminated sites is to manage the accreditation of environmental auditors and the audit system, and to regulate contaminated sites listed on its priority sites register (PSR). The EPA is not responsible for undertaking environmental assessments or cleaning up contaminated sites.

Confusion has been created among councils and DPCD about the EPA's role. This is partly because of the discretionary nature of the EPA's role under the P&E Act and that it has been inconsistent in performing functions it is not required to perform. This includes undertaking site assessments and participating in site clean-ups, reviewing site assessments that councils and DPCD have sent to it, and commenting on planning referrals.

In a complex arrangement, under the P&E Act, the EPA is a compulsory referral authority if specified under clause 66 of the Planning Scheme. In this situation, the EPA must receive and review planning referrals relating to potentially contaminated land. The referring agency must then follow the EPA's advice.

However, any agency may refer planning applications to the EPA under section 52(1)(c) of the P&E Act, but unless the EPA is acting as a compulsory referral authority, then it is at its discretion whether to review them and provide advice. Agencies do not have to adhere to advice provided in these situations.

When site assessments have been provided to the EPA for review when it is not a compulsory referral authority, its decisions to review are ad hoc and without rationale or guiding criteria, other than consideration of the impact on the environment.

Responsibility for known contaminated sites

The EPA is responsible for regulating contaminated sites where the contamination poses an imminent danger to human health or the environment, and it has issued either a pollution abatement notice or clean-up notice. It also regulates contaminated sites owned or managed by entities that it licenses.

However, there is no agency responsible for overseeing or managing sites that are known to be contaminated when the risks to human health and the environment may be long-term rather than imminent, or contaminated sites that pose a risk to human health and the environment that are not known to the EPA. This is because there is no clear requirement:

- for anyone other than contracted EPA appointed environmental auditors to report known contaminated sites to the EPA or any other agency
- to clean-up contaminated sites that do not pose imminent human health or environment risk, even though these risks have been identified
- to assess potentially contaminated sites at high risk of being contaminated due to past activities, unless they are subject to redevelopment—even if these sites are used by the public.

The lack of a responsible agency for these types of contaminated sites means that in some instances, there is an incentive either to do nothing or to react slowly to identify and manage contamination risks. Exacerbating this is the complexity of issues and costs associated with managing the issue.

Figure 3A
Case study 1—City of Maribyrnong

Site A is a residential area within the City of Maribyrnong. Between the 1930s and 1960s, the site, which was a privately owned quarry, was used as a landfill for foundry wastes. After infilling the landfill, the area and its surrounds were redeveloped for low density residential use from 1956 to 1970. Maribyrnong City Council owns a site within Site A.

Maribyrnong City Council identified in 1994, through sampling of the soil in the council-owned property, that it was highly contaminated. An environmental audit and management plan were recommended, but not undertaken. Maribyrnong City Council did not notify the EPA until 1998.

Health risks were identified in 1999. Twenty-two residential properties surrounding the former quarry site are contaminated with polycyclic aromatic hydrocarbons—by-products of fuel burning—benzo[a]pyrene—a carcinogen found in coal tar and exhaust fumes, lead and other metals due to the quarry infill material. Twelve of the properties within Site A have contamination levels that pose a potential health risk to children due to the contaminant levels exceeding recommended criteria, while a further four properties pose an actual risk because of children residing at these properties. The remaining six properties are potentially contaminated, with potential health risks.

Figure 3A
Case study 1—City of Maribyrnong – *continued*

Draft memoranda of understanding (MOU) were developed by the EPA and Maribyrnong City Council in 2007 and 2011. These MOUs were never signed by Maribyrnong City Council due to disagreements about roles and responsibilities for managing the contaminated sites, further delaying substantive action.

Only in 2011, 17 years after first being identified, has work commenced to clean up the highest risk sites. The EPA is managing the clean-up, even though they have advised that this is not their responsibility.

A detailed overview for this case study is included in Appendix A.

Source: Victorian Auditor-General's Office.

Responsibility for orphan sites

Orphan sites are contaminated sites where the party responsible for the contamination is unknown, insolvent, or cannot or will not cover the clean-up costs.

The defining feature is the absence of private interest responsibility for, or ability to, clean or manage the contamination. In market failure-type situations such as this, ordinarily the state assumes responsibility if the site poses an imminent risk to human health or the environment. However, where no imminent risk is identified or the site has not been assessed, sites are managed in an inefficient, ad hoc and inconsistent fashion—and in some cases, not addressed at all. This is partly due to there being no public sector entity is responsible for orphan sites.

Issues around the management of orphan sites have been known for at least 11 years, particularly in relation to the lack of responsibility and gaps in the legislation with a range of recommendations made to address them. However, very little action has been taken. As a consequence, many of the issues remain, especially the potential risks to human health and the environment.

Recommendations were made to ministers on four occasions between 2000 and 2007. These included:

- That an interdepartmental committee be set up to address orphan site issues. This was first raised in 2000, and then again in 2004.
- In 2004, the Minister for the Environment indicated that the issue of mandatory reporting should be investigated.
- In 2006, the EPA briefed the Minster for the Environment and recommended that the EPA convene an interdepartmental committee to examine issues including:
  - changes that may be necessary to the EPA's powers to require clean up and to ensure this occurs efficiently and minimises the risks of orphan sites that may become state liabilities
  - approaches to managing existing orphan sites
  - other strategies to improve management of historical contamination and minimise cost and risk to the state.

To date, none of these recommendations have been adequately addressed. Figure 3B shows the status of the issues identified.

Figure 3B
Identification and resolution of issues associated with orphan sites

Task/barrier	First identified	Resolved
Resolution of funding for orphan sites	1999	No
Resolution of liability issues	2000	No
Mechanism to inform potential buyers, new property owners and tenants of land status	2000	No
Set up of an inter-departmental committee to develop orphan sites protocol	2000	No
Development of a communication strategy for orphan sites	2001	No
Development of protocol to address orphan sites	2001	No
Roles and responsibilities for clean-up of orphan sites	2001	No
Review of identification systems as PSR not adequate	2003	No
No legislative mechanism for clean-up of orphan sites	2003	No
Investigation into mandatory reporting	2004	No

Source: Victorian Auditor-General's Office.

3.4 Managing regulatory risks

Risk management is fundamental to effective public sector administration. It enables entities to systematically identify and manage risks and opportunities, and also to prioritise actions. Risks can apply at an organisation or statewide level.

For the management of potentially contaminated and contaminated sites, key inputs into managing risks include knowing where these sites are, whether they are contaminated, the extent and type of contamination and the potential impact on human health, the environment or amenity.

There is no systematic approach within the three councils audited, the EPA and across the state public sector generally to identify and assess the risks from potentially contaminated and contaminated land. Risk management activities are limited and do not take a statewide perspective, even though this is a statewide issue.

An absence of information about contamination across Victoria means that risk management activities are not adequately informed. As a consequence, there is no assurance that the current regulatory approach is the appropriate approach to manage risks associated with site contamination.

3.4.1 Agency approaches to risk management

All agencies had risk management systems and processes in place to identify high-level corporate and operational risks. However, there was less rigour in the processes to identify and address risks associated with potentially contaminated sites, and variation in how each assesses risks. A key issue identified was the lack of review and evaluation in determining the effectiveness and efficiency of their risk management systems.

Councils' approach to identifying municipal-wide risks from potentially contaminated and contaminated sites was limited, with their focus typically on council-owned and managed sites. Municipality and community-wide risks associated with potentially contaminated and contaminated sites are not generally known.

Figure 3C
Approaches to assessing contamination risks

Brimbank City Council has identified risks relating to contamination on sites that it owns, but not community use sites. It is implementing a new corporate strategic risk management approach to better identify and manage strategic risks, including contaminated sites as a high strategic risk. To do this, it intendeds to improve technical capacity, reviewing internal coordination of potentially contaminated sites and contaminated sites issues and the recruitment of a strategic risk officer.

Maribyrnong City Council has only identified council-owned or managed sites as a general risk, but has not identified risks associated with individual or community based sites. It has rated the risk of managing contaminated properties that it owns as high in its risk register and flagged the need to improve council staff awareness in its business planning.

Yarra City Council has systematically assessed and documented the risks and management needs of all council-owned and managed community use sites, such as child care centres and playgrounds, and around 70 per cent of public open space—driven by requirements to undertake new works. It has proposed a centralised register of all council-owned or managed contaminated sites to centrally coordinate organisational responses to soil contamination and asbestos removal for impending works or ongoing monitoring.

DPCD has not identified risks associated with sites that the Minister for Planning owns or manages.

The **EPA** has undertaken a review of all operational risks associated with the management of contaminated sites under the EP Act.

Source: Victorian Auditor-General's Office.

A further element of the risk management approach is to routinely obtain legal advice when dealing with issues related to potentially contaminated and contaminated sites. The legal advice is sought, in part, because of the complexity of the regulatory framework and associated issues, and is used to inform planning decisions, but also to minimise councils' risk and liabilities associated with potentially contaminated and contaminated sites. For example, Brimbank City Council and Maribyrnong City Council have sought specific and generic legal advice to improve the management of risks, whereas Yarra City Council has sought specific advice in relation to the application of the Environment Audit Overlay.

Councils and the EPA have identified the need to improve the coordination, evaluation and review of risk management processes to better address risks associated with potentially contaminated and contaminated sites. All have recently implemented actions to commence this process.

3.4.2 Information about contaminated sites

Reliable data on the location, number and nature of all potentially contaminated and contaminated sites across the state and within individual municipalities is not available.

Councils, DPCD and the EPA hold a narrow range of information on potentially contaminated and contaminated sites, but do not have effective processes to proactively obtain detailed information about these sites. This is despite issues around contamination being known since at least 1989 following the introduction of Ministerial Direction No.1 for Potentially Contaminated Land.

Figure 3D
Information on contaminated sites

Brimbank City Council has information on both its known publicly and privately owned contaminated sites. This information is based on a preliminary desktop review. Brimbank City Council has focused on gathering information about higher profile contaminated sites, and recently commenced a more systematic approach to assessing the risks across all council-owned sites that are potentially contaminated or contaminated.

Maribyrnong City Council has detailed information on high-risk sites, but has no systematic risk-based approach to identify and record these. This creates problems for Maribyrnong City Council in turning information into action.

Yarra City Council has information only on council-owned or managed contaminated sites, and monitors these to identify sites that need further management or new management plans if new works are proposed.

DPCD (on behalf of the Minister for Planning) has no information about potential or known contamination on sites it owns or manages.

The **EPA** has information about contaminated sites that are subject to a clean-up or pollution abatement notice. The EPA places these on the PSR, which includes 208 sites. The PSR is not a complete register of all known contaminated sites. It includes only those sites that the EPA has issued notices for.

Source: Victorian Auditor-General's Office.

The objective of the regulatory framework is, in part, to prevent and clean contamination, and prevent human health and environmental risks. The absence of reliable and comprehensive information, and the absence of effective processes to obtain information on potentially contaminated and contaminated sites, means this objective is unlikely to be fully met.

3.4.3 Information systems

There is no information management system that integrates data across stakeholders to provide a central repository of information associated with potentially contaminated and contaminated sites, and their risks. Where information is available, it is held within individual public entities and not shared. None of the councils held their information in a central register, even though a range of business units across these organisations dealt with contamination issues.

None of the information systems used within the three councils included complete details on the type and extent of contamination, management strategies or plans attached to sites, ongoing management conditions attached to sites, or risks associated with the contamination. DPCD had no information system to record contaminated sites data in relation to sites for which the Minister for Planning was responsible.

Brimbank and Yarra City councils have taken steps to address information management issues, whereas Maribyrnong City Council is only just starting to address this issue and DPCD is yet to recognise the issue.

Recommendations

2. The Department of Planning and Community Development should:
   - assume responsibility and accountability for the leadership, coordination and oversight of the contaminated sites framework
   - establish mechanisms and processes to improve the leadership, coordination, oversight and accountability of, and for, the contaminated sites framework and system
   - clarify and communicate responsibilities within the framework so that they are clear and understood.
3. The Environment Protection Authority should:
   - develop mechanisms and processes that enable the identification and recording of contaminated land
   - assess the risks of these sites
   - prioritise high-risk sites and actions to manage the associated risks.

4 Applying the regulatory framework

At a glance

Background

How effectively the regulatory framework is applied in practice directly affects human health and the environment. Planning and responsible authorities need to clearly understand the framework and the associated planning, legal and technical requirements, and align their operational processes and activities accordingly.

Conclusion

Councils and the Department of Planning and Community Development (DPCD) have not applied the regulatory framework as intended. Councils and DPCD do not check whether planning applicants and developers adhere to the framework. This reduces assurance that human health and the environment are being adequately protected when developments occur on contaminated sites.

Findings

- There is significant variation within and between councils and DPCD in terms of the consistency, transparency and rigour of the decision-making process.
- Variation in process between councils and DPCD largely stem from different organisational interpretations of the ambiguity or gaps in the framework.
- Councils lack the technical capability to manage the complexity of issues associated with contaminated sites.
- Routine compliance monitoring is not undertaken, and consequently there is little enforcement activity. This is primarily because entities have not adequately resourced or prioritised these activities.

Recommendation

Councils, with the support of DPCD, should:

- develop systems to capture environmental audit conditions to inform their compliance monitoring activities
- develop compliance monitoring programs and enforcement processes, consistent with better practice, and perform these activities on a routine basis
- assess the level of expertise and financial resources required to accurately manage and clean up high-risk sites.

4.1 Introduction

Effectively applying the regulatory framework is critical to managing human health and environmental risks. Planning and responsible authorities must understand the framework and the associated planning, legal and technical requirements, and have processes in place to operationalise the requirements. Effective compliance monitoring should also be in place so that planning applicants adhere to the objective and intent of the framework.

4.2 Conclusion

Councils, and the Department of Planning and Community Development (DPCD), as planning and responsible authorities are not effectively applying the regulatory framework. It is inconsistently applied across councils and by DPCD—largely due to a lack of clarity in the framework, and the lack of rigour in applying internal processes and systems.

Councils and DPCD are not checking whether planning applicants and developers are adhering to the framework and imposed conditions. This is due to significant deficiencies in compliance monitoring. This reduces assurance that human health and the environment are being adequately protected in relation to the management of contaminated sites.

4.3 Applying the framework

Across the planning and responsible authorities audited, processes and systems to assess and approve planning applications do not provide adequate assurance that there is compliance with framework requirements.

Each planning and responsible authority had implemented systems and processes for the assessment and approval of planning applications. However, there were significant variations within and between councils in terms of the consistency, transparency and rigour of the decisions.

Variation in process between councils largely stem from differences in interpreting the ambiguity or gaps in the framework; whereas the differences within councils were most often due to a lack of rigour in applying internal processes and systems.

Variations in applying the framework identified throughout this report include:

- applying the Environment Audit Overlay (EAO) across broad areas by Yarra City Council, as opposed to a site-by-site application by Brimbank City Council
- applying the EAO to one site, and not another in similar circumstances
- knowing when a site assessment is required as opposed to an audit for similar applications
- undertaking an audit before planning approval, and in other cases after approval without obvious differences between site circumstances

- knowing whether to use a section 173 agreement or another tool to translate audit conditions to ongoing planning conditions
- obtaining a peer review for some site assessments and not others.

Further undermining the application of the framework is the failure to consistently and transparently document the rationale for decisions. In many instances, it was unclear what considerations had been taken into account to inform decisions.

When compared to responsible authorities and planning permits, there was greater rigour and transparency around decision-making for the assessment and approval of planning scheme amendments by planning authorities. This is because there are fewer gaps and greater clarity in the framework in relation to planning scheme amendments. There is also a range of high quality standard pro-forma assessment guidelines, checklists, report frameworks and guides for planning scheme amendments, developed by DPCD, which were used consistently by planning authorities.

4.3.1 Technical capability

One of the key issues in effectively implementing the framework is the lack of guidance under the framework about how responsible and planning authorities assure themselves that the land is fit for its intended use.

Around 80 per cent of contaminated site issues are dealt with by councils, as planning and responsible authorities. However, they lack the technical capability to manage the complexity of issues associated with contaminated sites.

To perform this work effectively and to appropriately inform planning decisions, planning and responsible authorities need to be able to understand the regulatory framework. They also need to assure themselves that the assessments and audits are technically sound, and the findings and recommendations are captured appropriately in planning conditions.

To address gaps in their technical capability, councils rely heavily on legal advice to clarify planning and legal issues. They do this to minimise not just the risk of an incorrect decision, but also to minimise their potential liability associated with potentially contaminated and contaminated sites.

Financial resources spent on legal advice and training around contaminated sites have varied from council to council, ranging from $109 000 spent annually on legal fees for Yarra City Council to $240 000 for annual legal advice for Brimbank City Council for day-to-day planning issues.

Another area of technical capability risk for planning and responsible authorities is in the review of environmental site assessments. Apart from there being no guidance on what an assessment should involve, unlike environmental audits, there is no routine review process.

In the absence of in-house expertise, planning and responsible authorities assure themselves in a range of ways, and assessments are undertaken in an ad hoc manner. If there is a lack of certainty about a site assessment, then councils may require that it be peer reviewed. However, there is little guidance as to when this occurs, and if a peer review is required, this often leads to additional costs for the applicant.

Figure 4A
Requirements for peer reviews of site assessments

Brimbank and **Maribyrnong City Councils** do not obtain a peer review for every case involving a site assessment, but there were no criteria for which assessments were or were not reviewed. Legal advice obtained by Brimbank City Council in 2010 advised that a peer review be obtained for all cases where a site assessment is involved.

Yarra City Council adopts a risk averse approach by applying the EAO, thereby requiring an audit where site assessments may be the appropriate first step, as the responsibility for assessing the technical adequacy and making the correct decision lies with the Environment Protection Authority appointed auditor.

DPCD, acting as the responsible authority on behalf of the Minister for Planning, does not require peer reviews because it holds the view that experience resides in-house to determine whether a site assessment is adequate.

Source: Victorian Auditor-General's Office.

4.3.2 Funding

Addressing contamination can be expensive. There are costs involved in undertaking assessment and audits, and potentially significant costs involved in cleaning up contaminated sites.

The majority of these costs are borne by the private sector through the planning processes, driven by commercial interests. However, there are also potentially significant costs to the state and councils. This is particularly so where Crown land or municipal-owned land has been identified as contaminated, or where the state has to step in to clean sites as a last resort—usually for orphan sites.

The Victorian Government established a contaminated sites fund in 2011 in an effort to address some of the financial resourcing issues. The fund was allocated $5.4 million over four years from the Landfill Levy. Based on historical costs associated with the clean-up of contaminated sites, this allocation is inadequate to clean currently known problem sites:

- The Environment Protection Authority has spent around $2 million on the four high-risk sites identified in Case Study 1.
- Two sites within Brimbank and Maribyrnong have cost in the vicinity of $6.6 million to clean up.

- Maribyrnong City Council has spent around $1 million annually for several years to manage one of its high-risk contaminated sites, and it estimates it has spent around $120 000 in the past four years on site assessments (not clean-up) associated with property transactions.
- Brimbank City Council has spent large sums annually to deal with 'high-risk' sites. For example, $2.6 million was spent over three years for a single site and $5 million since 1997 for another site, because these sites pose risks for human health and the environment.

The potential cost to the state and councils for remediation of all contaminated sites is unknown because of the lack of complete and reliable information about contamination.

Councils advise that the cost of cleaning up is more than is available in their budgets and that the lack of available funding to manage contaminated sites is consequently an impediment to managing the risks.

The state government and councils cannot reliably assess their potential financial liabilities unless they complete environmental site assessments of all their known sites—itself a costly exercise. An initial assessment of the cost of this task for Maribyrnong City Council was between $5 million and $10 million. The lack of assessment has contributed to historically poor management of contamination issues or inaction around known contaminated sites that pose a risk to human health and the environment.

4.4 Adherence to the framework

Effective compliance monitoring and enforcement action should assure the community that those developing or building on contaminated sites adhere to conditions designed to protect human health and the environment.

The framework requires councils and other responsible authorities to undertake compliance monitoring activities for planning scheme amendment provisions and planning permit conditions. Despite this requirement there is no routine compliance monitoring, and consequently little enforcement activity. This is primarily because these entities have not adequately resourced or prioritised these activities.

4.4.1 Compliance and enforcement

The main compliance monitoring activities that councils should undertake relates to environmental audit conditions. A Statement of Environmental Audit typically contains one or more conditions that must be implemented for the site to be suitable for its proposed use. The framework requires that planning and responsible authorities incorporate these conditions into planning scheme amendment provisions or planning permit conditions.

Conditions attached to an audit statement generally relate to the development or ongoing management of a site. In terms of the development, conditions have included concreting contaminated soil exposed areas or capping contaminated soils on site. Ongoing management conditions generally relate to the continued management and monitoring of the groundwater and vapours, or refer to the monitoring and maintenance of equipment to manage contamination issues.

Planning and responsible authorities used a range of tools to attach ongoing management and monitoring conditions to a site, including:

- planning permit conditions
- planning scheme amendment provisions
- planning permit notes
- section 173 agreements—agreements that attach conditions to the property, so that they apply to successive purchasers
- body corporate agreements
- notices of restrictions on plans of subdivision.

Potentially Contaminated Land: General Practice Note recommends section 173 agreements as the most appropriate tool.

Regardless of the method that councils used to record conditions, the value of doing this is limited through poor practices. None of the three councils audited undertook routine, risk-based compliance monitoring, and as such they do not know whether statements of audit conditions are being complied with—even if they are in the form of section 173 agreements.

Compounding this, if the councils wanted to undertake routine risk-based monitoring, their systems do not support it. None of the audited councils had systems to record conditions. They therefore lacked the basic information needed to inform compliance monitoring. This represents obvious risks that compliance with the conditions will not occur. Figure 4B demonstrates an example where conditions were not monitored.

Figure 4B
Case Study 3—City of Yarra

In 2004, the Victorian Civil and Administrative Tribunal (VCAT) directed **Yarra City Council** to issue a permit for a development of buildings above a basement car park (Site C). The permit included a condition requiring an environmental audit to assess the suitability of Site C for the proposed use.

The environmental audit, completed in 2006, found widespread contamination on-site, including groundwater contamination and soil vapour emissions. Consequently, a Statement of Environmental Audit was issued, which required that there be a basement car park ventilation system to mitigate risk of vapour emissions, and to monitor, manage and mitigate off-site contamination of groundwater.

The planning permit was issued before the completion of the environmental audit and therefore the ongoing requirements to manage the contamination issues at the site were not incorporated in any legislative tool attached to the site, such as a section 173 agreement or land title.

Yarra City Council and the developer were unaware of who was responsible for implementing the ongoing conditions attached to the management plan, and Yarra City Council was also unaware whether these conditions were being complied with.

If the basement car park ventilation system is not managed according to the Site Management Plan, it could pose a serious health risk to residents due to the build-up of contaminated vapours in an enclosed space. Similarly, if groundwater monitoring is not conducted and reviewed in accordance with the management plan, there is a risk of off-site contamination posing a risk to the beneficial uses of the groundwater downstream.

In addition, future residents may be unaware of the contamination issues and possible risks on the site as the details of the contamination issues are not easily accessible to new residents or tenants.

Source: Victorian Auditor-General's Office.

All councils audited acknowledged the need to improve compliance and enforcement activities and procedures associated with contaminated sites. Brimbank City Council and Yarra City Council identified the need for more proactive compliance activities and have indicated that it is an area of high priority, including increasing resources for these activities

Enforcement

Enforcement actions should act as a deterrent by holding offenders accountable. They also present the opportunity to educate and inform the community and industry about appropriate behaviour relating to the use and redevelopment of potentially contaminated and contaminated sites.

If developers or proponents do not comply with requirements set out in planning permit conditions or planning scheme amendment provisions, graduated enforcement actions such as infringement notices, enforcement orders or prosecutions should be undertaken by responsible authorities. However, the lack of compliance monitoring activities associated with contaminated sites has led to no or very limited appropriate and timely enforcement actions.

Notwithstanding that routine compliance monitoring does not occur, councils advised that enforcement around potentially contaminated and contaminated sites is also hampered by a range of issues, including:

- prosecution procedures for non-compliance are slow and cumbersome under the *Planning and Environment Act 1987* and the *Environment Protection Act 1970*, with long delays in accessing VCAT or the Magistrates court. This means that proponents tend to continue undertaking works until the issue is resolved
- councils are hesitant to take proponents to VCAT or court over non-compliance as it is a regulatory burden for compliance enforcement officers. Due to the long delays, the responsible parties have either left the site or finished the project before they can be prosecuted
- difficulty collecting evidence around non-compliance due to a lack of technical capabilities. For example, councils do not have dust monitoring equipment or groundwater monitoring equipment, and therefore are unable to provide evidence of non-compliance in some cases.

Reasons cited for not enforcing non-compliance, such as administrative difficulties and a lack of technical expertise are not adequate, and are within the power of the councils to address. The failure to address this demonstrates the low priority that councils place on compliance and enforcement, even when the risks of non-compliance may be significant.

All councils audited acknowledged the need to improve compliance and enforcement activities and procedures associated with contaminated sites. Brimbank City Council and Yarra City Council identified the need for more proactive compliance activities and have indicated that it is an area of high priority, including increasing resources for these activities.

Recommendation

4. Councils, with the support of the Department of Planning and Community Development, should:
   - develop systems to capture ongoing site conditions to inform their compliance monitoring activities around the development, management and clean-up of contaminated sites
   - develop compliance monitoring programs and enforcement processes, consistent with better practice, and perform these activities on a routine basis
   - assess the level of expertise and financial resources required to accurately manage and clean up high-risk sites.

Appendix A.
Case studies

Case study 1—Site A, City of Maribyrnong

Background

Site A is a residential area within the City of Maribyrnong. Between the 1930s and 1960s, the site, which was a privately owned quarry, was used as a landfill for foundry wastes. After infilling the landfill, the area and its surrounds were redeveloped for low density residential use from 1956 to 1970. Maribyrnong City Council owns a site within Site A.

Maribyrnong City Council identified Site A was contaminated in 1994, with health risks identified in 1999. Twenty-two residential properties surrounding the former quarry site are contaminated with PAHs (polycyclic aromatic hydrocarbons—by-products of fuel burning), benzo[a]pyrene, lead and other metals due to the quarry infill material and the smearing of this material during earthworks to level the surface prior to redevelopment. Twelve of these properties have been identified as posing a potential health risk to children as contaminant levels exceed recommended criteria, while a further four pose an actual risk because of children residing at these properties. The remaining six properties are potentially contaminated, with potential health risks.

Since the Maribyrnong City Council identified the contamination in 1994, Site A has been subject to a range of activities. The following chronology outlines these.

1994

Maribyrnong City Council undertakes sampling of a site that it owns. The sampling shows high levels of contamination.

Assessments and reports produced following the sampling recommend an environmental audit and a health risk assessment be undertaken. They also recommended a long-term management strategy be developed. **This was not done**.

1998

The processes undertaken in 1994 are repeated. This time, Maribyrnong City Council notifies the Environment Protection Authority (EPA) about the contamination—four years after the contamination was first identified.

1999

Between May and June, a range of activities were undertaken, culminating in the Minister for Conservation and Land Management being briefed and residents neighbouring the site being advised.

In May, Maribyrnong City Council conducted further sampling, and produced a report based on the assessment. The report made no recommendations.

In June, the EPA conducted sampling, which identified that 22 sites in the area were contaminated. An environmental assessment report was produced, which identified the properties that were contaminated with high levels of metals and PAHs. The EPA recommended that Maribyrnong City Council undertake an environmental audit. **This was not done**.

Also in June, the EPA briefed the Minister for Conservation and Land Management on the status of the contamination within Site A. The EPA, together with the then Department of Human Services (DHS) developed a community information bulletin and advised residents of the contamination issues and health risks.

2000–2003

In March 2000, the EPA and DHS produced a human health risk assessment report. The report identified high levels of arsenic, cadmium, copper, lead, benzo[a]pyrene (a carcinogen found in coal tar and exhaust fumes) and PAHs at the 22 properties. The lead was at levels that posed a risk to children. Legal advice obtained by the council recommended that a notification program for new owners and residents be developed to advise them of the risks. **This was not done**.

The Minister for Environment and Conservation was again briefed, this time on the human health risk assessment and the need to clean-up selected high risk properties. The Minister for Environment and Conservation requested that the EPA establish an inter-departmental committee to address orphan site issues, such as those affecting Site A. **This was not done**.

In June, residents were again advised by the EPA and the council on the human health risk assessment results. Short-term actions to mitigate health risks were communicated to residents, however, there has never been any follow-up to determine whether the residents had implemented these actions.

In October 2000, the EPA commissioned a bioavailability study of lead at the site. This confirmed the results of the year 2000 human health risk assessment. The results of the EPA's study were not released to the affected residents.

Various meetings between the EPA, Maribyrnong City Council and DHS were held between 2000 and 2003 regarding Site A. However, none of these meetings resulted in any on-ground clean-up actions. There is no record of any meetings between Maribyrnong City Council and the EPA between 2003 and the end of 2006, and **no action** to address the issues at Site A occurred in those three years.

2007

In October, the Minister for Environment and Climate Change was briefed by the EPA and advised that further investigations were underway at Site A.

2008

In July 2008, the EPA signed a draft memorandum of understanding (MOU) between itself and Maribyrnong City Council. The MOU defined the proposed project methodology and activities to assess the clean-up of Site A. Maribyrnong City Council **did not sign** the MOU, and as a consequence, around $885 000 that the EPA had set aside for assessments and clean-up was not allocated.

Also in July, Maribyrnong City Council obtained legal advice that section 173 agreements were the best way to notify current and future land owners of land contamination status. Maribyrnong City Council advised this was done through its rates notices. However, this was not evidenced on the rates notices for all the effected properties.

In March 2008, the EPA and Maribyrnong City Council meet residents to provide another update. After the update, there is no record of meetings between the EPA and Maribyrnong City Council, and **no action** to address the issues at Site A occurred between then and 2010.

2009

The EPA presented a revised MOU to Maribyrnong City Council. Again, it **did not sign** the MOU due to issues around funding and roles and responsibilities.

2010

The EPA reviewed all of the existing information related to Site A, and produced a report. The report confirmed the previous findings and proposed management actions to address the issues. The EPA also identified that the previous sampling of Site A was insufficient to characterise the current risk.

An environmental audit was started. However, this was only for the council-owned property. No audits of the other 21 properties were undertaken, and no clean-up of the council-owned property occurred.

2011

In March 2011, the EPA presented Maribyrnong City Council with another revised MOU. For the third time, it **did not sign** it, again due to issues around funding and roles and responsibilities.

Between May and June, the EPA obtained funds to clean up the four high-risk sites at Site A and conducted an environmental audit of the remaining area. It developed a project brief for the first phase of remediation for Site A, and for environmental audits for a further 18 properties. The project brief for the remediation of the four identified real risk sites was approved in June 2011, and the remediation will be finalised in November 2011.

Since August 2011, Maribyrnong City Council has begun to collaborate with the EPA in an effort to move forward with managing issues associated with Site A.

Issues

Maribyrnong City Council has known of the contamination issues and the need to clean-up the contamination for 17 years. The EPA has known of these issues for 13 years. The boundaries of the contamination have not been determined, nor all the types of contaminants. The real health risks associated with the contamination are yet to be accurately identified. Despite this, an environmental audit of only the council owned site has occurred.

There is no management plan and no clean-up has occurred, hindered by there being no clarity around roles and responsibilities for the ongoing management. This has potentially resulted in long-term exposure to high levels of contaminants known to pose a health risk, particularly to children.

Effective and timely action by the Maribyrnong City Council and the EPA to address contamination issues at Site A has also been hindered by the gaps and a lack of clarity in the framework. For example:

- there are no mandatory reporting requirements under the framework to report known contaminated sites to the EPA, hence, a delay of four years in reporting this site to the EPA
- the absence of a mechanism in the regulatory framework to require the clean-up and management of such sites, where a long-term risk to human health has been identified, but is not deemed an imminent risk
- roles and responsibilities for the management and clean-up of these sites under the regulatory framework are not clear
- there is no ongoing and long-term funding for the management of known contaminated sites posing a risk to health and the environment.

There have also been poorly applied council processes. Seven planning permit applications were approved for Site A and surrounding areas since 1998. Despite this, contamination was not raised as an issue for any, either as part of planning permit, building permit or the delegate assessment report for the approval of the permits.

Impacts and risks

Maribyrnong City Council and the EPA have demonstrated poor due diligence and a poor duty of care to the residents and surrounding community of Site A in terms of protecting their health. Health risks associated with the contamination were reported in 2000. Specifically, real health risks to younger and older children were identified in terms of long-term exposure to lead, polyaromatic hydrocarbons, copper, zinc, cadmium and benzo-a-pyrene. Lead can affect the brain and impair intellectual development, while long-term exposure to benzo-a-pyrene has been linked to cancer.

Short-term remediation actions to minimise resident exposure to high levels of contaminants were identified by the EPA and DHS, and communicated to residents in 2001. There has been no monitoring or follow up to determine if residents implemented these actions.

The lack of action reflects a focus by Maribyrnong City Council on liability issues to drive the management of this site, rather than adequately addressing the risks posed to the health of the residents and the surrounding environment. This is evidenced by legal advice provided to council in 2008, stating that 'Council may face liability if it has been complicit or actively encouraged a management regime which later proves to be inadequate'.

If Maribyrnong City Council and the EPA followed a diligent process, such as undertaking an audit by an EPA approved auditor, the liability would have rested with the EPA accredited auditor if the management regime was inadequate. This would be unlikely given auditors' expertise and qualifications.

Case study 2—Site B, Department of Sustainability and Environment

Background

Site B is a large public use/open space site in the City of Yarra, which DSE manage on behalf of the Crown. The site is located adjacent to the Yarra River at a steep incline and forms part of a reserve, which includes barbeque facilities and picnic tables.

In 2004, DSE wrote to the Yarra City Council asking them to purchase, or become the Committee of Management, for the site. Yarra City Council undertook an initial environmental site assessment to inform its decision. The assessment rated the potential for site contamination as very high. This rating was based on the previous industrial land use of the site, and visual inspection of exposed topsoil at one location on the site.

The inspection found debris and fill material, and soil colour that indicated the possible presence of contamination by heavy metals and hydrocarbons. Based on the preliminary site assessment, Yarra City Council indicated to DSE it would take over management of the site if DSE agreed to pay for its clean up. DSE did not agree to the request and, as such, the council refused DSE's offer, citing the presence of soil contamination and consequent risk management issues.

Issues

Since 2004 DSE has known that the site poses a potential risk to the environment and to the human health of users of the site. The site has not been cleaned up and no short term actions have been implemented to either monitor the risk to the Yarra River, such as groundwater monitoring, or to protect the public from exposure to the soil, such as fencing and removal of barbeque and picnic facilities.

DSE advised that, after reviewing the site assessment in 2004, it was satisfied that no immediate and substantive further action was warranted. However, DSE was unable to provide documentation to evidence their decision to take no further action. Consequently, we cannot be assured that DSE's rationale for taking no further action was soundly based.

On 24 November 2011, DSE informed us that it had recently completed soil sampling on three locations at Site B. DSE advised that the condition of the soil did not present an unacceptable risk to the human health of site occupants. We have not had the opportunity to verify the results or the adequacy of this analysis.

There is no legislative requirement to clean up or report the site, even though it is currently used by the public and poses a potential risk. The site is not registered on the Priority Sites Register—the only register available for community information—as the EPA has not issued a clean-up notice.

DSE owns a number of similar sites abutting the Yarra River, but no assessment of these sites has been undertaken, even though past industrial use indicates there is potential for the sites to also be contaminated.

Case study 3—Site C, City of Yarra

Background

In 2004, the Victorian Civil and Administrative Tribunal (VCAT) directed Yarra City Council to issue a permit for the development of two, four-storey and two, three-storey buildings above a basement car park (Site C). The permit included a condition requiring an environmental audit be undertaken to assess the suitability of Site C for the proposed use.

The environmental audit, completed in 2006, found widespread contamination on-site, including groundwater contamination and soil vapour emissions. Consequently, a Statement of Environmental Audit (SoEA) was issued, which contained several conditions that must be met prior to use, and as a part of the ongoing management of Site C.

The ongoing management conditions included the development of:

- a site management plan to define the responsibilities and measures required to manage and maintain a basement car park ventilation system to mitigate the risks posed by vapour emissions
- a groundwater quality management plan to monitor, manage and mitigate off-site contamination of groundwater.

In 2008, an EPA-appointed auditor provided Yarra City Council with a letter confirming that the developer had complied with all conditions set out in the SoEA.

Issues

The two management plans list a range of ongoing management and monitoring requirements associated with the groundwater and ventilation systems, so that ongoing risks associated with the use of the site posed by the contamination continue to be managed effectively.

The permit was issued before the completion of the environmental audit and, therefore, the ongoing requirements to manage the contamination issues at the site were not incorporated in any legislative tool attached to the site, such as a section 173 agreement or land title.

Yarra City Council and the developer were unaware of who was responsible for implementing the ongoing conditions attached to the management plan, and Yarra City Council was also unaware whether these conditions were being complied with. It indicated that this was not its responsibility and did not have the technical expertise to do so. While it is not clear where this responsibility lies under the regulatory framework, the Planning Practice Note indicates that councils should have liaised with the EPA in relation to ongoing management conditions associated with groundwater contamination. **This did not occur**.

There is no trigger on the council files to indicate there is ongoing site management conditions associated with the site. The conditions for these management plans can only be found in the 2006 SoEA, which is only referred to in a section 32 statement—a legal statement prepared by a vendor that details any matters affecting a site or its condition—if the site was to be sold.

Impacts and risks

If the basement car park ventilation system is not managed according to the Site Management Plan, it could pose a serious health risk to residents due to the build-up of contaminated vapours in an enclosed space. Similarly, if groundwater monitoring is not conducted and reviewed in accordance with the management plan, there is a risk of off-site contamination posing a risk to the beneficial uses of the groundwater downstream.

In addition, future residents may be unaware of the contamination issues and possible risks on the site as the details of these are not easily accessible to new residents or tenants.

Case study 4—Site D, Department of Planning and Community Development

Background

An application for high density residential development in inner Melbourne was referred to a range of agencies for comment under section 55 of the *Planning and Environment Act 1987* by the Department of Planning and Community Development (DPCD), acting as a responsible authority. DPCD did not raise the issue of potential contamination during the pre-application meeting with the developer, or in its initial assessment of the application.

Even though the application was for a sensitive use, of all the referral authorities, including the EPA, only the City of Melbourne recommended a site assessment be undertaken due to the past uses of the site and potential contamination issues.

DPCD requested a site assessment, which indicated an audit was not required. The responsible authority referred the site assessment to the EPA, which initially recommended DPCD pay for a peer review by a suitably qualified person to assess the technical adequacy of the site assessment. **DPCD chose not to do this**.

In the interim, works commenced on the site, as the proponent had complied with the requirements of the planning permit. During early works, site workers discovered contamination. The EPA then reviewed the site assessment, determined it was inadequate and required an audit. The EPA issued a clean-up notice and works on the site were suspended, subject to the completion of an audit indicating the site was suitable for the intended use.

Issues

The trigger to require either an audit or site assessment for a sensitive use associated with a planning permit application is not clear under the framework, leading to situations such as this.

While a site assessment is seen as the first step to determine if an audit is required, the technical expertise to assess the adequacy of a site assessment and its recommendations do not reside within responsible authorities. While the EPA appointed auditors and the EPA review the technical adequacy of audits, there is no such clarity for the technical rigour of site assessments. This is particularly so in determining whether and when a peer review of a site assessment should be required, who should do it and who should pay for it.

Impacts and risk

Planning approval was issued prior to a site assessment or audit being undertaken. It is now unclear if the site is appropriate for the intended use, even though approval was given and works started. This has resulted in avoidable time delays and costs to the developer. Due to the inadequate assessment, site workers were potentially exposed to avoidable health risks associated with the contamination.

Case study 5—Site E, City of Maribyrnong

Background

Site E is a former quarry site and now a reserve in the City of Maribyrnong. The site is known to be contaminated due its past quarrying history, resulting in soil contamination and vapours. The site now includes two recreation centres and grassed open areas with public seating. One of the recreation centres is used by older people, while the other is used for outside school hours care. Residential properties abut the reserve, including two neighbouring properties located over the old quarry footprint.

Maribyrnong City Council is undertaking a stage 1 environmental assessment, being a due diligence information review of the surroundings of the site, as a part of a proposal to redevelop the area.

Issues

While the assessment indicates that Site E is contaminated, the extent of contamination is only known to Maribyrnong City Council. There has been no communication with property owners whose houses are located on the footprint of the old quarry, surrounding residents, or users of the recreation centres. As there are no mandatory reporting requirements, Maribyrnong City Council is not required to report the site to the EPA or any other agency.

The boundaries of the stage 1 assessment do not include any assessment or monitoring of the neighbouring residences or any assessment of the extent of the contamination beyond the quarry footprint. Based on experience from other similar sites, it is likely that during the redevelopment of Site E, contaminated soils were spread beyond the footprint of the quarry hole. As a consequence, a number of the neighbouring properties may be located on contaminated soil that potentially poses a health risk to the residents of those properties.

The environmental consultants employed by Maribyrnong City Council to undertake the due diligence process advised it to consider an audit 'given the identified potential risks and current and proposed community uses'. **This has not been done.**

Impacts and risks

The current assessment that Maribyrnong City Council is undertaking will not define the extent of the contamination. As a consequence, there is no risk assessment of the public health impacts of the contamination to users of the site, the residents located on the quarry footprint or adjacent to the quarry, where contaminated soils may have been spread for development.

Appendix B.

Audit Act 1994 section 16—submissions and comments

Introduction

In accordance with section 16(3) of the *Audit Act 1994* a copy of this report was provided to the Department of Planning and Community Development, the Environment Protection Authority, Brimbank, Maribyrnong and Yarra city councils, and the Department of Sustainability and Environment with a request for submissions or comments.

Responses were received as follows:

The submission and comments provided are not subject to audit nor the evidentiary standards required to reach an audit conclusion. Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

Submissions and comments received

RESPONSE provided by the Secretary, Department of Planning and Community Development

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Ref CSEC003026

24 NOV 2011

RECEIVED 25 NOV 2011 VICTORIAN AUDITOR-GENERAL'S OFFICE

Mr Des Pearson
Auditor-General
Victorian Auditor-General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Dear Mr Pearson

PROPOSED AUDIT REPORT: *MANAGING CONTAMINATED SITES*

Thank you for providing me with a copy of the proposed report *Managing Contaminated Sites* in accordance with section 16(3) of the *Audit Act 1994*.

The Department supports the broad finding that the current regulatory framework for managing contaminated and potentially contaminated sites will benefit from a comprehensive review.

Victoria has historically experienced significant changes in how land is used and developed and how the activities associated with harmful materials and processes are conducted and regulated. New and developing capabilities to identify and respond to land contamination and the need to facilitate the redevelopment of existing urban areas that are undergoing change as a result of Victoria's strong growth makes it timely to review the regulatory framework in this area.

The land use and development planning system is an important tool for managing the appropriate use and development of land. The Department therefore welcomes the opportunity to take a leading role in developing the Government's response to these issues.

As noted in the report, the Minister for Planning has already established an advisory committee that is reviewing the operation of the planning system provisions for potentially contaminated land. This work will respond directly to a number of the matters identified, in particular in Recommendations 1 and 2. The Environment Protection Authority is working closely with the Department as part of this review process. The advisory committee will provide its report in early 2012.

In relation to that part of Recommendation 2 that recommends that the Department assume responsibility and accountability for the leadership, coordination and oversight of the contaminated sites framework, the Department supports the concept of a single point of responsibility, but considers that a decision about who this should most appropriately be should best be determined once the outcome of the Recommendation 1 review is available.

In relation to a number of other matters mentioned in the report, I would like to record the following comments.

State Government Victoria

RESPONSE provided by the Secretary, Department of Planning and Community Development – continued

Firstly, the report notes that the Department has not identified the risks associated with sites that are owned or managed by the Minister for Planning. The Minister for Planning owns approximately fifty properties across the State. They include land acquired for future road and rail purposes, a number of heritage properties and some residential properties.

While no comprehensive risk analysis of these properties has been undertaken, the acquisition due diligence process does include an investigation of the previous uses of each site and the results of these are known to the Department.

Secondly, the report states that '*DPCD did not apply the EAO over the Docklands area, as they submitted it may result in a decrease in the market value of the land.*'

This comment was derived from the report of the panel for Amendment C92 to the Melbourne Planning Scheme and reflects a comment made by the Department's then legal representative that was not consistent with the Department's written submission to the hearing.

In fact there were other reasons why the Department did not apply the Environmental Audit Overlay to the Docklands area. Broadly, the Docklands Zone represents a translation of the former Docklands Planning Scheme into the VPP format so that it can be included in the Melbourne Planning Scheme. The contaminated land provisions were embedded in the zoning in the former scheme and were retained in that way in the new Docklands Zone. While this is a 'non-standard' approach, the provisions are equivalent to the Environmental Audit Overlay provisions, so there is no lessening of the requirement compared to other areas.

Yours sincerely

Andrew Tongue
SECRETARY

cc Mr Chris Sheard

RESPONSE provided by the Chairman, Environment Protection Authority

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23 November, 2011

Mr DDR Pearson
Auditor General
Victorian Auditor-General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Dear Mr Pearson,

Re: Proposed Audit Report – Contaminated Sites

Thank you for the opportunity to comment on the proposed audit report for contaminated sites. EPA appreciates the insights external reviews can provide and endeavours to use them as opportunities to provide greater transparency to our operations and improve our systems and processes.

As the report notes, contamination is a complex issue that many jurisdictions in Australia and around the world are only just beginning to address. Victoria has been contaminating land almost since its foundation. In many cases our generation has been burdened with past practices that would not be acceptable with today's understanding of human and environmental health.

Since the issue gained prominence in the late 1980's, Victoria has adopted an approach of dealing with contamination through the planning process. EPA supports this approach and believes it offers the most effective and efficient solution to deal with contaminated sites. Even then, this state-wide problem has no simple solution and it will take some time to identify problem sites and mitigate the risks. While our community engagement program has allowed us to tap into local knowledge about potentially contaminated sites, it is only through detailed analysis that we will we be able to properly identify and quantify the sites that are contaminated, and by what.

We also appreciate that the report acknowledges our efforts in the last two years to reform the way we work. One significant program is our ongoing effort to overhaul and formalise our approach to compliance and enforcement. This will improve the way we work to ensure that future generations will not be saddled with the historical burden we currently face, but it must be recognised that solutions to past contamination will be expensive to mitigate and will take time to implement. We agree that the magnitude of the task will require a partnership between all those involved - from planners, to government and industry. EPA is committed to ensuring this happens.

State Government Victoria

RESPONSE provided by the Chairman, Environment Protection Authority – continued

The report makes four recommendations for improvement, two of which involve EPA. We accept the recommendations and are committed to seeing improvement in planning system regulations governing the maintenance and remediation of contaminated land by those with responsibility to address contamination. Specifically:

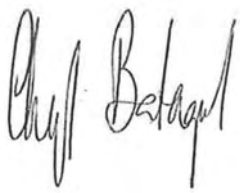
- Recommendation One – We will be working closely to assist the Department of Planning and Community Development as they address the significant issue of providing the necessary Framework to allow all participants in the system to have a clear understanding of their obligations and responsibilities in managing and remediating contaminated land.

- Recommendation Three - EPA has already identified 'dealing with past pollution' as one of three strategic priorities in the EPA 5 Year Plan (2011-16). A key objective under this program is to improve the management of contaminated environments and their impacts.

  EPA has committed to the implementation of an action plan to identify priority sites, make information available to the public and put processes in place to safely manage these environments. Work to improve our efforts is already underway. We have realigned our business to commit more resources to compliance, enforcement and contaminated site identification and management. We are also well into an engagement program to strengthen relationships with community, industry and government as the foundation for continuing this work.

As with the previous VAGO reviews, EPA will continue to reform through external examination and is committed to adapting the way we work to ensure we meet our vision of ***a healthy environment that supports a liveable and prosperous Victoria.***

Regards



Cheryl Batagol
Chairman
EPA Victoria

RESPONSE provided by the Chief Executive Officer, Brimbank City Council

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File: SUB/002383:04
TRIM: 11/086252

23 November 2011

Mr D D R Pearson
Auditor-General
Victorian Auditor-General's Office
Level 24, 35 Collins Street
MELBOURNE VIC 3000

Dear Mr Pearson,

Re: Proposed Audit Report, Managing Contaminated Land

I refer to the above proposed report provided to Council on 17 November 2011.

Council believes the management of contaminated land is of the utmost importance for the protection of human health and the environment.

The proposed report identifies many of the issues with the current contaminated land management system in Victoria. Council is pleased that issues with the complexity of the system and the need for better oversight have been identified. Any solutions will require the cooperation of all parties associated with contaminated land management.

Council will have regard to the findings in continuing to improve the management of contaminated land in Brimbank.

Thank you for the opportunity to participate in the audit.

Yours sincerely

NICHOLAS FOA
CHIEF EXECUTIVE OFFICER

RESPONSE provided by the Chief Executive Officer, Maribyrnong City Council

22 November 2011

Mr D Pearson
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Dear Mr Pearson

Victorian Auditor-General Report Managing Contaminated Sites

Thank you for the opportunity to comment on the VAGO revised Final Draft Report on Managing Contaminated Sites, as provided on 17 November 2011.

The report provides a detailed review of the management of contaminated land, and has highlighted a number of matters regarding processes in identifying and managing contaminated land.

Council officers have reviewed the document and wish to make the following general comments to further assist your office about Council's practice in dealing with contaminated land.

It should be noted that it is Maribyrnong City Council's Local Planning Policy to ensure that potentially contaminated land is identified, appropriately tested and remediated to a standard suitable for the intended use or development.

The principal objective of the policy is:

- *To properly address public health and safety issues and threats to the environment associated with land contamination.*
- *To the extent that is reasonable, identify any contamination issues likely to be encountered and any potential impacts of contamination on proposed land use and development.*

Council officers have taken a lead in developing the policy in order to provide direction in the Maribyrnong Planning Scheme that addresses the complexities of the environmental auditing and the planning approval systems.

Further, with regard to identifying potentially contaminated land, a mapping exercise of all known quarries within the City of Maribyrnong and surrounds is nearing completion by Environmental Consultants on behalf of Council. Following the mapping, former landfill sites will be further investigated to assist Council's review of obligations in relation to the "*Best Practice Environmental Management –Siting, Design, Operation and Rehabilitation of Landfills, EPA Publication 788.1 September 2010.*

RESPONSE provided by the Chief Executive Officer, Maribyrnong City Council – continued

In addition, Council has been burdened with considerable costs in managing, testing and preparing environmental management plans for Council owned sites. The use of specialised legal and environmental opinions have been required and relied upon to ensure that all particular requirements are identified and adequately addressed, in what is a complex maze of requirements and responsibilities. To add to the complexity, the regulatory requirements and science in managing contaminated land has changed and is constantly evolving which creates difficulty in developing solutions.

Council recognises that there is an urgent need to improve the management of contaminated land, in particular a State resource base indentifying contaminated land, potentially contaminated land and audited land, integrated environmental and planning controls, and a State guiding document addressing managing contaminated land.

Council supports the findings and recommendations of the Report.

Yours faithfully

Vince Haining
Chief Executive Officer

Copy: Mayor, Cr Carter – City of Maribyrnong
Mr Chris Sheard (chris.sheard@audit.vic.gov.au)

RESPONSE provided by the Chief Executive Officer, Yarra City Council

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22 November 2011

Mr DDR Pearson
Auditor- General Victoria
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RECEIVED
23 NOV 2011
VICTORIAN AUDITOR-GENERAL'S OFFICE

Dear Mr Pearson

Submission to Proposed Audit Report
Managing Contaminated Sites

Pursuant to section 16 (3) (b) of the Audit Act 1994, Yarra City Council makes the following submission and comments in relation to the Proposed Audit Report – *Managing Contaminated Sites*:

1. Council agrees that the current regulatory framework is overly complex and roles and responsibilities are not as clear as they should be if potentially contaminated land is to be managed appropriately. The need for a systematic and coordinated review of the entire regulatory framework for the management of potentially contaminated and contaminated sites and the need for one agency to assume responsibility and accountability for the leadership, coordination and oversight of the contaminated sites framework is also recognised.

2. Recommendation 1 refers to consultation with councils in relation to the review of the regulatory framework by the Department of Planning and Community Development, assisted by the Environment Protection Authority. However it is also critical that councils also be consulted in relation to the implementation of Recommendations 2 and 3 which refer to the establishment of mechanisms and processes by both the DPCD and the EPA.

3. Yarra City Council has already identified the need for improvement to Council's processes to better support monitoring of permit conditions relating to environmental audits and the necessary improvements to Council's property and rating system have been completed and the system is being implemented.

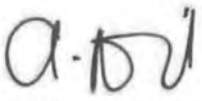
4. It is noted that the report (Recommendation 4) recommends that Councils, with the support of DPCD, should develop systems to capture ongoing site conditions, develop and implement compliance monitoring programs and enforcement processes, and manage and clean up high risk sites. As was identified during the conduct of the audit, this will have very significant resource implications for councils (both financial and expertise) which need to be acknowledged and supported by the State government.

RESPONSE provided by the Chief Executive Officer, Yarra City Council – continued

Council appreciates the opportunity to be involved in the audit and in particular the associated comprehensive consultative process with all participants and we look forward to Parliament's consideration of the report's recommendations.

As identified in the audit, the regulatory framework for the management of contaminated sites in Victoria is currently very complex and the role and responsibility of local government is not clear. It is hoped that the recommendations of this audit, together with the parallel Ministerial Advisory Committee's examination of the existing planning controls and processes for potentially contaminated land, which is currently being undertaken, will assist to improve management of potentially contaminated land in Victoria.

Yours sincerely



Dr. Andi Diamond
Chief Executive Officer

c.c. *Cr Alison Clarke, Mayor, Yarra City Council*
Chris Sheard, via email: chris.sheard@audit.vic.gov.au

RESPONSE provided by the Secretary, Department of Sustainability and Environment

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Mr D D R Pearson
Auditor-General
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RECEIVED
30 NOV 2011
VICTORIAN AUDITOR-GENERAL OFFICE

Dear Mr Pearson

MANAGING CONTAMINATED SITES AUDIT

I write in reply to correspondence issued by your Office on 29 November 2011 inviting written submission or comments on an extract of the proposed Draft Report Managing Contaminated Sites Audit.

The extract refers to a site in the City of Yarra which the Department of Sustainability and Environment (DSE) manages on behalf of the Crown. The site is listed as a case study in Figure 2E, case study 2 of 5 and is referred to in the text of the report under 'Case Study 2 – Site B, Department of Sustainability and Environment'.

After detailed discussions with your office, I accept the audits findings.

Yours sincerely

Greg Wilson
Secretary

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Biotechnology in Victoria: the Public Sector's Investment (2011–12:1)	August 2011
Developing Cycling as a Safe and Appealing Mode of Transport (2011–12:2)	August 2011
Road Safety Camera Program (2011–12:3)	August 2011
Business Planning for Major Capital Works and Recurrent Services in Local Government (2011–12:4)	September 2011
Individualised Funding for Disability Services (2011–12:5)	September 2011
Supporting Changes in Farming Practices: Sustainable Irrigation (2011–12:6)	October 2011
Maternity Services: Capacity (2011–12:7)	October 2011
Procurement Practices in the Health Sector (2011–12:8)	October 2011
TAFE Governance (2011–12:9)	October 2011
Auditor-General's Report on the Annual Financial Report of the State of Victoria, 2010–11 (2011–12:10)	November 2011
Public Hospitals: Results of the 2010–11 Audits (2011–12:11)	November 2011
Water Entities: Results of the 2010–11 Audits (2011–12:12)	November 2011
Portfolio Departments and Associated Entities: Results of the 2010–11 Audits (2011–12:13)	November 2011
Local Government: Results of the 2010–11 Audits (2011–12:14)	November 2011
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