Brookland Greens Estate –
Investigation into methane gas leaks

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LETTER TO THE LEGISLATIVE COUNCIL AND THE LEGISLATIVE ASSEMBLY

To
The Honourable the President of the Legislative Council
and
The Honourable the Speaker of the Legislative Assembly


G E Brouwer
OMBUDSMAN
14 October 2009
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CHRONOLOGY

14 April 1992 Works approval for the Stevensons Road landfill (the landfill) issued by the Environment Protection Authority Victoria (EPA) to the Shire of Cranbourne (the Shire).

2 February 1993 Planning permit for the landfill issued by the Shire.

15 December 1994 The City of Casey formed as a result of Victorian local government amalgamations.

19 September 1995 Select Earthmoving (Select) contracted by South Eastern Regional Waste Management Group to design and establish the landfill and operate the landfill for five years.

19 October 1995 Waste Disposal Agreement signed by the cities of Casey and Frankston and the South Eastern Regional Waste Management Group.

3 June 1996 The EPA issued waste discharge licence to the South Eastern Regional Waste Management Group. The landfill commenced operation.

1999 Peet & Co Casey Land Syndicate Limited (Peet) began construction of Brookland Greens estate (the estate).

17 February 2000, Planning panel considered Amendment C6 to the City of Casey’s planning scheme. Amendment C6 proposed rezoning land to Residential Zone 1 to facilitate further development of the estate.
28 February 2000, 17 April 2000

15 August 2000 Amendment C6 adopted by the City of Casey.

16 August 2000 The City of Casey and Peet entered into a Section 173 Agreement stipulating no homes to be built within a 200 metre buffer of the landfill.

1 November 2001 Grosvenor Lodge contracted by the City of Casey to operate the landfill.

4 March 2002 Landfill Gas Agreement executed between the City of Casey and Energex.

31 July 2002 Waste discharge licence transferred from the South Eastern Regional Waste Management Group to Grosvenor Lodge.

10 June 2003 SITA contracted by the cities of Casey and Frankston as landfill manager.

3-5 May 2004 Victorian Civil and Administrative Tribunal (VCAT) hearing considered planning permit to develop Stage 10 of the estate. Stage 10 included land situated within the 200 metre landfill buffer. VCAT approved Peet’s proposal to reduce the buffer along the western landfill boundary.

7 June 2005 Waste discharge licence transferred from Grosvenor Lodge to the City of Casey.

24 June 2005 The landfill ceased operation.
2 March 2006  The EPA was notified via an anonymous complaint of bubbling stormwater puddles on an unsealed road within the partially constructed estate.

10 March 2006  After preliminary testing of puddles, Landfill Management Services (LMS) confirmed landfill gas containing methane and carbon dioxide was migrating laterally from the landfill into the estate.

31 October 2006  Mr Stuart Hercules was contracted by the City of Casey to manage rehabilitation of the landfill.

3 January 2007  The EPA issued a post-closure Pollution Abatement Notice relating to the landfill to the City of Casey.

2 February 2007  Pollution Abatement Notice took effect.

7 February 2007  Waste discharge licence revoked.

31 August 2008  Methane gas detected at 63% volume for volume of air within a house in the estate.

9 September 2008  Emergency management arrangements were implemented based on advice from the EPA indicating imminent danger to residents. The Country Fire Authority (CFA) responsible for leading the emergency response.

31 October 2008  The CFA announced de-escalation of the emergency based on advice indicating risk to residents was tolerable.
EXECUTIVE SUMMARY

1. On 15 September 2008, I received a letter from the Acting Premier, the Hon Rob Hulls MP, regarding problems at the Brookland Greens housing estate (the estate) in Cranbourne. Methane, a component of landfill gas, was reportedly leaking from the site of the closed Stevensons Road landfill (the landfill) adjacent to the estate and had been detected at dangerous levels in a number of locations, including homes in the estate.

2. On 9 September 2008, emergency management arrangements were implemented in response to advice received from the Environment Protection Authority Victoria (EPA) that the landfill represented an imminent danger to residents in the estate. As a result, the Country Fire Authority Victoria (CFA) advised residents to consider evacuating their homes.

3. Given the seriousness of the matter and its widespread impact, and in accordance with section 14(1) of the Ombudsman Act 1973, I initiated on my own motion an investigation into the circumstances surrounding the presence of methane gas in the estate.

4. My investigation was concerned not only with the declaration of the emergency and the current state of the landfill, but also with the administrative actions that led to the current situation. This included the regulatory approval process that allowed the landfill to be created in the first place; the oversight of the landfill during its operational life by the City of Casey; the Frankston City Council and the EPA; and the process that allowed the housing estate to be built adjacent to the landfill.

5. My investigation was concerned with the following five key issues:
   1. Approval for the landfill
   2. Management of the landfill
   3. EPA enforcement in relation to the landfill
   4. Planning decisions affecting the estate
   5. Safety of residents in the estate.

Approval for the landfill

6. To prepare and operate a landfill at the Stevensons Road site, the City of Casey’s predecessor, the Shire of Cranbourne (the Shire), applied for a works approval which the EPA granted in 1992. The works approval allowed the landfill to accept putrescible waste, which is biodegradable and produces landfill gas.

7. My investigation revealed that the EPA intended the landfill to be lined with compacted clay if it was to accept such waste. A landfill liner assists in the control of leachate which in turn affects the control of landfill gas.
Failure of the EPA to properly process and assess applications for works approval

8. I identified that the EPA failed to efficiently process the Shire’s works approvals by providing conflicting advice and causing unreasonable delay. As a result, the EPA failed to assess the applications for works approval within the legislated timeframe. While these initial failures on the part of the EPA are minor in themselves, they contributed to a poor outcome at the landfill and provided the Shire with the opportunity to resist conditions proposed by the EPA.

9. My investigation identified that the EPA’s assessments of the Shire’s works approval applications were inadequate. The applications contained errors and the EPA failed to properly explore all assertions. The EPA also failed to properly assess the Shire’s applications for works approval partly through lack of expertise and partly through allowing the outcome to be the subject of negotiation.

10. One significant error of the EPA was to ignore the condition of the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) 1991 that prohibited landfilling below the level of the water table ‘unless written permission from the Authority has been obtained’. Without addressing this condition explicitly in the assessment of the works approvals, the EPA should not have granted permission for the landfill which was not only below the level of the water table, but interrupted a substantial nearby aquifer.

11. Of further concern is that the EPA’s position was influenced by pressure from the Shire and reluctance on the part of the EPA to appear before the Victorian Civil and Administrative Tribunal’s (VCAT’s) predecessor, the Administrative Appeals Tribunal (AAT), as a result of having lost an appeal in 1991 (the Camberwell case)\(^1\) in respect of a works approval for a landfill. It is evident that the conditions set by the EPA in the Stevensons Road landfill works approvals in 1992 were affected by a perception of vulnerability and concern of being overruled by the AAT.

12. I identified evidence that the EPA favoured the use of landfill liners by 1992 and had required some landfills as early as 1987 to be clay lined. Landfill liners were included in the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste), although not as a compulsory condition. Importantly, the EPA’s initial intention to require lining or limit the waste type to solid inert only at the Stevensons Road landfill would appear to demonstrate a belief in the EPA that at that time (1992) lining was a necessary feature of putrescible landfills. Despite this, the EPA agreed, following a series of meetings with the Shire, to allow an unlined putrescible landfill at Stevensons Road.

\(^1\) City of Camberwell v Environment Protection Authority 1991, AAT.
The Shire’s contention in 1992 that a landfill liner would be expensive ($500,000) to install should not have been taken into account by the EPA. Clearly, environmental standards should not be compromised for the sake of an agency saving money. By allowing economic considerations to override environmental imperatives, the EPA failed to set conditions for the discharge of waste into the environment. Whether it was pressure to provide good service following a series of inefficiencies; a reluctance to spend money; or the threat of a potential AAT hearing; the EPA should not have allowed external factors to influence its standards on environment protection.

Advances in knowledge and practice in the waste industry have made it easier to criticise the now outdated practices of past decades. However, this investigation revealed issues of poor administration. It is the role of the regulator to ensure assertions made in an application for works approval are in fact correct. I conclude a more thorough assessment of the Shire’s applications for works approval was required.

The EPA maintains ‘that it did not compromise environmental standards’ to save the Shire money and that landfill liners ‘were one of many possible design options available’ in 1992.

While acknowledging errors and delays in the works approval process, the EPA did not consider ‘such issues contributed to poor outcomes at the landfill’.

**Failure of the City of Casey and the South Eastern Regional Waste Management Group to comply with works approval conditions**

My investigation revealed that the City of Casey through its agent, the South Eastern Regional Waste Management Group, failed to comply with the works approval conditions relating to the provision of a leachate collection system. The appointment of the South Eastern Regional Waste Management Group as manager of the landfill does not absolve the City of Casey of overall responsibility. The works approvals were issued to the City of Casey direct and the landfill was owned by the City of Casey. I conclude that the City of Casey and the South Eastern Regional Waste Management Group failed to comply with works approval conditions.

The City of Casey has stated that ‘if there were any compliance issues … it was only because of the actions of the South Eastern Regional Waste Management Group’.
Failure of the Shire of Cranbourne and the City of Casey to have regard to environment protection

20. I am of the opinion that the Shire failed to have regard to environment protection in two ways:
   - It did not recognise its own role in protecting the environment.
   - It sought to affect the role of the EPA in protecting the environment.

21. The South Eastern Regional Waste Management Group also failed to have regard to environment protection, specifically, its own legislated role in that area.

22. The Shire had a duty under the Environment Protection Act 1970 not to pollute the environment and to act in accordance with the goal of the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) to protect the environment. Yet the Shire’s actions in gaining approval for the landfill were consistently motivated by financial considerations, at the expense of the environment. Throughout the works approval application process and during preparation of the site, the Shire’s motivation was clear: to maintain the momentum of the project while minimising costs to the Shire. In its narrow focus on the economics of landfilling, the Shire failed to take account of other factors, namely environmental standards.

23. The City of Casey maintains that the Shire was entitled to ‘make a submission’ to the EPA and ‘cite expert reports which indicated that clay lining was unnecessary’. In the City of Casey’s view, it was the EPA’s decision ‘whether a clay liner was needed’.

24. The City of Casey, through the South Eastern Regional Waste Management Group, was similarly motivated by commercial imperatives in its rejection in 1995 of an environmental consultant’s recommendation for the use of a landfill liner as ‘unnecessary and expensive’.

25. When groundwater inflows were encountered in the preparation of the landfill site, the South Eastern Regional Waste Management Group and the City of Casey considered the financial implications should the landfill not proceed, but gave no consideration to the impact on the environment of an exposed aquifer on the side of the landfill.

Inadequate review and enforcement by the EPA

26. My investigation found that the EPA missed numerous opportunities to improve the standard of the landfill, especially given that works did not begin for several years after approval was granted.
The EPA’s compliance assessment, required by legislation to be conducted upon the completion of works, was poorly done, based as it was on inspection of works that were clearly not complete nor compliant.

27. Despite an intended lifespan of twelve months, the works approvals for the Stevensons Road landfill were allowed to remain valid for more than three years before works commenced. In that time, the EPA did not invalidate, extend or review the works approvals or their conditions. In an industry described by several experts as rapidly developing, this was a case of poor administration by the EPA.

28. When a contractor approached the EPA with concerns about the landfill’s standards, the EPA failed to act other than by writing to the City of Casey to inform it of the contractor’s concerns. I consider that conditions attaching to works approvals for landfills ought to be strengthened and improved over time. The EPA failed to grasp this opportunity.

29. When groundwater inflows were encountered during preparation of the Stevensons Road landfill site, the EPA appeared to be unaware of this issue. This highlights the fact that the works approvals granted in 1992 contained no requirements for monitoring or reporting. The EPA, despite its statutory obligation to undertake inspections to ensure compliance with the Environment Protection Act, does not appear to have visited the Stevensons Road site between the granting of the works approvals in 1992 and its compliance check of finished works in 1996. Had the EPA visited the site or required the holder of the works approval to report any incidents to the EPA, it may have identified the difficulties the operator was having with groundwater inflows and perhaps even the dispute over the lining of the site. This was another missed opportunity.

30. Evidence also revealed the EPA’s compliance assessment, required by legislation to be conducted upon the completion of works, was poorly done, based as it was on inspection of works that were clearly not complete nor compliant. After deciding to issue a works approval for both Lots 10 and 7, in my view the EPA was wrong to sign off on completion of works when only Lot 10 had been prepared for the acceptance of waste. Lot 7 was still being mined for sand. Furthermore, the leachate control system on Lot 10 differed significantly from the specifications of the works approval. The change was made by the South Eastern Regional Waste Management Group without any apparent consultation with the EPA. Yet the EPA found it appropriate to sign off on the works as complete and compliant. I consider this a further example of poor administration by the EPA.

31. When the licence was negotiated and granted, the EPA not only missed an opportunity to require higher standards than those agreed in 1992, but it actually allowed standards to drop.

When the licence was negotiated and granted, the EPA not only missed an opportunity to require higher standards than those agreed in 1992, but it actually allowed standards to drop.
32. I concluded that while there have been significant technological developments in landfill design since the works approval was issued by the EPA in 1992, design standards at the Stevensons Road landfill effectively stood still. Essentially, a landfill conceived in the late 1980s, approved in 1992 and licensed in 1996 continued to operate with no landfill liner up until 2005 when it was closed. In the granting of the works approval for an unlined landfill and the subsequent lost opportunities to require a landfill liner, the EPA failed to set conditions for the protection of the environment.

33. The EPA asserts that the works approvals and licence for the landfill were ‘issued consistent with all then current and relevant statutory policy’. Also, the EPA maintains that it had no reason to suspect that ‘the means proposed to manage the leachate and/or landfill gas in the absence of any liner would not be adequate to protect the environment’.

Conflicts of interest

34. My investigation identified three perceived conflicts of interest in the approval process for the landfill:

   1. EPA officers occupying the dual role of advisor and assessor
   2. the Shire being both applicant and responsible authority for the landfill planning permit
   3. the assessing officer for the EPA transitioning to project officer for the landfill manager.

35. My investigation identified conflict in the role of EPA officers as both advisor and assessor in the works approval process. Providing guidance to applicants regarding the requirements of the EPA in the works approval process is an important function of the EPA. However, this role can conflict with the role of EPA officers in assessing a works approval. The EPA should ensure the assessment of an application for works approval is reviewed by an EPA officer who has not been involved in the assessment process. Otherwise the assessment process may be perceived to be influenced by the type of pressure exerted by the Shire in this case.

36. Also concerning is the conflict of interest involved in the Shire of Cranbourne and later the City of Casey serving as both responsible authority and applicant for the landfill planning permit. As both the agency wishing to retain a valid permit and the agency required to enforce that permit, the Shire of Cranbourne and later the City of Casey had a perceived conflict of interest which may be seen to explain its lack of enforcement of the permit conditions.

37. A perceived conflict of interest also arose when, less than two months after conducting the Stevensons Road site compliance checklist and recommending a licence be granted, the assessing officer for the EPA commenced working for the South Eastern Regional Waste Management Group. I consider the EPA officer’s assessment was very poorly done.
My investigation found that the landfill during its operational and post-closure life was characterised by significant environmental issues including largely uncontrolled and overabundant leachate and poorly controlled gas.

The cities of Casey and Frankston failed to monitor the performance of the many contractors and consultants involved with the landfill.

The EPA maintains that ‘the officer undertook a comprehensive investigation’ of the landfill and there is no evidence of the perceived conflict of interest impacting on the officer’s assessment.

The impact of consultants and administrative appeals

The capitulation of the EPA in the issuing of a works approval for the Stevensons Road landfill was in large part due to: the influence of the Shire of Cranbourne’s environmental consultant who advocated a low level of environmental protection; the EPA’s loss of confidence caused by the Camberwell case; and the potential for another AAT hearing should the EPA issue a works approval not to the liking of the Shire.

It was inappropriate for the EPA to act in this manner. Given its position as the statutory authority responsible for protecting the environment, the EPA should have demonstrated courage in its role.

The EPA denies ‘lacking confidence’ and asserts that ‘it is incorrect to say that EPA capitulated’.

Management of the landfill

My investigation found that the landfill during its operational and post-closure life was characterised by significant environmental issues including largely uncontrolled and overabundant leachate and poorly controlled gas. Contributing to these outcomes were the following general administrative problems:

- poor contract management
- lack of accountability
- poor knowledge management
- poor performance of statutory duty.

Poor contract management

I established that the cities of Casey and Frankston failed to monitor the performance of the many contractors and consultants involved with the landfill. Performance measures were generally lacking in the contracts examined, and where contracts did specify some level of oversight, that oversight was usually not provided. Despite evidence such as environmental audits and correspondence from the EPA showing that leachate and landfill gas were not adequately managed, the cities of Casey and Frankston allowed contractors free reign to manage and operate as they saw fit with no checks or balances placed on them other than financial audits. I consider this an abrogation of their responsibility as well as poor contract management.

In addition to poorly monitored contracts, the Stevensons Road landfill suffered from several badly written contracts. These contracts failed to clearly delineate the roles of the parties; did not hold relevant parties accountable; and did not match the regulatory requirements of the EPA. I consider the case of the City of Casey’s...
gas extraction contract with Energex highly significant in this regard. Despite the City of Casey’s desire to hold Energex accountable for the environmental impacts of landfill gas through the gas extraction contract, the City of Casey ended up with a contract that was ambiguous on the subject of responsibility for gas migration.

45. Energetex acknowledges that although the gas extraction contract ‘may have been ambiguous in places’, there was sufficient clarity to demonstrate that the City of Casey was responsible ‘for ensuring that there was no dangerous migration of gas from the Site’.

46. Also, the contract between the cities of Casey and Frankston did not clearly delineate the role of each municipality in the event of a leachate spill or gas leakage after the site had closed. I consider the lack of well-defined responsibilities under the contract is a significant oversight.

47. I have concluded that poorly written contract documents and failure to effectively manage contracts contributed to very poor results at the landfill.

48. While acknowledging ‘an issue with the adequacy of some contracts’, the City of Casey insists that this did not have a ‘bearing on … gas migration from the landfill’.

Lack of accountability

49. In overseeing the management and operation of the landfill, the cities of Casey and Frankston, like the EPA, suffered from a lack of technical expertise. While the City of Casey and the Frankston City Council had an agreement to jointly oversee the management and operation of the landfill, I identified that neither council had the expertise to properly oversee the work of contractors engaged to operate and manage the landfill. More concerning than the actual lack of technical expertise on the part of the councils, however, was their lack of adequate management.

50. The contractual arrangements for the landfill fostered the displacement of responsibility through over-reliance on the expertise of contractors. What is concerning, however, is that the cities of Casey and Frankston failed to provide even basic oversight of contracts. In my view, when a statutory body engages a contractor to perform its services, the statutory body still retains ultimate responsibility for those services.

51. The environmental audits and statements from witnesses about the general amenity of the landfill, in particular the overabundance of leachate and poorly captured gas, demonstrate that the landfill was not managed and operated effectively. Some issues, such as insufficient leachate disposal capacity, appeared to continue unaddressed for years. Many of the environmental audits identified the same issues in succession demonstrating a lack of action in response to audit reports. However, the City of Casey and the Frankston City Council failed to take action to address the issue.
Some issues, such as insufficient leachate disposal capacity, appeared to continue unaddressed for years.

Numerous contractors and consultants have come and gone during the life of the landfill and the post-closure period. By allowing knowledge and records to disappear when contractors or consultants left, the cities of Casey and Frankston rendered effective management of the landfill that much more difficult.

52. While the City of Casey is the owner of the landfill site, the Frankston City Council had a stake in the management and operation of the landfill. The Frankston City Council, though a minor partner, accepted contractual responsibility for the management of the landfill and was therefore obliged to contribute to the management, not only financially but also through active participation in contract management. The Frankston City Council must share the responsibility with the City of Casey for the lack of action to rectify problems at the landfill.

53. While the Frankston City Council has accepted my conclusions, the City of Casey has denied any accountability on its part.

Poor knowledge management

54. The landfill industry is one of rapidly changing technology and sometimes very divergent technical opinions. It is therefore all the more crucial that knowledge relating to the landfill is managed effectively so all decisions are based on the fullest information possible. In the case of the landfill, poor knowledge management contributed to some serious problems.

55. The poor record-keeping of the City of Casey and the Frankston City Council hindered my investigation. I was able to obtain records from contractors involved at the site with varying degrees of success. For example, the City of Casey and the Frankston City Council had little or no records from the initial contractor operating the landfill.

56. Numerous contractors and consultants have come and gone during the life of the landfill and the post-closure period. By allowing knowledge and records to disappear when contractors or consultants left, the cities of Casey and Frankston rendered effective management of the landfill that much more difficult.

57. Lack of records of waste tipped and loads refused was not only a breach of the waste discharge licence which required such information to be recorded, but it also made predicting the volume and composition of landfill gas and possibly leachate more difficult. Similarly, whether the base of the northern cells of the landfill was properly prepared cannot be conclusively established due to a lack of records.

58. The lack of records detailing the basic features of the landfill is an important issue. While each entity involved in the landfill may have had its own records of work done, what was lacking was a central repository for information about the landfill enabling information to be shared between entities and stored for future reference. Ultimately, this omission must be attributed to the owner of the landfill. That is, the City of Casey.

59. The City of Casey has acknowledged that ‘its record-keeping could have been better’. However, the City of Casey did not accept that ‘this contributed to ‘serious problems’ at the landfill.
Poor performance of statutory duty

60. I conclude that through inadequate regulatory activity during the operational phase of the landfill, the EPA failed to protect the environment. The fact that the EPA did not inspect the prepared Cells 3 and 4 prior to their receipt of waste is a serious omission. Since works approval was granted for both Lots 7 and 10, the works on both lots should have been inspected prior to the issue of a waste discharge licence. By not inspecting the preparation of each cell or at least each half of the landfill, the EPA not only failed to ensure the minimum standards of the 1992 works approval were met, it also missed an opportunity to require a better standard of design for Cell 3 in 1999, and Cell 4 in 2001, than the one approved in 1992.

61. The EPA also missed an opportunity to require improved standards via licence amendment. The EPA could have ensured new cells were lined simply by amending the licence to require it. The EPA was aware of the poor quality of the landfill. This is demonstrated by its own internal review in early 2001 which questioned the very suitability of the site for a landfill. However, as the review also noted, the EPA could have halted landfilling prior to the beginning of tipping in Cell 4 until it was satisfied best practice standards were in place. That it did not do so is in my view a crucial opportunity missed.

EPA enforcement in relation to the landfill

62. My investigation identified that the EPA failed to take adequate enforcement action in relation to the landfill over a number of years. This was not as a result of a shortage of powers as the Environment Protection Act affords the EPA extensive statutory powers and an array of enforcement tools. In my view, the EPA ineffectively utilised the enforcement tools at its disposal. This failure resulted from several factors, including:

- delays associated with the EPA’s enforcement process
- passive management
- lack of strategic direction at the EPA South Metropolitan Region.

Failure to take adequate enforcement action

63. I consider that the level of enforcement action taken in relation to the landfill was inadequate compared to the volume of complaints the landfill generated while in operation and given the history of non-compliance of the landfill operators. In my view, there were many occasions where the EPA had sufficient grounds to take enforcement action at the landfill but it failed to do so or it utilised inappropriate enforcement measures. It is also clear that the EPA did not seriously consider taking prosecution action against the City of Casey until August 2008.
64. The EPA issued two Notices of Contravention in relation to the landfill. The first was issued to the South Eastern Regional Waste Management Group on 30 May 2001 and the second to the City of Casey on 8 June 2007. The EPA failed to prosecute the South Eastern Regional Waste Management Group for ongoing breaches of the licence conditions identified in the first Notice of Contravention or the City of Casey for ongoing breaches of the Pollution Abatement Notice conditions identified in the second Notice of Contravention. This lack of decisive follow-up action by the EPA is contrary to its stated policy that it takes the continuation of breaches seriously.

65. Similarly, continual breaches of the Pollution Abatement Notice rarely resulted in enforcement action. It follows that the EPA has been unsuccessful in preventing or rectifying breaches of the Environment Protection Act, which according to the EPA’s Enforcement Policy is the purpose of Pollution Abatement Notices. The minimal enforcement action taken by the EPA clearly had little effect on improving the management of the landfill.

66. Stronger enforcement action by the EPA in relation to the landfill would have created certainty for the City of Casey that there were serious consequences for non-compliance and raised the City of Casey’s awareness of the environmental risks.

67. The EPA insists that its ‘actions and enforcement responses for the Stevensons Road landfill were proportionate to the circumstances at the relevant time’.

Delays in the EPA’s enforcement process

68. In my view, the EPA’s enforcement process is overly complex, lengthy and time consuming. I found that the EPA aims to issue 90 percent of Penalty Infringement Notices within 90 days. I consider the current timeframes excessive. Penalty Infringement Notices should deter offenders from further non-compliance. The lengthy timeframes for the issue of Penalty Infringement Notices substantially dilutes their deterrent effect.

69. As the regulator for the environment with a key role in ensuring compliance with the Environment Protection Act, it is important that the EPA consider enforcement to be a high priority and retain a continual focus on enforcement issues. I identified that the EPA does not consistently place a high priority on enforcement and enforcement matters can be overlooked or delayed due to workload issues. In my view, sufficient resources should be available to EPA officers to follow matters through from non-compliance to enforcement.

70. The EPA should also have a mechanism for monitoring the progress of Pollution Abatement Notices. I am concerned that standard post-closure Pollution Abatement Notices for landfills do not refer to the lateral migration of landfill gas as this phenomenon appears to be well known.
71. The EPA has accepted that its enforcement timeframes ‘could be shortened and is taking steps to improve its enforcement procedures’.

**Poor management at the EPA South Metropolitan Region**

72. I identified that the lack of enforcement action taken in relation to the landfill was largely due to the inaction of the former Regional Manager of the EPA South Metropolitan Region during the period November 2003 to 5 November 2007.

73. The evidence supports the view that the former Regional Manager ignored serious compliance issues at the landfill. My investigation revealed that EPA officers, including a junior officer at the South Metropolitan Region, understood the environmental impacts of the site and the necessity for the EPA to take enforcement action. However, the Regional Manager was unwilling to support his staff in taking action.

74. I found evidence that in September 2006 the same junior officer prepared a briefing note for the EPA Chairman reporting that significant levels of landfill gas had been found migrating from the landfill into the estate, resulting in environmental and possible public health issues. However, this briefing note was stopped by the junior officer’s Regional Manager and never reached the EPA Chairman. I also found similar evidence that the same manager had stopped another briefing note on a serious matter from progressing to the EPA Chairman. The Regional Manager has since resigned from the EPA.

75. The EPA has agreed to undertake ‘a number of organisational reforms to ensure that decisions are made at the appropriate levels … and that staff are comfortable to raise issues with senior management. The reforms include the introduction of a quality assurance function, cultural change, business systems reform and the [EPA] restructure’.

76. A further concern is the delay in issuing the Pollution Abatement Notice. EPA officers advised that the delay was caused by workload issues at the South Metropolitan Region, the extensive internal review of the Pollution Abatement Notice and the fact that it was not a standard post-closure notice. I do not consider these to be acceptable reasons for the 19-month delay.

**Inadequate knowledge management system**

77. My investigation revealed the EPA does not have a comprehensive knowledge management system. The EPA’s filing system only records some site-based information and the quality of record-keeping is generally poor. I consider that the EPA is unable to properly execute its statutory duties without an effective mechanism for recording all site-based information. All relevant information should be appropriately recorded and accessible in order for the EPA to develop and retain a complete understanding of sites it is responsible for regulating.
My investigation established that the City of Casey and the EPA failed to combine effectively to present the best possible case before the Victorian Civil and Administrative Tribunal (VCAT) to oppose the private developer, Peet & Co Casey Land Syndicate Limited’s (Peet’s) planning application to allow houses to be built along the western boundary of the landfill.

I identified a series of missed opportunities; poor performance of statutory duty; administrative oversights by various parties including the City of Casey, its legal representative, and the EPA. These factors contributed to residential houses being built within a few metres of where putrescible waste had been deposited in the landfill and the consequential problems which have led to my enquiry.

Failure to highlight explosive risk

My investigation revealed evidence of several incidents occurring overseas dating back to the 1960s involving explosions caused by methane gas migrating from landfills into nearby dwellings and resulting in serious injury and/or death.

I was concerned to find that VCAT was not adequately informed about the explosive risk of methane. This was despite officers from the EPA, the City of Casey and its legal representative, being made aware of this issue prior to the VCAT hearing. I consider this was key information that should have been presented to VCAT.

The City of Casey maintains that it did not have ‘the knowledge or technical expertise’ to determine whether there was a risk of methane gas causing an explosion.

In investigating the circumstances surrounding the VCAT decision, I concluded that the performance of a number of witnesses at the VCAT hearing was deficient. For example, I found evidence that one environmental expert, who was aware of the potential explosive risk of migrating landfill gas, failed to raise this concern with the VCAT Members. As such, I consider the environmental expert failed in his duty to VCAT as an expert witness.

The expert witness has stated that he did not fail in his duty to VCAT, as he was not qualified to give evidence about methane gas.

The EPA’s reluctance to join legal proceedings

Also of concern was the minimal involvement of the EPA in the VCAT hearing. In my view, the EPA was neglectful in not seeking to be joined as a party to the VCAT hearing when it knew of the environmental problems at the landfill and it understood that its recommended landfill buffer of 200 metres was under challenge. I established that the EPA did not have a strategic approach to

The EPA has agreed to ‘implement significant reform to its internal business systems’ to improve knowledge management.
Also of concern was the minimal involvement of the EPA in the VCAT hearing. In my view, the EPA was neglectful in not seeking to be joined as a party to the VCAT hearing.

Section 173 Agreement

89. In August 2000, private developer, Peet, voluntarily entered into an agreement with the City of Casey under section 173 of the Planning and Environment Act 1987 when it applied to have the Brookland Greens estate land zoned Residential 1. The purpose of the agreement was to restrict the development of dwellings within buffer areas from surrounding industries. The agreement stipulated that no homes were to be built within a 200 metre buffer of an ‘adjoining sand extraction site’ (the landfill).

90. Also, I identified that the Section 173 Agreement, including the schedule/plan, prepared by Peet’s solicitor, refers to a ‘sand extraction facility’ rather than a landfill. At the time that the Section 173 Agreement was signed in August 2000, sand was still being extracted from Lot 7 of the Stevensons Road site in preparation for the acceptance of putrescible waste. However, the landfill at Lot 10 Stevensons Road had been in operation for over four years and sand extraction was finished in Lot 7 by December 2000.

91. The Section 173 Agreement was included with Peet’s contract to prospective purchasers of residential lots in the estate, and failed to make any mention of the landfill or the actual use of this land. While I have been unable to establish whether this was done intentionally, I identified that reference to the landfill on the schedule/plan had been removed from an earlier draft. This is concerning as during my investigation several residents complained that they had not been provided with information from Peet about the nearby landfill at Stevensons Road at the time of purchasing their property.

92. Peet maintains that it is unaware who made an amendment to the schedule/plan omitting the landfill site. Also, Peet has stated that ‘purchasers were not misled’.

93. Also, the Section 173 Agreement and the Development Plan are both unclear about how to measure the buffer; when a reduction in the buffer can be considered; and the manner in which the reduction can take place. I consider that the City of Casey and Peet failed to ensure that these documents were unambiguous.
The City of Casey failed to adequately address its conflict of interest as the owner of the landfill and the responsible authority for making planning decisions about residential developments adjacent to the landfill.

The EPA’s policies and guidelines make reference to buffer distances being required for landfill operating conditions including odours, noise, litter and dust, to ensure the amenity of nearby land users.

94. Peet has acknowledged that ‘the Section 173 Agreement and the Development Plan reflected the lack of certainty on behalf of government authorities at the time about how the buffer should be measured’.

**Failure to resolve conflicts of interest**

95. I consider that the City of Casey failed to adequately address its conflict of interest as the owner of the landfill and the responsible authority for making planning decisions about residential developments adjacent to the landfill. In order to maintain the 200 metre buffer, it was necessary for City of Casey officers not only to be critical of the City of Casey’s management of the landfill, but also their own involvement with the site. This conflict of interest was not appropriately managed by the City of Casey. I consider that the City of Casey did not present VCAT with all relevant facts regarding the management of the landfill.

96. The City of Casey maintains that the legislative scheme ‘makes such a conflict of interest inevitable’.

**VCAT policy interpretation**

97. VCAT determined that the required buffer distance from the landfill was 200 metres, as outlined in the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste). VCAT ruled that the 200 metre buffer distance was to be measured from the ‘active tipping area’, being the ‘active tipping face’ of the landfill.

98. However, the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) defines ‘tipping area’ as ‘a place within a landfill site in which municipal wastes are, have been or will be deposited’. The terms ‘active tipping area’ and ‘active tipping face’ as applied by VCAT are not phrases used in or relevant to the definition of ‘tipping area’ in the policy.

99. During the course of my investigation, I identified that the EPA’s policies and guidelines make reference to buffer distances being required for landfill operating conditions including odours, noise, litter and dust, to ensure the amenity of nearby land users. There is also recognition of the need for buffers to guard against the contamination of water. However, there is no specific reference to a buffer being required to protect nearby land users against the risk of explosion or health issues arising from exposure to landfill gas containing methane. I consider this a major shortcoming which needs to be addressed.

100. The EPA has agreed to amend its *Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills* publication to address this issue.
Incorrect advice regarding appeal

101. My investigation identified that the City of Casey’s legal representative was incorrect in its advice that VCAT’s decision could not be appealed because it was not an error of law. As a consequence, the City of Casey failed to challenge any further planning applications from Peet relating to the development of later stages of the Brookland Greens estate, along the boundary of the landfill.

102. The City of Casey denies ‘that VCAT’s decision could have been the subject of successful appeal to the Victorian Supreme Court’. In the City of Casey’s view, ‘any suggestion that a successful appeal to the Victorian Supreme Court was tenable is without foundation’.

VCAT administrative procedures

103. As evidenced by the poor quality of the transcript and audio recording in the VCAT hearing relating to the Brookland Greens estate, my investigation identified shortcomings in VCAT’s current administrative procedures.

104. I note that the publication of VCAT’s reasons for its decision did not occur until some five years after the hearing and in response to the emergency situation being declared at the estate in September 2008.

105. VCAT has since acknowledged that its ‘recording facilities … are not satisfactory, resulting in poor quality recordings and transcript[s]’. VCAT also regrets the delay in the publication of reasons for the decision, which it describes as ‘an oversight’.

The safety of residents in the estate

106. In my view, residents of the estate were placed at unnecessary risk by both the City of Casey and the EPA in failing to ensure that appropriate actions were taken in a timely manner to mitigate the risk of landfill gas escaping from the landfill into the estate.

107. The City of Casey and the EPA both maintain that the safety of residents of the estate was and remains their paramount consideration, and that they took appropriate actions to mitigate the risks.

108. I consider that if there is a risk that the public health and safety of individuals may be jeopardised by exposure to methane gas leaking from a landfill, government agencies have a responsibility to err on the side of caution and take appropriate action to ensure the safety of those persons affected.

Failure to take action to ensure the safety of residents

109. My investigation revealed that both the City of Casey and the EPA were made aware of the presence of methane in the estate from as early as March 2006 when ‘bubbling puddles’ were detected by workers constructing the drainage system. Despite a junior EPA officer raising concerns with EPA senior management about the risk to residents in the estate caused by the leaking methane, this information was effectively ignored by the Regional Manager.
Despite warnings that migrating methane posed a threat to the residents of the Brookland Greens estate, the City of Casey proceeded to approve further building work on the estate in May 2006.

It appears that of the many agencies involved in the emergency, the City of Casey’s perception of the risk to residents was significantly less than that of the EPA, the CFA and the independent experts, despite the weight of expert advice.

By July 2007, the reports of an environmental auditor warning of an ‘imminent environmental hazard’ and an ‘unacceptable risk’ to residents, due to the presence of methane in the estate, were brought to the attention of EPA senior management. However, it was not until June 2008 and the discovery of methane within homes in the estate that EPA senior management began to fully appreciate the gravity of the situation.

I am concerned that it took over 10 months after it was informed of the environmental auditor’s report of 25 July 2007 warning of an ‘imminent environmental hazard’ for EPA senior management to recognise the seriousness of the situation and to take action to ensure the safety of the residents.

The EPA denies that it was ‘slow to respond’ and says it did ‘recognise the seriousness of the situation’.

Despite these and other warnings that migrating methane posed a threat to the residents of the Brookland Greens estate, the City of Casey proceeded to approve further building work on the estate in May 2006.

The City of Casey maintains that it did not have the power to refuse endorsement of further planning and building works in the estate when methane gas was detected in March 2006. The City of Casey has stated that the EPA had the power to stop the building works from proceeding.

Failure to appreciate the risk to residents

Throughout my investigation I observed the contrasting views concerning the level of risk to residents in the estate caused by the leaking methane. I appreciate that given the unusual nature of the emergency and the lack of past experience in Australia in dealing with leaking methane gas from a landfill, there would be differing views regarding the level of risk posed to residents in the estate. However it appears that, of the many agencies involved in the emergency, the City of Casey’s perception of the risk to residents was significantly less than that of the EPA, the CFA and the independent experts, despite the weight of expert advice.

When one of the technical consultants engaged by the City of Casey informed the EPA about his concerns in relation to the risk to residents posed by the methane, the Acting Chief Executive Officer for the City of Casey responded by downplaying the advice and sought to discredit the consultant for ‘breaking ranks’.

Also, it appears that City of Casey officers downplayed the advice of the international advisory group assembled by the EPA, including one landfill gas expert who described the landfill as one of the worst sites he had ever seen with the potential for explosion and/or asphyxiation.
118. The City of Casey maintains that ‘any risk of physical harm or injury [to residents of the estate] has always been remote’.

**Failure to consider risk assessment**

119. There has been a great deal of discussion in the local community and in the media in relation to the EPA’s failure to conduct a risk assessment prior to informing the CFA of the need to implement the emergency management arrangements, which included recommending the evacuation of some residents.

120. Although the EPA was initially slow to respond to the detection of methane in the estate, from June 2008 onwards the EPA took appropriate action in undertaking research; seeking international advice on the problem; verifying the methane findings with independent consultants; and devoting adequate resources to the issue.

121. While there is little doubt that conducting a quantitative risk assessment prior to declaring the emergency, the likes of which was conducted in October 2008, would have assisted in evaluating the level of risk to residents, I consider that if there was the risk of an explosion and/or asphyxiation caused by methane in the estate, then the EPA needed to err on the side of caution and inform the CFA of the need for residents to consider relocation.

122. While the results of the quantitative risk assessment conducted in October 2008 revealed that the risk to residents in the estate was ‘acceptable’, in my view caution needs to be exercised in relying solely on this instrument in assessing the level of risk to residents in these situations. A quantitative risk assessment should form part of a suite of measures used to evaluate the level of risk, including expert advice and analysis.

123. Clearly, the physical risk to public health and safety, that is, explosion and/or asphyxiation, should be the overriding consideration when determining whether or not to evacuate or recommend evacuation to residents from their homes in this type of situation. In my view, consideration also needs to be given to the social and financial consequences to residents of declaring an emergency situation on the community. Regrettably, it appears that some of the social consequences associated with declaring the emergency were not fully appreciated in this case.

**Management of the emergency response**

124. Overall I consider that the CFA, as the lead agency responsible for handling the emergency situation, performed commendably in the circumstances.

125. In my view, it is inexcusable that at a time when the EPA and the City of Casey should have been working together for the greater good of the community and the co-ordination of the emergency response, they were unable to put aside their differences.
Failure to conduct a review of the emergency response

126. In light of the unique nature of this emergency, it is noted that a detailed review and report on the emergency response has not been undertaken by the Office of the Emergency Services Commissioner. This review would be of considerable assistance to emergency service agencies in Australia and internationally in responding to any future events of this nature.

127. There are considerable opportunities to learn from the methane gas emergency at Cranbourne. In my view, the Office of the Emergency Services Commissioner should conduct a detailed review focusing on:

- improving the suitability of the Emergency Management Manual Victoria in dealing with an emergency situation of this nature
- improving the use of risk assessment tools to evaluate the level of risk
- improving inter-agency communication
- clarifying the roles of municipal councils and the EPA under the Emergency Management Manual and detailing the process to be followed when these roles clash with other statutory roles performed by these bodies
- communicating with affected individuals
- developing the roles of the State Emergency Strategy Team and the Emergency Management Team and detailing the information flow between each group
- collecting and analysing data.

128. The Office of the Emergency Services Commissioner has indicated that it would ‘welcome the opportunity to discuss how the Emergency Management Manual can be improved to assist in the management of similar events in the future’.

Review of other landfills in Victoria

129. I note that since commencing my investigation, the EPA has undertaken a review of other landfills throughout Victoria to determine whether methane gas is leaking from any of these sites. I understand that no other homes or residential developments have been affected in the same manner as the Brookland Greens estate.

130. In light of the unpredictable nature of landfills, I consider that the EPA will need to repeat this review at regular intervals to ensure that the landfills do not pose a risk to the health and safety of nearby communities.

Compensation

131. Ultimately, the issue of compensation will be considered by the courts through the class action on behalf of affected residents. Nonetheless it is clear to me that the local community has endured considerable anxiety, distress and inconvenience as a result of methane gas leaking...
from the landfill into the estate and the way that some government agencies handled this issue. On this basis, affected residents should be compensated accordingly.

Summary

132. I consider that the methane leak into the Brookland Greens housing estate was brought about by a series of missed opportunities by the responsible agencies. Sub-standard conditions were put in place at the landfill from the outset and allowed to continue without remedy throughout the life of the landfill. These conditions directly contributed to problems with leachate and gas control which created the risk of methane explosion in the estate. Activities such as monitoring and enforcement, contract management and management of conflicts of interest, had they been conducted more thoroughly, may have helped to halt the process that led to the emergency situation at Brookland Greens.

133. I understand that the City of Casey in the 2008-09 financial year alone committed approximately $21 million to a range of measures aimed at mitigating the risk of landfill gas leaking into the estate. In the long term, the total cost of rehabilitating the landfill is expected to exceed $100 million. This stands in stark contrast to the 1992 estimated cost of $500,000 to line the landfill as a preventative measure to protect people and the environment, which the Shire of Cranbourne rejected on the basis of expense.

134. I have made a number of recommendations to the various agencies involved, including that the:

- EPA review its policy for assessing works approvals to ensure assessments are made by suitably qualified officers and all assertions made by applicants are verified fully before works approval is granted
- City of Casey develop specific procedures to manage conflict of interests where it is both the applicant or permit holder and responsible authority
- City of Casey and the Frankston City Council each centrally manage all future contracts through an officer or team with contract management expertise
- EPA ensure that all licences are reviewed annually and amendments made where existing standards are below best practice
- EPA revise its compliance and enforcement procedures to ensure the EPA takes strong and decisive enforcement action in response to non-compliance
- EPA develop and make available comprehensive policies and procedures to guide its decision-making in relation to becoming a party to legal proceedings
- Office of the Emergency Services Commissioner conduct a detailed review of the emergency response to the methane gas risk at the estate and publicly report its findings.
BACKGROUND

135. On 15 September 2008, I received a letter from the Acting Premier, the Hon Rob Hulls MP, highlighting the government’s concerns regarding the safety of residents and their property as a result of methane gas from the landfill leaking into the estate. The Acting Premier considered that the matter should be investigated.

136. Given the seriousness of the matter and its widespread impact on the community, I initiated on my own motion an investigation into the circumstances surrounding the presence of methane gas in the estate, under the provisions of section 14(1) of the _Ombudsman Act 1973_.

137. In conducting my investigation, I was seeking to provide the community with answers as to how the methane gas risk to residents occurred, and to make recommendations to minimise the risk of this type of incident happening again.

The Stevensons Road landfill

138. Traditionally, landfills were located in areas on the edge of urban development. They were often located several kilometres from communities so as to ensure that people and the environment were not inconvenienced by any adverse effects such as noise, odours, dust, landfill gas, or any spills or leaks that may occur.

139. However, the ever-increasing development of new suburbs in growth corridors to the north, south, east and west of Melbourne has resulted in residential communities living closer to landfills than ever originally intended.

140. It is against this backdrop that problems have arisen with the Stevensons Road landfill (the landfill) in close proximity to the Brookland Greens residential housing estate (the estate) at Cranbourne.

141. In 1989, the Shire of Cranbourne (the Shire) entered into an agreement for the purchase of a former sand quarry from Vella Sands Pty Ltd at Lots 7 and 10 Stevensons Road, Cranbourne. The Shire, until December 1994, and then its successor, the City of Casey, was the owner of the landfill. The Frankston City Council also had a share in the landfill as joint user and manager.

142. In April 1992, the EPA issued a works approval to the Shire allowing a landfill to be established at Stevensons Road, accepting putrescible waste.

143. The landfill opened in June 1996 and closed in June 2005, with approximately 1.1 million tonnes of waste deposited at the site. The landfill consisted of four separate cells, developed progressively from south to north, with the southern cells being used as landfill while the northern cells were still being mined for sand. On the following page is a photograph of the landfill in operation taken in August 2003.
Throughout the life of the landfill, the City of Casey outsourced the management of the site to the following companies:

- South Eastern Regional Waste Management Group (1996-02)
- Martin Aylward and Associates Pty Ltd (2002-03)
- SITA Environmental Solutions Pty Ltd (2003-06).

Separately, the actual operation of the landfill was contracted out to:

- Select Earthmoving Pty Ltd (1995-01)

Numerous consultants were also involved in providing advice and monitoring operations, both during and after tipping at the landfill. The complexity of the arrangements for oversight of the landfill became a focus of my investigation.
The Brookland Greens estate

147. The estate is located directly to the west of the landfill, as shown in the aerial photograph below, taken in 2008.

Illustration 2. Location of Stevensons Road landfill
The estate was established by Peet and Co Casey Land Syndicate Limited (Peet), an investment arm of private developer, Peet Limited. Peet syndicates offer investors participation in the ownership and development of a parcel of land, earmarked for future residential development.²

Purchased by Peet in 1998, the estate comprises approximately 135 hectares. The development of the estate occurred in stages with construction beginning in 1999 and continuing into 2009.

Development of the estate has been the subject of several planning objections and a hearing at VCAT in May 2004 which effectively allowed residential houses to be built along the western boundary of the landfill. This decision was made despite the City of Casey and the EPA opposing the construction of houses within 200 metres of the landfill.

Landfill regulations

The Victorian Government has the statutory power to regulate the waste management industry in this State. Accordingly, State regulations govern the construction and operation of landfills. Under the Environment Protection Act 1970, the agency responsible for this regulation and its enforcement is the EPA. The EPA’s stated purpose is to ‘protect, care for and improve our environment’.³

EPA works approval and licensing

A works approval is required under the Environment Protection Act to begin works that will result in the discharge of waste to the environment, such as the preparation of a landfill site. The EPA is responsible for determining whether or not to issue a works approval and the conditions that apply if a works approval is issued.

When the works specified in the works approval have been completed, the EPA must inspect the works and, if the works are found to comply with the conditions of the works approval, it will issue a waste discharge licence.

The waste discharge licence covers the actual operation of the site. It sets conditions which aim to prevent an adverse effect on the environment. The conditions vary depending on the type of operation, but they generally include limits on the discharge of various substances, monitoring requirements, housekeeping conditions, reporting of incidents and monitoring data.

The works approval and licensing system as described above have been in operation since the Environment Protection Act commenced in 1970. Works approvals and licensing are also subject to a number of Gazetted State Environment Protection Policies and the EPA’s Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills 2001, publication.

Policies and guidelines

156. State Environment Protection Policies are subordinate legislation made under the provisions of the Environment Protection Act to provide more detailed requirements and guidance for the application of the Act to Victoria. The State Environment Protection Policies administered by the EPA cover the following environmental aspects:

- air
- land and groundwater
- noise
- water.

Monitoring and enforcement

157. The EPA performs a key role in the monitoring and enforcement of landfills. For enforcement purposes, the Environment Protection Act specifies penalties for breach of licence conditions, or for operating a site without a licence. It contains provisions for the EPA to suspend or revoke a licence under certain conditions.

158. Under the Environment Protection Act, the EPA may serve a Pollution Abatement Notice on the occupier of premises to control the activities on those premises in order to stop or prevent pollution or unreasonable noise from occurring. The EPA can also issue a Penalty Infringement Notice or Notice of Contravention for non-compliance.

159. The EPA is also able to take measures other than enforcement to promote compliance and encourage good environmental performance, including education, technical advice and environmental audits.

Landfill gas

160. Landfill gas is a by-product of the degradation of waste. It is produced by organic reactions in putrescible waste which is waste that is able to degrade biologically. The primary components of landfill gas are methane and carbon dioxide. Methane constitutes approximately 50 percent of landfill gas.

161. As landfill gas is generated, a pressure gradient is established, and gas migrates in the direction that offers the least resistance or the lowest pressure. Waste in a landfill is usually deposited in layers, or ‘lifts’, and ‘daily cover’, generally in the form of earth, is usually placed over the layers of waste to suppress gaseous emissions and associated odours. Because of this, the potential pathway of least resistance to gas flow is often sideways or ‘lateral’. Consequently, landfill gas can migrate into the soils and rock formations outside the actual landfill site.

162. Primary landfill gas management practices involve installing extraction devices such as vertical extraction wells or horizontal extraction trenches in the waste mass to capture the gas. Captured gas is conveyed to either a combustion facility where it is burnt off or ‘flared’, or an energy recovery facility where it is used to generate power. Gas monitoring ‘wells’ or ‘bores’ are generally installed in the ground around the edges of a landfill to track the potential migration of landfill gas. The occurrence of methane in perimeter gas monitoring wells is the gauge by which the effectiveness of most gas management systems is measured.
Experts say it is difficult to predict the distance that landfill gas will migrate because so many factors play a part. Although distances greater than 1,500 metres have been observed, these are exceptional. More typically, migration plumes extend for about 150 metres.

Experts estimate that landfill gas must be monitored and managed for around thirty years after the landfill’s closure and it is not uncommon for experts to speculate on the effects a landfill may continue to have on the environment for up to five hundred years.

Methane is a colourless, odourless and flammable gas. As well as being a ‘greenhouse gas,’ methane is a potential hazard for human beings. It may accumulate in confined spaces and if ignited by a spark or flame it can explode. It is, however, explosive only when present in certain quantities.

Specifically, methane must be present in the range between five (lower explosive limit) and fifteen (upper explosive limit) percent of the immediate atmosphere to be explosive. Any amount outside that range is not explosive. The diagram below sets out the explosive range of methane.1

Figure 1. Explosive range of methane

A reading of 20 percent of the lower explosive limit (LEL) means that the air in the confined space contains one percent methane. This measurement (20 percent of the lower explosive limit) was used by the CFA as an alarm trigger for monitors installed in homes within the estate. As this figure is below the lower explosive limit, it provided the CFA with adequate time to respond, investigate and assess if any further action was required.

In August 2008, methane concentrations above the explosive limits were detected in homes in the estate within close proximity to the landfill.

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1 Country Fire Authority, 16 October 2008.
Emergency management arrangements

169. In Victoria, the Emergency Management Manual provides the framework for emergency management. This includes information on the roles different organisations perform in dealing with the many and varied emergencies which may arise.

170. Under the emergency management arrangements, the EPA is a key support agency for providing advice on environmental issues. The CFA is the lead agency responsible for responding to an emergency involving either a risk of fire and/or explosion.

171. Based on advice from the EPA that the landfill posed an imminent danger to human beings, the environment and property owing to the risk of explosion and/or asphyxiation caused by landfill gas containing high levels of methane leaking into homes within the estate, on 10 September 2008 the CFA advised affected residents of the need to consider relocating. As a result, approximately 45 relocations occurred.

172. The emergency was eventually downgraded on 31 October 2008 following data collection and mitigation works which showed that the risk had reached a tolerable level. Residents were informed by the CFA that it was safe to return to or remain in their homes.
INVESTIGATION

173. I decided my investigation would examine the administrative actions of the various Victorian government departments, statutory authorities and municipal councils involved in decisions affecting the landfill, the estate and its residents, including the interface of those public bodies with private individuals and entities.

174. My investigation was concerned with the following five key issues:

1. Approval for the landfill
2. Management of the landfill
3. EPA enforcement in relation to the landfill
4. Planning decisions affecting the estate
5. Safety of residents in the estate.

175. In light of the serious nature of this matter, I requested that Mr Garry Livermore, Barrister, assist me with the investigation. Mr Livermore worked with a team of investigators, including an officer with expertise in local government planning matters.

176. When conducting a formal investigation under section 14 of the Ombudsman Act 1973, I have powers similar to those of a Royal Commissioner. I have the power to summons witnesses; require the production of documents; and interview any person under oath or affirmation who has any information relevant to my investigation. Consequently, I was able to interview and obtain information from private individuals and entities associated with the landfill and the estate, including the private developer, Peet.

177. My investigation examined events and actions commencing from 1987, when the approval process for the landfill commenced. During the investigation, my office interviewed over 70 individuals throughout Victoria and from interstate and overseas. I obtained access to extensive documentation and computer records from a variety of government departments, statutory authorities, municipal councils, and private individuals and entities.

178. My officers also met and interviewed several residents of the local community to gain a firsthand appreciation of their situation.

179. I wish to acknowledge the co-operation I received from senior officers from the Environment Protection Authority, the Country Fire Authority, the Victorian Civil and Administrative Tribunal, Peet Limited, the Frankston City Council and the City of Casey, in providing my office with access to information during my investigation.
1. APPROVAL FOR THE LANDFILL

Selection of the landfill site

180. Consideration of Lots 7 and 10 Stevensons Road as a new landfill site is recorded on the files of the Shire of Cranbourne (the Shire) from the beginning of 1987 when discussions took place between the Shire’s works engineer and the owner of the land, Vella Sands Pty Ltd (Vella Sands), who was at that time mining the lots for sand.

181. Sand mining had been prevalent in south-eastern Melbourne and since the late 1960s it was common practice for municipal councils to use the pits created by sand mining as landfills. This served the dual purpose of rehabilitating the land by filling the pits and allowing the municipality to dispose of waste.

Alternative sites

182. The State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Wastes) was not adopted by the EPA until 1991. However, a draft of this policy was disseminated in the late 1980s to various stakeholders for comment. The draft policy required landfill proponents to investigate alternative options before applying for works approval. The Proposed Municipal Landfill Stevensons Road Cranbourne Planning Report, prepared in 1989 for the Shire by Australian Groundwater Consultants (AGC – later Woodward Clyde then URS), stated:

The Shire of Cranbourne has conducted the alternative site evaluation in the spirit of the provisions of this draft policy.

... The main factor precluding immediate use of all of the sites except Stevensons Road was non-availability, either through continuing resource extraction or proposed extension to extractive industry licences.

183. A further alternative considered by the Shire was to use the privately run landfill at nearby Lyndhurst. A works approval application had been made for the Lyndhurst landfill, later known as the Taylors Road landfill, around the same time as the Shire submitted its application for the Stevensons Road landfill (the landfill), but the Lyndhurst landfill commenced operation while the Shire still awaited an outcome on its application. The Lyndhurst landfill was owned and run by Browning Ferris Industries Pty Ltd (BFI – later SITA). BFI agreed to allow the Shire to tip municipal waste at its Lyndhurst landfill at a discounted rate. The Shire began doing so in October 1990.

184. An internal report dated September 1989 suggested the Shire could continue to pay for use of the Lyndhurst landfill instead of proceeding with the Stevensons Road landfill. The report noted the Lyndhurst landfill had not been included in the Shire’s earlier list of alternative sites and that it was an EPA requirement that all other options be considered. The same report noted, however, that the Shire had already entered into a purchase agreement for Lot 10 Stevensons Road. On that basis, the Shire continued with the Stevensons Road option.
Planning permit

185. On 13 October 1989, the Shire applied to the Department of Planning and Urban Growth for a permit to use Lots 7 and 10 Stevensons Road as a municipal landfill. On 5 November 1990, the Minister for Planning and Urban Growth issued a notice of decision to grant a permit. The permit was intended to allow building and works to be constructed and the land to be used ‘for a major utility installation,’ in this case a landfill, on Lots 7 and 10 Stevensons Road.

186. Under Victorian planning laws, a notice of decision to grant a planning permit may be issued by the responsible authority if the authority supports the application but there are objections to the application. A notice of decision to grant a planning permit does not constitute a planning permit. Rather, it is a legal notice that the responsible authority supports the application if the use or development meets certain conditions. The responsible authority sends a copy of its notice of decision to the applicant and all objectors. Objectors and the applicant then have 21 days and 60 days respectively to apply to VCAT for a review of the decision and/or any of the conditions in the proposed permit. These aspects of planning law were in force in 1989, although the role of VCAT was at that time performed by its predecessor, the Administrative Appeals Tribunal (AAT).

187. Appeals against the proposed planning permit for the Stevensons Road landfill were made to the AAT. The AAT set a date for hearing. In the meantime, however, due to changes in planning laws in Victoria brought about by the introduction of the Planning and Environment Act 1987, the Minister for Planning and Urban Growth ceased to be the responsible authority for the permit. The Shire, being both the newly responsible authority and the applicant, then applied to itself for a planning permit. The Shire issued a permit to itself on 2 February 1993.

188. The planning permit contained general operating conditions such as ‘no putrescible wastes or domestic garbage shall be deposited into water’. It also included controls for emissions of landfill gas and controls for water that has been contaminated by waste, otherwise known as leachate. Landfill gas and leachate were known to result from landfills that accepted putrescible, or biodegradable, waste.

189. Conditions for leachate management included, ‘Before tipping commences in each stage, leachate collection works shall be constructed and used to collect all surface leachate’ and ‘no leachate, including stormwater or groundwater shall be permitted to pond on the surface of the landfill but shall be conducted to a leachate holding pond’.

190. Conditions relating to landfill gas included, ‘There shall be no discharge or emissions of odours from the site which are offensive to the senses of human beings in residential areas or in public spaces adjacent to residential areas’ and ‘methane gas monitoring and collection shall be carried out to the satisfaction of the Environment Protection Authority’.

Works approval

Application for Lot 10

191. The Shire initially lodged a works approval application covering Lot 10 only, the southernmost of the two lots identified as the future landfill site. While both lots were mined for sand, mining was scheduled to finish on Lot 10 first.
The Shire’s works approval application for Lot 10 was accompanied by the Hydrogeological and Leachate Management Report, prepared by Australian Groundwater Consultants (AGC) and dated October 1989. The EPA received the Shire’s application on 30 October 1989, but did not immediately accept it. The EPA’s Instructions for Completion of Works Approval Application which were found on the Shire’s works approval file stated:

The Act provides that where an application contains insufficient information the Authority may request further information. The application will be deemed to be unacceptable and will not be acted upon until the further information sought is received and accepted as adequate.

The Environment Protection Act\textsuperscript{5}, as amended in 1984, required an application be:

... accompanied by such plans, specifications and other information and a summary thereof as may be required by the Authority within 21 days of receiving the initial application.

... The Authority shall not deal with an application which does not comply with subsection (1) and shall advise the applicant that the application does not comply with subsection (1).

The EPA’s Instructions for Completion of Works Approval Application also included a ‘check-list indicative of information which the Authority may require to complete your works Approval/Licence application’. The checklist contained numerous items, such as site plan and process details, but it did not indicate the form the required items should take or the level of detail required.

I found no information on the EPA files to show what further information was required by the EPA in the initial stages of the Shire’s application for works approval. A letter from Mr Mark Paton of the EPA to Mr Terry Vickerman, Chief Executive Officer (CEO) of the Shire, dated 4 December 1989 stated:

I refer to my telephone conversation with your Mr Bruce Conboy on 23 November 1989 indicating that a substantial amount of information was lacking from your works approval application. It became apparent that only one of two reports compiled by [AGC] was lodged with your application.

I await receipt of the planning report compiled by AGC which details specific information required by the Authority in order to deal with your application.

In another letter from Mr Paton to Mr Vickerman, dated 12 December 1989, the EPA also requested further fees after previously requesting an incorrect figure.

The Shire’s works approval application for Lot 10 Stevensons Road was officially accepted by the EPA on 21 December 1989. As required under the Environment Protection Act, the EPA then referred the application to a number of parties, such as the Rural Water Commission, and advertised it publicly for third-party comment. Also under the Environment Protection Act, as it was then, the EPA was required to process the application for works approval within six months of accepting it.

\textsuperscript{5} Section 19B(1)(c) of the Environment Protection Act 1970.
Processing the application for Lot 10

198. According to an internal report dated November 1989 from the Shire’s Finance and Works file, EPA officers cautioned the Shire against purchasing its desired landfill site in advance lest the Shire buy the site and not be able to use it if works approval was refused. However, the Shire’s internal report noted the site was good value and recommended:

> While there is some risk involved [of the works approval not being granted], Council is not likely to be able to purchase such a convenient site for a cost less than half the price of sites like Clayton. Council should exercise its option to purchase Lot 10.

199. The same internal report from November 1989 noted long delays, of up to two years, in landfill licensing in Victoria which were reportedly due to disagreement between the EPA and landfill proponents over methods of leachate management. The report noted the EPA was:

> ... fast tracking the [Lyndhurst landfill] application which proposed a clay liner to the tip, leachate treatment and disposal and a large monitoring program to American standards. Costs of operation were likely to be high also.

200. Mr Paton, formerly of the EPA, suggested during interview on 31 October 2008 that the approach of BFI in its application for works approval for the Lyndhurst landfill was much more co-operative than the EPA was used to, possibly because BFI was prepared to spend large amounts of money on its projects to ensure the highest possible standards. The proposed Lyndhurst landfill, according to Mr Paton, ‘really was Rolls Royce’. Mr Paton recalled that the EPA Chairman at the time, Dr Brian Robinson, asked BFI for a $20m financial assurance, ‘at which time the gentleman from BFI took out a cheque book and started writing a cheque out on the spot’. Mr Paton said it was ‘a bit of bluff and curry, but it really was an extraordinary leap’.

201. By contrast, the Shire’s internal report dated November 1989 noted regarding the Stevensons Road application, ‘The EPA officers are non committal [sic] on the matter but see no major impediment to the site’.

202. Mr Patrick Clarke, a geological engineer formerly of AGC, during interview on 13 February 2009, described a divergence between the approaches of municipal councils and private operators of landfills. Mr Clarke said private operators, seeing the potential for large profits, were prepared to spend large amounts of money ensuring best standards from the outset. He said such companies could turn landfills into a ‘golden goose’, a ‘cash cow’ and ‘money pits’. He also suggested companies connected with the United States of America (the USA) tended to have higher standards because the EPA in the USA was more rigorous than the Victorian EPA in its landfill controls and because landfill proponents in the USA were mindful of potential litigation should a landfill cause any harm. A number of witnesses agreed USA regulations were more prescriptive than Victorian ones.

203. In an attempt to expedite its application, the Shire in December 1989 wrote to a number of ministers to express concern over long delays in the EPA’s issuing of waste disposal licences. None of the ministers became actively involved in this matter.

204. According to the EPA, the delays identified were in fact by agreement between the EPA and individual applicants for works approvals in the ‘sandbelt area’ south east of Melbourne.
Dr David Horsman, then Director of Operations for the EPA, wrote to the Shire on 13 February 1990:

This extension of time for a decision on landfills in the sandbelt area was to facilitate a study by [AGC] on leachate generation from municipal landfills and its impact on groundwater processes ... Extensions of time were agreed to by both the Authority and individual applicants under section 67A of the Environment Protection Act 1970.

205. The issue in question in the AGC study was whether or not landfilling should be allowed to occur below the level of the water table. At interview, Mr Clarke said:

... the EPA brought in a policy that said, ‘thou shalt not place putrescible waste below groundwater level, below the water table’ the idea there being that you get inflows, you get a lot more breakdown of – or you’ll generate a lot more leachate, which has to be managed in some way or some form or it will migrate away from the landfill. It will also increase probably the rates at which methane would be developed within the landfill as well.

206. According to Mr Clarke, AGC was engaged by the South Eastern Regional Waste Management Group on behalf of ‘21 councils all tipping their waste into landfills in the sand that extended below water table, unlined’. AGC was to show that existing landfills below the water table had only minimal impact on the environment. The study reportedly showed leachate migration from those unlined landfills was less extensive than expected, but it nevertheless occurred. The EPA went on to formalise policy against landfilling below the water table without written permission from the EPA.

207. Mr Vickerman of the Shire of Cranbourne responded to Dr Horsman’s 13 February 1990 letter on 4 April 1990. He wrote that the Shire remained concerned over the length of time taken by the EPA to process works approval applications and to answer its correspondence. Mr Vickerman also asked whether ‘current indications’ were that the EPA’s assessment deadline of 21 June 1990, six months after the application was accepted, would be met.

208. On 3 May 1990, Mr Rob Monteith, Manager – South Metropolitan of the EPA, requested further information from the Shire, to be provided by 14 May 1990. The further information was ‘specifically in relation to the possible incorporation of Lot 7 Stevensons Road …’ and was to include plans for leachate management on Lot 7 and ‘any details of the current application which may change if Lot 7 Stevensons Road, Cranbourne is incorporated within the proposal’.

209. Mr Conboy of the Shire responded by letter on 15 May 1990 with an explanation that the leachate management system designed for Lot 10 could simply be extended to Lot 7 and no other details of the application would need to be changed if Lot 7 were to be included in the application.

210. At this point, in May 1990, the Shire had purchased and was soon to take possession of Lot 10 Stevensons Road and it had first right of refusal to purchase Lot 7, the northern lot. The EPA, however, advised the Shire to fix a price or buy Lot 7 and lease it back to Vella Sands lest the Shire be ‘held to ransom’ by Vella Sands at a later date. The Shire subsequently fixed a purchase price for the lot.

211. On 25 May 1990, Mr Monteith of the EPA wrote to Mr Vickerman of the Shire: ‘Since it is the Council’s intention to incorporate Lot 7 Stevensons Road, Cranbourne into the proposal I suggest you alter your works approval application to include this’. Mr Monteith advised Mr Vickerman to obtain permission from the owner of Lot 7 to include the lot in the application for works approval.
212. On 1 June 1990, Dr Horsman of the EPA wrote to Mr Vickerman:

A meeting and site inspection were held on April 9 1990 ... A notice requesting further information was subsequently issued. Our ability to meet the June deadline will depend upon you providing a quick response to the notice and the amount of time required to assess the information.

213. On 8 June 1990, Mr Monteith wrote to Mr Vickerman, advising:

The Authority is very concerned about making a decision regarding WA 1291/7 until the inclusion of Lot 7 Stevenson’s [sic] Road Cranbourne is formalised.

I suggest that a deferment of works approval application WA 1291/7 be requested by council under Section 67A of the Environment Protection Act 1970. This would enable council to submit a separate works approval application for Lot 7 Stevenson’s Road, Cranbourne. The Authority in conjunction with Department of Planning and Urban Growth could then consider both applications simultaneously.

Application for Lot 7

214. In accordance with Mr Monteith’s advice, the Shire submitted an application for works approval covering Lot 7 and requested a deferment of its existing application covering Lot 10 to enable simultaneous consideration of both applications. The EPA accepted the application for works on Lot 7 on 10 August 1990, ten months after it received the Shire’s initial application for Lot 10.

215. A Shire file note dated 28 September 1990 stated the Shire telephoned the EPA to check on the progress of its works approval applications. The EPA reportedly responded that it was allowed six months in which to consider the applications and the applications were ‘well down on [its] list of priorities’.

216. On 15 October 1990, the Rural Water Commission provided comment to the EPA on its referral of the works approval for Lot 7. The Rural Water Commission wrote:

... a new landfill strategy needs to be developed for the combined use of Lot 10 and Lot 7 ... directed towards preventing leachate migration from the land fill [sic] site.

217. The method of controlling leachate proposed by AGC was to maintain what was described as an ‘inward gradient’. An example of an inward gradient is shown in the diagram on the next page.
Maintaining an inward gradient meant keeping the level of the water (leachate) in the landfill lower than the level of the surrounding water table, so that water would be drawn towards the landfill rather than flow out of it. This was intended to stop leachate discharging from the landfill and contaminating the surrounding groundwater and land.

AGC provided details of a leachate collection system to be used to maintain the inward gradient. This system involved horizontal pipes in the base of the landfill that would collect leachate and deliver it to either of two sumps, one located in Lot 7 and the other in Lot 10. From these sumps, leachate would be pumped out and disposed of. This was intended to allow the operator to control the leachate levels in the landfill and ensure an inward gradient. This proposal satisfied the Rural Water Commission.

1991 assessment

The Shire’s works approval applications were assessed by Mr Stephen Low of the EPA in February 1991. Mr Low’s report to the EPA Board recommended approval be given for works on both lots. In his assessment report of the Shire’s works approvals, Mr Low stated, ‘There are no aquifers or local surface waters nearby’. He also noted a planning permit had been ‘issued by the Ministry on 5 November 1990 for both Lots 7 and 10’ and that an AAT appeal was pending, relating to subdivisions that would encroach up to the proposed landfill’s boundaries. Mr Low ‘anticipated that no odour problems [would] occur’ although no reason was provided for this belief. Mr Low noted consideration had been given to using BFI’s Lyndhurst landfill instead of creating a new landfill at Stevensons Road, but he did not address why the option was rejected.
When questioned at interview on 21 October 2008 about the works approval assessment he made in 1991, Mr Low said the Stevensons Road application was one of the first, if not the first, landfill works approval application he assessed. Asked to explain in layman’s terms some of the statements in his assessment report, Mr Low replied he could only answer vaguely ‘because I’m a layman too’. He went on to say:

But Mark Paton, mentioned there, who was my manager – was a geologist. And he was the one that really looked at that sort of hydrogeological setting … even though I’ve – it’s my signature at the end there, I guess – he was the one that provided that – that input. You know, he’s a trained geologist.

Mr Low has since stated:

... I am unqualified in this general field of science and hence my inability to describe ... in simpler terms, those geological and hydrogeological settings you read out from the original report.

... I recollect Mr Paton as being my manager at the time and he would have been the person to first review the assessment report and provide the technical comments for the geological and hydrogeological settings for the site.

Mr Paton, on the other hand, said during interview:

The geological advice would have been based upon the information provided by AGC-Woodward Clyde at the time as the consultant and I certainly inspected the sites and my honours degree is in geology, so I was – you know, I didn’t undertake any geological tests myself, but I accepted the work that was provided.

Mr Clarke, a geological engineer formerly of AGC, suggested there was a lack of expertise on the part of the EPA although he was complimentary of the abilities of Mr Paton and, later, Mr Colin McIntosh, both of whom he said ‘know their stuff’. Mr Stephen Hancock, a hydrogeologist also formerly of AGC, similarly commented on a lack of expertise in the EPA at that time.

Invalid works approvals

The EPA Board approved the Shire’s two applications for works approval on 14 February 1991. The approvals were sent to the Shire along with a draft waste discharge licence.

However, in May 1991, it was discovered the works approvals were invalid because they failed to contain a condition that approval did not take effect until a copy of the relevant planning permit was served upon the EPA by the applicant. Such a condition was required by section 19B(7A) of the Environment Protection Act when a works approval was issued prior to the granting of a planning permit. The required condition was omitted due to the EPA’s assessing officer Mr Low’s mistaken belief that a planning permit had been issued. While a notice of decision to grant a permit had been made by the Minister for Planning and Urban Growth on 5 November 1990, no permit had in fact been issued. The decision to grant a permit was at that time the subject of a number of appeals yet to be heard by the AAT.
Applications re-accepted

227. On 23 May 1991, the EPA re-dated and re-accepted the Shire’s two applications for works approvals on Lots 7 and 10 Stevensons Road and advertised the applications as required.

228. Objections to these works approvals were made by the owners of two parcels of land adjacent to Lots 7 and 10 Stevensons Road. The owners’ grounds for objection were numerous including that the applications had not been correctly made. The Shire then withdrew the applications, according to a note by Mr Low, ‘due to too many problems associated with the legality of the applications’.

229. In June 1991, the Shire’s President, Cr Patrick Marshall, and CEO, Mr Terry Vickerman, met with the EPA to complain about the EPA’s slowness and inconsistent advice from EPA officers. According to Shire minutes and a file note from the EPA’s Mr Paton from that time, the EPA undertook to expedite a new works approval application from the Shire. The EPA also noted, however, that any new applications would be subject to the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) which would come into effect on 1 July 1991 and which set out new, enforceable standards for new and existing landfills.

230. A focus of the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) was the protection of groundwater. In this regard, the policy specified the EPA may require a landfill to be lined and that landfilling must not occur below the level of the water table without written permission from the EPA.

New application for Lots 7 and 10

231. On 29 July 1991, the Shire submitted a new works approval application covering both Lots 7 and 10. The application was accepted by the EPA on 2 August 1991. It was accompanied by the Proposed Cranbourne Sanitary Landfill Hydrogeological and Leachate Investigation by AGC, dated August 1990. This document was identical to the 1989 ACG report of the same name other than it was now dated 1990. The report addressed tipping in Lot 10 only, rather than both lots. The Shire also submitted with its new application:

- a fire prevention plan (CFA, 25 July 1991)
- Proposed Stevensons Road Leachate Collection and Disposal (AGC, August 1991)
- Proposed Sanitary Landfill Lots 7 and 10, Stevensons Road Cranbourne Wheelwash Design (AGC, June 1991)
- Proposed Stevensons Road Landfill Gas Generation Collection and Disposal (AGC, June 1991).

232. In October 1991, the Shire submitted two further applications for works approval, one for a leachate management system and one for a gas management system. The purpose of the gas works approval was to enable the collection of landfill gas from both the future Stevensons Road landfill and the adjacent closed Cemetery Road landfill and flaring of the gas. The purpose of the leachate works approval was to enable leachate to be collected from the landfill, stored in a pond on Lot 8 Stevensons Road and discharged by irrigation over the closed Cemetery Road landfill.
1992 assessment

233. On 9 January 1992, nearly six months after the new application for Lots 7 and 10 had been made and approximately 18 months since the Shire submitted its original application for a works approval, the EPA’s assessing officer, again Mr Low, made four recommendations to the EPA Board. Mr Low wrote each recommendation had ‘sufficient merit to be considered defensible at a VCAT hearing’. The four recommendations were:

- (1) Approve the works approval as is,
- (2) Approve the works approval requiring a wall liner,
- (3) Approve a works approval for a solid inert site only, or
- (4) Refuse the application based on the works proposed.

234. Mr Low’s 1992 assessment report for the Shire’s works approvals was significantly more detailed than his 1991 assessment and in it he took issue with aspects of the applications that he had accepted without comment in his earlier report, in particular the omission of a landfill liner. Mr Low wrote that, although the base of the pit could easily be compacted to form a suitable bottom liner, the unlined side walls of the landfill:

... are believed to be the weak link in this situation and may not significantly impede migration in or out of the site of leachate or groundwaters.

... The whole issue of pumpout [sic] and lowering of water tables could be fraught with problems and is considered as a ‘bandaid’ approach rather than a definite containment effort such as by using an impermeable liner.

235. Essentially, Mr Low recommended a putrescible landfill not be allowed at the Stevensons Road site unless it was lined or the landfill accepted solid inert waste only.

Landfill lining

236. In the context of the EPA’s assessment of the Stevensons Road landfill for works approval in 1992, I considered it necessary to examine the prevalence and use of landfill liners in Victoria at that time.

237. There are two main types of landfill liner: compacted clay and geomembrane, with the most common type of geomembrane being high density polyethylene (HDPE). Clay lining was the first type of landfill lining used in Victoria. Common practice today, and best practice according to the EPA guidelines, is to line with both clay and HDPE any landfill that is to accept putrescible waste.

238. The first clay lined landfill in Victoria was the Truemans Road landfill at Rye where construction of the first lined cell began in 1987 and was completed in 1988. The Truemans Road landfill at Rye also became one of the first landfills in Victoria to generate energy from methane.

239. The first reference to landfill lining in Victorian regulation was in the 1991 State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) which stated the EPA ‘may require’ a liner.
Mr Martin Aylward, of waste management company Martin Aylward and Associates, was asked about landfill lining during interviews on 29 October 2008 and 18 February 2009. He said practice in this area progressed from no lining, to clay lining, to using both clay and HDPE lining. Mr Aylward said ‘the change from nothing to clay/plastic has only been in a relatively short period of time’. He estimated lining of landfills was common by about 1993. Asked whether clay lining was ‘on the radar’ in 1991 and 1992, Mr Aylward said: ‘Yeah, it was on the radar, but it was I guess a mood in the … industry that if you didn’t have to clay line, you didn’t clay line’.

Mr Colin McIntosh of the EPA said that in 1992 lining ‘certainly wasn’t common, but there were some liners around at that point in time’. He said, ‘I don’t know whether it was a debate or not. I think the view of a few [EPA] officers would have been that liners would be required’.

References to landfill liners in the early 1990s were identified during the course of my investigation. For example, during a 1991 AAT hearing one witness who had recently returned from studying landfills in the United Kingdom (UK) and Germany argued that the use of liners was now generally accepted as essential to protect groundwater from contamination by leachate.6

Similarly, in 1991, following an overseas study trip to Germany, the UK and the USA, a municipal engineer, Mr Bill Chapman of the City of St Kilda, recommended that the South Eastern Regional Refuse Disposal Group (later the South Eastern Regional Waste Management Group) ‘adopt a policy requiring all future putrescible landfills in the region to be lined’. The South Eastern Regional Waste Disposal Group did not adopt the recommendation. Mr Aylward suggested that might have been because setting conditions for landfilling was the role of the EPA.

Mr Clarke and Mr McIntosh both said landfill proponents in the north-west of Melbourne were more amenable to lining than those in the south-east. Mr Clarke said the geology of the north-west made lining easier and cheaper than in south-east. He said clay was more readily available in the north-west.

Mr McIntosh also recalled the different attitudes of the consultants used in the two regions. He said AGC ‘seemed to be always opposing some type of liner development’. In April 1995, however, the South Eastern Regional Waste Management Group received from Woodward Clyde (formerly AGC) a document outlining ‘the way in which modern landfills are operated’. This included, ‘a low permeability liner on the base and sides of the landfill to ensure leachate does not adversely affect groundwater’.

Internationally, it appears landfill lining was common by the mid 1990s. The landfill symposium that takes place every two years in Sardinia, Italy, was considered by many witnesses to be the pre-eminent landfill conference in the world. Reports from the 1993 symposium represented landfill lining as standard for putrescible landfills at that time. In the USA, a composite liner was compulsory for putrescible landfills from 1993, under Subtitle D of the Resource Conservation and Recovery Act.

Throughout my investigation, most witnesses with technical expertise in the landfill industry agreed that liners were traditionally thought of as barriers to water, but that they also have value in impeding the migration of gas. In Victoria, the introduction of the State Environment Protection Policy (Groundwaters of Victoria) 1997 had implications for landfill lining because

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6 City of Camberwell v Environment Protection Authority 1991, AAT.
it required protection of groundwater from contamination by leachate, based solely on the potential use of the groundwater rather than any actual use. Commenting on the draft State Environment Protection Policy (Groundwaters of Victoria) in February 1995, Mr Aylward wrote ‘… every site in the Region would require total containment. Total containment would require a clay and plastic membrane liner …’.

248. Landfill lining was eventually embedded in Victorian regulation when, in October 2001, the EPA published its *Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills 2001*. This document provides mandatory objectives and outcomes with suggested measures for achieving those objectives and outcomes. It also contains the following mandatory objective: ‘Design and construction of the best liner and leachate collection system practicable to prevent contamination of groundwater’. It identified a wide range of liners that could be used to achieve that objective.

249. In December 2004, the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) was replaced with the *Waste Management Policy (Siting, Design and Management of Landfills) 2004*. This policy did not make any explicit reference to landfill lining. However, the EPA’s Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills publication, with its specific requirements for lining, remained in force at the time of my investigation.

**Postponement of decision**

250. Mr Low’s assessment of the Shire’s three works approval applications was presented to the EPA Board on 21 January 1992. The Board, however, postponed its decision and Mr Low reported that the then EPA Chairman, Dr Brian Robinson, instructed him to contact the Shire ‘to see how it would react to the likelihood of a works approval being issued for either a lined putrescible site or solid inert only’.

251. In response to the EPA’s suggestion that it might not permit a putrescible landfill without a landfill liner, the Shire requested and was granted an extension of the EPA’s consideration of the applications beyond the legislated six months which had almost ended. The Shire requested a meeting with the Chairman of the EPA to discuss its concerns about EPA procedures and what it viewed as ‘poor performance and conflicting advice from the EPA’.

252. Mr Paton, formerly of the EPA, explained at interview that consultation regarding a proposed works approval was not uncommon because the EPA was ‘going off to the Administrative Appeals Tribunal in every case … We just knew we were going to end up there’. He said the EPA’s strategy was ‘to try and negotiate or see if there’s some neutral ground whereby options could be explored before we got into the AAT’.

253. One particular AAT case, in December 1991, was said to have significantly influenced the mood of the landfill industry at the time. This case was known as the ‘Camberwell case’. Mr Paton said at interview:

> The EPA up until the Camberwell case had run a very successful campaign with respect to protecting the integrity of the conditions on its works approvals … Certainly the Camberwell case would have had an influence on the EPA’s negotiation position to consider things.

254. Mr McIntosh, who has worked for the EPA since 1981, said the EPA felt ‘absolute dismay’ over the result of the Camberwell case.
The Camberwell case

255. The ‘Camberwell case’, as it has been called by numerous witnesses, was a hearing of the AAT in 1991. It involved a number of appeals all concerned with a proposed landfill on Clayton Road, Oakleigh. It appears that the Camberwell case became somewhat notorious in the history of the south-eastern Melbourne waste industry.

256. One of the main proponents in this case was the City of Camberwell which had purchased the proposed landfill site on behalf of a sub-group of the South East Regional Refuse Disposal Group (later the South Eastern Regional Waste Management Group). The other municipalities in the sub-group – Box Hill, Caulfield, Hawthorn, Malvern and Oakleigh – were to pay the City of Camberwell for a share in the site and have joint use of the landfill. However, the City of Oakleigh, in which municipality the site was located, opposed the landfill and refused a planning permit for it. The EPA proposed to issue a works approval for a landfill at the site, but for solid inert waste only. The City of Camberwell, on behalf of the sub-group, appealed the decisions of the City of Oakleigh and the EPA to the AAT.

257. A key point of contention in the Camberwell case related to the proposed use of ‘slimes’ at the site. Slimes are the sludge-type material left over when sand extracted from a mining site is washed so it can be sold clean, for use in the construction industry. Slimes are usually considered waste to be disposed of. However, in this case, the sub-group’s consultant, Mr Hancock of AGC, proposed to use the slimes as a landfill liner.

258. A number of witnesses, including those from the EPA and the City of Oakleigh, argued the use of slimes for lining was untested and should not therefore be approved. However, the AAT accepted the evidence presented in favour of the new technology in preference to the evidence against. In assessing the case, the AAT member stated:

We shall now evaluate the witnesses. We found them all honest. However, we have no doubt that from the point of view of knowledge of the subject and application of that knowledge to the present circumstances Mr Hancock and Dr Bellair were pre-eminent. We accept their evidence where it is in conflict with other evidence on the same subject … Mr Hancock’s evidence … remains far and away the best evidence available. No other party has done any investigation or research to substantiate an alternative prediction. The approach of the other parties has simply been to sit back and postulate hypothetical difficulties.

259. Mr Paton said Mr Hancock in particular was ‘a very articulate presenter in court’. He said Mr Hancock used to be nicknamed ‘the magician’ because of his ability to present complex concepts in easy to understand terms. According to Mr Clarke, Mr Hancock prided himself on never having ‘lost’ a case.

260. Mr Paton recalled at interview his concerns with the AAT’s hearing of the Camberwell case. He said Mr Hancock was invited by the AAT to give a summary of the technical issues and ‘was given free reign for maybe two or three days’ after which the AAT ‘proceeded to approve the application’ without hearing the evidence of the EPA. Although the EPA protested and was then allowed to present its case, Mr Paton said the EPA had no right to cross examine Mr Hancock and after Mr Hancock’s presentation ‘the panel never wavered from its first impression’.

261. The AAT ordered a works approval and planning permit be issued for the Clayton Road landfill.
17 February 1992 meeting

262. Following the EPA’s postponement of its decision and the Shire’s request for a meeting, arrangements were made for a meeting on 17 February 1992. The meeting was attended by the Shire President Cr Patrick Marshall and CEO Mr Terry Vickerman and EPA Chairman Dr Brian Robinson, as well as other officers from both agencies.

263. In preparation for the meeting, the Shire produced a document entitled ‘Discussion with EPA Chairman, Dr B Robinson’ dated 17 February 1992. The document contained a timeline of events and reasons why the EPA should approve works for an unlined putrescible landfill at Stevensons Road.

264. Mr McIntosh, though not present at that meeting, recalled at interview on 12 December 2008 the Shire’s reluctance to line the Stevensons Road landfill was mainly due to cost. Economic imperatives cited by the Shire included that a liner would be expensive to create and would occupy valuable air space. The Shire’s submission to the Chairman stated:

The lining option put to Council greatly affects the economic viability of the project. The lining would occupy 50,000 metres of air space on a site with a maximum of 950,000 to 1 million cubic metres air space. The cost of the lining is estimated at $500,000 which will adversely affect the viability of the project.

265. The Shire’s discussion paper also noted concern that without a landfill of its own, ‘Council is exposed to the Commercial Market for tipping’ and ‘Ratepayers can be held to ransom’.

266. The Shire also argued that the works approval should be issued with the same conditions as the 1991 approvals because it was the EPA’s fault the initial works approvals were invalid. The Shire’s submission stated it was ‘being disadvantaged by poor performance and conflicting advice from the EPA’. The Shire noted the previous works approval had not required a liner and it requested the EPA to ‘honour its original commitment’.

267. Mr Low’s notes from the meeting stated, ‘Council feel they are to make a decision not EPA’. Mr Low also noted ‘Much discussion occurred regarding the SEPP [State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste)] and the Camberwell case implications’.

268. At the end of the meeting, the matter was not resolved and the EPA Chairman requested a further meeting, to be attended by the Shire’s hydrogeological consultant, AGC, and the Rural Water Commission. A second meeting was set for 16 March 1992.

EPA consultant

269. Between meetings, the EPA consulted Mr Roger Parker of Golder Associates. According to notes from Mr Low, Mr Parker advised either the site should be lined or the leachate controlled by a pump-out method to create an inward gradient. Mr Parker agreed that lining the site would make the proposal uneconomical for the Shire. He did, however, make some criticisms of the AGC proposal, including that pump-out should be maintained to the base of the pit rather than one metre below the water table and that an indication should be given of how long pump-out would continue.
Mr Parker has since stated:

While there are no records of this particular meeting in Golder Associates files, based on other documentation in the file, it is likely that my comments were made in the context that the Shire [the Shire of Cranbourne] only intended to collect leachate during operation and then allow it to dissipate to the environment on cessation of filling operations. I proposed that other measures would be required being either lining or long term pumping of leachate to maintain inward gradient to the site.

... 

It is more likely that I would have said that the Shire [the Shire of Cranbourne] did not want to line the site because they would have considered it uneconomical.

Following his meeting with Mr Parker, Mr Low stated in a fax to Dr Horsman and the EPA Chairman:

It seems the Authority’s grounds for refusal or even lining are extremely limited, but there are significant improvements that can be made to the proposal from our point of view.

On 15 March 1992, Mr Parker provided the EPA with a three page written opinion marked ‘draft’ which discussed the Shire’s works approval application. In it, Mr Parker stated:

Given the quality of the groundwater and the potential use of the groundwater ... it is considered appropriate to protect the groundwater by ensuring that leachate does not leave the proposed site in significant quantities.

Mr Parker again identified two methods of controlling leachate; lining the site and maintaining an inward gradient in the landfill. Noting the proposed method of AGC-Woodward Clyde (formerly AGC) was an inward gradient, Mr Parker listed seven concerns with that method. He then concluded:

If the Proponents of the landfill wish to recover leachate rather than line the site, it is recommended that leachate level in the landfill be maintained at the lowest possible level until such time as the quality of the leachate being produced in the landfill is similar to the surrounding natural groundwater.

16 March 1992 meeting

The 16 March 1992 meeting between the EPA and the Shire was attended by the EPA’s consultant, Mr Parker of Golder Associates and the Shire’s consultants, Mr Hancock and Mr Clarke of AGC-Woodward Clyde.

The EPA and Shire meeting notes from that date show Mr Parker suggested leachate be pumped out to maintain a level no less than two metres below the surrounding groundwater level. The AGC-Woodward Clyde proposal specified one metre. The meeting notes suggest Mr Parker raised some concerns regarding the inward gradient method as a substitute for a landfill liner, but he did not insist a liner was necessary. The duration of leachate pumping was discussed. The Shire’s notes from the meeting recorded that pumping would be required for thirty years after the landfill had closed.
276. Mr Parker has since commented on this meeting:

I note that I included in my notes the comment “Stressed monitoring / management”. I also concluded my notes with the statement “Council prefer to build in costs of operating rather than construct barrier up front”.

277. Mr Clarke said during interview that, using the inward gradient method as the primary leachate control method, ‘you’re going to be pumping leachate forever and a day’. Mr Clarke also said during interview that relying on the inward gradient method in 1992 was ‘pushing the boundaries’ and he recalled internal debate about it at AGC-Woodward Clyde at the time. He said he did not object to the proposal since he was at the time a very junior staff member.

278. The Shire’s meeting notes also illustrated an adversarial relationship between the Shire and the EPA and a consciousness of the Camberwell case. For example, from the Shire’s notes:

Stephen Hancock believes [EPA Chairman] Dr Robinson was testing the water to see what case the EPA have if Council was to take them to the Administrative Appeals Tribunal. They are keen to stay out of the AAT following the Camberwell case.

279. The Shire’s contemporaneous notes also stated:

The EPA confirmed they were reluctant to issue a Works Approval for putrescible wastes without a liner being in place … following [Stephen Hancock’s] successful argument in the Camberwell case, his advice is that Council has an excellent basis for the request that the lining be dispensed with … The EPA was requested to honour its original commitment and issue [a] valid Works Approval for putrescible waste without the need for a liner.

280. Mr Hancock confirmed during interview that the Camberwell case contributed to strained relations between the EPA and the municipal councils in the south east of Melbourne:

Oh inevitably, inevitably. [The Camberwell case] was adversarial and they did their best and we did our best and ultimately we had the data on our side …

281. At interview, Mr Paton demonstrated that the EPA was conscious of the Camberwell case and reluctant to return to the AAT. He said:

I think that around that time – I can’t recall the timing, but there was a significant shift in the emphasis of – you know, we were just going to be going back to the AAT.

... 

Had the AAT not approved the Camberwell case, then probably Cranbourne wouldn’t have pushed it ...

282. Mr Clarke described the EPA at that time as lacking in power and confidence. He said because works approvals were challenged in the AAT in almost every case, the real decision-maker on works approval conditions was the AAT. He believed the case would have had an impact on Mr Parker as well.
283. According to Mr Clarke, the EPA’s confidence and power gradually returned as it created more prescriptive policies. Mr Clarke said by the time the EPA’s Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills document was produced in 2001, the EPA had regained an appropriate degree of control over its regulatory processes.

284. A similar opinion was provided during interview by Mr McIntosh of the EPA. Mr McIntosh said, ‘We tossed in our best landfill people’ and the EPA considered it ‘got rolled big time’. Mr McIntosh said he suspected the Camberwell case was the reason Mr Paton and another experienced staff member left the EPA shortly after. He said it was not until the late 1990s that the EPA was able to win a tribunal case and wrest back some control of the works approval system. Mr McIntosh said:

And for some years, I suspect, after [the Camberwell case], EPA was very loath to go to VCAT because we felt that we did not have the standing to be able to rebut people of the calibre of Steve Hancock. Now that changed … Probably the Colac landfill … we won that case; our evidence was accepted. And from then on we’ve been more prepared as an organisation – this is going back to the late 90s – to say ‘no’ and draw the line.

Further information

285. Following the meeting on 16 March 1992, the EPA Chairman discussed the Stevensons Road applications with the EPA officers involved. They resolved that leachate should be fully pumped out from the site and that if the Shire could produce a detailed plan to that effect plus further details of leachate collection lines and site permeability then works approvals would be granted for an unlined putrescible landfill.

286. Accordingly, the Shire had AGC-Woodward Clyde prepare a document entitled Cranbourne Landfill Works Approval Application: Supplementary Material. The Supplementary Material was signed by Dr Adrian Bowden and Mr Clarke and received by the EPA on 27 March 1992. It stated:

The landfill will be fully drained during the period of refuse disposal at the site to maintain the stability of the refuse slopes within the landfill. While the landfill is fully drained, water levels in the landfill will be maintained at or near the base of the refuse mass.

287. The Supplementary Material proposed to pump leachate for at least 20 years.

Works approvals issued

288. For his final assessment report of the site, Mr Low added an addendum to his original 1992 assessment. The addendum documented the events that caused him to change the recommendation in his assessment. Mr Low’s recommendation was now to approve the works approval applications. The addendum noted:

It is intended that total leachate pumpout [sic] be maintained to induce site and local ground water [sic] inflows to the pit.

289. The 1992 assessment report with the addendum was considered by the EPA Board on 14 April 1992 and on that day the Board granted three works approvals to the Shire for the Stevensons Road landfill. The EPA sent the final works approvals, along with a draft waste disposal licence, to the Shire on 28 April 1992.
Importantly, the works approvals were conditional on works being conducted according to the information submitted with the applications and the Supplementary Material received by the EPA on 27 March 1992. The approvals were set to expire if works were not commenced within 12 months of the date of issue (and 24 months in the case of the gas management system works approval).

The draft licence required:

Pumpout [sic] of leachate collected from the leachate collection sumps in the base of each active landfill cell must occur such that the leachate level in each sump is maintained at a minimum level at all times.

It was specified that the above described pump-out operation ‘must continue for at least 20 years after premises closure’. These were the only conditions added to the 1991 draft licence to reflect the proposed inward gradient method of leachate management.

Preparation of the site

Apart from some correspondence regarding a three-month extension of the works approval requested by the Shire in April 1993, there is nothing further on the EPA files regarding the Stevensons Road landfill until 1996.

A report to the Finance and Works Committee of the Shire dated 19 May 1993 made mention of the fact that a planning permit and works approval was held to construct a landfill at Stevensons Road, but gave no sign that construction was imminent. A report to the same committee in June 1993 noted, ‘There is now a real urgency to get this project underway’. The report recommended expressions of interest be called for immediately.

During interview on 17 November 2008, Mr Conboy, formerly of the Shire, said there was a delay in getting works underway for the landfill partly because of the amalgamation of municipal councils following a state wide review of local government. The Shire merged with the City of Berwick in December 1994 to form the City of Casey.

A review of the Shire’s files and interviews with witnesses did not reveal the cause for the delay in works commencing on the landfill or any evidence of further extensions on the works approval being granted by the EPA. Likewise, it is not clear whether any extensions were granted on the planning permit issued by the Shire to itself. The planning permit was set to expire if works were ‘not commenced within two years or within two years of any extension allowed before or within 3 months of expiry’.

Request for tenders to operate the landfill

It was not until 14 June 1995 that the request for tenders to operate the landfill was eventually issued. Mr Martin Aylward, Region Manager for the South Eastern Regional Waste Management Group, co-ordinated the tender process. The South Eastern Regional Waste Management Group was one of a number of regional waste management groups in Victoria constituted under an amendment of the Environment Protection Act. Part of the role of these regional groups was to manage landfills for the municipal councils in their respective regions. The statutory functions and powers of regional waste management groups as outlined under Local Government Act 1989 included, among other things, the need:
• To facilitate and foster best practices in waste management and minimisation …

• To provide for the current and future management of waste … in an effective and efficient manner and so as to have minimal impact on the environment …

• To develop … codes of practice and performance indicators on municipal waste management, especially in relation to compliance with appropriate State environment protection policies …

• To advise its members on the introduction of new or specialised technologies for waste management and to promote the introduction of such technology where benefits to the community can be demonstrated …

298. Approximately two weeks after the request for tenders was issued, Mr Low of the EPA met with representatives of a company called Select Earthmoving (Select). Select was bidding for the tender to operate the landfill but was concerned that the standards required by the EPA were too low. In an email dated 23 June 1995, Mr Low wrote that the contractor:

… is requesting the Authority require a higher standard of works than exists on the WA [works approval] issued to Council back in 1992.

The risk of groundwater impact is small and thus the need for additional works is not considered necessary …

[The contractor] intends contacting the Chairman today to pursue the issue of the Authority increasing the site development standards.

299. Mr Low wrote to the City of Casey on 28 June 1995:

It is the contractor’s belief that the proposed operation of the landfill to meet the terms of the tender and the minimum requirements of the existing works approval documentation could result in a detrimental impact to the environment.

Noting that the works approval was issued some years ago and that landfill engineering standards have improved since that time, the Authority can not [sic] condone a proposed operation liable to cause an impact to the environment …

The Authority does not wish to see minimally engineered landfills develop and as policy standards are expected to tighten in the short term for the construction of landfills, the Authority would be supportive of any additional works that can be implemented to further reduce the landfill’s risk of impact on the environment.

300. Mr Low offered to meet with the City of Casey to discuss possible improvements to the landfill design. There is no record of any further action being taken regarding the contractor’s concern. Although Mr Low said he recalled the event, he was unable to recall any further action on the matter.

Select engaged

301. In September 1995, almost three and a half years after the works approvals were issued and more than three years after the planning permit was granted, Select won the tender and was engaged to design and establish the Stevensons Road landfill and to operate it for five years.
Select used an environmental consulting/engineering company, Rust PPK, to provide a detailed design of the Stevensons Road landfill based on the conceptual design included in the works approval. Select, essentially an earthmoving company, intended to work from Rust PPK’s detailed design in preparing the landfill site. Mr Peter Quinn, former Managing Director of Select, explained during interview that his company, being new to landfill operations, chose to engage Rust PPK to give it a competitive advantage. He said if Select had used Mr Hancock – who was used by ‘everyone else’ and was ‘flavour of the month’ – then Select would not have had any advantage.

Asked whether the landfill was designed according to the EPA works approval, Mr Quinn responded:

Sorry for laughing, but … to me that’s a ridiculous question because you don’t just go starting off a landfill if – they don’t just throw us the keys to the kindergarten … There [were] more guys crawling over this than you can poke a stick at.

According to Mr Quinn, Select submitted plans to Mr Aylward who ‘would say yea or nay’ and Select was required to carry out Mr Aylward’s instructions. Mr Quinn described Select as a ‘hired gun’.

Design issues

In the design stage, however, there arose some disagreement over the specifications of the site. In its design for the landfill, Rust PPK recommended a landfill liner. However, a liner had not been required by the works approval. In a report dated 27 June 1995 that was signed by Mr Quinn and based on information provided by Rust PPK, Select wrote:

Our experience in landfills in Australia and overseas has proven that without a proper lining system, of a minimum of a compacted clay liner or a composite liner system, the potential of leachate migrating off-site is very high … We recommend that a closer look at the conceptual design should take place and a redesign should be considered to meet Vic. EPA’s future regulations and worlds [sic] best practices. Going through this exercise at this early stage of the project will save the council, in the long term, lots of money in potential remediation and purchasing of nearby properties.

Rust PPK also recommended using HDPE rather than PVC pipes for the leachate collection system because PVC ‘would not survive the extreme conditions of landfills’ and ‘the costs of excavating waste to replace PVC pipes would be tremendous compared to the extra cost of installing HDPE pipes’.

Mr Clarke, formerly of AGC, said at interview, ‘Rust was a waste mob out of the US, that took over PPK which was a consultant engineering group here’ and ‘They would have had technical reviewers in the US saying, “Here’s Subtitle D standard.” They would have just been feeding that through’.

Mr Quinn recalled presenting Rust PPK’s proposal to Mr Aylward. He stated, ‘They said that our design was over the top … I was actually a bit taken aback by it [because] we actually thought that we might have – might have got a pat on the back’.

During interview, Mr Aylward said he could not recall, but, looking back, he thought he would have refused to use a liner because ‘that’s not what the specification [was] calling for and it’s not what the works approval [was] – you know, [was] saying’.
310. Select did not discuss lining the site with the Shire because, in the words of Mr Quinn, ‘We were working for the region. The council had – as far as I’m concerned, the council had nothing to do with it’.

311. The disagreement over the design of the landfill contributed to a broader contractual dispute between Select and the South Eastern Regional Waste Management Group that emerged in 1996 regarding payment for services. One of the items for which Select claimed extra payment was the re-design of the landfill. Select claimed the concept of the landfill had been altered by the South Eastern Regional Waste Management Group since the tendering process. On 5 July 1996, the South Eastern Regional Waste Management Group’s legal representative, Sweeney & Company, compiled a summary of events to assist in resolving the dispute. The summary confirmed the proposal for a liner ‘and other expensive works’ recommended by Rust PPK had been dismissed as ‘unnecessary and misconceived’.

312. Sweeney & Company’s summary of events indicated a ‘possible misunderstanding’ about the tender requirements may have caused the argument over a landfill liner because the South Eastern Regional Waste Management Group made changes to the pumping requirements for the landfill:

We are instructed that it was evident from the original tender documents that lining was not required but it was stipulated that leachate was to be pumped from a depth of 300mm. above the base of the site. It subsequently became apparent to the region that the pumping requirement was excessive for a site that was unlined, and in order to save tenderers costs on pumping, the Region, on 7 February, amended its Leachate Management provisions to require that pumping at any time would be necessary only to a depth of 6ft. below the working level of the site. Rather than view this amendment as a cost saving, Select, we are instructed, took the amendment to be a major change to the tender requirements but did not set out precisely why they took this view. The Region subsequently understood that Select or their consultants believed that if the site was not to be pumped down to a depth of 300mm. above the base of the site, then the site would need to be lined to prevent leachate escaping. This presumption, we are instructed, was not warranted, and not to be inferred from the tender documents …

**Water inflow**

313. During the preparation of the Stevensons Road landfill site, a significant water-related problem was encountered. When an earthmoving machine reportedly struck an outcrop of rock and exposed an aquifer, an estimated 20,000 litres per hour of water began to flow into the landfill pit. The flow showed no sign of abating.

314. When asked how Select dealt with the inflow of water, Mr Quinn said:

We hit water … We ended up talking to Martin [Aylward] about it … Martin [Aylward] handballed it back to the council and then we had to put up with a couple of … engineers from the council coming out just telling us that’s how stormwater works.

315. Mr Quinn stated the City of Casey’s engineers ‘tried to hoodwink’ Select by arguing the water was stormwater and should be managed by Select. He claimed the City of Casey was ‘running an agenda to try and make [Select] pay for their stormwater collection’. 
316. In January 1996, Mr Gordon Walker of Sinclair Knight Merz inspected the water at the request of the South Eastern Regional Waste Management Group and found ‘the presence of good aquifers’. An AGC Woodward-Clyde report of June 1996 confirmed good quality water, describing it as ‘well within levels generally accepted for irrigation purposes and furthermore, well within levels generally accepted for human consumption’.

317. The incoming water was managed with a containment system created to keep the aquifer water apart from the rest of the cell. The water was able to be pumped out straight to the drain because ‘it was absolutely clean, beautiful water’.

318. Without having been involved at that time, Mr Paton reflected on the significance of the exposed aquifer. He said to find drinking quality water at the Stevensons Road landfill site would have added a ‘whole new twist’. He said the Rural Water Commission, had it known, would have advised the EPA ‘that resource had to be protected … I think that that would have had a significant influence on the design of the landfill’.

319. AGC Woodward-Clyde wrote in June 1996:

'It was recognised that these inflows could substantially increase the volume and difficulty involved in leachate collection, treatment and disposal from the site. Furthermore it would add substantially to the site operating costs.

... 

... the flow of water should not be expected to diminish significantly in drier years. It seems probable that the groundwater inflow is sourced either directly or indirectly from the fractured bedrock aquifer which is regionally rather than locally recharged ...'

320. However, a number of witnesses implied that once a works approval is granted, a landfill proponent is unlikely to halt progress. In the words of Mr Paton, ‘Once you’ve got the works approval, you’re away’.

321. However, a memorandum from Mr Aylward to the City of Casey in February 1996 demonstrated that some consideration was given to abandoning the project. The memorandum described the ‘unforseen’ water-related problems and discussed the ‘Financial Implications Should Site Not Proceed’. According to the memo, if the landfill did not go ahead the City of Casey would lose:

- $900,000 already promised to Select for set-up costs;
- $10,000 per month profit from tipping fees;
- damages that may be sought by Select; and
- compensation for increased tipping costs owed to Frankston City Council which had recently entered an agreement with the City of Casey to share use of the landfill.

322. To avoid incurring such losses, Mr Aylward recommended work to plug the water flow at a cost of $23,000. The recommendation was accepted by the City of Casey.

323. Also in February 1996, Mr Aylward wrote to Mr Conboy at the City of Casey:

The EPA must issue a licence upon us finishing the set up of the site. At this stage we do not have to advise them our problem, rather we should go to them with a solution. A number of the proposed licence conditions need varying and I would like Stephen Hancock with me during discussions with the EPA.

approval for the landfill
324. Preparation works for the landfill were completed in May 1996.

**Licence**

**Compliance with works approval**

325. In May 1996 the EPA conducted its required compliance inspection at the Stevensons Road site to determine whether works had been completed according to the works approvals and whether a licence to discharge waste should now be issued. The inspection was conducted by Mr Low, who made a file note of the inspection, stating, among other things:

The modifications to the leachate collection system in the landfill base is [sic] taken into account by the draft licence. The effective changes are that Cells 1 & 2 will both drain to one sump point between the two cells & that the floor has been graded with a 2% slope & will be covered by a ~300mm blue metal to promote a drainage layer rather than using discrete leachate pipes. These changes reflect improvements in design since the [works approval] was lodged & will not cause any problems with leachate collection & control.

326. Mr Low also wrote:

Michael Matthews of Energy and Minerals arrived during the inspection on another matter but confirmed excision of landfill area to be used has occurred. Will need to tidy this issue up.

327. At this stage, only Cells 1 and 2, being the southern half of the landfill, had been prepared. The northern portion, where Cells 3 and 4 would be located, was still being mined for sand.

328. Of the other two works approvals, for gas and leachate management systems, Mr Low wrote only:

The supporting gas & leachate WAs [works approvals] are considered complied with by virtue of the AGC report & a gas collection well design is at least proposed.

329. In conclusion, Mr Low wrote:

Believe all WAs [works approvals] have been complied with & recommend that attached licence, which has been viewed, modified and agreed to by SERWMG [the South Eastern Regional Waste Management Group], be issued.

330. To that effect, Mr Low on 30 May 1996 filled out a Delegation Action Sheet to have his compliance assessment approved. The Action Sheet was signed by Mr Carsten Osmer, Delegate for the EPA, the next day.

331. On 26 July 1996, Mr Low commenced employment as project officer for the South Eastern Regional Waste Management Group. The minutes of South Eastern Regional Waste Management Group dated July 1996 noted ‘Mr Low was previously employed with the EPA and has considerable expertise in landfill management’.

**Negotiation of licence conditions**

332. Negotiations took place between the South Eastern Regional Waste Management Group and the EPA regarding licence conditions prior to the granting of the licence. Mr Aylward requested the City of Casey provide the South Eastern Regional Waste Management Group with the assistance of Mr Hancock of AGC Woodward-Clyde for the negotiations.
Mr Hancock provided written advice to the South Eastern Regional Waste Management Group on 14 March 1996 ‘to assist in resolving licensing conditions’. In his advice, Mr Hancock reiterated his opinion that the landfill did not need to be lined. He also commented on the benefits of leachate accumulation:

The mere presence of leachate accumulations in the base of the landfill is not operationally significant, so long as it is not exposed during filling operations. Quite the reverse, its presence stimulates bioreaction and rapid waste stabilisation and it can lubricate compaction and consolidation provided excessively impermeable cover is not placed. Most importantly it expedites methanogenic degradation … Active under drainage of leachate accumulations which are over 2m below the working floor simply inhibits the above beneficial processes …

Mr Hancock suggested options for disposal of leachate ‘if it [was] necessary to remove leachate during the landfilling operations or post closure’. In addressing the draft licence conditions, Mr Hancock commented that condition 2.16(a) was ‘inappropriate’. The draft condition stated:

Pumpout [sic] of leachate collected from the leachate collection sumps in the base of each active landfill cell must occur such that the leachate level in each sump is maintained at a minimum level at all times.

Mr Hancock claimed this condition was ‘never intended nor is it necessary or desirable’. He proposed the leachate level be maintained at all times prior to site closure at least two metres below the lowest level of waste or cover placement in that cell. He explained:

This wording precludes any potential for leachate to ever be exposed at the tipping face, while at the same time maintaining the advantage of saturation and biodegradation during the period of operation.

Mr Hancock also stated that condition 2.16(b) of the draft licence was ‘not desirable’. The draft condition stated:

The pumpout [sic] operation described by condition 2.16(a) must continue for at least 20 years after premises closure.

With no further explanation, Mr Hancock suggested that condition be replaced with:

The pumpout [sic] operation described in condition number 2.16(b) (as amended herein) shall be continued for 20 years to maintain the leachate level within the waste mass 0.25m below the natural groundwater table outside the landfill perimeter measured in fully penetrating monitoring bores at points not less than 5m nor more than 10m from the perimeter.

In the case of both conditions 2.16(a) and 2.16(b), Mr Hancock’s suggested amendments were adopted, but with leachate to be maintained 1.5 metres below the water table rather than Mr Hancock’s suggested 0.25 metres. The assessing officer, Mr Low, recorded one page of handwritten notes on the EPA file in consideration of Mr Hancock’s fifteen-page document. Regarding section 16 of the draft licence, Mr Low wrote, ‘Pump out considered excessive in draft licence. i.e. would dewater Cranbourne area as written’. Regarding the alterations to conditions 2.16(a) and 2.16(b), Mr Low’s comment was, ‘Redraft considered OK’.
339. It appears that Mr Hancock was unaware that total leachate pump-out of the landfill had been contemplated by both the EPA and the Shire, prior to the EPA’s granting of the works approval. In March 1992, the Shire engaged AGC-Woodward Clyde to prepare a report which addressed total leachate pump-out. The EPA works approval was subsequently made conditional on this requirement.

340. Mr Hancock has since commented on the negotiation of licence conditions at the landfill:

… [the licence conditions] accord with my memory and are acceptable indeed they allow for the adjacent groundwater to be protected by maintaining an inward groundwater flow but at a low rate which would require limited pumping rates especially as the aquifers as tested were of transmissivity.

Licence granted

341. A waste disposal licence permitting tipping to commence on 3 June 1996 was granted by the EPA.

Conclusions

342. My conclusions on the approval process for the Stevensons Road landfill relate to the failure of the:

- EPA to properly process applications for works approval
- EPA to properly assess applications for works approval
- City of Casey and the South Eastern Regional Waste Management Group to comply with works approval conditions
- Shire of Cranbourne, the City of Casey and the South Eastern Regional Waste Management Group to have regard to environment protection
- EPA to review and enforce conflicts of interest and the impact of consultants and administrative appeals.

343. The EPA has since responded:

… it is EPA’s opinion that your [the Ombudsman’s] conclusions unfairly fail to give sufficient recognition to the fact that approaches which may be less acceptable in today’s terms, were acceptable in years gone by, given the constraints of a lesser state of awareness which will inevitably characterise an earlier period prior to the acquisition of an understanding of better approaches.

…

… it has been the expressed wish of successive State Governments that EPA should perform its statutory responsibilities within the context of the overall economic and social wellbeing of the State. In short, providing its primary environmental protection duties are not compromised, EPA has always been expected to be part of the “real world”.

…
... providing its [EPA’s] environmental standards are not compromised there is nothing inconsistent with a proper decision-making process for EPA to consider economic factors.

Failure of the EPA to properly process applications for works approval

344. I consider the EPA failed to efficiently process the Shire’s works approvals by providing conflicting advice and causing unreasonable delay.

345. Firstly, during 1990 and 1991, EPA officers gave the Shire conflicting advice about whether to purchase the landfill site before or after gaining works approval, whether to include both lots on one application or have a separate application for each lot, and even how much to pay for an application fee. The EPA did not provide clear guidance to the Shire regarding applications for works approval.

346. Secondly, the EPA caused delay to the Shire’s application for works approval made in late 1990. Under the Environment Protection Act, the EPA was allowed six months in which to assess an application for works approval. The EPA’s use of the argument that, according to the legislation, it was not required to accept an application until sufficient information had been provided was, in my view, a case of poor administration. The Environment Protection Act states that the EPA would not deal with an application that was not accompanied by information ‘as may be required by the Authority within 21 days of receiving the initial application’. After receiving the application on 30 October 1989, the EPA did not request further information until 23 November 1989 by phone, and 4 December 1989 by letter. In this way, the EPA delayed the Shire’s application by more than seven weeks.

347. The EPA also caused further delay in the processing of that application by responding to a letter from the Shire three months after the letter was written, requesting further information five months after the application was lodged and forwarding referral party comments to the Shire three months after the EPA received the comments. For the EPA to suggest the Shire request a deferment of consideration of the applications at the end of this process because the EPA had not decided on the application is an example of poor administration. The EPA had a statutory obligation to assess the application for works within six months. In my view, the EPA clearly failed to fulfil its obligation. Similarly, in its assessment of the subsequent applications in 1992 (not counting those withdrawn due to administrative error), the EPA at the end of its six month period for assessment suggested the Shire apply for a deferment of decision.

348. I consider that in both instances, in 1991 and 1992, the EPA failed to assess applications for works approval within the legislated timeframe. Relative to subsequent conclusions I have drawn, these initial failures on the part of the EPA are minor in themselves. However, I found they contributed to a poor outcome at the landfill by providing opportunities for the Shire’s arguments against strict conditions at the site.

349. The EPA has since responded:

The administration and thoroughness issues to which the Ombudsman refers relates to events which occurred more than 17 years ago.

... EPA agrees with the Ombudsman’s conclusions that any initial timeframe issues were minor. EPA does not agree such issues contributed to the poor outcome at the landfill.
Failure of the EPA to properly assess applications for works approval

350. As a result of my investigation I have concluded that the EPA’s assessments of the Shire’s works approval applications in both 1991 and 1992 were inadequate. The assessments contained errors and the EPA failed to properly explore all assertions. The EPA also failed to properly assess the Shire’s applications for works approval through lack of expertise and allowing the outcome to be the subject of negotiation.

351. In relation to the EPA’s 1991 assessment of the Shire’s works approval applications, it is clear that the assessing officer Mr Low was inexperienced. Mr Low’s report failed to explore or question most of the assertions made in the Shire’s application. Aspects of those applications that should have been examined further included the:

- status of the proposed residential subdivision on neighbouring property
- potential for odour generation
- viability or otherwise of lining the site
- reasons for rejecting potential alternative sites.

In addition, two statements on the assessment report – that there were no aquifers nearby and that a planning permit had been issued – were simply incorrect.

352. The EPA’s 1992 assessment of the Shire’s works approvals contained fewer errors, but again failed to properly explore all the assertions presented by the Shire. One significant error was to ignore the condition of the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) that prohibited landfilling below the level of the water table ‘unless written permission from the Authority has been obtained’. While the issuing of a works approval provides the EPA’s written permission for landfilling below the level of the water table, I was concerned to establish that this condition was not explicitly addressed by the EPA in the assessment of the Stevensons Road landfill works approvals. I consider that the EPA should not have granted permission for the landfill which was not only below the level of the water table, but interrupted a substantial aquifer.

353. Of further concern is that, in the case of the 1992 assessment, the EPA’s position was influenced by pressure from the Shire and reluctance on the part of the EPA to appear before the AAT. It is evident the conditions set in the works approvals in 1992 were affected by a mixture of a sense of obligation and concern of being overruled by the AAT.

354. My investigation identified evidence that the EPA favoured the use of landfill liners by 1992. For example, the EPA readily accepted the application for the fully lined Lyndhurst landfill. Also, the EPA required the Frankston City Council in 1992 to line future cells of its McClelland Drive landfill. Landfill liners were included in the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste), published in 1991, although not as a compulsory condition. Importantly, the EPA’s initial intention to require lining or limit the waste type to solid inert only at the Stevensons Road landfill would appear to demonstrate a belief in the EPA that at that time (1992) lining was a necessary feature of putrescible landfills. Despite this, the EPA agreed, following a series of meetings with the Shire, to allow an unlined putrescible landfill at the Stevensons Road site.
I consider the Shire’s argument that a landfill liner would be expensive should not have been taken into account by the EPA. Clearly, environmental standards should not be compromised for the sake of an agency saving money. By allowing economic considerations to override environmental imperatives, the EPA failed to set conditions for the discharge of waste into the environment. Whether it be pressure to provide good service following a series of inefficiencies; a reluctance to spend money; or the threat of a potential AAT hearing; the EPA should not have allowed external factors to influence its standards on environment protection.

Advances in knowledge and practice in the waste industry have made it easier to criticise the now outdated practices of past decades. However, this investigation revealed a question of poor administration. It is the role of the regulator to ensure assertions made in an application for works approval are in fact correct. I conclude a more thorough assessment of the Shire’s applications for works approval was required.

The EPA has since responded:

EPA acknowledges the error in the 1991 Works Approvals in relation to the planning permit condition but notes that error did not appear to impact on the development of the Stevensons Road landfill.

EPA assessed the Works Approval applications in accordance with the Environment Protection Act and statutory policy in force at the time, including SEPP 1991 [State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste)]. EPA commissioned and took into account independent expert advice when making its decision. The policy didn’t require particular design criteria for landfills, but rather, set out environmental objectives to be met.

Works Approval applicants and EPA regularly consult about options. The final EPA decision is based on the Works Approval applications before it. There were different options for the Stevensons Road landfill which could have complied with the statutory policy in force at the time.

In 1992 landfill liners were one of many possible design options available for putrescible landfills, but the statutory framework at the time did not require any particular option.

EPA did not compromise environmental standards to save the applicant money. However, EPA can take cost considerations into account when assessing options for a development, provided that the options comply with the Environment Protection Act and the statutory policy in force at the time.
Failure of the City of Casey and the South Eastern Regional Waste Management Group to comply with works approval conditions

358. My investigation also found the City of Casey through its agent, the South Eastern Regional Waste Management Group, failed to comply with the works approval conditions relating to the provision of a leachate collection system. The approved plans included discrete leachate collection pipes which were omitted by the South Eastern Regional Waste Management Group. The City of Casey, through the South Eastern Regional Waste Management Group, also formed the opinion that the requirements for leachate pumping, as specified in the works approval, were excessive. The South Eastern Regional Waste Management Group informed the future landfill operator, Select, that total pump-out would not be required. The decision that a condition is unnecessary, inappropriate or even outdated should not be for the holder of a works approval to make. That decision remains with the EPA as regulator.

359. The appointment of the South Eastern Regional Waste Management Group as manager of the landfill does not absolve the City of Casey of overall responsibility. The works approvals were issued to the City of Casey direct and the landfill was owned by the City of Casey.

360. Finally, the lack of any enforcement by the EPA of those conditions did not excuse either the City of Casey or the South Eastern Regional Waste Management Group for non-compliance. I conclude that the City of Casey and the South Eastern Regional Waste Management Group failed to comply with works approval conditions.

361. In response to my concerns, Mr Aylward has since stated:

   The EPA must inspect the works and sign off that the required works have been completed in order to issue a Licence to commence taking waste; its [sic] not possible for the operator to simply not carry out the works required.

362. The City of Casey has since responded:

   If there was a lack of compliance with the Works Approval conditions, it was only because of the actions of the Region [South Eastern Regional Waste Management Group]. Council engaged the Region to manage the Landfill because of its experience and expertise. It was, in fact, a statutory body, with extensive environmental knowledge and a history of landfill management.

   Council [City of Casey] was entitled to assume that the Region was complying with the Works Approval.

Failure of the Shire of Cranbourne and the City of Casey to have regard to environment protection

363. I am of the opinion that the Shire failed to have regard to environment protection in two ways:
   1. It did not recognise its own role in protecting the environment.
   2. It sought to affect the role of the EPA in protecting the environment.

364. The South Eastern Regional Waste Management Group also failed to have regard to environment protection, specifically, its own legislated role in that area.
The Environment Protection Act was established to, among other things, ‘make further provisions for the protection of the environment’. The Act was made to ‘bind the Crown and every body (whether corporate or unincorporate) constituted under any Act for a public purpose’. The Act states: ‘No person shall pollute any waters or cause or permit any waters to be polluted’ and this includes underground and artesian waters. Similar prohibitions are made against pollution of soil and air.

Similarly, the goal of the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste), introduced in 1991, was ‘to protect existing and anticipated beneficial uses of segments of the air environment, surface waters and groundwaters and to protect residents and the environment from off-site effects arising from landfills’.

The Shire had a duty under the Environment Protection Act not to pollute the environment and to act in accordance with the goal of the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) to protect the environment. Yet the Shire’s actions in gaining approval for the landfill were consistently motivated by financial considerations, at the expense of the environment. Throughout the works approval application process and during preparation of the site, the Shire’s motivation was clear: to maintain the momentum of the project while minimising costs to the Shire. Its desire to own a landfill to avoid exposure to the commercial tipping market – to avoid being ‘held to ransom’ – and its arguments regarding the allegedly prohibitive expense of landfill lining demonstrated this. In its narrow focus on the economics of landfilling, the Shire failed to take account of other factors, namely environmental standards.

The City of Casey, through the South Eastern Regional Waste Management Group, was similarly motivated by commercial imperatives, in its rejection in 1995 of Rust PPK’s recommendation for a liner as ‘unnecessary and expensive’. The South Eastern Regional Waste Management Group also failed in its own statutory duty to ‘facilitate and foster best practices in waste management’ and to advise on new technology and promote that technology where benefits can be demonstrated.

The City of Casey responded:...

... the Rust PPK recommendation was rejected because its [the City of Casey’s] expert manager – the South Eastern Regional Waste Management Group – rejected it. Like the EPA and many expert advisers before it, the South Eastern Regional Waste Management Group took the view that clay lining was not needed. The EPA had a continuing opportunity to insist upon lining and that at no point in 1995 (or subsequently) did it advise the City of Casey or any of its experts that clay lining should be introduced in new cells. Presumably the EPA was unmoved because it was only a few years earlier that it had received no less than eight expert reports suggesting that a clay liner was unnecessary.

When water-related problems were encountered in the preparation of the site, the South Eastern Regional Waste Management Group and the City of Casey considered the financial implications should the landfill not proceed, but gave no consideration to the impact on the environment of an exposed aquifer on the side of the landfill.

Mr Aylward has since stated:

URS were engaged to provide advice on how to control the spring in the south/west corner and works were carried out to intercept the water inflow into a holding well with permanent pump and pipework diverting the water flow from the landfill cell.
372. The Shire also neglected its obligation to protect the environment by seeking to affect the decisions of the EPA. The Shire took an adversarial approach which I consider was inappropriate. The use of such phrases – ‘testing the waters’ and ‘an excellent basis for the request that lining be dispensed with’ – demonstrated the Shire’s adversarial approach. The Shire also began to criticise the EPA for delays before the EPA had been allowed its legislated six months to consider the applications for works approval. Finally, the Shire demanded it be allowed to operate according to outdated environmental standards in recompense for the inconvenience it claimed to have suffered because of the EPA’s slowness and administrative errors. I consider such actions inconsistent with the role of public agencies to cooperate with a statutory authority such as the EPA. Section 7(b) of the Local Government Act 1989 required the Shire to ‘co-ordinate with other public bodies to ensure that services and facilities are provided and resources used effectively and efficiently’. I consider the Shire did not co-ordinate with the EPA to use resources effectively and efficiently and, regardless of how many administrative errors the EPA made in the assessment of the application, the EPA – not the Shire – had the statutory power and responsibility to determine the conditions of the works approvals.

373. The City of Casey responded:

... [the Shire] was making a submission as to what the EPA should decide. It [the Shire] was entitled to do so, and cite expert reports which indicated that clay lining was unnecessary.

... The EPA then had a decision to make about whether a clay liner was needed. The EPA ultimately made that decision, based not only on what Cranbourne [the Shire] had submitted but on its own assessment.

Inadequate review and enforcement by the EPA

374. My investigation identified that the EPA missed numerous opportunities to improve the standard of the landfill, especially given that works did not begin for a long time after approval was granted.

375. I note section 19CA(1) of the Environment Protection Act allowed the EPA to specify in a works approval the day on which the approval should expire should works have not yet commenced to the satisfaction of the EPA. This was reflected in the works approvals granted to the Shire for the landfill in 1992. However, despite an intended lifespan of twelve months, the works approvals for the Stevensons Road landfill were allowed to remain valid for more than three years before works commenced. In that time, the EPA did not invalidate, extend or review the works approvals or their conditions. In an industry described by several experts as rapidly developing, this was a case of poor administration by the EPA.

376. When the contractor Select approached the EPA with concerns about the landfill’s standards, the EPA failed to act other than by writing to the City of Casey to inform it of the contractor’s concerns. The City of Casey’s predecessor, the Shire of Cranbourne, had already expressed its unwillingness to bear the expense of lining the landfill, so it was not surprising that the City of Casey chose not to act on the contractor’s concerns. I consider conditions attaching to works approvals for landfills ought to be strengthened and improved over time. The EPA failed to grasp this opportunity.
I note that when water problems were encountered during preparation of the Stevensons Road landfill site, the EPA appeared to be unaware of the groundwater inflows at the site. This highlights the fact that the works approvals granted in 1992 contained no requirements for monitoring or reporting. While the waste discharge licence for the landfill required the occupier of the premises to notify the EPA of any breach of licence, the works approvals contained no such condition. The EPA, despite its statutory obligation to undertake inspections to ensure compliance with the Environment Protection Act, does not appear to have visited the Stevensons Road site between the granting of the works approvals in 1992 and its compliance check of finished works in 1996. Had the EPA visited the site or required the holder of the works approvals to report any incidents to the EPA, it may have identified the difficulties the operator was having with groundwater inflows and perhaps even the dispute over the lining of the site. This was another missed opportunity.

Evidence also revealed the EPA’s compliance assessment, required by legislation to be conducted upon the completion of works, was poorly done, based as it was on inspection of works that were clearly not complete nor compliant. After deciding to issue a works approval for both Lots 10 and 7, in my view the EPA was wrong to sign off on completion of works when only Lot 10 had been prepared for the acceptance of waste. Lot 7 was still being mined for sand. Furthermore, the leachate control system on Lot 10 differed significantly from the specifications of the works approval. The change was made by the South Eastern Regional Waste Management Group without any apparent consultation with the EPA. Yet the EPA found it appropriate to sign off on the works as complete and compliant. I consider this a further example of poor administration by the EPA.

When the licence was negotiated and granted, the EPA not only missed an opportunity to require higher standards than those agreed in 1992, but it actually allowed standards to drop. Specifically, the condition relating to leachate pump-out which was heavily debated before the granting of the works approval was changed on the basis of advice from Mr Hancock followed by the uncritical endorsement of Mr Low.

Moreover, the detailed proposals and supplementary information that had been incorporated into the conditions of the works approvals were simply lost in the development of the licence. No reference was made to them in the negotiation of licence conditions and they were not accurately represented in the licence that was issued.

Essentially, the landfill that was built at Stevensons Road in 1996 was one that was conceived in the late 1980s. The Shire argued successfully in 1992 to be given approval for a landfill design that was originally approved in 1991 and was conceptualised in the late 1980s. It was not until 1996 that the EPA then inspected the allegedly completed works. Significant changes had taken place in best practice over those years, as evidenced by the concerned contractor and the Rust PPK report. The EPA did not take any of the opportunities available to improve the standards it required at the landfill. By allowing these opportunities to pass it by, I consider the EPA failed to protect the environment.

The EPA responded:

Works Approvals 1569, 1598, and 1599 were approved in April 1992 and were consistent with all then current and relevant statutory policy. Licence ES29244 was issued in 1996 in accordance with the Environment Protection Act and all then current and relevant statutory policy. At the time EPA issued Licence ES29244, EPA had no reason to suspect that the means proposed to manage the leachate and/or landfill gas in the absence of any liner would not be adequate to protect the environment or that the Stevensons Road Landfill would not be operated in accordance with the Licence requirements.
Works Approvals 1569, 1598, and 1599 each included a condition 2 setting out when approval expired (which could be extended beyond 12 months). EPA did not fail its statutory duty.

The file note of the inspection [of the landfill] records that the officer undertook a comprehensive investigation.

Conflicts of interest

383. In all cases of conflict of interest, the concern is not whether or not the conflict actually occurred or resulted in improper behaviour. Rather it is whether there is the appearance of a conflict in the first place and how the appearance of a conflict is dealt with. The very appearance of a conflict of interest gives rise to the perception that improper behaviour may have resulted. I have raised my concerns about this issue publicly in the past. My investigation identified three perceived conflicts of interest in the approval process for the landfill:

1. EPA officers occupying the dual role of advisor and assessor
2. the Shire of Cranbourne being both applicant and responsible authority for the landfill planning permit
3. The assessing officer for the EPA transitioning to project officer for the landfill manager.

384. My investigation identified conflict in the role of EPA officers as both advisor and assessor in the works approval process. Providing guidance to applicants regarding the requirements of the EPA in the works approval process is an important function of the EPA. However, this role can conflict with the role of EPA officers in assessing a works approval. The EPA should ensure the assessment of an application for works approval is reviewed by an EPA officer who has not been involved in the assessment process. Otherwise the assessment process may be perceived to be influenced by the type of pressure exerted by the Shire in this case.

385. Also concerning is the conflict of interest involved in the Shire of Cranbourne and later the City of Casey serving as both responsible authority and applicant for the landfill planning permit. An expiration date was included as a condition of permit, but that condition was not enforced. Also, since the City of Casey was aware of problems arising at the site in 1995, it may have found reason to reconsider the permit. However, no action was taken. As both the agency wishing to retain a valid permit and the agency required to enforce that permit, the Shire of Cranbourne and later the City of Casey had a perceived conflict of interest which may be seen to explain its lack of enforcement of the permit conditions.

386. The City of Casey responded:

The City of Casey points to the legislative scheme which makes such a conflict of interest inevitable. It also points to a segregation of duties – planning enforcement staff being quite separate from those involved in the Landfill – which has had, and continues to have, the effect of mitigating the perception and risks associated with the conflict of interest.

7 Conflict of interest in the public sector, Ombudsman Victoria, March 2008; Conflict of interest in local government, Ombudsman Victoria, March 2008.
A perceived conflict of interest also arose when Mr Stephen Low, of the EPA, commenced work for the South Eastern Regional Waste Management Group less than two months after conducting the Stevensons Road site compliance checklist and recommending a licence be granted. I consider that Mr Low’s assessment was very poorly done.

In response, Mr Low has since stated:

In respect of a perceived conflict of interest regarding my change of employment through the period of concern, I would state that I had no prior knowledge that the South Eastern Regional Waste Management Group through Martin Aylward as the Regional Manager was going to approach me with an offer of employment.

It was in fact the situation that I hand delivered the first issued licence to Mr Aylward at the Cranbourne landfill site on the morning of 3 June 1996 as part of a quasi opening ceremony. After this ceremony concluded, Mr Aylward took me aside and proceeded to describe an offer of employment with the Regional group.

This was the first occasion that I became aware that I had been targeted for the Region’s project officer role, and both the uncommon and unexpected manner in which I received the literal car park job interview is one that strongly remains in my mind.

The EPA also responded:

EPA recognises that there is a basis of concern about the perceived conflicts of interest in relation to Mr Low’s transition to project officer for the landfill manager. However, there is no evidence this impacted on Mr Low’s conduct while working at EPA.

EPA’s assessment of applications for Works Approvals 1569, 1598 and 1599 was not undertaken solely by Mr Low.

The impact of consultants and administrative appeals

It is not in my jurisdiction to review or comment upon the correctness or otherwise of decisions of VCAT and its predecessor, the AAT. It is, however, clear that decisions of the AAT and the role of expert witnesses had both a direct and indirect impact upon the administrative decisions giving rise to the matters I investigated. My investigation revealed the capitulation of the EPA was in large part due to the influence of the consultant, Mr Hancock; the EPA’s loss of confidence caused by the Camberwell case; and the potential for another AAT hearing should the EPA issue a works approval not to the liking of the Shire. The EPA clearly demonstrated concern in the wake of its loss in the Camberwell case. The files of the EPA and the Shire show the Camberwell case was discussed during the Stevensons Road works approval meetings and numerous interviewees from both agencies have confirmed the influential nature of that case. Evidence of numerous witnesses showed the EPA demonstrated a lack of confidence in its own regulatory control following the Camberwell case. The Shire’s use of Mr Hancock, the witness from the Camberwell case, served to deflate the EPA’s confidence further.

Mr Hancock was said to pride himself on never having ‘lost’ a case. In its use of Mr Hancock’s services, the Shire made several references to its ‘chances,’ its ‘basis’ and what ‘case’ it might have to get the approval it wanted for an unlined putrescible landfill. Mr Hancock believed the EPA was ‘testing the waters’ to see what case it might have to oppose Mr Hancock’s proposal in the wake of ‘his successful argument in the Camberwell case’.
393. Mr Hancock has since stated:

The issue of Stevensons road site and the Camberwell site are interlinked by the fact that data and interpretations used during the Camberwell site AAT hearing included data and evaluations of the attenuative capacity of the Stevensons Road site amongst others. These were presented in evidence to the South Eastern Region Waste Management group. These reports were presented in evidence to the Camberwell AAT hearing and the arguments they supported were accepted. It is for this reason that I believe that the EPA were reluctant to run the case again in relation to Stevensons Road.

...

There was no atmosphere of adversity in my mind in respect to the Camberwell case other than a disagreement as to what constituted the optimum approach to landfill management where landfills extended below the water table. In the past many landfills had done so and it was my opinion that with proper management such landfilling was beneficial in achieving more rapid waste stabilization. The alternative of all landfilling above water table or attempting to maintain landfills as dry tombs were approaches that were bound to fail. Certainly the EPA did not agree my position [sic] but they did not succeed in refuting the evidence presented before the AAT regarding this seminal hearing.

394. In my view, the Camberwell case should have had no bearing on the Shire of Cranbourne’s application for works approval. The issues in question in the two cases were not the same. The only precedent set by the Camberwell case that could have had relevance to the ‘Cranbourne case’ was the perception that the EPA had ‘lost’ to Mr Hancock. It appears that the EPA was overly concerned about the risk of failure at the AAT.

395. It was inappropriate for the EPA to act in this manner. Given its position as the statutory authority responsible for protecting the environment, the EPA should have demonstrated courage in its role.

396. The EPA responded:

The issues which the Ombudsman refers to relate to events which occurred more than 18 years ago.

It is appropriate for EPA to take into account relevant court and tribunal decisions in the way it administers the Environment Protection Act and performs its duties, but it is incorrect to say that EPA capitulated.
Recommendations
I recommend that:

Recommendation 1
The EPA ensure it has clear and detailed written guidelines for applicants for works approvals.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 2
The EPA review its policy for assessing works approval applications to ensure assessments are made by suitably qualified officers and all assertions made by applicants are verified fully before works approval is granted.

The EPA’s response
EPA has already fulfilled this recommendation.
It is now standard practice that all works approvals are peer reviewed by EPA staff with appropriate expertise before the Authority’s decision on the works approval is made.
In addition, a dedicated expert-based Statutory Facilitation Unit has been created as part of the EPA’s new organisational structure. All works approval applications are assessed by this centralised team.

Recommendation 3
The EPA create an independent panel of experts to advise on works approval and licence conditions where an applicant wishes to vary the recommendations of the EPA’s Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills publication.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 4
The EPA review its training program for officers involved in the waste management industry.

The EPA’s response
EPA can fulfil this recommendation.
EPA can design and implement improvements to the existing training programs for officers involved in waste management industry issues.

Recommendation 5
The EPA ensure works approval applications are processed within the legislated timeframe, currently four months.

The EPA’s response
EPA can fulfil this recommendation.
EPA has published a 2009-10 corporate target of processing works approvals within a three month timeframe.
Recommendation 6

The EPA adopt a policy that allows comment on proposed works approvals, licences and licence amendments, but not the negotiation of the conditions.

The EPA’s response

EPA can partially fulfil this recommendation.

In accordance with EPA’s statutory duty it will continue:

- not to negotiate on the environmental standards which must be met in works approvals, licence and licence amendment decisions, and
- to negotiate options to fully meet those environmental standards.

Recommendation 7

The EPA implement procedures for tracking the life of works approvals and grant no more than one extension of time without a full review of the conditions of the works approval.

The EPA’s response

EPA can fulfil this recommendation.

Recommendation 8

The EPA include as a condition of works approval that regular monitoring and reporting be undertaken during the works phase.

The EPA’s response

EPA has already fulfilled this recommendation.

EPA has implemented a standard works approval requirement for landfills that an appointed environmental auditor be required to conduct an assessment of critical elements of landfill construction.

Recommendation 9

The EPA review its procedures for compliance assessment of works approvals to ensure sign-off occurs at senior management level and with the benefit of a detailed assessment against all information incorporated into the works approval.

The EPA’s response

EPA has already fulfilled this recommendation.

The Authority’s formal statutory delegations specify that all landfill works approvals must be signed off by a member of the EPA Executive Team.

Recommendation 10

The EPA ensure any changes to works approval conditions are agreed by the EPA via a formal request for amendment.
The EPA’s response

EPA has already fulfilled this recommendation.

EPA can reinforce this practice by specifying it in (1) the guidelines for works approval applicants and (2) EPA’s internal procedures as they are updated as part of our current licensing and works approval reform package.

Recommendation 11

The EPA review its licensing arrangements to ensure that the process for setting licence conditions is at least as rigorous as the works approval process.

The EPA’s response

EPA can fulfil this recommendation.

Recommendation 12

The EPA ensure any proposal regarding the future operation of a landfill made in an application for works approval is fully reviewed in the licensing process and incorporated where appropriate into the waste discharge licence.

The EPA’s response

EPA can fulfil this recommendation.

A review of existing practices will be undertaken as part of EPA’s current licensing and works approval reform package.

Recommendation 13

The City of Casey ensure its waste management policy takes account of environmental and community concerns as well as economic considerations.

The City of Casey’s response

Council’s Waste Management Policy does take account of environmental and community concerns, as well as economic considerations.

Recommendation 14

The City of Casey ensure that environment protection is a central principle in its planning policy.

The City of Casey’s response

Clause 15 of the Casey Planning Scheme already provides for environmental protection as an integral part of the planning scheme.

Recommendation 15

The City of Casey ensure it has procedures in place for tracking the life of planning permits.

The City of Casey’s response

… [the City of Casey] has developed a proactive regime that concentrates on high risk elements of planning decisions.
Recommendation 16
The City of Casey review its planning permit enforcement policy to ensure that permit conditions are observed.

The City of Casey’s response
... [the City of Casey] has developed a proactive regime that concentrates on high risk elements of planning decisions.

Recommendation 17
The City of Casey grant no more than one extension of time on a planning permit without a formal review of the permit conditions.

The City of Casey’s response
Over a number of years, VCAT has established a series of tests to determine whether an extension of time should be granted for a planning permit. Council has applied these tests in assessing all applications for extensions of time.

Recommendation 18
The City of Casey develop specific procedures to manage conflict of interest where the City is both permit applicant or permit holder and responsible authority for a planning permit.

The City of Casey’s response
... Council segregates its duties as a responsible authority for processing planning permits and planning enforcement from its role in other council operations by involving different staff.

Recommendation 19
The City of Casey review its code of conduct and provide related training to ensure its officers do not exert undue pressure on a statutory authority or attempt to interfere with the decisions of a statutory authority.

The City of Casey’s response
It is surprising that a recommendation is proposed relating to an event that occurred over 17 years ago, involving the former Shire of Cranbourne and EPA.
2. MANAGEMENT OF THE LANDFILL

Contracting arrangements

397. Over the life of the Stevensons Road landfill, an increasing number of parties were contracted to work on the landfill. It became evident during my investigation that the contractual arrangements surrounding the landfill had a significant impact on how it was managed and operated.

Contracting regulations and procurement policies

398. The Local Government Act 1989 governs the manner in which a municipal council may obtain goods and services it is unable to produce itself. Section 186 of the Local Government Act determines how a council may enter into a contract. Section 186 originally required contracts valued at $50,000 or greater be subject to a competitive tender process. In 1999, this condition was amended to apply to contracts valued at $100,000 or greater.

399. The Local Government Act also requires each council to create, display and abide by a procurement or purchasing policy. On 7 May 2002 the City of Casey adopted an Environmental Purchasing Policy. The policy remained current at the time of my investigation and contains the following general purchasing principles:

- Purchasing should provide the best value for money expended;
- Procedures used must be able to withstand public scrutiny;
- All those suppliers who wish to participate in the business transactions of the Council should be given, within reasonable time limits, the opportunity to do so;
- Purchasing procedures should ensure open competition;
- Purchasing procedures should comply with all of Council’s policies.

400. Separate to the above policy, the City of Casey adopted on 16 November 2004 and amended on 19 July 2005 a general Purchasing Policy. The policy identified the City of Casey’s procurement objectives as:

- Achievement of best value in price, desired quality and delivery
- Use of a competitive process, which is fair, transparent, compliant and accountable
- Effective management of the risks created for the community
- Giving preference to the purchase of environmentally friendly goods.

401. While the Purchasing Policy specified how many officers must assess a tender or quotation for purchases valued at $5,000 or more, it did not specify how many or what type of tenders or quotations the City of Casey must obtain before making a purchase below $100,000.

402. I was unable to locate Frankston City Council’s procurement policy on its website. However, I note that in accordance with section 186A of the Local Government Act, councils have until 19 November 2009 to comply with this requirement.
Ownership and use of the landfill

403. The landfill is owned by the City of Casey. The City of Casey came to an agreement with Frankston City Council to allow Frankston City Council to use the landfill providing it contributed to its establishment, management and operational costs. The distribution of costs was calculated ‘per tonne’ of waste tipped by each municipality.

404. For the purpose of sharing use of the landfill, the cities of Casey and Frankston formed a sub-group of the South Eastern Regional Waste Management Group of which both councils were already members. Records suggest the newly formed sub-group of the South Eastern Regional Waste Management Group, sometimes called the Casey Frankston User Group, met every four months over a number of years. However, Mr Andrew Swales, Physical Services Manager for the Frankston City Council, said during interview on 9 December 2008 that when he had oversight of the landfill for the Frankston City Council from 2003 there were no regular meetings between the two councils.

405. The relationship between the City of Casey and the Frankston City Council was formalised in a waste disposal agreement signed on 19 October 1995. The waste disposal agreement set out the responsibilities of the two parties should there be any environmental problems with the landfill. It stated:

... in the event of any leachate outburst or gas leakage, or other environmental problem or mishap or contamination... each member of the sub-group shall contribute to the cost of any remedial action and contribute to the payment of any costs, losses or damages incurred ...

406. It was also a condition that the agreement continued until the landfill was no longer available for the acceptance of waste.

Management contractor – the South Eastern Regional Waste Management Group

407. The waste disposal agreement signed by the City of Casey and the Frankston City Council on 19 October 1995 was also signed by the South Eastern Regional Waste Management Group which agreed to establish, manage, operate and rehabilitate the landfill on behalf of the councils. The agreement stated:

As agent of the sub-group the Group [the South Eastern Regional Waste Management Group] shall ... be responsible for the day-to-day control and management of the development, operation, restoration and maintenance works carried out at the tip site and shall take all steps and action necessary to ensure that such work is carried out by itself and its contractors in a proper and workmanlike manner in accordance with the standards required by the EPA, any planning permits affecting the tip site, the EPA works approval, and as otherwise set out herein and in accordance with its budgets approved by the sub-group.

408. Mr Michael Jansen, Team Leader Environment, who has worked for the City of Casey since 1997, said during interview on 28 November 2008, ‘one of the main benefits to Council’ of the South Eastern Regional Waste Management Group was ‘they managed [landfill] sites on our behalf. They had the expertise to operate and supervise those sites’. Mr Jansen said this was important because ‘Council didn’t have the expertise in landfill management and I certainly wasn’t an expert in – in managing landfills’. He said, ‘We relied heavily on their – or, entirely on their expertise to manage the site on our behalf’.
Mr Jansen also said the waste disposal agreement ‘gave the responsibility for operating [the landfill] in accordance to the licence to [the South Eastern Regional Waste Management Group]’ and the role of the City of Casey ‘has always been to make sure [the South Eastern Regional Waste Management Group] are managing the site in compliance with the licences’. When asked about the reporting requirements of the contracted landfill manager, Mr Jansen said:

In terms of the reporting mechanism, there was to be a management committee or a User Group formed between Casey and Frankston, and we’d nominate an officer from each who would sign off on expenditure over a certain amount but also be reported to on progress, and how things were going.

Mr David Richardson, Manager Engineering and Environment for the City of Casey, provided a similar response during interview on 10 December 2008 when questioned about the role of the City of Casey at the landfill. Mr Richardson said the City of Casey’s role was, by intention, not a ‘hands-on’ one. Asked how the City of Casey oversaw the work of its contracted landfill managers and, in particular, whether it conducted any audits or monitoring, Mr Richardson said:

From a financial point of view because there was – there was actual books there, there were audits on the finances. [The South Eastern Regional Waste Management Group] was considered the group so we weren’t – we weren’t auditing their performance and SITA [who managed the site later] … again were appointed to do that so we weren’t.

Mr Jansen said the contracted landfill manager was also required to interpret technical information provided by consultants. He said technical reports were provided to the South Eastern Regional Waste Management Group which:

... would be our representative in terms of analysing those reports and saying, ‘Well, yes, they make sense, no, they don’t’. Subsequently, then, they would report that back to us and say, ‘Well OK, from this we need to now go and put in a gas extraction system in the southern part of the system’. So that’s what we would then sign off on, is, OK, the need to put in a gas extraction system.

Mr Andrew Swales, Physical Services Manager for the Frankston City Council, said during interview on 9 December 2008 that ‘the day-to-day running of the landfill was left to the City of Casey and the Frankston City Council did not have much involvement’. Mr Swales said the Frankston City Council did not receive contractors’ reports or itemised invoices.

By contrast, Mr Richardson and Mr Jansen of the City of Casey indicated the Frankston City Council received the same contractors’ reports and financial information as the City of Casey. Mr Richardson said information:

... wasn’t necessarily reported from the City of Casey to Frankston. That was reported out of the User Group set up for that, so it was reported – at the same time it was reported to us it would be reported to Frankston City Council representatives ... Although it was our site, you know, we owned the land, you know, the licence was held by the region and [later] Grosvenor Lodge so it was really reporting to both of us.

Although the Frankston City Council’s files included records provided by the South Eastern Regional Waste Management Group such as the minutes of meetings, I found little evidence of correspondence or reports from contractors in the files inspected by my officers.
Management sub-contractor – Martin Aylward and Associates

415. While the South Eastern Regional Waste Management Group managed the landfill for the cities of Casey and Frankston, the day-to-day duties of management were further delegated to the South Eastern Regional Waste Management Group’s Region Manager, Mr Martin Aylward. Mr Aylward was, from April 1992 until approximately June 1994, an employee of the group. However, in 1997 Mr Aylward ceased employment with the South Eastern Regional Waste Management Group and the duties formerly undertaken by him were contracted out to a company formed by him called Martin Aylward and Associates.

416. Martin Aylward and Associates was contracted to ‘undertake the administration of the Group’s activities’ from 1 May 1997 to 30 April 2000, with an option for a two-year extension. The contract stipulated Martin Aylward and Associates provide a person to act as Region Manager, ‘such person being first approved in writing by the group’. The person provided by Martin Aylward and Associates and approved by the South Eastern Regional Waste Management Group was Mr Aylward. Martin Aylward and Associates was also required to provide an administrative officer and a project officer. Mr Stephen Low, formerly of the EPA and the South Eastern Regional Waste Management Group, filled the role of project officer, as an employee of Martin Aylward and Associates. The annual fee to be paid to Martin Aylward and Associates was, initially, $201,450.

417. Of these arrangements, the South Eastern Regional Waste Management Group Chairman at that time said:

This model evolved due to the funding framework established [under an amendment to the Local Government Act] in 1994. The funding structure did not adequately allow for the engagement of suitably qualified and experienced people on a full-time basis. Many groups opted to engage a consultant to provide that service.

418. The landfill management duties of Martin Aylward and Associates were set out in its contract with the South Eastern Regional Waste Management Group as follows:

The Consultant shall manage the landfill requirements of the group … The Consultant shall ensure that those sites under the direct control of the Group are operating in accordance with the Licence conditions … The Consultant shall develop direct communication links with the EPA to ensure that the EPA is aware of any operational problems that may arise at any Group landfill. The Consultant shall advise the host Member Council of any adverse effects from a waste disposal facility impacting on its surrounding neighbours.

419. On 25 November 1999, the South Eastern Regional Waste Management Group approved a two-year extension of its contract with Martin Aylward and Associates, until 30 April 2002. However, a 2001 government review of Victoria’s regional waste management groups recommended the groups cease to engage in commercial activities such as management of landfills. Mr Jansen recalled one of the major findings of the review was a potential conflict between the roles of waste management groups as regional planners and also potential owners and operators of landfill sites.

420. On 16 May 2001, Mr Aylward, on behalf of Martin Aylward and Associates, wrote to the cities of Casey and Frankston regarding future management arrangements at the landfill.
Mr Aylward wrote:

As you are aware the review of the Regional Waste Management Groups … will prohibit [the South Eastern Regional Waste Management Group] from providing any site management at the Stevensons Road Landfill … My proposal to the Stevensons Road User Group would be that my company continue to provide the level of service that you require at the landfill. The cost of providing the level of service will be $3,850 per month (GST Inclusive).

421. When the South Eastern Regional Waste Management Group ceased management of the landfill, the Casey Frankston User Group agreed to have Martin Aylward and Associates continue to manage the landfill on its behalf, directly, on a month-by-month basis. I was unable to locate a contract for this arrangement on the City of Casey or the Frankston City Council files. However, an internal report by Mr Richardson of the City of Casey dated 2 October 2001 noted:

Martin F. Aylward and Associates have written to Casey and offered to continue Contract Management and Site Management Services …

…

Given that Martin F. Aylward and Associates are successfully project managing the landfills operations and they have the local knowledge and industry expertise, it is reasonable to continue with their service at the present time and to accept their offer. Their performance and service cost will be monitored and reviewed. The service agreement will be on a monthly basis …

422. Mr Jansen said at interview:

… under the Local Government Act we needed to go through a competitive tender to appoint somebody as Site Manager. We didn’t have the expertise to do that. So in the interim Martin took over.

423. Despite no longer needing a manager for the landfills in its region, the South Eastern Regional Waste Management Group extended its contract with Martin Aylward and Associates for the provision of management services to cover the remaining areas of the South Eastern Regional Waste Management Group’s work.

424. Around the same time, the then Mayor of the City of Monash wrote to the South Eastern Regional Waste Management Group identifying a number of alleged conflicts of interest between Martin Aylward and Associates as a private company and Region Manager of the South Eastern Regional Waste Management Group. The Mayor pointed out that Martin Aylward and Associates conducted private commercial business from an office half funded by public money. He criticised the South Eastern Regional Waste Management Group for fully funding overseas study trips for Martin Aylward when Mr Aylward ‘admits that these trips have a significant relevance to his private interests’ and for fully funding office furniture and stationery as well as staff members that were partly used for the private business of Martin Aylward and Associates.
425. In July 2002 the South Eastern Regional Waste Management Group commissioned accountancy firm Ernst and Young to produce a report on these and other concerns raised by the Mayor. Ernst and Young recommended the South Eastern Regional Waste Management Group consider the appropriateness of the above arrangements. Ernst and Young also identified the South Eastern Regional Waste Management Group had reduced its annual fee to Martin Aylward and Associates from $270,992 to $192,842 and it now required Martin Aylward and Associates to provide a project manager. As far as I was able to determine, the South Eastern Regional Waste Management Group took no further action on the matter. Martin Aylward and Associates continued to provide regional management services to the South Eastern Regional Waste Management Group and landfill management services to the cities of Casey and Frankston.

426. In relation to employment arrangements with the South East Regional Waste Management Group, Mr Aylward has since stated:

   ... the Group had employed Martin Aylward as its Regional Manager directly and under contract to manage the Groups [South Eastern Regional Waste Management Group] affairs.

   ...

   It should be noted that the agreement with the Group clause 4.2 provided that the Region Manager may at the expense of the Group attend seminars, conferences etc provided they were approved and budgeted for; in all cases this was the case. Martin Aylward presented papers at conferences under the Group banner. It should also be stated that Martin Aylward & Associates was paying 50% of the office rental costs and had been paying all rental costs until the Group changed office location.

   ...

   ... the Group did reduce the fee to $192,842 as it (the Group) no longer required the consultant to employ a project officer on its behalf.

**Contracted operator – Select**

427. As well as a manager, an operator was required to run the landfill. For this purpose, the South Eastern Regional Waste Management Group engaged Select Earthmoving in 1995 to prepare the landfill and operate it for its first five years. Select Earthmoving was soon replaced by Select Waste Management, a related company. Mr Peter Quinn, Managing Director of the Select companies, was unable to recall the exact relationship between the two, but said during interview:

   I think the contract documents might have been signed – tendered under Select Earthmoving and signed under Select Waste.

428. Select signed a contract with the South Eastern Regional Waste Management Group ‘for the Design, Establishment and Operation of a Landfill Site at Stevensons Road, Cranbourne’ beginning on 19 September 1995. According to its minutes, the South Eastern Regional Waste Management Group signed the contract on behalf of the cities of Casey and Frankston and both councils endorsed the South Eastern Regional Waste Management Group’s actions in the matter.
429. These arrangements remained in place until Select’s contract ended at the end of June 2001, at which point the operation of the landfill in its second phase was put out to tender by the South Eastern Regional Waste Management Group.

Sand extraction – Vella Sands / Warriak

430. While Lot 10, the southern-most lot of the landfill, was being filled with waste in the early years of the landfill’s operation, the northern lot, Lot 7, continued to be excavated by sand-mining company Vella Sands Pty Ltd (Vella Sands).

431. The Shire’s records confirm that in December 1993 it purchased Lot 7 and concurrently leased it back to Warriak Pty Ltd (Warriak – formerly Vella Sands) with the condition that Warriak attempt to extract at least 600,000 cubic metres of sand from the lot. I found no evidence that Vella Sands or Warriak was required to prepare Cells 3 and 4 to any particular specifications other than to remove a minimum quantity of sand.

432. According to the minutes of the Casey Frankston User Group, Cell 3 at the southern end of Lot 7 was handed over to the tip operator on 31 August 1999. Evidence suggests that mining in Cell 4 ended in December 2000.

Change of operator – Grosvenor Lodge

433. Two tenders were received for the operation of the landfill in its second phase. Both tenderers, Select and Grosvenor Lodge, were invited to interview, but only Grosvenor Lodge attended an interview. Mr Quinn of Select said during interview:

I knew I wasn’t going to get it … because I’d capped [the Cemetery Road landfill] and ended up in a disaster with Casey … I just sort of didn’t really want to do that much more with them after that.

434. The ‘disaster’ referred to by Mr Quinn was a contractual dispute over the capping of the adjacent closed Cemetery Road landfill for which Select had a separate contract. The dispute involved Select claiming extra payment for unexpected costs involved in the work. Mr Quinn said the matter ‘ended up in arbitration’ and his company was paid out. He said by that time the relationship between Select and the City of Casey was very poor and descended into personal attacks.

435. The contract to operate the landfill in its second phase was won by Grosvenor Lodge, a waste management company which at that time also operated a landfill for the South Eastern Regional Waste Management Group at Clayton Road, Clayton. Grosvenor Lodge signed a contract with the cities of Casey and Frankston on 1 November 2001. The role of superintendent of the contract which had been performed by the South Eastern Regional Waste Management Group in the Select contract was now performed by Martin Aylward and Associates. Grosvenor Lodge managed the landfill until its closure in 2005.

Change of Manager – SITA

436. In March 2003, the cities of Casey and Frankston tendered the management of the landfill. Tenders were received from Martin Aylward and Associates, SITA Australia Pty Ltd (SITA) and Vemco Environmental Pty Ltd. The cities of Casey and Frankston together assessed the tenders and selected SITA.
437. The tender assessment report, produced by the cities of Casey and Frankston, noted SITA’s price was ‘almost 50% of the expected cost’. The report stated:

The SITA price of $33,910 is much lower than expected and seems disproportionate when the hourly rate of allocated staff was compared to the hours required in providing the services … SITA addressed this issue by indicating resources from its operations in Taylors Road, Lyndhurst and Hallam Road, Hampton Park would be shared to achieve efficiencies. During the interview process, SITA went on to indicate that it would … not seek increases in fees for “unexpected items”. Council staff will be required to ensure that the level of service at Stevensons Road is not compromised by management requirements at the existing SITA sites.

438. Representatives of SITA, Mr Daniel Fyfe, General Manager for Victoria, and Mr Robin Macan, former employee who managed the landfill for a time, said during interviews that SITA’s offer of management at a reduced price was a strategic decision to fill the landfill quickly and attract the cities of Casey and Frankston as clients of SITA’s other landfills.

439. Records show SITA began managing the site in mid-2003, but the contract signed by SITA and the cities of Casey and Frankston was dated 29 March 2004. As well as setting out the duties of SITA as landfill manager, the SITA contract created the Casey Frankston Joint Venture to replace the South Eastern Regional Waste Management Group sub-group and Casey Frankston User Group. The contract stated:

The Joint Venture [consisting of the cities of Casey and Frankston] has formed a non-statutory management committee consisting of one representative from each municipality. The Committee has the overall responsibility for the effective and efficient management of all activities and works at the Site ...

440. The Joint Venture Management Committee proposed to ‘meet quarterly with a Chairman selected by the Committee’. SITA was to prepare agendas and reports for the meetings. Minutes and actions arising from the meetings were also the responsibility of SITA. Standard items to be reported on at meetings were, according to the contract:

- Performance of the landfill contractor including quantity wastes received;
- Financial performance compared with annual budget;
- Site development activities compare to approved Development Plan, with particular reference to the removal of slimes [emphasis added] and preparation of the southern pit;
- OHS status of all site activities;
- Environmental performance of all Site activities; and
- Customer and community relationship performance.

441. It would appear from the inclusion of ‘removal of slimes’ and ‘preparation of the southern pit’ that the contract was adapted from an existing contract for another landfill since there were no slimes at the Stevensons Road site and the southern end of the landfill had already been filled at this point.

442. The contract also required SITA to act as superintendent of the Grosvenor Lodge contract and to ‘arrange for the annual EPA reports to be prepared and submitted on time to the EPA’. SITA was required to ‘note all risks to the environment and plan ameliorating measures that can be implemented in the event of any environmental damage occurring
as a result of activities at the Site. The Site Manager shall maintain open communications with the EPA and be proactive with the EPA in problem solving should any environmental issues related to the site arise’. Also, ‘as part of the reporting system to the Joint Venture Management Committee,’ SITA was required to ‘report on the Site’s environmental performance including any issues raised by the EPA’.

443. The Joint Venture management committee would, according to the contract, ‘monitor the Site Manager’s performance of the Services’ by the following criteria:

- The exercise of vision and judgement;
- The quality of advice provided to the Joint Venture Management Committee;
- Achievement of targets set in the adopted Business Plan;
- Achievement of incomes and adherences to expenditures proposed in the adopted Annual Budget;
- Implementation of risk management measures and the avoidance of incidents;
- The provision of timely, accurate and comprehensive reports; and
- Level of community satisfaction achieved.

444. The landfill closed on 24 June 2005. Shortly afterwards, Grosvenor Lodge and then SITA ceased involvement at the site.

Post-closure manager – Mr Stuart Hercules

445. In October 2006, the City of Casey appointed Mr Stuart Hercules to manage the site after its closure. On 16 December 2008, the City of Casey emailed Mr Hercules with an offer of a contract extension until October 2009.

Other contractors

446. Several other contractors and sub-contractors were involved in works at the landfill during its operating phase and after its closure. Energex and Landfill Management Services Pty Ltd (LMS), which were involved in the gas extraction system, are discussed later in this chapter. HLA-Envirosciences Pty Ltd (HLA), later subsumed by ENSR, was involved in monitoring and providing advice on water and later gas-related issues.

Environmental auditors

447. Environmental auditors were also involved at the landfill. Mr Anthony Lane of Lane Consulting (later Lane Piper) conducted regular audits at the site from the time the landfill opened through to its closure and beyond, although the scope of his audits changed over time. Mr Lane’s audits were initially not a statutory requirement, but were part of a wider auditing role he performed for the South Eastern Regional Waste Management Group, auditing all the South Eastern Regional Waste Management Group’s landfill sites. He described the purpose of those audits as follows:

It was to check the compliance with the licence conditions, you know, some of which were pretty mundane things like catching rats and picking up litter, right? The others were the big issues, you know, always the big issues of, you know, leachate, groundwater, gas and odour … It was basically reviewing against the licence requirements and the planning permit requirements … and very briefly just identifying the key issues and – and trying to – to keep them on top of managing the key issues.
After each audit Mr Lane presented the South Eastern Regional Waste Management Group with a written report. Mr Lane stated that it was ‘in a tabulated form so we could keep track of the issues very systematically’.

My investigation revealed Mr Lane’s audits for the South Eastern Regional Waste Management Group did not, however, have the intended effect of ‘keeping them on top of managing the key issues’. In February 2001, Mr Lane sent to the South Eastern Regional Waste Management Group via Martin Aylward and Associates a document entitled ‘Review of Landfill Audit Program and Management Systems’. In this document, Mr Lane identified the following two ‘systemic problems with the audit process’:

Objective evidence, such as documentation and records needed to support or verify the status of issues identified during audits, is not always readily available either on site, in Steve Low’s office or at the SERWMG [the South Eastern Regional Waste Management Group] offices (this includes correspondence, external reports, monitoring data, etc.) Changes are required in the record keeping system …

Several items on the audit reports have achieved little if any progress over the last 6 to 12 months. The importance of these should be reviewed with yourself and resolved at the next audit.

From 2002, Mr Lane’s auditing role at the landfill was more limited. After the South Eastern Regional Waste Management Group ceased managing the landfill, Mr Lane was no longer required by the South Eastern Regional Waste Management Group to audit that landfill. However, a licence amendment in August 2002 required the landfill licence holder to engage the services of an environmental auditor to report to the EPA by 30 September each year on the condition of groundwater. These new audits were conducted according to section 53V of the Environment Protection Act. From that time, Mr Lane was engaged each year by the City of Casey to conduct audits of groundwater only. He ceased to report on other aspects of the landfill and ceased to visit the landfill quarterly.

Mr Roger Parker of Golder Associates, also an EPA-appointed auditor, said the audits under section 53V of the Environment Protection Act are ‘risk of harm’ audits which may relate to such things as groundwater quality or whether a landfill cell has been correctly constructed according to works approval or licence requirements. Mr Parker said the Act did not specifically provide for audits of landfill gas or air quality generally, but gas might ‘come into play’ in a contaminated land audit under section 56XEP if such an audit was conducted at a landfill and if gas was classified as a pollutant. After the landfill closed, however, the EPA did require air quality audits due to growing concern over landfill gas. The City of Casey engaged a consultant, Mr Brian Eva of Eva and Associates, to conduct the air quality audits in the post-closure period of the landfill.

Licensing

While the City of Casey had the contracting arrangements described above which determined responsibility for the landfill, the EPA attributed responsibility to the holder of the waste discharge licence. In accordance with the request of the City of Casey, the EPA first issued the waste discharge licence for the landfill to the South Eastern Regional Waste Management Group.
The City of Casey wrote to the EPA on 20 September 1995:

I wish to advise that [the South Eastern Regional Waste Management Group] will be managing the Stevensons Road landfill for the City of Casey. The landfill will also be used by Frankston City Council …

The City of Casey holds Planning Permits and Works Approval for the site. The licence for the site should be issued to [the South Eastern Regional Waste Management Group] upon completion of the Works Approval requirements.

On 31 July 2002, shortly after Martin Aylward and Associates replaced the South Eastern Regional Waste Management Group as landfill manager, the waste discharge licence was transferred to Grosvenor Lodge. The transfer was initiated by Mr Aylward who sent a transfer form to Grosvenor Lodge requesting Grosvenor Lodge complete the form and submit it to the EPA. Mr Aylward advised Grosvenor Lodge the cities of Casey and Frankston would remain responsible for monitoring and reporting of leachate levels and installation and maintenance of a permanent gas collection system. The cities of Casey and Frankston would also reimburse Grosvenor Lodge for the annual EPA licence fee and transfer fee.

Mr Low said he suspected the transfer of the licence to Grosvenor Lodge ‘would’ve been to put the liability on Grosvenor Lodge as the licensee for control mechanisms’. Mr Aylward confirmed during interview the reason for transferring the licence to Grosvenor Lodge was to hold Grosvenor Lodge accountable. Mr Fraser Brown, Managing Director of Grosvenor Lodge, said it was unusual for his company to hold the EPA licence for a site at which it was the operator rather than the manager or the owner. Mr D, formerly of Grosvenor Lodge also noted:

The Clayton regional [landfill] was exactly the same, exactly the same. It was owned by five councils … [and managed by] Martin Aylward. So, well, I don’t know how that happened and why you’d even want it to happen, but anyhow that’s how that was. So obviously it put us at some fair risk there.

In relation to the licence transfer, Mr Aylward has since stated:

The requirement for the contractor [Grosvenor Lodge] to hold the EPA Licence was contained in the Specifications for Contract No 2-2001.

... I enacted the provisions of the Contract; namely to arrange for Grosvenor [Grosvenor Lodge] to transfer the Licence to their name.

The Contractor was required to comply with all requirements of the EPA Licence; in the event the contractor failed to comply the Principal did not wish to be prosecuted for an offence; for which the Contractor was liable, hence the transfer provision.

The risk identified by Mr D was realised in 2003 when the EPA issued a Penalty Infringement Notice to Grosvenor Lodge for the discharge of odorous landfill gas from the landfill. The Penalty Infringement Notice imposed a $5,000 fine. Grosvenor Lodge refused to pay the notice because it was not contractually responsible for landfill gas control. Grosvenor Lodge forwarded the Penalty Infringement Notice to SITA, the landfill manager. SITA attempted to recover payment from Energex, the company contracted to install a gas extraction system at the landfill, but Energex also denied responsibility and refused to pay. Eventually, the Penalty Infringement Notice was paid by the City of Casey.
457. Grosvenor Lodge retained the waste discharge licence until 7 June 2005. In January 2004, the EPA wrote to the City of Casey suggesting it apply to have the licence transferred into its name since it, as owner, had ultimate responsibility for the landfill. Mr Richardson of the City of Casey recommended the City of Casey agree since the landfill was soon to close and it had ‘little to gain by opposing [the] EPA’s request’. The City of Casey adopted Mr Richardson’s recommendation on 1 June 2004 and on 7 June 2005 the licence was transferred to the City of Casey. It was subsequently rescinded on 7 February 2007 after the landfill was closed and no longer required a licence.

Planning permit

458. The operation of the landfill was also governed by the planning permit issued by the City of Casey to itself prior to the development of the landfill. The permit contained conditions relating to the operation of the site such as ‘there shall be no discharge or emissions of odours from the site’ and ‘before tipping commences in each stage, leachate collection works shall be constructed and used to collect all surface leachate’.

459. In the City of Casey files I found one planning permit inspection report, dated 20 January 2004. The report noted the required truck washing facility was not in place, but that this had not had any detrimental effect and the Planning Investigations Team had not received any complaints regarding the matter. It also noted:

The Methane gas monitoring and collection … appears to be operating in accordance with the EPA requirements and there were no detectable fumes or odours … there have been no complaints regarding odour from the site received by the Planning Investigations Team to date.

There were no other concerns with the Planning conditions resulting from this site inspection.

Pollution Abatement Notice

460. To retain regulatory control of the landfill after the waste discharge licence was rescinded the EPA issued a Pollution Abatement Notice for the landfill. The notice was issued on 3 January 2007 and came into effect on 2 February 2007.

461. The cities of Casey and Frankston agreed that the Pollution Abatement Notice would be in the City of Casey’s name only as it was the occupier of the site. The Frankston City Council continued to contribute financially to the rehabilitation of the site, but had no further involvement in its management. During my investigation, however, Mr George Modrich, Chief Executive Officer (CEO) of the Frankston City Council advised that the Frankston City Council ceased its financial contributions in early 2009. According to Mr Modrich, the cessation of payments from the Frankston City Council was not by agreement with the City of Casey, but was based on legal advice obtained by the Frankston City Council.

462. The conditions of the Pollution Abatement Notice issued to the City of Casey were wide-ranging, covering gas and leachate management, rehabilitation and capping, monitoring and reporting, complaints, incident reporting and many other aspects of landfill management. Monitoring and enforcement of the conditions of both the waste discharge licence and the Pollution Abatement Notice were the role of the EPA. I have examined in detail the EPA’s monitoring and enforcement activities in the following chapter.
Leachate management

463. I note that from the time the landfill was first conceived, leachate management and water in general were important issues. Australian Groundwater Consultants Pty Ltd (AGC) recognised in its 1987 investigation into the proposed landfill that ‘there [would] be some problems regarding removal of leachate from the site’. Leachate management was debated heavily in the works approval stage and, as previously mentioned, the inflow of water from a fractured aquifer caused difficulties in the preparation of the site in 1995 and 1996. My investigation into the management of the landfill found leachate remained a key issue throughout the operational life of the landfill and into the post-closure period.

Leachate-related licence conditions

464. The conditions relating to leachate management in the works approval and the subsequent waste discharge licence rested on the premise of maintaining an inward gradient to prevent leachate from flowing out of the unlined sides of the landfill. As described in the previous chapter of my report, the inward gradient was to be achieved by pumping leachate out of the landfill so that the level of the leachate was lower than the level of the surrounding water table and water was only ever drawn into the landfill rather than allowed to flow out of it.

465. Specifically, the waste discharge licence required the leachate level in the landfill to be maintained at least 1.5 metres below the surrounding water table. It required pump-out of leachate to that level to continue for 20 years. The licence also required monitoring by measurement of the level of leachate in the landfill.

466. By 6 October 2004 the licence required ‘Confirmation by an appropriately qualified and experienced hydrogeologist that an inward gradient … has been maintained at the premises, during the preceding 12 month period’.

Leachate extraction system

467. To allow for the extraction of leachate the landfill was built with two sumps, low points to which leachate was intended to drain along the sloped base of the landfill, underneath the waste mass. From those sumps, leachate was pumped out of the landfill to a nearby leachate holding dam. From that dam, the leachate was discharged to the sewer, by agreement with the relevant authorities. Those authorities required the leachate to be first treated so it was of a quality acceptable to the sewerage system.

468. There are no records to clarify whether leachate collection pipes were in fact installed in the base of Cells 1 and 2 of the landfill or whether a drainage layer of blue metal was put in place instead. According to Mr Patrick Clarke, geological engineer formerly of AGC-Woodward Clyde, best practice today is to use both. Due to the lack of any records, even less is known about the leachate collection infrastructure, if any, installed in the base of Cells 3 and 4 of the landfill.

469. Despite being unable to establish conclusively the exact nature of the leachate system at the landfill as a result of incomplete records held by the City of Casey, I nevertheless considered it important to investigate the adequacy of the system and its operation given the importance placed on leachate management by most if not all witnesses and the known relationship between leachate and landfill gas.
Contractual responsibility for leachate management

470. According to the EPA licensing system, the licence holder was responsible for meeting the conditions of the licence and therefore for ensuring leachate was maintained at the specified level and monitored. This meant the responsible party was firstly the South Eastern Regional Waste Management Group and later Grosvenor Lodge. However, the contractual arrangements surrounding the landfill’s operation and management distributed responsibility for leachate management differently.

471. Both the Select and Grosvenor Lodge contracts required the contractor to ‘periodically’ pump leachate from the sumps to the leachate holding dam. Select was required to ensure leachate depth of no more than 300 millimetres in the base of each cell. Grosvenor Lodge was to ‘ensure that the leachate build up in any cell is maintained to a depth of 3.0m below the working platform’. The Grosvenor Lodge contract did not refer to pumping of leachate from a completed cell, as distinct from a cell with a ‘working platform’.

472. The Select contract required it to monitor and record the level of the leachate. However, in the Grosvenor Lodge contract the cities of Casey and Frankston held that responsibility. The responsibility to treat and test the leachate in the holding dam to the sewer was the landfill manager’s.

Environmental audits

473. The environmental audits produced by Mr Lane provided a useful source of information about problems with leachate at the landfill. Mr Lane said during interview leachate was one of the big issues. His audits demonstrate leachate levels appeared high and leachate was not measured sufficiently to ensure the presence of an inward gradient.

474. Mr Lane’s audit of July 1996 noted the landfill operator was unaware of various aspects of water and leachate management required at the site. In January 1997 Mr Lane identified a range of leachate-related issues including:

- responsibility for management of leachate required clarification (an issue already identified in a 1996 audit);
- water was being discharged to the marshy area to the north-west and the residential area to the east (also previously noted in 1996 audit);
- water was flowing into Cell 2;
- there were no working groundwater monitoring bores;
- there were no leachate monitoring bores; and
- a number of issues that were identified in the previous audit remain unchanged.

475. By December 2000, Cell 1 was filled and covered with a temporary cap. Mr Lane’s audits of May, September and December 2000 identified ‘small leachate springs’ on the temporary cap suggesting a high level of leachate in the cell. The December 2000 audit also reported that pumping in the south-east corner of the landfill, where the aquifer had been exposed in 1995, had ceased in August 1999 and not recommenced until around October 2000, after which time it was operated manually and intermittently. Mr Lane stated he suspected the aquifer in that corner was contributing water in Cell 1.

476. In 2003, Mr Lane’s annual groundwater audit found surrounding groundwater was polluted by leachate.
Having received all of the audit reports mentioned in my report, the City of Casey was aware of the issues described. Correspondence demonstrates the EPA was also aware of the problems with leachate. For example, in October 2000 and May 2001, the EPA wrote to the South Eastern Regional Waste Management Group warning it was considering ‘further enforcement action’ due to leachate discharges and other problems. In a letter to Grosvenor Lodge dated 7 May 2004 the EPA referred to the conclusions of Mr Lane’s 2003 audit and warned ‘further enforcement may occur in accordance with [the] EPA’s Enforcement Policy’.

Mr Lane said part of the problem with leachate management at the landfill was measuring the leachate. He said during interview:

> The key issue was – which is still a key issue today – is what is the level of leachate in the landfill? And it’s very difficult – it is difficult to measure, but, you know, you’ve just got to try harder … As we know, it’s an unlined landfill, and there was a notion at the outset that it would all be okay as long as you – you had the leachate level in here below the groundwater level out here, and so the groundwater would flow in and the leachate wouldn’t get out and wouldn’t contaminate the groundwater …

Asked his opinion of the inward gradient method of leachate control, Mr Lane responded it was ‘an interesting idea’. He then said, ‘That’s what the licence required so they had to measure these things to see if [they] had actually achieved it’.

The audits show monitoring was not adequate to assess whether an inward gradient was achieved. For example, Mr Lane recommended in his December 2000 audit that groundwater inflow into Cell 4 be assessed and leachate and groundwater levels be analysed to evaluate compliance with the inward gradient requirement. Mr Lane’s audit of September 2001 confirmed leachate levels were not being measured. In 2002, Mr Lane recommended that the ‘hydraulic gradient between the landfill and the aquifers be explicitly addressed’ but in 2003 he reported that it had not been done because he was ‘unable to measure leachate level in the landfill’.

In 2003, Mr Lane also found the bores installed to measure the level of leachate in Cell 1 ‘had become ineffective due to [landfill gas] causing foaming’. Mr Lane described this problem of gas in the leachate bores at interview on 25 November 2008. He said:

> … you’ve got a cap, you’ve got a bore, you’ve got gas and you’ve got leachate that’s also got some gas, you know, bubbling through it and you put this bore in and you take the cap off and you’ve got this local pressure drop and the gas goes phooff, into the bore and phooff out, like a geyser … if the leachate level is quite high then this thing can just go continuously … gushing leachate and gas just continuously … and then two or three visits – audits later on, this thing was just bubbling away … you couldn’t measure anything in it, and that’s why I think that cell number one was actually full. It was chockers with leachate, right to the cap. You just bore in it and it just [goes] phooff. Just basically leachate came out.

The 2003 audit also noted that while the licence required the leachate level to be measured in metres above the lowest point of the landfill base, it was not known where that lowest point of the landfill base was located. Mr Lane explained during interview that the depth of the northern cells of the landfill was unknown.

The 2003 audit concluded the data available on the level of the leachate was ‘insufficient to enable a reliable and regular assessment of the state of [the] gradient’.
At interview, Mr Lane said leachate measurement was made even more difficult because monitoring was undertaken quarterly. He said quarterly monitoring of leachate levels was unreliable because a measurement taken at a single point in time is affected by the stage in the pumping cycle at which the measurement is taken. Mr Lane said he recommended the landfill manager ‘use pressure transfusers or air line, so it’s continuous measurement of the level, rather than, you know, quarterly or weekly’. There is no evidence that the recommendation was adopted.

Despite the poor quality of the data available to measure leachate, Mr Lane said at interview he believed the leachate level was high. He said, ‘The data was pretty patchy, but it would be fair to say that [the landfill] exhibited all the signs of being, – being, you know, a saturated landfill’.

A second aquifer

Mr Lane’s environmental audit of December 2000 noted an inflow of groundwater into the north-west corner of Cell 4. The water originated from an aquifer which was presumably exposed during the excavation process but would previously have been pumped out by the sand mining company in the normal course of its operation. It was in December 2000 that the Cell 4 was handed over by the sand mining company and the aquifer became a problem for the landfill operator.

Mr Lane said, ‘Ultimately it became a major problem … it would have started off life as a small puddle and became a large lake, a very large volume of black, odorous, leachate-contaminated water’. Mr Low, formerly of Martin Aylward and Associates, said the accumulating water ‘caused a significant odour issue for a period’. Mr Jansen of the City of Casey said at interview the accumulating water was ‘the main issue’ that he ‘intervened with or dealt with [the South Eastern Regional Waste Management Group] on’. He mentioned the odour it caused and noted, ‘At that point we had residents 200 metres away’.

On 11 April 2001, Mr Low wrote to the EPA to formalise the South Eastern Regional Waste Management Group’s plan for managing what he described as ‘the clean spring water’ entering Cell 4 of the landfill. Mr Low noted the South Eastern Regional Waste Management Group did not require the EPA’s approval to conduct the proposed work, but he wrote to keep the EPA informed. He proposed constructing a containment dam to segregate the incoming clean aquifer water and keep it from being contaminated and thus becoming leachate, and then pumping it out. The black, odorous water that had already accumulated in Cell 4 of the landfill was also to be pumped out, after treatment to improve its quality.

Mr Low’s correspondence with the EPA demonstrated the implications of not managing the inflow were serious. He wrote:

One implication of not collecting the groundwater would be the very rapid saturation of any wastes placed within the pit and the consequential rapid generation of leachate and landfill gas. This is assuming that the accumulation of water didn’t occur at a rate that prohibited waste disposal in the first place.

Nevertheless, Mr Low evidently considered management of the problem simple and achievable and he cited the successful management of the aquifer in the south-east corner of the landfill as proof of the South Eastern Regional Waste Management Group’s ability to manage the second aquifer. This was despite the finding in a recent audit that the pump in the south-east corner had been switched off for many months and water from the aquifer had been flowing into Cell 1 which was, according to environmental auditor Mr Lane, ‘holding water’ in late 2000.
Mr Low wrote:

The Region has had to maintain such a discharge from the south-eastern end of the premises site since initial site works were commenced and there have been no problems raised and associated with this discharge operation.

The management of waters on a landfill site is a major part of the operational requirements, and again the Region is not aware of any problems associated with the management of site waters generally. The proposal outlines simple engineering requirements that can be managed by the on site Contractor …

Mr Low has since stated:

The maintenance of the pump extracting clean waters from the cell 1 aquifer management system could not be continued in its original form to off site stormwater drainage, due to gradual contaminant impact. For this reason this pump discharge had to be switched off for a period as there was no alternate disposal option available. I do recall the use of some basic irrigation techniques through the summer period at that time as an interim management method, presumably whilst awaiting the various permissions to be granted for the sewer discharge facility to be developed.

It is my recollection that the development of this limitation on disposal of the cell 1 waters was the precursor to the Region seeking to develop a contaminated water treatment facility as a means of managing any contaminated site waters by disposal to sewer.

The Land and Groundwater section of the EPA produced an internal review of Mr Low’s document. The review which, was not dated, noted:

… more significant, fundamental issues about the suitability of this site for a landfill. Given landfilling is underway presumably this is a historical legacy, however it is of concern that it appears there is no restriction in the licence that requires out [sic] approval of the groundwater operational controls or any other document before Cell 4 is filled.

Question: Should action be taken to prevent them filling Cell 4 before issues associated with groundwater and leachate management have been adequately resolved.

Despite the concerns of its Land and Groundwater section, the EPA did not take any action to prevent Cell 4 from being filled until the groundwater and leachate management issues were adequately resolved. The EPA wrote to the South Eastern Regional Waste Management Group on 6 December 2001 regarding the importance of controlling the relative levels of leachate and groundwater. The EPA suggested the South Eastern Regional Waste Management Group install further monitoring bores and use data loggers to measure the level of the leachate. It required detailed operating plans to be provided by 31 January 2002.

The South Eastern Regional Waste Management Group’s response, dated 19 February 2002, stated, ‘I believe our successful operation of ground water bore No.1 indicates the Region can adequately manage ground water, however I will discuss your concerns with a hydrogeologist’. There was no further correspondence on the matter.
Meanwhile, in June 2001, Mr Low submitted an application to South East Water for a trade waste agreement to discharge water from the landfill to the sewer. Mr Low’s application mentioned the previous trade waste agreement that had been arranged to allow water from the aquifer in the south-east corner of the landfill to be pumped to the sewer, but it stated that the previous agreement had been necessary to:

... overcome water management issues associated with site start up, in a particularly wet winter season, and because there were no alternate management mechanisms available.

Mr Low wrote that a second agreement was necessary because ‘very heavy rainfall event experienced at the end of April 2001’ had caused ‘some 1 million litres of water’ to accumulate ‘in the main pit area’. No mention was made of any aquifers or ‘springs’.

South East Water granted a trade waste agreement and the odorous accumulation of water and the inflow of clean aquifer water were managed as planned, with a containment dam and pump-out.

**Pump-out of leachate**

The pump-out of leachate from the landfill was the contractual responsibility of the landfill operator. Asked what instructions Select received about pump-out of leachate, Mr Quinn of Select said during interview ‘there was no big issues’. Asked about the level to which Select was required to pump the leachate, Mr Quinn said:

But see, we were pretty good at keeping the water out of the tip and if you keep the water out of a tip, the leachate doesn’t start for a while. It takes quite a while for it to become a problem and ‘cause we never had that water coming through the site then ... it wasn’t that bad. Wasn’t a big issue.

I note Mr Quinn’s recollections are at odds with the findings of the environmental audits discussed earlier. The audits show that by June 2001, when Select’s contract at the landfill ended, problems with leachate had already been identified.

Also in contrast with Mr Quinn, staff from Grosvenor Lodge recalled leachate was a major problem at the landfill and pumping it to the required level was not straightforward. Mr D of Grosvenor Lodge, who was not based at the landfill but visited a few times a week on average in 2002 and later, recalled:

... the biggest issue at Cranbourne was the groundwater ... the quantity of, of water before you place the waste was the most difficult probably aspect of that job.

Similarly, Grosvenor Lodge’s onsite operator, Mr R, recalled, ‘That place was always to do with water’.

Mr D said he was aware it was a condition of the licence that waste must not be deposited into water, but he implied it was difficult to avoid because the landfill ‘could never be de-watered’. He said:

There was just way too much water to de-water the site. All you could do was – is just keep it as empty as you could keep it and that would mean running the pump continuously so that’s how much groundwater was filtering in.
503. Asked about the specific condition of the licence that required leachate to be kept 1.5 metres below the surrounding water table, Mr D said, ‘Great if you didn’t have groundwater pouring in or you had a lined cell where you control all these things’.

504. One of the efforts initiated by Mr D to control water in the landfill was, according to his recollection, dealing with the pump and dam in the north-west corner. This infrastructure had been installed in Cell 4 to manage the incoming water from the north-west aquifer and the resultant accumulation of odorous water. Mr D appeared unaware of those problems. He recalled:

They’d purposely left a void there to capture the water, but I believe the water was coming from – like I say – the eastern side and we ended up moving this sump completely back to the eastern side so it wasn’t filtering from the east all the way across to the west before it was captured … You had to create a sump to capture water. Otherwise your whole site’s waterlogged. So I remember creating another sump on the eastern side and filling [the void on the western side with waste] and that was the end of that. So within a couple of months of myself being there, this – that was gone and we managed the water from over here which was closer to the leachate pond.

505. Environmental auditor Mr Lane also recalled the void or dam being pumped-out and filled with waste. Questioned about what would then have happened to the groundwater flowing in from the aquifer, Mr Lane said, ‘Well, it’ll come back, it’s just – it’ll come back into the – into the landfill … it would become leachate’.

506. Grosvenor Lodge’s onsite operator, Mr R, said he pumped leachate for a few hours a day, about four hours, he guessed. Mr R said, ‘Well, we just ran it. There was no meterage, there was nothing to – to, um, tell us otherwise’. Asked whether he was instructed to run the pump for four hours every day, Mr R said, ‘There was nothing – nothing put in place for me to go by. Yeah, it was just, “Pump it”’. Mr R could not recall whether anyone measured the level of the leachate.

507. By the time SITA took over management of the landfill, leachate was clearly a significant problem. SITA’s report of its initial inspection of the landfill in July 2003 stated:

Drainage infrastructure appears to be non-existent with the presence of significant quantities of water on site … Cells 2, 3, & 4 … are areas of major pondage … the leachate sump within [Cell 1] was flooded with water …

Disposal of leachate

508. According to Mr D, one reason it was difficult to ‘de-water’ the landfill was a lack of disposal options. I note that even prior to the opening of the landfill, in the works approval stage, Mr Parker of Golder Associates drew attention to the volume of leachate that would need to be pumped and the lack of any contingency plan should the volume become too large to dispose of.

509. Records show a leachate holding dam had not yet been provided for the landfill operator to use in 1998. The provision of a leachate holding dam for disposal of leachate from the landfill was the contractual responsibility of the City of Casey. Minutes of the Casey Frankston User Group at the end of 1997 noted the failure to provide a dam was ‘tantamount to a breach of contract’.
Once a leachate holding dam was provided, it did not, according to Mr D, have the capacity to hold the amount of leachate that should have been extracted from the landfill. It was not until 2007 that a second, additional leachate holding dam was provided. Prior to that, Mr D said when the leachate dam became full, there was no other facility to which the leachate could be pumped. He said:

Obviously sometimes that did impact some of our operations. ... You can’t place waste in water ... There were times that we had to wait for the pond to be emptied, had to wait for the water to be treated.

When asked whether he discussed with SITA or the City of Casey the problem of having limited leachate discharge space, Mr D said, ‘We had those discussions frequently, yes’. When asked what the response was, he said:

Well, what do you do? You’re governed, aren’t you? Nothing happened from there. We didn’t increase the pond ... By then it was probably a bit of a mountain that was a bit hard to conquer for anybody. We were inundated with water in a – in a massively deep hole. I mean, you imagine the size of the landfill cell. You’re not going to build a dam to contain that water anywhere.

Asked how the inundation of leachate might have been avoided or resolved, Mr D suggested that at some point operations could have been stopped to allow the unfilled cells to be lined. During my investigation I established that lining of new cells in a landfill where the older cells were not lined was not uncommon. For example, a waste disposal licence granted to the Frankston City Council in 1984 for its McClelland Drive landfill was amended in 1992 to require new cells at the landfill to be clay lined on the base and on at least the first two metres of the walls.

**Leachate – an ongoing issue**

At the landfill, overabundant leachate continued to be a problem until and during the time of my investigation. An independent review by consultant Mr David Maltby for the EPA in 2008 found leachate was still not being extracted sufficiently to maintain the required level 1.5 metres below the surrounding water table. Also in February 2008, the EPA criticised the City of Casey for not extracting enough leachate from the landfill and refused a request from the City of Casey to reduce its requirements for leachate extraction. High leachate levels were identified by UK consultant, Mr James Shaughnessy, in September 2008.

Insufficient disposal capacity continued to restrict leachate extraction capabilities at the landfill. An internal EPA document dated December 2008 stated, ‘the current leachate disposal system is not adequate to meet the needs for the site’. An earlier internal document of the EPA dated September 2008 noted:

The [EPA] landfill center advised Council over last December through to April that leachate extraction needs to be considerably increased at the site, and that a bottleneck situation was likely to occur if they didn’t increase their leachate storage capacity or find an alternative method of disposing/treating the leachate.

The City of Casey responded:

Throughout the relevant period, the management of the Landfill was outsourced. It may have been the case that issues were raised with managers but these issues were not, in turn, brought to Council’s attention.
[The City of Casey] ask[s] that the … [Ombudsman’s] report refer to the extensive advice sought by Council and obtained from ENSR between 2005 and 2008, the lengthy delay on EPA’s part in considering the request for a second leachate pond and the geological and other impediments to the lowering of leachate levels.

**Gas management**

516. The Proposed Cranbourne Sanitary Landfill Hydrogeological and Leachate Investigation submitted to the EPA by the Shire of Cranbourne in 1989 demonstrated landfill gas was a known phenomenon at the time the landfill was conceived, as was the approximate methane content of landfill gas. The investigation stated:

> Municipal landfills are also known to generate odours after they have been filled and rehabilitated due to the gradual seepage of landfill gas. The major constituent of the landfill gas is methane (approximately 55%) which represents a hazard due to its explosive potential.

517. The EPA also recognised that leachate levels could affect gas extraction long before the current problems arose. In 1992, Mr Low, then of the EPA, wrote in his works approval assessment that gas extraction at the landfill could be ‘sub-optimal’ because of the height of the water table.

**Gas-related licence conditions**

518. From 2000, the EPA licence required a gas collection system to be installed and operated in accordance with the environmental improvement plan submitted by the South Eastern Regional Waste Management Group to the EPA. However, the environment improvement plan submitted in December 2000 did not provide details of a gas extraction system other than a brief reference to post-closure collection of gas.

519. In May 2002, the EPA amended the licence to require ‘active horizontal gas extraction lines, which must be installed every second layer of waste’ to be progressively installed in active cells. The licence also stated, ‘Completed landfill cells must utilise an active gas collection system’.

**Contractual responsibility for gas management**

520. The contract required Select to install a gas collection system in the landfill at the completion of each of the four cells. Despite the fact that Cell 1 was completed by the end of Select’s contract at the landfill, Select did not install any gas collection infrastructure.

521. The requirements of the Grosvenor Lodge contract were different. Rather than install a system in the completed cells, Grosvenor Lodge was required to install gas collection infrastructure progressively in the active northern cells while the cells were being filled.

522. The SITA contract further explained the roles of various parties in gas management as they were in 2003 when SITA took over management and Grosvenor Lodge had taken over operating the landfill:

> Energex has a contract for the extraction and use of landfill gas from the Site. Energex will be installing a gas collection system in the completed southern pit cells and will extend this system as further landfill cells are completed.
The Site Manager shall establish a sound working relationship with Energex to ensure that landfill gas is drawn continuously from the Site at a rate that will avoid the discharge of offensive odours to the atmosphere.

523. Although the contract required SITA to ‘identify areas of the Site where additional collectors should be installed’, it did not specify who should install the additional collectors.

**Environmental audits**

524. Gas featured in a number of Mr Lane’s earlier environmental audits. These were the general audits conducted for the South Eastern Regional Waste Management Group. Later audits, ordered by the EPA, required Mr Lane to report on groundwater only.

525. Mr Lane’s audit of May 2000 noted remediation of landfill gas emissions on the south-west of the landfill as a ‘key issue with potential for long term liability’. The audit identified landfill gas ‘bubbling through the water’ in Cell 2; odours emanating from the Cell 2 sump; and ‘fugitive’ landfill gas in the vicinity of the western boundary of Cell 1. ‘Fugitive’ landfill gas was noted again in the audit of December 2000.

526. In September 2001 Mr Lane’s audit identified landfill gas emissions were ‘not controlled’. Mr Lane recommended the landfill gas extraction contractor be required to address emission issues.

**Odour**

527. While the impetus for my investigation into the management of the landfill was the migration of methane into neighbouring properties and the threat of explosion, I note that the earliest gas-related concerns at the landfill focused primarily on odour rather than the dangers of methane, which is odourless.

528. As early as May 1999, an EPA officer advised the South Eastern Regional Waste Management Group that odorous landfill gas was escaping from a leachate sump. From 2000, residents of the growing Brookland Greens housing estate on the western boundary of the landfill began to make complaints to the City of Casey and the EPA about odour. These were recorded on council and EPA files. In 2001, two public meetings were held and a community consultative committee was formed. This committee met with the landfill owners, managers, operators and regulators to discuss problems and solutions relating to the landfill.

529. Brookland Greens residents, Mr and Mrs W living in Huntingdale Close, were interviewed for my investigation on 17 November 2008. They said the odour from the landfill was at times so bad it could be smelt inside a closed car driving along nearby Sladen Street. Mr R who worked on-site for Grosvenor Lodge from either 2001 or 2002 until the landfill closed, said:

> Odour was a thing that I took … pretty bloody seriously ‘cause these people [the Brookland Greens estate residents] had to live there … Now, if they had a complaint, I would try and source where that’s coming from … it was just a battle basically trying to stop it …

...  

I used to always drive around through the houses … just to see if you could smell any odour because generally if you could smell any odour you knew you were going to get complaints. I always dreaded it.
Efforts to control landfill gas at the landfill began in 2000 when Mr Aylward erected a row of large fans along the northern boundary of the site to direct odour away from residential areas and began the process of engaging a gas extraction company to install a gas extraction system at the landfill.

Rights to gas

The capture of landfill gas may be looked upon as both a responsibility and a right. The EPA waste discharge licence required the licence holder at the landfill to install landfill gas extraction infrastructure. This was to prevent gas from migrating off-site. However, since landfill gas can be used to generate electricity, the rights to collect and own landfill gas are of value and there can be financial incentives involved in collecting landfill gas.

According to its agreement with the Frankston City Council, the City of Casey was the owner of all waste deposited into the landfill and any products derived from that waste, including landfill gas. However, the Frankston City Council was partly responsible for managing gas and it was required to approve any use of the gas by the City of Casey. Notes appearing on the Frankston City Council files from the Casey Frankston User Group meeting of 13 June 2001 confirmed, ‘There is an obligation for both Councils to control gas and leachate’.

An internal memo from Frankston City Council dated 14 June 2001 stated:

The Agreement provides for the ownership of all refuse deposited to pass to Casey (Clause 2.4). Casey shall not enter into any agreement in relation to commercial exploitation of the refuse, including gas unless each party agrees (Clause 5.0). On completion of the capping and grassing of the site Casey shall be responsible for ongoing management (Clause 6.5) except for remedial action in relation to the capping or a leachate outburst or gas leakage (Clause 4.3). The Agreement continues until the site is no longer available for the acceptance of refuse.

Proposals for a gas extraction system

In late 2000, Mr Aylward sought proposals from landfill gas companies to collect gas from the landfill. On 12 December 2000, Energex submitted by invitation to Martin Aylward and Associates a proposal for a gas extraction system at the landfill. Energex submitted a revised proposal in May 2001.

LMS also submitted a proposal in May 2001. During interview, Mr Richardson of the City of Casey said the two proposals, from LMS and Energex, were considered by the South Eastern Regional Waste Management Group and a recommendation made to the City of Casey. He stated:

There was only two contractors, I think. It was LMS and Energex and it was – it was – again the contract specifications and so forth evolved through the region then the contract negotiations were done through their solicitor and we had the recommendations of who to select and again it seemed at the time a fairly easy decision. You had one for 500,000 [dollars], you had one at no cost, so.

The $500,000 referred to by Mr Richardson was the upfront fee LMS proposed to charge to install a gas extraction system. The Energex proposal included no such fee, relying instead on the profitability of converting the gas to electricity and selling it. Both companies proposed an ongoing maintenance fee. A letter from Mr Aylward to the cities of Casey and Frankston on 30 May 2001 recommending the Energex proposal be accepted and a contract be drawn up confirmed the Energex proposal was preferred due to the absence of an upfront fee.
Mr Aylward wrote:

The Energex proposal is clearly the most beneficial offer for the User Group to consider, i.e. there is no upfront financing and the ongoing maintenance costs are about the same.

537. Mr Richardson said, ‘Council would have no experience of gas extraction systems. We would have taken advice from – from the region’.

538. Energex’s proposal was accepted and contract negotiations ensued.

Type of gas extraction system to be installed

539. During the negotiation of the gas extraction agreement, there was some discussion between Energex and Martin Aylward and Associates regarding the type of system to be installed. I established that, early on, Energex was concerned about how leachate could affect the gas extraction system. Energex wrote to Mr Aylward on 22 June 2001 on the subject of leachate. The letter stated:

The offer dated 30th May 2001 is based on the Council having installed at its cost a leachate control and collection system for cells 3 and 4. This allows for a vertical well design for cells 3 and 4. If the Council does not intend to provide for a leachate control or collection system for cells 3 and 4 then a horizontal collection system will be installed.

540. I note Energex’s revised proposal of 31 May 2001 stated it expected the ‘groundwater table’ to be approximately 12 metres below ground and ‘mounded within the waste mass’. Evidence suggests neither the water table nor the leachate was as low as 12 metres below ground. Mr Aylward’s response to Energex dated 25 June 2001 stated:

Cells 3 and 4 will have a leachate sump connected to the sewer; however, this cannot guarantee that the water table will [not] rise, i.e. we do not intend to pump down groundwater when the site is filled. Hence, any decision to install vertical wells will be solely your decision and cost differentials for horizontals would not be entertained … I need this deal fixed now as I have already made a presentation to both Councils.

541. I note Mr Aylward’s response was at odds with the licence condition which required pump-out of leachate to continue for 20 years. It is not clear whether Mr Aylward corrected Energex’s expectation that ‘the groundwater table’ was approximately 12 metres below ground.

542. Energex contracted out the design of the gas extraction system to a New Zealand-based company, SCS Wetherill Environmental. Energex also contracted out the construction of the gas extraction system, to a company called Fulton Hogan. Via this arrangement Energex had a horizontal system installed in the southern section of the landfill, which by then had been filled. Meanwhile, horizontal collectors were progressively installed by Grosvenor Lodge in the operational northern section of the landfill. These collectors were installed at every two layers of waste, while that section of the landfill was being filled. Energex received permission from the City of Casey to connect the horizontal collectors installed by Grosvenor Lodge to its gas extraction system with the aim of converting to electricity that gas as well as the gas collected via the Energex system.
Purpose of the gas extraction agreement

543. Prior to the signing of the gas extraction agreement Energex and the City of Casey through Martin Aylward and Associates also debated the purpose of the agreement. Significant to my investigation were suggestions that the purpose of the agreement could affect the performance of the system.

544. During the negotiation of the gas extraction agreement, Mr Aylward suggested officers of the City of Casey perform some of the maintenance work on the gas extraction system to save costs and reduce the maintenance fee charged by Energex. In an email to Energex dated 7 May 2001, Energex’s design sub-contractor SCS Wetherill Environmental demonstrated hesitation in involving council staff in the operation of the system. SCS Wetherill Environmental wrote:

... there could be an occasional conflict between operating the system to maximise [landfill gas] quality for generation (Energex objective) and operating it to minimise [landfill gas] emissions (Council objective).

545. On this subject, Mr Roger Parker of Golder Associates described during interview conflicts he had witnessed between gas extraction for environmental management and gas extraction for profit through energy generation. Mr Parker said:

If they’ve got a well that’s close to the edge and they’re pumping hard on that … [it might start] to bring in air … they actually balance these systems so that they don’t suck too much air in. And therefore they’ll actually throttle back on this one if it’s starting to suck in air. They may even turn it off, get it out of the system. So that we might be collecting gas from there [away from the edge of the landfill], but we could still have gas moving out the side of an unlined landfill.

546. Mr Parker also described an example of a gas extraction contract for a landfill in another state which did not ensure proper management of gas from an environmental point of view. He said:

[The gas extraction company’s] contract is all about their economic recovery of gas. When I first got involved they were only operating eight hours a day five days a week because that’s when they could sell gas at the best price, sell the power. It was switched off the rest of the time. It wasn’t there to control the migration of gas which had gone hundreds of metres off the site.

547. Mr Parker said, ‘I’m talking about this as a general issue for landfill gas’. He added:

The councils, the operators have set up these contracts and I suspect the contractors are being very cagey about their contracts and not taking environmental responsibility from [sic] their extraction activities. Why would they want to?

548. Mr David Williams, General Manager Gas Resources of gas extraction company LMS, said gas extraction companies could be held accountable for environmental issues through their contracts.

549. Mr James Shaughnessy, former National Advisor for landfills for the United Kingdom Environment Agency, said he saw a similar conflict. Mr Shaughnessy said, ‘I’ve already put in my report [for the EPA in 2008] that landfill gas utilisation can compromise migration control’. He said some companies ‘design the gas system for the energy they can get off it, not for the control’.
550. On 8 May 2001, Energex replied to SCS Wetherill’s observation regarding a potential conflict between the objectives of Energex and the City of Casey. Energex wrote:

I guess if Martin [Aylward] wants this to work he will have to come to the party, we could probably tie them down to generation instead of LFG minimisation.

551. Later that year, when legal advisers became involved in the drafting of a gas extraction system, Harwood Andrews Lawyers for the City of Casey wrote to a legal representative of Energex. In a letter dated 27 August 2001, Harwood Andrews Lawyers wrote:

… our instructions in relation to the Stevensons Road, Cranbourne site changed the emphasis of the Agreement … such that at Cranbourne the Council will pay Energex for Energex to take up the responsibility of dealing with and containing odour and other nuisances caused by landfill gas escaping into the environment. In particular Energex will be responsible for dealing with any notices issued with respect to the site by the EPA.

Essentially the change in emphasis is that under the Stevensons Road contract, the Council will contract out to Energex the responsibility for odour and other environmental nuisances caused by landfill gas at the site.

552. Energex’s legal representative responded on 31 August 2001. She wrote:

There appears to be a drift away from the original intent of the deal to provide a gas extraction to power generation system at minimal cost to the two councils.

To focus on the landfill odour control the proposed design would have to be changed to reduce the collector spacing from 30 metres to 25 metres for a “greater odour capture area” plus tapping into two or three places in the leachate drainage system in anticipation of clearing odour from there.

There would also need to be additional resources employed to respond to additional wellfield balancing in response to odour reports and complaints.

The Energex proposal had stated that there would be an odour minimisation system to comply with [EPA] requirements. This does not include Energex taking responsibility [for] containing odour and other nuisances caused by landfill gas escaping into the environment and in particular being responsible for dealing with any notices issued with respect to the site by the [EPA].

553. Energex’s legal representative suggested odour could be caused by many factors over which Energex would have no control such as poor operational practices at the landfill. She asked:

How would a contract be established to differentiate between different sources of odour and hence responsibility? … if the intent now is to focus on odour control, Energex will have to revisit their proposal.
The gas extraction agreement

554. On 4 March 2002, the City of Casey reached a Landfill Gas Agreement with Energex. The agreement gave Energex the right to use or sell the gas generated by the landfill and also the responsibility to install and maintain a gas extraction system, for which it was paid an annual maintenance fee, starting at $39,600 and to be adjusted annually.

555. With respect to odour, the agreement stated that during installation of the gas extraction system Energex would be responsible for odour or nuisance caused by the installation of the system or failure to maintain the system.

556. The City of Casey was to retain responsibility for odour and gas migration other than as provided for in the condition above and a number of related conditions. The City of Casey was also required by the agreement to operate the landfill according to the EPA waste discharge licence.

557. The agreement dictated that in the event of odour or nuisance caused by landfill gas the City of Casey should, ‘if it considers that the occurrence is of a sufficiently serious nature to warrant action being taken,’ notify Energex of the matter and ‘consult with them’. Energex was then required to notify the City of Casey of ‘any proposal which it [was] prepared to implement in order to deal with the matter’. If Energex did not make a proposal or if agreement on a proposal was not reached:

... the Council [might] at its own cost deal with the occurrence in any reasonable way including the installation of gas collection and control equipment, the collection of landfill gas and the disposal of same in any reasonable manner.

558. Energex might then make use of any equipment or systems installed by the City of Casey if the parties could reach agreement on purchase or lease of the equipment.

559. The gas extraction agreement was designed to run for 20 years from the ‘Satisfaction Date’ unless terminated earlier. The Satisfaction Date required various conditions to be either satisfied or waived within 12 months of the execution of the contract. One of those conditions was confirmation of an average gas flow rate of at least 8,424 cubic metres per day over a period of not less than 30 days according to a Gas Field Verification Study to be undertaken by Energex. If the gas flow rate was found to be lower than that rate then parties might either agree on new terms or terminate the agreement. Energex could also suspend or terminate the project at any time if it became ‘uneconomic’.

The gas extraction system

560. In November 2002, Energex brought the gas extraction system into operation and commenced charging the City of Casey the agreed Availability Fee of $39,600 per annum.

561. Mr Jansen of the City of Casey said ‘we were getting fairly low volumes of gas’ after the initial system was put in. In March 2003, Energex wrote to the City of Casey indicating gas flow was not sufficient for energy generation and if it did not improve Energex intended to renegotiate its maintenance fee. Energex advised in March 2003, ‘The problem appears to be associated with high water levels which existed even during the recent dry spell’.

562. Despite low volumes of gas reportedly being collected by the gas extraction system in early 2003, it was in June 2003 that the EPA detected odorous discharge of gas from the landfill for which it later issued a Penalty Infringement Notice.
Also, when SITA took over management of the landfill from Martin Aylward and Associates its initial inspection of the site in July 2003 identified strong odours and gas escaping from a number of points. SITA’s inspection report stated, ‘The current system does not appear to be managing landfill gas adequately’. On 25 July 2003, Mr Robin Macan, formerly of SITA, wrote to Energex to advise it of the ‘seriousness of the odour nuisance problems associated with ineffective gas collection and flaring’. Mr Macan wrote, ‘We note that the system has been inoperative on many occasions’.

Problems with the gas extraction system that were identified early on were that the flare that was intended to incinerate gas when the gas was not being converted to electricity regularly became extinguished and the gas collector pipes became blocked with water.

Mr Jansen recalled the attempts of the key stakeholders to account for the lack of gas flow into the extraction system. He stated:

Energex said, ‘Well hey, the water levels are high, the cap might be leaking’ and – but we were saying, ‘Well, hang on, what about the integrity of the system?’ You know, ‘Have we checked that?’

The City of Casey and Energex agreed jointly to fund a third-party investigation of the system. The investigation was done by LMS, the gas extraction company that had submitted an unsuccessful proposal to design and install the gas extraction system in 2001. The purpose of the LMS investigation, according to an Energex letter dated 28 July 2003, was:

... to determine the best course of action to maximise gas extraction and subsequently minimise site odour ... It should be noted that our aim is to establish an adequate gas extraction system at minimum cost to all parties. It is understood that the site currently does not produce any returns for the capital investment made during the development of the site.

LMS produced a report in August 2003 which found, among other things, the flare was not operational and required upgrading and the gas extraction system was negatively affected by high water levels in the site which blocked the gas collection pipes.

Similarly, both Mr R and Mr D of Grosvenor Lodge recalled the horizontal collectors progressively installed by Grosvenor Lodge in the active northern section of the landfill were not effective due to influx of water into the collectors. Both witnesses from Grosvenor Lodge said the collectors did not survive as long as expected because they became water-logged soon after installation.

LMS recommended further investigation to find blockages and check for flooding. LMS carried out that further investigation and confirmed high water levels in the landfill were causing problems for the gas extraction system. There were also some design and construction aspects that LMS believed required improvement and sections of the gas extraction system that LMS suggested required repair. Among other things, LMS recommended ‘lowering water levels within the whole site’.

Mr Jansen of the City of Casey said during interview that after the recommendations of LMS were implemented, ‘it got a bit better but it didn’t make a huge difference to the site, to the gas flow’. Evidence suggests, however, water levels in the site were not in fact lowered as LMS recommended.
In mid-2004, LMS began monthly reporting to Energex on the gas extraction system. Records show these reports continued until at least mid-2005. The monthly reports show high leachate levels remained a problem throughout the period. LMS reported most horizontal collectors blocked most months. All collectors except one were blocked in April 2005. The April 2005 report also noted EPA had been receiving odour complaints. According to the reports, problems with the flare continued too, with the flare regularly extinguishing itself.

In August 2004, LMS informed SITA in writing that ‘elevated water levels in the site are effecting [sic] some previously installed laterals. I must point out that continued elevation of water will flood laterals and result in loss of extraction ability’. Similarly, in April 2005 LMS provided in writing to Mr Jansen of the City of Casey observations of the landfill. The observations included: ‘The Cranbourne Landfill has a number of complex issues that effect [sic] landfill gas extraction. Elevated water levels are the most significant’.

Further work on the gas extraction system

In 2005, LMS provided a proposal to Energex to install five vertical gas wells in the landfill. A vertical gas well is a hole dug into the ground to allow gas to be extracted vertically from the landfill. These were the first elements of the vertical gas extraction system installed to supplement the horizontal system installed by Energex. The wells proposed by LMS were surface wells, meaning they were relatively shallow. LMS suggested shallow wells were necessary at the landfill to keep the wells above the level of the leachate that flooded the site.

The five wells were to be installed on a test basis with their performance monitored and the information gained used to design a gas extraction system more effective than the existing horizontal one. Mr Williams of LMS said at interview on 12 December 2008 that LMS was reluctant to ‘go and design a whole system straight away’ without testing first ‘because, quite frankly, we didn’t know what the water levels were, we didn’t know how it was going to perform’.

Although LMS presented its proposal to Energex, it appears Energex was reluctant to pay for the installation of the wells. In August 2005, the City of Casey requested permission from Energex for LMS to install the gas wells. Permission was required under the gas extraction agreement which gave Energex full rights to gas extraction at the site. Energex agreed to grant permission providing the City of Casey acknowledge and agree that, among other things, Energex was not at all responsible for gas or odour emissions from the northern section of the landfill. After some negotiation, it was agreed by Energex and the City of Casey that the City of Casey would pay for, retain ownership of, and responsibility for the gas extraction system on the northern half of the landfill.

In April 2006, Mr Williams of LMS wrote to Mr Jansen of the City of Casey prior to the installation of the five test wells. Mr Williams mentioned in his letter, ‘Excessively high water levels in the site can make all systems non functional … It is understood that Council are currently investigating water level reduction options’.

The five test wells were installed in May 2006. At interview, Mr Williams said:

... the five wells gave us more gas production out of that site than we’d ever had before, even though they were only shallow surface wells... Council then said to myself, ‘I don’t want to wait the six months, David, for the report. Go ahead and install the – another about twenty wells in this area’. Because odour had become such an issue they didn’t have the ability to wait.
A further 20 wells were installed by LMS in July 2006. A second flare was also installed at that time. As mentioned earlier, odour complaints from residents of the neighbouring Brookland Greens housing estate began in 2001. Complaints continued to be made to the EPA into 2006 when the vertical gas wells were installed. However, Mr Jansen of the City of Casey explained during interview that the City of Casey’s haste in installing further vertical wells was not only due to odour complaints. He said:

I think around that time is when we discovered that bubbling off site, and decided we had to accelerate the expansion of the gas extraction system so we used the emergency provisions under the Local Government Act, installed 20 or 23 additional vertical wells in that northern section almost immediately …

The ‘bubbling off site’ referred to by Mr Jansen was the first of many instances of underground gas migration being detected off-site, in particular in the Brookland Greens housing estate. In this case, gas travelled sideways underground and surfaced as bubbles in stormwater puddles outside the landfill. The impact of migrating gas, namely methane, is addressed in detail in the final chapter of my report.

A November 2006 report by LMS on the performance of the vertical gas wells noted ‘reduction in the level of water in the site is critical to ongoing [sic] gas management’. LMS recommended the vertical gas extraction system installed in the northern section of the landfill be extended to the southern section. This was done in April 2007 at the request and expense of the City of Casey.

Mr Jansen said the LMS system was followed by the installation of further vertical wells, but deeper ones that ‘penetrate right through to the base of the site’. Dual gas and leachate wells were also introduced.

According to a graph produced by the City of Casey (see below), the rate of gas extracted from the landfill by the gas extraction infrastructure as a whole rose sharply between January 2006 and March 2007.

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**Figure 3. Gas extraction rates – Stevensons Road closed landfill**
583. At March 2007 the rate of extraction reached a plateau, according to the graph, thereafter exhibiting small fluctuations and a very slight overall increase by September 2008. Actual gas production rates as opposed to collection rates are not known.

584. Despite the increase in the amount of gas captured by the extraction system, an independent review of the gas extraction system produced for the EPA in February 2008 by consultant Mr David Maltby found the system was not operating adequately to prevent off-site emissions of landfill gas. Mr Maltby reported this was ‘likely due to the high levels of leachate preventing active gas extraction from many parts of the site’. Similarly, UK expert Mr Shaughnessy found in September 2008 leachate levels remained high and the gas extraction system was ‘53% ineffective’.

585. Work on the gas extraction system was continuing at the time of my investigation.

**Contractual issues regarding the gas extraction system**

586. My investigation established that while problems with the gas extraction system persisted there was some dispute over the responsibilities of the parties involved. The City of Casey and Energex argued over whether Energex had the right to re-negotiate the maintenance fee paid it by the City of Casey. The responsibilities of each party were not clear, especially given that the cause of the problems was not clear. Whether the failure of the gas extraction system was due to overly high leachate levels, poor design, or poor construction was unclear.

587. Energex has since responded:

   ENERGEX submits that the independent report prepared by Landfill Management Services Pty Ltd indicates that it was the conditions at the Site, namely subsidence of the landfill and water ingress into the waste that caused this failure rather than any defect in the design or construction.

588. Meanwhile, Energex had a contractual dispute with one of its sub-contractors, Waste Management New Zealand (formerly SCS Wetherill Environmental), the company that designed the original gas extraction system.

589. In June 2003, Energex wrote to Waste Management New Zealand:

   … as you are well aware by your own admission there are significant defects in the design and installation of the wells and the valves installed in the wells. As a result of these defects, the gas output required by Energex was not achieved.

590. In the same letter, Energex accused Waste Management New Zealand of breaching its contract by providing sub-standard work. Waste Management New Zealand responded that it was Energex that was in breach of contract by its refusal to pay for work provided.

591. In September 2003, Mr Macan of SITA wrote to Energex requesting a cheque within seven days for the $5,000 fine entailed under the Penalty Infringement Notice issued by the EPA to Grosvenor Lodge for discharge of odorous gas. Mr Macan stated the gas extraction system was still not performing to expectations or the intent of the agreement. He wrote, ‘The inferior construction of the gas extraction system is becoming more evident as further problems were identified, as recent as today’. Energex drafted a response to Mr Macan in which it wrote, ‘The construction of the gas extraction system is not inferior … [It] operate[s] efficiently when not affected by water contained within the landfill’. Shortly afterwards, however, Energex wrote to Waste Management New Zealand regarding ‘a number of defects in the gas extraction system’.

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Energex stated:

The [EPA] in Victoria has now imposed fines against the local council (who in turn are now seeking to recover such fines from Energex Limited) in relation to odour emissions from the Cranbourne site. The odour emission problems are attributable to defects in the works undertaken by Waste Management New Zealand Pty Ltd … Energex Limited hereby advises that it requires Waste Management New Zealand Pty Ltd to rectify the above defects in full, at its own cost, as a matter of urgency … Energex also wishes to formally express its disappointment with the Cranbourne gas extraction system project …

592. After legal action, Energex paid $55,000 to Waste Management New Zealand to settle the dispute and be released from its contract with that company. From September 2003, Energex used LMS instead to maintain its infrastructure at the landfill. The relationship was on a ‘do and charge’ basis with no ongoing contract.

593. Mr Richardson of the City of Casey said during interview the City of Casey was at the time of my investigation involved in a contractual dispute with Energex. Mr Richardson said Energex:

… invested all this money, they say, to get a return through our generation and so their – their resistance to invest any more when they don’t believe they can generate power. Our [view] was, ‘We wanted you to put this system in so it’d work and you’re meant to be capturing the gas and it’s not working, so you’re not even fulfilling what we wanted you to do’ … They were wanting to claim money from us and we’d say, ‘No, that’s not – not the case, not within the contract, you know, because you can’t generate power it’s not our – we never gave any – we never said what the site was like. You know, you made those assumptions when you came onto the site’.

594. Mr Richardson also said, however, the nature of the gas extraction agreement made it difficult for the City of Casey to demand a better gas extraction system from Energex. Mr Richardson compared the signing of the gas extraction agreement to buying a car. He said:

… the contract was written a bit like … they said, ‘We’ll give you a Ford car, six-cylinder Ford car’, and, whether we wanted to use it as a race car or not, ‘That’s what you get’ … you know, whether the Ford performs for the function you want or not, the specification is written like that. So it wasn’t performance-based, basically.

595. Internal documents provided to me by Energex, however, revealed Energex did not view the gas extraction agreement in the same way. Energex had not yet installed an energy generator at the landfill because it had considered the gas flow rate to be too low for the generation of electricity. Instead, gas collected was incinerated at the flare. However, in December 2007, Energex noted increased gas flow rates and considered again installing a generator at the landfill.

596. The Engineering Manager for Energex advised Energex internally in February 2008 that, even if good energy production could be achieved, the project would be ‘small in overall size compared to the risk’. The Engineering Manager wrote:

Attempting to negotiate a new contract, will flag to Council’s legal advisors that Energex is apparently currently already in breach of its existing contract, which may leave us open to claims, or put Council in a powerful position to negotiate harsh terms for a renewed contract. Relations with Council are currently good, as we are dealing with operational people and Alan [Brett of Energex] has developed excellent goodwill and rapport and co-operation. They have invested several million dollars which we could have been arguably liable for. Putting the current contract under a microscope is not likely to be in our favour.
Technically Energex is already obliged to maintain the site to acceptable odour standards, at its own risk and expense... Due to Energex’s failure to provide an adequate system, Council appear to have taken over this risk, unilaterally at their own expense. Extending the contract to generation is likely to make this issue resurface, and could cause us to re-accept the risk well beyond the 5-7 year life of the project.

The Engineering Manager also wrote in March 2008 that commencing legal negotiations with the City of Casey ‘might flag some of our existing potential breaches, which could backfire on us, expensively’.

Records show that by 4 September 2008 the City of Casey and Energex had agreed to terminate the gas extraction agreement. Energex noted in an internal email, ‘The reasons for termination are related to the high risks involved in continuing to operate on this site with residential housing having been approved and constructed right up to the [landfill] site boundary’.

Other management issues

Aside from the management of leachate and gas, the general amenity of the landfill site was described by numerous witnesses as poor. My investigation also revealed problems with knowledge management and co-operation between agencies.

General amenity

A number of witnesses shared during interview their first impressions of the landfill. Mr R, of Grosvenor Lodge, said his first thought on seeing the landfill was, ‘Get me out of here’. Mr R qualified his statement by saying the equipment there was not what he was used to. Mr D, also of Grosvenor Lodge, who estimated he first saw the landfill in 2002, said:

I’d say [Mr R] could have been a little bit under-resourced. Didn’t have the best gear to work with and whatever. So appearance-wise [the Stevensons Road landfill was] probably a bit below what I would have expected, but in saying that I wouldn’t say it was Beirut or anything.

Mr Robin Macan of SITA, who managed the landfill when SITA took over management, said he was surprised by the poor condition of the landfill. Mr Macan said he had been ‘spoiled’ by working on SITA’s Hampton Park landfill which he said had ‘Rolls Royce construction’.

When asked how the landfill compared with the Hallam Road landfill, Mr D said it:

... didn’t really compare. Look, at the end of the day it was a small site taking low volumes. For that it probably should have been a little bit better in presentation, but then there was possibly issues that [Mr R] was dealing with there that I wasn’t involved in, you know. It had all these water issues – I know the landfill was all over the joint when he got there and so for him to get it up and level and get a little bit of infrastructure in and whatever – I guess he’s probably put a lot of effort in there. Anyhow, we made it better from that point. That’s all we could do.

Mr D said that when SITA took over the management of the landfill in mid-2003, it raised the level of management, ‘no question’. Mr D explained that SITA expected ‘systems and procedures’ that hadn’t previously been in place. He mentioned occupational health and safety requirements, keeping records of waste deposited and daily site inspection sheets. Mr D said where ‘things were a bit informal before’ SITA then introduced ‘formal systems’.
Allegations of prohibited tipping

604. Allegations were made around the time of my investigation that inappropriate types of waste were dumped at the landfill. SITA’s licence compliance inspection completed in mid 2003 found the site had ‘no proof of rejected loads that do not meet Licence Requirements’. SITA asked Grosvenor Lodge to provide forms for this purpose and to train staff in their use.

605. Both Mr Quinn of Select and Mr Brown of Grosvenor Lodge said during interview that no loads were turned away and no prohibited waste was tipped, but staff at the landfill would not have known anyway if prohibited waste was tipped because drivers generally knew how to conceal a load containing prohibited waste. Mr Quinn said Select staff did not inspect trucks, but he did say, ‘You had their rego number so if … something untoward came out the back of a truck you’d be able to track them down’.

606. Two former waste truck drivers said during interview that they had tipped prohibited waste at the Stevensons Road landfill.

607. The first driver said the prohibited loads he tipped were catering and general waste from international and domestic flights. He said the waste, which was ‘like soup’ because it leaked large amounts of liquid, was ‘supposed to be deep burial’ and was usually tipped at the Sunbury landfill. However, when the Sunbury landfill was closed, the driver said he tipped a load at a privately owned and operated landfill instead where deep burial cost between $6,000 and $8,000 per load. Due to the cost, the driver said his supervisor at the waste company instructed him not to tip there again. The driver said after that he was told to use the Stevensons Road landfill when the Sunbury landfill was closed. He said he did this around six times at a cost of around $600 to $800 each time. He said the loads were not given deep burial as required for loads containing prohibited waste.

608. The first driver said on some occasions he was accompanied by the second driver who was under training. At interview, the second driver said he recalled the prohibited waste being tipped at the Stevensons Road landfill. The second driver also claimed to have tipped further prohibited wastes such as substantial quantities of paint, milk and alcohol at the Stevensons Road landfill.

609. None of the witnesses interviewed from the landfill operations companies Select and Grosvenor Lodge said they remembered any such waste being tipped at the Stevensons Road landfill. Records from the operators were not available to confirm the evidence of the two waste truck drivers. The City of Casey had no records of waste tipped and my enquiries with the waste company and the airline proved inconclusive.

Knowledge management

610. During my investigation of the management of the landfill, I noted a number of areas where those involved lacked knowledge of the underlying condition of the landfill and previous work done at the site. For example, a number of witnesses were unsure about the depth of the landfill in the later, northern cells.

611. Mr Jansen of the City of Casey said that the depth of the landfill cells was important in predicting the volume of landfill gas production when he said the landfill is now producing much higher rates of gas than expected, but that ‘given the different depth of the site so you’d expect more gas production in Lot 7 than Lot 10’. Mr Richardson was asked how the City of Casey knew the depth of the landfill cells.
He stated:

The depth of the landfill was – has been picked up from Stuart Hercules looking at previous things … we didn’t have a lot of information on that type of – whether it existed somewhere at some time, we can’t – we can’t find it. So that – that’s been found now though.

612. At interview, Mr Richardson was asked whether the City of Casey was concerned about the depth of the landfill, given the works approval specified it should be approximately 14 metres deep in the northern section, but it was now estimated to be approximately 35 metres deep. Mr Richardson responded:

Yeah, look, all I can say for that is that it was being managed by the region and we believed, you know, we had the managers and we believed … you know, an important part of that was compliance of the works approval and [we believed] that was being done.

613. With regard to the depth of the landfill, Mr Richardson has since stated:

The ultimate depth of the landfill would have been the operational responsibility of the South East Regional Waste Management Group for the period the Region were responsible for the management of the landfill site.

614. In relation to whether a lack of records was a hindrance to the City of Casey’s efforts to manage landfill gas at Stevensons Road, Mr Richardson stated:

… I thought there were problems with the lack of adequate information from the operator of the site when under the management of the South East Regional Waste Management Group and SITA, particular in reference to the treatment of the aquifers, the construction of the existing sumps and daily records of filling.

615. The EPA also demonstrated a lack of knowledge of the underlying condition of the landfill. For example, an internal memorandum from the EPA dated 9 July 2008 stated:

Landfill was originally to be constructed with 4 distinct cells. However, it has been suggest [sic] by HLA that the Casey-Frankston Landfill was actually constructed in three main cells with Cells 1 and 2 combined into one. The cells were separated by earthern/clay bund. However, it is not clear whether each of the cells were constructed in this manner and whether they are hydraulically independent …

Anecdotal evidence suggests that the landfill operators towards the end of waste deposition at the landfill, deposited large quantities of slimes/clay within the northern section of the landfill.

616. Other anecdotal evidence suggests the northern section of the landfill did not have a properly prepared base. This was suggested at interview by Mr Nowland Bambard, consultant for ENSR, and Mr Macan, formerly of SITA. Mr Macan said it was ‘common knowledge’ when SITA took over management that there was no prepared based. A lack of records makes it difficult to establish the nature of the base.

Lack of co-operation between agencies

617. I also identified a lack of co-operation between the City of Casey’s contractors, Mr Stuart Hercules and ENSR, after the landfill’s closure. Problems were reportedly caused by poor information sharing and unclear delineation of roles.
ENSR was initially awarded a one-year contract in September 2007 to provide monitoring and technical advice while Mr Hercules had a contract to manage works on the landfill site until November 2008. The relationship between Mr Hercules and ENSR was commented on in a Golder Associates report dated 14 September 2007 which noted there had been ‘limited interaction on technical issues’ between Mr Hercules and HLA (later ENSR).

Mr Hercules has stated:

I was engaged by the City of Casey and reported directly to Council. I liaised with ENSR, but ENSR was independently contracted by the City of Casey and I had no direct reporting role to ENSR. I would therefore characterise any problems related to knowledge management as either a lack of coordination on the City of Casey’s part or due to structural issues within ENSR rather any lack of co-operation by me.

ENSR has since responded:

… [ENSR] reject[s] the statement from Mr Hercules that ‘any problems relating to knowledge management related to … structural issues within ENSR’.

…

… prior to September 2007 there was a limited relationship between ENSR and Mr Hercules …

… post the report of Golder Associates dated 14 September 2007 … a relationship [with Mr Hercules] was established, however, it was one that was at times strained.

At interview on 7 January 2009, Mr Scott Johnson, Manager of Waste Services for ENSR, said Mr Hercules often did not follow ENSR’s recommendations. When asked why the leachate level in the landfill still, at the time of interview, did not meet the EPA’s Pollution Abatement Notice conditions, Mr Johnson stated, ‘It’s of my opinion that the recommendations are not being implemented by the current site manager’.

Mr Hercules has since stated:

In relation to the allegation that I did not follow ENSR’s recommendations, I dispute this assertion …

…

Mr Johnson’s comments in the quote are wrong and show the absence of proper communication within ENSR.

…

Finally the concern expressed by Mr Johnson in his interview with the Ombudsman was never raised with me.

Mr Johnson also said ENSR had recently recommended new dual-purpose gas and leachate wells be installed in the landfill at 40-metre intervals.
Mr Johnson said Mr Hercules:

... changed them to thirty metres and placed them next to bores that have already been installed which is counter productive, and [they] are not even remotely installed the way – for example, some of the bores, the wells that he’s put in, he’s actually used a bucket from an excavator and pushed the pipes in which has caused them to spiral. Therefore you cannot fit a pump down them to extract leachate out. They’re useless. This is not industry standard.

624. Mr Hercules said during interview that he did not change ENSR’s technical specifications in relation to the wells; rather, he said he had not received any technical specifications for that task from ENSR.

625. Mr Hercules has since stated:

I need to clarify this response. My answer at interview was in relation to what I interpreted as a question about the spacing between the dual-purpose gas & leachate wells. In this context I was saying that ENSR did not give me a plan I could retain on the well layouts. It was only later, early in 2009, that I did get a copy of the plan.

626. ENSR has since responded to Mr Hercules’ comments:

... the facts do not support the position adopted by Mr Hercules. For example, Mr Johnson recommended to Mr Hercules that he not relocate four landfill well locations. Contrary to that advice Mr Hercules did relocate the four landfill wells. Further, at around the same time Mr Hercules, of his own initiative, installed an additional 17-20 landfill wells at the landfill site.

... [ENSR] reject[s] Mr Hercules’s version as to when he was given the plans. However, irrespective of when the plans were provided what is most critical here is that ENSR communicated a clear and unambiguous recommendation to Mr Hercules and he did not follow it.

627. Mr Johnson also identified in an internal email to ENSR officers dated 13 June 2008 that Mr Hercules used plastic sports drink or soft drink bottles to cover the tops of gas bores instead of proper caps which Mr Johnson wrote could ‘allow excess oxygen to enter the landfill causing the landfill gas extraction system to be less efficient and could also create an environment for a subsurface fire to occur’. Mr Hercules said at interview the bottles were a temporary measure used before it had been agreed which bores were to extract gas. He said they were ‘fundamentally at the time fit for purpose,’ did not affect gas extraction and ‘most of them have been changed’.

628. Mr Hercules has since stated:

Some pipes did have plastic bottles as temporary caps. The pipes we are talking about that had plastic bottle caps for a time were vertical pipes, some of which had initially intended for, but were never connected to the gas system ...
629. ENSR has responded:

[ENSR] respectfully suggest[s] that Mr Hercules’ contention that certain pipes/bores were never connected to the gas system is incorrect. By simply drilling the pipes into the ground at the landfill immediately places them into, or within the vicinity of gas located in the subsurface landfill (ie the gas system). The exact location of those subsurface gases is not exactly known to anyone at any given time and can change from time to time. That is why it is imperative to ensure that all pipes/bores are properly capped. Sealing a bore with plastic bottles on any pipe/bore inserted into the subsurface can potentially allow oxygen ingress and create an unsafe environment for a subsurface fire to occur.

630. Mr Gavin Scherer, Project Manager for ENSR, related similar examples during interview on 22 January 2009 and said, for ENSR, working with Mr Hercules was like having ‘one hand tied behind our back’.

631. Mr Darren Ellis, Senior Principal Hydrogeologist and former director of ENSR also expressed concern regarding the information ENSR received from Mr Hercules. He said that Mr Hercules was ‘pumping [leachate] from various places’, but ‘we didn’t know where he was pumping from’. He said, ‘in my tenure on the project I never got what I would call satisfactory information on that’. This, Mr Ellis said, made it difficult for ENSR to assess the situation and provide the technical advice required of it.

632. Mr Johnson, who said he was similarly frustrated by the lack of information provided by Mr Hercules, said when ENSR asked for information, ‘We [would] get excuses: “The flow meters are on order; they’re the wrong ones; we’re getting to it”’.

633. In response, Mr Hercules stated:

I take issue with insinuation that I was making excuses to explain the absence of measurable data. The fact is that for a period of time I was unable to measure the flow of leachate.

634. It is clear that Mr Hercules and ENSR also at times disagreed about the provision of data to the EPA. Regarding one of ENSR’s weekly reports to be provided to the EPA, Mr Hercules told the City of Casey in an email dated 21 November 2008 he was ‘rather concerned’ the report was ‘misleading and deceptive’. According to Mr Hercules, the number of gas wells ENSR reported had been connected to the gas extraction system was incorrect. Mr Hercules wrote:

As the current Site Manager I take umbrage to being misrepresented in the progress/performance of on-site activities … We can loose [sic] any confidence we have clawed back with EPA if we continue telling ‘porkies’.

635. Mr Hercules has also since commented on this matter:

My email related to Weekly Report No.8 in which incorrect statements of fact were set out by ENSR concerning the progress of works on-site. My email provided that this form of (mis-) reporting needed to stop, or else ‘porkies’ would continue …
ENSR has since responded:

[ENSR] strongly reject[s] the suggestion by Mr Hercules that weekly report number 8 was “misleading and deceptive” for the following reasons:

(a) ENSR conducted site investigations at the landfill and identified 14 wells as being located in areas of gas migration flow.

(b) The data was then inserted into a draft weekly report. A copy of this report was sent to the City of Casey, who would then subsequently send it to its representatives (which included Mr Hercules) for comments. This procedure was done with all weekly reports. Notwithstanding Mr Hercules’ email to the City of Casey on 21 November 2008 … [ENS] is not aware of any complaint or concern being raised with ENSR by either Mr Hercules or the City of Casey in connection with weekly report number 8. The Draft Report is the first occasion that ENSR has been made aware of the concerns raised by [Mr] Hercules.

(c) The usual procedure is that, if an error is identified in a report, a correction will be inserted in the following week’s report.

(d) Further, it should be noted the previous week’s report (No 7) stated that 14 wells had been completed and the subsequent week’s report (No 9) stated 27 wells had been completed. These reports are entirely consistent with the 14 wells reported to have been completed in report No 8. The drafts of these reports were provided to the City of Casey and Mr Hercules and at no stage did ENSR receive any communication which raised a complaint or concern about inaccurate reporting.

Mr Richardson of the City of Casey responded to Mr Hercules by email dated 24 November 2008 stating there had been ‘a break down [sic] in communications that has been resolved today’. At interview, Mr Hercules said that his concerns had been resolved by him emailing weekly site updates to ENSR and the City of Casey.

Mr Richardson has since stated:

... Council had no intention of being deceptive or misleading ...

The City of Casey has also since responded:

The City of Casey denies that its conduct has ever been misleading or deceptive.

... Absolutely no evidence exists of any amendment of an ENSR report. Any allegation that the City of Casey amended anything prepared by ENSR is a complete fabrication.

Mr Ellis, however, said that ENSR was concerned about the integrity of its reports because they were at times amended by both the City of Casey and Mr Hercules. Mr Ellis said having its reports altered by another party was a ‘reputation risk’ to ENSR and also impacted on its performance.
641. Mr Hercules has also since stated:

So it is not a question that ENSR and I at times disagreed about the provision of data to the EPA, rather that information reported to me to Council and ENSR was apparently overlooked or modified by ENSR.

... 

... I also add that if any of the grievances raised by ENSR had been brought to my attention, we could no doubt have discussed and resolved the problem(s). This did not occur.

642. ENSR has responded:

... [ENSR] reject[s] any allegation that information reported by Mr Hercules was either overlooked or modified by ENSR.

643. I also established that ENSR and Mr Hercules had different understandings about the future management of the landfill. Witnesses from ENSR said the City of Casey had assured them that ENSR would be given authority to oversee site management. Mr Ellis said, ‘David Richardson said to me on phone calls that we should work on the understanding that that’s going to happen, but it never formally happened in my tenure [which ended in September 2008]’. Mr Scherer of ENSR said at interview on 22 January 2009 ‘we were still talking about it yesterday’. ENSR officers interviewed both before and after the renewal of Mr Hercules’ contract in December 2008 were unaware the contract had been renewed.

Conclusions

644. My investigation found that the landfill during its operational and post-closure life was characterised by significant environmental issues including largely uncontrolled and overabundant leachate and poorly controlled gas. Contributing to these outcomes were the following general administrative problems:

- poor contract management
- lack of accountability
- poor knowledge management
- poor performance of statutory duty.

Poor contract management

645. Both the City of Casey and the Frankston City Council had poorly written contracts and poor contract management. Almost every contract entered into regarding the landfill was the subject of dispute or lack of clarity and most were poorly overseen.

646. The contract between the cities of Casey and Frankston did not clearly delineate the role of each municipality in the event of a leachate spill or gas leakage after the site had closed. Although the contract specified both municipalities would be responsible in the event of such an occurrence in the post-closure period, the contract also stipulated that the contract ceased to apply when tipping at the landfill ended. Given the Frankston City Council’s decision during the course of my investigation to cease contributing to remediation works at the landfill, I consider the lack of well-defined responsibilities under the contract is a significant oversight.
647. The relationship between the South Eastern Regional Waste Management Group, Martin Aylward and Associates and the cities of Casey and Frankston was complex. Martin Aylward and Associates was contracted by the South Eastern Regional Waste Management Group which was contracted by a sub-group of the South Eastern Regional Waste Management Group to manage the landfill for that sub-group. In 1994 the South Eastern Regional Waste Management Group arranged for Mr Aylward to operate as a private contractor on a fee for management contract rather than as an employee of the South Eastern Regional Waste Management Group. This change in contractual arrangements drew criticism from the former Mayor of the City of Monash. I consider the former Mayor’s concerns warranted some investigation and I consider the audit obtained by the South Eastern Regional Waste Management Group insufficient for that purpose. The audit was conducted by an accounting firm with no significant attention given to matters of probity. Such a response to allegations of conflict of interest was inadequate.

648. Also, the cities of Casey and Frankston exhibited a lack of probity in contracting by allowing Martin Aylward and Associates to manage the landfill following the South Eastern Regional Waste Management Group’s withdrawal. In May 2001, Mr Aylward formally offered the services of his company and in October 2001 an officer of the City of Casey recommended the offer be accepted. There was ample time in the interim for the cities of Casey and Frankston to initiate a competitive process. Yet it was not until March 2003 that the role occupied by Martin Aylward and Associates was put out to tender. The effect of this lack of probity in contracting was the landfill was managed for a time by a company found later to provide a lesser service than its competitor.

649. Similarly, the probity of the tender process for the gas extraction agreement was also questionable. Only two proposals were received and one of the proponents had the advantage of submitting two tenders, an original proposal and a revised proposal. There was no evidence of the project being publicly advertised. On receiving the final two proposals, the City of Casey appeared to make its decision purely on the basis of price, simply choosing the proposal that did not include an up-front fee. I consider the assessment of value for money far more complex than determining which proposal asks the lowest fee. I conclude that the City of Casey acted irresponsibly by failing to follow a proper tender process for the gas extraction agreement and by failing to follow a proper assessment process for the proposals submitted. In this, the City of Casey was most likely in breach of the Local Government Act and at odds with the Victorian Government Purchasing Board guidelines.

650. The contracting arrangements between the Shire of Cranbourne and Vella Sands did not make for a good environmental outcome, as Vella Sands was paid for every cubic metre of airspace it created. As a result, the Shire allowed Vella Sands to excavate the northern end of the landfill site without monitoring the depth of the excavation. Given the acknowledgement by witnesses that volume of waste affects quantity of gas produced, the size of each landfill cell is important.

651. The contractual relationship between the City of Casey and Select was a poor one and highlights the importance of transparency and well-written contracts. Select challenged the conditions of its contract on a number of points, namely the design of the landfill, the responsibility for water inflow and the responsibility to pay consultants’ fees. Also, Select’s dispute with the City of Casey over the capping of the Cemetery Road landfill clearly contributed to bad feeling between the parties to the point that representatives from both parties resorted to personal attacks. While not an excuse for unprofessional behaviour, I consider the poorly written contracts contributed to the frustration of those involved in this case.
I also identified a lack of consistency between some of the contracts written by the cities of Casey and Frankston and the regulatory requirements of the waste discharge licence. For example, pumping requirements in the contracts of Select and Grosvenor Lodge did not match the requirements of the licence.

Perhaps most significantly, the agreement drawn up between Energex and the City of Casey did not adequately address gas management. Documentary evidence obtained from Energex suggests the emphasis of the agreement on commercial rights at the expense of environmental obligations is likely to have had a negative impact on the control of gas migration at the landfill.

Energex has since responded:

ENERGEX maintains … that the Landfill Agreement was clear in establishing that it was the Council [The City of Casey] who retained responsibility for ensuring that there was no dangerous migration of gas from the Site.

When it became evident the gas extraction system failed to control gas, the City of Casey did not assume responsibility by acting to lower the level of the leachate. Nor did it require Energex to take responsibility by upgrading its system. The problem of the flare being extinguished continued for many years, but the City of Casey did not take any action to enforce the condition of the contract requiring Energex to provide and maintain a working system. Although SITA raised the issue of the flare with Energex on the City of Casey’s behalf, the problem continued.

Evidence suggests Energex privately accepted some responsibility for the failed gas extraction system. Indeed it apportioned some of that responsibility to its sub-contractor which it accused of sub-standard work. Yet officers of the City of Casey said they had no recourse to demand a better system from Energex. Clearly there was not a clear understanding of the contract between the parties, whether through the imprecise nature of the contract itself or a lack of expertise in contract management on the part of the parties.

Energex has since responded:

... although the gas extraction contract (the Landfill Agreement) between the City of Casey (the Council) and ENERGEX may have been ambiguous in places, there was sufficient clarity to demonstrate that the parties intended from the outset that it was the Council, and not ENERGEX, who was to retain responsibility for the Site generally, including responsibility for ensuring that there was no dangerous migration of gas from the Site.

... ENERGEX has not assumed any responsibility for any alleged shortcomings in its gas extraction system. The fact that the system returned lower gas flow rates than hoped was … a result of subsidence of the landfill and water ingress into the waste rather than defect in the design or construction of the system. The fact that ENERGEX may have had a dispute with its contractor regarding the performance of that contractor’s work with respect of this Site and other sites does not mean that ENERGEX has assumed any responsibility “privately” or otherwise.
The officers of the Council were correct in saying that they had no recourse under the Landfill Agreement to demand that ENERGEX install a better gas extraction system, not because the Landfill Agreement was ambiguous, because it was never intended by the parties that the Council could require ENERGEX to do this (and this was reflected in the Landfill Agreement).

658. The counter-productive relationship between ENSR and Mr Hercules was also the result of the City of Casey’s poor contract management. The City of Casey’s efforts via email to encourage its contractors to work together were clearly insufficient. Also, a lack of transparency regarding the status of Mr Hercules’ contract and the future intentions of the City of Casey added to the frustration felt by ENSR officers attempting to initiate and oversee remediation works at the landfill.

659. ENSR has since responded:

... [ENSR] respectfully disagree[s] with your ... conclusion that there was a lack of cooperation between ENSR and Mr Hercules ...

...

... a more accurate description is that prior to September 2007 there was very little in the way of a relationship between Mr Hercules and ENSR. This was largely due to the City of Casey not having a contractual requirement for either ENSR or Mr Hercules to communicate with each other and there being no encouragement, or apparent need, for any communications.

...

... the failure of Mr Hercules to follow ENSR recommendations and his failure on occasions to provide data resulted in a relationship that was, at times strained. However, ENSR continued to work with Mr Hercules and a number of ENSR’s recommendations were adopted by him.

660. I have concluded that poorly written contract documents and failure to effectively manage contracts contributed to very poor results at the landfill.

661. The City of Casey has since responded:

What is presented as ‘poor contract management’ is, in substance, an issue of the adequacy of some contracts. Whatever criticism can be made about the form and content of these contracts, the basic responsibilities of the parties were always clear. Expert managers were engaged to manage the landfill and, in so doing, to comply with licence conditions and legislative responsibilities. This should not be obscured by the concentration on the adequacy of the drafting of only a handful of the many contracts involved, and none of which has any real bearing on the issue of gas migration from the landfill.
The reality is that Council [the City of Casey] was not in the business of landfill management. It did not have the expertise, experience or resources to manage the Landfill. Hence the decision to engage expert managers (in anticipation that they would, in turn, engage expert operators).

Lack of accountability

In my view, the contractual arrangements for the landfill fostered the displacement of responsibility through over-reliance on the expertise of contractors. Officers of the cities of Casey and Frankston admitted they did not have the expertise to question the technical decisions of their contractors. What is concerning, however, is that they failed to provide even basic oversight of contracts. Reporting and monitoring were minimal and decisions and recommendations of the contractors were accepted without apparent question or review. In my view, when a statutory body engages a contractor to perform its services, the statutory body retains ultimate responsibility for those services.

While officers from the City of Casey acknowledged lacking the expertise to question or assess decisions made by the City of Casey’s management contractors, the contracts it signed with both the South Eastern Regional Waste Management Group and SITA explicitly required the cities of Casey and Frankston to evaluate the quality of advice provided by the contractors. Clearly they did not do this.

The environmental audits and statements from witnesses about the general amenity of the landfill, in particular the overabundance of leachate and poorly captured gas, demonstrate that the landfill was not managed and operated effectively. Some issues, such as insufficient leachate disposal capacity, appeared to continue unaddressed for years. Many of the environmental audits identified the same issues in succession, demonstrating a lack of action in response to audit reports. From these reports it should have been evident to the cities of Casey and Frankston that management of the landfill needed improvement. In particular, the need to address the level of the leachate was raised repeatedly, especially in the environmental audits and reports of problems with the gas extraction system. However, the City of Casey and the Frankston City Council failed to take action to address the issue.

While the City of Casey is the owner of the landfill site, the Frankston City Council had a stake in the management and operation of the landfill. The Frankston City Council, though a minor partner, accepted contractual responsibility for the management of the landfill and was therefore obliged to contribute to the management, not only financially but also through active participation in contract management. There were no regular meetings with or reports from the landfill manager in the later years of the landfill’s operation. As joint overseer of the landfill and party to the landfill management contract, the Frankston City Council was responsible for ensuring meetings occurred and reports were provided. The Frankston City Council must share the responsibility with the City of Casey for the lack of action to rectify problems at the landfill.

In response to my concerns, Mr Swales of the Frankston City Council stated:

... the point must be made that the City of Casey were making some decisions with little or no reference to Frankston City on the gas migration issue.

The Frankston City has since stated that ‘it accepts the conclusions’ in my report.
I consider that it was a major abrogation of their responsibilities for the City of Casey and the Frankston City Council to require its contractors to hold the waste discharge licence issued by the EPA for the landfill. The unsuitability of this arrangement was made clear in 2003 when Grosvenor Lodge was issued with a Penalty Infringement Notice for an aspect of the landfill over which it as operator had only partial, if any, control. This situation could have been avoided had the City of Casey as owner of the site or the management committee formed by the two councils accepted responsibility for the waste discharge licence. Again, while the management and operator contracts required compliance with the waste discharge licence, lack of monitoring and enforcement rendered the conditions of the contracts ineffective.

A related issue for the City of Casey was its failure to enforce the conditions of the planning permit granted to itself to allow the Stevensons Road site to be used as a landfill. The planning permit inspection report on the City of Casey file was at odds with other evidence regarding the condition of the site. It is of concern to me that the City of Casey’s assessment of compliance with the planning permit was based partly on the fact no complaints had been received by the Planning Investigations Team. Officers from other sections of the City of Casey were well aware complaints had been made to both the EPA and the City of Casey regarding odour from the landfill. They had also received letters from the EPA alluding to breaches of the waste discharge licence. In my view, the efforts of the City of Casey to monitor and enforce its own compliance with the planning permit were deficient.

The City of Casey has since responded:

The City of Casey operated only one open landfill. It could hardly be expected to retain in-house landfill expertise. Appropriately and reasonably, it engaged the substantial entities with expertise and experience in landfill management. They were, in turn, overseen by the EPA, which had the benefit of environmental audit reports. It is unrealistic to suggest that, in these circumstances, the City of Casey relied upon its managers too much or should have established its own parallel technical and management infrastructure.

Poor knowledge management

The landfill industry is one of rapidly changing technology and sometimes very divergent technical opinions. It is therefore all the more crucial that knowledge relating to the landfill is managed effectively so all decisions are based on the fullest information possible. In the case of the landfill, poor knowledge management contributed to some serious problems.

The poor record-keeping of the City of Casey and the Frankston City Council hindered my investigation. I was able to obtain records from contractors involved at the site with varying degrees of success. I note all were co-operative, but the quality of records available varied. However, the records I required from those contractors were not already held by the overseers of the contracts. In the case of Select, all that company’s records were reported to have been destroyed. The City of Casey and the Frankston City Council had no records from Select’s operation of the landfill other than their own correspondence with Select.

The City of Casey as owner of the landfill and, to a lesser extent, the Frankston City Council as joint manager, should have had a central file of information relating to the landfill. Numerous contractors and consultants have come and gone during the life of the landfill and the post-closure period. By allowing knowledge and records to disappear when contractors or consultants left, the cities of Casey and Frankston rendered effective management of the landfill much more difficult.
Environmental auditors Mr Lane and Mr Eva, and Mr Ellis of ENSR all said a lack of comprehensive and reliable records hindered their work. Also, certain aspects of the landfill’s condition have been the subject of speculation due to a lack of historical documentation. For example, it is now known the degree of excavation in the northern section of the landfill caused greater than expected quantities of gas and leachate to be produced, but a lack of awareness of the underlying condition of the northern cells has hindered attempts to manage that gas and leachate.

Poor knowledge management also impacted on leachate management at the landfill when the infrastructure built to manage an incoming aquifer in the north-western corner of the landfill was decommissioned. Because the officers of Grosvenor Lodge were unaware of the purpose of the infrastructure in the north-west corner of the site, they dismantled it. This would have caused clean water from the aquifer simply to flow continuously into the landfill and become leachate. According to the environmental audits, the pump for the aquifer in the south-eastern corner of the landfill was also decommissioned for a time. In both cases, consultants expressed a view the water source was unending, but operators were variously uninformed about the nature and the existence of the aquifers. In a site already inundated with leachate, this was a particularly undesirable outcome. It was a result that could have been avoided through proper knowledge management.

Lack of records of waste tipped and loads refused was not only a breach of the waste discharge licence which required such information to be recorded, but it also made predicting the volume and composition of landfill gas and possibly leachate more difficult. Furthermore, the lack of any relevant records to the contrary makes it difficult to confirm if prohibited waste had been dumped at the landfill. Similarly, speculation that the base of the northern cells of the landfill was not properly prepared cannot be conclusively established due to a lack of records.

The lack of records detailing the basic features of the landfill is an important issue. While each entity involved in the landfill may have had its own records of work done, what was lacking was a central repository for information about the landfill enabling information to be shared between entities and stored for future reference. Ultimately, this omission must be attributed to the owner of the landfill. That is, the City of Casey.

The City of Casey has since responded:

... Council’s record-keeping could have been better. To this extent, no issue is taken with the broad thrust of what is said about ‘knowledge management’.

... it is not necessarily accepted that this contributed to ‘serious problems’.

Poor performance of statutory duty

I also conclude that through inadequate regulatory activity during the operational phase of the landfill, the EPA failed to protect the environment.

The fact that the EPA did not inspect the prepared Cells 3 and 4 prior to their receipt of waste is a serious omission. Since works approval was granted for both Lots 7 and 10, the works on both lots should have been inspected prior to the issue of a waste discharge licence. As mentioned earlier and by numerous witnesses, the landfill industry is one of rapidly changing technology. Given that tipping did not begin in Cell 4 until 2001, it is an obvious conclusion that standards would have risen above those of the late 1980s, or 1992, or even 1996 when prepared Cells 1 and 2 were inspected. By not inspecting the preparation of
each cell or at least each half of the landfill, the EPA not only failed to ensure the minimum standards of the 1992 works approval were met, it also missed an opportunity to require a better standard of design for Cells 3 and 4 than the one approved in 1992.

681. The EPA also missed an opportunity to require improved standards via licence amendment. The example of the McClelland Drive landfill in Frankston demonstrates the EPA could have ensured new cells were lined simply by amending the licence to require it. The EPA was aware of the poor quality of the landfill. This is demonstrated by the internal review in early 2001 which questioned the very suitability of the site for a landfill. As the review noted, the fact that landfilling was already underway in unlined cells was a ‘historical legacy’. However, as the review also noted, the EPA could have halted landfilling prior to the beginning of tipping in Cell 4 until it was satisfied best practice standards were in place. That it did not do so is in my view a crucial opportunity missed.
Recommendations

I recommend that:

Recommendation 20

The City of Casey and the Frankston City Council centrally manage all future contracts through an officer or team with contract management expertise.

The City of Casey’s response

Council already centralises its procurement functions.

Like the vast majority of other Victorian councils, day to day contract management functions rest with those who have the necessary expertise and experience. These members of staff may work in different areas of Council operations.

Recommendation 20 is, therefore too absolute in terms. If it remains in this form, Council cannot support it.

The Frankston City Council’s response

Frankston City Council’s procurement and contract management unit will centrally oversee all complex and major contracts via a reporting and monitoring system.

Recommendation 21

The City of Casey and the Frankston City Council ensure their tendering procedures are consistent with the Local Government Act and the Victorian Government Purchasing Board guidelines.

The City of Casey’s response

Council’s tendering procedures are already consistent with the Local Government Act 1989 and incorporate relevant parts of the Victorian Government’s Purchasing Board Guidelines.

The Frankston City Council’s response

Frankston City Council will ensure its tendering procedures are consistent with the Local Government Act and, where appropriate, the Victorian Government Purchasing Board Guidelines.

Recommendation 22

The City of Casey and the Frankston City Council ensure that all future contracts are written to reflect accurately the needs of their respective municipalities and to define clearly the roles of parties to the contracts.

The City of Casey’s response

Council agrees with [this] Recommendation.

The Frankston City Council’s response

Frankston City Council accepts this recommendation.

Recommendation 23

The City of Casey and the Frankston City Council ensure that all contracts include a clear set of performance indicators against which they can be monitored.
The City of Casey’s response

The recommendation is supported.

The Frankston City Council’s response

Frankston City Council will ensure that all contracts, where appropriate, include a clear set of performance indicators against which they can be monitored. It is considered that certain contracts, such as for the supply of goods, may not require the inclusion of performance indicators.

Recommendation 24

The City of Casey combine its Purchasing Policy and its Environmental Purchasing Policy for ease of use by officers and to avoid potential conflicts.

The City of Casey’s response

Recommendation is accepted.

Recommendation 25

The Frankston City Council ensure it has a current procurement policy available on its website.

The Frankston City Council’s response

Frankston City Council will ensure that it has a current procurement policy available on its website by 19 November 2009 being the date when section 186A of the Local Government Act applies. The policy is currently being prepared for Council approval, partly based on the MAV [Municipal Association of Victoria] model recently circulated to Councils.

Recommendation 26

The City of Casey and the Frankston City Council revise their record-keeping systems to provide for a centralised repository of information relating to the Stevensons Road landfill.

The City of Casey’s response

A centralised repository for information concerning the former Stevensons Road Landfill has been established.

The Frankston City Council’s response

Frankston City Council accepts this recommendation.

Recommendation 27

The City of Casey revise its record-keeping system to ensure there is a central repository for information relating to each significant site or facility owned or managed by it.

The City of Casey’s response

Council’s current record-keeping already ensures that there is a central repository for information. The importance of utilising the system has already been reinforced with relevant staff.

Council has commenced the process of procuring a new record-keeping system. It will be a requirement of any such system that it too contains a facility for centralised information to be stored.
Recommendation 28

The Frankston City Council revise its record-keeping system to ensure there is a central repository for information relating to each significant site or facility owned or managed by it.

The Frankston City Council’s response

Frankston City Council accepts this recommendation.

Recommendation 29

The City of Casey and the Frankston City Council ensure that all relevant licences and permits for sites and facilities owned by them are issued to them rather than to their contractors.

The City of Casey’s response

Council supports licences and permits being held in its name where this is appropriate.

The Frankston City Council’s response

Frankston City Council accepts this recommendation.

Recommendation 30

The EPA ensure that all licences are reviewed annually and amendments made where existing standards are below best practice.

The EPA’s response

EPA can fulfil this recommendation.
3. EPA ENFORCEMENT IN RELATION TO THE LANDFILL

Background

682. My investigation examined enforcement action taken by the EPA at the Stevensons Road landfill (the landfill) in relation to suspected breaches of Victoria’s environmental legislation and relevant EPA policies. This included an examination of the EPA’s enforcement processes. My investigation encompassed decisions made and actions taken during the operating phase of the landfill from 3 June 1996 to 24 June 2005 and during the post-closure phase of the landfill from 24 June 2005 until 18 September 2008.

EPA’s regulatory framework

683. As the protector of the Victorian environment, one of the EPA’s core functions is to monitor compliance with the Environment Protection Act 1970 (the Act), environment protection Regulations and the EPA’s policies by individuals and organisations and to take enforcement action when breaches of these occur. The Act contains 11 principles of environment protection, introduced in 2001 and intended by Parliament to guide the administration of the Act.8 The EPA is required to perform its role within the framework of these principles. The Act places a strong emphasis on the EPA’s enforcement role.

684. The principles that relate to enforcement are as follows:

**The precautionary principle:**

1) If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

2) Decision making should be guided by –
   a) a careful evaluation to avoid serious or irreversible damage to the environment wherever practicable; and
   b) an assessment of the risk-weighted consequences of various options.9

**Principle of shared responsibility:**

1) Protection of the environment is a responsibility shared by all levels of Government and industry, business, communities and the people of Victoria.10

**Principle of enforcement:**

Enforcement of environmental requirements should be undertaken for the purpose of –

a) better protecting the environment and its economic and social uses;

b) ensuring that no commercial advantage is obtained by any person who fails to comply with environmental requirements; and

1c) influencing the attitude and behaviour of persons whose actions may have adverse environmental impacts or who develop, invest in, purchase or use goods and services which may have adverse environmental impacts.11

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8 Section 1A(3) of the Environment Protection Act 1970.
9 Section 1C of the Environment Protection Act 1970.
10 Section 1G of the Environment Protection Act 1970.
11 Section 1K of the Environment Protection Act 1970.
EPA’s enforcement framework


686. In the foreword to each version of the EPA’s Enforcement Policy, the EPA’s Chairman stated:

In Victoria, community expectations about environment protection are high. The community expects EPA Victoria to exercise its responsibilities in an efficient and effective manner without fear or favour.

687. The EPA’s Enforcement Policy sets out seven guiding principles that guide the EPA in its enforcement role. The guiding principles that are of particular relevance for this chapter are as follows:

- enforcement of mandatory and discretionary provisions will be undertaken in a fair, predictable and consistent manner
- within the limitation of resources available, the EPA will endeavour to investigate all suspected offences
- the primary purpose of enforcement measures is to stop or prevent polluting activities, by making offenders accountable as a deterrent to those involved and to others.

688. The EPA is able to take measures other than enforcement to promote compliance and encourage good environmental performance, including education, technical advice and environmental audits. The EPA’s Enforcement Policy states these measures often reduce the need for enforcement.

EPA’s enforcement process

Identifying non-compliance and commencing enforcement

689. Each site subject to EPA regulation is allocated a Client Manager responsible for the day-to-day management of the site. The Client Manager is required to inspect the site at least annually and when the site incurs complaints. The Client Manager is also responsible for managing the relationship with the site operator, monitoring compliance, investigating potential non-compliance and commencing enforcement action where non-compliance is confirmed.

690. EPA officers other than Client Managers may also identify non-compliance. Non-compliance may be either administrative, for example failing to submit an environmental audit by the required date, or substantive, for example allowing a discharge of odour to the environment contrary to a waste discharge licence (the licence) condition.

691. If an investigation confirms non-compliance and the EPA decides to commence enforcement action, the investigating officer must draft an incident summary sheet that details the circumstances of the non-compliance, includes supporting evidence and makes a recommendation regarding the appropriate enforcement measure. The incident summary sheet must be approved by the investigating officer’s Unit Manager before consideration by the Enforcement Review Panel. If the panel approves a recommendation for prosecution, additional witness statements may be gathered and a brief of evidence prepared.
EPA Enforcement Review Panel

692. The EPA Enforcement Review Panel was established as a result of an amendment to the Act in 2000 that reclassified summary environmental offences as indictable offences. With the change in jurisdiction the EPA’s maximum penalties for environmental offences increased substantially. For example, the penalty amount for a Penalty Infringement Notice increased from $800 for all offenders to $2,000 for individuals and $5,000 for companies.

693. Mr Mark Payton, Solicitor to the EPA, said during interview on 30 December 2008 that the Enforcement Review Panel was established to ensure consistency of enforcement actions throughout the EPA’s regional offices; to ensure there is adequate evidence prior to taking enforcement action; and to ensure adequate resources are provided for enforcement. Mr Peter Jackson, Manager Enforcement Unit at the EPA, stated during interview on 29 December 2008 that prior to the establishment of the Enforcement Review Panel the regions were interpreting the EPA’s Enforcement Policy in an inconsistent manner.

694. The three permanent members of the Enforcement Review Panel at the time of my investigation were Mr Bruce Dawson, Director Environmental Services, Mr Jackson and Mr Payton. The panel meets weekly to consider recommendations brought before it and make decisions regarding enforcement action.

695. Mr Jackson has been a member of the Enforcement Review Panel since 2005. He was asked whether issues relating to the landfill had been brought before the panel and whether he was familiar with the history of non-compliance at the landfill. Mr Jackson stated:

I think the first I knew about this issue was July [2008] … about the issue with the landfill gas.

696. Mr Jackson did recall the issue of a leachate spill considered by the Enforcement Review Panel in 2006. Neither Mr Payton nor Mr Dawson recalled any issues relating to the landfill being brought before the panel.

Timeframes for Penalty Infringement Notices

697. The Act does not impose time limits on the EPA in relation to commencing enforcement of environmental offences. At interview, several EPA officers said that prior to the establishment of the Enforcement Review Panel the enforcement process was significantly quicker. For example, regional EPA officers had the authority to issue Penalty Infringement Notices to offenders almost immediately they identified non-compliance, which was typically within one day. The key evidence required for a Penalty Infringement Notice was the attending officer’s statement and an analysis certificate if relevant.

698. Due to the increased penalty imposed by Penalty Infringement Notices, the EPA’s current approach is only to issue a notice after an investigation has been conducted and the degree and standard of evidence gathered would enable the notice to be upheld in Court. Hence the degree of evidence and documentation required for a Penalty Infringement Notice has risen substantially, resulting in extended timeframes.

699. Several EPA officers said that three months is the average timeframe between an incident of non-compliance and the issue of a Penalty Infringement Notice or an official warning. Mr Jackson said that the EPA has an internal target that 90 percent of notices should be issued within 90 days and most notices meet this target.
EPA officers acknowledged three months is a lengthy turnaround for Penalty Infringement Notices or official warnings. During interview on 18 December 2008, Mr George Tsivoulidis, former EPA Manager South Metropolitan Region, stated:

"Obviously with infringement notices you'd like to, one of the … potential benefits of ah infringement notices are they’re [sic] can be a little bit more immediate … there are times where you’d like to hand something over directly after the event … however our internal procedures um for offences under the Environment Protection Act ah are such that we do have internal checks and balances um and I guess a consequence of that is that they can potentially add, add time."

**EPA’s enforcement action taken in relation to the landfill**

The EPA took enforcement action in relation to a variety of breaches of the landfill licence and the post-closure Pollution Abatement Notice, including discharge of odour and leachate beyond the landfill boundary and causing an environmental hazard through the lateral migration of landfill gas into the Brookland Greens estate (the estate).

Mr Wajahat Bajwa, former Client Manager of the landfill and former Team Leader Landfills at the EPA’s South Metropolitan Region, appeared as a witness at the VCAT hearing in May 2004 relating to the planning permit for Stage 10 of the estate. Mr Bajwa wrote in his witness statement:

"… EPA has received approximately 90 complaints since 2000 alleging odour from the Cranbourne landfill. The majority occurring since 2001.

Around 19 of these complaints were confirmed as originating at the Cranbourne landfill. Those 19 confirmed complaints related to 6 separate incidents.

… Enforcement action was taken in relation to each confirmed reported incident in accordance with EPA Enforcement policy (July 1993). This has included warning letters, three Penalty Infringement Notices (PINs), licence amendments and a Notice of Contravention.

The licence holder has been encouraged to develop an Environmental Improvement Plan (EIP) to develop a more proactive approach to managing the landfill and hence, break the cycle of complaint/enforcement and improve the local amenity."

Mr Bajwa said during interview on 19 November 2008, that although he considered the landfill to be below average in standard, the EPA actively addressed non-compliance and took appropriate enforcement action. According to Mr Bajwa, the EPA’s general practice is to work co-operatively with offenders and allow a willing offender to remedy non-compliance. However, Mr Bajwa stated that if an offender does not remedy non-compliance, the EPA will take enforcement action.

Mr Bajwa demonstrated the EPA’s collaborative approach in a letter to Mr Martin Aylward of Martin Aylward & Associates, dated 22 July 2002. Mr Bajwa advised Mr Aylward that the EPA had recently received a large number of complaints concerning offensive odours emanating from the landfill. Mr Bajwa stated that although the discharges of offensive odour from the landfill constituted a breach of licence, the EPA would not consider taking enforcement action in order to allow time for the gas extraction system to be installed.
Mr Bajwa advised my officers that the EPA’s South Metropolitan Region considered prosecution in 2003 and 2004. However, when the level of resources required by prosecution was assessed against the EPA’s long-term objectives, a decision was made not to prosecute. Mr Bajwa did not specify which officers made this decision. Mr Bajwa stated the EPA’s understanding that the landfill was soon to close contributed to this decision.

Investigating odour complaints

Mr Bajwa highlighted in his VCAT witness statement some difficulties in relation to investigating odour complaints. He stated:

> However this number [90] of complaints received indicates that perhaps a larger problem exists than that which has been confirmed. There have been times when EPA officers were not able to confirm the incidents of off-site offensive odours, either due to the odour dispersing before the arrival at the site by an officer or where complainants decided not to report to EPA at the time of [sic] incident was occurring.

Several EPA officers, including the former Client Manager for the landfill, EPA Officer A, who was interviewed on 11 December 2008 said that while discharge of leachate is straightforward to prove through sampling and analysis, discharge of odour is more difficult to prove. EPA Officer A said that odour is intangible and requires a subjective judgement. An internal EPA document titled ‘Advice on Odour Investigation of Landfills’ advises:

> The cause and effect relationship of odour generation, specific source, plume travel and effects on people need to be established beyond reasonable doubt if enforcement/control is to take place in a legal framework of evidence.

EPA Officer A said that ‘the nose’ is the only instrument the EPA uses to measure odour. She stated:

> We do get our nose calibrated sometimes, so you can figure out if your nose is more sensitive to others. Because in the end, if you’re looking at offensive odours, lots of people have different types of noses. Some people smell it a lot easier than other people. So there is a test you can do to see how sensitive your nose is.

EPA Officer A stated that as the judgement whether odour is ‘offensive’ is subjective, odour discharges can be difficult to enforce.

Other EPA officers, including the former Acting Team Leader Enforcement at the EPA’s South Metropolitan Region, EPA Officer B, who was interviewed on 20 January 2009, said that odour complaints are not overly complex to investigate. The main requirement is to establish the nature of the odour and to confirm its source before atmospheric conditions change. Officers reported that when complaints are received, an EPA officer usually visits the site the same day. However, if the inspection occurs after hours the officer may not be able to access the site.

Another experienced officer, EPA Officer C, said during interview on 6 January 2009 that in approximately 2001 the South Metropolitan Region implemented a surveillance program in the area of the landfill during and after business hours. He said the surveillance program was focused on ambient air quality, as the EPA was receiving many odour complaints about the landfill, and resulted in two Penalty Infringement Notices issued on 15 June 2001. I obtained evidence from an internal EPA email that another surveillance program focusing on the landfill commenced in early May 2003 and ran for approximately four weeks.
Penalty Infringement Notices

712. The EPA’s South Metropolitan Region issued four Penalty Infringement Notices in relation to the landfill, three prior to the establishment of the Enforcement Review Panel. The first notice was issued to South Eastern Regional Waste Management Group on 19 June 1998. The notice, which imposed a penalty of $800, related to the burning of waste on the site and the failure to notify the EPA about a fire at the transfer station. The date of offence was 12 June 1998. The timeframe for issuing the notice was one week.

713. The second Penalty Infringement Notice was issued to the South Eastern Regional Waste Management Group on 15 June 2001. The notice, which imposed a penalty of $5,000, related to the discharge of odourous leachate beyond the boundary of the landfill. The date of offence was 31 May 2001. The timeframe for issuing the notice was just over two weeks.

714. The third Penalty Infringement Notice was also issued to the South Eastern Regional Waste Management Group on 15 June 2001. The notice, which imposed a penalty of $5,000, related to the discharge of offensive odour beyond the boundary of the landfill. There is no recorded date of offence on the notice. The issuing officer was unable to explain this omission when asked during interview.

715. The fourth Penalty Infringement Notice was issued to the operator of the landfill, Grosvenor Lodge, on 4 September 2003. This was subsequent to the establishment of the Enforcement Review Panel. The notice, which imposed a penalty of $5,000, related to the odourous discharge of landfill gas from cracks in the cover surface and leachate wells. The date of offence was 10 June 2003. Therefore, the timeframe for issuing the Penalty Infringement Notice was approximately three months, significantly longer than the timeframes for the earlier notices. Mr Bajwa said that following an investigation of the offence, the South Metropolitan Region, managed at that time by Mr Stuart McConnell, brought a recommendation for a Penalty Infringement Notice before the Enforcement Review Panel. Initially the Enforcement Review Panel declined the recommendation for a Penalty Infringement Notice due to what it considered a lack of substantial evidence that the odours were impacting on nearby residents. Mr Bajwa stated that the EPA had been receiving complaints regarding off-site odours for some time. However, each time EPA officers attended the site to gather evidence, conditions had changed and the odours had abated. The Enforcement Review Panel eventually agreed to issue a Penalty Infringement Notice on 4 September 2003 after the EPA gathered further evidence confirming the discharge of odourous landfill gas emissions from the landfill.

Enforcement action other than Penalty Infringement Notices during operating phase

716. According to Mr Bajwa’s VCAT witness statement, the EPA’s enforcement action taken between 3 June 1996 when the landfill commenced operation and May 2004 included warning letters, licence amendments and a Notice of Contravention.

717. The EPA’s Enforcement Policy July 1993 stated ‘failure to comply with a warning will lead to further enforcement measures’ and a Penalty Infringement Notice rather than a warning letter would be issued for a repeated offence or an offence where no reasonable steps were taken to remedy the situation. These provisions remained in the EPA’s subsequent Enforcement Policies July 2005 and July 2006.
Mr Bajwa referred to licence amendments as a form of enforcement action in his VCAT statement and also during interview. However, the EPA’s Enforcement Policy does not refer to licence amendments as an enforcement measure.

**Notice of Contravention (1)**

The EPA issued a Notice of Contravention to the South Eastern Regional Waste Management Group on 30 May 2001, pursuant to section 27(2) of the Act, for the breach of the following six licence conditions:

1. Wastes, including litter, must not be:
   a) deposited or allowed to accumulate in waters or leachate dams.
2. Leachate, or any water containing leachate, must not be discharged to the environment.
3. Odours offensive to the senses of human beings must not be discharged beyond the boundaries of the premises.
4. Putrescible wastes must be immediately covered by earth or other EPA approved material after deposition.
5. Wastes must be covered with a layer of earth or other EPA approved material not less than 300 millimetres in thickness by the end of each day’s operations.
6. Leachate or water must not be permitted to pond on the surface of the landfill.

The Notice of Contravention stated ‘should you continue to fail to comply with those requirements after service of this notice you may be liable to a daily penalty of up to $120,000 for each day upon which the non-compliance continues’. Almost three years later, on 23 January 2004, Mr Bajwa wrote to Mr Fraser Brown of Grosvenor Lodge to advise the EPA had revoked the Notice of Contravention. The reason given by Mr Bajwa was not that the South Eastern Regional Waste Management Group was complying with all licence conditions but that it was no longer the licence holder. The licence had been transferred from the South Eastern Regional Waste Management Group to Grosvenor Lodge on 31 July 2002.

The EPA’s Enforcement Policy July 1993 stated ‘a notice of contravention formally advises the recipient he/she is contravening a section of the Environment Protection Act. Such a notice will be issued where there is a substantive ongoing contravention and it is envisaged further enforcement will be undertaken by way of prosecution for daily offences’. The EPA did not take further enforcement action in relation to the Notice of Contravention.

**Enforcement action during post-closure phase of the landfill**

For over three years, between 4 September 2003 and 1 November 2006, the EPA did not take any enforcement action in relation to the landfill. No enforcement action was taken despite the following non-compliance:

- Continued high levels of leachate were identified by the environmental auditor for groundwater, Mr Anthony Lane.
- Numerous odour complaints were made.
- Landfill gas was migrating laterally out of the landfill into the estate, as confirmed on 10 March 2006 through the gas well monitoring conducted by Landfill Management Services Pty Ltd (LMS).
2005 investigation of odour complaints

723. EPA Officer B said that he was involved in an investigation of odour complaints at the landfill in 2005. The EPA had been receiving constant complaints relating to odour and failure of the flare on the gas extraction system. EPA Officer B stated that over the course of one week he confirmed the discharge of an offensive odour and gathered witness statements from residents. He confirmed discussing the outcome of the investigation with Mr Bajwa and Mr Tsivoulidis. EPA Officer B said that despite the evidence of breach of licence and the obvious odour problem at the landfill, the investigation did not proceed to enforcement action. He did not recall the reason for this.

724. EPA Officer A was also involved in this investigation. She stated a Penalty Infringement Notice should have been issued but this did not occur due to workload issues within the South Metropolitan Region. She stated that instead the EPA sent a letter to Grosvenor Lodge, the licence holder at that stage, advising about the odour complaints.

725. I was unable to find any mention in the EPA files provided to me of the investigation or the reasons why enforcement action did not proceed.

Discovery of lateral migration of landfill gas

726. On 2 March 2006 the EPA was notified via a complaint from an anonymous worker in the estate that stormwater puddles in Cherryhills Drive, within the estate, were bubbling. The complainant was concerned that the bubbling was caused by methane gas. LMS was employed by the City of Casey to conduct preliminary testing of the puddles.

727. On 10 March 2006 LMS confirmed the presence of methane gas within the estate. LMS concluded that landfill gas containing methane was migrating laterally from the landfill into the estate.

728. EPA Officer A said that following the discovery of landfill gas in the estate on 10 March 2006, she asked the City of Casey to conduct a full geological assessment, including drilling a grid of wells within the landfill to identify the landfill gas pathways and assess the extent and impact of landfill gas within the estate. She also said that approximately one month after the bubbling puddles were discovered, the City of Casey had not undertaken any mitigating action.

729. The EPA wrote to Mr Mike Tyler, Chief Executive Officer (CEO) of the City of Casey, on 3 May 2006 advising of the risks of landfill gas and requesting that a geological assessment be conducted. The City of Casey wrote to the EPA on 15 May 2006 and reported it was installing a new gas extraction system. The EPA again requested the geological assessment in a letter dated 5 June 2006. On 6 July 2006 the EPA wrote to the City of Casey to confirm that in a meeting on 30 June 2006 the City of Casey had agreed to conduct a geological assessment. The City of Casey advised the EPA by a letter dated 18 July 2006 that rather than conducting a geological assessment, the City of Casey had decided to install monitoring bores on the landfill. The City of Casey subsequently installed four monitoring bores on the western boundary of the landfill and two monitoring bores on the northern boundary.

730. EPA Officer A said that she had considered that the EPA should take enforcement action against the City of Casey in response to the bubbling puddles.
She stated her Regional Manager, Mr Tsivoulidis, did not agree:

[Mr Tsivoulidis] just didn’t do anything. So it was – it was quite hard to go forward so the only thing I could really do was try to get [the Pollution Abatement Notice] out. [The Pollution Abatement Notice] went through extensive review, I think everyone reviewed the notice.

731. Mr Colin McIntosh, Manager Landfill Centre at the EPA, stated during interview that the EPA did not have grounds to issue a Direction in response to the discovery of the bubbling puddles because:

At that stage it wasn’t necessarily deemed by the people concerned an imminent environmental hazard because there weren’t houses directly on it.

732. Mr Tsivoulidis has since stated:

... my view was that the priority was to have Council ascertain how and why this was occurring and to take steps to stop the landfill gas migration whilst keeping enforcement options open.

**Official warning**

733. On 18 September 2006 following the closure of the landfill, EPA Officer A conducted an inspection of the site. An EPA incident summary sheet indicates that EPA Officer A observed leachate discharging from the landfill and pooling within the estate to the north-west of the landfill. This was a breach of the licence condition in that ‘leachate, or any water containing leachate, must not be discharged to the environment’. According to the incident summary sheet, the EPA undertook an investigation that determined the leachate discharge occurred between 15 and 18 September 2006 from a disused landfill gas extraction pipe. The incident summary sheet stated that a cap had blown off the pipe from the pressure being built up by the gas and the leachate. In a letter to Mr Tyler dated 1 November 2006, Mr Tsivoulidis said that the EPA had concluded ‘contractors present at the landfill responded quickly and effectively to stop the discharge and clean up the affected area, thereby minimising environmental impact’.

734. In response to the leachate discharge, the EPA Enforcement Review Panel approved the EPA South Metropolitan Region’s recommendation that an official warning be issued to the cities of Casey and Frankston for breach of licence. Official warnings were issued to both councils on 1 November 2006. The EPA advised the cities of Casey and Frankston that it had decided to issue an official warning rather than a Penalty Infringement Notice. The councils were advised that should they become liable for a further offence, they may be issued with a Penalty Infringement Notice.

735. Until 2006 EPA officers had authority to send warning letters to offenders or potential offenders. Since the enactment of the Infringements Act 2006 that enables official warnings to be issued in the place of Penalty Infringement Notices, the EPA requires official warnings to be approved by its Enforcement Review Panel. EPA officers do not require the panel’s authorisation to send letters to offenders warning them to cease non-compliance, provided the letters do not state the term ‘warning’.
The issuing officer, EPA Officer B, was asked during interview why the EPA issued an official warning to the cities of Casey and Frankston rather than a Penalty Infringement Notice. EPA Officer B said he sought direction from Mr Tsivoulidis on whether to recommend an official warning, Penalty Infringement Notice or prosecution to the Enforcement Review Panel. However, he said that Mr Tsivoulidis did not provide him with any direction. He stated it was the usual practice for Regional Managers to attend panel meetings that considered matters brought forward by their region. He said Mr Tsivoulidis did not attend this panel meeting. Therefore, EPA Officer B was asked by the panel to make a decision and he recommended an official warning. He stated he was put ‘on the spot’ by the Enforcement Review Panel to make a decision that should have been made in conjunction with Mr Tsivoulidis. EPA Officer B said that in retrospect he does not believe the official warning was as effective as a Penalty Infringement Notice would have been in remedying the non-compliance at the landfill.

In an email to Mr Tsivoulidis and the EPA Team Leader Landfills at that time, dated 19 October 2006, EPA Officer B provided the following feedback regarding the Enforcement Review Panel meeting:

The recommendation of an Official Warning from the Region was endorsed by ERP [Enforcement Review Panel] however not without some debate.

EPA Officer B said that he was disappointed that Mr Tsivoulidis did not attend the Enforcement Review Panel meeting and expressed his frustration with the manner in which enforcement matters were handled at the South Metropolitan Region.

In response, Mr Tsivoulidis stated:

I understood at the time from discussions with [EPA Officer A] and [EPA Officer B] that the recommendation for an official warning rather than infringement notice was in acknowledgement of the prompt response and corrective action taken by Council in relation to this particular incident.

...  

I normally attend ERP meetings as I was expected to, however on this occasion I had an internal training session scheduled for the same time. I believe I advised [EPA Officer B] of this clash and asked him to explain my absence to the ERP ...

Pollution Abatement Notice

Section 31A of the Act allows the EPA to issue a Pollution Abatement Notice on the occupier of premises for a variety of reasons. It is standard practice for the EPA to issue a post-closure Pollution Abatement Notice to the operator of a landfill in order to replace the licence and to monitor rehabilitation and long-term management of the landfill, including capping. A Pollution Abatement Notice is revoked when all its conditions have been complied with.

The EPA issued a post-closure Pollution Abatement Notice to the City of Casey on 3 January 2007 which came into effect on 2 February 2007. The landfill licence was revoked on 7 February 2007. The notice will remain in place until the EPA is satisfied the landfill no longer has any actual or potential detrimental off-site impacts.
EPA Officer A stated the geological assessment she had requested the City of Casey undertake was not included in the Pollution Abatement Notice as Mr Tsivoulidis considered this an action the environmental auditor should recommend. However, EPA Officer A said that the environmental auditor did not recommend this.

In response, Mr Tsivoulidis stated:

I considered the geological assessment that [EPA Officer A] had suggested be included in the notice was something the auditor could (not should) pursue within the scope of the audit if they deemed necessary for their assessment of the risk. In other words the auditor could determine what further information he needed to perform his task.

... [EPA Officer A] was not appreciate [sic] of any discussion or analysis of suggestions or recommendations she made on a range of issues relating to the former landfill or other matters and she openly displayed her frustration whenever myself or others did not unequivocally agree with her suggested alternative approaches. This often caused some tension in the relationship that [EPA Officer A] had with myself and others in the leadership team and may have led to [her] interpreting this as a lack of supported [sic].

The Pollution Abatement Notice was issued more than 18 months after tipping operation at the landfill ceased on 24 June 2005 and 10 months after landfill gas was confirmed to be migrating laterally from the landfill into the estate (10 March 2006). Mr Tsivoulidis was asked during interview for the reason for the delay. He stated he could not comment on the timeframe. However, he said that the City of Casey was properly rehabilitating the landfill as the landfill had been capped in June 2006. Mr Tsivoulidis stated the EPA was satisfied the cap would substantially reduce odour discharge from the landfill and consequently reduce complaints.

In regards to the length of time taken to issue the Pollution Abatement Notice, Mr McIntosh stated:

It’s not unusual but it’s not desirable … that PAN [Pollution Abatement Notice] is a bit different to the normal landfill post-closure notice. That was specifically targeted to the gas-type issues, which is not the normal principle of post-closure notices on landfills … It’s mostly managing rehabilitation, groundwater monitoring. It’s maintaining the site and the monitoring program to demonstrate if there is any environmental impact. Those notices are a fairly standard format and for a conventional landfill, and can be issued by most regions within days or weeks of a landfill closing.

Mr Tsivoulidis agreed that standard post-closure Pollution Abatement Notices do not refer to the lateral migration of landfill gas. Mr Tsivoulidis stated this Pollution Abatement Notice differed from the standard post-closure notice as it ‘went through many hands’ which also contributed to the delay. The Pollution Abatement Notice was reviewed by the Team Leader Landfills, the Regional Manager, the Director Regional Services, the audit unit, the legal team and the Authority (the EPA Chairman). The Authority was required to approve the notice as the works required were greater than $100,000. Mr Tsivoulidis said that the EPA does not have a method of tracking Pollution Abatement Notices, for example, to determine the stage of review and level of completion.
Mr Dawson acknowledged that the EPA took an unusually long time after the cessation of tipping at the landfill to issue the Pollution Abatement Notice. He was unable to provide a reason for this. Mr Dawson said that a landfill licence is usually surrendered when a post-closure notice is issued and this normally coincides with the cessation of landfill operations.

EPA Officer A attributed the delay in the issue of the Pollution Abatement Notice to her high workload and general workload issues at the South Metropolitan Region. She stated that it was questionable whether enforcement action could have been taken in relation to the landfill in the period between the cessation of tipping and the issue of the Pollution Abatement Notice:

There is a licence on the site so we still have that regulatory control. The enforcement aspect of that is interesting, because, well, if it’s not a scheduled activity, should it have a licence? Well, it doesn’t need a licence so can you enforce under that licence?

In relation to the delays in issuing the Pollution Abatement Notice, EPA Officer A has since stated:

I recommended to my team leaders (VPS5) and regional manager (VPS6) of the EPA South Metropolitan Regional office that a PAN [Pollution Abatement Notice] be issued to the City of Casey early in 2006 on or about the time I detected landfill gas off-site. I repeatedly reiterated the need for a PAN to be issued to the City of Casey to my team leaders and regional manager of the South Metropolitan Regional office.

... I was unable to issue a PAN to any entity. I did not have the delegated authorization power under the Environment Protection Act 1970 (the Act) to issue an enforcement notice of this nature.

EPA Officer A said that in late 2006 and early 2007 the EPA met regularly with the City of Casey. She stated the EPA continually advised the City of Casey it was required to progress with rehabilitating the landfill even though the Pollution Abatement Notice had not yet been issued.

EPA Officer A also stated:

Regardless of whether a specific enforcement tool, such as a PAN [Pollution Abatement Notice], had been issued, as the occupier of the premises, the City of Casey has obligations under the Act [Environment Protection Act] not to pollute the environment or cause or permit an environmental hazard.

**Notice of Contravention (2)**

On 8 June 2007 the EPA issued a Notice of Contravention to the City of Casey, pursuant to section 31A(7) of the Act, for the continued breach of the following two Pollution Abatement Notice conditions:

1. Ensure that landfill gas does not migrate laterally underground beyond the boundary of the premises.

2. Ensure that landfill gas does not accumulate such that it poses an environmental hazard.
This was the second Notice of Contravention issued in relation to the landfill. It was issued by authorised officer Mr Tsivoulidis without the need for Enforcement Review Panel approval. The Notice of Contravention followed the discovery on 1 June 2007 of 10 percent methane gas in an electrical pit in properties under construction in Powerscout Retreat, Cranbourne, and seven percent methane gas in a meter box in Powerscout Retreat.

The Notice of Contravention stated that should the City of Casey continue to fail to comply with the Pollution Abatement Notice requirements it may be liable for a daily penalty of up to $132,144 for each day upon which the non-compliance continued. Although the non-compliance continued for a further 15-month period until the date the emergency situation was declared on 9 September 2008, the EPA did not take action to enforce the Notice of Contravention.

EPA Officer A said that prior to issuing the Notice of Contravention the EPA had been trying to guide the City of Casey to develop appropriate procedures for dealing with the detection of methane gas in houses. The notice was the first enforcement action taken by the EPA in the 15-month period since 10 March 2006, the date the discovery of lateral migration of landfill gas was made.

During my investigation EPA officers were asked their views on the second Notice of Contravention not being enforced by way of prosecution, despite ongoing breaches of the specified licence conditions. Mr Jackson stated:

> It’s bizarre … by the time you’ve got to notices of contravention I mean so you’re past the, the dickering around and talking phase … I would have thought that here’s your notice of contravention um if you don’t come back with a change of direction or a commitment, change in commitment that I can see, then within a month I would be thinking that it would be, I would be um, I would be taking some more severe action around that … There was no [further] enforcement action. I don’t know what the reason for that is. I find that unusual.

According to EPA Officer B, the Notice of Contravention is a substantial tool of the EPA, frequently issued by the EPA but rarely followed up. He said that the practical effect of a Notice of Contravention is:

> … negligible if it is not carried out adequately.

**Direction**

Mr Brian Eva, an EPA accredited environmental auditor, had been engaged by the City of Casey to conduct air audits, required by the Pollution Abatement Notice. On 25 July 2007 the EPA received advice from Mr Eva that migration of landfill gas was causing an ‘imminent environmental hazard’ and health and safety risks to the residents of the estate. Mr Eva advised that immediate action was required to reduce the risk. Mr Eva’s advice gave the EPA grounds to issue a Direction under section 62B of the Act. The Act and the EPA’s *Enforcement Policy July 2006* provide ‘where there is imminent danger to life, limb or the environment, an authorised officer may give directions to any person to remove, dispose of, destroy, neutralise or treat any pollutant, waste, substance, environmental hazard or noise’. Thus a Direction does not require approval from the Enforcement Review Panel.
The EPA issued a Direction to the City of Casey on 26 July 2007. The EPA listed the following reasons for issuing the Direction:

i. pollutants have been or are being discharged;
ii. a condition of pollution is likely to arise; and

... there is likely to be imminent danger to life or limb or to the environment;

The Direction required the City of Casey to undertake immediate actions to abate the environmental hazard, including:

1. complete all current upgrade works to the landfill gas extraction system (this included sealing all the meter boxes within the estate);
2. ensure that there were no pathways via which landfill gas could be emitted from the landfill to the estate;
3. provide all available data and reports to Mr Eva;
4. notify the City of Casey’s stakeholders of the environmental hazard caused by the discharge of landfill gas from the landfill; and
5. take any other measures necessary to abate the environmental hazard.

Following the issuing of the Direction, several EPA officers said that the City of Casey was slow to respond. EPA Officer A said that the EPA had to ‘push’ the City of Casey to seal all the meter boxes in the estate and conduct regular monitoring of the electrical and stormwater pits. She stated the City of Casey also implemented some other procedures such as replacing solid covers on stormwater pits with grated covers to allow landfill gas to vent.

Mr Dawson said that the EPA considered the Direction to be the quickest and most effective way of solving the problems at the landfill. He said that the Direction was necessary because the Pollution Abatement Notice and the Notice of Contravention issued on 8 June 2007 had not been complied with.

According to the EPA’s Enforcement Policy July 2006 ‘failure to comply with directions … without reasonable cause is a very serious matter and may result in prosecution’.

**Clean Up Notice**

On 18 September 2008 after the declaration of an emergency situation, the EPA issued the City of Casey with a Clean Up Notice under section 62A of the Act. The EPA’s Enforcement Policy July 2006 provides a Clean Up Notice may be served on the occupier of a premises ‘where clean-up of pollution, industrial waste or a potentially hazardous substance is required’. A Clean Up Notice requires the recipient to take specified clean up and management measures and can be enforced by prosecution. Clean Up Notices requiring works to a value higher than $100,000 must be approved by the Authority (the Chairman). I identified that Mr Mick Bourke, the then EPA Chairman, decided to issue a Clean Up Notice as early as 23 January 2008. However, the notice was not finalised and issued until 18 September 2008. It was unclear as to the reasons for this delay.

The Clean Up Notice required the City of Casey to take short-term and long-term management actions. The short-term management actions had been developed by the City of Casey’s consultant ENSR Australia Pty Ltd (ENSR) and submitted to the EPA by the City of Casey. The short-term management actions included the following:
- Passive venting of hotspots and [landfill gas] migration pathways.
- Installation of a [shallow] cut off trench along the western and northern landfill boundary.
- Installation of deep horizontal [landfill gas] venting lines along the landfill boundaries.

766. The Clean Up Notice directed the City of Casey to complete the second action by 3 October 2008 and the first and third actions by 16 October 2008. The long-term management action required the City of Casey to provide the EPA with a written assessment of the options for the prevention of landfill gas migration beyond the boundary of the premises, including a preferred option, by 30 September 2008. EPA Officer A stated that neither the short-term nor long-term actions were completed within the required timeframes. Mr Eva said that the Clean Up Notice has driven a lot of the work that will be completed by the City of Casey in 2009.

Prosecution case being prepared

767. The EPA’s Enforcement Policy states that all offences under the Act are subject to prosecution. A decision to prosecute will be made after all relevant circumstances are considered. Relevant factors include whether an incident is a first offence, whether it was deliberate and its environmental impact.

768. According to EPA officers, at the time of my investigation the EPA was preparing a prosecution case against the City of Casey. Mr Jackson said that the Enforcement Review Panel considered the matter in late August 2008 and approved the preparation of a brief of evidence. Mr Payton stated this was the first time the panel had been asked to consider prosecution in relation to the landfill. EPA Officer A stated that the prosecution case relates to a ‘plethora of breaches’ of the Act, including causing an environmental hazard and causing aggravated pollution through negligence.

Level of enforcement action taken by the EPA

769. At interview on 27 February 2009, Mr Bourke described the level of enforcement action taken by the EPA in relation to the landfill as ‘minor to moderate’.

770. Mr McIntosh was asked during interview his opinion on the City of Casey’s performance. He stated ‘poor’ due to the odour and leachate problems experienced at the landfill. When asked what action the EPA took to improve the City of Casey’s performance, Mr McIntosh stated:

   We wrote a few very strongly worded letters at odd times in the past and that’s been basically it … I knew that it would not be given the attention that it would otherwise merit because of all the other demands on them as well too. And that’s not necessarily a function of EPA management, which I’m part of now, it’s a function of the fact that there’s high expectations that EPA will fix, be all things to all people and fix everything.

771. In regards to the EPA management’s response to complaints, Mr McIntosh stated:

   I wouldn’t say that there’s a reluctance to penalise people.

772. Mr McIntosh stated that the EPA’s current powers are sufficient to manage a situation such as developed at the landfill if the powers are appropriately used:

   Shortening timeframes, having staff with the time available to see things through that need a little bit more time on them.
Several EPA officers, including Mr Bajwa, stated that 90 odour complaints over a period of approximately four years was a relatively high number of complaints for a landfill. Mr Tsivoulidis stated:

That’s a problem site. You know, that number of complaints in relation to any site is a matter of concern and may be a reflection, often is a reflection on the level of compliance and/or management, you know, of an operating landfill.

Mr Dawson did not agree the receipt of 90 complaints necessarily indicated a ‘problem’ site. However, Mr Dawson also stated that the majority of ‘problem’ sites receive less than five or ten odour reports per year. In regards to the landfill, Mr Dawson stated:

… that’s about 20 a year so it would come up on your radar as one that would require a strategy and action … [the EPA] wouldn’t have had – necessarily had that arrangement in place … at the time.

Mr Tsivoulidis was Manager South Metropolitan Region from November 2003 to 8 December 2008. He was asked during interview why only four Penalty Infringement Notices have been issued in relation to the landfill and none since 4 September 2003, despite ongoing non-compliance. Mr Tsivoulidis was unable to explain the lack of enforcement.

Mr Tsivoulidis has since stated:

During the period that I was at South Metro region I encouraged and supported enforcement action despite a reluctance by some staff to take enforcement action.

**EPA organisational issues**

**Grosvenor Lodge – licence holder**

On 9 and 10 June 2003 EPA officers attended the landfill in response to odour complaints and discovered the gas extraction system was not fully installed and was not performing adequately. This was causing odourous landfill gas to discharge from cracks in the cover surface and leachate wells. As a result of this the EPA issued a Penalty Infringement Notice for $5,000 to Grosvenor Lodge on 4 September 2003.

Although it held the licence, Grosvenor Lodge was not contractually responsible for the installation or maintenance of the gas extraction system. Energegy installed the gas extraction system and the joint venture (the cities of Casey and Frankston) remained responsible for its maintenance. As a result, I identified that Grosvenor Lodge had refused to pay the Penalty Infringement Notice, as did Energegy, and eventually the notice was paid by the City of Casey. It would appear that Frankston City Council was not requested to and did not contribute to the payment of the Penalty Infringement Notice.

Mr McConnell, former Regional Manager South Metropolitan Region, stated during interview on 13 January 2009 that when the Penalty Infringement Notice was issued, the EPA asked Grosvenor Lodge and the City of Casey what action they were going to take to remedy the problems at the landfill. The EPA advised the City of Casey that it needed to take a more active role in determining who was responsible for the deficiencies in the gas extraction system. Mr McConnell stated the City of Casey wished to remain distant and leave the issue with the contractors. According to Mr McConnell, the EPA had internal discussions about transferring the licence from Grosvenor Lodge to the City of Casey in order to shift the liability for the landfill to the City of Casey.
In a letter to Mr Brown dated 16 June 2003, the EPA stated:

Please also note that EPA will be reviewing the current arrangement regarding the licence holder for the premises, given that there is an apparent limitation to the effective control of the site, specifically in relation to the gas collection system.

The EPA wrote to the City of Casey on 28 January 2004 suggesting that the council apply for transfer of the licence into its name. The licence was transferred to the City of Casey on 7 June 2005.

EPA officers were asked during interview why the licence was transferred from the South Eastern Regional Waste Management Group to Grosvenor Lodge, the contracted operator of the landfill, rather than to the joint venture which as owner of the landfill was ultimately responsible for it. EPA officers were also asked whether they had concerns about this situation, given that by holding the licence, Grosvenor Lodge had become liable for the operation and management of the landfill (Lots 7 and 10) and also the former Cemetery Road landfill (Lots 9, 11 and 12), with which it had no involvement.

Mr Dawson said that a situation such as this can occur when contractors are engaged. He stated the primary consideration from the EPA’s point of view is the licence holder should be the occupier of the site. However, he said this sometimes becomes contractually blurred. Mr Dawson’s view was that the occupier is the body that ‘controls the purse strings’ and has primary responsibility as decision-maker. Mr Dawson was unaware the Penalty Infringement Notice issued to Grosvenor Lodge was paid by the City of Casey.

EPA Officer C considered it appropriate that Grosvenor Lodge held the licence. EPA Officer A and Mr Bajwa disagreed. EPA Officer A stated:

... [Grosvenor Lodge] were pretty much just doing the tipping side of the operation. They weren’t managing it really ... if they’re not managing the site it’s very hard to enforce against that.

EPA officers were asked what action the EPA takes to ensure licence transfers are appropriate and licence holders understand their responsibilities. Mr Dawson stated that:

The licensee has a responsibility to understand its obligations under the licence. Like any – anyone subject to law – it’s your responsibility to understand your obligations ... if there’s assistance or guidance provided in that, that will be part of our regular compliance and feedback.

EPA Officer B said that the extent to which the EPA ensures new licence holders understand their responsibilities depends on many factors such as the client management relationship, the Client Manager’s workload and the Client Manager’s ability. He also stated sometimes a new licence is simply issued in the mail with no follow-up action taken.

**EPA South Metropolitan Region**

The EPA’s South Metropolitan Region, located in Dandenong, was responsible for monitoring and enforcement of the landfill until October 2007. In July 2007 the EPA established the Landfill Centre to centralise the EPA’s management of landfills. The Landfill Centre, managed by the former Waste Management Unit at the EPA’s central office, took over management of the landfill. The Client Manager of the landfill at the South Metropolitan Region from January 2005 transferred to the Landfill Centre and retained day-to-day responsibility for the landfill.
Mr Jackson stated during interview that the EPA South Metropolitan Region has not historically had an enforcement focus. Mr McConnell stated that when he was Manager South Metropolitan Region between late 2002 and November 2003, he wanted to see enforcement action taken where it was necessary. However, he acknowledged that enforcement was not an area he was experienced in. EPA officers reported that Mr Tsivoulidis, the most recent Manager South Metropolitan Region, was reluctant to pursue enforcement action.

Mr Tsivoulidis did not agree with this assessment. He stated that operators of landfills need to see consequences of their actions and he is not averse to taking enforcement action. However, he said that odour complaints are commonly unsubstantiated. Mr Tsivoulidis was unable to explain why no enforcement action was taken in relation to the landfill between his commencement as Manager South Metropolitan Region in November 2003 and the closure of the landfill on 24 June 2005. Mr Tsivoulidis said that he instigated a series of discussions and letters with the City of Casey to advise the landfill was a concern and to ask what the City of Casey was doing about it.

EPA Officer A, who was a junior officer when she became Client Manager of the landfill in early 2005, stated that the EPA was keen for the site to close due to the extensive odour problems. She said that prior to the discovery of lateral migration of landfill gas on 10 March 2006, the EPA had made no connection between odours and the risk of an explosion occurring. However, gas monitoring reports received from the City of Casey’s consultant HLA-Envirosiences Pty Ltd (HLA, later ENSR) indicated a very significant problem was emerging. EPA Officer A said that over time she became extremely frustrated that the issue was not being dealt with effectively by Mr Tsivoulidis. Therefore, on 5 June 2007 EPA Officer A raised the matter with the Director Regional Services, Mr Dawson. In an email to several EPA officers, including Mr Dawson and Mr Tsivoulidis, EPA Officer A wrote:

I am seeking some advice on a way forward to progress resolution to this issue.
Given the profile of this issue and the risk posed I would appreciate a response as soon as possible.

**Team Leader Enforcement at the South Metropolitan Region**

EPA regional offices were required to have a Team Leader Enforcement to supervise enforcement matters within the region. I identified that the South Metropolitan Region has not had a regular Team Leader Enforcement for several years. EPA Officer B said that he was in the role for approximately 12-18 months before he left the region in April 2007 and prior to this the role had not been filled since 1999. Therefore, no-one had been directly responsible for enforcement in the region since April 2007. He stated that although the Regional Manager, Mr Tsivoulidis, was responsible for filling positions within the region, the role was not advertised.

EPA Officer B stated there was little oversight in relation to his enforcement decisions. He stated he did not receive specific direction from Mr Tsivoulidis in regards to the priority that should be placed on enforcement.

EPA Officer B described the South Metropolitan Region as ‘a shambles’. He stated the structures around management, delegation of work and roles and responsibilities were generally unclear and there was a low level of support. He said that while he was at the South Metropolitan Region there was not an adequate method for ensuring delegated work was completed or that incidents of non-compliance were recorded and adequately attended.
to. He said there were reporting structures within the region but they were not well adhered to or managed. Mr Tsivoulidis said that the EPA has a weekly report which can be used to raise issues of interest with the EPA senior management. Mr Tsivoulidis also stated that the EPA has the ‘9:30 report’, a daily report that can be used by any EPA officer to provide senior management with immediate notification of significant issues.

EPA Officer B used the 2005 odour investigation that did not proceed to enforcement action and the 2006 leachate discharge that resulted in the issue of an official warning as examples of enforcement matters in which there was a lack of strategic direction.

According to EPA Officer B, conducting investigations and taking enforcement action is time-consuming. Therefore, he said it is tempting for EPA officers to ignore a matter or fail to gather appropriate evidence. He said he was extremely frustrated by the Regional Manager’s lack of focus on enforcement:

... where you have a manager that supports enforcement and where you have people that are interested in it … that will be strongly reflected. Where you have a manager who’s not, who’s disinterested in enforcement, that again will be reflected to some degree. And that was certainly the case with George [Tsivoulidis] … he was disinterested in enforcement, disinterested in it as a – a method for achieving outcomes so that – that was reflected in – to some degree in terms of what the outputs were … like all of us he’d probably prefer the quiet life … he certainly would have wanted to see these and other issues resolved but often the way of resolving them – it is complex and it is necessarily time consuming and it involves his – him to actually do them and drive them. There was never that drive to, you know, see that things were completed I suppose and achieved.

Mr Jackson agreed that the lack of a regular Team Leader Enforcement at the South Metropolitan Region may have affected the level of enforcement action taken by the region.

Mr Jackson stated that Team Leader Enforcement meetings were held every few months, during which in his former role as Manager Special Prosecutions Unit he would provide feedback on statistics with the aim of maintaining consistency amongst the regions. Mr Jackson stated that the South Metropolitan Region regularly had low enforcement statistics in relation to the other metropolitan regions. Mr Jackson said that it was his role to identify trends, such as low enforcement levels, occurring within the regions and the role of the Director Regional Services, Mr Dawson, to address trends with the Regional Managers. Mr Dawson stated his feedback to the Regional Managers was mostly general and geared towards ensuring enforcement continued to be used as a tool.

In response, Mr Tsivoulidis has since stated:

When I moved to South Metro in late 2003 I was aware that the region had a reputation for not having a strong enforcement focus and that it had been without an enforcement team leader since around 1999. This was something I worked to address ...
I strongly disagree with [EPA Officer B’s] comments that I was not interested in enforcement.

He [EPA Officer B] did not raise with me (or anyone else that I am aware of) concerns that he did not feel supported in the role that he had been acting in, nor did he mention any such concerns at the time he moved to his new role.

**Mr Tsivoulidis’ conduct**

799. EPA officers can use briefing notes to raise issues with the Chairman or the Minister. A draft briefing note typically requires approval by the officer’s Unit Manager and Director before it is forwarded to the Chairman or Minister.

800. On 26 September 2006, EPA Officer A wrote a briefing note to the EPA’s Chairman to advise that significant levels of landfill gas had been found migrating from the landfill into the estate, resulting in environmental and possible public health issues. The briefing note advised that houses had been constructed within two metres of the landfill boundary fence and on 18 September 2006 dead trees were observed between the landfill and the houses. The briefing note also advised that WorkSafe had been contacted, because civil contractors were working in the estate, and recommended the Department of Human Services (DHS) be contacted and informed of the health risks to residents. EPA Officer A attached three photos, including one of the bubbling puddles.

801. EPA Officer A forwarded the briefing note to the Manager of the Office of the Chairman on 26 September 2006. On 27 September 2006, the Manager of the Office of the Chairman forwarded it to Mr Tsivoulidis for his approval with a note suggesting it move promptly through the system. My investigation revealed that Mr Tsivoulidis did not act on the briefing note. The progression of the briefing note stopped at Mr Tsivoulidis and it was cancelled on the EPA’s electronic system on 5 November 2007. EPA Officer A said she regularly asked Mr Tsivoulidis about the status of the briefing note. For example she asked Mr Tsivoulidis if there was any news on the briefing note in an email dated 9 October 2006. EPA Officer A did not receive a reply. In an email to Mr Tsivoulidis and the EPA Team Leader Landfills at that time, dated 19 October 2006, EPA Officer A stated:

> … Questions were raised [at the Enforcement Review Panel meeting that considered the leachate discharge] around the management of the issue going forward particularly about risks posed by the new housing development – I advised that a briefing note was in preparation and that this would be concluded soon.

802. EPA Officer A again asked Mr Tsivoulidis about the briefing note in an email dated 23 October 2006:

> … George [Tsivoulidis], any news on the briefing note? Should I be updating the briefing note to include that the landfill gas appears to be fluctuating weekly?

803. Mr Tsivoulidis replied to EPA Officer A on 26 October 2006, stating he was updating the briefing note as she suggested.
804. Mr Tsivoulidis was shown EPA Officer A’s briefing note during interview. Mr Tsivoulidis said that he did not recall receiving the briefing note on 27 September 2006. He stated the issues raised in the briefing note were very familiar to him and he acknowledged the seriousness of the issues raised. Mr Tsivoulidis stated he did not know why the briefing note’s progression ceased with him. He was unable to explain why the briefing note was cancelled 14 months after he received it or what happened to it in the interim. Mr Tsivoulidis surmised the briefing note may have been superseded by other communications that followed the preparation of the briefing note such as advice to the senior management and the Chairman on 19 December 2006 recommending that a Pollution Abatement Notice be issued to the City of Casey.

805. Mr Dawson said that he had not been aware of the briefing note. Mr Bourke also said during interview that he had not previously seen the briefing note. Mr Bourke stated he did not become aware of the methane gas migration from the landfill until 1 June 2007 when significant levels of methane gas were detected in the electrical pit and meter box in Powerscout Retreat.

806. In response, Mr Tsivoulidis has since stated:

I accept the briefing note did not progress with me and with the benefit of hindsight, heavy workload and other demands at the time may have contributed to this at the time.

... 

Whilst the briefing note did not progress, the matters reported in it and the key recommendation that a Pollution Abatement Notice be issued with a requirement for an auditor to be appointed to conduct an audit on the air segment of the environment including the underground migration of gas of-site [sic], were progressed and in December 2006 the draft notice and background and supporting information including the lateral migration into the adjoining Brookland Green Estate, was formally submitted to the executive and Chairman and approved, with the notice being issued in January [2007].

807. Mr Bourke said that there were incidents at other sites managed by the South Metropolitan Region of which he was not informed. He stated that he discovered a briefing note on another serious matter that stopped progressing at Mr Tsivoulidis and was not forwarded to him. He did not specify which matter that briefing note related to. Mr Bourke said that he was concerned by Mr Tsivoulidis’ failure to advance the briefing note relating to the Stevensons Road landfill.

808. Mr Eva’s air audit report in November 2007 advised methane gas migration was causing unacceptable risks to the beneficial use of air surrounding the landfill and additional measures were immediately required to control landfill gas, in particular within sub-surface structures in the estate. EPA Officer A said she was concerned by these findings. However, she said when she advised Mr Tsivoulidis he did not take any action. At that stage the South Metropolitan Region was providing weekly updates on regional issues to the Director Regional Services, Mr Dawson. She said that in December 2007 she drafted an update to Mr Dawson in which she quoted the environmental auditor’s assessment that there was ‘high to extreme risk’ to residents of the estate. She said that before the weekly update was forwarded to Mr Dawson, Mr Tsivoulidis downgraded the risk to the residents by removing Mr Eva’s risk assessment. EPA Officer A advised that Mr Tsivoulidis instead focused on actions the City of Casey was taking, such as installing additional monitoring bores.
She stated:

I know what I wrote and it wasn’t what went up. So that was very frustrating.

809. At interview, Mr Tsivoulidis was asked about EPA Officer A’s allegations regarding the removal of Mr Eva’s risk assessment from the weekly update. He said that he could not recall the weekly update in question. However, he was concerned that EPA Officer A had quoted selectively from the audit report and this was potentially misleading. He said that he may have removed the risk assessment from the update. Mr Tsivoulidis stated the audit report should have been read in its entirety and taken in its full context.

810. Mr Dawson said that he was unaware of this issue. However, he said in December 2007 he was aware of the high level of risk to residents of the estate and the immediate need for the risk to be addressed. Mr Dawson said that he had a general recollection of seeing Mr Eva’s audit report.

811. At interview, Mr Bourke said that he reviewed the ‘9:30 reports’ in relation to the landfill and the migration of landfill gas was not raised as an issue in those reports until 2007 or 2008. Mr Bourke stated:

I have difficulty understanding why that is.

812. Mr Bourke stated that he also reviewed the weekly reports to senior management. Mr Bourke stated the reports that advised of the issues at the landfill indicated the issues were being managed by the region and did not raise ‘alarm bells’. Mr Bourke stated that:

… [EPA Officer A] indicates that she felt that she hadn’t been able to move things forward through the management processes as she would have liked. Yeah and I find that pretty disappointing … [Mr Tsivoulidis] could have supported some of his people more fully and he could have supported the management structure more fully … management was incompetent … it didn’t heed the warning signals … I think management did fail.

813. In response, Mr Tsivoulidis has since stated:

I certainly do recall changing … the weekly report summary and I certainly discussed this with [EPA Officer A] and [another EPA officer] at the time explaining my concern that what she had prepared was selectively chosen and did not provide an overall context and was potentially misleading.

…

The statement made by [EPA Officer A] implies that I changed the summary without her knowledge and I wish to make it clear that this is not the case.

814. Mr Tsivoulidis is no longer the Regional Manager having been transferred out of the EPA South Metropolitan Region (now named South Unit) in late 2008. Mr Tsivoulidis resigned from the EPA in August 2009.

Knowledge management at the EPA

815. Several EPA officers said during interview that there is a high staff turnover within the EPA, including the South Metropolitan Region. Mr Payton said that the EPA’s staff attrition rate is comparable to any organisation. However, he stated staff turnover may be more noticeable at the EPA as the EPA is a reasonably small organisation in relation to its profile.
816. There have been a number of different EPA officers (Client Managers, Team Leaders and Regional Managers) responsible for the landfill, spanning from the City of Casey’s initial application for a works approval on 30 October 1989 to the present day, a period of approximately 20 years.

817. EPA officers were asked about the EPA’s knowledge management system. Mr Dawson stated the EPA has a database on which it records which officer is responsible for each site. He said that information about sites is recorded on physical client files. Mr Dawson also stated EPA officers who have been involved with sites can provide relevant information to new officers.

818. Mr Tsivoulidis said that he did not recall receiving specific information about the landfill when he became Manager South Metropolitan Region. Mr Tsivoulidis said that his knowledge of the landfill developed through receiving regular complaints about the landfill, speaking with the Team Leader Landfills and viewing correspondence that the region received relating to the development of the estate and the VCAT hearing. Mr Tsivoulidis said that he was not aware the landfill had no side lining until the migration of landfill gas emerged as an issue in March 2006.

819. EPA Officer A said that she did not receive a specific handover when she assumed responsibility for the landfill. Instead she learnt ‘on the job’ by visiting the landfill with Mr Bajwa, the Team Leader Landfills. She stated each site has a premises strategy that provides a site history but premises strategies vary in detail. EPA Officer A said that premises strategies are sometimes reviewed annually and sometimes less often. She said maintaining premises strategies becomes a low priority when EPA officers have high workloads.

820. Mr McIntosh stated that audit reports are the main source of useful information to the EPA. Therefore, he said the EPA’s knowledge management system should enable these to be quickly sourced. He said that audit reports are kept on the EPA’s physical files and as they are submitted to the EPA on compact disc, can be accessed electronically. Mr McIntosh said that the EPA does not have integrated electronic or physical files that include history of sites, photographs, consultant reports and other relevant information. He said that the EPA considered implementing a fully electronic filing system but this had not yet occurred:

Now it has been determined that with a new structure we do need a better client management/information management system. That’s been developed but I know of no details of it yet.

821. According to Mr McIntosh, the Stevensons Road landfill files are not all in chronological order and the same document may appear multiple times throughout a file or across various files. My inspection of the EPA’s files supported this observation.

Changes to enforcement process as a result of the EPA’s restructure

822. During the course of my investigation the EPA underwent an organisational restructure, effective from 8 December 2008, with the purpose of improving service delivery. This was the EPA’s first major restructure since 1987.

823. Prior to the restructure, the EPA had seven regional offices. Each regional office was responsible for providing environmental services such as works approvals, licences, pollution response, compliance and enforcement to sites in its region. Regional Managers reported to the Director Regional Services at the EPA’s central office. Mr Jackson described the regional model as relying on seven ‘fiefdoms’ that all operated separately and differently.
The restructure has reduced the number of regional offices from seven to five. The South Metropolitan Region was renamed the South Unit. The Special Prosecutions Unit that was established in 2001 to provide training and support to regional offices in relation to enforcement matters, has been enlarged, renamed the Enforcement Unit and made directly responsible for all enforcement matters. As a result of the restructure, environmental services are managed centrally, although some environmental services staff are located in the regional offices. The EPA now has a Statutory Facilitation Unit to issue works approvals and licences and an Environmental Performance Unit to focus on compliance of the EPA’s licensed sites.

Ms Nicole Hunter, former EPA Manager, said that the restructure replaced Regional Managers with Client Service Managers whose role is less technical and more focused on client management and staff management. According to Ms Hunter the centralisation of environmental services is beneficial for improving client management and for enabling earlier intervention for major issues.

EPA Officer B stated that the new enforcement model will strengthen the EPA’s ability to undertake enforcement action and allow for consistency across the organisation. However, he stated that a division remains between compliance and enforcement because these functions are managed by separate units.

EPA culture

EPA officers interviewed during my investigation said that the nature of the EPA’s culture has traditionally been ‘command and control’, with decisions made at higher levels of the organisation and minimal responsibility given to lower level staff.

When asked what more the EPA could have done to prevent the problems at the landfill, one EPA officer said that the EPA should have taken earlier action, including prosecution. However, the failure to act was attributed to EPA senior management and the need for all decision-making to be referred to the highest level.

Another EPA officer said that the EPA’s decision-making culture is ‘very top-heavy’ and that decisions are referred upwards through the organisation.

At interview on 27 February 2009, the then EPA Chairman, Mr Bourke, attributed the low level of enforcement action taken in relation to the landfill to the EPA’s regional structure:

... a couple of times we tried to ... coordinate issues management... We couldn’t do that while we – we had what we call regional operational management systems. They’d sort of become I think a – a little bit self-appointed in terms of the way they dealt with things. And I think there were some long-held cultural issues in the business too around that. One of them’s what I call the footy trip mentality, which [means] what happens in the region stays in the region... It was almost supported from the executive levels in past times that you deal with the – your dirty linen in your own area ... I don’t know whether [Mr Tsivoulidis] was impacted by that or not but I – I feel that a lot of things that could have been bought [sic] forward out of that region didn’t seem to be bought [sic] forward ... even when they did come forward, I wasn’t that sure that they then were coming forward to the broader organisation or just to the directorate level and being managed there on the same basis ... By the time you got hold of something it was generally pretty hot.
Mr Bourke stated he is committed to changing the EPA’s culture:

The systems we’ve put in, putting in place at the, during the current era and the restructure of the organisation has been largely about ah trying to eliminate some of those behaviours and change that culture.

Conclusions

My investigation identified that the EPA failed to take adequate enforcement action in relation to the landfill over a number of years. This was not as a result of a shortage of powers as the Act affords the EPA extensive statutory powers and an array of enforcement tools. In my view, the EPA ineffectively utilised the enforcement tools at its disposal. This failure resulted from several factors, including:

- delays associated with the EPA’s enforcement process
- passive management
- lack of strategic direction at the South Metropolitan Region
- EPA’s culture and decision-making processes.

The EPA has since responded to these issues:

On all occasions, when EPA had a choice between approaches, adopting one course as distinct from another, the fact that hindsight might now indicate an alternative option might have, on occasion, been preferable, does not mean that a breach of statutory duty occurred at the time the decision was made.

EPA’s actions and enforcement responses for the Stevensons Road landfill were proportionate to the circumstances at the relevant time. EPA has taken action to protect the environment and the community of Brookland Greens Estate. EPA has prioritised actions and enforcement measures to ensure the City of Casey remedy the problem, rather than taking punitive action.

At all times the City of Casey has had the responsibility for remedying the environmental problems at the Stevensons Road landfill. EPA has used formal instruments such as a pollution abatement notice, clean up notice and directions to require it take the necessary corrective actions.

In addition to enforcement action, EPA has taken a variety of action including engaging with the City of Casey at senior management level, engaging with WorkSafe and emergency services, informing and advising the community of Brookland Greens Estate, and engaging international experts for advice and guidance.

I also consider that the EPA does not have effective systems to record and manage information relating to sites that it regulates.
The EPA has since responded:

As part of the EPA’s broader restructure EPA continues to improve and review its business systems (including record and information management) and is making significant investments to upgrade its information management systems.

**Poor adherence to the principle of shared responsibility**

In accordance with section 1G of the Act, protection of the environment is a responsibility shared by all levels of Government and industry, business, communities and the people of Victoria. As Victoria’s primary environment protection body, the EPA must take the leading role in upholding this principle. According to the EPA’s website, a key aspect of the EPA’s responsibility for improving the environmental performance of its operations and activities is the duty to take decisive enforcement action when the Act is breached. In relation to the landfill I consider that the EPA poorly performed its duty.

The EPA has developed an Enforcement Policy to guide its officers in applying the powers provided to it in the Act. I consider that in relation to the landfill, the EPA has not utilised its Enforcement Policy appropriately, resulting in a considerable disconnect between non-compliance and enforcement. In my view, the level of enforcement action taken in relation to the landfill was inadequate compared to the volume of complaints the landfill generated while in operation, and to the history of non-compliance of the landfill operators.

Despite continued breaches of the licence, only four Penalty Infringement Notices were issued in relation to the landfill:

- one on 19 June 1998
- two on 15 June 2001
- one on 4 September 2003.

Similarly, continual breaches of the Pollution Abatement Notice have rarely resulted in enforcement action. It follows that the EPA has been unsuccessful in preventing or rectifying breaches of the Act, which according to the EPA’s Enforcement Policy is the purpose of Pollution Abatement Notices. The minimal enforcement action taken by the EPA clearly had little effect on improving the management of the landfill.

The EPA has since responded:

EPA continues to recognise section 1G as one of the 11 principles in section 1 of the Environment Protection Act. In responding to the issues at the Stevensons Road landfill, EPA has adhered to the principles (specifically section 1G principle of shared responsibility) by working with the City of Casey, Frankston City Council, emergency services, Department of Human Services, Department of Sustainability and Environment, Country Fire Authority and others. EPA disagrees with this conclusion. EPA also notes that more EPA resources were deployed in responding to the Stevensons Road landfill issues than any other environmental issue in recent memory.

EPA does not agree with the conclusion which, in isolation, misrepresents the totality of EPA’s response to issues during the development of the Stevensons Road landfill. EPA took a range of specific actions …
To date EPA has focussed its resources and efforts primarily on rectifying the environmental issues outstanding at the landfill in conjunction with the City of Casey. EPA notes that an investigation into possible breaches of the Environment Protection Act continues and enforcement action will be taken consistent with EPA’s Enforcement Policy.

EPA has undertaken a review of enforcement practices and is developing a compliance framework, including guidance on the escalation of enforcement action.

**Poor compliance with the precautionary principle**

841. There have been many occasions where the EPA had sufficient grounds to take enforcement action but it failed to do so or it utilised inappropriate enforcement measures. This is at odds with the Chairman’s statements in the foreword to the EPA’s Enforcement Policy that the EPA will take enforcement action against those who damage the environment and the EPA will act in an efficient and effective manner without fear or favour.

842. Section 1C of the Act, the precautionary principle, advises decision-making should be
guided by:

- a careful evaluation to avoid serious or irreversible damage to the environment wherever practicable; and
- an assessment of the risk-weighted consequences of various options.

843. I am of the opinion that the EPA’s decision-making in relation to the landfill has not been guided by this principle and the consequences of decisions have not always been suitably assessed. I note as an example the EPA’s decision to allow the transfer of the landfill licence from the South Eastern Regional Waste Management Group to Grosvenor Lodge. In my view, this decision was flawed. The transfer of the licence resulted in Grosvenor Lodge becoming responsible for activities at the landfill, including the operation of Energex’s gas extraction system, over which it had no contractual responsibility and no technical expertise. It would have been logical and prudent from an enforcement perspective for the joint venture, as the owner of the landfill, to have held the landfill licence for the duration of the licence. This is supported by the fact that the City of Casey paid the Penalty Infringement Notice issued to Grosvenor Lodge on 4 September 2003.

844. I also consider that an EPA licence should be issued to the party responsible for the management of the site. I am of the opinion that the joint venture was at all times and is still ultimately responsible for the landfill. It is concerning that the EPA permitted the joint venture to abrogate its responsibility for the landfill; failed to conduct appropriate checks before transferring the licence to Grosvenor Lodge; and did not take action to ensure that Grosvenor Lodge understood its responsibilities under the licence. I am also concerned by the evidence which indicates a two-year delay between the EPA recognising that the joint venture should have been the licence holder and the licence eventually being transferred to the City of Casey.

845. Several of the EPA’s decisions relating to enforcement were inappropriate. In his VCAT witness statement, Mr Bajwa cited warning letters as a form of enforcement action that the EPA had taken in relation to the landfill. Few other enforcement measures were taken during the periods between the commencement of tipping, the cessation of operations and the decision of VCAT.
846. A further example of inappropriate enforcement action was the EPA’s decision to issue an official warning in response to the leachate discharge from the landfill that occurred on 18 September 2006. The source of the leachate spill was a disused landfill gas extraction pipe. Given the previous problems that had become evident with the gas extraction system, the official warning was an inadequate enforcement measure.

847. I consider that the EPA failed to take advantage of the many opportunities it had to commence prosecution proceedings. In the period from 30 May 2001 to 18 September 2008, the EPA issued two Notices of Contravention, a Direction and a Clean Up Notice to the operators of the landfill. These enforcement tools are all enforceable by prosecution. I am of the view that when the EPA is dealing with a recalcitrant operator, as the joint venture and its contractors proved to be, these tools are only effective if they are enforced.

848. It is clear that despite the repeated and consistent non-compliance of the landfill operators throughout the operation and rehabilitation of the landfill, the EPA did not seriously consider taking prosecution action against the City of Casey until August 2008.

849. There were additional enforcement measures available to the EPA that were not utilised in relation to the landfill. The EPA has the power to suspend or revoke a licence if the licence holder does not comply with the conditions of the licence. The EPA also has the power to apply to the Supreme Court for an injunction. An injunction can be used to restrain any person from contravening the Act or any condition of a licence or notice where there is an urgent environmental problem and/or other measures taken under the Act have proved ineffective. An injunction may require the cessation of an activity or may require an action to be performed. Despite having these significant enforcement measures at its disposal, there is no evidence the EPA considered using them in relation to the landfill.

850. The EPA has since responded to these issues:

EPA does not agree with the conclusion [lack of enforcement action], which in isolation, misrepresents the totality of EPA’s response to issues during the development of the Stevensons Road landfill. EPA took a range of actions …

... The ability to suspend or revoke a licence was only available to EPA during the operational phase of the Stevensons Road landfill.

EPA does not believe that applying for a Supreme Court injunction would have materially assisted in resolving the offsite landfill gas migration.

... This principle, as described in the Act [Environment Protection Act], is applied by EPA to avoid situations where scientific uncertainty is used as a means of postponing measures to avoid environmental damage.

There does not appear to be any link between the precautionary principle and the licence issues referred to.
EPA accepts where site occupation remains with one party throughout, having one licensee for all phases of the landfill is preferable.

EPA notes that it is implementing licence reforms.

**Poor compliance with the principle of enforcement**

851. Section 1K of the *Environment Protection Act 1970*, the principle of enforcement, states the purposes of enforcement of environmental requirements. Section 1K(c) advises that one of the purposes of enforcement is to influence the attitude and behaviour of people whose actions may have adverse environmental impacts. It is evident the enforcement action taken by the EPA in relation to the landfill did not act as a deterrent to non-compliance or as an incentive for the joint venture to improve its attitude or behaviour.

852. The EPA issued two Notices of Contravention in relation to the landfill. The first was issued to the South Eastern Regional Waste Management Group on 30 May 2001 and the second to the City of Casey on 8 June 2007. The EPA’s Enforcement Policy July 2003 advises that in cases of continuing non-compliance ‘it is envisaged further enforcement will be undertaken by way of prosecution’. The EPA’s enforcement policies July 2005 and July 2006 state ‘the issue of a notice of contravention therefore sends a clear message that the EPA will take any continuation of the breach very seriously’. The EPA failed to prosecute the South Eastern Regional Waste Management Group for ongoing breaches of the licence conditions identified in the first Notice of Contravention or the City of Casey for ongoing breaches of the Pollution Abatement Notice conditions identified in the second Notice of Contravention. This lack of decisive follow-up action by the EPA is contrary to its stated policy that it takes the continuation of breaches seriously.

853. If the EPA had taken appropriate and timely enforcement action that imposed significant penalties, the City of Casey may have better understood the consequences of non-compliance and potentially created a far greater incentive to implement changes to the management of the landfill. It follows that the landfill gas migration and the consequential risk to public safety may have been identified and remedied at an earlier stage.

854. Stronger enforcement action by the EPA in relation to the landfill would have created certainty for the City of Casey that there were serious consequences for non-compliance and raised the City of Casey’s awareness of the environmental risks.

**Delays in the EPA’s enforcement process**

855. The EPA’s enforcement process is complex, lengthy and time consuming. I found that the EPA aims to issue 90 percent of Penalty Infringement Notices within 90 days. This contrasts significantly with the situation prior to the establishment of the Enforcement Review Panel when Penalty Infringement Notices could be issued almost immediately. The distinction is demonstrated earlier in my comparison of the timeframes for Penalty Infringement Notices issued in relation to the landfill. I consider the current timeframes excessive. Penalty Infringement Notices should deter offenders from further non-compliance. The lengthy timeframes for the issue of Penalty Infringement Notices substantially dilutes their deterrent effect.
As the regulator for the environment with a key role in ensuring compliance with the Act, it is important that the EPA considers enforcement to be a high priority and retains a continual focus on enforcement issues. I identified that the EPA does not consistently place a high priority on enforcement and enforcement matters can be overlooked or delayed due to workload issues. In my view, sufficient resources should be available to EPA officers to follow matters through from non-compliance to enforcement and to bring matters before the Enforcement Review Panel in a timely manner. In order for the EPA’s enforcement regime to be effective, efficient and to encourage compliance by operators of EPA regulated sites, EPA officers should receive appropriate support and strategic direction from the EPA’s management. In turn the EPA’s senior management should guide managers in creating a culture where officers are able to take appropriate and timely enforcement action.

The EPA should also have a mechanism for monitoring the progress of Pollution Abatement Notices. I am also concerned standard post-closure Pollution Abatement Notices for landfills do not refer to the lateral migration of landfill gas as this phenomenon appears to be well known.

The EPA has since responded:

... EPA accepts that timeframes could be shortened and is taking steps to improve its enforcement procedures which will maintain the existing rigour while reducing the time taken to issue a Penalty Infringement Notice.

... Taking enforcement action is an important function and priority of EPA. Recent structural changes reinforce EPA’s enforcement role and will result in a more efficient flow from the identification of non-compliance through to enforcement action.

... EPA has amended the standard post-closure Pollution Abatement Notice to ensure that all future post-closure Pollution Abatement Notices will deal with the possibility of lateral migration of landfill gas.

Poor management at the EPA South Metropolitan Region

Prior to the EPA’s restructure in December 2008, each region was responsible for compliance and enforcement matters. The wide discretion given to Regional Managers and lack of close monitoring by EPA senior management resulted in inconsistent enforcement regimes across the regions. My investigation revealed the lack of enforcement action taken in relation to the landfill was largely due to the inaction of the former Manager South Metropolitan Region, Mr Tsivoulidis.

The EPA has since responded:

... the issues raised here have been addressed by the restructure put in place in December 2008.

Previous Managers of the South Metropolitan Region were not particularly active in relation to enforcement during the operation of the landfill, given the volume of complaints the landfill generated. However, the four Penalty Infringement Notices issued all predated the most recent Regional Manager, Mr Tsivoulidis. Mr Tsivoulidis was responsible for the
region’s management of the landfill from November 2003 to 5 November 2007. The South Metropolitan Region took minimal and ineffective enforcement action in relation to the landfill during the period November 2003 to November 2007. This was a significant period of time in the life of the landfill as the landfill ceased operation and the migration of landfill gas was discovered. In my view this was a crucial period for the EPA to take appropriate action but it failed to do so.

862. The evidence supports the view that Mr Tsivoulidis ignored serious compliance issues at the landfill. My investigation revealed EPA officers, in particular EPA Officer A, understood the environmental impacts of the site and the necessity for the EPA to take enforcement action. However, Mr Tsivoulidis was unwilling to support his staff.

863. Another example of the South Metropolitan Region’s inadequate approach to enforcement is demonstrated by the fact that the region did not have a regular Team Leader Enforcement.

864. A further example is the delay in issuing the Pollution Abatement Notice. As discussed earlier in this chapter, EPA officers stated it is standard practice for a post-closure Pollution Abatement Notice to be issued for a landfill, and the landfill licence to be surrendered, at the time that landfill operations cease, that is, prior to the commencement of rehabilitation of the landfill. EPA officers confirmed that the delay in issuing the Pollution Abatement Notice was caused by workload issues, the extensive internal review of the Pollution Abatement Notice and the fact that the notice was not a standard post-closure Pollution Abatement Notice. I do not consider these to be acceptable reasons for the 19-month delay.

865. The EPA has since responded:

The Notice was very detailed and took a significant amount of consideration given the issues at the site. A number of actions took place during that time which the Pollution Abatement Notice formalised.

866. A third matter that illustrates Mr Tsivoulidis’ inaction was EPA Officer A’s briefing note to the Chairman advising landfill gas was migrating into the estate. The tracking information recorded on the briefing note identifies that Mr Tsivoulidis failed to action it. His failure to progress the briefing note to the intended recipient, the Chairman, and his inability to provide a reasonable explanation for his inaction, is concerning. This supports the evidence of witnesses that Mr Tsivoulidis was generally inactive in regards to compliance and enforcement matters.

867. I concluded that Mr Tsivoulidis’ lack of leadership and persistent inaction warranted review by the EPA. In response, Mr Tsivoulidis has since stated:

... I strongly disagree that I was “generally inactive in regards to compliance and enforcement matters”.

868. Following my investigation, Mr Tsivoulidis resigned from the EPA in August 2009.

The EPA’s culture and decision-making processes

869. The EPA’s culture encourages significant decisions to be made at a senior level. This may contribute to an unwillingness or inability for EPA officers at lower levels of the organisation to take action. It is encouraging that the EPA’s senior management has recognised this weakness and has taken action to address the situation by forming the Organisation Transition Unit to implement cultural change.
I note the EPA’s recent move to centralise its environmental services, including compliance and enforcement. The establishment of a centrally managed Environmental Performance Unit for compliance issues and an Enforcement Unit for enforcement issues, is a positive step. However, in order for the EPA to make enforcement a priority and overcome the shortcomings of the regional based system, the two units should be adequately staffed and managed. There should be an effective method for communicating, reporting and transferring files between the two units. Furthermore, the model will rely on enforcement issues being raised by the EPA’s other units. Therefore, the EPA should establish an effective referral mechanism to these two units from the regions and other units that identify compliance and enforcement matters.

The EPA has since responded:

EPA has undertaken, and continues to undertake, a number of organisational reforms to ensure that decisions are made at the appropriate levels, the efficient flow of information and that staff are comfortable to raise issues with senior management. The reforms include the introduction of a quality assurance function, cultural change, business systems reform and the restructure.

Referral mechanisms are being enhanced to ensure the efficient flow from the Pollution Response Unit, Regional Offices, and the Environmental Performance Unit to the Enforcement Unit. The referral of information will be supported by improved business and information systems and the clear separation of client management and enforcement roles.

Inadequate knowledge management system

My investigation revealed the EPA does not have a comprehensive knowledge management system. The EPA’s filing system only records some site-based information and the quality of record-keeping is generally poor. I consider that the EPA is unable to properly execute its statutory duties without an effective mechanism for recording all site-based information. All relevant information should be appropriately recorded and accessible in order for the EPA to develop and retain a complete understanding of sites it is responsible for regulating.

The EPA’s physical files relating to the landfill are cumbersome and disorganised and only some of the site information is stored electronically. This unsystematic and inefficient transfer of knowledge may have partly resulted in diminished awareness within the EPA of the non-compliance issues at the landfill and the emerging environmental risks. As the EPA is charged with the significant responsibility to protect, care for and improve the environment, its ability to fulfil these responsibilities will continue to be hampered without a robust knowledge management system.

The EPA has since responded:

EPA is implementing significant reform to its internal business systems which will substantially improve knowledge management.
Recommendations

I recommend that:

Recommendation 31

The EPA develop comprehensive policies and procedures to guide its decision-making in relation to licence transfers. Checks should be conducted to ensure the licence holder is the individual or organisation that has primary responsibility for the site. This process should record who is responsible for making the decision and document the reasons.

The EPA’s response

EPA can fulfil this recommendation.

This is being done as part of EPA’s current licensing and works approval reform program.

Recommendation 32

The EPA develop procedures to assist licence holders to understand their legal liability and responsibilities under the licence. This procedure should include provision for advice to be clearly documented in the EPA’s records and confirmed in writing to licence holders.

The EPA’s response

EPA can fulfil this recommendation.

Recommendation 33

The EPA review its Enforcement Policy with a view to providing clearer direction in relation to enforcement action. In particular the Enforcement Policy should clearly identify circumstances when enforcement action should take priority over working collaboratively with operators of EPA regulated sites.

The EPA’s response

EPA can fulfil this recommendation.

EPA is currently reviewing its existing Enforcement Policy as part of developing a new Compliance Framework. This Framework will set clear guidance on making decisions on which type of action is appropriate.

Recommendation 34

The EPA review its compliance and enforcement procedures to ensure the EPA takes strong and decisive enforcement action in response to non-compliance.

The EPA’s response

EPA can fulfil this recommendation.

Recommendation 35

The EPA implement a reporting system that enables compliance issues and potential enforcement actions to be reported to its senior management.

The EPA’s response

EPA can fulfil this recommendation.
Recommendation 36
The EPA implement procedures for following-up notices and directions on a regular basis in order to determine whether the notices or directions are being complied with.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 37
The EPA review its Penalty Infringement Notice policy with a view to ensuring that Penalty Infringement Notices are issued within 60 days.

The EPA’s response
EPA can fulfil this recommendation.
EPA can revise its internal targets and adopt a revised internal target of issuing 90% of Infringement Notices within 60 days.

Recommendation 38
The EPA review its organisational priorities to ensure compliance and enforcement are maintained as a high priority. This process should include allocating sufficient resources to compliance and enforcement.

The EPA’s response
EPA has already fulfilled this recommendation.

Recommendation 39
The EPA develop an internal tracking system for Pollution Abatement Notices and other enforcement measures that are subject to an internal review process.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 40
The EPA amend the standard post-closure Pollution Abatement Notice for landfills to require testing for and management of the lateral migration of landfill gas.

The EPA’s response
EPA has already fulfilled this recommendation.

Recommendation 41
The EPA review its filing system and implement an electronic knowledge management system. The system should record chronologically all information relevant to EPA regulated sites, including site histories, photographs, internal and external correspondence, audit reports, other consultant reports and records of the EPA’s enforcement action.
The EPA’s response

EPA can partially fulfil this recommendation.

EPA can fulfil some of the intent of this draft recommendation by significantly improving its filing system. This will be achieved through the implementation of EPA’s current business systems reform program.

Recommendation 42

The EPA review its existing procedures in relation to supervision of staff, including the Unit Managers, in the Environmental Performance Unit and the Enforcement Unit.

The EPA’s response

EPA can fulfil this recommendation.

This can be achieved through a review that EPA will conduct of its relevant existing procedures.

Recommendation 43

The EPA review its existing procedures to ensure there is regular reporting and effective co-ordination between the Environmental Performance Unit and the Enforcement Unit.

The EPA’s response

EPA can fulfil this recommendation.

This can be achieved through a review that EPA will conduct of its relevant existing procedures.

Recommendation 44

The EPA review its allocation of staff to the Environmental Performance Unit and the Enforcement Unit to ensure these units have an appropriate number of staff with adequate experience in compliance and enforcement issues.

The EPA’s response

EPA has already fulfilled this recommendation.
4. PLANNING DECISIONS AFFECTING THE ESTATE

Background

My investigation examined the various planning decisions affecting the Brookland Greens estate (the estate) which allowed residential houses to be built up to the edge of the western boundary of the landfill site at Stevensons Road, Cranbourne.

Private developer – Peet

In June 1998, property developer Peet & Co Casey Land Syndicate Limited (Peet) purchased an L-shaped parcel of land of approximately 135 hectares, known as 1070 Cranbourne/Frankston Road and 815/885 Ballarto Road Cranbourne, from Rysvale Pty Ltd for $3.5 million. This parcel of land was later to become known as the estate and is shown below in the aerial photograph which appeared in the Peet Prospectus, dated July 1998. At the time of the purchase, the land was zoned a combination of residential and rural under the City of Casey’s Planning Scheme.

Illustration 3. Peet Prospectus – aerial photograph

The Prospectus issued by Peet offered investors the opportunity to invest in the residential housing development. The project sought to raise $4.4 million in capital funds with a total of 4,400,000 ordinary shares offered at $1.00 each. The projected profit before tax over the estimated life of the project (as a percentage of $4.4 million issued capital) was 211 percent.
The Prospectus stated that the company (Peet & Co Casey Land Syndicate Limited) and the project were to be managed by Peet & Company Limited. The $4.4 million capital raised for the project was fully underwritten by Peet & Company Limited.

Peet & Company Limited has a history of land and property development in Australia, having operated in Western Australia since 1895. According to its website, Peet & Company Limited has developed over 100 land estates in Western Australia, Victoria, Queensland and New South Wales. The company’s core activities are the development of broad acre residential land estates; the development of medium-density residential property; land syndication; and funds management.

The Prospectus identified constraints on the development of some areas of the subdivision caused by the nearby landfill site, chicken broiler farms and quarry operations. As a risk factor to investors, the Prospectus identified that if the existing buffer zones around these industries were not removed this would delay the return to investors, potentially affecting the profitability of the project.

The Concept Development Plan dated 23 July 1998 and included with the Prospectus, as shown below, clearly identified the sand extraction facility and landfill site at Lots 7 and 10 Stevensons Road respectively. At the time this plan was prepared, the sand extraction facility in Lot 7 was still in operation in preparation for the acceptance of putrescible waste.

Illustration 4. Peet Prospectus – development concept plan
A Consultant Town Planner Report prepared by Mr Robert Jonson, Director of Bosco Jonson Pty Ltd (Bosco Jonson), dated 24 July 1998 and included with the Prospectus, made reference to the sand mine and landfill site. Mr Johnson’s report stated:

There is an active landfill and sand mine abutting the north eastern boundary on Stevensons Road. A buffer of 200 metres is required from the boundary of these operations which [sic] no residential development is allowed. The buffer is reflected on the plan and future allotments proposed within this buffer are shown on the concept plan. It is advised by the Council that the total operation of the landfill site and sand mine will cease by 2003 at which stage it is expected that the 200 metre buffer will disappear and residential development within the buffer zone can be pursued.

In October 1999, Peet lodged an application with the City of Casey to rezone a parcel of land, 96.93 hectares in size, bounded by the Cranbourne-Frankston Road, Ballarto and Stevensons Roads (the land) to Residential Zone 1. Some areas of the land were inside the buffer zone. The proposed rezoning of the land was required in order to facilitate the further residential development of the estate. The proposed rezoning is referred to as Amendment C6.

The planning framework

A planning scheme is a statutory document which sets out objectives, policies and planning provisions relating to the use, development, protection and conservation of land in the area to which it applies. Changes to the planning scheme such as a rezoning or the application of a planning overlay are known as ‘planning scheme amendments’. The statutory process for a planning scheme amendment is set out in the Planning and Environment Act 1987. An amendment may involve a change to a planning scheme map (often a rezoning), or a change to the written part of the planning scheme, or both.

City of Casey Planning Scheme Amendment C6

Amendment C6 applied a Development Plan Overlay to the land in question. A planning overlay on land indicates that further planning provisions may apply to a site or an area in addition to the requirements of a zone. As with the zones, standard overlays for state wide application are included in the Victorian Planning Provisions.12

Generally, planning overlays apply to a single issue or related set of issues, such as heritage, an environmental concern or a risk such as flooding or wildlife. Where more than one issue applies to land, multiple overlays can be used. Usually, overlays may only make requirements about development, not use. As such, overlays do not change the intent of the zone.

The introduction of a Development Plan Overlay over the land in question was intended to ensure that residential development on the estate was undertaken in accordance with the provisions of a Development Plan, in this case the South Central Development Plan and subsequent amended versions, referred to as the Cranbourne Development Plan.13

12 The Victorian Planning Provisions is a comprehensive set of standard planning provisions and provides a standard format for all Victorian planning schemes. It includes the planning framework and State planning policy.

13 The South Central Development Plan (Incorporating the Brookland Greens Development Plan) was prepared by the City of Casey in October 1999. The Cranbourne Development Plan was adopted by the elected Council on 16 September 2003 and a later amended version of the Cranbourne Development Plan was adopted by elected Council on 18 September 2007.
Referral to the EPA

888. In consideration of the land’s close proximity to a number of industries likely to reduce the amenity of residents, including a nearby chicken broiler farm, landfill and quarry, the City of Casey referred Amendment C6 to the EPA for advice.

889. In a letter dated 20 December 1999, the EPA advised the City of Casey that it had no objection to the proposed amendment. The letter stated:

The amendment appears to make provisions for the minimum buffer distances between the proposed residential area and surrounding industries as stated in its publication Recommended Buffer Distances For Industrial Residual Air Emissions, No. AQ 2/86.

The EPA has no objections to the proposed amendment.

890. Although the EPA’s letter raised few concerns about the proposed residential rezoning and its proximity to the Stevensons Road landfill, the document on which the EPA based its referral advice, Recommended Buffer Distances for Industrial Residual Air Emissions, No. AQ 2/86, stresses that while buffer distances are a means of reducing the effects of such residual emissions, they are not an alternative to source control. This document states:

It must not be assumed that industrial operations will have no adverse impact on the amenity beyond the distances nominated in this document. Off-site effects other than reduced amenity of the air environment which may extend over greater distances – for example, noise, vibration, hazard and so on – have not been considered. In such cases a buffer distance greater than that specified in this document may be necessary. Sound planning will take account of all the potential impacts of a development proposal.

891. While the EPA advised that it had no objection to the planning scheme amendment, I note that the EPA’s Recommended Buffer Distances for Industrial Residual Air Emissions, No. AQ 2/86, applies a more cautious tone in respect of the role of buffer distances. It recognises that even state of the art technology is not always without fault. Accidents, equipment failure and abnormal weather conditions are all cited as potential causes for off-site amenity impacts.

Public exhibition period

892. Section 19 of the Planning and Environment Act requires that a planning scheme amendment proposal must be placed on public exhibition for at least one month to allow objectors time to make a submission if they feel the proposed amendment will negatively affect them. Section 19 also requires that notice must be given in writing to Ministers, authorities, affected property owners and occupiers, in selected local newspapers and the Victorian Government Gazette.14

893. In accordance with the requirements of the Planning and Environment Act, City of Casey officers publicly exhibited the Casey Planning Scheme Amendment C6. During the exhibition period, objecting submissions were received from the Royal Botanic Gardens Cranbourne and the former Department of Natural Resources and Environment.

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14 Section 19 of the Planning and Environment Act sets out what notice the elected Council must give of a planning scheme amendment.
Concerns raised by the Royal Botanic Gardens Cranbourne related to the use and construction of Ballarto Road, removal of vegetation and potential amenity impacts of reflective roofing materials on the estate. The submission made by the Department of Natural Resources and Environment also raised flora and fauna issues and highlighted the importance of conserving remnant vegetation in the subject area. No objecting submissions were made at that time in relation to the potential proximity of residential land to an existing landfill.

**Reporting to the City of Casey**

When assessing a request for a planning scheme amendment, the City of Casey must consider each submission received in response to the public exhibition period. In the case of submissions which request a change to the amendment, the council must either change the amendment as requested or refer the submission to an independent panel appointed by the Minister. Alternatively, it may abandon the amendment or the part of the amendment affected by the submission.

A report was prepared by a City of Casey planning officer and presented to a council meeting of the City of Casey on 21 December 1999 outlining the objecting submissions received from the Royal Botanic Gardens Cranbourne and the Department of Natural Resources and Environment during the public exhibition period.

At this meeting the council resolved to refer the submissions received to an independent panel appointed by the Minister under section 23(1)(b) of the Planning and Environment Act.

**The panel hearing – Amendment C6**

**Appointment of a Panel**

Planning panels are appointed to provide independent advice to the planning authority and/or the Minister regarding a proposal and the submissions referred to it. A planning panel is usually comprised of one or more members depending on the complexity or significance of the matter and the type of issues that have been raised.

In response to the City of Casey’s written request, the Minister appointed a two person panel to hear and consider submissions in relation to Amendment C6. The Panel hearing was held on Monday 28 February 2000 and considered submissions made by the City of Casey, the Department of Natural Resources and Environment, WSC Consultants on behalf of the Royal Botanic Gardens Cranbourne, and Russell Kennedy Lawyers on behalf of Peet.

**Buffer distances**

The ‘minimum buffer distance’ referred to by the EPA, in correspondence to the City of Casey dated 20 December 1999, was 200 metres. This buffer distance was based on the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Wastes) 1991. State Environment Protection Policies constitute subordinate legislation under the Environment Protection Act. They provide the framework for the application of the Environment Protection Act; guide the EPA’s decisions; and provide a basis for issuing works approvals and licences.

At the Panel hearing, the buffer distance from the landfill to residential properties was not raised as an issue by any of the parties that attended.

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15 Section 23 of the Planning and Environment Act outlines decisions about submissions received.
However, the Panel considered that buffer distances were a matter that needed to be addressed in order to form recommendations in relation to the proposed rezoning of the land. The Panel asked each of the parties to comment on the width of buffers that should be provided, particularly in respect to dust, noise, windblown litter and other emissions in relation to the landfill site and the nearby quarry and chicken broiler farms.

I note that in October 2001, the EPA published its Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills. This document recommends a minimum buffer distance of 500 metres from the nearest residential dwellings in the case of putrescible and solid inert waste landfill sites.

Reconvened Panel hearing

According to the Panel members, submissions received from the various parties raised ‘more questions than answers’ in relation to buffer distances. As a result, the Panel decided to reconvene the hearing on Monday 17 April 2000 to seek further information.

The EPA attended the reconvened Panel hearing and provided a written statement including the following advice:

The recommended buffer for landfills is 200m. Experience over the past decade has indicated this distance is often inadequate, even with the application of best practice. For example one large landfill in the southern metropolitan region applies all current best practice standards, yet cannot reliably contain offensive odour within 200m. In this case EPA has received over 40 complaints in the past 18 months and the site is subject to on-going enforcement action. EPA has been reviewing best practice standards and buffer distances for landfills and will be shortly releasing new guidelines. In the meantime we can only flag where residential areas are proposed between 200-500m from landfills as posing a significant risk of future amenity problems.

In response to the EPA’s comments, Dr Terry Bellair, an environmental consultant engaged by Peet, advised the Panel that well planned and managed landfill sites should not have off-site impacts beyond the required 200 metre buffer. Notwithstanding the EPA’s advice that the EPA had received over 40 complaints about the landfill, predominantly relating to odour, in the 18 months leading up to the hearing, the Panel accepted Dr Bellair’s evidence and agreed that a 200 metre buffer from the landfill would be adequate.

Defining the buffer

Although the Panel was reconvened to discuss buffer distances, at no point was any reference made as to where the buffer distance should be measured from. The State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) defines the ‘buffer distance’ as ‘the distance between the tipping area of a landfill site and a segment of the environment to be protected’. ‘tipping area’ is defined in the policy as ‘a place within a landfill site in which municipal wastes are, have been or will be deposited’.

Table 3 of the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) specifies the minimum buffer distances for different types of landfills. In the case of the Stevensons Road landfill, a former extractive industry site, Table 3 requires a 200 metre buffer.
909. In its deliberations the Panel made reference to Clause 15.04-2 of the State Planning Policy Framework\textsuperscript{16} which states:

Planning and responsible authorities should ensure that development is not prejudiced and community amenity is not reduced by air emissions by ensuring, wherever possible, that there is suitable separation between potentially amenity reducing and sensitive land uses and developments. Consideration should be given to Recommended Buffer Distances for Industrial Residual Air Emissions (EPA 1990) to determine the extent of separation.

910. The EPA Recommended Buffer Distances for Industrial Residual Air Emissions, No. AQ 2/86, requires a buffer for landfill operations in accordance with the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste). This policy requires a minimum buffer distance of 200 metres between residential areas and municipal waste landfill sites located in former quarry holes. The policy also provides that restricted approval may be given for reduction of the 200 metre buffer distance where circumstances warrant.

Findings of the Panel

911. After hearing and considering all submissions, the Panel is required to report its findings to the council and can make any recommendations it thinks fit. The council must consider the report, decide what alterations should be made to the amendment and whether to adopt or abandon it. The Panel concluded that the rezoning of the land to a Residential 1 Zone to allow residential subdivision was appropriate in the circumstances. The concluding remarks in the Panel report stated the following:

The only real constraint to development is the need to provide buffers to nearby incompatible land uses. However, the need for these buffers is likely to change over time as uses (such as the Stevensons Road landfill) cease, or technological changes to other incompatible uses (such as broiler farms) reduces the need for buffers.

912. On 18 May 2000, the Panel released its report recommending that the City of Casey adopt Amendment C6 to the Casey Planning Scheme following some changes to the exhibited amendment. However, none of the recommended changes related to the buffer distance from the landfill.

Reporting to the City of Casey

913. In accordance with section 188(2)(a) of the Planning and Environment Act, adoption or abandonment of an amendment cannot be delegated to council officers.\textsuperscript{17} It must be by resolution of the planning authority and recorded in its minutes or reports. On 15 August 2000 a report was presented to the elected Council recommending that the amendment be supported. The elected Council supported the planning officer’s recommendation and planning scheme Amendment C6 was adopted.

\textsuperscript{16} The State Planning Policy Framework sits within the Victorian Planning Provisions.
\textsuperscript{17} Section 188 of the Planning and Environment Act allows planning authorities and responsible authorities to delegate powers except in certain circumstances.
Controls to guide buffer distances

Overview

914. At the time the land was being considered for rezoning to residential there was an existing sand quarry and a council-owned landfill, another quarry for sand and sedimentary rock extraction and a chicken broiler farm, all located within close proximity to the estate. These land uses all had the potential for off-site impacts that could detrimentally affect the amenity of residential land use.

915. The South Central Development Plan, later amended to the Cranbourne Development Plan (the Development Plan), was publicly exhibited with planning scheme amendment C6. Additionally an agreement under section 173 of the Planning and Environment Act was entered into by Peet and the City of Casey.\(^\text{18}\) Both documents stipulated buffer distances that should be observed in order to protect residential amenity.

The Development Plan

916. Amendment C6 introduced a Development Plan Overlay. This requires the council to approve a Development Plan before development can commence in the overlay area. Further to this, development must be in accordance with the approved Development Plan. The use of a Development Plan Overlay enables the council to foresee a subdivision layout and sets a number of principles on which development can occur.

917. A Development Plan provides guidelines that co-ordinate the actions of developers, infrastructure service providers, public authorities and the council and directs the management of new subdivisions within the Development Plan area. The council must take the Development Plan into consideration when assessing planning applications for subdivision or applications for the use and development of land generally in accordance with the Development Plan.

918. In the case of the estate, the Development Plan stipulated various buffer areas to be observed in order to protect the amenity of residential land use. In relation to the landfill, the Development Plan stated:

No development will be permitted within 200m of an existing landfill that prejudices the activities of the landfill to the satisfaction of the responsible authority (the buffer area). The buffer may be progressively reduced if the responsible authority and the Environment Protection Authority are satisfied that the activities affecting the buffer have permanently ceased.

919. The Development Plan also stated:

Development will not be permitted within the designated buffer areas (as marked in figure B) until such time that the activities creating the need for these buffers cease. Except, in the case of the landfill and quarry buffer where it has been determined, to the satisfaction of the responsible authority, that the application of the buffer is no longer required.

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\(^\text{18}\) Section 173 of the Planning and Environment Act sets out the provisions under which councils can enter into agreements.
The Development Plan recognised that the operation and location of the Stevensons Road landfill had the potential to create a land use conflict unless planning guidelines were considered and applied. The landfill was located in a rural area that had experienced an encroachment of residential development, particularly the rezoning of the adjacent land in the Brookland Greens estate.

While it was important to protect the residential amenity of residents by means of a buffer area, it was also considered important to recognise and protect the landfill. The application of buffer areas in the Development Plan and the Section 173 Agreement sought to ensure that the operations of the landfill were not adversely affected by residential development in close proximity to the landfill.

**Section 173 Agreement**

A Section 173 Agreement allows a council to negotiate an agreement with an owner of land to set out conditions or restrictions on the use or development of the land, or to achieve other planning objectives in relation to the land. The power to enter into the agreement arises under Section 173 of the Planning and Environment Act. A Section 173 Agreement is a legally binding contract on the parties to the agreement.

The benefit of a Section 173 Agreement is that it can be registered over the title to the land so that the owner’s obligations under the agreement bind future owners and occupiers of the land. A Section 173 Agreement can also be enforced in the same way as a permit condition or planning scheme. The purpose of an agreement is to make it easier to achieve planning objectives for an area or particular parcel of land than is possible when relying on other statutory mechanisms.

Peet voluntarily entered into a Section 173 Agreement with the City of Casey when it applied to have the Brookland Greens estate land zoned Residential 1. The purpose of the Agreement was to restrict the development of dwellings within buffer areas from surrounding industries. The Agreement stipulated that the restriction would remain in place until the activity requiring the buffer ceased or it was agreed by the Responsible Authority [City of Casey] and the EPA that the buffer was no longer required.

The planning submission accompanying Amendment C6 stated:

It is understood that the land in this area cannot be developed for residential purposes until the quarry/landfill use is finalised. This will occur over a period of time as a result of the capping and conversion of the site into open space. The Owners of the land are proposing to enter into a legal agreement pursuant to Section 173 of the Planning and Environment Act 1987, that will preclude residential development from occurring in this area until quarrying/landfill activities have ceased.

The Section 173 Agreement was drafted by Russell Kennedy Lawyers on behalf of Peet and signed by the City of Casey and Peet on 16 August 2000. Clause 2.1 of the Agreement contained covenants that no dwelling was to be constructed within a buffer area until:

1. In any case, the activity creating the need for the Buffer Area ceases;

2. It has been determined to the satisfaction of the Responsible Authority and the Environment Protection Authority that the Buffer is no longer required in whole or in part.
The Agreement provided for the release of individual lots of land from the operation of the Agreement. The Agreement also provided that a notice under section 183 of the Planning and Environment Act was to issue if the Responsible Authority (in this case the City of Casey) was satisfied that any of the matters set out in Clause 2.1 of the Agreement no longer applied or there was a relevant order made by VCAT relating to any matter being to the satisfaction of the Responsible Authority.  

My investigation established that the Section 173 Agreement made no reference to the Stevensons Road landfill. The wording in the Agreement referred to a ‘sand extraction site’. At the time that the Agreement was signed in August 2000, sand was still being extracted from Lot 7 of the Stevensons Road site in preparation for the acceptance of putrescible waste. However, the landfill at Lot 10 Stevensons Road had been in operation for over four years and sand extraction was finished in Lot 7 by December 2000. Also, the ‘Schedule 2 Buffer Plan’ included in the Agreement made no mention of the landfill, again only referring to a ‘sand extraction facility’ in the location where the landfill was operating.

I note that the Section 173 Agreement, which failed to make any mention of the landfill, was included with Peet’s contract to prospective purchasers of residential lots in the estate. Since March 2007, Peet has included with its contracts to potential property purchasers a copy of a letter from the then Mayor of the City of Casey dated 7 March 2007 advising of the restoration works at the landfill and the detection of small amounts of landfill gas in the estate.

The landfill was referred to as ‘future parkland’ rather than a ‘landfill’ by Peet in its sales material advertising the estate. This is consistent with the City of Casey’s long-term vision to rehabilitate the landfill and use it as parkland.

Mr Jonson of Bosco Jonson, the surveyors engaged by Peet, was interviewed on 28 November 2008 in relation to why the ‘Schedule 2 Buffer Plan’ attached to the Section 173 Agreement referred to a ‘sand extraction facility’ and not a landfill. He said:

“It’s interesting that you could pick up on that as there was never any doubt that in my mind that that’s what those buffers referred to. I’d say that is probably a drafting error.”

Mr Colin Taylor, formerly of Russell Kennedy Lawyers and who acted on behalf of Peet, was also asked about the reference to a ‘sand extraction facility’ and not a landfill in the Section 173 Agreement. At interview on 25 March 2009 he said:

“I can’t answer that. I don’t know why. I don’t think there was an intent to try and obscure it.”

During the course of my investigation I established that an earlier draft of the Section 173 Agreement, including the schedule/plan on buffers prepared by Bosco Jonson and sent by Russell Kennedy Lawyers to the City of Casey on 14 July 2000, made specific reference to the landfill site.

However, all references to the landfill site had been removed from the Section 173 Agreement and the final schedule/plan signed by the City of Casey and Peet on 16 August 2000. While I have been unable to identify who removed the reference to the landfill on the earlier draft of the schedule/plan or to establish whether this was done intentionally, I note that the City of Casey and its advisers did not identify and rectify the matter before executing the agreement.

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19 Section 183 of the Planning and Environment Act sets out the provisions for cancellation or alteration of registration of a Section 173 Agreement.
935. While the Development Plan and the Section 173 Agreement were consistent in so far as they both provided for a 200 metre buffer from the landfill, my investigation identified that neither document specifically stated where the buffer distance was to be measured from. The Plan attached to the Section 173 Agreement and the Development Plan drew the 200 metre buffer from the western boundary of the landfill.

936. Mr John McCaffrey, Surveyor of Bosco Jonson was interviewed on 4 December 2008 regarding where the buffer was measured from. He said:

That was the ongoing argument and was, as I recall it, the principle issue in the VCAT hearing was determining what was the limit of the buffer. And in my view that was determined by interpretation of the Development Plan. The Development Plan in my reading and my understanding of it was that the 200 metre buffer was from where the actual landfill was taking place and there was provision in the Development Plan that the buffer would shift as the landfill proceeded.

937. Both the Development Plan and the Section 173 Agreement required the City of Casey and the EPA to be satisfied that the activity creating the need for the buffer, that is landfill activities, had ceased in whole or part before any dwellings could be built in the buffer area. Also, a letter from the EPA to the City of Casey dated 31 March 2003 stated:

... no development should be approved within these specified buffer distances until such time as the landfill has been completed, capped and rehabilitated and it is demonstrated that there would be no impact on the amenity of any such residential development.

938. In response to my concerns regarding the Section 173 Agreement, Mr Taylor has since stated:

I have now revisited part of the file for which I was responsible when I was working on the matter at Russell Kennedy and confirmed the plan attached to schedule 2 to the agreement was not prepared by me or by Russell Kennedy and was attached after I prepared the document. No matter how the buffer was described, it was clearly shown on that Bosco Jonson plan and also on the plan which formed part of the CDP [Cranbourne Development Plan] adopted by the Council on 25/6/2002 and which the buffer area was described as “200m. Quarry/Landfill Buffer”.

... I understand purchasers of land within the estate have suffered anguish and loss as a result of the escape or “migration” of landfill gases from the former landfill site owned and managed by Casey Council underground into the estate. Neither I nor Peet, I believe were or reasonably should have been aware of that nuisance or the likelihood of it at the time of preparation of the agreement on August 2000 or at the time of VCAT hearing and decision, or at the time of the Planning Panel deliberations and hearing between 17/2/2000 and 16/5/2000, or the preparation of the CDP [Cranbourne Development Plan].
Planning application for Stage 10 development

Planning Application P210/02

939. On 12 April 2002, the City of Casey received an application from Peet seeking a planning permit for the subdivision of Stage 10 of the estate. This planning application was numbered and referred to as P210/02. At the time of receiving this application, the City of Casey had previously issued approval for the development of Stages 3-9, 11-13, 14A, 15-16 and 18 of the estate.

940. The planning submission accompanying the application referred to the 200 metre buffer distance outlined in the Section 173 Agreement and the Development Plan. It asserted that as a result of landfill activities undertaken in recent years, the land was no longer within the 200 metre buffer and therefore residential development could proceed.

941. Peet maintained that as the active tipping face moved northwards progressively from Cell 3 to Cell 4 of the landfill, the point from where the buffer was measured would also shift. Peet’s surveyor, Bosco Jonson, undertook survey works that measured the buffer from the active tipping face. Peet submitted that this measurement effectively meant that Stage 10 of the estate fell outside the buffer area.

942. The aerial photograph below, taken in 2004, shows the landfill and an area of land along the western boundary of the landfill that was a buffer zone and where houses were later built following the VCAT hearing in May 2004.

Illustration 5. Aerial photograph of the buffer zone – 2004
Referral advice

943. On inspection of the planning file, I identified that the officer assessing the planning application for the City of Casey, Mr Bill Zombor, raised concerns in relation to the cessation of the nearby landfill activities in the early stages of the planning assessment process. Mr Zombor sought advice on this matter from Mr Michael Jansen, the City of Casey’s Team Leader, Environment. The resulting advice provided by Mr Jansen in an email dated 26 April 2002 to Mr Zombor, stated that any reduction in the 200 metre buffer area at that time would be premature. The email stated:

Environmental Services do not support prematurely reducing the buffer zone around the Stevensons Road landfill. I acknowledge that the southern section of the landfill has been capped, but works are not yet complete. According to the South East Waste Management Group the works to be completed include the gas collection system (currently in the planning process with the council) and a leachate irrigation system (yet to commence). There remains potential for off-site impacts including migration of landfill gas, noise, birds and dust.

... EPA would normally allow removal of buffer zones following complete rehabilitation of the site and demonstration that there are no off site impacts. I have confirmed with the EPA officers that EPA are opposed to any further buffer reduction until at the very least the works are complete and a gas collection system has been installed and has been proven for several months.

944. While the EPA was not a referral authority as specified at Clause 66.01 of the Casey Planning Scheme, the City of Casey nonetheless referred this matter to the EPA under section 52 of the Planning and Environment Act. Under section 52 comments or information can be sought from an authority without a statutory requirement.

945. In response to the City of Casey’s request for advice, the EPA in a letter dated 31 March 2003 advised the following:

Buffer distances are not a substitute for appropriate landfill management practices to control odour emissions, such as gas extraction. Therefore, despite the fact that a gas extraction system has been installed in the completed southern part of the Cranbourne landfill, the buffer distances must remain as their purpose is to provide for contingencies that arise with normal operations.

946. The EPA concluded:

Accordingly, no development should be approved within these specified buffer distances until such time as the landfill has been completed, capped and rehabilitated and it is demonstrated that there would be no impact on the amenity of any such residential development. Planning overlays should include the buffer area to ensure that it is maintained through the life of the landfill.

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20 Clause 66 sits within the General Provisions of Victorian Planning Schemes. These provisions set out the types of applications which must be referred under section 55 of the Planning and Environment Act and which notices must be given under section 52(1)(c) of the Act.
Where an objection is lodged as the result of a section 52 referral, it must be taken into consideration by the responsible authority under the normal provisions of the Planning and Environment Act. The authority lodging the objection has the same review rights as any other objector. A responsible authority is not bound to refuse to grant a permit if there is an objection, nor must it include any specified conditions.

Both the City of Casey and the EPA opposed any reduction in the buffer from the landfill for obvious and compelling reasons although neither referred to the actual risks, including potential explosions, posed to residents by laterally migrating methane gas from an unlined landfill in sandy geological conditions.

City of Casey report

On 22 April 2002, Mr Zombor submitted a report to the City of Casey council recommending that planning application P210/02 made by Peet be refused a planning permit. Mr Zombor recommended that a permit be refused on the following grounds:

1. The proposal does not comply with the objectives of Clause 12 of the Metropolitan Strategy – Melbourne 2030.
2. The proposal is not generally in accordance with the Cranbourne Development Plan approved under Clause 43.04 of the Casey Planning Scheme.
3. The proposal fails to comply with Clause 52.10 – Uses With Adverse Amenity Potential.

Although the report made reference to the Section 173 Agreement registered on the land, it was not specified as a distinct ground for refusing the application. The council supported Mr Zombor’s recommendation and refused the planning application for the subdivision.

I consider that the City of Casey processed planning application P210/02 in an appropriate manner. This included consideration of the necessary steps to ensure that the application was assessed in accordance with the requirements of the Planning and Environment Act and that advice on the issue of buffers from the landfill was obtained from appropriate sources.

The VCAT hearing

Background

The VCAT Planning and Environment List is responsible for independently reviewing planning decisions made by councils about planning permit applications and other planning matters. It hears and decides applications by permit applicants, objectors and others in an informal manner.

VCAT has the power to affirm, vary or set aside any decision being reviewed or to substitute its own decision. VCAT Members are appointed by the Governor-in-Council and include experienced town planners, lawyers and other persons with special professional expertise, such as architects, scientists and engineers. Although parties may be represented by a solicitor or another person such as a planner, this is not essential and many permit applicants and objectors present their own submissions.

On 29 May 2003, the City of Casey received an Application for Review pursuant to section 77 of the Planning and Environment Act, from Russell Kennedy Lawyers on behalf of Peet, seeking a review of the City of Casey’s decision to refuse the planning permit for Stage 10 of the estate.
In response to the Application for Review, the City of Casey engaged the law firm Maddocks to represent it in the VCAT proceedings. Ms Tania Heber, Senior Associate of Maddocks was assigned responsibility for handling the case. In preparation for the VCAT hearing, Ms Heber met with various officers of the City of Casey and the EPA. Mr Zombor and Mr Jansen of the City of Casey were also in attendance at the VCAT hearing.

**Application for Enforcement Order**

Any person, including a responsible authority, may apply to VCAT for an enforcement order under section 114 of the Planning and Environment Act to rectify a breach of a planning scheme, permit or Section 173 Agreement, or to avoid the commission or continuance of such a breach. A person can seek that an order be made against the user/developer, owner, occupier or any other person who has an interest in the subject land.

An Application for Enforcement Order was lodged with VCAT by Russell Kennedy Lawyers on behalf of Peet on 23 December 2003. The Application for Enforcement Order was issued against Grosvenor Lodge Pty Ltd (the contractor operating the landfill), SITA Australia Pty Ltd (the site manager) and the City of Casey (the owner).

The Application for Enforcement Order relied on the grounds that conditions in the landfill planning permit and the EPA waste discharge licence had been breached, particularly in relation to:

1. Odours have discharged from the Site which are offensive to the senses of human beings in residential areas and in public spaces adjacent to residential areas;
2. The amenity of the locality adjacent to the Site, particularly residential areas have been prejudicially affected and suffered nuisance by reason of offensive odours from the Site;
3. The extraction, collection and flaring of landfill gas has been inadequate on and from the Site and the gas collection and flaring system has been improperly constructed and or maintained;
4. The landfill areas where waste is no longer being deposited have been improperly constructed and or maintained;
5. The landfill areas where waste is no longer being deposited have been inadequately compacted and capped such as to allow the random escape of landfill gases to the atmosphere.
6. Leachate has been inadequately managed in breach of conditions 2.4, 2.6, and 2.9 of the EPA licence.

The Applicant is materially affected by the breaches of the Permit conditions referred to by reason of it being the owner of adjoining land comprised in Lot JJ Plan of Subdivision 511421B in respect of which a residential subdivision application has been refused by Casey City Council because of the proximity of its land and proposed development to the landfill (the Applicant’s land). That application is now the subject of Proceedings No. P1277/2003 in the Tribunal.

The Application for Enforcement Order was eventually withdrawn by Peet before the matter was heard by VCAT. Peet’s Project Manager for the estate, Mr Brenton Downing, was interviewed on 10 December 2008 in relation to the Application for Enforcement Order and the reasons why it was withdrawn.

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21 Section 114 of the Planning and Environment Act sets out the provisions in relation to applications for enforcement orders.
At interview, he said:

There were obviously a number of complaints about the odour from a considerable distance away. We were concerned on a number of fronts obviously. Number one, the reputation of the development which ultimately, you can see where it has led to now, and also how that would be perceived for getting Stage 10 approved as well, poor management of the tip and whether that would have an influence on a decision for whether we would get our permit, which you would imagine would be taken into consideration so we took enforcement action. I think the management of the tip improved significantly over the next few months and we ended up withdrawing that.

960. The City of Casey’s Team Leader Environment, Mr Jansen, had a different explanation as to the reasons why the enforcement proceedings were abandoned. At interview on 27 November 2008, he said:

I believe that it was used to try to get me to buckle from the refusal of the permit. The main pressure that I was getting prior to it going to VCAT was ‘tell us when the site will close’. Tell us when you will allow the removal of the buffer zone’ and I would not give a date for a couple of reasons, one was that the rate of filling might vary a bit towards the end of the site, it may slow down significantly and to be able to say its going to be closed July 2005, which is what they wanted me to say, I couldn’t do.

961. Peet’s decision to lodge an Application for Enforcement Order is indicative that prior to the VCAT hearing it was aware of some of the amenity issues, primarily relating to odour, that the landfill was causing on the neighbouring estate.

962. Although Peet sought to ensure action was taken to improve the management of the landfill it was also mindful that criticising the management of the landfill before the VCAT hearing would run counter to its case for a planning permit, namely that the operation of the landfill would have no adverse impact upon the amenity of residents in the proposed Stage 10 development of the estate.

963. My investigation revealed that SITA and Peet had come to an arrangement prior to the VCAT hearing, whereby Peet agreed to discontinue legal proceedings against SITA concerning the Application for Enforcement Order, in return for SITA giving evidence at the VCAT hearing regarding the satisfactory operation of the landfill.

964. In legal advice prepared for Grosvenor Lodge by Mr Graeme Peake, Barrister, dated 28 January 2004, Mr Peake stated:

The matter came to a Directions hearing on Friday, 23 January 2004. The Tribunal was constituted by Mr R Horsfall, Deputy President. Ms T Heber, of Maddocks, appeared on behalf of the Council. Mr Chris Wren of Counsel appeared on behalf of Sita. Mr Colin Taylor, of Russell Kennedy, appeared on behalf of Peet.

At the commencement of the hearing, Mr Wren announced that Sita had ‘done a deal’ with Peet, whereby Peet discontinued its proceedings against Sita, with Sita undertaking to give evidence about the satisfactory operation of the tip, if required to do so by Peet, in the context of their merits appeal regarding the subdivision of the land near the landfill.
Conflict of interest

965. In March 2008, I tabled two reports in Parliament on conflict of interest in local government and the public sector. Both reports highlighted the need for local government and the public sector to develop a better understanding about conflicts of interest and how to deal with situations that arise.

966. In the public sector context, a ‘conflict of interest’ is a situation where a conflict arises between public duty and private interest. The term refers to circumstances where a public official could be influenced, or could be reasonably perceived to be influenced, by a private interest when performing an official function. A range of private interests are relevant to the term conflict of interest.

967. Conflicts can also arise when a responsible authority has interests in a revenue generating business. I consider that the City of Casey had a conflict of interest in respect of its dual responsibilities as the owner of the landfill and the authority responsible for making planning decisions affecting residential developments in close proximity to the landfill. My investigation revealed that these competing interests were not adequately managed by the City of Casey and had a significant bearing on the outcome of the VCAT hearing.

968. More precisely, on one hand it was in the City of Casey’s best interests to present evidence to VCAT that the landfill was being properly managed in accordance with the EPA licence conditions and that its systems, including gas extraction and leachate control were working effectively so as not to adversely impact upon the amenity of neighbouring properties. On the other hand, the City of Casey was seeking to ensure that the 200 metre buffer was maintained, which required evidence of actual and potential ongoing problems with those very same systems.

969. I identified that in the lead-up to the VCAT hearing, Maddocks sought legal advice from Harwood Andrews Lawyers as to whether the City of Casey’s planning department and environmental services department, should engage separate legal representation at VCAT in light of the conflicting interests.

970. Legal advice received from Harwood Andrews dated 4 December 2003 stated:

As we discussed in our recent telephone discussion the Tribunal is not likely to grant separate representation to two arms of the City of Casey, one being its responsible authority arm for whom you would act and appear and the other its landfill management arm sought to be separately represented.

971. The advice also stated:

Having regard to the City of Casey’s interest in the landfill site as both owner, joint user and party to the management agreement, in conjunction with the reasons for Council as a responsible authority refusing the permit particularly reasons two and three, I take the view that you would not be constrained in your submissions to the Tribunal as a responsible authority from putting to the Tribunal the concerns that the city has as landfill manager and user.

972. In light of this advice, Maddocks chose to legally represent the City of Casey in its dual roles as the owner of the landfill and the responsible authority making planning decisions affecting residential developments in close proximity to the landfill.

22 Conflict of interest in the public sector, Ombudsman Victoria, March 2008; Conflict of interest in local government, Ombudsman Victoria, March 2008.
At the VCAT hearing, Mr Jansen was called to give evidence for the City of Casey in relation to the management of the landfill. Mr Jansen stated that while there had been significant improvements in the management of the landfill, a 200 metre buffer from the landfill should be maintained owing to the gas extraction system not functioning at its optimum capacity and some ongoing amenity issues.

Ms Heber, formerly of Maddocks, was interviewed on 15 December 2008 regarding the conflict of interest situation involving the City of Casey. She said:

... I guess the problem was that the council – and again my memory might be shaky on the arrangement – but I think they were in some sort of joint arrangement, joint venture, whatever, with Frankston council. And there was a wider group called the South Eastern Waste Management Group. So they were responsible for operating the EPA licence and doing things under their permit and obviously the council itself is a responsible authority for making decisions in relation to planning matters and enforcement matters in relation to that permit. It could be seen that they would have an interest in making favourable decisions to themselves.

The EPA’s involvement in the VCAT hearing

On 27 June 2003, Mr Stuart McConnell, EPA Manager South Metropolitan Region wrote to the City of Casey confirming that the EPA would not be a party to the Application for Review at VCAT. However, the EPA offered to make available one of its officers to provide assistance to the City of Casey in any mediation or hearing that resulted. The EPA provided no explanation to the City of Casey as to the reasons why it would not seek to be joined as a party to the proceedings.

Despite this advice, in the lead-up to the VCAT hearing Ms Heber endeavoured to ensure that the EPA was a party to the VCAT proceedings. Ms Heber’s file notes dated 6 October 2003 and 16 December 2003 reveal that she recognised the value of having the EPA as party to the VCAT proceedings and sought to encourage the EPA to join the proceedings. At interview, she said:

So if it comes as an independent submission from the EPA we would probably thought [sic] that the Tribunal would give it more weight.

When questioned about this matter on 19 November 2008, Mr Wajahat Bajwa, formerly of the EPA said:

The EPA’s general philosophy was that the moment we object the relevant planning authority [the council] would handball this to us and they will divorce themselves.

... We always say we are happy to support and we are happy to appear as an expert witness or provide a statement or whatever, but we are not objecting due [sic] these experiences in the past.

... It’s a planning decision. City of Casey as the planning authority needs to take responsibility for their decision. EPA is there to help. That was the thinking at the time.
Mr Mark Payton, Solicitor to the EPA, was asked at interview on 30 December 2008 about the EPA’s approach to becoming a party to VCAT proceedings. He said:

We are generally there to provide assistance to the councils, as we did in this case. Because we are not a statutory referral authority but somebody who [sic] simply sought advice from, we don’t have any greater standing than any other residents really. But we are there to provide assistance to the council and if the matter goes to a hearing we will be there on behalf of the council to support how the council came to its view.

I can’t recall the Authority ever becoming party to a planning matter. There may have been situations where it might have been done by mistake by officers in the field not understanding the difference between making a submission on behalf of the council or somehow we have become a part, but not consciously.

Mr Payton has since stated:

My response was in the context of ‘planning matters’ in which the EPA has had no approval or licensing responsibility.

My investigation revealed that City of Casey officers were also concerned about the EPA’s reluctance to become involved in the VCAT proceedings. Mr Zombor was interviewed on 20 November 2008 and asked about the EPA’s involvement in the VCAT proceedings. He said:

... very, very disappointed. You know, they [the EPA] would tell us what they want and I mean, they’re supposed to be out there as the experts in the area of environment protection and pollution control and all that sort of stuff. And you know, when it came to the crunch they just, you know, shrunk away into the background.

Mr Jansen also commented on this issue at interview:

I wanted the EPA to become a party to the VCAT hearing and the refusal of the permit. Unfortunately they declined to do that saying that it’s not the EPA’s buffer zone it’s our buffer zone.

... I was surprised. I thought we’d get more support than that.

My investigation identified that the final decision as to whether the EPA becomes a party to legal proceedings rests with the EPA Regional Manager rather than the EPA Legal Services Unit. No written guidelines or procedures exist to assist EPA officers with these complex decisions and decision-making is not documented.

Mr Payton was asked about the merits of this approach. He said:

Because it’s not a statutory decision of the authority it would not usually go through the legal officers, it’s done through the regional offices as there are lots and lots of referrals which come to the regional offices.
In relation to Mr McConnell’s letter dated 27 June 2003, Mr Payton said:

Stuart was a relatively new manager at the time and I might have had a conversation with him. I think Stuart got it wrong when he said that EPA would not be making a submission at the hearing. What he meant to say was that EPA would not be a party to the hearing.

Mr Payton was asked whether there is a formal process in place within the EPA to identify and bring to the attention of senior management significant legal cases which may have a bearing on EPA legislation or policy. He said:

I’m not aware of a formal process. There is not a process where they are brought before the Authority for a formal decision.

Mr Payton has since stated:

Again my response was in the context of planning matters in which EPA has no approval or licensing responsibility. Legal challenges to EPA decisions are formally reported to the Authority. When the litigation is concluded the result is also formally reported to the Authority and in my experience acted upon. It is incorrect to interpret my response to applying to any significant case which may have a bearing on EPA legislation or policy. My response was limited to matters where EPA has no formal statutory role.

With the exception of Mr Bajwa who attended VCAT on the first day of the hearing to give evidence, no EPA solicitor or legal officer attended the hearing or actively sought information on the outcome of the hearing. It also appears that the outcome of the VCAT hearing was not formally evaluated to determine any policy implications for the EPA.

Mr Bourke, the then EPA Chairman, was asked at interview on 27 February 2009 about the VCAT hearing and senior management’s awareness of the significance of this matter at interview. He said:

I say that perhaps the strategic objectives may not have been considered. It wasn’t clear to me. I wasn’t in knowledge of the fact that what was at risk here was some of those issues under the SEPP [State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste)].

Mr Bourke confirmed that he had not been informed by EPA officers until some years later about the VCAT hearing, its significance on EPA policy or its outcome.

The City of Casey has also since commented on this issue:

The EPA’s participation in the VCAT planning appeal was regarded by Council [the City of Casey] as critical. After all, it [the EPA] had the expert knowledge, experience and resources to analyse the environmental implications of development occurring within the buffer zone while the gas extraction system remained unproven. Hence Council’s repeated attempts to engage it [the EPA] as a participant in the VCAT planning appeal.

Not unreasonably, when the EPA finally agreed to play a role Council relied upon its environmental assessment and deferred to its judgement. Council believed that the EPA would raise before VCAT any important risk factors relevant to the proposed development, in the evidence that it was to prepare independent of Council.
Expert evidence – methane gas and risk of explosion

991. VCAT takes into account material presented to it at a hearing including evidence presented by witnesses. While expert evidence is not required to decide most applications for review, it is used to assist VCAT. For example, where environmental impacts are disputed, expert evidence from an environmental scientist or auditor may assist VCAT in deciding the merits of an application.

992. The EPA made Mr Bajwa available to the City of Casey for the purposes of providing expert evidence at VCAT regarding the operation of the landfill. While Mr Bajwa’s statement made minor reference to the risks associated with the migration of landfill gas, his evidence did not specifically focus on the relevance of the walls of the landfill being unlined or the danger of methane gas migrating into service facility excavations or elsewhere on the estate. Mr Bajwa was asked why his evidence did not include reference to the risks associated with migrating methane gas. At interview, he said:

Look, to be honest that was the key focus at the time, the off-site odour emissions. But in my statement I mentioned about the actual migration.

993. Mr Bajwa has since stated:

... the issue of landfill gas migration was discussed in detailed [sic] including describing the difference that a well designed landfill would make in managing the landfill gas migration. This was discussed by comparing the subject site with the SITA Hallam Road landfill which was a well-designed landfill incorporating base liner, side liner and leachate collection system.

My response to a question asked during the cross-examination also highlighted the explosive nature of the landfill gas.

...

My statement and evidence during the cross examination consistently stated that no development should be allowed within the specified buffer until the landfill had been completed, capped, and rehabilitated and it was demonstrated over a period of time that there would be no impact on the amenity of the proposed residential development. In my view, this period of demonstration would have picked up amongst other issues the issue of landfill gas migration and as a result would not have allowed the subject development to go ahead, without satisfactorily addressing the issue.

994. My investigation identified evidence in the lead-up to the VCAT hearing indicating that officers from the City of Casey and the EPA, as well as Ms Heber, were aware of the potential risk of explosion caused by methane gas leaking from the landfill. Ms Heber made a file note on 7 January 2004 of a meeting she had with City of Casey and EPA officers which provides documentary evidence of this knowledge.

995. The file note states:

Secondary issue is gas explosions because the sides are not lined – a matter for the Council as manager.
At interview on 15 December 2008, Ms Heber was shown her file note dated 7 January 2004 and asked about the risk of an explosion occurring. She said:

I recall that the site is not lined. And that was a particular issue for this landfill site. In terms of discussions about explosions, no, I don’t really recall.

Ms Heber was asked whether at the time of her file note she was aware of the potential risk of methane gas leaking from a landfill and causing an explosion. At interview, she said:

Actually I do – I do recall, and the reason why I recall is because my partner at that time’s son went to Footscray High School, which is built on a landfill site. This has just come back to me. And they were often evacuated from school because methane was detected. They had quite a number of fires as well because methane was popping out everywhere around the school site.

In relation to evidence presented to VCAT regarding the risk of explosion, Ms Heber said:

I can’t remember whether we wanted to – whether we wanted Michael [Jansen] to talk about that [migration of gas] in his evidence or get someone else.

Mr Jansen was called to give evidence by the City of Casey at the hearing. Mr Jansen’s evidence made reference to the risk of landfill gas migrating off-site due to the landfill being unlined and the gas extraction system not operating at optimum capacity. Mr Jansen stated during the hearing:

The landfill is licensed as an unlined site, so it has no body liner at all, it has no side liners and this is one of the reasons that I feel that it is very important that the gas extraction system is working to its optimum capacity to ensure that there is no lateral migration of gas.

When gas is produced in a landfill its tendencies is [sic] for it to what you call dive vertically and if that landfill has been capped with an impermeable barrier such as a clay cap, it will hit the cap and it will look for an alternative way out of the site. So if there is no side barrier the tendency is that the gas can escape from the perimeter of the site.

The gas extraction system is designed to collect that gas and prevent it from travelling sideways. However, I am yet to hear of a gas extraction system that will collect 100% of the gas produced.23

At the VCAT hearing, Mr Daniel Fyfe, General Manager – Southern Region of SITA was called by Peet to give evidence regarding the management of the landfill. Mr Fyfe was questioned by Ms Heber about the lateral migration of gas. At the VCAT hearing he stated:

I’m aware from reading landfill literature that there’s been instances of landfill gas migration laterally into basements and causing potential explosion risks for old style landfills in areas where houses have developed to the edge of the boundary. But I’m not in a position to say that there’s a risk that may exist where the soil structure can permit that.24

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23 Based on a review of the transcript of the VCAT hearing, published by VCAT on its website on 17 September 2008, and the audio recording of the hearing provided by VCAT.
24 Supra.
1001. Despite the City of Casey and the EPA being made aware of the potential risk of explosion caused by methane gas leaking from a landfill, no other evidence was presented to VCAT regarding the potential for this to occur at the Stevensons Road landfill.

1002. There have been many incidents reported overseas that involved methane gas migrating from landfills into nearby dwellings, resulting in explosions causing serious injury and death. Some of these date back to the early 1960s. For example, in 1967 two people were killed and a further two injured when a methane gas explosion demolished a single story home in Atlanta, Georgia in the United States of America. Methane gas from a nearby landfill was found to have seeped into the basement of the building through an open pipe and caused an explosion when someone lit a cigarette.

1003. In another case in Loscoe, United Kingdom in 1986, a gas explosion demolished one home and damaged several others, causing serious injury to three occupants. Investigations revealed that the source of the methane gas was the local landfill. The gas entered the house and exploded when the central heating was turned on.

1004. At interview, Ms Heber was asked whether the presentation of evidence regarding the risk of explosion caused by methane gas leaking from a landfill would have affected the outcome of the VCAT hearing. She said ‘Yes’. At a second interview on 19 February 2009, Ms Heber was asked whether she was satisfied with the response she gave to this question. She said:

I think generally I am. I do recall there was discussion about lateral migration and the fact there had been an audit of the site some time, some time just before the hearing and that the gas system had been perhaps been modified because the problems were noticed. But taking it further and saying is there a risk of explosion. Yeah, that probably wasn’t addressed in full in the same way the discussion about how the engineering of the whole thing works.

Dr Terry Bellair

1005. During the course of my investigation, I became aware of concerns with the evidence presented to VCAT by Dr Terry Bellair, Environmental Science Consultant on behalf of Peet. Dr Bellair’s submission to VCAT provided an assessment of odour emitted from the landfill and the likely impact of odour on the amenity of Stage 10 of the estate.

1006. In the preliminary stage of my investigation, Dr Bellair contacted my office and requested a meeting with my investigators to discuss his involvement with the Brookland Greens case. Dr Bellair said that he felt he had been portrayed unfairly in the media in relation to his involvement with the VCAT hearing. At interview on 30 September 2008, he said:

… it sounds as though I argued that – you know, my argument was based on landfill gas which [sic] in fact it was only odour because that was the issue.

1007. In relation to the risks associated with methane gas and the evidence he provided at the VCAT hearing, Dr Bellair also said:

… no-one raised issues about methane migration although as I’ll get to, EPA did talk about other hazards but it was a very oblique reference.

1008. Dr Bellair provided a copy of a letter dated 25 June 2003 from him to Peet confirming his role in the VCAT proceedings.
It stated:

I confirm that we will be pleased to assist Peet & Co Casey Land Syndicate in defining appropriate buffer distances between the existing landfill and Stage 10 of the Brookland Greens estate.

I understand that the initial objective will be to advise on the scientific validity of the positions adopted by Council and EPA in relation to buffer distances from the landfill site and landfill operations, respectively.

1009. I note that Dr Bellair in his Curriculum Vitae makes reference to having been retained as an expert witness in over 350 appeals, planning hearings, and prosecutions in Victoria, New South Wales, Queensland, South Australia, and Tasmania during his 35-year environmental consulting career.

1010. A VCAT Practice Note dated 1 September 1999 relating to experts providing evidence in a VCAT hearing, states that an expert’s duty to the Tribunal is as follows:

2.1 An expert witness has a paramount duty to the Tribunal and not to the party retaining the expert.

2.2 An expert witness has an overriding duty to assist the Tribunal on matters relevant to the expert’s expertise.

2.3 An expert witness is not an advocate for a party to a proceeding.

1011. In relation to expert witnesses withholding information from VCAT, the Practice Note states:

3.2 The expert must declare at the end of the report, “I have made all the inquiries that I believe are desirable and appropriate and that no matters of significance which I regard as relevant have to my knowledge been withheld from the Tribunal”.

1012. At a second interview on 19 February 2009, Dr Bellair confirmed that he was aware of his obligations as an expert witness in accordance with the VCAT Practice Note. He said:

I have been absolutely religious. I believe in following those principles even before they [VCAT] produced that practice note and I can tell you that not in one of those cases has anyone suggested that I have given incomplete or biased, or have I even given demonstrably wrong evidence. And that’s why I get so much work in these jurisdictions as the barristers all want me on their side.

1013. Dr Bellair’s report to VCAT cited several examples of landfills in close proximity to residences and included discussion about the former Preston municipal landfill in Gremel Road, Reservoir. Dr Bellair’s evidence referred to the Summerhill Village residential development built in 1990 on the former Preston municipal landfill site, comprising a total of around 180 pre-fabricated homes. Dr Bellair cited this as an example of how residential developments can be built either on, or directly adjacent to, former landfill sites.

1014. As VCAT hearings are recorded, my office obtained from VCAT the recording of the hearing and listened to the proceedings. In doing so, it was identified that Dr Bellair did not present VCAT with all relevant facts in relation to the risk of methane gas migration at the Preston landfill site.
An assessment of the audio recording identified that during a lunch adjournment on the first day of the VCAT hearing on 3 May 2004, microphones in the hearing room recorded Dr Bellair’s conversation with Mr Colin Taylor of Russell Kennedy Lawyers, representing Peet, and Mr Brenton Downing, Project Manager for Peet, regarding the risks associated with methane gas migration. For an unknown reason, the recording device was not turned off during the lunch adjournment. Dr Bellair said during the adjournment:

“If the gas goes sideways if it goes into the surrounding areas it’s going to filter up. The only problem’s been where you’ve got basements or cellars and the gas can go into basements and there is an explosion risk. This happened at the Preston landfill at the Target [retail store], it was in a hotel or somewhere. They have a potential explosion risk – I think they even had an explosion.”

My investigators provided Dr Bellair with the opportunity to listen to the relevant section of the VCAT recording. He has since stated:

“I was able to confirm that all but the last ... words (‘I think they even had an explosion’) of the extract presented ... accurately reflect what I said. Despite having the relevant part of the recording replayed at least four times, and listening intently, I am unable to confirm that I (or anyone else) spoke the last ... words attributed to me ...

I consider that the statement attributed to Dr Bellair (‘I think they even had an explosion’) is an accurate record of what he said during the lunch adjournment on the first day of the VCAT hearing on 3 May 2004.

Dr Bellair was questioned at interview about why he failed at the VCAT hearing to mention the explosion and fire linked to the former Preston municipal landfill site, in relation to evidence he gave regarding the Summerhill Village residential development. He said during interview:

“Because number one, I didn’t know whether that was only anecdotal and I didn’t know whether – I sort of vaguely remembered having heard in the course of being involved in this Summerhills estate matter. And it’s outside of my area of expertise. So if I had gone into that [the explosion/fire] I couldn’t have taken it beyond saying that I seemed to recall.

... I wouldn’t consider it [the explosion/fire] relevant to the evidence that I was asked to provide or the areas that I was asked to address.

So if I made a misjudgement that’s what it was. There was never any intent to cover that up. My report was dealing with odour.

Dr Bellair has since described his conversation with Mr Taylor and Mr Downing as simply a ‘story’.”
He has also stated that:

On further consideration, I stand by the bulk of my initial responses, but do not consider that I made a misjudgement in relation to this matter, based on my knowledge at that time.

1020. Mr Taylor was asked about the conversation he had with Dr Bellair and Mr Downing during the lunch adjournment on the first day of the VCAT hearing, regarding the risk of explosion caused by methane gas. He said:

I don’t remember it [the conversation]. But I was aware, as I think everyone was, would be and as the Tribunal surely was, that there is a potential danger of this gas exploding.

1021. Dr Bellair was also asked about the evidence he gave at VCAT regarding the Stevensons Road landfill. He said:

The evidence I was giving related to amenity buffers – odours and dust. I didn’t attempt to address landfill gas migration.

... I’ve got no expertise in landfill gas migration.

1022. In my view, it is clear that Dr Bellair’s conversation with Mr Taylor and Mr Downing during the lunch break on the first day of the VCAT hearing confirms that Dr Bellair was aware of the risks associated with landfill gas migrating off-site and potentially causing an explosion. However, he chose not to inform VCAT about the risks.

1023. Dr Bellair in a memorandum to my office dated 12 February 2009 further stated:

I contend that it would have been inappropriate for me to have made any reference to the (possible) LFG migration issue at Preston in my (Cranbourne) VCAT report, for the following reasons:

- it would have clearly fallen outside the scope of my report;
- I would not have been in a position to advise the Tribunal whether or not such an event actually occurred and if so, whether LFG migration was a causative factor, or provide any technical details; and
- most importantly, I do not have expertise in LFG migration or management (this is a highly specialised area requiring skills in geology, geomechanics, hydrogeology, waste management and chemical engineering to name a few – to my knowledge there are only a few qualified LFG practitioners in Australia).

Therefore, had I made reference to such a (possible) event in my report, I would have clearly been in breach of the provisions of paragraph 3.1(11) of PNVCAT 2.

I also note that the Tribunal was made aware of the potential for LFG [landfill gas] from the Cranbourne landfill by:

- David [sic] Jansen of the Casey Council (based on your advice to me)
Daniel Fyfe (SITA’s General Manager – Southern Region) also made reference to the potential for LFG [landfill gas] migration in cross examination, but observed inter alia that; “in instances where [LFG migration] has occurred to the best of my recollection in the literature read there wasn’t gas extraction either passive [??] on those landfills” [sic] (i.e. he suggested that this was unlikely to be an issue at the Cranbourne landfill).”

Therefore, I cannot see how the fact that I did not (quite properly in my view) make any reference to the possible LFG migration issue at Preston in my evidence, could have had any bearing on the Tribunal’s deliberations or its Determination.

1024. Although Dr Bellair maintains that he is not an expert in the field of landfill gas, he gave evidence at the VCAT hearing about works he had recommended at the Summerhill Village in dealing with landfill gas emissions. At VCAT he stated:

And the development commenced in 1990, and there were also issues about methane and so I was involved in recommending that the buildings have to be above the ground, and had to be prepared around the site to provide ventilation, and all the penetrations with the floor were sealed, and minimum penetrations – so there’d be no risk of a build up and fire explosion.

1025. In response to my concerns that Dr Bellair did not inform VCAT about the incident linked to the former Preston municipal landfill site, or the risks associated with landfill gas migrating off-site and potentially causing an explosion, he has since stated:

The reality is that I have never been aware of any facts in relation to this (possible) “event”.

... I have a vague recollection of being informed, 25 years ago, by someone (I cannot recall their identity, qualifications [if any] or whether they had any direct knowledge of the circumstances) during my involvement in the Summerhill VCAT matter in 1984, to the effect that there had been a fire or explosion in a basement of a hotel or retail premises adjacent to the landfill ...

... I do not recall that this “story” even crossed my mind while I was preparing my VCAT submission (20 years later), as it was not relevant to my assessment of an appropriate odour buffer at Cranbourne.

1026. In relation to Dr Bellair’s expertise in landfill gas migration, he has since stated:

I do not have, nor have I ever purported to have qualifications and/or expertise in LFG [landfill gas] migration or management ...

... I reiterate that there is no basis for your suggestion that I have qualifications and/or expertise in LFG/methane migration.
1027. He also stated:

... I consider that the failure by the Council (and/or its agents) to control leachate levels within the landfill, and EPA’s apparent reluctance to use its powers to ensure it was properly managed, are the fundamental reasons why LFG [landfill gas] migration became an issue at the Cranbourne landfill – particularly as EPA’s subsequent investigations have found no such problems at any other former or existing landfill in Victoria ...

1028. With regard to his obligations to VCAT as an expert witness, Dr Bellair has since stated:

... I always adopt a conservative approach when reporting (and appropriately qualifying) findings and conclusions based on the available information – in other words, I must be confident that I have sound scientific data and explanations to back up my findings and conclusions, particularly as any expert evidence is normally tested in cross examination ...

...

I totally reject your suggestion that I failed to comply with Section 2.2 of VCAT Practice Note 2.

...

I totally reject your suggestion that I failed to comply with Section 3.2 of VCAT Practice Note 2.

1029. My investigation also revealed that Ms Heber had opportunities during the VCAT hearing to question the accuracy of Dr Bellair’s evidence, as Mr Jansen and Mr Bajwa had raised concerns about his evidence. In relation to this matter, Mr Jansen said:

... they had Dr Terry Bellair give evidence and Wajahat [Bajwa] and I were sitting in the back stalls at this stage and Wajahat [Bajwa] whispered to me that the evidence was flawed in terms of some of those sites that were given as examples in terms of close proximity of houses to the sites and there being no problem was incorrect.

...

The message that was given to me was that the evidence was incorrect in that there were actual problems; there were complaints, a register of complaints against those sites. Wajahat [Bajwa] then left the hearing and said ‘I’ve got to go to another meeting’. And so I mentioned that to our solicitors at the time but because I didn’t know anything about it we were unable to run that argument.

1030. In response, Mr Heber stated:

My understanding is that the register of complaints about the sites mentioned by Dr Bellair related to odour, not methane gas explosions.
In relation to concerns raised by Mr Jansen and Mr Bajwa regarding the evidence presented by Dr Bellair at the VCAT hearing, Dr Bellair has since stated:

I totally reject your suggestion that the material presented ... reflects adversely on the veracity of my evidence.

**Interpretation of the buffer**

Ms Heber’s submission to VCAT on behalf of the City of Casey sought to maintain a 200 metre buffer as outlined in the Development Plan. The submission also made reference to a 500 metre buffer recommended by the EPA in its published *Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills 2001*. The document recommends a 500 metre buffer distance between a residential dwelling and activities capable of causing a nuisance to the nearest sensitive land use. It states that the buffer distances are based on the buffer distances contained in the *State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Wastes)* 1991.

Ms Heber’s submission also specified that the ‘activities’ that require the application of the buffer included the ‘operations at any active tipping face on the landfill site and the operation of the gas collection system’. It appears that the submission focused the attention of VCAT Members on the ‘active’ tipping face of the landfill rather than the real, important and long-term issues of methane gas migration and leachate control in the context of rehabilitation of the site.

The State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) defines ‘tipping area’ as ‘a place within a landfill site in which municipal wastes are, have been or will be deposited’. However, the term ‘active tipping face’ is not a phrase used or relevant in the definition of ‘tipping area’ in the policy, which is the instrument for determining how the 200 metre buffer was intended to be measured.

In my view, the activity requiring the buffer should have been more broadly and accurately stated to be along the lines of ‘the operation, use and rehabilitation of the landfill site’. Mr Taylor of Russell Kennedy Lawyers, on behalf of Peet, submitted that in accordance with the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste), a 200 metre buffer applied, measured from the active tipping face of the landfill.

**Status of the Section 173 Agreement at VCAT**

As discussed earlier in my report, the City of Casey and Peet entered into a Section 173 Agreement on 16 August 2000 which restricted the development of dwellings within buffer areas from surrounding industries, including the landfill.

The Application for Review before VCAT did not seek to change or vary the Section 173 Agreement. Rather it was an application under section 77 of the Planning and Environment Act against the City of Casey’s refusal of a planning permit application for Stage 10 of the estate.25

The City of Casey did not refer to the Section 173 Agreement as a separate ground for refusal of the planning permit. Although the Notice of Refusal for the planning permit does not specifically refer to it, the application of the buffer area as it applied to the proposed Stage 10 development was the principal issue of dispute at the VCAT hearing.

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25 Section 77 of the Planning and Environment Act relates to appeals against refusal. An applicant for a permit may apply to VCAT for review of a decision by a responsible authority to refuse to grant the permit.
I have been advised by legal counsel assisting me that VCAT had jurisdiction under section 149 of the Planning and Environment Act to review any decision of the City of Casey and the EPA under Clause 2.1.2 of the Agreement in relation to whether the buffer continued to be required to the satisfaction of the City of Casey and the EPA; and under section 184 of the Planning and Environment Act as to whether the activity creating the need for the buffer had ceased as set out in Clause 2.1.1 of the Agreement.

In relation to the Section 173 Agreement, Ms Heber’s submission to VCAT stated:

53. It is submitted that the Section 173 Agreement is not a relevant consideration in relation to the exercise of discretion whether or not to grant a permit.

54. In any event, the provisions of the Section 173 Agreement place the same obligations on the Owner of the subject land as are provided for in the Cranbourne Development Plan.

It appears that Ms Heber considered the Section 173 Agreement to be irrelevant. When initially questioned about the reasons why the Section 173 Agreement had not been relied on at VCAT, Ms Heber said:

I’m baffled. I am. I don’t know why I would make a submission that the Section 173 Agreement isn’t a consideration. The only thing I can guess at is that the law was different at that time in relation to the consideration of agreements, but I don’t know.

I have since been advised by legal counsel assisting me that there has been no change to the law in respect of Section 173 Agreements which could explain Ms Heber’s submission to VCAT.

Ms Heber subsequently approached my office and requested an opportunity to clarify the answers she gave at interview in relation to the Section 173 Agreement. At a second interview on 19 February 2009, she said:

So I think in oral submission [to VCAT] I qualified the statement that the Section 173 Agreement isn’t relevant by saying the Development Plan would be of greater consideration than the 173.

Despite Ms Heber’s explanation, it is difficult to understand why she did not seek to rely on the Section 173 Agreement at VCAT and effectively considered it irrelevant. In my view, the rezoning of a parcel of land in favour of Peet on the basis of the buffer as set out in the Section 173 Agreement should have been raised as a key point at VCAT. This would have focused attention on Peet’s complaint that it was being prejudiced by having to provide a buffer on its own land as a result of the landfill operating nearby.

Ms Heber has since stated:

In response to these comments, I again point out that my oral submissions to VCAT qualified the written submission that the Section 173 agreement was irrelevant by explaining that when the land was rezoned for Peet’s residential development a development plan overlay was introduced into the planning scheme affecting the land. A development plan was subsequently approved under the planning scheme affecting the land.

...
The development plan made the buffer zone a statutory requirement, whereas the section 173 agreement is a voluntary agreement which has a different status to a statutory instrument, namely the planning scheme.

VCAT decision

1046. While VCAT sometimes make its decision at the end of a hearing and orally provides reasons, the decision is usually reserved. In all cases a written decision is issued to all parties sometime after the hearing. If oral reasons have already been given the decision must include written reasons. VCAT’s decision is final and binding on all parties. However, an appeal may be made to the Supreme Court on a question of law.

1047. After returning from a lunch adjournment on the third and final day of the VCAT hearing on 5 May 2004, the Senior Member announced that VCAT was in a position to make an interim decision without hearing further submissions from Ms Heber in reply to submissions made by Mr Taylor on behalf of Peet.

1048. While VCAT Members are able to conduct site visits to assist them with their decision-making, I understand that on this occasion the VCAT Members did not visit the landfill to see first-hand the proximity of the landfill to the proposed Stage 10 development.

1049. At the conclusion of the hearing on 5 May 2004, VCAT made an interim decision accepting the submission of Mr Taylor on behalf of Peet. VCAT determined that the required buffer distance from the landfill was 200 metres, as outlined in the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste). VCAT concluded that the 200 metre buffer distance was measured from the ‘active tipping area’, being the open batters and the tip face within the working area of the tip. VCAT considered the 500 metre buffer as outlined in the EPA’s Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills publication, unsupported.

1050. VCAT did not explain how it arrived at such a position in light of the definition of ‘tipping area’ in the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste), nor how it had the power and jurisdiction to decree that the buffer should be measured from the ‘active tipping face’, rather than as outlined in the policy.

1051. As discussed earlier in my report, the definition of ‘tipping area’ refers to ‘a place within a landfill site in which municipal wastes are, have been or will be deposited’. As waste had already been deposited in Cells 1 and 2 of the landfill up to its boundary and in close proximity to the proposed Stage 10 development, it seems clear that Cells 1 and 2 formed part of the ‘tipping area’.

1052. In the VCAT’s oral reasons given on 15 September 2008, the Senior Member stated:

In general terms, we consider the 500 metres buffer distance is unsupported by policy. We find the EPA Best Practice Environment Management Guidelines are not policy at this time. The State Environmental Protection Policy (Site and Management of Landfills Receiving Municipal Wastes) s 40 1991 (“SEPP Landfills”) is the policy the planning scheme requires us to consider, and the Development Plan is the primary planning instrument the Tribunal must apply in this case.
The Development Plan sets a buffer distance of 200 metres. The relevant passages in the Development Plan are unclear, but having regard to the evidence of the major sources of odours, the interpretation of the SEPP Landfills ands [sic] its objectives and policies, we find the point from which the buffer distance should be measured is from the open batters and the tip face within the working areas of the tip.

1053. As the tipping face had progressively moved northwards, VCAT considered that based on the survey results undertaken by Bosco Jonson, the tipping face had moved beyond 200 metres from the edge of the Stage 10 development.

1054. The interim decision made by VCAT, dated 6 May 2004, in favour of Peet applied to the measurement of the 200 metre buffer. The decision also asked the parties to advise VCAT if the matter was resolved or was proceeding to a further hearing. VCAT also provided the City of Casey and Peet with the opportunity to resolve outstanding issues relating to the removal of native vegetation on the land, prior to a final hearing.

1055. An agreement in relation to the vegetation issue was subsequently entered into between the City of Casey and Peet and formed the basis of consent orders made by VCAT on 23 September 2004. These orders stated:

The decision of the Responsible Authority is set aside. A permit is granted and directed to be issued to the Responsible Authority for the a 47 lot FFPS50400J 3S Whitecombe Views Cranbourne stage 10 of Brooklyn [sic] Greens development residential subdivision and the removal of native vegetation.

1056. VCAT directed that the planning permit contain a number of specific conditions, for example: vegetation, construction of roads, installation of services relating to the development of the subdivision.

1057. In summary, VCAT’s decision allowed the Stage 10 development to proceed, with some houses being built along the boundary of the landfill within two to three metres of where putrescible waste had been deposited, as shown in the photograph below.

Illustration 6. Brookland Greens development
While VCAT accepted Dr Bellair’s submission in relation to how the buffer ought to be measured, it did not agree with his evidence regarding the timeframe for commencing the Stage 10 development.

Dr Bellair maintained that following capping of the landfill and the installation of a gas extraction system, the site should be monitored for a full year before proceeding with the Stage 10 development. This was also in accordance with the evidence presented at VCAT by Mr Bajwa and Mr Jansen.

The VCAT Senior Member in the summary of VCAT’s oral reasons dated 15 September 2008 stated:

We do not agree that, after the tip is capped and filled, that it is necessary that there be ongoing monitoring of the capping and its repair or maintenance before a certificate of compliance issues. We do not consider it necessary to wait for the full year cycle of seasons contemplated by Dr Bellair.

The VCAT decision came as a significant disappointment to the City of Casey and its officers. Mr Zombor was asked about his reaction to the outcome of the hearing. At interview, Mr Zombor said:

In this case we had three days of highly technical, detailed submissions and some quite difficult issues to be resolved. I was flabbergasted that a verbal decision was made at the end of the third day. So before the parties had even left the room it was announced that the Tribunal had accepted Mr Bellair’s evidence.

The written decision was handed down the next day. To the best of my knowledge there was no site visit by the Tribunal. They wouldn’t have had time to review any of the submissions to check other cases. It was very disappointing and baffling. Normally you get reasons given but here we had a number of comments made and in the comments there was a comment that the reasons were being prepared but they didn’t come [sic] out. Then in September when the final decision was made there were still no reasons.

Appealing VCAT’s decision

Section 148 of the Victorian Civil and Administrative Tribunal Act 1998 provides that a party to a VCAT proceeding may appeal an order of VCAT on a question of law to the Supreme Court within 28 days of the order. City of Casey officers were questioned about whether consideration was given to appealing the VCAT decision to the Supreme Court. At interview, Mr Zombor said about this matter:

Well, yeah, at the end of – like when the decision was handed down, I was so disappointed that I, you know, go back to our legal advisors, Maddocks, and asked – I don’t think it was in writing, but I just asked the question, you know, ‘Is there anything we can do about it?’ And in these sort of cases it’s only – appeal is only available on a point of law, so you can’t actually argue the rights and wrongs of whether the Tribunal made a mistake on the planning grounds.

If they – you know, if they made an error of law, and we noticed that there was an error of law made, well then there’s an avenue of appeal, but no other. So the comment back to me was, ‘No, no,’ that we can’t – there’s nothing we could do about it.
1063. Despite both Mr Zombor and Mr Jansen saying that they raised with Ms Heber the prospects of an appeal, I have been unable to locate any written legal advice, file notes or documents evidencing any such considerations or discussions. To the contrary, the material demonstrates that following the interim finding by the VCAT regarding the buffer zone, VCAT’s finding was simply accepted and consent orders agreed. This purportedly gave effect to the finding and permitted construction of houses as part of Stage 10 of the development.

1064. Furthermore, the City of Casey progressively approved further planning applications by Peet within the buffer zone as the active tipping face moved north, resulting in the buffer zone being completely built out.

1065. Each of the further planning applications provided opportunities for the City of Casey which it did not avail itself of, to refuse the application and present further evidence and argument to VCAT, and appeal or review such decisions if necessary.

1066. Ms Heber was questioned about the evidence of Mr Zombor and Mr Jansen regarding an appeal. At interview, she said:

The thing I find unusual is that I didn’t make a file note of any request for advice.

... 

In the case of an appeal from VCAT they are very rare. Even if it is possible – most councils because of the cost, time and whatever else involved don’t go ahead with it. So it’s always discussed with always more than one partner – there would be an informal meeting to discuss the way forward. And there is a time limit as well, so it’s usually done in a fairly timely manner. But the other thing is if there was a concern about an appeal at the council’s end, invariably it would be one of the Directors or even the CEO who would approach one of the partners of the firm to discuss it.

1067. The City of Casey in a media release dated 9 October 2008 commented on VCAT’s decision and whether the ruling could be appealed. It stated:

It is important to note that the City of Casey was unable to challenge the VCAT ruling at a higher court as these matters can only be challenged on a point of law, which, in this particular case, did not exist because VCAT’s decision was determined on the basis of its interpretation of the evidence put before it and not on matters of law.

... 

The VCAT decision in respect to Stage 10 set a precedent for the consideration to subsequent stages of the subdivision.

1068. Mr Tyler, CEO of the City of Casey confirmed at interview that he had no knowledge as to whether legal advice was sought concerning an appeal against the VCAT decision. He also advised that he was not involved in the issuing of the press release on 9 October 2008 as he was on leave at the time.
1069. I am advised by legal counsel assisting me that the City of Casey is incorrect in its assertion that the VCAT decision regarding the buffer could not be appealed. On legal advice, I identified that it is an error of law for VCAT to fail to apply the correct legal test to the facts as found by it. In this case at least one possible error of law that could have been subject to appeal was that VCAT failed to apply the correct test under the Section 173 agreement, the Development Plan and the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste), by holding that the 200 metre buffer zone should be measured from the ‘active tipping face’ rather than in accordance with the definition of ‘tipping area’, namely ‘where municipal wastes are, have been or will be deposited’.

1070. An appeal based upon VCAT misinterpreting the criteria to be applied in determining the appropriate buffer zone would have involved a question of law and not a challenge to any factual findings of VCAT. The advice I have received is clear that whatever the reason for the City of Casey not appealing VCAT’s decision, it ought not have been because VCAT’s decision did not involve a question of law.

1071. Ms Heber was questioned about whether an appeal against the VCAT decision could have been sought on a question of law. She said:

I agree that it sounds like you could have considered an appeal.

1072. The City of Casey has since responded to this issue by providing me with independent legal advice it obtained which concludes ‘that there is no appealable error arising from VCAT’s orders or reasons’. The City of Casey also stated:

The City of Casey absolutely rejects the suggestion that VCAT’s decision could have been the subject of successful appeal to the Victorian Supreme Court. No vitiating error of law is disclosed in VCAT’s decision. Not only is the speculation about the possibility of an appeal misguided it diverts attention away from the central issue – the lack of wisdom on VCAT’s part in allowing development within the buffer zone when a gas extraction system remained unproven.

1073. I have been advised by legal counsel assisting me that the legal advice obtained by the City of Casey fails to recognise that the operative VCAT decision was the interpretation of the meaning of ‘tipping area’ in relation to the Section 173 Agreement, the Development Plan and the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste). In my view, there is no doubt that this critical issue – the interpretation of the defined term – ‘tipping area’ was a question of law and therefore could have been appealed.

**VCAT administrative procedures**

1074. The decision made by VCAT dated 6 May 2004 stated that:

A written interim decision setting our findings and reasons is being prepared, but a final decision and order on the application for approval of Stage 10 of the subdivision cannot be made until the issue of removal of vegetation under the Vegetation Protection Overlay is addressed.

1075. However, I identified that written reasons setting out the findings of VCAT in relation to its interim decision dated 6 May 2004 regarding the buffer, were not made with its final order dated 23 September 2004. Mr Zombor was asked at interview about VCAT not providing written reasons following the hearing in May 2004.
He said:

... normally you get reasons given. Here we had a number of comments made, and
in the comments there was a comment that the reasons were being prepared, but they
didn’t come out. And then in September [2004], when the final decision was made,
there were still no reasons.

1076. I understand that in response to the methane gas risk to residents in the estate, VCAT
arranged on 15 September 2008 for the Senior Member to prepare oral reasons based on the
transcript of the final day of the hearing on 5 May 2004. The oral reasons were prepared by
VCAT following the implementation of emergency management arrangements at the estate
on 9 September 2008. They were made available to the public on VCAT’s website on 16
September 2008.

1077. On 17 September 2008, Justice Kevin Bell, President of VCAT, published the transcript of the
VCAT hearing on the VCAT website with the following notice:

In view of the public interest in the issues concerning Brookland Greens and the
exceptional circumstances of the case, I have decided the transcript of the hearings of
the tribunal on 3, 4 and 5 May 2004 should be published on our VCAT website in full.

The reader should be aware the transcript has been produced from a VCAT sound
recording. It is sometimes difficult to prepare a transcript from such a recording. This
transcript contains many references to words and phrases which the transcribers have
been unable to hear clearly enough to transcribe. This is not unusual for transcripts of
VCAT hearings produced in this way.

The transcript is published in unrevised form. That is, it is published in the same
form in which it was provided to VCAT. It may contain some inaccuracies. It is not
practicable to correct and revise a transcript of this length at this stage. The reader
should be aware of this also. The one exception is that the decision of the tribunal
on the last day of the hearing has been revised by Senior Member Horsfall and has
previously been published on the VCAT website.

1078. During my investigation, several residents of the estate complained to my office about
difficulties in reading and understanding the transcript of the VCAT hearing on 3, 4 and
5 May 2004. They were seeking answers as to how VCAT arrived at its decision to allow
houses to be built along the boundary of the landfill.

1079. I also had difficulties in reading the transcript and found the audio recording of the VCAT
hearing to be poor in quality. As a result, I arranged for a technical enhancement of the audio
recording to assist with my understanding of the proceedings.

1080. On listening to the audio recording and checking VCAT’s transcript, I identified that the
transcript contained a number of errors and inaccuracies, as well as being punctuated with
the word ‘indistinct’ where the transcription service had been unable to understand words
or sentences. For example, the transcript of Mr Jansen’s evidence on gas migration is missing
key words which renders it meaningless. Also key witnesses are incorrectly named, such as
Dr Bellair who is referred to in the transcript as Dr Bulleen.

1081. In line with VCAT’s ‘Guidelines For Obtaining Transcripts of VCAT Proceedings’, available
on its website, transcripts of VCAT proceedings may be obtained by parties to proceedings at
their own cost. VCAT currently uses seven ‘approved suppliers’ of transcription services.
VCAT’s guidelines state that:

The member of VCAT who presided over the hearing will either direct the transcription services to:

(a) provide an unrevised copy of the transcript marked “Unrevised” **direct to you** and a copy to VCAT; or

(b) provide a draft copy of the transcript **to the member** who will check its accuracy and then have the transcription service send the revised transcript to you.

1082. The Principal Registrar of VCAT was asked at interview on 10 March 2009 whether VCAT undertakes any checks to ensure the accuracy of transcripts requested by VCAT Members. He said:

> Not from an administrative point of view. But they do go to the [VCAT] Member, I’m not sure whether you would say ‘check’, but to ascertain their accuracy.

1083. The Principal Registrar was also questioned regarding VCAT’s recording system which has been in place since 2003. He said:

> My understanding is that our system has got the highest level of microphones and mixers to try and capture everything that is said.

1084. As mentioned earlier in my report, the recording of the VCAT hearing also captured private discussions during lunch and other adjournments, as the audio recording had been left running continuously. When asked about this matter, the Principal Registrar said:

> I’m sure there is some signage which says – that indicates that the rooms are continually being recorded.

1085. The witnesses called to give evidence at the VCAT hearing in May 2004 were not required to take an oath or affirmation. I understand that the Victorian Civil and Administrative Tribunal Act makes provision for the taking of an oath or affirmation by witnesses. Sections 102(3) and (4) set out the procedures in relation to persons giving evidence in a proceeding. Section 102 states:

> (3) Evidence in a proceeding—
>   (a) May be given orally or in writing; and
>   (b) If the Tribunal requires, must be given on oath or by affidavit.
> (4) A member of the Tribunal may administer or cause to be administered an oath or take or cause to be taken an affirmation for the purpose of taking and receiving evidence at a hearing.

1086. The Principal Registrar was asked whether VCAT has a consistent approach to taking evidence from witnesses under oath or affirmation. He said:

> It’s up to the individual [VCAT] members. You know under the Act they can set the proceedings as they see fit. So some people do. Some hearings are under oath or affirmation but it is really a [VCAT] member driven process.
1087. Justice Bell, President of VCAT, has since responded in relation to VCAT’s administrative procedures:

… in courts and tribunals generally, transcripts (where taken) are not checked unless there is reason to do so …

…

… it is usually the obligation of the legal representatives for the parties to bring errors in a transcript to the attention of the court or tribunal …

…

… the recording facilities at VCAT are not satisfactory, resulting in poor quality recordings and transcript; the parties and the community deserve better, but we do our best with the equipment that is to hand.

…

… it is usual, not unusual, for a tribunal to receive information without the witness taking oath or affirmation. When it is deemed necessary, the witness can and is required to do so. That the witness is an expert is taken into account, as is the nature of the case. The presiding member has to make a judgment on these and other relevant considerations.

Conclusions

1088. My investigation established that the City of Casey and the EPA failed to combine effectively to present the best possible case before VCAT to oppose the Stage 10 development of the estate.

1089. I identified a series of missed opportunities; poor performance of statutory duty; administrative oversights by various parties including the City of Casey, its legal representative, and the EPA. These factors contributed to residential houses being built within a few metres of where putrescible waste had been deposited in the landfill and the consequential problems which have led to my enquiry.

1090. In my view, VCAT should have been presented with evidence relating to the risk of explosion caused by the migration of methane gas from an unlined landfill; the relevance of the Section 173 Agreement; and all relevant facts regarding the management of the landfill.

Failure to highlight explosive risk

1091. My investigation revealed evidence of several incidents occurring overseas dating back to the 1960s, involving explosions caused by methane gas migrating from landfills into nearby dwellings and resulting in serious injury and/or death. Despite officers from the City of Casey and the EPA and Ms Heber identifying the risk of an explosion occurring, as evidenced by Ms Heber’s file note dated 7 January 2004, VCAT was not adequately informed about the risk.
1092. The City of Casey has since responded:

The file note records that the EPA raised the issue of explosion. The City of Casey had neither the knowledge or technical expertise to assess whether the EPA’s assessment of the risk as ‘secondary’ was correct, and was entitled to assume that – if the issue was one of real significance – the EPA would [sic] addressed it in its evidence. In fairness to the EPA, however, the City of Casey believes that the EPA assessed the risk as so remote that it had no real relevance. Presumably the VCAT member who was an industrial chemist took the same view, given that the risk of explosion was referred to during the VCAT hearing.

1093. There is no doubt that Dr Bellair’s conversation with Mr Taylor and Mr Downing during the lunch adjournment on the first day of the VCAT hearing on 3 May 2004 is evidence that Dr Bellair was aware of the risks associated with landfill gas migrating off-site and potentially causing an explosion, however he chose not to inform VCAT about these risks. Not only did Dr Bellair not inform VCAT about the explosive risks, he cited the former Preston municipal landfill site as an example of how residential developments can be built either on, or directly adjacent to, former landfill sites.

1094. Regrettably, VCAT was not made fully aware of the risks of a gas explosion. I consider that this was key information that should have been presented to VCAT. I also consider that Dr Bellair failed in his duty to VCAT as an expert witness. I do not accept Dr Bellair’s assertion that it was outside of his area of expertise and that he did not have an obligation to make VCAT aware of this matter.

1095. Dr Bellair has since responded by stating that:

I totally reject this adverse finding ...

EPA’s reluctance to join legal proceedings

1096. The EPA’s unwillingness to join the City of Casey as a party in the VCAT hearing had a significant bearing on the outcome of the VCAT hearing. It appears that EPA did not adequately consider the strategic significance of the VCAT appeal on its own legislation and/or policy in relation to how buffer distances between landfills and residential housing developments are measured.

1097. Although the planning decision under review by VCAT was a decision of the City of Casey, the rationale for the decision was based on the EPA’s policy position regarding buffers. As the environmental regulator, the EPA should have ensured that detailed evidence was presented to VCAT on this issue. In my view, the best way to ensure this was by joining the legal proceedings.

1098. The EPA has since responded to these issues:

The 2004 VCAT case was a planning case involving a planning decision by the City of Casey to reject the proposal for the residential development adjacent to the Stevensons Road landfill. The 2004 VCAT case was not about the siting of the Stevensons Road landfill ...
... the primary controlling approval was the planning permit, with the EPA having no approval or licensing responsibility over the Estate land. Its [the EPA’s] licensing functions stopped at the Landfill site boundary.

...

Consistent with the planning framework and VCAT cases in residential planning matters, EPA provided a written statement and oral evidence to VCAT strongly recommending 500m buffers from the boundary of the Stevensons Road landfill to the proposed adjacent residential development.

1099. It is of concern that the EPA chose not to become a party to the VCAT proceedings. It is clear to me that this case had significant implications for the EPA with regard to the interpretation of its State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) relating to buffer distances to landfills for residential housing. However, the EPA did not give adequate consideration to the wider implications of this matter. It is also clear that the EPA’s decision not to join the VCAT proceedings had a detrimental effect on the City of Casey’s ability to defend its position at VCAT.

1100. My investigation identified that the EPA also does not have a formal process in place to identify and bring to the attention of senior management significant cases where the EPA is not a party to legal proceedings or does not have a statutory role, but which may have a bearing on EPA legislation and/or policy.

1101. In light of the EPA’s reluctance to become a party to VCAT proceedings in the vast majority of planning matters, I am concerned that the EPA does not have structured monitoring and reporting processes in place to ensure that key learnings from legal decisions on legislation and/or policy are reported to EPA officers and that appropriate actions are taken by the EPA to amend, revise or implement legislation and/or policy.

1102. I consider the EPA’s lack of formal policies or procedures in relation to becoming a party to legal proceedings is a major shortcoming.

1103. I also identified that the ultimate decision as to whether the EPA becomes a party to legal proceedings rests with the relevant EPA Regional Manager rather than the EPA Legal Services Unit. I consider this approach is unsatisfactory as EPA staff in the regional offices may not necessarily have the requisite skills or experience to identify significant issues impacting on EPA legislation and/or policy. There is also the potential that they may give the wrong advice to VCAT.

1104. Also, no written guidelines or procedures exist to assist EPA officers with these complex decisions and decision-making is not documented. In my view, consideration should also be given to making the EPA a statutory referral authority under the Victorian Planning Schemes in relation to planning permit applications within close proximity to the boundary of a landfill. This would ensure that the EPA has legal standing in VCAT proceedings.
1105. The EPA has since responded:

A decision whether to join as a party to legal proceeding can only be made by the Authority. The role of the [EPA] legal services unit is to provide formal advice on such matters before a decision is made by the Authority.

...

EPA’s restructure has resulted in a more efficient structure for dealing with EPA’s involvement with VCAT matters, including a centralised role for planning referrals.

...

Further to EPA’s restructure, guidelines and systems will be further developed for dealing with EPA’s involvement with VCAT matters.

...

EPA is currently reviewing its role in relation to planning decisions.

...

If one consequence of your [the Ombudsman’s] report is that you believe that EPA should be more proactive by being more involved in planning matters, including perhaps appearing more frequently before VCAT, then that is a decision for State Government.

Section 173 Agreement

1106. With regard to the private developer, Peet, I identified that the Section 173 Agreement, including the schedule/plan, prepared by Peet’s solicitor, Russell Kennedy Lawyers, referred to a ‘sand extraction facility’ rather than a landfill. This is an important issue as the Section 173 Agreement was included with Peet’s contract to prospective purchasers of residential lots in the estate and failed to make any mention of the landfill or the actual use of the land. While I have been unable to establish whether this was done intentionally, I identified that reference to the landfill on the schedule/plan had been removed from an earlier draft. This is concerning as during my investigation several residents complained that they had not been provided with information from Peet about the nearby landfill at Stevensons Road at the time of purchasing their property.

1107. Mr Taylor, formerly of Russell Kennedy Lawyers, has since stated:

Neither I or Russell Kennedy have acted for Peet on or in respect of any sale of any land in the estate.

1108. Also, the Section 173 Agreement and the Development Plan are both unclear about how to measure the buffer; when a reduction in the buffer can be considered; and the manner in which the reduction can take place. I consider that the City of Casey and Peet failed to ensure that these documents were unambiguous.
1109. Peet has since responded to these issues:

... [Peet is] unaware of who would have made an amendment to Schedule 2 of the Section 173 Agreement, omitting a mark-up of the landfill site.

Peet was not an authority in this matter and, though a signatory to the Section 173 Agreement, it is noteworthy that the developer does not usually take the lead role in drafting the Agreement and is not believed to have done so in this instance.

...

We [Peet] submit that purchasers were not misled ... and that Peet could not reasonably have thought that purchasers would be unaware of the landfill site ...

...

... the Planning Permit No 694/99 – which also forms part of the contracts ... relating to later stages – refers specifically to the "landfill buffer" as detailed in the Section 173 Agreement so it would appear there was every intention and understanding that the Agreement would be clear on the matter.

1110. The City of Casey has also since responded:

The Section 173 Agreement was negotiated at a time when the Landfill was used for other purposes. It was critically reviewed by a Ministerial Panel.

1111. I note that while the Ministerial Panel made suggestions regarding the proposed Section 173 Agreement, it was not its role to review or endorse the Agreement entered into between Peet and the City of Casey.

Failure to rely on the Section 173 Agreement

1112. I consider that the City of Casey should have relied on the Section 173 Agreement as distinct grounds for initially refusing Peet’s planning permit application. This would have strengthened the City of Casey’s position and assisted it in defending any possible appeal to VCAT.

1113. Also it appears to me that an important issue was overlooked at the VCAT hearing in relation to the status of the Section 173 Agreement regarding buffer distances. It is unclear why Ms Heber chose not to rely on the Section 173 Agreement at VCAT and effectively considered it irrelevant. I do not consider that the conduct of Ms Heber can be explained because of a concern as to the legality of the Section 173 Agreement. In my view it could and should have been used to advance the City of Casey’s position.

1114. Ms Heber has since stated:

In response, the Tribunal considered the merits of the buffer distance and determined that it was no longer necessary to maintain a buffer between the residential development and the landfill.

...
... it is unlikely that the Tribunal would have made a different decision on the merits based on a technical legal argument related to the status of the section 173 agreement, particularly in circumstances where the operative provisions of the section 173 agreement were also reflected in the provisions of the planning scheme and the approved development plan.

1115. The City of Casey has since responded:

The Section 173 Agreement was not the relevant instrument for determining whether the planning permit application should be granted. The suggestion that reliance upon the Section 173 Agreement would have somehow strengthened the City of Casey’s prospects at VCAT or even was relevant in VCAT misunderstands the planning process, and overlooks the fact that the Section 173 Agreement was the subject of significant commentary during the VCAT hearing.

Failure to resolve conflicts of interest

1116. I consider the City of Casey failed to adequately address its conflict of interest as the owner of the landfill and the responsible authority for making planning decisions about residential developments adjacent to the landfill. I consider that the City of Casey did not present VCAT with all relevant facts regarding the management of the landfill.

1117. I also consider that the City of Casey was conflicted and that Mr Jansen was placed in a difficult position. In order to maintain the 200 metre buffer, it was necessary for Mr Jansen not only to be critical of the City of Casey’s management of the landfill, but also his own involvement with the site. This conflict of interest was not appropriately managed by the City of Casey.

1118. It appears that in part VCAT accepted that, on the evidence put to it, the operation of the landfill had not only significantly improved but was operating satisfactorily in general, with the gas extraction system operating adequately in particular. This was simply not the case. The gas extraction system that had been installed had not been demonstrated to be operating effectively and indeed, never has. Substantial new systems continue to be installed at the landfill site in an attempt to control the level of leachate and the migration of landfill gas.

1119. Mr Jansen responded to this issue by stating:

Council subpoenaed Mr Wajahat Bajwa of the EPA, who was able to present evidence from the point of the regulator. Mr Bajwa was in a position to be both objective and critical, and presented a detailed history of the site. It should be noted that Council attempted to have the EPA take a more prominent role in the VCAT hearing by becoming a party to the appeal. The EPA refused to do so.

... VCAT was made aware of the importance of a fully functioning gas extraction system being proven before development occurred. ... [Mr Jansen] told VCAT: “The landfill was licensed as an unlined site, therefore it is imperative that the gas extraction system is proven to be effective before any amendment to the buffer zone is considered.”
At the time of the VCAT hearing a gas extraction system only existed in the southern Cells (Cells 1&2) of the landfill. A gas extraction system could not be installed in the Northern Cells (Cells 3&4) until active tipping had ceased and capping completed on that half of the site. … it is difficult to comprehend that VCAT reasonably concluded that “the gas extraction system (was) operating adequately in particular”.

1120. Compounding this situation, I was concerned to identify that the manager of the landfill, SITA, had arranged with Peet to provide evidence at VCAT regarding the satisfactory management of the landfill in exchange for Peet agreeing to discontinue VCAT proceedings against SITA.

1121. In light of the complexities associated with landfill operations, I am not convinced that councils have the necessary technical expertise to effectively own, manage and/or run landfills. While local government has traditionally been responsible for the collection and disposal of waste and resource recovery services, there is an increasing sophistication in the technologies needed for waste disposal and recycling. Resourcing this increasing sophistication is an added technical burden on municipal councils.

1122. This raises the broader question as to whether councils should be operating landfills, or leaving this function to private operators. The challenge presented by this is that public and private entities are motivated by different drivers. Generally, private entities are more focused on commercial considerations, while councils have the added responsibility of ensuring the safety and well-being of the community and the environment. Further consideration needs to be given to this issue.

1123. I consider that the cities of Casey and Frankston, as the joint owners of the site, were not equipped to make informed technical decisions about the operation, management and rehabilitation of the site.

VCAT policy interpretation

1124. The State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) defines ‘tipping area’ as ‘a place within a landfill site in which municipal wastes are, have been or will be deposited’. However, the term ‘active tipping face’, as applied by VCAT, is not a phrase used or relevant in the definition of ‘tipping area’ in the policy, which is the instrument for determining how the 200 metre buffer was intended to be measured.

1125. I note that in December 2004, the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) was revoked and the 500 metre buffer as outlined in the EPA’s Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills publication, was included in the EPA’s Waste Management Policy (Siting Design, and Management of Landfills). This policy is subordinate legislation under the Environment Protection Act.

1126. The Waste Management Policy updated the former State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste), while giving legal standing to elements of the EPA’s Best Practice Environmental Management publication, including buffer distances. The Waste Management Policy recognises and makes provision for advances in waste management technology; changing community standards regarding waste management; and an improved understanding of the effects of landfills on the environment.
While the Waste Management Policy does not include any specific references to buffer distances, Clause 13(1) requires that strategic planning and siting of prospective landfills must take into account siting considerations established in the EPA’s Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills publication, including buffer distances. In turn, the EPA’s Best Practice Environmental Management publication relies on buffer distances outlined in the since revoked State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste). The EPA’s Recommended Buffer Distances for Industrial Residual Air Emissions, No. AQ 2/86 also refers to the State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Waste) in determining the buffer distance for any landfill operation. In my view, these documents fail to clearly articulate how the buffer distance from a landfill is measured and should be revised to provide greater clarity and guidance.

During the course of my investigation, I identified that the EPA’s policies and guidelines make reference to buffer distances being required for landfill operating conditions, including odour, noise, litter, and dust, to ensure the amenity of nearby land users. There is also recognition of the necessity for buffers to guard against the contamination of water. However, there is no specific reference to a buffer being required to protect nearby land users against the risk of explosion or health issues arising from exposure to landfill gas containing methane. I consider this a major shortcoming which needs to be addressed.

An aspect of the buffer requirements that also is significant is that buffers affect privately owned land. I understand that in other countries such as the United States of America, it is common for landfill owners and/or operators to provide a buffer on their own land between residential developments. As such, I consider it is unreasonable to burden private landowners and preclude residential development particularly in areas that have been specifically identified for future urban expansion.

With the City of Casey seeking to ensure a 200 metre buffer from the landfill in order to adequately protect nearby residents, I consider it reasonable in the circumstances for it to either have purchased or leased the land in the buffer zone. I found no evidence that the City of Casey ever considered or investigated this option.

Incorrect advice regarding appeal

I am advised that the City of Casey is incorrect in its conclusion that the VCAT decision could not be appealed. My investigation revealed that it was open to the City of Casey to appeal the decision of VCAT to the Supreme Court on the grounds that VCAT had made an error in law, that is it failed to apply the correct legal test to the facts as found by it. The City of Casey also failed to challenge any further planning applications from Peet relating to the development of later stages of the Brookland Greens estate along the boundary of the landfill.

The City of Casey has since responded:

Subsequent planning permit applications did not provide the City of Casey with the opportunity to reagitate the planning and environmental issues before VCAT. The City of Casey would have been criticised for forcing ‘repeat appeals’ to be brought in respect of the same set of facts. Almost certainly costs orders would have been made against the City of Casey, and VCAT would have criticised the City of Casey for wasting its time and ratepayers’ money.
VCAT administrative procedures

1133. In March 2008 the Victorian Government requested that the President of VCAT, Justice Kevin Bell, conduct a review of VCAT to mark its 10 year anniversary. The review will examine how the community accesses VCAT’s services; the diversity of legal problems VCAT adjudicates; and how efficiently VCAT operates in delivering justice to the people of Victoria. In the context of the current VCAT review, which I understand is due to be completed on or before 30 November 2009, my investigation identified some poor administrative procedures at VCAT.

1134. As evidenced by the poor quality of the transcript and audio recording in the VCAT hearing relating to the Brookland Greens estate, my investigation identified shortcomings in VCAT’s current administrative procedures.

1135. While VCAT sought to ensure that information was provided to the public as to how VCAT arrived at its decision regarding the Brookland Greens estate, the transcript of the hearing placed on VCAT’s website contained many errors and was not helpful.

1136. Justice Bell, President of VCAT, has since responded:

... when the controversy over the Brookland Greens decision arose, I called for the recording of the hearing, which I listened to, and had a transcript prepared …

... the transcript was deficient (though no more so than many others), I asked senior member … to check it; he spent many hours on this task, but found it impossible …

... in the public interest, I decided to post the transcript on our [VCAT] website with a strong qualification about its deficiencies; I also made CD recordings of the hearing available free of charge on request; both of these steps were unprecedented in a justice institution in Victoria …

I accept people would have experienced difficulty in reading the transcript; that is regrettable …

1137. The publication of VCAT’s reasons for its decision did not occur until some five years after the hearing and in response to the emergency situation being declared at the estate in September 2008.

1138. Justice Bell has also since responded:

... this is correct [the publication of VCAT’s reasons for its decision did not occur until some five years after the hearing and in response to the emergency situation being declared], a result of an oversight and regretted. It probably occurred because the final orders were made by consent after oral reasons were given and the member has overlooked the need to produce the written reasons confirming the oral orders.

1139. With regard to the process for appealing a VCAT decision, Justice Bell also commented:

... it troubles me that the present avenue to the Supreme Court of Victoria is too costly and burdensome. There should be a mechanism of internal appeal which is cheaper and easier for parties to undertake. Such an alternative avenue of appeal may have been of real use in the circumstances of this case.
Recommendations

I recommend that:

Recommendation 45

The EPA develop and promulgate comprehensive policies and procedures to guide its decision-making in relation to becoming a party to legal proceedings. This process should record who is responsible for making the decision and document the reasons for the decision.

The EPA’s response

EPA can fulfil this recommendation.

Recommendation 46

The EPA develop a formal process to identify and bring to the attention of senior management significant cases where the EPA is not a party to legal proceedings or does not have a statutory role, but which may have a bearing on EPA legislation and/or policy. This should include provision for decision-making to be clearly documented; appropriate action to be taken to amend, revise or implement EPA legislation and/or policy; and a structured reporting process to be established to ensure that the learnings from legal decisions on legislation and/or policy are reported to EPA officers.

The EPA’s response

EPA believes it is likely that the actions proposed in [the preceding] recommendation … will address this issue.

Recommendation 47

The EPA take steps to become a statutory referral authority listed under Clause 66 of the Victorian Planning Schemes in relation to planning permit applications relating to land within 500 metres of the boundary of a landfill.

The EPA’s response

EPA believes that this recommendation is outside the current scope of EPA to take action on, as it relates to a matter for whole-of-government consideration.

Recommendation 48

The EPA revise its existing policies to provide greater clarity and guidance in relation to how the buffer distance from a landfill is measured. This should include that landfill gas and its associated risks are key factors in any assessment of the amenity of nearby land users.

The EPA’s response

EPA can fulfil this recommendation.

Recommendation 49

The EPA amend its Waste Management Policy (Siting Design, and Management of Landfills) to make it a mandatory requirement of the EPA’s works approval process for all new landfills, that the owner of the property on which the landfill is to be situated provides a 500 metre buffer (measured from the boundary of the landfill) on land which they either currently own, or have an agreement to purchase or lease.
The EPA’s response

EPA believes that this recommendation is outside the current scope of EPA to take action on, and is a matter for whole-of-government consideration.

Recommendation 50

The EPA undertake a review of all landfills owned, operated or managed by municipal councils in Victoria to determine whether councils should continue to be involved in landfills.

The EPA’s response

EPA … believes [this recommendation] … is a matter for whole-of-government consideration.

Recommendation 51

The City of Casey revise the Cranbourne Development Plan to ensure that it accurately reflects how to measure buffers; when a reduction in the buffer can be considered; and the manner in which the reduction can take place.

The City of Casey’s response

The Cranbourne Development Plan already provides for when a reduction in the buffer can be consider [sic] and the manner in which the reduction can take place.

Recommendation 52

Peet as a signatory to the Section 173 Agreement take action to inform all prospective purchasers of properties in the Brookland Greens estate that all references to ‘sand extraction facility’ in the Section 173 Agreement are in fact references to the Stevensons Road landfill.

Peet’s response

We appreciate and commend your Recommendation …

Peet has already enacted the spirit of this recommendation ensuring all prospective purchasers can be in no doubt about the location and status of the disused landfill site.

Recommendation 53

VCAT be adequately resourced to review its procedures relating to the use of ‘approved suppliers’ of transcription services to ensure that adequate checks are in place to ensure the accuracy of transcripts.

VCAT’s response

VCAT has agreed with the need to enhance its recording facilities.

Recommendation 54

VCAT be adequately resourced to review and upgrade its audio recording procedures to ensure that all hearings are clearly audible and that the recording process is suspended during any adjournments.

VCAT’s response

VCAT has agreed with the need to enhance its recording facilities.
5. THE SAFETY OF RESIDENTS IN THE ESTATE

Background

I considered the administrative actions of the various agencies responsible for ensuring the safety of residents in the Brookland Greens estate (the estate). This included examination of the key events and actions taken in the lead-up to the implementation of emergency management arrangements on 9 September 2008, through to the de-escalation of the emergency on 31 October 2008.

I also reviewed the role of the lead agencies in the implementation of the emergency management arrangements and their response to the emergency.

The lead-up to the emergency

Bubbling puddles of gas

Methane gas was first detected in the estate as early as March 2006. EPA records reveal that on 2 March 2006 a worker involved in the Stage 20 subdivision in Cherryhills Drive contacted the EPA to report the discovery of gas. The caller, who wished to remain anonymous, reported that gas had been detected coming through the soil. The caller also advised that when it rained the puddles that formed looked as though they were ‘boiling’ and that this had been evident for approximately four weeks.

The complaint was allocated to the Client Manager for the landfill, EPA Officer A, who immediately contacted Mr Michael Jansen, Team Leader Environment at the City of Casey, and arranged to meet him at the construction site the same day. EPA Officer A spoke with three contract workers from Connell and Sons who had been engaged by StreetWorks Pty Ltd to install the drainage system in the subdivision. She was shown some stormwater puddles that were bubbling constantly in Cherryhills Drive, approximately 150 metres from the north-west corner of the landfill.

Later that day EPA Officer A also spoke with another contractor working for Connell and Sons. EPA Officer A was advised that workers in the estate had often detected gas odours and some workers had been able to light the stormwater puddles with a cigarette lighter. The contractor also stated that following heavy rainfall on 25 February 2006, the water in the puddles looked like a ‘volcano’ due to the gas bubbling up.

At interview on 11 December 2008, EPA Officer A was asked about the bubbling puddles of methane reported to the EPA in March 2006. She said:

They excavated the road, so they removed – they said a clay layer. And then stormwater puddles sort of developed within the road excavation. And that’s where they saw the gas bubbling, or they saw the bubbles coming out through the stormwater puddle.

On 3 March 2006, EPA Officer A reported the incident to Mr David Richardson, Manager Engineering and Environment at the City of Casey. Gas well monitoring conducted by Landfill Management Services Pty Ltd (LMS) in the vicinity of the ‘bubbling puddles’ in Cherryhills Drive on 10 March 2006 confirmed the presence of methane at a concentration of 3.5 percent in one of the observation bores.
With regards to the location of the ‘bubbling puddles’, Mr Jansen has stated:

The bubbling was observed in a pool of stormwater in the excavated roadway. This was located in Stage 20B near the intersection of what would become Broadstone Way and Powerscout Retreat.

During the course of my investigation, I identified that there have been other instances of bubbling puddles detected, either in the estate or within close proximity to the landfill. The property at Stevensons Road, that adjoins the northern boundary of the landfill, has a dam which was reported to have bubbled on several occasions. The caretaker for this property was asked about the bubbling in the dam at interview on 17 November 2008. He said:

I believe it was [methane] and the bubbles were coming up over there [the dam] and I reported it.

Although the caretaker could not remember the exact date of the bubbling in the dam, EPA Officer A recalled that shortly following the initial report of ‘bubbling methane’ in March 2006, she had also investigated bubbling in the dam at Stevensons Road. At interview she said:

... I went and looked at this dam that was bubbling, and there were some puddles down here [near the dam] that were bubbling as well.

I also found evidence that City of Casey officers were made aware of a separate report of bubbling puddles in a drainage trench along the western boundary of the landfill in 2005 or 2006, located in Stage 21 of the estate. Mr Alex Micheli, Manager Roads and Construction at the City of Casey, was questioned about this incident at interview on 12 February 2009. He said:

I know that my team leader of construction at that stage made a comment that the contractor, which was StreetWorks at that stage, while they were constructing the drainage works, some drains which were letting off a gaseous smell, and that some of these – when there was rain they could see a little bit of bubbling, and that was very, very close to the boundary.

That was pretty close to the boundary, it wasn’t like 50 or 60 metres into the estate, it was basically one metre, two metres off where we were putting in drainage lines.

Mr Micheli has since stated:

The minor bubbling in the drainage trench was only noticed when the drainage trench had water from surface runoff. The odour emitted from the trench excavation was slight. I did not witness this issue and was made aware after the fact. The contractor advised that it was not concerned. There was no direct indication that the bubbling noted in the drainage trench was caused by gas from the landfill as the drainage trench was of a shallow nature.
1152. Mr Micheli was asked what action he took in response to the report from his team leader concerning the bubbling gas detected in the drainage system. He replied:

I said ‘How bad is it’ and his [team leader of construction’s] reply was that there were only very, very small bubbles, and that it was going to be picked up by the drainage trench, and it shouldn’t be an issue.

... It was a minor issue.

1153. When asked how he reached the conclusion it was a minor issue and whether the City of Casey had sought to conduct independent testing of the gas bubbling in the drainage trench, Mr Micheli said:

Not at that stage because it was on private land.

... It is not council’s responsibility to highlight those issues, because it’s the responsibility of the property owner through the consultant, through their contractor, to provide a safe workplace. It’s not up to council to provide a safe workplace.

1154. Mr Micheli has since stated:

... it should be made clear that I was referring to works on private land where Council has no control or authority.

1155. Despite Mr Micheli being made aware of the reported bubbling in the drainage trenches along the western boundary of the landfill, he confirmed that he did not notify the EPA or emergency services of this matter or request further testing to verify the report.

1156. Mr Micheli has since stated that he:

... understood the minor bubbling to be a product of the natural environment (a former swamp, with decomposing vegetation) rather than the migration of gas from the former landfill.

... the contractor advised that it was not concerned by what had been encountered, and that, in any event, the EPA was aware of the presence of methane gas and chose to take no action. In these circumstances, [Mr Micheli] is adamant that Council was justified in not taking any further action.

... As the situation did not pose a risk or hazard to the contractor on site, to the point that the contractor (Streetworks) did not think it necessary to notify Worksafe or the emergency services, no emergency or risk was evident.
1157. Following detection of the ‘bubbling puddles’ in March 2006, EPA Officer A sought to ensure that the City of Casey undertook a thorough risk assessment to determine the extent of lateral migration of methane gas from the landfill. As discussed earlier in Chapter 3, the City of Casey was reluctant to monitor the landfill gas, determine the impact of the landfill gas migration and communicate the impact to the community.

1158. However, the City of Casey wrote to affected residents on 7 July 2006 advising of further restoration works being undertaken on the landfill. The letter from the then Mayor of the City of Casey stated:

> With the clay cap now in place, the landfill is now developing greater amounts of gas than expected.

1159. The City of Casey also held an information session on 13 July 2006 and issued a press release regarding the landfill and the works to be conducted.

1160. In response to methane being detected within the estate, the City of Casey engaged HLA-Envirosciences Pty Ltd (HLA) to conduct weekly monitoring of the observation bores. Throughout 2006, HLA’s weekly reports continued to show concentrations of methane in the monitoring bores along the western boundary of the landfill and within the estate. High readings continued to be recorded in bores GB5 and GB6 at the northern end of the landfill, above the lower explosive limit. In a report dated 30 October 2006, HLA advised:

> Methane was detected in bores GB03, GB05 and GB06. The highest methane concentration was observed for GB06 (50.5% by volume). Methane concentrations observed for both these bores (GB05 and GB06) continue to exceed both the adopted guideline (1.2% by volume) and the LEL [the lower explosive limit] of 5% by volume.

**Planning approval for Stage 20 development**

1161. The ‘bubbling puddles’ reported by workers preparing the drainage system in Cherryhills Drive in March 2006 were detected within the Stage 20 development of the estate. During my investigation I identified that drainage works had commenced in the Stage 20 development, despite revised plans for the development not having been endorsed by the City of Casey. This area of the estate was later to become known as the Stage 20B development. EPA Officer A commented on this issue at interview. She said:

> I was told by Michael Jansen that they don’t have a planning permit in place so they shouldn’t be doing it [the drainage works]. So I kind of went, ‘Oh, OK, well if they’re not meant to be excavating, the planning permit hasn’t been issued’.

1162. I identified that Mr Jansen sent a fax dated 10 March 2006 to EPA Officer A confirming that the revised plans for the Stage 20 development had not been approved by the City of Casey. The fax stated:

> I have confirmed with our Senior Statutory Planner, Keri Hoffman that Peet & Co do not have planning approval to work in Stage 20.
I understand that while the City of Casey had granted a planning permit on 25 October 2005 for the Stage 20 development to proceed, in January 2006 Bosco Jonson, surveyors on behalf of Peet, submitted amended plans to the council for a section of the development (Stages 20A and B). These amended plans required endorsement as a condition of the planning permit issued by the City of Casey. However, I established that the amended plans were not endorsed by the City of Casey until 8 May 2006. Construction plans for the Stage 20B development were later approved by the City of Casey on 11 May 2006.

Mr Jansen has since stated:

On becoming aware of construction of Stage 20B, I contacted Council’s Planning Department. It is my understanding that this led to Planning Infringement Notice 05/52 being issued to the developer. It is therefore quite wrong to infer that Council allowed unauthorised works.

However, my investigation established that Planning Infringement Notice 05/52 was issued to Peet in September 2005, some six months prior to the detection of the ‘bubbling puddles’ in March 2006. Mr Micheli has since stated:

The developer [Peet] in breach of the planning permit, commenced stripping and removal of vegetation from the site without Council approval. Once made aware of these works, the City of Casey issued Planning Infringement Notice (PIN) No. 05/052 at 9.30 am on the 22 September 2005 to the developer Peet & Co. The PIN directed Peet & Co to cease all future works until planning approval has been obtained.

It appears that the issuing of a Planning Infringement Notice in September 2005 did not deter Peet from commencing further unauthorised works in Stage 20 of the estate in March 2006. This is despite revised plans not being approved by the City of Casey until May 2006.

In response to my concerns regarding this issue, Peet has since stated:

… [it] takes it [sic] responsibilities as a developer very seriously and seeks to fully comply with all laws and regulations including planning regulations.

…

… there may have been a communication break-down between consultants and contractors, and possibly between the Council and Peet’s consultants.

…

It is not Peet’s practice, nor the practice of our consultants, to undertake unauthorised works. Such errors are in no way authorised or condoned and it is most unfortunate that such an event may have occurred in Stage 20.

In any event, Peet has argued that ‘any breach of the kind referred to … would in relative terms, have been minor and also wholly unrelated to the methane gas problem’.
1169. Despite City of Casey officers being aware that methane gas had been detected in the Stage 20 subdivision in March 2006, the City of Casey proceeded to endorse the revised plans and planning permit for Stage 20 of the development in May 2006 without any further challenge, or it appears, regard for the safety of future residents. It is concerning that a methane reading of 63 percent was recorded in a wall cavity in a home in Powerscout Retreat in August 2008, which is located in the Stage 20 development.

1170. Mr Jansen responded to this issue by stating:

> My understanding is that Council did not have the power to stop works in Stage 20B or refuse to endorse subdivision plans on the basis of the bubbles observed.

> I believe that only the EPA had this power. I advised [EPA Officer A] from the EPA that I believed that Council did not have the power to stop the development, but that the EPA might. The EPA chose not to exercise this power.

> ...  

> While council could not prevent the development going ahead, it did implement a monitoring program for houses in the estate and established an Emergency Response Plan to deal with any methane detection in a home. The monitoring program successfully detected methane in … Powerscout Retreat and a response was initiated in accordance with the Council’s Emergency Response Plan.

1171. The Peet Development Plan dated 10 July 2006, set out on the following page, shows the stage developments of the Brookland Greens estate, including the Stage 20 subdivision shown as Stages 20A and 20B.
EPA Pollution Abatement Notice

1172. As discussed earlier in my report, on 3 January 2007 the EPA issued a post-closure Pollution Abatement Notice to the City of Casey. The notice required the City of Casey to develop a landfill gas management plan and conduct an environmental audit to assess the effect of landfill gas on residents in the estate. In response to the Pollution Abatement Notice, the City of Casey arranged for HLA to undertake a wider program of landfill gas testing throughout the estate. This included testing of stormwater drains adjacent to the western boundary of the landfill and the drilling of additional observation bores.

1173. As a requirement of the Pollution Abatement Notice, the Site Manager of the landfill, Mr Stuart Hercules, on behalf of the City of Casey, developed a report titled ‘Management of Landfill Gas at the Stevensons Road Landfill (Closed)’. This plan dated 15 February 2007 provided a range of proposed works and measures to reduce the risk of landfill gas migrating from the landfill into the estate, including:

- Upgrading the gas processing infrastructure at the landfill to initiate an aggressive gas extraction program.
- Installation of additional gas extraction wells and interception trenching along the boundary of the landfill.
- Increasing the number of gas monitoring bores to evaluate the effectiveness of the gas extraction program.
- Communication of the actions to be taken and the dangers associated with landfill gas migration to all affected parties.

1174. HLA was also commissioned in January 2007 by the City of Casey to develop a leachate and landfill gas management plan at the landfill to help fulfil requirements of the Pollution Abatement Notice. Investigations had identified that leachate levels within isolated areas of the landfill were above surrounding groundwater levels. The City of Casey’s aim was to lower leachate levels within the landfill and to improve the efficiency of the landfill gas extraction system by installing new infrastructure and upgrading existing infrastructure at the landfill.

1175. In March 2007, an environmental auditor appointed under the Environment Protection Act, Mr Brian Eva of Eva and Associates Pty Ltd, was commissioned by the City of Casey to conduct an air audit. In his report, Mr Eva concluded:

... the risks to the beneficial use of air surrounding the site are unacceptable and additional measures are required to control landfill gas, in particular within subsurface structures within the Brookland Greens estate.

1176. In response to Mr Eva’s report, the City of Casey wrote to all affected residents and builders in March 2007 advising of the works to be undertaken at the landfill in response to small pockets of gas being detected off-site. This letter also advised that the gases may present a risk to nearby residents only if they accumulate in an enclosed, poorly ventilated space. Community information sessions were also held by the City of Casey in March 2007 to inform affected residents.

1177. Landfill gas monitoring conducted by HLA throughout February, March, April and May 2007 continued to show methane readings in observation bores at the north and north-west end of the landfill in excess of the lower explosive limit.
On 31 May 2007, the EPA received a complaint from an electrical contractor working in the estate who smelt a strong ammonia smell in an electrical pit in Powerscout Retreat. EPA Officer A and a fellow EPA Officer responded to the complaint the same day and detected landfill gas odours within an electrical pit and meter box in Powerscout Retreat. Testing undertaken by HLA on 1 June 2007 recorded methane concentrations of 10 percent in the electrical pit and 7 percent in the meter box. As a result, mitigation works were carried out by the City of Casey to reduce the risk.

In response to the methane concentrations identified in Powerscout Retreat, the City of Casey arranged for HLA to undertake further testing. The aim was to identify the source of the methane gas and its pathway.

EPA Notice of Contravention

On 8 June 2007, the EPA issued a Notice of Contravention to the City of Casey pursuant to section 31(A)7 of the Environment Protection Act. This notice advised the City of Casey that it had failed to comply with the Pollution Abatement Notice by not ensuring that landfill gas did not migrate laterally underground beyond the boundary of the landfill, and by not ensuring that gas did not accumulate such that it created an environmental hazard.

In response to methane being detected by electrical contractors in June 2007 the City of Casey also issued warnings and safe-site work procedures to all workers working in the estate.

Throughout 2007 the City of Casey in consultation with the EPA undertook a range of measures designed to minimise the migration of landfill gas into the estate. These measures included:

- drilling additional gas and leachate bores
- drilling additional leachate sumps
- installing an additional leachate pond
- pumping leachate to sewer
- sealing electrical conduits in houses within 250 metres of the landfill
- conducting environmental audits and ongoing monitoring of methane within the estate
- advising residents and tradespeople of the risks.

In light of the emergency management arrangements implemented in September 2008, these measures proved largely unsuccessful in preventing the migration of landfill gas into the estate.

Monitoring the risks of landfill gas

In July 2007 environmental auditor, Mr Eva, conducted another environmental audit of the landfill gas risk presented by the landfill. In his report dated 25 July 2007, Mr Eva concluded:

The data provided today, indicates that there is an Imminent Environmental Hazard and an OHS [occupational health and safety] hazard to the adjacent residents of the Brookland Greens Estate from landfill gas. Given the results of monitoring data in the electrical switchbox, immediate action is required to reduce the current risk.
1185. The EPA responded to Mr Eva’s report by requesting that the City of Casey take immediate action to reduce the level of risk. As a result, Mr Eva conducted a further landfill gas risk assessment in August 2007. In his report dated 27 August 2007, Mr Eva stated:

Hazard identification and preliminary risk assessment has been undertaken by the City of Casey and a landfill management plan developed and is currently being implemented. The remedial measures involve greater and more efficient extraction of landfill gas and the installation of a gas interception trench on the north and north west side of the landfill. The available data indicates that these measures are not currently effective at controlling off-site landfill gas migration and the risk profile is more significant than that observed in February – March 2007.

The most significant risk of adverse impacts of landfill gas is from accumulation and possible explosion in underground structures and dwellings within 50 m of the landfill.

1186. Following this report, Mr Eva was asked by the City of Casey to prepare a report quantifying the safety risk of landfill gas migration into individual houses in the estate. Mr Eva monitored four houses in the estate over the period 5 September to 3 October 2007. The roof space of an unoccupied house was also monitored. Mr Eva in his report dated 20 November 2007, stated:

The data obtained from the representative residences within the Brookland Greens Estate over a 17-day period does not indicate that there is an immediate safety risk associated with the presence of methane.

Further monitoring within residences immediately adjacent to the landfill boundary should be considered if landfill gas extraction rates are significantly reduced or as a result of resident concern which is likely to be associated with odour.

1187. However, Mr Eva also conducted an environmental air audit in November 2007. In this report, Mr Eva concluded:

... the risks to the beneficial use of air surrounding the site are unacceptable and additional measures are immediately required to control landfill gas, in particular within sub-surface structures within the Brookland Greens Estate.

1188. Mr Eva also stated:

The most significant risk of adverse impacts of LFG [landfill gases] from accumulation and possible explosion in underground structures and dwellings is within 50m of the landfill.

1189. Mr Eva was asked about his audit reports and his use of the term ‘imminent environmental hazard’ to describe the risk to residents in the estate. At interview on 18 December 2008, he said:

I certainly used the term that ‘there could be a catastrophic impact’. I’m not sure whether I used the word ‘imminent’. I certainly used the word ‘catastrophic’ as an outcome, there is a potential for a catastrophic event, i.e. explosion to occur so the hazard is there. The probability of it occurring based on the controls and mitigation there is keeping that fairly low.
Despite works undertaken at the landfill by the City of Casey to prevent the migration of landfill gas, the EPA remained unconvinced about the success of these measures. In a letter dated 11 December 2007 to the City of Casey, EPA Officer A stated:

EPA is concerned that the risk posed by landfill gas migration has not yet been mitigated.

In late 2007, HLA merged with ENSR Australia Pty Ltd (ENSR) and ENSR was engaged to provide technical advice to the City of Casey regarding the landfill and the ongoing landfill gas monitoring program.

Concentrations of methane gas above the lower explosive limit continued to be identified in bore readings throughout early January 2008. This was highlighted in a report by ENSR dated 15 January 2008, which stated:

Of these 17 bores in which stabilised methane concentrations were observed, 12 of these bores exceeded the adopted guideline of 1.25% v/v [volume for volume of air] and 10 bores exceeded the LEL [lower explosive limit] of 5%.

In response to ongoing concerns by the EPA regarding the landfill and the risk to nearby residents, Mr David Maltby, Environmental Management Consultant, was commissioned by the EPA in early 2008 to conduct a review of the landfill gas extraction system. Mr Maltby in his report dated 22 February 2008 concluded:

Gas migration off site continues to pose an unacceptable risk at this site. The priorities at the site must be to reduce leachate levels and increase the rate of gas extraction.

I identified evidence that ENSR had also become concerned with the levels of methane gas identified within the estate by early 2008. ENSR’s weekly monitoring reports throughout May and June 2008 stated:

Due to elevated methane concentrations observed within the Brookland Greens estate, it is recommended that Council proceed with testing for the presence of methane in houses immediately adjacent to landfill gas bores that were observed to have methane concentrations above 20%.

In April 2008, the City of Casey arranged for environmental auditor, Mr Eva, to conduct further in-house testing for the presence of landfill gas. Mr Eva selected five houses in the estate and tested them for landfill gas over the period 1 to 19 April 2008. The testing identified methane concentrations in three out of the five houses monitored. Methane concentrations between 10 percent and 21.2 percent of the lower explosive limit were recorded in a home in Powerscout Retreat, Cranbourne.

Mr Eva in his report dated 12 June 2008 concluded:

Although the data obtained from within representative residences within the Brookland Greens estate over the period does not indicate that there is an immediate safety risk associated with the presence of methane, it is evident that where elevated methane levels are detected in the gas bores, levels of 3-5 percent of the LEL [lower explosive limit] are likely to be present within adjacent houses.
The data for … Powerscout Retreat does not reveal any trends but may reflect operational activity on the landfill site where extraction efficiency was reduced, or leachate level changed resulting in episodic release of gas from the landfill.

1197. In response to the elevated methane reading detected within a house in Powerscout Retreat, the City of Casey wrote to the owners, Mr and Mrs G, on 16 June 2008 advising of the results and recommending weekly monitoring of their house for landfill gas. The City of Casey advised that:

Levels such as this are not a problem however there really should be no methane recorded at all.

The testing does not tell us how the gas is entering your property and it could have easily entered though the window or any vent in the property and as the measurements were only recorded for short intervals, it would appear that this may be the case.

Disagreement regarding the trigger level for evacuation

1198. In June 2007 the EPA asked the City of Casey to complete a landfill management plan, including an emergency response plan, advising of the action that would be taken if methane gas was identified inside houses at the evacuation trigger level. At this time, the EPA advised the City of Casey to base the trigger level for evacuation of residents on the United Kingdom (UK) guidelines, ‘Guidance on the Management of Landfill Gas’, issued by the UK Environment Agency and the Scottish Environment Protection Agency, September 2004.

1199. According to the Chairman, Mr Mick Bourke, the EPA considered the UK guidelines to be best practice and the most reliable guidance on the trigger level for evacuation in situations involving landfill gas. The UK guidelines recommend a trigger level of 1.25 percent methane gas volume for volume of air for the evacuation of people from properties.

1200. In the City of Casey’s draft emergency response plan, submitted to the EPA on 17 January 2008, 2.5 percent methane gas volume for volume of air was identified as the trigger level for the following actions:

- Asking the residents to evacuate;
- Contacting emergency services; and
- Contacting the EPA’s Pollution Watch Line.

1201. In a letter dated 12 February 2008, EPA Officer A referred Mr Richardson to the UK guidelines for an example of emergency procedures for landfill gas incidents and again advised the City of Casey to adopt the lower evacuation trigger level of 1.25 percent methane gas volume for volume of air. EPA Officer A wrote:

If methane is detected at 2.5% within the living space of the house, the source has a higher probability of having a concentration above the LEL [lower explosive limit] of methane and therefore a greater explosive risk, ie [sic] within the wall cavities where there are ignition sources such as electrical switches.
1202. The City of Casey resubmitted its emergency response plan to the EPA in April 2008. However, EPA Officer A’s advice had not been taken into account and the evacuation trigger level was still stated as double the level advised by the EPA and international best practice. Ms Melinda Barker, former Manager Waste Management at the EPA, was asked about this issue. At interview on 3 December 2008, she stated:

There were some updates made to their landfill management plan which we received an updated version [sic] in April [2008]. And I guess one of the things that was concerning about that updated plan was that the trigger levels had been doubled … one of the documents that we’d provided to the City of Casey was not only our own guidance but some guidance from the UK Environment Agency … they talk about that a twenty percent of the LEL [lower explosive limit], so one percent volume for volume, should be used as a trigger level and in the management plan we received in April that had been, that was stated as being fifty percent with no justification as to why, why it was different. So I guess that was one of the things that sort of working backwards and forwards with, with council was why had that been done as of this time I’m still not clear as to why that level was doubled from their perspective.

1203. The EPA provided the City of Casey with a copy of the UK guidelines in July 2008. At interview on 27 February 2009, the then EPA Chairman, Mr Bourke, said that he discussed this issue with representatives of the City of Casey when they met on 11 July 2008. Mr Bourke also wrote to Mr Tyler, CEO of the City of Casey in relation to this issue on 11 July 2008 to confirm the advice he provided at the meeting. Several letters and emails between Mr Bourke and Mr Tyler followed. Mr Bourke advised Mr Tyler that since June 2007 the EPA had clearly and consistently advised that 1.25 percent methane gas volume for volume of air should be used as the evacuation trigger level in the City of Casey’s emergency response plan.

1204. Mr Tyler disagreed that the EPA had ever recommended this trigger level and alleged the EPA had recently reduced the trigger level from 2.5 percent to 1.25 percent methane gas volume for volume of air. In a letter to Mr Bourke dated 21 July 2008, Mr Tyler referred to the EPA’s ‘surprise tactics’ and ‘sudden changes of direction’.

1205. At interview, Mr Bourke described the City of Casey’s attitude as ‘total resistance to anything’. On 25 July 2008, the City of Casey released a media statement claiming the EPA had changed its advice. The media release stated:

... the level of gas emissions coming from the closed landfill hasn’t suddenly changed. What has changed is the Environment Protection Authority’s (EPA) new position on acceptable methane gas levels in residential areas which was suddenly, and significantly, reduced from 2.5% to 1%, about two weeks ago by the EPA.

1206. Mr Bourke stated that the then Mayor of the City of Casey had also raised this issue with Members of Parliament and the Municipal Association of Victoria.

1207. Although the City of Casey claimed the EPA had suddenly changed its position on the level of methane gas that should trigger evacuation, Ms Hunter, formerly of the EPA, stated that the EPA had advised the City of Casey many times it was using an incorrect trigger level.
1208. The evidence I gathered through my investigation indicates that City of Casey officers were aware of and had acknowledged the 1.25 percent trigger level on previous occasions. For example, in an email to EPA Officer A dated 19 July 2007, Mr Jansen referred to ‘the trigger point of 1.25 percent’. Mr Jansen also referred to 1.25 percent methane gas in an email to EPA Officer A and others dated 27 July 2007. Another City of Casey officer also referred to ‘the adopted guideline for methane gas (1.25% by volume)’ in emails dated 30 January 2008 and 6 February 2008.

Concerns regarding methane found in homes

1209. The receipt of Mr Eva’s report by the EPA in June 2008, identifying methane in three out of five houses tested in the estate, heightened the EPA’s concerns regarding the situation. Mr McIntosh, EPA Manager, Landfill Centre, was asked about the EPA’s response to Mr Eva’s report. At interview he said:

That then raised our concern enormously, and the fact that we were unclear as to whether there was a real threat of gas getting in homes, because we’ve been told, ‘These are all new homes, concrete slabs, impervious type thing’. To actually go and find gas, even though it wasn’t incredibly high levels. But to find the gas in homes meant that this risk could, in all honesty, be realised, of unacceptable levels of landfill gas getting into homes and causing problems. It was at that stage that we, within EPA, that this was brought to the attention of Mick Bourke, that we had some data eventually in June, but when we had it, that there was a real impact there.

1210. However, it appears that the EPA did not have sufficient technical information or knowledge at this time to fully understand the extent of the risk to residents. As a result, the EPA undertook further research focusing on the international experience in relation to dealing with landfills which have leaked methane and resulted in explosions and/or health-related issues.

1211. At interview on 27 February 2009, the then EPA Chairman, Mr Bourke said:

We had got to the point where through May-June [2008] that I was becoming increasingly concerned that this was a very major issue and we didn’t have it under control. And we didn’t seem to be able to get Council to take ownership of it.

... I just felt that I needed a basis of information that was better than what I had to go forward on. So that was about the time that I asked Mel Barker [EPA] to do some particular work to look at the international settings and give me some good case study information and factual information about process that would be used elsewhere in these settings. That’s when we really started to open the UK guidelines and look at those examples of landfills overseas that had failed because of methane.

International experience and advice

1212. The EPA considered that international expertise was required to assist it in dealing with the problem at hand. As a result, in August 2008 the EPA established an international advisory group of landfill experts to provide advice in respect of measures to prevent landfill gas migrating from the landfill and to manage the risk within the estate.
1213. The advisory panel comprised landfill gas experts from the United Kingdom, Italy, Canada and the United States of America and included:

- Mr James Shaughnessy, National Training Advisor at Landfill Gas Environment Agency — United Kingdom
- Professor Mario Manassero, Professor of Geotechnical Engineering at Politecnico di Torino — Italy
- Professor Kerry Rowe, Professor and Vice Principal (Research) Department of Civil Engineering at Queen’s University — Canada
- Professor Debra R Reinhart, Professor and Executive Associate Dean College of Engineering and Computer Science at University of Central Florida — United States of America.

1214. The international advisory panel provided the EPA with advice on a range of proposed mitigation strategies to control and prevent the migration of landfill gas from the site.

**Informing the Minister and emergency service agencies**

1215. In light of the ongoing concerns for the safety of residents in close proximity to the landfill, in July 2008 the EPA briefed the Minister for Environment and Climate Change. The EPA recommended that the Minister consider briefing the Premier, the Minister for Emergency Services, the Minister for Local Government and other colleagues as appropriate. At the same time, the EPA informed the Office of the Emergency Services Commissioner, the Country Fire Authority (CFA) and the State Emergency Services about the situation.

1216. In a letter dated 25 July 2008 to Mr Tyler, CEO of the City of Casey, Mr Bourke also commented on the need for urgent action. Mr Bourke stated:

> As we both agree there is still an urgent need to mitigate the cause of the risk.

> ...

> Our level of concern regarding this issue was raised even higher when we received the recent in-house monitoring data in June [2008] that showed levels of methane within a home which would have triggered an evacuation based on international practice.

1217. From July 2008 onwards the EPA held weekly meetings with the City of Casey to discuss actions the council was taking to mitigate the landfill gas migration. Mr McIntosh said that the EPA encountered constant delays from the City of Casey with regard to implementing the EPA’s suggestions. Ms Hunter also said that the EPA was disappointed with the City of Casey’s failure to acknowledge the environmental and safety risks posed by landfill gas migration.

1218. Ms Hunter stated that in her capacity as Incident Executive Officer at the EPA she attended a meeting on 11 July 2008 with representatives from the City of Casey, the CFA and the Office of the Emergency Services Commissioner. At interview Ms Hunter stated that at the meeting:

> ... a lot of the communication from City of Casey inferred that they really didn’t think it [methane leaking from the landfill] was a problem. They failed to see the urgency imposed by EPA.
1219. Mr Tyler confirmed the City of Casey’s attitude in a letter to Mr Bourke dated 21 July 2008. In regards to the meeting on 11 July 2008 and actions to be taken at the landfill, Mr Tyler wrote:

I fail to understand the urgency imposed by the EPA.

1220. The EPA recommended that the City of Casey conduct permanent in-house monitoring. On 16 and 17 July 2008, the City of Casey and the EPA conducted a joint door-knock of affected residents to provide them with information about the risks of landfill gas within their homes. Community information sessions were held to inform affected residents of the situation.

1221. In August 2008 the EPA arranged for Mr James Shaughnessy, landfill gas expert from the United Kingdom, to visit the landfill and conduct an audit of landfill gas migration. Mr Shaughnessy had over 35 years of experience in dealing with problem landfills and had previously worked for the Environment Protection Authority United Kingdom as a Landfill Gas National Advisor and Expert. He provided specialist training in landfill gas management.

1222. Mr Shaughnessy in his report dated 25 August 2008 concluded that:

There is a current risk to the houses on the Brookland Greens estate due to gas migrating into houses through service ducts. There is a risk to the residents from explosion and asphyxiation. In 35 years of experience with problem sites, this is the worst I have observed.

.... The houses are in jeopardy.

... In England, the houses would be valueless and the council could be potentially charged with manslaughter, if there was a fatality.

1223. Mr Shaughnessy was asked at interview on 2 April 2009 about the findings of his audit report. He said:

When I first arrived at the site I was totally shaken about what was going on.

...

I was really worried about the health and safety of people in the estate. I have never ever seen a site as bad as that in all my experience.

1224. Mr Shaughnessy also said at interview that he was concerned about the risk of asphyxiation and the effects landfill gas could potentially have on residents in the estate. He said:

I keep mentioning about asphyxiation to them and the effect of the levels of gas on them [sic] people. Also landfill gas contains – we have detected over 500 trace gases in landfill gas.

1225. When asked what he thought about the close proximity of houses in the estate to the landfill, Mr Shaughnessy said:

I was completely and utterly disgusted. I feel sorry for the people on that estate. I honestly do.
1226. Mr Shaughnessy also stated that in his view it was ‘sheer good luck’ that there had not been any deaths or injuries caused by a methane-related explosion, or any health issues at the estate.

1227. In August 2008 the EPA engaged Professor Jeremy Joseph and Mr Ken Mival of environmental consultancy URS Australia Pty Ltd (URS), to conduct an independent review of the landfill. Professor Joseph and Mr Mival in their report dated 5 August 2008, concluded that:

The results of our third party environmental review of the Stevensons Road Landfill, Cranbourne and the surrounding residential area including Brookland Greens Estate suggest that LFG [landfill gas] migrating from the landfill poses very real and significant risks to both human health and the environment. As indicated in the opening paragraphs of this letter report we are in no doubt that an imminent environmental hazard exists in the area, and within the meaning of the Act (Environment Protection Act 1970).

1228. Under the Environment Protection Act, ‘environmental hazard’ means:

... a state of danger to human beings or the environment whether imminent or otherwise resulting from the location, storage or handling of any substance having toxic, corrosive, flammable, explosive, infectious or otherwise dangerous characteristics.

1229. During early August 2008 in-house gas monitors at two properties in Powerscout Retreat detected methane readings of 1 percent. In both cases, the affected areas were ventilated and service entry points sealed to prevent further access to the homes by the gas.

1230. Methane readings of up to 7 percent of the lower explosive limit were also recorded in August 2008 in Cherryhills Drive. Monitoring in the estate conducted by ENSR in early September 2008 again showed methane concentrations in excess of the lower explosive limit. This was highlighted in a report written by ENSR dated 4 September 2008, which stated:

Of the 15 bores in which stabilised methane concentrations were observed, the adopted guideline of 1.25% v/v [volume for volume of air] was exceeded in 12 bores and the LEL [lower explosive limit] of 5% v/v [volume for volume of air] exceeded in 10 bores.

High methane reading – Powerscout Retreat, Cranbourne

1231. I considered it important to speak directly with those individuals affected by the methane gas migration in the estate to gain a first-hand appreciation of their situation. Mr and Mrs G, the owners of a property in Powerscout Retreat where the highest methane readings were recorded, agreed to be interviewed.

1232. At interview on 6 February 2009, Mr and Mrs G said that they had previously lived in a different house in the estate and had decided to move to a smaller house requiring less upkeep. They enjoyed living in the estate and were attracted to the land in Powerscout Retreat due to its quiet court location and nice area. In early 2007, Mr and Mrs G purchased the land from Peet and after a 10-week construction period, moved into their home in December 2007.
Mr and Mrs G stated that at the time of purchasing the property in Powerscout Retreat they were aware of the existence of the landfill from having previously lived in the estate. Mr and Mrs G were asked about what information Peet had provided concerning the landfill at the time of their purchase. Mr G said:

We knew that it [the landfill] was there. They told us at the sales office it was going to be a park area and it was going to all be done up and how good it was going to be.

Shortly after moving into their home in December 2007, Mr and Mrs G received a visit from City of Casey officers requesting permission to test for gas. Mr and Mrs G consented to the testing. Mrs G was asked whether the City of Casey officers had explained to them what they were looking for. She said:

No, I didn't have a clue. I used to say why are they coming around testing all the time.

Some months later, City of Casey officers asked Mr and Mrs G to install a methane monitor. Mr and Mrs G allege that it was only then that they were informed by the City of Casey that the regular testing had been for landfill gas and methane concentrations.

On Sunday 31 August 2008, the in-house monitor in place under the kitchen sink at the home of Mr and Mrs G in Powerscout Retreat was activated, registering a reading of 1 percent methane. In response to the alarm, staff from ENSR immediately attended the property and conducted further testing. ENSR staff reported a reading of 63 percent methane in a wall cavity under the kitchen sink.

The CFA were notified, the house ventilated and Mr and Mrs G advised to vacate their home. The CFA later attended the property and conducted further atmospheric testing. However, no methane readings were detected. Later that same evening, the monitor under the kitchen sink was again activated and staff from ENSR again attended the property. All readings were below 1 percent methane.

At interview, Mr and Mrs G were asked whether they were told by the City of Casey about the high methane readings and what they meant. Mr G said:

They [the City of Casey] wouldn’t tell us the readings.

They [City of Casey] said there was no risk. They said don’t go smoking. I said what about [Mrs G] lighting the gas right along side it [the area of the high methane reading]. They said, ‘No it won’t cause you any problems’.

ENSR in its In-home Air Monitoring Weekly Report No.6, dated 5 September 2008, described the incident at Mr and Mrs G’s home in Powerscout Retreat on 31 August 2008 and that a reading of 1,000 percent of the lower explosive limit had been detected. The report stated:

Of the 55 dwellings monitored methane was detected at a maximum of 1% (v/v) [volume for volume of air] or 20% of the LEL [lower explosive limit] within the kitchen sink cabinet of … Powerscout Retreat on 31 August. Subsequent scans conducted for methane, carbon dioxide, and oxygen using ATX 620 hand held multigas detector. Methane was detected at a concentration greater than 50% v/v [volume for volume of air] or 1000% of the LEL [lower explosive limit] from the void space between the power conduit and the kitchen sink cabinet.
1240. My investigation revealed the EPA was not informed by the City of Casey about the high methane reading at Mr and Mrs G’s home in Powerscout Retreat until the following day. EPA Officer A considered that the City of Casey should have reported such significant information immediately to the EPA.

1241. Mr and Mrs G provided the City and Casey and ENSR with access to their home to further investigate the elevated readings and the source of the methane gas, while they went away on a planned break. Following their return on 4 September 2008, the City of Casey arranged for Mr and Mrs G to stay in a hotel for several nights while it conducted further testing of the elevated methane readings. Monitoring and testing of homes in and around Powerscout Retreat was undertaken, including under-home and wall cavity testing.

1242. On 5 September 2008, the City of Casey issued a community update advising residents in the estate of the methane reading at Mr and Mrs G’s home in Powerscout Retreat and the actions taken to address the situation. The City of Casey also personally contacted residents in close proximity to Powerscout Retreat to explain the risks.

1243. On 5 and 6 September 2008, the City of Casey arranged for further testing to be undertaken at three houses in Powerscout Retreat. A series of investigation holes were drilled through the concrete floor slabs in each house in an attempt to identify the gas pathway. Holes drilled into the concrete slab at Mr and Mrs G’s house in Powerscout Retreat recorded readings of 25 and 28 percent methane. As a result, the City of Casey undertook further remediation works including the installation of a roof cowl, vents, additional venting pipes and sealing of holes and service entry points. Additional monitors were also installed, bringing the total to seven monitors in the home of Mr and Mrs G.

1244. Investigations conducted by the City of Casey and ENSR have since revealed that Mr and Mrs G’s house in Powerscout Retreat is built on a former creek bed which had been filled in. At the time of construction, four concrete pillars were drilled into the soil at each corner of the concrete slab to secure the slab into the ground. The pillars appear to have provided a pathway for the gas to seep into the home. Mr Gavin Scherer of ENSR was asked at interview on 22 January 2009 about the construction of Mr and Mrs G’s house and what made it different from other houses. He said:

   It was identified that … Powerscout had been built on piers, which meant that it was built on a layer of fill and so we started looking at different pathways.

**Horizontal pipe – identification of landfill gas under pressure**

1245. In August 2008, ENSR installed a 100 metre long slotted pipe along the northern boundary of the landfill in preparation for a trial of air sparging, which had been proposed as a measure to manage the landfill. Air sparging is a remediation technique involving the injection of air into contaminated groundwater. The main purpose of air sparging is to promote biodegradation of volatile organic compounds in the groundwater passing through the landfill.

1246. ENSR officers reported that the horizontal pipe was installed in the landfill at a depth of 20 metres. The pipe was capped at one end and left open at the other. On 26 August 2008, gas was observed discharging from the open pipe and the pressure of the gas could be felt by hand up to half a metre from the end of the open pipe.

1247. ENSR officers inspected the pipe on 3 and 4 September 2008 and undertook further analysis which indicated the presence of methane concentrations between 58 and 61 percent. As a result, the horizontal line was connected to the landfill’s gas extraction system to prevent any further off-site migration of landfill gas.
1248. At interview on 5 February 2009, Mr Darren Ellis, Senior Principal Hydrogeologist and former director of ENSR, was asked about the discovery of landfill gas flowing from the horizontal pipe at pressure. He said:

We’d heard from the site operators, and this was Stuart Hercules and/or his offsider that that pipe was actually producing a flow of gas and anecdotally the flow could be felt like at arms length or a metre away from the end of the pipe. So there was this flow of gas coming out.

... 

If the gas is flowing at those sorts of rates and we’d seen 50% volume to volume combustible gases I guess a hundred-odd metres away at … Powerscout [Retreat] there’s potential for what we call a vective flow those distances. So if our alarm goes off at 20 per cent of the LEL [lower explosive limit] in our monitors that are – you know our few monitors that have been rotated around so many houses, the question came up is, ‘Will we have enough time to respond – to get people out before we reach LEL [lower explosive limit] if our trigger is 20 per cent of the LEL [lower explosive limit]?’ And I guess the answer that was welling up to me is, ‘I don’t know. I don’t know whether this is going to be quick enough’.

1249. Mr Ellis was also asked whether ENSR had adequate in-house monitors to assess the level of risk to residents caused by landfill gas in close proximity to Powerscout Retreat. He said:

We had some data from the monitoring of houses but … we didn’t have data on other houses.

1250. At this time, it appears that ENSR did not have a sufficient supply of methane monitors to conduct in-house monitoring and were constantly rotating 50 monitors between houses in the estate. Only five homes had permanent monitors. In addition, I understand that ENSR had not conducted in-house monitoring in neighbouring houses in close proximity to Mr and Mrs G’s home in Powerscout Retreat.

Informing the EPA about the risk to residents

1251. The 63 percent methane reading at Mr and Mrs G’s home on 31 August 2008 and the identification of landfill gas under pressure, prompted Mr Ellis of ENSR to raise his concerns regarding the risk to residents in the estate, direct with the EPA. On 3 September 2008, Mr Ellis contacted Mr McIntosh at the EPA and arranged to meet with him to discuss his concerns.

1252. At interview, Mr Ellis was asked about his meeting with Mr McIntosh. He said:

I guess we had some discussion about our level of concern at that stage. That – some of that – that discussion sort of centred around – and I was reporting to Colin [McIntosh] at that meeting with permission from council because I told them I was going to see Colin about the results we are starting to get from that horizontal pipe on the Tuesday to – and talk about that and we talked about the mechanisms for gas relief – release from the site and I guess the level of understanding we had at that point in time and, you know, and Colin I can remember asking me whether he could report that back internally within the EPA and there was no problem with a result from the site and I said he could do that.
1253. Mr Ellis confirmed that prior to this meeting he informed Mr Richardson of the City of Casey of his intention to meet with Mr McIntosh and the topics to be discussed. Mr Ellis also stated that following the meeting he contacted Mr Richardson to inform him of the outcomes of his meeting with Mr McIntosh. At interview, Mr McIntosh was asked about what had been discussed at the meeting with Mr Ellis. He said:

   ... his professional view – and it was very much putting his professionalism on the line here, and it’s a very brave call for any consultant to make – was that the situation was unsafe and residents should be evacuated. An incredibly brave call.

1254. It appears that the City of Casey did not share the view of Mr Ellis regarding the level of risk to residents at this time. Mr Richardson of the City of Casey was questioned at interview on 10 December 2008 about the meeting between Mr Ellis and Mr McIntosh on 3 September 2008. He said:

   ... and then on the Thursday I get a call from Nicole Hunter [EPA] saying, ‘Has your consultant advised you to’ – and this is sort of off the record conversation Darren [Mr Ellis] had with her – ‘Has your consultant advised you to evacuate the estate?’ And there was no – never been any information and that’s when – that’s when everything started rolling and you just couldn’t get them [EPA] to stop and look at what’s happening, you know. They virtually bully the consultants into giving them an answer saying, ‘Evacuate’ but at the same time we were saying, ‘Stop’.

1255. At interview, Mr Ellis was asked whether he was influenced by Mr McIntosh from the EPA in relation to escalating concerns about the level of risks to residents in the estate. He said:

   Not at all, not at all but I’ve got a lot of respect for Colin [McIntosh]. Certainly, you know, I’d been in meetings with Colin and discussed the site situation with Colin and respected his views, right? So – but very much me – I’m my own person and I talk with my own colleagues and come up with my own views. Now, I’m not a five-year consultant; I’m a 23-year consultant with a couple of degrees and I’m a director of the firm [ENSR]. I’m used to dealing with all sorts of situations like that so I’m no sort of – I just refute that.

1256. There is no doubt that the City of Casey was unhappy with Mr Ellis for approaching Mr McIntosh at the EPA. At interview, Mr Ellis was asked about a meeting he attended at the City of Casey on 5 September 2008. He said:

   The CEO [Acting CEO Mr Peter Fitchett] opened up and gave ENSR and particularly me a blast and there was a suggestion there was some sort of collusion with Colin McIntosh.

1257. Mr Ellis commented on the allegations of collusion with the EPA when he said:

   I just strongly rebutted that [allegation of collusion] because it was just a straight out questioning of my integrity.

   ...

   There might have been a sense that I might have broken ranks or whatever but, no, absolutely not and I strongly refuted [the allegation] initially at that meeting.
1258. In response to this matter, Mr Fitchett stated the following:

I was involved in the meeting in my capacity as Acting CEO. I did speak with Mr Ellis in a forceful manner but this was to demonstrate our frustration with him that he had not kept Council adequately informed and had, without any notice, seemingly upgraded the degree of risk posed by the landfill site.

...

... [I] dispute ... that ... [I] gave ENSR a ‘blast’ for ‘breaking ranks’ or suggested collusion between ENSR and the EPA.

...

... [I] expressed real disappointment over Mr Ellis engaging in substantive discussions without Council also being involved, especially since what Mr Ellis had told the EPA involved a radical departure from what had previously been indicated to Council.

1259. As an outcome of the meeting between Mr Ellis and Mr McIntosh on 3 September 2008, the EPA asked ENSR to confirm its views in writing regarding the level of risk to residents in the estate. A letter dated 4 September 2008 jointly signed by Mr Tony Hill, Operations Manager and Mr Ellis on behalf ENSR, and addressed to the City of Casey, was emailed to the EPA on 5 September 2008. The letter discussed the risks related to off-site landfill gas migration from the landfill and included:

- consideration of the methane concentrations at Powerscout Retreat above the lower explosive limit
- the methane concentrations in the gas monitoring bores and service pits monitored above the lower explosive limit
- gas in the subsurface identified at pressure; and the geological conditions that could reasonably allow migration of gas from the landfill.

1260. In the letter, ENSR concluded:

The risk to occupants where the methane levels exceed the LEL [lower explosive limit] are considered to be unacceptable and ENSR recommends that action is taken to reduce the risk to acceptable levels.

Given that major mitigation measures currently being implemented and considered at and surrounding the site by Council will take an uncertain amount of time (months to years) to implement, ENSR recommends that more immediate action should be undertaken to reduce the risk to residents. Under the circumstances, and without implementing any other means of lowering the concentrations of methane, this would necessitate the relocation of residents in areas where the risk of methane above the LEL [lower explosive limit] is considered reasonably likely.

1261. ENSR’s letter dated 4 September 2008 that raised the issue of potential evacuation of residents prompted an immediate response from the EPA. The EPA arranged for ENSR’s conclusions as outlined in this letter to be independently evaluated by Professor Joseph of URS. It also sought advice from the international advisory group and other experts on the level of risk to residents, the need for evacuation and the guidelines for evacuation.
Professor Joseph in a letter to the EPA dated 5 September 2008 concluded that while further information was required from ENSR in order to identify the level of risk associated with migration of landfill gas from the landfill, he remained convinced that an imminent environmental hazard existed in the area.

In early September 2008, the then EPA Chairman, Mr Bourke, also met with representatives from the City of Casey to discuss the EPA’s position in relation to the findings detailed in ENSR’s letter dated 4 September 2008. It appears that the City of Casey did not share the EPA’s concerns. At interview, Mr Bourke said:

They [the City of Casey] were very clear with me at that meeting that ENSR’s letter to us [EPA] meant nothing to them. So they dismissed it.

In response to the review conducted by Professor Joseph of URS, on 5 September 2008 the EPA requested that ENSR provide further information to clarify the level of risk to affected residents. A letter dated 8 September 2008 jointly signed by Mr Hill and Mr Ellis on behalf of ENSR was sent by the City of Casey to the EPA responding to the EPA’s request for further information regarding the level of risk associated with migration of landfill gas from the landfill. On the basis of the additional information provided, ENSR reiterated its previous advice and recommendations as outlined in its letter dated 4 September 2008 relating to the level of risk to residents and the need to consider relocation.

Differing views on the risk to residents

Throughout my investigation, it is clear that the EPA and the City of Casey held vastly differing views about the level of risk posed to residents by the detection of methane in houses in August and September 2008. Ms Nicole Hunter, formerly of the EPA, was asked about the concerns of EPA officers at the time. At interview, she said:

Our team was not sleeping, for fear things would blow up. I’m dead serious. It gets to a point where you know so much, you’re – you’re concerned if there’s a drop in weather pressure – you know, air pressure – that something could happen. It’s all related to temperature, and as soon as you get a drop in air pressure, the gas moves out of the landfill faster.

... It had to be - it had to be clear to them [the City of Casey] how serious we considered the situation. And the community had to have a choice. And we – to be frank, I felt – particularly when I first started working with Casey, that they – because they didn’t believe it was an issue, it came out as mixed messages to the community. We were saying, ‘There’s a problem here’, and they [the City of Casey] were saying, ‘Oh, there’s a problem, but it’s sorted; we’ve got all these bores in and we’re venting’ – and all that sort of stuff. So the community was not – I don’t feel – was not fully informed.

Mr McIntosh of the EPA said about the risks:

I consider this a clear danger. Even I was surprised at the extent of the gas migration and the level of it underneath the homes that had been found.
1267. In contrast, officers of the City of Casey did not appear to share the EPA’s concerns. Mr Richardson of the City of Casey was asked about the EPA’s decision to advise the CFA about a potential emergency situation. At interview, he said:

I think it’s got to a point where they [EPA] we’re trying to protect the position and justify why it was an emergency when you know – I mean a classic example was the – when people started sitting around and looking at it, you know, no houses have blown up, you know, there’s no huge readings of methane gas within the houses.

1268. Mr Micheli of the City of Casey minimised the risks of explosion in light of the methane readings detected at Mr and Mrs G’s home in Powerscout Retreat by saying at interview:

From what I’ve been told, what I’ve been told is that if there was an ignition source, and if you had the lower explosive limit, or the high explosive limit within that cabinet, and if that was ignited, all that would happen is it would kick the doors open, and that’s it. Now, potential risk, if there’s a child sitting there with their face right on the kitchen cabinet, and the cabinet moved, it would smack them in the face. It wouldn’t be that the house would explode.

1269. At interview, Mr Micheli was asked whether landfill gas and its potential for explosion was an area of his expertise. He said:

No, it’s not, but I have asked a lot of questions from the CFA.

1270. Mr Micheli has since stated:

... the actual risk to the resident was assessed by the CFA as being low and then confirmed through a formal Risk Assessment Process also attended by the CFA.

... Extensive advice was sought and considered in the assessment of risk to the community and potential explosions.

1271. Mr Trevor Owen, CFA Operations Manager at Westernport Area, was actively involved in the emergency response for the CFA as the incident controller. He was asked whether the CFA had an understanding of the likely effect on life and property that a methane explosion above the lower explosive limit would cause within a house. At interview on 20 March 2009, he said:

Not really, in the sense that the level of expertise in Australia was heavily reliant on overseas examples.

... There could be an explosion. What the consequences of that would be is largely unknown because of the construction of our houses. We don’t have cellars and the amount of concrete construction that exists within other buildings in Europe and elsewhere. So there was a lot of assumptions made on potentially what could happen. Everything from a house being demolished, which were the photos we were presented with, to potentially a room or window blowing out and a wall blowing out. Again, it was very anecdotal without any direct evidence in Australia.
Informing the CFA

1272. Under the Environment Protection Act, Mr Bourke as the then EPA Chairman was responsible for exercising the powers of the EPA. In early September 2008, Mr Bourke was responsible for deciding whether to inform the CFA of an imminent environmental hazard and the need to offer relocation to affected residents.

1273. Mr Bourke was asked about this decision. At interview, he said:

I would talk to my people all the time about the difficulty of making these advices to government, as what you almost do is you’re almost irreparably affecting people’s lives. They work locally, they’ve got kids and they go to school locally and what you are saying is that can’t happen today, or if you going to take that risk you are going to live with it.

... anyway the Act requires me to do certain things, to take certain positions, and that’s what I did.

1274. During my investigation, I identified evidence which indicates that the EPA’s decision to call the emergency was also influenced by the City of Casey’s failure to implement required actions in a timely manner in relation to the landfill and ensuring the safety of residents. There is no doubt that EPA officers were frustrated by the City of Casey’s lack of commitment to addressing the issues.

1275. At interview, Mr McIntosh of the EPA said about this issue:

So there was ample opportunity beforehand for proactive response to try and reduce the hazard, the gas migration and the risk. They were not being done. So I think calling the emergency at least triggered, ‘Yes, we better at least manage the risk’.

...

Declaring it an emergency dramatically escalated the speed at which all that work was being done.

1276. Mr Owen from the CFA was also asked his views. He said:

You had a council that were doing works on the site and saying that they have got it in hand, and you had other political factors and drivers with EPA, who weren’t happy with the speed they [the City of Casey] were doing those works or whatever it was, that were in my opinion using this [the emergency] as a lever to get those works done.

1277. At interview, Mr Bourke said that the City of Casey’s slow response to dealing with issues at the landfill did not influence his decision to recommend the implementation of emergency management arrangements. He said that his decision was based on the evidence and expert advice which showed an unacceptable level of risk to residents living in the estate. However, Mr Bourke acknowledged that the emergency provided the impetus for the City of Casey to undertake actions at the landfill which the EPA had been recommending for many months.
The emergency response

1278. On 9 September 2008, Mr Bourke determined that landfill gas migrating from the landfill represented an imminent danger and recommended that urgent action take place, including recommending relocation to affected residents. Mr Bourke’s letter dated 9 September 2008 to Mr Neil Bibby, CEO of the CFA, stated:

EPA has accessed the best expertise available locally and overseas. There is a strong consensus that conditions in the residential estate represent an imminent danger to people and property and that urgent action is required.

EPA believes that the most reliable guidance on the extent of any offer of relocation comes from the UK “Guidelines” which states that relocation should occur in a 250 metre radius of the homes where in excess of 1% methane has been detected. Currently available information suggests this 250 metre radius would be from … Powerscout Retreat.

1279. Mr Bourke included with his letter a summary of the expert advice which the EPA had relied on in arriving at the conclusion that relocation needed to be offered to affected residents. This included advice from the following experts:

- Mr James Shaughnessy, United Kingdom expert on landfill gas
- ENSR, technical advisor to the City of Casey
- Professor Jeremy Joseph and Mr Ken Mival of URS
- Mr Brian Eva, environmental auditor.

1280. Mr Bourke’s letter also refers to the UK guidelines, ‘Guidance on the Management of Landfill Gas’, which it considered is the most reliable guidance in relation to evacuation of residents due to the detection of methane gas within homes. The UK guidelines recommend relocation of residents within a 250 metre radius of houses where methane is detected at greater than 20 percent of the lower explosive limit, that is, 1 percent volume for volume of air in buildings and services.

The emergency framework

1281. In accordance with the Emergency Management Act 1986, the Emergency Management Manual (the Manual) provides the framework for emergency management in Victoria. This includes information on the roles different organisations perform in dealing with the many and varied emergencies which may arise. The Manual states:

Emergency management involves the plans, structures and arrangements which are established to bring together the normal endeavours of government, voluntary and private agencies in a comprehensive and coordinated way to deal with the whole spectrum of emergency needs, including prevention, response and recovery.

1282. The objectives of the emergency management arrangements are to:

- deal with all hazards
- be integrated, (involve all people and relevant agencies)
- be comprehensive, (cover prevention, response and recovery).

1283. The Manual identifies the key roles performed by ‘control agencies’ and ‘support agencies’ in responding to various types of emergencies. A ‘control agency’ has responsibility for controlling the response activities to a specific type of emergency. A ‘support agency’ is defined as an agency providing essential services, personnel or material to support or assist a control agency. Key support agencies are agencies which have specific skills and resources to support a response for a particular type of emergency.

1284. Under the emergency management arrangements in Victoria, the EPA is a key support agency for providing advice on environmental issues. Its responsibilities include:

- assessing the environmental impacts of emergencies
- determining practical measures to protect the environment
- advising the emergency services on the properties and environmental impacts of hazardous materials
- advising affected persons on the properties and environmental impacts of hazardous materials.27

1285. The CFA is the control agency responsible for responding to an emergency involving a risk of fire and/or explosion. The City of Casey also has a role under the emergency management arrangements. All municipal councils are required to prepare a municipal emergency management plan. This plan requires municipal councils to consider the various types of emergency situations that may arise and to develop generic principles and arrangements that can be activated in the event of an emergency. Councils are responsible for ensuring the following:

- local implementation of State wide preventive strategies – planning and building codes, flood planning (in conjunction with Catchment Management Authorities); health planning; and fire prevention planning in conjunction with the Country Fire Authority, the Metropolitan Fire Brigade and the Department of Sustainability and Environment
- local risk management and emergency planning
- management of community participation in planning and service delivery before and after emergencies
- provision of community education and awareness programs
- incorporation into local safety programs of risk reduction strategies
- service delivery to support persons in particular need
- equipment support to emergency agencies
- management/support of community recovery programs, policies and strategies.28

Implementation of emergency management arrangements

1286. In response to Mr Bourke’s letter to the CFA dated 9 September 2008 that recommended that affected residents in the estate consider relocation, a meeting of the Victoria Emergency Management Council Coordination Group was urgently convened on 9 September 2008.

The Victoria Emergency Management Council Coordination Group is responsible for advising the Minister for Police and Emergency Services, the Hon Bob Cameron MP, as the Co-ordinator in Chief of Emergency Management, on matters including co-ordination of agencies (government and non-government) responsible for emergency prevention, response and recovery. The Victoria Emergency Management Council Coordination Group is also responsible for ensuring that adequate emergency management measures are undertaken.

The Victoria Emergency Management Council Coordination Group was chaired by the Minister for Police and Emergency Services and included representatives from various emergency service agencies and government departments including the EPA, the Office of the Emergency Services Commissioner, the Victoria Police, the CFA, and the Department of Human Services (DHS). Briefings on the situation were provided by key agencies.

Based on the advice from the EPA, the decision was made by the CFA to implement emergency management arrangements under the Emergency Management Act, the Emergency Management Manual and the *Country Fire Authority Act 1958*. As a result, the situation at the estate moved from a land management issue to an emergency response, with the CFA taking the lead in managing the situation.

Mr Craig Lapsley, DHS Director of Emergency Management, attended the Victoria Emergency Management Council Coordination Group meeting. At interview on 27 February 2009 he was asked about the implementation of the emergency management arrangements. He said:

I have no doubt in my mind, very clear, the meeting of VEMCCG [the Victoria Emergency Management Council Coordination Group] on the Monday there was enough evidence to say that we had a risk that needed to be called an emergency.

Mr Russell Rees, CFA Chief Officer, was also asked about the implementation of emergency management arrangements. At interview on 7 April 2009 he said:

The level of risk was quite substantially above where we had thought it had been, or our judgement or advice had been.

On 10 September 2008, the CFA in conjunction with the City of Casey, and the EPA issued a Community Update advising that:

... the CFA wants residents situated within 250 metres of the residence on Powerscout Retreat consider [sic] relocation.

The decision to stay or relocate is one that needs to be made by each household.

A series of community information sessions and public meetings were immediately arranged to inform residents in the estate of the situation; the options available to them; and the assistance being offered. These meetings were held on 10, 11, 12 and 13 September 2008. A door-knock of residents was also undertaken and information distributed.

Under the Emergency Management Act and the Country Fire Authority Act, the CFA does not have the power to require a person to relocate from their home. As a result, the approach the CFA took was to provide residents in the estate with as much information as possible to assist them in making an informed decision whether to remain in or relocate from their homes.
This notwithstanding, residents were placed in the difficult position of having to make a ‘snap decision’ with the potential for life-changing consequences. This involved residents having to absorb highly technical information in relation to methane gas and the likelihood of it causing an explosion or health-related issues. This was unlike other types of emergencies such as bushfires where the threat can often be seen and understood, and where information such as warnings and weather reports are made available to assist people in making an informed decision whether to remain in or leave their homes. In this case, the threat was methane gas which is odourless and colourless, and its pathway was largely unknown.

Government assistance

In response to the implementation of emergency arrangements, the Victorian Government on 11 September 2008 provided $3 million to the EPA for it to assist the City of Casey in reducing the level of risk associated with the gas leaking from the landfill. This funding enabled the purchase and installation of additional in-house monitors throughout the estate to measure gas levels. Until this time, there were only approximately 50 in-house monitors being rotated throughout homes in the estate. This later increased to over 300 in-house monitors.

This funding was also used for immediate remediation works on houses in the estate, such as underground and roof venting, to prevent the build up of gas levels.

The Victorian Government through the DHS implemented a grants program available to affected residents, which included an immediate emergency grant of $1,067 and a temporary accommodation hardship grant for affected families. The hardship grant was designed to assist with the cost of temporary accommodation and living expenses. It included:

- up to $200 per week (or part thereof) per adult and up to $100 per week (or part thereof) per child within the household
- up to a maximum grant payment per household of $8,650 for a six-month duration.

The grants were only available for a period of relocation authorised by the CFA due to an assessed unacceptable risk and while safety mitigation measures were implemented.

During and after the emergency, the DHS and the City of Casey worked jointly to support residents in the estate through a range of community support initiatives, including:

- establishing a Community Information Centre located in Cranbourne (Balla Balla Community Centre)
- introducing a Community Information Line established as the one stop information line
- implementing Community and Street meetings on a regular basis represented by multiple agencies
- establishing a Brookland Greens Community Reference Group and a Children’s Advocacy and Support Group
- providing counselling support and case management services to affected residents
- implementing a Brookland Greens Master Plan, which will involve expenditure in excess of $245,000 in the 2009-10 financial year, to assist in restoring community confidence through a range of projects and initiatives within the estate.

In my view, the assistance provided by the Victorian Government to affected residents in the form of the emergency grants and the $3 million funding for in-house monitoring and remediation works, was both timely and reasonable in the circumstances.
Emergency co-ordination

1302. In response to the implementation of the emergency management arrangements on 9 September 2008, the Victoria Emergency Management Council Coordination Group recognised the need to establish a multi-agency integrated approach to the situation. On 9 September 2008, the Victoria Emergency Management Council Coordination Group endorsed four strategic priorities for the emergency response, which formed an integral part of the State Emergency Management Strategic Planning Brief prepared to deal with the emergency. The priorities were:

- People safety, health and wellbeing (led by the CFA)
- Increasing communications to all stakeholders (led by the Emergency Management Joint Public Information Committee)
- Increased knowledge of the problem (led by the EPA)
- Minimise/stop the landfill gas from migrating from the site (led by the City of Casey).

1303. The emergency management structure for the methane gas incident in the estate is set out below.29

Figure 4. Emergency management structure

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29 Victorian Strategic Operational Plan, (Methane Gas Incident), September 2008.
The State Emergency Strategy Team was formed to provide strategic leadership for the emergency response. It comprised representatives of multiple agencies, including the CFA, the DHS, the EPA, the Office of the Emergency Services Commissioner, the State Emergency Services, the Victoria Police, the Department of Sustainability and Environment, the Department of Transport and the Metropolitan Fire Brigade.

The State Emergency Strategy Team was responsible for overseeing the overall planning for the deployment of monitoring and mitigation works, including works supported by the government assistance.

The State Emergency Strategy Team established two advisory groups to provide it with assistance:

1. Data and Information Management Group — responsible for the provision of timely and integrated information services to assist with the assessment of the risk to residents and knowledge about the situation
2. Built Environment Advisory Group — responsible for developing strategies and implementing measures at houses (built and unbuilt) in areas affected by the migration of landfill gas, including mitigation works.

At an operational level, it was the role of the Emergency Management Team based at the Municipal Emergency Coordination Centre in Narre Warren, to lead the emergency response.

In many ways, this emergency was a unique and challenging situation for emergency service agencies, particularly for the CFA as the control agency. Not only did the CFA have limited experience in dealing with this type of situation, the precise extent of the problem, its pathways, and its consequences, were largely unknown. This made containment, response and control extremely difficult for the CFA. Mr Owen of the CFA said about this issue:

... most of the emergency responses we respond to we have a level of experience and training to be able to deal with that particular event that will see us through. With this event it was quite unusual because of the nature of the event. It's not something we come across every day.

At interview on 27 February 2009, the then EPA Chairman, Mr Bourke also commented on this issue:

As an observation, I think the emergency services group as a whole found it a real challenge as to what they were actually dealing with because it wasn’t on fire, it wasn’t a flood, and you weren’t able to see it, touch it, feel it in the same way.

Knowledge and data management

From the outset, the need for data and information on the extent of the migration of landfill gas throughout the estate was seen as a critical element to guiding the emergency response.

To this end, the Data and Information Management Work Group was established to assist the State Emergency Strategy Team with understanding the data being collected on the migration of landfill gas throughout the estate. There was also recognition of the critical need for data collected from the various agencies to be integrated. This group included representatives from the EPA, the City of Casey and ENSR.
1312. A comprehensive data collection program was established which included:

- in-house monitoring
- monitoring of electrical and stormwater pits
- gas bore monitoring.

1313. The State Emergency Strategy Team was heavily reliant on ENSR for a significant amount of the data collection being co-ordinated by the Data and Information Management Work Group. This arrangement, however, caused some problems for the State Emergency Strategy Team and the Emergency Management Team. Mr John Haynes, CFA Deputy Chief Officer, commented on this issue at interview on 1 April 2009. He said:

... the way the system was set up relying on data from ENSR. And we were relying on it in an emergency management sense [sic] some technical expertise from EPA under the emergency management arrangements. So there was [sic] a lot of steps in that to say ENSR to Casey, Casey to EPA, EPA to us [CFA], and the timeliness in hindsight would be one of the challenges. The raw data was probably not the issue. It was what does that data mean to us as emergency responders and to the community.

1314. Understanding the technical nature of the data collected, being able to interpret what it meant, and explain that to the community, also presented some challenges for the emergency service agencies. At interview, Mr Haynes said about this matter:

... the other challenges were just simple language and communication. About bringing that to understanding in simple terms so they all knew what 20% of LEL [lower explosive limit] was.

1315. As a result, it took some time for emergency service agencies to fully comprehend the technical nature of the data and to be able to explain it to the community clearly and concisely.

1316. My investigation revealed that during the emergency, tensions arose between the EPA and the City of Casey’s technical advisor, ENSR, in relation to data collection regarding gas bore monitoring being conducted throughout the estate. In order to fully understand the extent of landfill gas migration, the State Emergency Strategy Team had approved the expansion of the gas bore network. This involved the drilling of observation bores throughout the estate.

1317. In mid September 2008, EPA Manager, Mr Tony Robinson, directly approached ENSR in relation to obtaining data on gas monitoring for the Data and Information Management Work Group. However, this resulted in some difficulties given that ENSR are employed by the City of Casey. At interview on 4 February 2009, Mr Robinson was asked what happened when he approached ENSR seeking data and information. He said:

We were having trouble getting up-to-date data and knowing exactly what was going on at the time. So I was sent by EPA down to ENSR to find out what was happening. And when I first got there I was told, ‘We can’t speak to you, you’re EPA’.

1318. To deal with this situation, a teleconference was arranged between the City of Casey, the EPA and ENSR, and an agreement was eventually reached that the EPA could speak directly with ENSR in relation to data and information requirements for the State Emergency Strategy Team. However, approximately one week later the City of Casey advised ENSR that it was unable to speak directly with the EPA without a City of Casey officer being present.
1319. Meeting notes of the Data and Information Management Group dated 30 September 2009 indicate that the collection of data and information from various agencies was a concern. The meeting notes state:

There is considerable concern about data and information issues. This includes:

- Lack of confidence in data provision (both monitoring data and information on mitigation measures and other responses).
- Lack of consistent reporting systems and repository for data/reports.
- Lack of shared understanding of the current situation and risk level.

1320. Also, there was a lack of co-ordination in relation to the drilling of observation bores throughout the estate. One of the strategic priorities of the emergency response was to increase the knowledge and understanding of the problem. This priority was being led by the EPA. It included understanding the extent of landfill gas migration throughout the estate by gathering additional data. As a result, the State Emergency Strategy Team approved a drilling program of observation bores. However, it was the responsibility of ENSR on behalf of the City of Casey to engage the drilling contractor and oversee the drilling of the observation bores. At interview, Mr Robinson of the EPA was asked about the drilling program. He said:

They drilled most of those holes in three days and that was when I was at ENSR talking to the guys saying, ‘Get out there, drill holes, how many rigs can you get out there’. They got the holes dug and then at a certain point they stopped doing that and sent the rigs home and hadn’t still measured over there and some of the areas over here [other parts of the estate]. ENSR let the rigs go home, I believe it was at the City of Casey’s instruction.

... 

The other thing that had happened is that the $3 million of government funding had been announced. So insofar as if it was a cost issue about drilling holes, it was now gone.

1321. I understand that it took several days for the drilling rigs to be redeployed throughout the estate and the additional bores to be dug. This was at a time when data collection on the extent of gas migration throughout the estate was critical to informing the State Emergency Strategy Team about the management of the emergency.

1322. In response, ENSR has since stated:

Contrary to the statement made by Mr Robinson, the drill rigs had previous commitments and other projects, and the mobilisation to the site of drill rigs was provided as a favour to ENSR. The reason that the drill rigs had to leave the landfill during the course of drilling activities was due to existing contractual commitments with other consultants which could not be broken.

... 

Redeployment of drilling rigs occurred in the shortest timeframe possible ...
Short term mitigation works

1323. Reporting to the State Emergency Strategy Team, the Built Environment Advisory Group was responsible for developing strategies and implementing measures overseeing mitigation works in areas affected by the migration of landfill gas. The aim was to provide a safe environment for residents in affected areas of the estate.

1324. As a result, a range of short-term mitigation works were implemented to minimise the risk to residents in the estate including:

- installation of roof cowls, wall vents and underground ventilation of houses in affected areas
- sealing of service conduits between electrical supply pits and meter boxes in affected areas
- replacement of solid drainage and service pit lids with grated lids
- passive venting of underground service trenches
- installation of a cut-off trench along the northern and western boundaries of the landfill to intercept gas migration
- installation of horizontal venting lines along the landfill boundary to capture gas migration.

Inter-agency co-operation during the emergency response

1325. In light of the number of agencies with a role in the emergency management arrangements, I looked closely at the communication between agencies and within the emergency management structure. In the main, agencies worked co-operatively together for the benefit of the community.

1326. Unfortunately, the same cannot be said about the level of co-operation between the City of Casey and the EPA. Throughout my report I have commented on the strained relationship between the two agencies. I have no doubt that the implementation of emergency management arrangements on 9 September 2008 placed a further strain on this already difficult relationship.

1327. Both Mr Tyler, CEO of the City of Casey, and Mr Bourke, the then EPA Chairman, were asked about the relationship between the two agencies. At interview, Mr Tyler said:

More recently and through a period last year [2008] when they [EPA] started arbitrarily changing the threshold levels, demanding more information from us – voluminous information with very short response times, we found them [EPA] to be not very helpful at all. There were many occasions where we tried to get information and assistance that wasn’t forthcoming. And I think the council officers’ view of the EPA went from being one where they were the watchdog, which we had to work with, to one where they were perhaps being a little unreasonable in some of their demands placed on the council.

1328. In contrast, Mr Bourke said at interview:

I met with them [the City of Casey] a great many times. I tried to be as useful to them as I could. I tried to give them as a good advice as I could. Asked them to do things, sometimes they did, often enough they didn’t. But generally speaking whatever I talked about or tried to assist them with was used in some other form to attack me.
1329. I established that on 18 September 2008, during the height of the emergency, Mr Bourke wrote to Mr Tyler offering to make available an EPA Officer based at the City of Casey to assist with improving communication and understanding between the two organisations. At interview, Mr Bourke said about this issue:

I thought we were having communication difficulties and I had offered an [EPA] officer, a senior officer, to stay at the City of Casey and act as an intermediary. So he [Mr Tyler] was extremely upset about that and you know it [Mr Tyler’s response] was quite pointed.

1330. In an email sent to Mr Bourke dated 18 September 2008, Mr Tyler stated that he:

... could not guarantee the safety of an EPA Officer based at Council at the moment.

1331. Mr Tyler was asked at interview to comment on his email to Mr Bourke. He said:

My officers would not have wanted someone from the EPA sitting in the office. It was a tongue-in-cheek comment that I couldn’t guarantee their safety. Obviously there would be no prospect of anyone threatening anyone’s individual safety.

1332. Mr Tyler has since stated:

Casey staff were struggling with the demands of the EPA, working very long hours under extreme pressure, attending numerous meetings and responding to unrealistic deadlines. There were meetings with EPA officers occurring on a daily basis (and usually a number of different meetings in a single day). In my judgement, it would have been very unhelpful to the morale and productivity of a stressed staff to have an EPA officer introduced into the refuge of their own workplace.

... the desk location of one EPA officer would not have improved communication between Council and the EPA which was already operating at very high level of contact.

1333. In response to Mr Bourke’s comments on this matter, Mr Tyler also stated:

I was not “extremely upset” with this suggestion [to make available an EPA Officer based at the City of Casey to assist with communication] – it was a considered decision to decline his [Mr Bourke’s] suggestion.

1334. It appears tensions between the EPA and the City of Casey were never far from the surface throughout the emergency management arrangements. In this regard, Mr Bourke commented at interview:

I think they [the CFA] had the difficulty of us [the EPA] and council [the City of Casey]. Normally they [the CFA] are used to people who are involved in an emergency event all being shoulder-to-shoulder and aligned all the way. Now I think we [the EPA] conducted ourselves very professionally, but I think that tension that they [the CFA] sensed there wasn’t useful to them.
1335. Mr Owen of the CFA was asked how the difficulties between the EPA and the City of Casey impacted on the CFA throughout the emergency response. He said:

They were at opposite ends of the spectrum. And CFA were at the last minute ... stuck in the middle.

1336. While senior managers at the City of Casey and the EPA were finding it difficult to resolve their differences, it appears that at an operational level staff from both agencies were focused on helping the community during the emergency response. Senior managers from both the EPA and the City of Casey advised that their staff had worked tirelessly to assist residents during the emergency response period and that they were proud of their efforts. My investigation acknowledges the hard work of EPA and City of Casey officers during the emergency response phase.

Strategic and operational co-ordination

1337. In relation to the State Emergency Strategic Team it appears that the sheer size of this group with some 25 representatives from various agencies presented challenges. The then EPA Chairman, Mr Bourke, commented on this issue at interview on 27 February 2009:

I thought at that strategic level there would be one group that met regularly and it became a very big group and I think it became more of an information dispenser.

...

After a while it shrunk back down and it got a bit more focused.

1338. There also appeared to be some confusion as to the functions and roles of the State Emergency Strategy Team and the Emergency Management Team in the early stages of the emergency. Mr Owen of the CFA was asked about the communication between the State Emergency Strategy Team and the Emergency Management Team. At interview, he said:

We identified early on there was a breakdown. We weren’t getting information out of them [State Emergency Strategy Team] and they were indicating to us, ‘What’s your objective, what’s your strategy, what are you doing?’ And we were saying ‘Hang on a minute we are doing this and this and this, what are you doing?’.

1339. In recognition of this communication breakdown, swift action was taken by the State Emergency Strategy Team to improve communication between it and the Emergency Management Team. This included changing the timing of the meetings to allow a debriefing to occur to the Emergency Management Team following the State Emergency Strategy Team meeting and ensuring that clear strategic direction was being provided to the Emergency Management Team in relation to how to achieve its objectives.

1340. Mr Rees of the CFA also noted that some of the support agencies assisting with the emergency did not have a good understanding of the role of the State Emergency Strategy Team. As a result, some operational issues more appropriately dealt with at the Emergency Management Team level, were directed to the State Emergency Strategy Team.
Conflicting roles

1341. Throughout the emergency and beyond, the City of Casey has been required to fulfil several different roles, which has often placed it in a difficult position. As the owner of the landfill, the City of Casey was seen by many people as ‘the polluter’, responsible for the migration of landfill gas into the estate. At the same time, the City of Casey is required under the Victorian emergency management arrangements to perform a key role during the emergency in supporting its ratepayers and keeping the community informed.

1342. At interview, Ms Hunter formerly of the EPA, was asked about the City of Casey’s challenging roles during the emergency. She said:

The council was conflicted the entire way along. They’re the local government authority to protect the community, who spends their taxes, and they’re the polluter.

1343. Several residents advised my office that they did not trust the City of Casey to provide them with accurate information about the emergency situation and the works being undertaken to prevent the migration of landfill gas.

1344. Mr Craig Lapsley of the DHS was asked about the City of Casey’s conflicting roles. At interview he said:

They [City of Casey] also have a responsibility in recovery. The recovery arrangements in a state of emergency, we [the DHS] engage with the municipality and they, not being rude to them – the pressure on them was quite complicated. And there were times where we actually pushed in and said we are actually leading these things which would normally be them leading it.

1345. The conflicting roles of the City of Casey were evident at many of the meetings arranged to inform the community about the emergency situation and the actions being taken, as many people in the community directed their anger and hostility at the City of Casey.

1346. The EPA was also required to perform conflicting roles during the emergency. As a regulator it continued to be responsible for ensuring that the City of Casey complied with the requirements of the Pollution Abatement Notice and Clean Up Notice, by undertaking required works to prevent the migration of landfill gas. EPA officers also had specific roles in the emergency response, particularly in regards to the collection of critical data and information. As discussed earlier in my report, the sharing of information between ENSR, the City of Casey and the EPA during the emergency response was a complicated process which hindered the emergency response.

1347. The EPA’s dual roles as a regulator of the environment and as a support agency responsible for providing advice to the CFA under the Victorian emergency management arrangements also caused issues. Mr Rees of the CFA commented on the dual roles of agencies under the emergency management arrangements when interviewed. He said:

There is a question mark that has to be put over the duality of some government departments who have a regulatory framework and an emergency management framework. I think that is very challenging for them.

... 

There may be elements in some agencies who do not understand the duality of roles.
Communicating the emergency arrangements

1348. Under the Emergency Management Manual, functional sub-committees can be established to provide advice, planning and guidance on a range of emergency issues, including communication.

1349. The Emergency Management Joint Public Information Committee co-ordinated by the Victoria Police and comprising representatives of the EPA, the City of Casey, the CFA, the DHS and the Office of the Emergency Services Commissioner, was responsible for ensuring a co-ordinated approach to public information and the media in relation to the methane gas emergency.

1350. As the lead agency, the CFA was responsible for responding to enquiries regarding public safety, with the support of the DHS and the EPA. The DHS, with the support of the City of Casey, was responsible for delivering public health messages. The involvement of the Emergency Management Joint Public Information Committee was designed to ensure that a consistent communications message was being delivered to the community and the media.

1351. My investigation identified some confusion in relation to the messages being delivered to the community, particularly in the days following the implementation of emergency management arrangements on 9 September 2008. For example, the Community Update issued on 10 September 2008 by the CFA, in conjunction with the City of Casey and the EPA, advised of the need for residents within 250 metres of the affected residence in Powerscout Retreat to consider relocation, and that the decision to stay or relocate needed to be made by each household. The message issued by the Emergency Management Joint Public Information Committee to the CFA was a great deal wider. In a strategy document dated 13 September 2008, the Emergency Management Joint Public Information Committee recommended that the CFA advise residents:

The only sure way to eliminate this risk for residents is for them to relocate from their homes. On expert advice including from the EPA, CFA recommends this approach as the safest option.

1352. Mr Micheli of the City of Casey was asked about the message delivered by the CFA to the community at the public meeting on 10 September 2008 in relation to residents needing to consider relocation. At interview, he said:

No, the message was a lot stronger than that, if you attended the public meeting.

… the message being sold, was being sold very strongly by Steve Warrington [CFA Deputy Chief Officer] and I think he said it three times, ‘I reiterate, if you are concerned about your safety, relocate or leave your homes’.

1353. While initially the focus was on residents within a radius of 250 metres from Powerscout Retreat, in the days following the declaration of the emergency the focus shifted to include the entire Brookland Greens estate. Mr Bourke stated that he had been asked by the emergency services whether he could guarantee the safety of residents in other areas of the estate. At interview, he said:

I couldn’t do that. So the Emergency Committee of Cabinet felt that we should be dealing with this whole east side [of the estate] uniformly. So that occurred within 24 hours of that advice [9 September 2008].
... there were some different communication just in that couple of days [after the emergency declaration]. People were a bit unsure of what was actually the case.

1354. Although the Community Update issued on 10 September 2008 advised of the need for residents within 250 metres of the affected residence in Powerscout Retreat to consider relocation, there was no information provided to indicate whether individual houses were in the 250 metre radius.

1355. Brookland Greens residents, Mr and Mrs W, who live at Huntingdale Close, were asked about the notification provided to residents. At interview, Mr W said:

It [the update] didn’t tell us we are within the 250 metres it just said that there is a voluntary evacuation notice.

... 

It didn’t actually say to us [evacuate], it was an area within 250 metres of a point which we didn’t know where that point was. We had no idea whether it affected us or concerned us.

1356. In terms of notification, a Community Update advising of the emergency situation was placed on the front door of Mr and Mrs W’s home. However, as they use another door for access to their home, they did not notice the update for some days and first became aware of the emergency through television reports several days later.

1357. Initially, public meetings were arranged on 10 and 11 September 2008 to inform residents about the emergency, with the CFA responsible for delivering the key messages. Representatives of the City of Casey, the DHS and the EPA were also present at these sessions. However, it quickly became apparent this was not necessarily the best approach as these meetings proved difficult to control and some of the key messages were lost due to the emotion of the situation. Mr Owen of the CFA was asked about this approach. He said:

It was a decision of the EMT [the Emergency Management Team], not that of the SEST [the State Emergency Strategy Team] or EMJPIC [the Emergency Management Joint Public Information Committee], that what we needed to do is properly inform the community. And because we had seen that it had been unsuccessful in our opinion to a point because at those bigger meetings that were held, because people couldn’t get heard, there was a lot of emotion, anxiety being shown, at an EMT [the Emergency Management Team] level we needed to break that down and keep them regularly updated.

1358. As a consequence, a decision was made by the Emergency Management Team to change the communication approach. From 20 September 2008 onwards, the CFA was responsible for implementing regular street corner meetings with residents in the estate as a way of ensuring that residents were kept informed. Trained communicators were engaged by the CFA to assist in delivering messages to the community. This approach proved extremely successful with the community as it enabled information to be delivered in a clear and calm manner and provided an opportunity for residents to ask questions.
Throughout the emergency, residents were provided with extensive information about the emergency arrangements. This included:

- street corner meetings and community information sessions
- regular community update newsletters
- information and regular updates on the City of Casey, CFA, DHS and EPA websites
- a City of Casey SMS messaging service.

Some residents said that they were overwhelmed by the quantity of information provided to them during the emergency.

The effect of the emergency on residents

While the EPA, the CFA and the City of Casey were, in my view quite rightly focused on the risk posed to the health and safety of residents caused by the leaking methane gas, my investigation identified that the potential consequences of calling an emergency on the lifestyle, anxiety levels, well-being and property values of residents in the estate, were not necessarily given sufficient attention. Mr Owen of the CFA was asked about this issue at interview:

> From my view there should have been more thorough analysis to determine the impacts ... [the emergency] would have on the community, because the consequences, and this is what I flagged even in the meetings prior [to the emergency], the consequences on the community could be quite horrendous. When you’re talking about sending them into an upheaval, property values devaluing, the emotional turmoil of living with such a thing and presenting it as an imminent risk, you can end up with people literally suiciding, or you know emotionally wrecking them. And I’m not sure that was really analysed.

Mr Bourke said about this issue:

> ... people lived with the risk and that wore them down pretty badly. And also then they saw loss in their value which really affected them. Some of these people have done it pretty hard.

The uncertainty associated with residents returning to their homes and the doubts about their health and safety was extremely distressing for many people to live with during the emergency and affected them in a variety of ways. Mr and Mrs G were required to move out of their home in Powerscout Retreat for several days and lived with the constant fear of an explosion.

Mr G said that he was woken one night during the emergency by a loud noise which he immediately thought may have been an explosion. Mr and Mrs G were relieved to discover it was the sound of thunder from a nearby thunderstorm.

Mr G reported that he had also experienced recent headaches since the emergency, while Mrs G had recently started falling asleep in front of the television. While they reported these issues to their doctor, it was unclear whether these problems were related to the effects of methane.
Mr and Mrs G also lived with the constant inconvenience of scientific, emergency and building workers undertaking testing and remedial works at their home. Mrs G said about this issue at interview:

The house hasn’t been our own. It was devastating you know. There were men, firemen, workers, council – folks up on the ceiling.

I was also concerned to hear reports of school children living in the estate being subjected to name-calling and bullying by other school children. For example, children had been teased about their homes exploding or that they would be gassed.

I was made aware of another case in which a father living in the estate was prevented from having his children stay with him during the height of the emergency. The children’s mother refused to allow the children to visit their father on the weekend as part of child access arrangements, fearing a gas explosion would cause injury, death or other health-related issues to the children.

The effect of the emergency on property values

Also of concern to me is the effect the migrating gas has had on property values in the Brookland Greens estate. Several residents complained to my office that their property values had fallen significantly as a result of the emergency. Mr and Mrs G were asked about this matter and said ‘the house is worth nothing’. Through no fault of their own, residents found themselves paying mortgages on properties with significantly reduced values.

I was informed that as a result of the emergency declaration, banks and mortgage lenders refused finance to residents in the estate. I was concerned with the impact on both potential and existing customers seeking finance. I was advised by Cranbourne residents that some banks had not only refused to provide finance to residents within the estate, they had also refused to provide finance to residents within a two kilometre radius of the estate.

I was also informed that banks had refused finance to existing customers within the estate who were seeking to borrow against their homes to finance other projects such as extensions to their homes.

In light of these concerns, I approached each of the four major banks – the Commonwealth Bank, the National Australia Bank, the ANZ Bank and the Westpac Bank – seeking their position on the provision of finance to residents in the estate since the emergency. In particular, I was interested to determine whether a two kilometre exclusion zone on finance had been applied by the banks; the number of customers refused finance on this basis; and the actions taken by the four major banks to assist residents in the estate since the emergency.

Following the emergency, I established that the four major banks made available hardship packages to existing customers in the estate, which included the suspension of mortgage repayments and credit card payments for three months, as well as the waiving of early withdrawal fees on term deposits and fees associated with loan restructuring.

The Commonwealth Bank, the National Australia Bank and the Westpac Bank all informed me that they had not changed their lending policies to residents in the estate following the emergency. While they advised that all loan applications were reviewed on their merits, they indicated that the approval of finance was dependent on a property valuation.
The ANZ bank introduced a new credit policy following the emergency declaration. This policy established an exclusion zone within two kilometres of the estate on lending secured against real estate. The ANZ Bank, in a letter dated 22 January 2009, advised:

Given the unknown impacts of the methane gas leak and the consequent impact on property values, ANZ has revised its credit policy for new lending to customers secured by properties within the estate and within a 2 km radius. Specifically:

- New mortgage lending to customers secured by property located within the Brookland Greens Estate has been suspended since September 2008;
- For new lending secured by property located within a 2km radius of the Estate (but outside the boundaries of the Estate), the following lending restrictions apply:
  - Maximum LVR of 70%
  - No Lo Doc applications
  - No ‘top-ups’ or supplementary loans
  - No refinances of existing ANZ lending
  - No inward finance lending
  - No ‘cash out’
  - No construction lending

This credit policy will be revised on an ongoing basis as the impacts of the leak become clearer and reliable assessments can be made of the impact on property.

The ANZ Bank has since responded:

Following the events in early September last year when the methane levels warning was issued and residents in the Brookland Greens Estate were advised to evacuate their homes, ANZ immediately offered generous hardship packages to its existing customers. Those packages included the suspension of repayments with interest waived for three months on all loans and credit cards. In addition, ANZ waived the early withdrawal fees for term deposits.

ANZ temporarily amended the credit policy for this area due to the impact of the leak on the value and saleability of the properties in the vicinity of the estate. Our panel valuers could not produce reliable estimates of the property values because of limited property sales and uncertain occupancy prospects.

It is our view that it would not have been prudent to allow customers within the estate to increase mortgage borrowings during this period of government warnings to evacuate and subsequent advice to monitor gas levels during occupancy. We did not want our customers to increase their indebtedness on properties that they may not have been able to occupy or sell.
ANZ reviewed and revised its credit policy in May 2009. The policy was relaxed to allow lending within the 2km zone up to 80% of security value and to permit increases in lending and refinances to existing ANZ customers. However, as sales data was limited on which to base reliable valuations (there were only two sales in the estate recorded since September 2008), the other restrictions were retained.

We will continue to monitor carefully our credit policy.

Risk assessment

1377. During my investigation, several officers from the City of Casey raised concerns in relation to the EPA’s failure to conduct a quantitative risk assessment prior to instigating the emergency management arrangements.

1378. The EPA did not undertake a quantitative assessment of the public health and safety risks to residents in the estate caused by landfill gas migration, prior to advising the CFA of the need to relocate affected residents.

1379. The City of Casey’s Municipal Emergency Resource Officer, Mr Micheli, advised that in the period between 4 and 9 September 2008 representatives from various emergency service agencies including the Victoria Police, the CFA and the DHS, met on several occasions to discuss how to proceed with the situation. At interview, Mr Micheli said:

> We all agreed that there should be a formal risk assessment before evacuating anybody within the estate, and then I believe on the 9th [September] is when we actually got the notification, I think it was very late in the afternoon that an emergency was going to be called, and we had to evacuate the residents.

... 

... it was an overreaction by the EPA and on top of that I believe the EPA were incompetent in ignoring the emergency services advice that a risk assessment had to be done.

1380. Mr Richardson of the City of Casey was asked at interview about the EPA not conducting a risk assessment prior to the commencement of the emergency management arrangements. He said:

> ... let’s take it to the municipal management group which had the CFA representative and see what this means. You know, do the risk of – it wasn’t said a risk assessment but do the assessment on this advice but instead of doing that which was arrangement [sic], which was a Tuesday, they [the EPA] took it completely out of our hands and I suppose there’s an example of that, they took it out of our hands and didn’t even have council present when they declared the emergency. So, it got to a point where they just – I don’t think they were listening to us at all.

1381. At interview on 27 February 2009, the then EPA Chairman, Mr Bourke, was asked why the EPA had not undertaken a quantitative risk assessment prior to advising the CFA on 9 September 2008 of the imminent environmental hazard and the need to consider relocation of affected residents. He said:

> The issue of risk was as assessed by the experts. I think we had actually done a risk assessment in that regard. We had taken the best expert advice.
But, no we didn’t do at that stage a quantitative risk assessment of any kind, over and above the expert advices and the knowledge we had.

1382. Mr Bourke was asked whether with the benefit of hindsight he would now consider conducting a risk assessment prior to making such a decision. He said:

If we take hindsight, I would. Would I have done something? Yeah you’re right I probably would have assembled a group to do that kind of work. I don’t know how it would have went, but I would have done it. The quantitative risk assessment process of course is not perfect in itself but it is another mechanism to guide where you might be.

1383. Mr Bourke said that it would take approximately two to three weeks to co-ordinate and conduct a quantitative risk assessment.

1384. In mid October 2008, the EPA commissioned independent environmental consultancy, URS, to develop and undertake a quantitative assessment of the risk to public health and safety caused by landfill gas in the estate. The risk framework used by URS was based on the Australian Standard AS/NZS 4360 (2004), Risk Management. This Standard provides a generic guide for managing risk.

1385. On 16 and 21 October 2008, URS held two risk assessment workshops involving representatives from the EPA, the City of Casey, the CFA, the DHS, Energy Safe Victoria, ENSR, and the Frankston City Council. The risk assessment considered information and data available before (9 September 2008) and after (21 October 2008) the implementation of the emergency arrangements. Experts considered the likelihood and consequences of landfill gas migration leading to serious injury or death.

1386. The assessment included consideration of dangerous levels of gas accumulating in areas such as wall cavities, service pits and meter boxes, and analysed the likelihood of an incident taking place. For example, the risk assessment showed the likelihood of property damage in wall cavities caused by an explosion is approximately 1 in 10,000. There was also a 1 in 100 chance per year that there would be an incident at any scale in a meter box or service pit across the estate.

1387. The URS report defined ‘societal risk’ as the risk posed to a group of people as a whole (in this case the people within the estate) due to a given hazard. URS concluded that the societal risk at the estate was an ‘acceptable risk’. The URS final report dated 30 October 2008 stated:

A conservative view of the overall societal risk would define the societal risk as acceptable with respect to the CFA/OESC [the Office of the Emergency Services Commissioner] targets.

... 

A very conservative view of the risk results would need to be taken to arrive at a conclusion that the total societal risk due to landfill gas in the Estate lies within the ‘Intolerable risk’ zone.
1388. The City of Casey maintains that the risk assessment conducted by URS vindicated their position that it was not necessary to implement the emergency management arrangements. Mr Tyler, CEO of the City of Casey said about the URS risk assessment:

… the outcome of that was that even the EPA’s own risk assessment was saying that at the time in October [2008] when the risk assessment was undertaken, there was an acceptable risk level.

1389. The risk assessment process also increased tensions between the EPA and the City of Casey. While the City of Casey were provided with the results of the workshop, the EPA refused to provide the final report to the council. Mr Jansen of the City of Casey was asked about this matter at interview. He said:

We still haven’t been able to get that final report, and my understanding is that our CEO is asking for it and we just will not – they will not provide that to us. To me that’s significant because it highlights again that the risk was being managed and it did not have to become the issue that it has become for a lot of community members there now.

1390. Mr Bourke was asked why the EPA has not provided the City of Casey with a copy of the final risk assessment report dated 30 October 2008. He said:

Because I won’t give it to them.

…

They know what’s in it, they have seen the draft, they only want to politicise it.

1391. Mr Bourke has since stated:

… not only did City of Casey see the draft report but that they possessed that draft report. Also by clarification of the term “politicise” was meant in the sense of the document or selective information from it being passed in some way to media sources.

De-escalation of the emergency

1392. As the state of emergency continued into October 2008, gradually more data became available on the level of risk to residents in the estate. In addition to the quantitative risk assessment conducted by URS which showed that the level of risk was ‘acceptable’\(^{30}\), the results of the expanded in-house monitoring program and below-ground gas bore network throughout the estate provided the State Emergency Strategy Team with sufficient information to re-evaluate the level of risk.

1393. The in-house monitoring program conducted during September and October 2008, which involved the installation of 305 monitors in some 282 homes, found that four homes had recorded methane concentrations at or above 20 percent of the lower explosive limit. Another 10 homes were found to have methane concentrations below 20 percent of the lower explosive limit and a further 272 (95 percent) of homes had no methane detected.

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1394. The EPA also commissioned independent consultant Pitcher Partners Consulting Pty Ltd (Pitcher Partners) to independently assess the management procedures developed in relation to the following:
- in-home monitoring program and landfill gas monitoring bores
- education programs and sessions
- detection sweeps and incident response
- mitigation works.

1395. Pitcher Partners, in a report dated 23 October 2008, identified some gaps in relation to procedures applied to analyse monitoring results and detail the progress and effectiveness of the reported mitigation works. For example, Pitcher Partners found that the procedures in relation to mitigation works did not provide sufficient details as to how the mitigation works were prioritised or which works were applicable under different circumstances. As a result, Pitcher Partners requested additional information from the City of Casey in relation to the actions to be taken to address these issues.

1396. My investigation identified that as the emergency continued throughout October 2008, it became difficult to determine the point at which the situation could be downgraded from an emergency and returned to a land management issue. By late October 2008, data collected from the in-house monitoring, the underground observation bores and testing, the risk assessment results and mitigation works in homes and at the landfill, showed the level of risk had reduced.

1397. However, it appears that the CFA and the EPA had differing views on the de-escalation of the emergency based on the reduced level of risk. Mr Rees of the CFA was asked about this matter at interview. He said:

> My aim was to seek to reduce the risk so that we could say that it is tolerable. Providing you do a, b, c and d, you can live there quite happily. We know it’s there, we’re going to continue to have all these things in place.

> ...

> Initially I sought their [the EPA’s] advice about when do we get there [de-escalation of the emergency]. EPA said they couldn’t guarantee that, and they wanted more information. And it seemed that they kept wanting more and more information, and that further reinforced my view that their frame of reference was not my frame of reference. My frame of reference was an emergency management context, theirs was a regulator context. And my frame of reference in my view was being satisfied.

1398. The Victoria Emergency Management Council Coordination Group met on 30 October 2008 to discuss the transition of the emergency management arrangements to a land management approach, based on the available information. CFA Chief Officer, Mr Rees, advised that as a result of the mitigation works undertaken the risk had reduced to the level where residents could safely return to or remain in their homes. The Victoria Emergency Management Council Coordination Group accepted this recommendation and agreed to de-escalate the emergency, with the Department of Sustainability and Environment assuming responsibility for overseeing the matter as a land management issue.
On 31 October 2008, CFA Chief Officer, Mr Rees, wrote to all residents in the estate and issued a media release that stated:

Provided that you continue to follow the advice previously provided by CFA, and landfill gas remains at current levels, it is considered acceptable for you and other residents to return to, or remain in your homes.

You should continue to ensure that all confined spaces are adequately ventilated, be vigilant and report the detection of any gas build up in or on your property, avoid using ignition sources in confined spaces, and avoid confined spaces where gas has become concentrated as it could cause adverse effects.

While the landfill gases below ground level are still present across the estate, much has been done above the ground to reduce risk, to identify its extent and to action work to reduce its presence in the estate.

In addition to the letter-drop to all residents in the estate, the CFA also held street meetings to inform residents about the de-escalation and what this meant in practical terms.

Mr Bourke of the EPA was asked about the triggers for de-escalation of the emergency. At interview, he said:

The de-escalation was based on the manageability of the risk in the households, property by property. It was very clear in that de-escalation that that total risk generated by the landfill hadn’t changed. The risk source hadn’t changed – the management of it had changed, and that was felt to bring it to a tolerable level.

In the period 9 September to 31 October 2008, a total of 45 relocations were reported in the estate, with 33 residents eventually returning to their homes. Of the remaining 12, several of these were rental properties where the occupier elected to move elsewhere.

A total of 11 relocation grants and 42 emergency grants were provided to residents in the estate as a result of emergency arrangements being implemented.

Review of the emergency response

The methane gas risk in the estate was a unique emergency situation which the CFA and other emergency agencies did not have previous experience in dealing with, or a great deal of knowledge about.

In Victoria, it is the role of the Office of the Emergency Services Commissioner to encourage co-operation in emergency management arrangements between agencies. The Office of the Emergency Services Commissioner has specific responsibilities for ensuring the delivery of efficient, equitable and integrated fire and emergency services. The Office of the Emergency Services Commissioner also has statutory responsibility to advise, make recommendations and report to government on any issue in relation to emergency management.

I understand that following the downgrading of the emergency situation, the Office of the Emergency Services Commissioner conducted a ‘Lessons Learnt’ forum on 22 December 2008 involving representatives of the Office of the Emergency Services Commissioner, the CFA, Victoria Police, the EPA, the Department of Human Services, the Department of Sustainability and Environment, the Department of Premier and Cabinet, the Department
of Transport, the Metropolitan Fire Brigade, Energy Safe Victoria, and the State Emergency Services. The purpose was to evaluate what had worked well during the emergency response and to identify areas of improvement for future emergencies of this nature.

1407. In summary, the ‘Lessons Learnt’ forum identified the need for clarification of the emergency management arrangements in this type of situation and improved co-ordination between agencies in respect of role responsibilities, communication, and data gathering.

1408. On 15 January 2009, I requested that the Office of the Emergency Services Commissioner provide me with the outcomes of the forum and its conclusions. I was eventually provided with this information on 24 March 2009. I was concerned to find that aside from the notes of the forum, a formal review of the emergency response had not been undertaken by the Office of the Emergency Services Commissioner. Participants also received the notes of the forum in late March 2009.

On-going support to the community

1409. In light of the considerable stress placed on the community during the emergency management arrangements, it was necessary to establish ongoing support services. To this end, the DHS with the assistance of the City of Casey developed and implemented a Community Support Plan aimed at providing the community with ongoing direction and support.

1410. In addition, in October 2008 a Community Reference Group was established to assist with rebuilding the community’s confidence following the emergency situation. The DHS also continues to provide ongoing support services to residents in the estate. In recognition of the impact of the emergency on residents, I understand the City of Casey in October 2008 agreed to waive the 2008-09 rates for property owners in the estate.

Long-term management strategies

1411. The Clean Up Notice issued by the EPA on 18 September 2008, required the City of Casey to inform the EPA of its long-term strategies to mitigate the migration of landfill gas.

1412. While the City of Casey’s preferred long-term strategy continues to be focused on lowering the level of leachate and maximising the efficiency of the landfill gas extraction system, the construction of a deep cement bentonite (clay) wall along the western and northern boundaries of the landfill was proposed by ENSR as the most effective method of reducing the likelihood of landfill gas migrating into the estate.

1413. Following review by the EPA, the City of Casey in February 2009 agreed to spend $11 million to construct a deep bentonite wall along the western and northern boundaries of the landfill. Completed in August 2009, the wall is approximately 830 metres in length, half a metre wide and its depth ranges from 17 metres to 27 metres to the landfill base. The construction method was selected to minimise disruption to nearby residents.

Financial assurance fund

1414. In accordance with the Environment Protection Act, the EPA requires operators of landfills in Victoria to establish a financial assurance fund. The fund ensures that the costs of rehabilitating a landfill, site closure and post-closure liabilities are the responsibility of the landfill owner and not the community. A financial assurance fund provides that funds are available to deal with the situation where a landfill owner or operator abandons the site and does not have funds to cover clean-up costs.
I established that a financial assurance fund exists in relation to the Stevensons Road landfill. This assurance fund was established by the South Eastern Regional Waste Management Group in 1995. There are three primary source documents: an Assurance Fund, a Financial Assurance Deed, and a memorandum of understanding between the South Eastern Regional Waste Management Group and the EPA.

The fund is administered by the Metropolitan Waste Management Group, a Victorian government agency responsible for coordinating municipal solid waste management and planning in Melbourne. The Metropolitan Waste Management Group is the successor to the four former Regional Waste Management Groups which included the South Eastern Regional Waste Management Group.

The financial assurance fund applies to three landfills that were under the management of the South Eastern Regional Waste Management Group: the Stevensons Road landfill, the Spring Valley landfill at Springvale, and the Clayton Road landfill at Clayton. It holds approximately $1.9 million. The agreement makes provision for the landfill owner to make a claim on the fund on receiving a Clean Up Notice or Pollution Abatement Notice from the EPA.

My investigation identified that in August 2007 the City of Casey wrote to the Metropolitan Waste Management Group requesting access to the financial assurance funds in consideration of the EPA issuing a Pollution Abatement Notice in relation to the Stevensons Road landfill. The Metropolitan Waste Management Group advised me that it met with representatives of the EPA, the City of Casey and the Frankston City Council in April 2008 to discuss management issues relating to the landfill.

Mr Rob Millard, CEO of the Metropolitan Waste Management Group provided a file note of this meeting dated April 2008 which states:

1. During the course of the meeting Advised council officers from Casey and Frankston that access to the Financial Assurance Fund would not be appropriate at this time.
2. Further discussion with David Richardson from City of Casey occurred and no further request from Casey has been received.

It appears that the Metropolitan Waste Management Group failed to provide the City of Casey with a written response to its request of August 2007 seeking access to monies in the financial assurance fund in response to the EPA’s issuing of the Pollution Abatement Notice. It also took the Metropolitan Waste Management Group approximately eight months before informally advising the City of Casey that access to the financial assurance fund would not be appropriate. Also Mr Millard’s file note of April 2008 does not explain the rationale for the Metropolitan Waste Management Group’s decision.

During my investigation, several EPA officers said that the financial assurance fund could not be accessed by the City of Casey to assist with the methane gas situation at the estate, as the City of Casey had not abandoned the landfill and was not financially insolvent.

At interview, Mr Jansen of the City of Casey was asked about the advice the council received in relation to accessing the financial assurance fund to deal with landfill gas being detected within the estate. He said:

We were told by the EPA that that [the financial assurance fund] was for emergency work, clean up work, and wasn’t required.
... I think we’ve [the City of Casey] written to the region [the Metropolitan Waste Management Group] to request exploring that, certainly had a meeting, and I think they were told separately as well by EPA that they weren’t likely to consider that. And I certainly was told direct from them.

1423. Mr Jansen was unable to recall receiving a written response to the City of Casey’s request for access to the financial assurance fund from either the EPA or the Metropolitan Waste Management Group.

1424. My investigation revealed that the City of Casey was eligible to make an application to access the funds. However, it is the role of the manager [the Metropolitan Waste Management Group] to approve the application. I understand that the manager has a broad discretion in relation to the assessment of any application for access to the fund.

1425. There is also provision in the agreement for the Metropolitan Waste Management Group to appoint an independent consultant to inspect the site and report on environmental degradation or pollution event that is the subject of the notice issued by the EPA. The Metropolitan Waste Management Group must take into account whether the works required are unusual rather than ‘day-to-day’ works and whether the landfill site has been managed in accordance with its licence.

1426. It appears that on receiving the City of Casey’s written request for access to the financial assurance fund, the Metropolitan Waste Management Group did not give adequate consideration to the process to be followed, as outlined in the agreement, in relation to whether the funds could be utilised by the City of Casey. There is no doubt that $1.9 million could have assisted the City of Casey with funding either remediation works at the landfill, in-house gas monitoring or the drilling of observation bores within the estate.

1427. Mr Millard, CEO of the Metropolitan Waste Management Group has since responded:

   ... I would like to reiterate that the current fund was originally set up in 1996 as a rehabilitation fund for three landfills including Stevensons Road Landfill. The Environment Protection Act was subsequently amended to require landfill operators to provide financial assurance to their sites. The fund was modified to meet this requirement.

   In response to the letter requesting access to finances from the fund by the City of Casey it was deemed that the proposed issues was one to be managed and funded by Casey City Council and that use of the fund was inappropriate. As my file note indicated this was communicated to officers from Casey City Council at a meeting in April 2008. Casey City Council did not object to this response and has not requested further clarification or made further application to the fund.

   ...

   It is acknowledged that the MWMG [the Metropolitan Waste Management Group] did respond in a formal [manner to the City of Casey].
Conclusions

1428. In my view, residents of the estate were placed at unnecessary risk by both the City of Casey and the EPA in failing to ensure that appropriate actions were taken in a timely manner to mitigate the risk of landfill gas escaping from the landfill into the estate.

1429. I consider that if there is a risk that the public health and safety of individuals may be jeopardised by exposure to methane gas leaking from a landfill, government agencies have a responsibility to err on the side of caution and take appropriate action to ensure the safety of those persons affected.

1430. In my view, a community should not have to endure the distress, anxiety and inconvenience of having to make a decision to remain in or relocate from their homes without adequate advice from the responsible authorities.

1431. The City of Casey has since responded:

The City of Casey maintains that the safety of residents was and remains its paramount consideration. Any risk of physical harm or injury has always been remote. URS, for example, assessed the risk before and after the declaration of the emergency as ‘acceptable’. When the risk became apparent in March 2006, the City of Casey acted promptly to involve the EPA and take measures on and beyond the Landfill to mitigate the risk.

1432. The EPA also maintains that its ‘prime focus has always been on mitigating the risk to residents of the Brookland Greens estate and the environment’.

Failure to take action to ensure the safety of residents

1433. Both the City of Casey and the EPA were aware of the presence of methane in the estate from as early as March 2006 when the ‘bubbling puddles’ were detected by the workers constructing the drainage system. Despite the efforts of EPA Officer A to highlight concerns with EPA senior management about the risk to residents in the estate caused by the leaking methane, this information was effectively ignored by her Regional Manager.

1434. By July 2007, the reports of environmental auditor, Mr Eva, warning of an ‘imminent environmental hazard’ and an ‘unacceptable risk’ to residents due to the presence of methane in the estate, were brought to the attention of EPA senior management. However, it was not until June 2008 and the discovery by Mr Eva of methane gas within homes in the estate that EPA senior management began to fully appreciate the gravity of the situation.

1435. I am concerned that it took over 10 months after it was informed of Mr Eva’s report of 25 July 2007 warning of an ‘imminent environmental hazard’ for EPA senior management to recognise the seriousness of the situation and to take action to ensure the safety of residents.

1436. The EPA has since responded:

EPA does not agree it was slow to respond.

... 

Senior management did recognise the seriousness of the situation. In addition to issuing a direction under section 62B of the Environment Protection Act the day after the receipt of Mr Eva’s report, EPA took a number of actions …
EPA has now implemented better communication systems and undertaken a significant structural reform to separate the client management and enforcement functions.

1437. I identified that drainage works had commenced in the Stage 20 development, despite revised plans for the development not having been endorsed by the City of Casey. The presence of methane had been detected in early 2006 at Cherryhills Drive, the dam at Stevensons Road, and along the western boundary of the landfill, and all brought to the attention of City of Casey officers in its Roads and Construction, Environmental, and Planning Departments. The revised plans for the Stage 20 development were endorsed by the City of Casey in May 2006 without any consideration to the risk posed to residents.

1438. In response to my concerns about this issue, Mr Jansen of the City of Casey has since stated:

I reiterate my belief that Council did not have the ability to prevent works after the Planning Permit was issued in October 2005 in accordance with the VCAT Order of 2004. Only EPA has that power.

1439. The City of Casey has also since responded:

Peet commenced the works without any permission or consent from the Council.

... 

It was not open to Council to refuse endorsement [of Stage 20 plans] because of external events. Those external events could have led to a body with appropriate power – such as the EPA – to order that works stop or not proceed.

Failure to appreciate the risk to residents

1440. Throughout my investigation I observed the contrasting views concerning the level of risk to residents in the estate caused by the leaking methane. I can appreciate that given the unusual nature of the emergency and the lack of past experience in Australia in dealing with leaking methane gas from a landfill, there were differing views regarding the level of risk posed to residents in the estate. However, it appears that of the many agencies involved in the emergency and despite the weight of expert evidence, the City of Casey perceived the risk to residents as significantly less than that of the EPA, ENSR, the CFA and the independent experts.

1441. When one of the technical consultants engaged by the City of Casey informed the EPA about their concerns in relation to the risk to residents posed by the methane, the Acting CEO of the City of Casey responded by downplaying the advice and sought to discredit the consultant for ‘breaking ranks’.

1442. Also, it appears that City of Casey officers downplayed the advice of the international advisory group assembled by the EPA, including landfill gas expert, Mr Shaughnessy, who described the Stevensons Road landfill as one of the worst sites he had ever seen with the potential for explosion and/or asphyxiation.
Failure to conduct risk assessment

1443. There has been a great deal of discussion in the local community and in the media in relation to the EPA’s failure to conduct a risk assessment prior to informing the CFA of the need to implement the emergency management arrangements, including recommending the evacuation of some residents.

1444. Although the EPA was initially slow to respond to the detection of methane in the estate, from June 2008 onwards the EPA took appropriate action in undertaking research; seeking international advice on the problem; verifying the methane findings with independent consultants; and devoting adequate resources to the issue.

1445. While there is little doubt that conducting a quantitative risk assessment prior to declaring the emergency, the likes of which was conducted by URS in October 2008, would have assisted in evaluating the level of risk to residents, I consider that as there was a risk of explosion and/or asphyxiation caused by methane gas in the estate, the EPA needed to err on the side of caution and inform the CFA of the need for residents to consider relocation. In this regard, I note the advice of landfill gas expert, Mr Shaughnessy, along with other independent experts, was supportive of the approach taken by the EPA. As a result, I am not critical of the then EPA Chairman, Mr Bourke, for making this difficult decision.

1446. While the results of the quantitative risk assessment conducted by URS in October 2008 revealed that the risk to residents in the estate was ‘acceptable’, in my view caution needs to be exercised in relying solely on this instrument in assessing the level of risk to residents in these situations. A quantitative risk assessment should form part of a suite of measures used to evaluate the level of risk, including expert advice and analysis.

1447. I consider that in the future, a quantitative risk assessment should be undertaken wherever possible to quantify the level of risk to residents caused by leaking landfill gas, prior to the implementation of emergency management arrangements and the evacuation of any residents from their home.

1448. Clearly, the physical risk to public health and safety, that is, explosion and/or asphyxiation, should be the overriding consideration when determining whether or not to evacuate or recommend evacuation from their homes to residents in this type of situation. In my view, consideration also needs to be given to the social and financial consequences to residents of declaring an emergency situation. There are a range of factors to consider including the effect on people’s lifestyles, relationships, property values, livelihood, confidence, and mental and physical well-being.

1449. Regrettably, it appears that some of the social consequences associated with declaring the emergency were not fully appreciated in this case. As a result, I consider that future risk assessments should make provision for evaluating the social consequences on the people affected.

Other motives for declaring an emergency

1450. During my investigation I found evidence which indicates the City of Casey’s failure to undertake required actions in a timely manner may have influenced the EPA’s decision to recommend implementation of the emergency management arrangements. There is little doubt that the EPA was frustrated with the City of Casey’s slow response or failure to undertake required works at the landfill and to take action to prevent landfill gas migrating into the estate. Several EPA officers confirmed this when interviewed. However, Mr Bourke denied that this was a factor in his deliberations regarding the implementation of the emergency management arrangements.
1451. The EPA has since responded:

EPA was frustrated with the City of Casey’s responses and failures. However, these issues were not a factor in deciding to recommend declaration of an emergency situation.

Management of the emergency response

1452. Overall, I consider that the CFA as the lead agency responsible for handling the emergency situation, performed commendably in the circumstances. While unaccustomed to dealing with an emergency of this nature, the CFA responded well to the many challenges it faced.

1453. It is inexcusable that at a time when the EPA and the City of Casey should have been working together for the greater good of the community and the co-ordination of the emergency response, they were unable to put aside their differences. At times this placed the CFA in the unenviable position of being in the middle of the City of Casey and the EPA, and at times this made it difficult for the CFA to achieve its objectives.

1454. In an emergency situation, where the collection, analysis, sharing and provision of data to those charged with the responsibility of making decisions that impact so heavily upon citizens of the State and the resources of the State, good communication between agencies is essential. It is disappointing that communication became so difficult between the City of Casey and the EPA.

1455. The EPA has responded:

At all times, notwithstanding the differences between EPA and the City of Casey, EPA worked with City of Casey and the emergency service providers and continues to do so.

Failure to conduct a review of the emergency response

1456. In light of the unique nature of this emergency it is noted that a detailed review and report on the emergency response has not been undertaken by the Office of the Emergency Services Commissioner. Such a review would be of considerable assistance to emergency service agencies in Australia and internationally in responding to any future events of this nature.

1457. The Office of the Emergency Services has since responded:

The decision relating to a review or investigation of the incident was considered by the respective Department Secretaries and the Cabinet. I understand the discussions included the adequacy or otherwise of my powers to undertake the review, and other options available to Government. Government made the decision, on advice of the Department of Premier and Cabinet that it was not appropriate for me to undertake this review. Subsequently, the Attorney General wrote to you [the Ombudsman].

1458. Although the Office of the Emergency Services Commissioner conducted a ‘Lessons Learnt’ forum in December 2008, the results were not provided to participants until late March 2009 after my office requested a copy of the outcomes of the forum. The Office of the Emergency Services Commissioner also did not reach any conclusions or make any specific recommendations to assist with the management of other emergencies of this type which may arise.
1459.  The Office of the Emergency Services has since responded:

While accepting there was some delay in finalising the [Lessons Learnt] report, my Office and the emergency management sector were heavily involved with the response to and recovery from the most extreme weather and fire event experienced in Victoria. This culminated in the tragic events of 7 February 2009.

I would suggest that this was a reasonable justification for the delay in finalising the report.

1460.  There are considerable opportunities to learn from the methane gas emergency at Cranbourne. In my view, the Office of the Emergency Services Commissioner should conduct a detailed review focusing on:

- improving the suitability of the Emergency Management Manual in dealing with an emergency situation of this nature
- improving the use of risk assessment tools to evaluate the level of risk
- improving inter-agency communication
- clarifying the roles of municipal councils and the EPA under the Emergency Management Manual and detailing the process to be followed when these roles clash with other statutory roles performed by these bodies
- communicating with affected individuals
- clarifying the roles of the State Emergency Strategy Team and the Emergency Management Team and detailing the information flow between each group
- collecting and analysing data.

1461.  I understand that the Office of the Emergency Services Commissioner is reviewing the Emergency Management Manual. As such, I consider it appropriate for my conclusions regarding this emergency to be considered in the context of this broader review.

**Review of other landfills in Victoria**

1462.  I note that since commencing my investigation, the EPA has undertaken a review of other landfills throughout Victoria to determine whether methane gas is leaking from any of these sites. This review involved an assessment of 260 closed or currently licensed landfill sites across Victoria. The EPA identified eight sites where methane was detected at the site boundary at levels leading to further investigation by the EPA. However, I understand that no other houses or residential developments have been affected in the same manner as the Brookland Greens estate.

1463.  In light of the unpredictable nature of landfills, I consider that the EPA will need to repeat this review at regular intervals to ensure that the landfills do not pose a risk to the health and safety of nearby communities.

1464.  I consider that the EPA should also seek to ensure that environment protection authorities in other States of Australia and internationally are made aware of the risk of landfill gas migration to nearby residents arising from this case.
Incorrect advice – access to the financial assurance fund

1465. My investigation revealed that the City of Casey was eligible to make an application to access approximately $1.9 million in funds held in the landfill financial assurance fund. It appears that the City of Casey was wrongly advised by the manager of the fund [the Metropolitan Waste Management Group] that it could not access these funds. These monies may have been used to assist with preventing the migration of landfill gas from the landfill.

1466. Also, I identified that the Metropolitan Waste Management Group did not respond to the City of Casey’s written request for access to the financial assurance fund, until some eight months after the initial request. I have been unable to find any evidence of a written response from the Metropolitan Waste Management Group explaining its decision.

Compensation

1467. Ultimately, the issue of compensation will be considered by the courts through the class action on behalf of affected residents. Nonetheless it is clear to me that the local community has endured considerable anxiety, distress and inconvenience as a result of methane gas leaking from the landfill into the estate and the way that some government agencies handled this issue. On this basis, affected residents should be compensated accordingly.

1468. It is also imperative that the local community continues to be supported by the City of Casey and the DHS to assist with rebuilding its confidence and strength.
Recommendations

I recommend that:

Recommendation 55

The Office of the Emergency Services Commissioner conduct a timely and detailed review of the emergency response to the methane gas risk at the estate and publicly report its findings. This review should take into account the findings of my investigation and consider whether structural changes are required to Victoria’s emergency management system. It should also provide guidance to agencies as to whether the emergency management arrangements require enactment in any future incidents involving migrating methane gas from a landfill affecting nearby communities, or similar emergencies. The review should focus on the following areas:

- improving the suitability of the Emergency Management Manual in dealing with an emergency situation of this nature
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The Office of the Emergency Services Commissioner’s response

… [The Office of the Emergency Services Commissioner] would welcome the opportunity to discuss how the Emergency Management Manual can be improved to assist in the management of similar events in the future.

Recommendation 56

The Office of the Emergency Services Commissioner amend the Emergency Management Manual to require the EPA to consider conducting a quantitative risk assessment, where possible, for future landfill gas incidents, prior to recommending implementation of emergency management arrangements.

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… [The Office of the Emergency Services Commissioner] would welcome the opportunity to discuss how the Emergency Management Manual can be improved to assist in the management of similar events in the future.
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The Office of the Emergency Services Commissioner revise the Emergency Management Manual to reflect the findings of its review.

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… [The Office of the Emergency Services Commissioner] would welcome the opportunity to discuss how the Emergency Management Manual can be improved to assist in the management of similar events in the future.

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The EPA review the continued use of the UK guidelines for landfill gas incidents and consider developing its own guidelines. This review should take account of the relevant Australian and/or State standards and codes which apply to landfills, residential developments and construction.

*The EPA’s response*

EPA can fulfil this recommendation.

Recommendation 59

The EPA, in conjunction with the CFA, co-ordinate research and testing to determine the potential consequences of a methane gas explosion on Australian residential houses. This information should be shared with the relevant emergency service agencies.

*The EPA’s response*

EPA can partially fulfil this recommendation.

EPA can explore this issue with the CFA.

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The EPA train its staff in landfill gas management to ensure that it has the expertise to deal with any future methane gas incidents which may arise.

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EPA can fulfil this recommendation.

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The EPA conduct yearly audits of all landfills in Victoria to ensure that they remain safe for nearby communities.

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Regular environmental audits of landfills as required in licences will require assessment of landfill gas. Post-closure Pollution Abatement Notices will also require this assessment. EPA will continue to follow-up on sites identified in the Landfill Assessment Review of 271 sites.
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The City of Casey and the DHS continue to support residents in the estate and the local community in rebuilding their lives following the emergency.

The City of Casey’s response

Certainly, Council intends to continue this support, by working closely with affected residents. It [the City of Casey] therefore supports what is recommended.

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The City of Casey waive payment of rates to all residents in the estate for the 2009/2010 financial year, as a measure of good faith and in response to the inconvenience experienced by the community.

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The Metropolitan Waste Management Group develop policies and procedures to clarify eligibility for financial assurance funds it administers and how eligible parties may access these funds.

The Metropolitan Waste Management Group’s response

The Metropolitan Waste Management Group did not specifically respond to this recommendation.

Recommendation 65

The Metropolitan Waste Management Group respond to all future requests for access to financial assurance funds in writing and in within 28 days.

The Metropolitan Waste Management Group’s response

The Metropolitan Waste Management Group did not specifically respond to this recommendation.
the safety of residents in the estate
SUMMARY OF RECOMMENDATIONS

Recommendation 1

The EPA ensure it has clear and detailed written guidelines for applicants for works approvals.

The EPA’s response

EPA can fulfil this recommendation.

Recommendation 2

The EPA review its policy for assessing works approval applications to ensure assessments are made by suitably qualified officers and all assertions made by applicants are verified fully before works approval is granted.

The EPA’s response

EPA has already fulfilled this recommendation.

It is now standard practice that all works approvals are peer reviewed by EPA staff with appropriate expertise before the Authority’s decision on the works approval is made.

In addition, a dedicated expert-based Statutory Facilitation Unit has been created as part of the EPA’s new organisational structure. All works approval applications are assessed by this centralised team.

Recommendation 3

The EPA create an independent panel of experts to advise on works approval and licence conditions where an applicant wishes to vary the recommendations of the EPA’s Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills publication.

The EPA’s response

EPA can fulfil this recommendation.

Recommendation 4

The EPA review its training program for officers involved in the waste management industry.

The EPA’s response

EPA can fulfil this recommendation.

EPA can design and implement improvements to the existing training programs for officers involved in waste management industry issues.

Recommendation 5

The EPA ensure works approval applications are processed within the legislated timeframe, currently four months.

The EPA’s response

EPA can fulfil this recommendation.

EPA has published a 2009-10 corporate target of processing works approvals within a three month timeframe.
Recommendation 6
The EPA adopt a policy that allows comment on proposed works approvals, licences and licence amendments, but not the negotiation of the conditions.

The EPA’s response
EPA can partially fulfil this recommendation.
In accordance with EPA’s statutory duty it will continue:
• not to negotiate on the environmental standards which must be met in works approvals, licence and licence amendment decisions, and
• to negotiate options to fully meet those environmental standards.

Recommendation 7
The EPA implement procedures for tracking the life of works approvals and grant no more than one extension of time without a full review of the conditions of the works approval.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 8
The EPA include as a condition of works approval that regular monitoring and reporting be undertaken during the works phase.

The EPA’s response
EPA has already fulfilled this recommendation.
EPA has implemented a standard works approval requirement for landfills that an appointed environmental auditor be required to conduct an assessment of critical elements of landfill construction.

Recommendation 9
The EPA review its procedures for compliance assessment of works approvals to ensure sign-off occurs at senior management level and with the benefit of a detailed assessment against all information incorporated into the works approval.

The EPA’s response
EPA has already fulfilled this recommendation.
The Authority’s formal statutory delegations specify that all landfill works approvals must be signed off by a member of the EPA Executive Team.

Recommendation 10
The EPA ensure any changes to works approval conditions are agreed by the EPA via a formal request for amendment.
The EPA’s response

EPA has already fulfilled this recommendation.

EPA can reinforce this practice by specifying it in (1) the guidelines for works approval applicants and (2) EPA’s internal procedures as they are updated as part of our current licensing and works approval reform package.

Recommendation 11

The EPA review its licensing arrangements to ensure that the process for setting licence conditions is at least as rigorous as the works approval process.

The EPA’s response

EPA can fulfil this recommendation.

Recommendation 12

The EPA ensure any proposal regarding the future operation of a landfill made in an application for works approval is fully reviewed in the licensing process and incorporated where appropriate into the waste discharge licence.

The EPA’s response

EPA can fulfil this recommendation.

A review of existing practices will be undertaken as part of EPA’s current licensing and works approval reform package.

Recommendation 13

The City of Casey ensure its waste management policy takes account of environmental and community concerns as well as economic considerations.

The City of Casey’s response

Council’s Waste Management Policy does take account of environmental and community concerns, as well as economic considerations.

Recommendation 14

The City of Casey ensure that environment protection is a central principle in its planning policy.

The City of Casey’s response

Clause 15 of the Casey Planning Scheme already provides for environmental protection as an integral part of the planning scheme.

Recommendation 15

The City of Casey ensure it has procedures in place for tracking the life of planning permits.

The City of Casey’s response

… [the City of Casey] has developed a proactive regime that concentrates on high risk elements of planning decisions.
Recommendation 16

The City of Casey review its planning permit enforcement policy to ensure that permit conditions are observed.

The City of Casey’s response

… [the City of Casey] has developed a proactive regime that concentrates on high risk elements of planning decisions.

Recommendation 17

The City of Casey grant no more than one extension of time on a planning permit without a formal review of the permit conditions.

The City of Casey’s response

Over a number of years, VCAT has established a series of tests to determine whether an extension of time should be granted for a planning permit. Council has applied these tests in assessing all applications for extensions of time.

Recommendation 18

The City of Casey develop specific procedures to manage conflict of interest where the City is both permit applicant or permit holder and responsible authority for a planning permit.

The City of Casey’s response

… Council segregates its duties as a responsible authority for processing planning permits and planning enforcement from its role in other council operations by involving different staff.

Recommendation 19

The City of Casey review its code of conduct and provide related training to ensure its officers do not exert undue pressure on a statutory authority or attempt to interfere with the decisions of a statutory authority.

The City of Casey’s response

It is surprising that a recommendation is proposed relating to an event that occurred over 17 years ago, involving the former Shire of Cranbourne and EPA.

Recommendation 20

The City of Casey and the Frankston City Council centrally manage all future contracts through an officer or team with contract management expertise.

The City of Casey’s response

Council already centralises it procurement functions.

Like the vast majority of other Victorian councils, day to day contract management functions rest with those who have the necessary expertise and experience. These members of staff may work in different areas of Council operations.

Recommendation 20 is, therefore too absolute in terms. If it remains in this form, Council cannot support it.
The Frankston City Council’s response

Frankston City Council’s procurement and contract management unit will centrally oversight all complex and major contracts via a reporting and monitoring system.

Recommendation 21

The City of Casey and the Frankston City Council ensure their tendering procedures are consistent with the Local Government Act and the Victorian Government Purchasing Board guidelines.

The City of Casey’s response

Council’s tendering procedures are already consistent with the Local Government Act 1989 and incorporate relevant parts of the Victorian Government’s Purchasing Board Guidelines.

The Frankston City Council’s response

Frankston City Council will ensure its tendering procedures are consistent with the Local Government Act and, where appropriate, the Victorian Government Purchasing Board Guidelines.

Recommendation 22

The City of Casey and the Frankston City Council ensure that all future contracts are written to reflect accurately the needs of their respective municipalities and to define clearly the roles of parties to the contracts.

The City of Casey’s response

Council agrees with [this] Recommendation.

The Frankston City Council’s response

Frankston City Council accepts this recommendation.

Recommendation 23

The City of Casey and the Frankston City Council ensure that all contracts include a clear set of performance indicators against which they can be monitored.

The City of Casey’s response

The recommendation is supported.

The Frankston City Council’s response

Frankston City Council will ensure that all contracts, where appropriate, include a clear set of performance indicators against which they can be monitored. It is considered that certain contracts, such as for the supply of goods, may not require the inclusion of performance indicators.

Recommendation 24

The City of Casey combine its Purchasing Policy and its Environmental Purchasing Policy for ease of use by officers and to avoid potential conflicts.

The City of Casey’s response

Recommendation is accepted.
Recommendation 25
The Frankston City Council ensure it has a current procurement policy available on its website.

The Frankston City Council’s response
Frankston City Council will ensure that it has a current procurement policy available on its website by 19 November 2009 being the date when section 186A of the Local Government Act applies. The policy is currently being prepared for Council approval, partly based on the MAV [Municipal Association of Victoria] model recently circulated to Councils.

Recommendation 26
The City of Casey and the Frankston City Council revise their record-keeping systems to provide for a centralised repository of information relating to the Stevensons Road landfill.

The City of Casey’s response
A centralised repository for information concerning the former Stevensons Road Landfill has been established.

The Frankston City Council’s response
Frankston City Council accepts this recommendation.

Recommendation 27
The City of Casey revise its record-keeping system to ensure there is a central repository for information relating to each significant site or facility owned or managed by it.

The City of Casey’s response
Council’s current record-keeping already ensures that there is a central repository for information. The importance of utilising the system has already been reinforced with relevant staff.

Council has commenced the process of procuring a new record-keeping system. It will be a requirement of any such system that it too contains a facility for centralised information to be stored.

Recommendation 28
The Frankston City Council revise its record-keeping system to ensure there is a central repository for information relating to each significant site or facility owned or managed by it.

The Frankston City Council’s response
Frankston City Council accepts this recommendation.

Recommendation 29
The City of Casey and the Frankston City Council ensure that all relevant licences and permits for sites and facilities owned by them are issued to them rather than to their contractors.

The City of Casey’s response
Council supports licences and permits being held in its name where this is appropriate.

The Frankston City Council’s response
Frankston City Council accepts this recommendation.
Recommendation 30
The EPA ensure that all licences are reviewed annually and amendments made where existing standards are below best practice.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 31
The EPA develop comprehensive policies and procedures to guide its decision-making in relation to licence transfers. Checks should be conducted to ensure the licence holder is the individual or organisation that has primary responsibility for the site. This process should record who is responsible for making the decision and document the reasons.

The EPA’s response
EPA can fulfil this recommendation. This is being done as part of EPA’s current licensing and works approval reform program.

Recommendation 32
The EPA develop procedures to assist licence holders to understand their legal liability and responsibilities under the licence. This procedure should include provision for advice to be clearly documented in the EPA’s records and confirmed in writing to licence holders.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 33
The EPA review its Enforcement Policy with a view to providing clearer direction in relation to enforcement action. In particular the Enforcement Policy should clearly identify circumstances when enforcement action should take priority over working collaboratively with operators of EPA regulated sites.

The EPA’s response
EPA can fulfil this recommendation. EPA is currently reviewing its existing Enforcement Policy as part of developing a new Compliance Framework. This Framework will set clear guidance on making decisions on which type of action is appropriate.

Recommendation 34
The EPA review its compliance and enforcement procedures to ensure the EPA takes strong and decisive enforcement action in response to non-compliance.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 35
The EPA implement a reporting system that enables compliance issues and potential enforcement actions to be reported to its senior management.
The EPA’s response
EPA can fulfil this recommendation.

Recommendation 36
The EPA implement procedures for following-up notices and directions on a regular basis in order to determine whether the notices or directions are being complied with.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 37
The EPA review its Penalty Infringement Notice policy with a view to ensuring that Penalty Infringement Notices are issued within 60 days.

The EPA’s response
EPA can fulfil this recommendation.
EPA can revise its internal targets and adopt a revised internal target of issuing 90% of Infringement Notices within 60 days.

Recommendation 38
The EPA review its organisational priorities to ensure compliance and enforcement are maintained as a high priority. This process should include allocating sufficient resources to compliance and enforcement.

The EPA’s response
EPA has already fulfilled this recommendation.

Recommendation 39
The EPA develop an internal tracking system for Pollution Abatement Notices and other enforcement measures that are subject to an internal review process.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 40
The EPA amend the standard post-closure Pollution Abatement Notice for landfills to require testing for and management of the lateral migration of landfill gas.

The EPA’s response
EPA has already fulfilled this recommendation.

Recommendation 41
The EPA review its filing system and implement an electronic knowledge management system. The system should record chronologically all information relevant to EPA regulated sites, including site histories, photographs, internal and external correspondence, audit reports, other consultant reports and records of the EPA’s enforcement action.
The EPA’s response
EPA can partially fulfil this recommendation.
EPA can fulfil some of the intent of this draft recommendation by significantly improving its filing system. This will be achieved through the implementation of EPA’s current business systems reform program.

Recommendation 42
The EPA review its existing procedures in relation to supervision of staff, including the Unit Managers, in the Environmental Performance Unit and the Enforcement Unit.

The EPA’s response
EPA can fulfil this recommendation.
This can be achieved through a review that EPA will conduct of its relevant existing procedures.

Recommendation 43
The EPA review its existing procedures to ensure there is regular reporting and effective co-ordination between the Environmental Performance Unit and the Enforcement Unit.

The EPA’s response
EPA can fulfil this recommendation.
This can be achieved through a review that EPA will conduct of its relevant existing procedures.

Recommendation 44
The EPA review its allocation of staff to the Environmental Performance Unit and the Enforcement Unit to ensure these units have an appropriate number of staff with adequate experience in compliance and enforcement issues.

The EPA’s response
EPA has already fulfilled this recommendation.

Recommendation 45
The EPA develop and promulgate comprehensive policies and procedures to guide its decision-making in relation to becoming a party to legal proceedings. This process should record who is responsible for making the decision and document the reasons for the decision.

The EPA’s response
EPA can fulfil this recommendation.

Recommendation 46
The EPA develop a formal process to identify and bring to the attention of senior management significant cases where the EPA is not a party to legal proceedings or does not have a statutory role, but which may have a bearing on EPA legislation and/or policy. This should include provision for decision-making to be clearly documented; appropriate action to be taken to amend, revise or implement EPA legislation and/or policy; and a structured
reporting process to be established to ensure that the learnings from legal decisions on legislation and/or policy are reported to EPA officers.

The EPA’s response

EPA believes it is likely that the actions proposed in [the preceding] recommendation … will address this issue.

Recommendation 47

The EPA take steps to become a statutory referral authority listed under Clause 66 of the Victorian Planning Schemes in relation to planning permit applications relating to land within 500 metres of the boundary of a landfill.

The EPA’s response

EPA believes that this recommendation is outside the current scope of EPA to take action on, as it relates to a matter for whole-of-government consideration.

Recommendation 48

The EPA revise its existing policies to provide greater clarity and guidance in relation to how the buffer distance from a landfill is measured. This should include that landfill gas and its associated risks are key factors in any assessment of the amenity of nearby land users.

The EPA’s response

EPA can fulfil this recommendation.

Recommendation 49

The EPA amend its Waste Management Policy (Siting Design, and Management of Landfills) to make it a mandatory requirement of the EPA’s works approval process for all new landfills, that the owner of the property on which the landfill is to be situated provides a 500 metre buffer (measured from the boundary of the landfill) on land which they either currently own, or have an agreement to purchase or lease.

The EPA’s response

EPA believes that this recommendation is outside the current scope of EPA to take action on, and is a matter for whole-of-government consideration.

Recommendation 50

The EPA undertake a review of all landfills owned, operated or managed by municipal councils in Victoria to determine whether councils should continue to be involved in landfills.

The EPA’s response

EPA … believes [this recommendation] … is a matter for whole-of-government consideration.

Recommendation 51

The City of Casey revise the Cranbourne Development Plan to ensure that it accurately reflects how to measure buffers; when a reduction in the buffer can be considered; and the manner in which the reduction can take place.
The City of Casey’s response

The Cranbourne Development Plan already provides for when a reduction in the buffer can be considered and the manner in which the reduction can take place.

Recommendation 52

Peet as a signatory to the Section 173 Agreement take action to inform all prospective purchasers of properties in the Brookland Greens estate that all references to ‘sand extraction facility’ in the Section 173 Agreement are in fact references to the Stevensons Road landfill.

Peet’s response

We appreciate and commend your Recommendation …

Peet has already enacted the spirit of this recommendation ensuring all prospective purchasers can be in no doubt about the location and status of the disused landfill site.

Recommendation 53

VCAT be adequately resourced to review its procedures relating to the use of ‘approved suppliers’ of transcription services to ensure that adequate checks are in place to ensure the accuracy of transcripts.

VCAT’s response

VCAT has agreed with the need to enhance its recording facilities.

Recommendation 54

VCAT be adequately resourced to review and upgrade its audio recording procedures to ensure that all hearings are clearly audible and that the recording process is suspended during any adjournments.

VCAT’s response

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*The Metropolitan Waste Management Group’s response*

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## GLOSSARY

<table>
<thead>
<tr>
<th>Term</th>
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<tbody>
<tr>
<td><strong>Air sparging</strong></td>
<td>The process of injecting air directly into groundwater to increase biodegradation of waste.</td>
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<tr>
<td><strong>Aquifer</strong></td>
<td>A body of permeable rock that is capable of storing quantities of water.</td>
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<tr>
<td><strong>Asphyxiation</strong></td>
<td>Suffocation as a result of the displacement of oxygen caused by the presence of a contaminant within an enclosed space.</td>
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<tr>
<td><strong>Batter</strong></td>
<td>The sloped sides of a landfill.</td>
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<tr>
<td><strong>Bentonite</strong></td>
<td>A type of clay, expandable when moist, commonly used to provide a tight seal around a wall casing.</td>
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<tr>
<td><strong>Buffer</strong></td>
<td>The distance between the tipping area of a landfill site and a segment of the environment to be protected.</td>
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<tr>
<td><strong>Bore</strong></td>
<td>A hole drilled in the earth to explore or release gas or leachate.</td>
</tr>
<tr>
<td><strong>Daily cover</strong></td>
<td>A compacted layer of soil that is placed on all exposed solid waste in a landfill by the end of each day.</td>
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<tr>
<td><strong>Evacuation trigger level</strong></td>
<td>The Environment Protection Authority (EPA) uses the United Kingdom guidelines (UK guidelines) published by the Scottish Environment Protection Agency for guidance in relation to evacuation in situations where methane gas is present. The UK guidelines base the trigger level for evacuation of residents on 1.25 percent methane gas volume for volume of air.</td>
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<tr>
<td><strong>Extractive industry</strong></td>
<td>An industry involving the recovery or processing of soil, sand, gravel, rock, stone or other materials extracted from the earth.</td>
</tr>
<tr>
<td><strong>Groundwater</strong></td>
<td>Water naturally stored underground in aquifers, or that flows through and saturates soil and rock, supplying springs and wells.</td>
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<tr>
<td><strong>Imminent environmental hazard</strong></td>
<td>Section 53ZB(3) of the Environment Protection Act 1970 requires environmental auditors to notify the EPA of an ‘imminent environmental hazard’. The EPA’s Environmental Auditor Guidelines for Conducting Environmental Audits of August 2007 defines ‘imminent environmental hazard’ as ‘any situation that requires immediate attention to prevent a state of danger to human beings or the environment’.</td>
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<tr>
<td><strong>Inward hydraulic gradient</strong></td>
<td>Groundwater flows from points of high elevation and pressure to points of low elevation and pressure. An inward hydraulic gradient involves maintaining the leachate in a landfill at a lower level than the surrounding groundwater table so that water flows into rather than out of the landfill.</td>
</tr>
<tr>
<td><strong>Landfill</strong></td>
<td>A designated area (usually a pit) into which solid waste is placed for permanent burial.</td>
</tr>
<tr>
<td><strong>Landfill cap</strong></td>
<td>The final cover material placed on a landfill to reduce odour, prevent exposure to site users from contaminants such as landfill refuse and to minimise water infiltration into the contaminated area, thus reducing leachate generation. Capping material generally consists of plastic liners, compressed clay, drainage material and top soil.</td>
</tr>
</tbody>
</table>
Landfill cell  Adjoining sections of a landfill that are individually prepared, constructed, filled and capped.

Landfill gas  A mixture of gases, mostly consisting of methane and carbon dioxide, produced as organic waste decays in landfills. Landfill gas production is increased when the landfill material is wet and production may continue for at least 20 years after closure of the landfill.

Landfill gas extraction system  Designed to collect landfill gas generated by the degradation of putrescible solid waste. Landfill gas is sometimes utilised for energy generation.

Landfill gas flare  An elevated vertical stack or chimney used for burning landfill gas that has been extracted by a landfill gas extraction system and not utilised for energy generation. The purpose of flaring is to dispose of landfill gas safely and to control odour and adverse environmental impacts.

Landfill liner  Impermeable layers of heavy plastic, clay and / or gravel that protect against groundwater contamination through downward or lateral escape of leachate.

Lateral migration of landfill gas  The horizontal movement of landfill gas through the side walls of a landfill. As the amount of gas in the landfill increases due to continued decomposition of waste, pressure builds and the gas moves along the path of least resistance. The path of least resistance may be through the side walls of the landfill or in other man-made structures such as stormwater drains and electricity services.

Leachate  Liquid that has passed through solid waste and may have become contaminated with metallic, organic and inorganic compounds and toxins.

Leachate dam  Stores leachate extracted from a landfill and pumped from leachate sumps. Leachate is stored in the leachate dam prior to its discharge to sewer or other method of disposal.

Leachate sump  The lowest area of a landfill into which leachate drains and is pumped to a leachate dam.

Lower explosive limit (LEL) of methane gas  When exposed to an ignition source, methane gas is explosive between the lower explosive level of 5% methane gas volume for volume of air and the upper explosive level of 15% methane gas volume for volume of air.
**Methane gas**  
A colourless, odourless, flammable and non-toxic gas that is formed naturally by the decomposition of organic matter and is a major component of landfill gas. High concentrations of methane gas can cause asphyxiation (suffocation) by reducing the amount of oxygen in the air.

**Putrescible waste**  
Waste that readily decomposes. Includes domestic waste such as food waste and organic waste from gardens.

**Silurian bedrock**  
Bedrock is the layer of rock that lies just beneath the soil at the Earth's surface. Silurian is a geologic period thought to have covered the span of time between 443 and 417 million years ago; also the corresponding system of rocks.

**Slimes**  
A by-product of sand mining which generally exists in a sludge or slurry form. Slimes consist mainly of clay which has been washed from the extracted sand and fine sand particles. Slimes have been used in some cases to construct landfill liners.

**Solid inert waste**  
Hard waste and dry vegetative material which does not decompose and has a negligible activity or effect on the environment, such as demolition material, concrete, bricks, plastic, glass, metals and shredded tyres.

**Tipping area**  
The ‘tipping area’ of a putrescible landfill is defined in the EPA’s *State Environment Protection Policy (Siting and Management of Landfills Receiving Municipal Wastes) 1991* as ‘a place within a landfill site in which municipal wastes are, have been or will be deposited’.

**Upper explosive limit (UEL) of methane gas**  
See ‘Lower explosive limit (LEL) of methane gas’.

**Waste management**  
Management of the collection, recovery and disposal of waste, including options for waste reduction.

**Water table**  
The level below which the soil is saturated, that is, the level below which pore spaces between the individual soil particles are filled with water. Water in the soil does not fill all pore spaces above the water table and below the ground surface. The water table level can be near the surface of the ground or far below it.
KEY STAKEHOLDERS

Administrative Appeals Tribunal (AAT): The Victorian-based AAT was the predecessor, until 1 July 1998, of the Victorian Civil and Administrative Tribunal (VCAT).

Australian Groundwater Consultants Pty Ltd (AGC) / AGC Woodward-Clyde Pty Ltd/ URS Australia Pty Ltd (URS): AGC, a consulting company, sold to Woodward-Clyde (USA) in 1989 and became AGC Woodward-Clyde. AGC Woodward-Clyde was later sold to San Francisco-based URS in 1997.

Aylward, Martin/ Martin Aylward & Associates: Mr Martin Aylward was the South Eastern Regional Waste Management Group's Regional Manager. Mr Aylward's company, Martin Aylward & Associates, provides consultancy services in waste management.

Bellair, Terry: Dr Terry Bellair is an environmental consultant with Environmental Science Associates.

Bosco Jonson Pty Ltd (Bosco Jonson): Bosco Jonson is a consulting firm providing surveying, urban designing and planning services.

Casey Frankston joint venture: The Casey Frankston joint venture replaced the Casey Frankston User Group. The joint venture formed the Joint Venture Management Committee on 10 June 2003, which consisted of one representative from each of the cities of Casey and Frankston.

Casey Frankston User Group: When the Stevensons Road landfill commenced operation, the cities of Casey and Frankston formed a sub-group of the South Eastern Regional Waste Management Group, called the Casey Frankston User Group.

City of Casey: The City of Casey is a municipal council that was formed on 15 December 1994 as a result of the Victorian local government amalgamations. The City of Casey's geographical area includes that of the former Shire of Cranbourne.

Country Fire Authority (CFA): The Country Fire Authority has a statutory role to respond to a variety of fire and emergency incidents in Victoria.

Department of Human Services (DHS): The Department of Human Services plans, funds and delivers health, community and housing services to Victorians.

Department of Sustainability and Environment (DSE): The Department of Sustainability and Environment is responsible for sustainable management of water resources, climate change, bushfires, public land, forests and ecosystems in Victoria.

Emergency Management Joint Public Information Committee (EMJPIC): The Emergency Management Joint Public Information Committee was responsible for ensuring a co-ordinated approach to public information and the media in relation to emergency management at the Stevensons Road landfill.

Emergency Management Team (EMT): The Emergency Management Team led the emergency response at the Stevensons Road landfill at an operational level.

ENSR Australia Pty Ltd (ENSR): Formerly HLA-Envirosciences Pty Ltd (HLA) and HLA-ENSR Pty Ltd, ENSR was engaged by the City of Casey to provide technical advice on the rehabilitation of the Stevensons Road landfill and monitoring in the Brookland Greens estate.

Environment Protection Authority (EPA): The EPA is a statutory authority established under the...
Authority (EPA)  
*Environment Protection Act 1970.* Its purpose is to protect, care for and improve the environment in Victoria.

Energex  
Energex is an energy company now based in Queensland.

Eva, Brian/ Eva & Associates Pty Ltd  
Mr Brian Eva is an environmental auditor with Eva and Associates Pty Ltd.

Frankston City Council  
The Frankston City Council is a municipal council located south-west of Cranbourne.

Golder Associates Pty Ltd (Golder Associates)  
Golder Associates is an international company providing environmental and engineering services.

Grosvenor Lodge Pty Ltd  
Grosvenor Lodge is a Victorian-based company providing a variety of services to the waste management industry.

HLA-Envirosiences Pty Ltd (HLA)/ HLA-ENSR Pty Ltd/ ENSR Australia Pty Ltd (ENSR)  
HLA was an Australian company providing expertise in environmental science. In late 2007, HLA merged with USA company ENSR to form HLA-ENSR and later ENSR Australia.

Lane, Anthony/ Lane Consulting/ Lane Piper Pty Ltd (Lane Piper)  
Mr Anthony Lane, an environmental auditor, was with Lane Consulting and is now with Lane Piper Pty Ltd after a merger in July 2006.

Landfill Management Services Pty Ltd (LMS)  
LMS is a specialist landfill gas company whose function includes researching the development of landfill gas.

Maddocks  
Maddocks is a commercial law firm based in Melbourne and Sydney.

Maltby, David  
Mr David Maltby is an Environmental Management Consultant.

Metropolitan Waste Management Group (MWMG)  
The Metropolitan Waste Management Group, established on 1 October 2006, is responsible for coordinating municipal waste management activities in metropolitan Melbourne. The Metropolitan Waste Management Group is the successor to the four former Regional Waste Management Groups, which included the South Eastern Regional Waste Management Group.

Minister for Environment and Climate Change  
The Hon Gavin Jennings MLC was Minister for Environment and Climate Change during the emergency management of the Stevensons Road landfill.
Minister for Police and Emergency Services
The Hon Bob Cameron MP was Minister for Police and Emergency Services during the emergency management of the Stevensons Road landfill.

Municipal Emergency Coordination Centre (MECC)
The Municipal Emergency Coordination Centre was the Emergency Management Team’s base.

Office of the Emergency Services Commissioner (OESC)
The Office of the Emergency Services Commissioner’s role is to provide leadership in emergency management for Victoria, specifically to ensure the delivery of efficient, equitable and integrated fire and emergency services.

Peet & Co Casey Land Syndicate Limited (Peet)
Peet is an Australian land and housing development company. Peet & Co Casey Land Syndicate Limited is an investment branch of the larger Peet & Company Limited, based in Perth that was established for the development of the Brookland Greens estate.

Russell Kennedy Pty Ltd (Russell Kennedy)
Russell Kennedy is a commercial law firm based in Melbourne.

Rust PPK Pty Ltd (Rust PPK)
Rust PPK was a consultant engineering company.

Select Earthmoving Pty Ltd/Select Waste Management Pty Ltd (Select)
Select Earthmoving Pty Ltd was an earthmoving company that was closely related to another company, Select Waste Management Pty Ltd. For the sake of simplicity, both companies are referred to as ‘Select’ in this report. All companies in the ‘Select’ group are now de-registered.

Shaughnessy, James
Mr James Shaughnessy was the National Training Advisor – Landfill Gas at the United Kingdom Environment Agency.

Shire of Cranbourne (the Shire)
The Shire of Cranbourne was the predecessor municipal council to the City of Casey. The City of Casey was formed on 15 December 1994 as a result of local government amalgamations.

SITA Environmental Solutions (SITA)
SITA is a French company providing a range of environmental and other services. SITA’s predecessor company was Browning Ferris Industries Pty Ltd (BFI).

South Eastern Regional Waste Management Group (SERWMG)
The now-defunct South Eastern Regional Waste Management Group was one of sixteen regional waste management groups in Victoria. The South Eastern Regional Waste Management Group was responsible for planning and facilitating waste management and resource recovery services in the municipalities of the south-eastern area of Melbourne. The South Eastern Regional Waste Management Group was dissolved in October 2006 when a number of the waste management regions amalgamated to create the Metropolitan Waste Management Group (MWMG).

State Emergency Strategy Team (SEST)
The State Emergency Strategy Team provided strategic leadership at the State level for the emergency response at the Stevensons Road landfill.

Stuart Hercules
Mr Stuart Hercules, Site Manager of the Stevensons Road landfill, provided environmental and engineering services to the City of Casey.

URS Australia Pty Ltd (URS)
Formerly Australian Groundwater Consultants (AGC) and AGC Woodward-Clyde.
<table>
<thead>
<tr>
<th>Key Stakeholders</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vella Sands Pty Ltd/ Warriak Pty Ltd (Vella Sands)</strong></td>
<td>Vella Sands, a company owned by Mr Frank Vella, was the previous owner of Lots 7 and 10 Stevensons Road, the land the Stevensons Road landfill is situated on. Vella Sands mined Lots 7 and 10 for sand prior to selling the land to the Shire of Cranbourne. Vella Sands later became Warriak Pty Ltd.</td>
</tr>
<tr>
<td><strong>Victoria Emergency Management Council Coordination Group (VEMCCG)</strong></td>
<td>The Victoria Emergency Management Council Coordination Group is responsible for advising the Minister for Police and Emergency Services, as the Coordinator in Chief of Emergency Management, on matters including coordination of agencies responsible for emergency prevention, response and recovery.</td>
</tr>
<tr>
<td><strong>Victorian Civil and Administrative Tribunal (VCAT)</strong></td>
<td>Established on 1 July 1998 as the successor to the AAT, VCAT deals with a range of disputes between individuals and between individuals and government, including planning and environment matters.</td>
</tr>
<tr>
<td><strong>Victoria Police</strong></td>
<td>Victoria Police played a role in the management of the emergency at the Stevensons Road landfill.</td>
</tr>
<tr>
<td><strong>Warriak Pty Ltd (Warriak)</strong></td>
<td>Formerly Vella Sands.</td>
</tr>
<tr>
<td><strong>Worksafe Victoria</strong></td>
<td>Worksafe Victoria is the manager of Victoria’s workplace safety system. Its responsibilities include helping to avoid workplace injuries occurring and enforcing occupational health and safety laws.</td>
</tr>
</tbody>
</table>
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A report of investigations into the City of Port Phillip
August 2009

An investigation into the Transport Accident
Commission’s and the Victorian WorkCover Authority’s
administrative processes for medical practitioner billing
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Conflict of Interest and Abuse of Power by a Building
Inspector at Brimbank City Council
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Whistleblowers Protection Act 2001
Investigation into the alleged improper conduct of
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Crime statistics and police numbers
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Report of an investigation into issues at Bayside Health
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Probity controls in public hospitals for the procurement
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August 2008

Investigation into contraband entering a prison and
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June 2008

Conflict of interest in local government
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Conflict of interest in the public sector
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Investigation into the handling, storage and transfer of
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Complaint handling guide for the Victorian Public Sector
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Review of the Freedom of Information Act: discussion
paper
May 2005

Review of complaint handling in Victorian universities
May 2005

Investigation into the conduct of council officers in the
administration of the Shire of Melton
March 2005

Discussion paper on improving responses to sexual abuse
allegations
February 2005

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Essendon Rental Housing Co-operative (ERHC)
December 2004

Complaint about the Medical Practitioners Board of
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December 2004

Ceja task force drug related corruption - second interim
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