

Planning and Environment Act 1987

Panel Report

Casey Planning Scheme

Amendment C115 and Planning Permit Application PlnA00857/07

Proposed Ballarto Road landfill and signs

12 February 2014



Planning and Environment Act 1987

Panel Report pursuant to Section 25 of the Act

Amendment C115 to the Casey Planning Scheme

Permit Application PInA00857/07

Proposed Ballarto Road landfill and signs

A handwritten signature in black ink, appearing to read 'Jenny Moles'.

Jenny Moles, Chair

A handwritten signature in black ink, appearing to read 'Doug A. Munro'.

Doug Munro, Member

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Amendment Summary

The Amendment and Permit Application	Casey Planning Scheme Amendment C115 and planning permit Application PlnA00857/07
Subject site	950 Ballarto Road, Botanic Ridge
Purpose of Amendment and Permit	To allow the use and development of the land for a Refuse disposal facility (solid inert landfill) and the display of business advertising signs
The proponent	Contour Consultants Australia Pty Ltd on behalf of Stevenson Brothers Industries Pty Ltd (SBI)
Planning Authority	Casey City Council
Exhibition	11 July 2013 to 12 August 2013

Panel Process

The Panel	Initially Mr Lester Townsend (Chair) and Mr Doug Munro (Member) for the Panel Directions Hearing, then reconstituted as Ms Jenny Moles (Chair) and Mr Doug Munro (Member) for the Hearing
Directions Hearing	31 October 2013
Panel Hearing	25 – 26 November 2013
Site inspections	Site: 15 November 2013 (accompanied); and general locality: 25 November 2013 (unaccompanied)
Appearances	Messrs Peter Hobbs, Michael Pollard and Michael Jansen represented the Casey City Council, the Planning Authority Mr Stuart Morris QC and Ms Marita Foley, Barrister instructed by Merrylees Legal, represented Stevenson Brothers Industries Pty Ltd, the proponent. They called the following expert witnesses: • Mr Jason Walsh, traffic consultant of Traffix Group • Mr Michael Barlow, town planner of Urbis consultants Mr Geoffrey Cousins appeared in person.
Submissions	In response to exhibition, the Council received 15 submissions within the advertising period and two late submissions. Six were objecting submissions.
Date of this report	11 February 2014

1 Introduction

Amendment C115 (the Amendment) to the Casey Planning Scheme (the Planning Scheme) was prepared by the Casey City Council as Planning Authority in response to a request by Stevenson Brothers Industries Pty Ltd (the proponent). The proponent is the owner of the land at 950 Ballarto Road, Cranbourne South (now Botanic Ridge). As exhibited, the Amendment proposed to introduce a site specific provision in Clause 52.03 and an Incorporated Document in the schedule to Clause 81.01 to allow a permit to be granted for the use and development of the land for a Refuse disposal facility (solid inert landfill) and the display of business advertising signs. The proposed use and development and the extent of the proposed signage was at that time prohibited under the Farming Zone and Clause 52.05.

Application was also made concurrently for a planning permit (Application Pln00857/07) for the Refuse disposal use and development, and display of the signs. A draft permit was exhibited together with the Planning Scheme changes as is required for joint processing under section 96A and following sections of the *Planning and Environment Act 1987* (the Act).

After exhibition of the Amendment and proposed permit, State-wide changes were made to the Farming Zone which had the effect of changing the use and development of land from prohibited to discretionary. Accordingly, the Amendment is no longer required to allow consideration of the proposed Refuse disposal facility itself. The Amendment is continuing, however, on the basis that it will allow consideration of the component of the application that relates to the display of the business signs.

The proponent and the Council have indicated that they believe that the section 96A process can lawfully continue. There were no views to the contrary presented to the Panel.

The land in question is situated a short distance inside the metropolitan Urban Growth Boundary. The area has a mixture of uses typical of the metropolitan urban fringe including a chicken farm, developing housing estates, landfills, a golf course, racing stables, limited areas of land in rural use, and some land containing remnant vegetation and/or possessing other biodiversity values. The Royal Botanical Gardens Cranbourne (RBGC) also abuts the subject site. The site itself has been used for many years as a quarry.

Given the current use of the land as a quarry, many of the impacts raised as concerns in the written submissions to the Amendment and at the Panel Hearing, such as road safety and dust, can be expected to be not dissimilar to those which are or might be associated with the quarry use. The new use does have some potentially different effects, however. All of these effects together with broader strategic considerations require assessment.

2 Background

2.1 The subject site and surrounds

The subject land is an irregularly-shaped site of some 41.6 hectares with a frontage to the southern side of Ballarto Road of some 550 metres. It is formally known as Lot 1 on TP257508P and on TP190083Q. The site is relatively flat with a slight fall to the south-west corner. A north-south overhead electricity transmission line bisects the site.

The land has been used for soil and sand extraction and as a mudstone quarry since the 1970s. The quarry still has a potential life of around 26 years at current rates of extraction. The quarry hole is some 400 metres by 200 metres or an area at the surface of approximately eight hectares. It has a maximum depth of some 40 metres. The site contains a small office, a weighbridge and several machinery sheds and works areas, all located on the northern part of the site. There are also large stockpiles of graded excavated material awaiting sale and removal from the site. Several tracts of remnant native vegetation occur, particularly along the northern and eastern boundaries. The remnant vegetation along the eastern boundary has been supplemented by recent planting.

The Panel was told that a 300 metre housing buffer around the quarry void is imposed by the relevant Work Authority issued by Department of Environment and Primary Industries¹.

Aspects of the existing quarrying operations were described by the proponent² as follows:

1. The SBI Quarry has been in operation since 1975 when it was initially established as a sand and soil quarry then later as a rock quarry on the underlying sedimentary rock. The site has mined approximately 50% of the approved extraction area.

2. The remaining life of the quarry is dependent on prevailing market conditions. The quarry work plan prepared in 2007 states:

“The total volume of sedimentary rock (mudstone material) still remaining in the proposed extraction area is approximately 2.7 million cubic metres in situ or 6.48 million tonnes.

The current output from the mudstone operations is approximately 200,000 tonnes per annum.”

3. 200,000 tonnes equates to approximately 85,000 cubic metres.

4. These estimates are consistent with the current operation with approximately 5.2 million tonnes of mudstone remaining providing an approximate life of 26 years.

5. The site produces mudstone that is either blasted or ripped from the quarry area. Some stone is sold without further processing and other stone

¹ WA 441 amended on 5 November 2007.

² Document P5 at the Panel Hearing produced in response to Panel Directions 8-10.

is crushed and screened. The stone is used for purposes of road sub base and backfill.

....

11. The quarry pit is dewatered by a sump pump operating at the base of the pit.

12. Noise from the quarry operations, in particular blasting, whilst compliant with site requirements is discernible from residential areas to the north of Ballarto Rd and houses in the Settlers Run Estate.

13. Blasting typically occurs once a week. If blasting is to occur the site manager telephones neighbours.

14. Dust and noise generated by vehicle movements on Ballarto Rd, have resulted in complaints in the past.

15. Dust is currently managed on site by use of sprays on conveyors, water cart is used on roads in addition to fixed sprinklers.

...

19. In most years the experience with the quarry has been that there is a water deficit requiring mains water to be used for dust suppression over summer months.

20. The wetter years experienced over the last two years have necessitated discharge of quarry sump water via a drainage line to the south west of the site boundary. This water is discharged into the South East Water stormwater drainage system at Pearcedale Rd.

The site has vehicular access via a cross-over from Ballarto Road towards the eastern end of the frontage. Ballarto Road is a local road of two lane construction, unsealed and with some significant remnant vegetation along either side. It is approximately 6-7 metres in width in a 20 metre wide reservation.

Ballarto Road intersects with the Cranbourne-Frankston Road approximately 1.2 kilometres to the west. That intersection has a roundabout. Cranbourne-Frankston Road is a primary arterial road and hence provides access to the network of Declared Roads. It has two lanes in each direction in this vicinity.

Ballarto Road terminates at the western entry to the RBGC about 200 metres east of the eastern site boundary and 475 metres east of the entry to the site. Two local roads run to the north from the section of Ballarto Road east of the subject site:

- the unsealed Laurie Cleary Lane (the former Cemetery Road) which terminates at a gate-controlled entry to the Cranbourne Racecourse and training complex; and
- unsealed Stevenson's Road (now Cyril Beechey Lane), providing access to the low density residential surrounds of the racecourse and the now closed Stevenson's Road putrescible waste landfill.

The vegetated land to the immediate north of Ballarto Road is in Council ownership and used as undeveloped open space. Across Ballarto Road to the north-east is the low density

residential area characterised by horse agistment and other activities associated with the Cranbourne Racecourse. A broiler farm (much of it disused) with a dwelling abuts the northern part of the site's eastern boundary - at 980 Ballarto Road. The remainder of the eastern abuttal is occupied by the RBGC with the closest part of the Gardens supporting remnant vegetation and being inaccessible to the public. The Settlers Run Golf Course and Botanic Ridge estate are located generally to the south of the site. To the west there is a semi-rural property with a house. A vacant 20 metre wide Crown road reserve abuts the south-western boundary of the site. It is proposed for development by the Council as a shared path and equestrian trail.

The nearest dwelling to the subject site is that on the broiler farm to the east. It is some 200 metres from the nearest point of the existing quarry hole³. The dwelling on the semi-rural property to the west is approximately 535 metres from the quarry void; the closest dwelling to the north of Ballarto Road is some 475 metres from the void; and to the south is the Settlers Run estate at 450 metres⁴. Figure 1 showing residential noise receivers is drawn from the supporting acoustic report prepared for the proponent by Marshall Day Acoustics Pty Ltd of 10 May 2013.

As noted earlier, the site is included in the Farming Zone. It is also subject to the Wildfire Management Overlay (or Bushfire Management Overlay⁵) and Environmental Significance Overlay (Schedule 3) which relates to the RBGC environs.

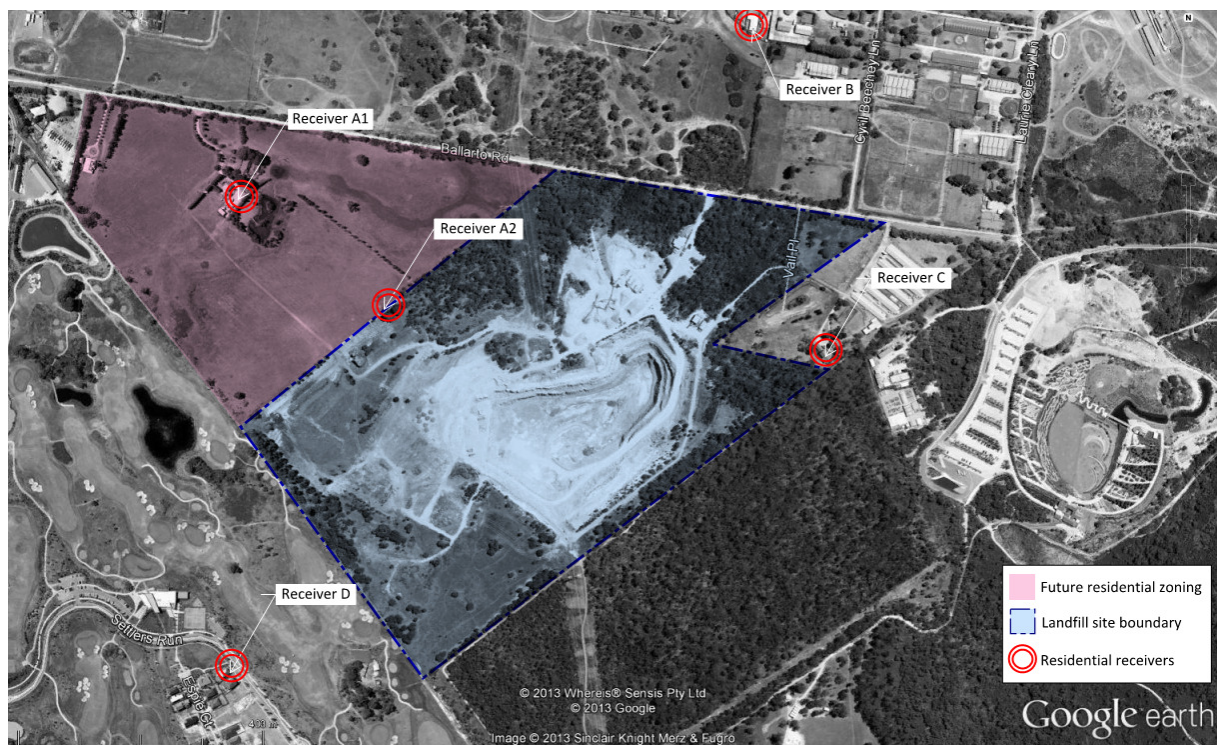


Figure 1: Nearest residences (not including Receiver A2) (Source Marshall Day Acoustics, report supporting application).

³ Michael Barlow evidence page 9 (Document P2 at the Panel Hearing).

⁴ As above.

⁵ The Panel understands that while the 'Wildfire Overlay' is the name appearing on the Planning Scheme maps, the provisions of the Bushfire Management Overlay in the ordinance actually apply.

2.2 The proposal

Essentially it is proposed to convert the use of the land to a landfill – filling the quarry void in stages. It is proposed that the only permissible fill material would be solid inert waste and it is expected that the filling would be completed in around seven or eight years. Mr Michael Barlow, who gave planning evidence for the proponent, suggested that the most appropriate long term use of the filled land would be as open space and recreation complementing the RBGC and golf course as has been discussed between the proponent and the Council. It is contemplated that the unfilled land on the site may be later proposed for residential purposes.

Concerning the proposed landfill the proponent advised:

22. The weighbridge and site office will continue to be used in the landfill operations. The existing water cart, excavators, grader and loaders will also be used in the landfill. The mobile crushing and screening equipment will also continue to be used in the hole.

23. This application is for a planning permit for the operation of a solid inert landfill. Solid inert waste is defined by the EPA as follows:

“Solid inert waste is hard waste that has a negligible activity or effect on the environment. The waste may be either a municipal or industrial waste.”

Solid inert wastes consist of material such as building and demolition material, e.g. soils, concrete, bricks, dry timber, plastic, glass, metals. They can also contain wastes from hard waste collections, transfer stations and waste collected from commercial premises in bins and skips. Material deposition at solid inert waste landfills is controlled by the EPA Waste Discharge licence. The waste discharge licence will contain a schedule setting out all permissible waste streams. Prescribed industrial wastes such as contaminated soil and sludges, hazardous wastes and putrescible wastes containing food or green wastes are not permitted to be accepted at solid inert landfill sites. Accordingly, such wastes will not be listed in the schedule forming part of the waste discharge licence issued by EPA and will therefore not be capable of being accepted at the site...

25. This landfill will not be open to the general public. Council and commercial customers only will be permitted entry.

26. All loads of SIW entering the landfill will be inspected at the site gatehouse. Loads containing odorous, putrescible waste materials or other non-complying wastes will not be permitted entry to the landfill and vehicles will be directed to leave the site.

27. Regular inspection of the landfill cell face will monitor deposits of waste and provide supervision to ensure compliance with the Landfill BPEM.

28. Landfill gate fees including the EPA landfill levy of \$58.50 per tonne in 2014/15 provide a strong incentive to divert waste from landfill where commercially viable. Commercial waste bin operators now take bins

collected from demolition or construction sites and sort the recyclable material such as concrete, steel and reusable timber from the waste before transporting the non-recyclable residue to the landfill. The residual waste stream from skips often resembles soil mixed with broken glass, pipes and other construction material.

29. Similarly, waste collections from commerce and industry are structured so that larger waste generators such as warehouses or supermarkets have bins for recyclable materials such as cardboard and plastic film and another bin for non-recyclable wastes. Commercial collectors will organise their routes into wet runs that collect loads that go to putrescible landfill and dry runs that collect wastes for solid inert landfill.

30. Transfer stations and hard waste collections produce solid inert waste streams such as used household goods such as broken furniture, household appliances (not televisions and computers that are now covered by the national recycling scheme), timber wastes, composite packaging.

...

32. Wastes deposited at the landfill will be covered daily in accordance with the anticipated EPA licence requirements.

...

37. The EPA Waste Discharge Licence will require the preparation of landfill monitoring and management plans that control the operation of the site and the management and reporting of operations including oversight by EPA accredited auditors.

38. The landfill will be filled in a staged manner and wastes placed in thin layers to enable effective compaction.

39. Vehicles will be directed to deposit waste at the designated daily tipping face area that is expected to be approximately 25 metres by 25 metres.

...

41. The landfill operations require that surface water and groundwater are isolated from the wastes by a lining system. Groundwater and surface water entering the pit will be directed to the sump in an underdrainage blanket placed beneath the liner... Sump water will be pumped to the groundwater tank adjacent to the pit.

52. A drainage layer will be placed above the landfill liner. The drainage layer is comprised of a 300 mm thick gravel blanket. This gravel blanket will contain a network of pipes that facilitate drainage of leachate into the leachate sump...

53. ... Any leachate in the landfill leachate sump will be pumped from the sump to the leachate tank/s above the landfill. Landfill leachate will be disposed of by either evaporation over the landfill area or transportation to

a waste water treatment plant such as the South Eastern Purification Plant at Carrum.

...

57. Trucks depositing waste in the landfill will access the site from Cranbourne – Frankston Rd or Pearcedale Rd via Ballarto Rd... Landfill traffic will be restricted to waste trucks. Small vehicles will not be permitted by the operator of the landfill to deposit waste... No access to private vehicles and small trailers will be allowed.

...

71. As the site is filled to the final approved waste level it will be progressively capped. The landfill cap will be comprised of a barrier layer and a topsoil layer to support vegetation growth. A “phytocap” is proposed for this landfill.

73. After completion of the rehabilitation the landfill area of the site will be provided for use as public open space. Details of the post rehabilitation ownership are to be determined and will form part of a site 173 agreement between the Council and SBI.

...

77. The EPA requires landfill operators to establish a financial assurance fund that contains sufficient money fund post closure activities.

...

79. The volume of airspace between the base of the pit and the top of the landfill cap is 2,800,000 cubic metres. Approximately 10% of this would be used by liner and cap leaving 252,000 cubic metres.⁶

...

82. A waste density of 0.75 tonnes per cubic metre has been used to estimate the life of the landfill. Landfill waste density estimates vary and 0.75 is within the expected range for Victorian Solid Inert Landfills. This would provide airspace for 1,890,000 tonnes.

The Panel has not identified anything in the application material providing details about the proposed signage (other than a reference in the Aboriginal Cultural Heritage report by Matrix Archaeological Services Pty Ltd and the minutes of the Council meeting on 19 August 2008 to its being intended to be approximately 2 metres by 0.9 metres⁷). Mr Morris QC for the proponent at the Hearing, however, later advised that:

The site specific control [allowing a sign of greater than three square metres in area] will allow a sign of sufficient size announcing the entry to the site ... to [be] erected and displayed... The entry to the site is not readily

⁶ Note: we believe that this should be 2,520,000 cubic metres for solid inert waste disposal.

⁷ At page iv and second page respectively.

visible and it is proposed to erect signage highlighting the entry and displaying information regarding the hours of operation, the type of landfill and where wastes may be deposited...

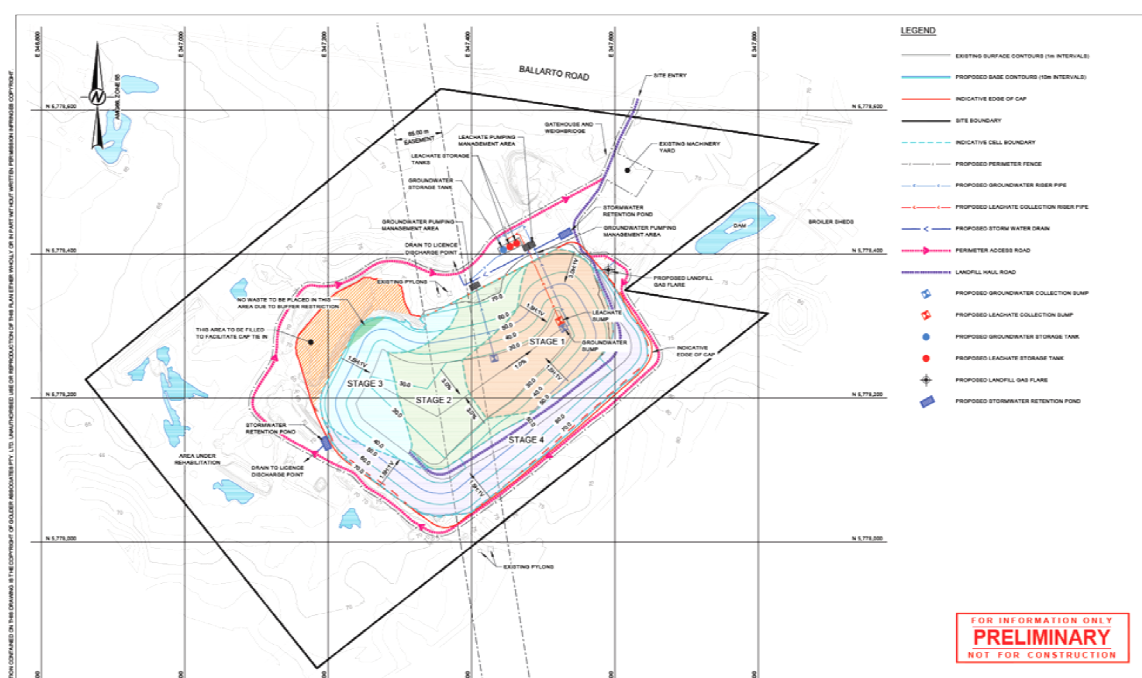
Mr Barlow as part of his planning evidence for the proponent also addressed the impacts of a non-floodlit or non-illuminated sign of greater than three square metres.⁸

Other details concerning rates of fill, amenity protection measures and traffic generation were provided by the proponent⁹. Where relevant, details of these are included later in the discussion of issues in this report. It was said by the proponent that none of the works and activities would require the removal of significant native vegetation.

Also late in the Panel Hearing an intention to partially continue quarrying operations on the site while preparatory works were undertaken for the landfill was raised for the proponent by Mr Morris. The intention to continue sales of quarried materials from the site until such time as the stockpiled material was spent was also indicated.

Figure 2 is a preliminary diagram showing the filling arrangement proposed.

Figure 2: Filling stages (Source: Proponent response to Panel Directions 8-10)



The Refuse disposal facility will require a subsequent Works Approval and Discharge Licence from the EPA. Many of the more detailed aspects of the use and development such as characteristics of the landfill liner, covering regimes, discharges of waste water and the like as well as buffer issues are expected to be subject to EPA requirements.

⁸ These effects he found to be acceptable given the limited viewing opportunities along the roadway and the screening effects of existing vegetation (page 14 of his report).

⁹ In Hearing Document P8.

2.3 The Amendment

The Amendment was prepared at the request of Stevenson Brothers Industries Pty Ltd (the proponent).

The Amendment/permit as exhibited was described in the Explanatory Report as follows:

The amendment seeks to insert a site-specific control in the Schedule to Clause 52.03 and corresponding incorporated document in the Schedule to Clause 81.01 to allow a permit to be granted for the use and development of a Refuse Disposal Facility (Solid Inert Landfill) at 950 Ballarto Road, Cranbourne South, which is currently operating as a quarry. The site specific control would also allow for applications for advertising signs to be considered under Category 3 of Clause 52.05 of the Casey Planning Scheme. Pursuant to Division 5 of the Planning and Environment Act 1987, the proponent has also sought Council's consideration of a concurrent planning application for the use and development of a Refuse Disposal Facility (Solid Inert landfill) and for the display of business advertising signs.

The exhibited draft permit is included as Appendix A to this report.

The request by the proponent for the Amendment/permit was initially made in October 2007. However how the Council stalled the processing of the request on a number of occasions while issues around the offsite effects of the nearby Stevenson's Road putrescible landfill were addressed.

The Amendment/permit was authorised under delegation by the Department of Transport, Planning and Local Infrastructure (DTPLI) on 17 August 2012.

On 14 May 2013, the proponent's planning consultants wrote to the Council providing updates to the material that had supported the initial and renewed request. The updated or new reports and other material were:

- A copy of the Certificates of Title
- Plans prepared by Golder Associates
- Town Planning and Urban Context Report by Contour Consultants, May 2013
- Bushfire Management Statement by Terramatrix, May 2013 (for the leachate tanks)
- Aboriginal Cultural Heritage Statement by Matrix, April 2013
- Traffic Engineering Assessment by Traffix Group, May 2013
- Air Quality Modelling Assessment by Golder Associates, May 2013
- Flora and Fauna Report by Ecolink, December 2012
- Landscape Concept Masterplan by ERM, May 2013
- Environmental Noise Assessment by Marshall Day Acoustics May 2013.

Earlier supporting material included:

- Buffer Assessment by Golder Associates, March 2012
- Hydrological Assessment, Melbourne Formation Aquifer, Cranbourne Area by John Leonard Consulting Services, August 2007
- Landfill Needs Assessment by Essential Economics, September 2007
- Traffic Engineering Assessment By Traffix Group, April 2007

- Traffic Impact Assessment by Traffix Group, September 2007.

The Amendment/permit was placed on public exhibition between 11 July 2013 and 12 August 2013. As noted earlier, 17 written submissions were received in response, with two of these being late submissions. A list of all submitters is included as Appendix B to this report.

The following 11 submissions did not object to the Amendment/permit:

- Department of State Development, Business and Innovation (DSDBI)
- Environment Protection Authority
- Cranbourne Turf Club
- SBI Quarries Cranbourne (proponent)
- Medallist Projects Pty Ltd (Botanic Ridge, Stage 1 developer)
- Settlers Run Owners Corporation (Botanic Ridge, Stage 1)
- Lynn and Colin Alderson for Alderson Racing
- Mary Quinn
- Geoff Cousins
- Royal Botanic Gardens Cranbourne (late submission)
- Department of Environment and Primary Industries (late submission).

The proponent and the RBGC, however, both requested changes to the proposed planning permit in their submissions. EPA requested certain conditions be included on the permit.

Six opposing submissions were received as follows:

- SITA Australia Pty Ltd
- Linda Sahhar and Michael Selesnew
- Frank Puliafito
- Michael Patterson
- Larry Childs
- Mr and Mrs Morris c/o local member.

The Council submission to the Panel Hearing summarised the issues raised in submissions received from:

- *Revised planning permit conditions from authorities and the proponent.*
- *The site is located too close to residential areas.*
- *Amenity impacts including noise, odour and dust.*
- *The use may become a putrescible landfill or waste transfer station.*
- *Concerns over detailed design: landfill lining and flare.*
- *Ballarto Road should be sealed and a gate installed to the east of the site entry.*
- *There is inadequate demand for an additional solid inert waste landfill.*
- *The proposal should include a recycling facility.*
- *Waste discharge from the existing quarry to Settlers Run estate.*
- *Notice of the amendment was not given to a wide enough catchment.*
- *Discrepancies between traffic volumes predicted in traffic reports.*
- *Transfer of site for public recreation/use following cessation of landfill.*

The additional issues raised in the two late submissions were also summarised:

- *Ballarto Road – traffic management and construction specifications.*
- *Landscape buffer at interface to RBGC.*

On 5 September 2013, Amendment VC103 made State-wide changes to the Farming Zone which had the effect of changing the use and development of the land for a Refuse disposal facility from prohibited to discretionary. Only the requirement to introduce a site specific Planning Scheme provision to allow signage in excess of 3 square metres remains.

The Council and proponent both accepted legal advice that the section 96A process could be continued.

At its meeting of 1 October 2013, the Council considered this issue and all submissions and resolved to refer the submissions to a Panel.

The Council also adopted a revised Incorporated Document to provide the necessary exemption for the land in relation to the advertising sign controls alone. This was subsequently presented to the Panel.

The Council also adopted a number of changes to the proposed permit in response to the submissions. The Council believe that it had to include changes requested by EPA and the Department of State Development, Business and Innovation because as statutory referral authorities, the conditions suggested were mandatory. The Council supported these permit changes at the subsequent Panel Hearing but agreed to a number of other changes as well.

The Panel notes that in relation to section 96A amendment/applications, the provisions of the Act indicate that the mandatory application of referral authority conditions is not required¹⁰. It is nevertheless appropriate that the Planning Authority consider whether or not the conditions should be included.

2.4 Panel process

The Panel to consider the Amendment was appointed under delegation from the Minister for Planning on 30 October 2013 and comprised Lester Townsend (Chair) and Doug Munro (Member). The Panel was later reconstituted, on 6 November 2013, as Jenny Moles (Chair) and Doug Munro (Member).

The Panel conducted a Directions Hearing on 31 October 2013. The Panel gave directions concerning provision of better particulars of both the current and proposed on-site operations. Those directions were complied with.

The Panel made an accompanied site inspection on 15 November 2013. All parties were invited but only representatives of the Council and proponent attended.

The Panel Hearing took place at a Council venue in Cranbourne on 25 and 26 November 2013. The Panel heard submissions in respect of the Amendment on behalf of the Council and proponent. Mr Cousins also made a short submission. It is recorded that while SITA Australia Pty Ltd requested and was scheduled to make a submission at the Hearing, the company wrote on 6 November 2013 withdrawing its request to be heard.

¹⁰ S96I(1)(b) indicates that the Minister may include any conditions on the permit that he or she thinks fit; and s96I(6), while it requires compliance with s60, specifically excludes s60(1) which ordinarily applies the mandatory requirements of referral authorities.

Appearances at the Panel Hearing are listed in the summary section of this report.

Expert traffic and planning evidence was called for the proponent. Those expert reports were circulated prior to the Panel Hearing. Mr David Maltby, who had acted as a consultant to the proponent in relation to the proposed refuse facility project, also provided evidence concerning aspects of the proposal, related EPA approvals processes and metropolitan waste management trends. No report by Mr Maltby had earlier been circulated but his oral evidence was allowed with the agreement of the parties. He was subject to questioning.

As noted above there has been a fundamental change in relation to the Amendment brought about by VC103. There is consequently now some 'cloudiness' about the ambit of relevant matters in the consideration of the submissions and advice to the Council. On one view the approval of VC103 means that strategic planning considerations are now only relevant to the proposal to have advertising signs able to be considered under Category 3 rather than Category 4 of Clause 52.06 – their being proposed to be greater in area than the three square metres maximum ordinarily allowed in the Farming Zone. It would seem possible that the Refuse disposal facility itself would only need to be considered within the context of the decision matters set out in the Planning Scheme.

Given that the combined section 96A process is intended to be continued, however, the Panel has chosen to consider the Amendment including the whole permit application in the usual strategic manner as well as against the scheme provisions.

The proposed permit conditions were discussed for some hours on the second day of the Panel Hearing. Only the Council and proponent were present during this part of the Hearing. Agreement was reached by the Council and proponent on many revised conditions which the Panel is content to endorse subject to only minor changes. There remained some outstanding issues, however, and the Council and proponent were given leave to make post-Hearing submissions on these matters. The last of that correspondence was received by the Panel on 18 December 2013. The issues around the permit conditions, to the extent that they are not addressed in earlier chapters of the report, are discussed in the penultimate chapter. Our recommended permit conditions are included in Appendix D.

In reaching its conclusions and recommendations, the Panel has read and considered the submissions and evidence from the Hearing as well as other material to which it was referred. This includes the written submissions and the reports and other documents which supported the request by the proponent to the Council.

2.5 Issues to be addressed

The Panel considered the issues raised in the written submissions, as well as those debated at the Hearing. In addressing the issues, the Panel has been assisted by the information provided by the Planning Authority and proponent and observations made during the inspections of the site and the surrounding area.

This report deals with the issues in the written submissions and from the Panel Hearing under the following headings:

- Need for the landfill
- Need for the quarry
- Defining solid inert waste

- Traffic and road issues
- Air quality including dust, odour and landfill gas
- Noise effects
- Fire issues
- Water management
- Materials recovery
- Litter
- Other impacts including visual effects
- Issues related to proposed permit.

2.6 The Panel report

The following chapter of this report sets out the strategic and statutory framework for consideration of the proposal. The subsequent chapters discuss and where appropriate make recommendations responding to the substantive issues. The penultimate chapter discusses permit conditions. The Panel's overall conclusion and recommendations are included in the final chapter.

3 Strategic and statutory planning context

The Council provided a response to the Strategic Assessment Guidelines as part of the Explanatory Report and reiterated these at the Panel Hearing. Mr Morris for the proponent also referred to the policies supporting the Amendment/permit. The Panel reviews the policy context of the Amendment in Sections 3.1 to 3.4 below.

In Section 3.5 and following, the Panel has also set out the relevant zone, overlay and other Planning Scheme provisions which also form part of the context for decision-making in relation to the proposal.

3.1 Policy framework

(i) State Planning Policy Framework

The Council submitted that the Amendment is supported by the following clauses in the SPPF (as paraphrased in Council's submission):

Clause 11.03 *Open space planning* as the proposal will result in ...*a well-designed and tightly regulated solid inert waste landfill in Melbourne's south-eastern region, the removal of the existing quarry use and the rehabilitation of the void for a public use.*¹¹ Council submitted that this is consistent with the objectives and strategies of this clause, which include to *Plan for regional and local open space networks for both recreation and conservation of natural and cultural environments.*¹²

Clause 11.02 *Urban growth* which has the following objectives and strategies:

- *To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses;*
- *Planning for urban growth should consider...opportunities for the consolidation, redevelopment and intensification of existing urban areas;*
- *To facilitate the orderly development of urban areas;*
- *Identify appropriate uses for areas described as constrained, including quarry buffers.*¹³

The Council submitted the Amendment is consistent with this clause as the proposal will result in transforming part of the site into land that is potentially suitable for urban development. This will include reducing buffer distances to surrounding residential uses and future development.¹⁴

Clause 11.04 *Metropolitan Melbourne* which contains the following objectives and strategies:

- *Facilitate achievement of a compact city;*

¹¹ Council submission p15.

¹² Council submission p15.

¹³ Council submission p16.

¹⁴ Council submission p15.

- *Protect non-urban uses.*¹⁵

The Council submitted that this clause is accounted for because the proposal will not infringe on the future development of the land for public open space, for housing or for another form of urban development within the Urban Growth Boundary.¹⁶

Clause 12 *Environmental and landscape values* which contains the following policy objectives and strategies:

- *To assist the protection and conservation of biodiversity, including native vegetation retention and provision of habitats for native plants and animals and control of pest plants and animals;*
- *As a priority, avoid adverse impacts on native vegetation, particularly through clearance.*¹⁷

The Council submitted that the Amendment is consistent with this clause because the proposal will include mechanisms to protect and conserve native vegetation and fauna, retaining remnant native vegetation in the northern half of the site. In addition, the maintenance of a 10 -30 metre landscape buffer along the RBGC boundary will be required.¹⁸

Clause 14.02 *Water* which contains the following objectives and strategies:

- *Ensure that land use activities potentially discharging contaminated runoff or wastes to waterways are sited and managed to minimise such discharges and to protect the quality of surface water and groundwater resources, rivers, streams, wetlands, estuaries and marine environments;*
- *Encourage the siting, design, operation and rehabilitation of landfills to reduce impact on groundwater and surface water.*¹⁹

The Council submitted that the Amendment is consistent with this clause as ground water resources and other water bodies will be protected through:

- A Works Approval and Discharge Licence issued by the EPA to regulate the solid inert waste landfill;
- Conditions in the Works Approval and Discharge Licence to regulate the ground water resources and other water bodies;
- Planning permit conditions and EPA requirements to include drainage requirements.²⁰

Clause 17.02 *Industry* which contains the following objectives and strategies:

Identify land for industrial development in urban growth areas where:

- *Good access for employees, freight and road transport is available;*
- *Appropriate buffer areas can be provided between the proposed industrial land and nearby sensitive land uses.*²¹

¹⁵ Council submission, p16.

¹⁶ Council submission p16.

¹⁷ Council submission p17.

¹⁸ Council submission p16.

¹⁹ Council submission p16.

²⁰ Council submission p16.

²¹ Council submission p17.

The Council submitted that the Amendment meets this clause as the proposal will provide land for an activity where buffers are currently in place, in order to protect surrounding sensitive uses and amenity impacts.²²

Clause 19.03 *Development Infrastructure* which includes the following reference documents:

- *Waste Management Policy (Siting, Design and Management of Landfills)*, EPA 2004
- *Metropolitan Waste and Resource Recovery Strategic Plan (MWRRSP)* and associated schedule.

The Council submitted that compliance with this clause is achieved through the design and operation of the landfill which will be subject to an EPA-issued Works Authority and Discharge Licence. Council considers that the proposal is a *...regional solution for waste management*.²³

The Council further commented that the MWRRSP identifies the site in its schedule and states in relation to the SBI quarry:

*The site is located in the City of Casey and can service the solid inert waste disposal requirements of Casey, Frankston, Cardinia and southern Greater Dandenong. This region is the fastest growing area of Australia and a local waste disposal option for solid inert material reduces the need to transport wastes long distances for disposal.*²⁴

The Council noted that the MWRRSP is currently being reviewed and a 2013 consultation version has been circulated, and the SBI quarry is included in the landfill schedule of the consultation draft.²⁵

Mr Morris for the proponent also addressed the policy context of the proposal. He similarly suggested that the landfill is generally supported by the State policies, referring in particular to Clauses 11.02, 12.01, 13, 14.02, and various parts of Clause 19.03.

(ii) Local Planning Policy Framework

The Council submitted that the Amendment supports the following local planning objectives (as paraphrased in Council's submission):

Clause 21.02 *Key influences* as the Amendment will involve an appropriate 'after use' of a quarry, and will *reduce conflicts between the existing quarry use and the surrounding residential uses...*²⁶ The Amendment will also protect and conserve the native vegetation that exists on the land.

Clause 21.06 *The urban fringe* because the Amendment will *minimise conflict between urban and non-urban uses* and will ensure that surrounding land will not be used for sensitive uses until appropriate buffers are provided.²⁷

²² Council submission p17.

²³ Council submission p17.

²⁴ Council submission p18.

²⁵ Council submission p18.

²⁶ Council submission p19.

²⁷ Council submission p19.

Clause 21.09 *Building new communities* because the Amendment will allow for abutting land to be developed to the west due to buffer distances eventually being removed. The Amendment will also provide for urban development to take place on part of the subject site (subject to relevant approvals).²⁸

Clause 21.10 *Natural and built assets* as the Amendment will encourage the quarry to be used for refuse disposal, whilst protecting the site's native vegetation. It will also provide time to identify potential future use of the site and allow for the site to be restored to one that is suited to urban use in the future.²⁹

Clause 22.13 *Extractive industry policy* as the Amendment will ensure that appropriate buffer distances between landfill uses and nearby sensitive uses are maintained.³⁰

Clause 22.16 *Advertising signs policy* as the Amendment is consistent with the 'Industrial Areas' and 'Rural Areas' guidelines which allow up to two signs per site.³¹

Again Mr Morris submitted that there was support for the proposal in local policy. He referred in particular to Clauses 21.02-2, 21.02-3, 21.06-2, 21.10-2, 22.13 and 22.18.

3.2 Other relevant policies and planning strategies

(i) EPA Publication 788.1 Best Practice Environmental Management Siting, Design, Operation and Rehabilitation of Landfills

The proponent submitted that the landfill will be operated in accordance with the above EPA publication, otherwise known as the Landfill BPEM. The BPEM includes the following suggested measures in regard to the receipt of wastes:

- *Ensure that the landfill is staffed at all times it is open for the receipt of waste.*
- *Conduct random inspections and sampling of waste loads.*
- *Train landfill staff to recognise conforming and non-conforming wastes.*

(ii) Regional waste plans

The State policy at Clause 19.03-5 relating to waste and resource recovery makes reference to a number of strategic documents relating to waste management.

They include:

- *Any relevant regional waste management plans.*
- *Metropolitan Waste and Resource Recovery Strategic Plan (Sustainability Victoria, 2009). (MWRRSP)*

The Council and proponent submitted that the proposed Refuse disposal facility was specifically identified in the MWRRSP and the more recent consultation draft of the revision of that document prepared in 2013. The Council also submitted that the facility was consistent with the South Eastern Regional Waste Management Plan 2005-2010 which again

²⁸ Council submission p19.

²⁹ Council submission p19.

³⁰ Council submission p19.

³¹ Council submission p19.

identifies the site as suitable for a solid inert landfill. Mr Morris for the proponent suggested that this south-eastern regional waste plan had been superseded by the MWRRSP.

(iii) Plan Melbourne – Metropolitan Planning Strategy

The Council submitted that the Amendment is consistent with *Plan Melbourne* which states:

*This Strategy is the vision for Melbourne. It is an evidence-based plan designed to guide Melbourne's housing, commercial and industrial development through to 2050. It seeks to integrate long-term land use, infrastructure and transport planning to meet the population, housing and employment needs of the future.*³²

Objective 5 - Environment and Water has the following directions that are relevant to the Amendment:

- *Direction 5.2 Protect and restore natural habitats in urban and non-urban areas;*
- *Direction 5.4 Improve noise and air quality to improve human and environmental health;*
- *Direction 5.8 Plan for better waste management and resource recovery.*

The Council further noted the following:

- Direction 5.2 is met through protecting and restoring biodiversity by retaining all native vegetation on the site through permit conditions.
- Direction 5.4 is met through the acoustic and air quality assessments of the proposal.
- Direction 5.8 refers to the Metropolitan Waste and Resource Recovery Strategic Plan (MWRRSP) and that it plays a role in relation to managing the number and location of existing and proposed landfill sites. The subject site is nominated in the 2009 MWRRSP as suitable for a solid inert waste landfill.³³

3.3 Ministerial directions and practice notes

(i) Ministerial Direction on the Form and Content of Planning Schemes

The Council submitted that the Amendment is consistent with this Ministerial Direction as *...the Amendment modifies the existing Schedule to clause 52.03 within the parameters established by the Victoria Planning Provisions.*³⁴

(ii) Ministerial Direction No. 9: Metropolitan Strategy (Melbourne 2030: Planning for Sustainable Growth)

The Council stated that the Amendment, through rehabilitating a quarry on land that is now within the Urban Growth Boundary, is consistent with Ministerial Direction No. 9: *Metropolitan Strategy (Melbourne 2030: Planning for Sustainable Growth)*. These are:

- *Direction 5.1 – Good urban design to make the environment more liveable and attractive;*

³² Council submission p19.

³³ Council submission p17.

³⁴ Council submission, pp13-14.

- *Direction 5.5 – Neighbourhood design that creates attractive, walkable and diverse communities;*
- *Direction 5.6 – Improve the quality and distribution of local open space and ensure long-term protection of public open space;*
- *Direction 7.2 – Reduce the amount of waste generated and encourage increased reuse and recycling of waste materials;*
- *Direction 7.7 – Protect native habitat and areas of important biodiversity through appropriate land-use planning;*
- *Direction 7.9 – Lead by example in environmental management;*
- *Direction 8.5 – Manage the road system to achieve integration, choice and balance by developing an efficient and safe network and making the most of existing infrastructure;*
- *Direction 8.6 – Review transport practices, including design, construction and management, to reduce environmental impacts.*

(iii) Ministerial Direction No. 11: Strategic Assessment of Amendments

The Council submission indicated that it is considered that the Amendment is consistent with Ministerial Direction No. 15: *Strategic Assessment of Amendments*.

3.4 Panel comment on strategic policy

There was no disagreement in presentations to the Panel (or indeed in written submissions) that there is general strategic policy support for this proposal. The Panel concurs that the proposal is supported by, and implements, the relevant sections of the State and Local Planning Policy Framework and the various strategic documents to which the policies refer.

3.5 Zoning

As earlier noted, the subject land is located within the Farming Zone (Schedule 2).

The Farming Zone provides that the use of land for Industry (which by definition includes a Refuse disposal facility) requires planning permission³⁵. Permission is also required for development associated with a discretionary use, and for buildings within certain setbacks to boundaries and other features. As potentially relevant here, permission would be required for a new building within 20 metres of Ballarto Road, 5 metres of any other boundary, 100 metres from a dwelling not in the same ownership and less than *100 metres from a waterway, wetlands or designated flood plain*. It is only the last of these setback permissions that appears may be a permission trigger in the case of the application.

Decision guidelines for the zone relevantly include:

General issues

- *The State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*
- *Any Regional Catchment Strategy and associated plan applying to the land.*

³⁵ With the exception of Rural industry.

- *The capability of the land to accommodate the proposed use or development, including the disposal of effluent.*
- *How the use or development relates to sustainable land management.*
- *Whether the site is suitable for the use or development and whether the proposal is compatible with adjoining and nearby land uses.*
- *How the use and development makes use of existing infrastructure and services.*

Environmental issues

- *The impact of the proposal on the natural physical features and resources of the area, in particular on soil and water quality.*
- *The impact of the use or development on the flora and fauna on the site and its surrounds.*
- *The need to protect and enhance the biodiversity of the area, including the retention of vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge area.*
- *The location of on-site effluent disposal areas to minimise the impact of nutrient loads on waterways and native vegetation.*

Design and siting issues

- *The impact of the siting, design, height, bulk, colours and materials to be used, on the natural environment, major roads, vistas and water features and the measures to be undertaken to minimise any adverse impacts.*
- *The impact on the character and appearance of the area or features of architectural, historic or scientific significance or of natural scenic beauty or importance.*
- *Whether the use and development will require traffic management measures.*

The Farming Zone applies Category 4 of the Advertising signs provisions at Clause 52.05. Business signs greater than 3 square metres are prohibited in the zone. This provision gives rise to the need for an Amendment.

3.6 Overlays

(i) Environmental Significance Overlay (Schedule 3)

The ESO3, which relates to the RBGC environs, has the following general objectives:

To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.

To identify areas where the development of land may be affected by environmental constraints.

To ensure that development is compatible with identified environmental values.

The environmental values to be protected by the overlay are described in the schedule as follows:

- *To protect the biological values, landscape quality and amenity of the nearby Royal Botanic Gardens, Cranbourne for the purpose of scientific investigation and for the benefit and enjoyment of the public.*
- *To ensure that development in the vicinity of the Royal Botanic Gardens, Cranbourne is compatible with the maintenance of the values referred to ...[in the statement of environmental significance].*

The ESO3 imposes permission for buildings and works and vegetation removal – all subject to specified exemptions. In relation to vegetation removal requirements, the schedule only provides an exemption for exotic vegetation, but fire protection and other exemptions are provided in the head clause itself.

Even if no vegetation removal is proposed, on-site structures and works appear to require permission under this clause. The structures include the new leachate tanks. The decision guidelines at Clause 4 of ESO3 include:

- *The effect any development could have on the biological integrity and amenity of the Royal Botanic Gardens, Cranbourne by reason of noise, smell, dust, fumes, vermin, noxious weeds, polluted waters and changes to natural drainage flows.*
- *The effect of any development on visitors' enjoyment of the Royal Botanic Gardens, Cranbourne in terms of the extent of visual impact of the use or development and or any significant change to the natural topography of the area.*
- *The extent to which any building or works would be visible from within any part of the Royal Botanic Gardens, Cranbourne.*
- *The desirability of maintaining a rural landscape and the need to limit fringe urban activities in the environs of the Royal Botanic Gardens, Cranbourne.*
- *The need to retain natural vegetation in the environs of the Royal Botanic Gardens, Cranbourne as habitat for native fauna and as an important landscape element.*
- *The desirability of using species of plants indigenous to the area in any landscaping works in the environs of the Royal Botanic Gardens, Cranbourne.*
- *The effect of any development in terms of fire hazard.*
- *The views of the Royal Botanic Gardens, Cranbourne and of any other agency the responsible authority considers relevant.*
- *The views, if any, of the Department of Natural Resources and Environment.*

(ii) Bushfire Management Overlay

The Wildfire Overlay (now Bushfire Management Overlay) also applies to the entire site.

The purposes of the overlay include:

To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.

To identify areas where the bushfire hazard requires specified bushfire protection measures for subdivision and buildings and works to be implemented.

To ensure that the location, design and construction of development consider the need to implement bushfire protection measures.

The overlay requires permission amongst other things for development associated with the use of land for Industry. It requires that a site and locality description must be supplied with any application and a bushfire management statement. The clause provides that a permit to construct a building or construct or carry out works must include the following condition:

The bushfire mitigation measures forming part of this permit or shown on the endorsed plans, including those relating to construction standards, defensible space, water supply and access, must be maintained to the satisfaction of the responsible authority and the relevant fire authority on a continuing basis. This condition continues to have force and effect after the development authorised by this permit has been completed.

The overlay at Clause 44.06-5 provides that mandatory referral under Clause 66.03 to the fire authority applies and Clause 44.06-2 provides that unless specific exemption is provided, the proposal must meet the requirements of Clause 52.47.

3.7 Particular and general provisions

(i) Bushfire protection: planning requirements

Clause 52.47, which relates to Bushfire protection planning requirements, as referred to in the BMO provisions, has the following specific purposes:

To ensure that development is only permitted if the risk to life, property and community infrastructure can be reduced to an acceptable level.

To specify requirements for buildings, works and subdivision on land to which the Bushfire Management Overlay applies.

That clause sets out objectives and mandatory standards which must be met and other standards which should be met by applications for development under the BMO. Relevantly they include Clause 52.47-7 which sets out defensible space for industry, office and retail premises objectives and standards. Those standards relate, however, to buildings and therefore only clearly apply to the two new leachate tanks. A bushfire management statement has been provided in relation to the tanks. The objectives and standards of Clause 52.47-10 relating to water supply and access may have more general relevance. Mandatory Standard F10 provides:

- *All buildings and works must provide a static water supply and access to this water supply which meets the requirements of the relevant fire authority.*

- *All buildings and works must provide access and egress arrangements which meet the requirements of the relevant fire authority.*

(ii) Advertising sign provisions

Clause 52.05 relates to permission for advertising signs. If the Amendment is approved it will allow the intended business sign of in excess of three square metres to be considered as part of the permit application applying Category 3 sign controls to the site.

Application requirements for advertising signs are included at Clause 52.05-2. Those relating to non-illuminated signs are:

An application to display an advertising sign must be accompanied by the following information, as appropriate:

- *A site context report, using a site plan, photographs or other methods to accurately describe:*
 - *The location of the proposed sign on the site or building and distance from property boundaries.*
 - *The location and size of existing signage on the site including details of any signs to be retained or removed.*
 - *The location and form of existing signage on abutting properties and in the locality.*
 - *The location of closest traffic control signs.*
 - *Identification of any view lines or vistas that could be affected by the proposed sign.*
 - *The dimensions, height above ground level and extent of projection of the proposed sign.*
- *The height, width, depth of the total sign structure including method of support and any associated structures such as safety devices and service platforms.*
- *Details of associated on-site works.*
- *The colour, lettering style and materials of the proposed sign.*
- *The size of the display (total advertising area including all sides of a multi-sided sign).*
- *The location of any corporate logo box and proportion of display area occupied by such a logo box.*
- *Any landscaping details.*

Clause 52.06-3 includes decision guidelines on signs. As relevant, they include:

- *The character of the area including:*
 - *The sensitivity of the area in terms of the natural environment, heritage values, waterways and open space, rural landscape or residential character.*
 - *The compatibility of the proposed sign with the existing or desired future character of the area in which it is proposed to be located.*
- *Impacts on views and vistas:*
 - *The potential to obscure or compromise important views from the public realm.*

- *The potential to dominate the skyline.*
- *The potential to impact on the quality of significant public views.*
- *The relationship to the streetscape, setting or landscape:*
 - *The proportion, scale and form of the proposed sign relative to the streetscape, setting or landscape.*
 - *The position of the sign, including the extent to which it protrudes above existing buildings or landscape and natural elements.*
 - *The ability to screen unsightly built or other elements.*
 - *The ability to include landscaping to reduce the visual impact of parts of the sign structure.*
- *The relationship to the site and building:*
 - *The scale and form of the sign relative to the scale, proportion and any other significant characteristics of the host site and host building.*
 - *The extent to which the sign displays innovation relative to the host site and host building.*
 - *The extent to which the sign requires the removal of vegetation or includes new landscaping.*
- *The impact of structures associated with the sign:*
 - *The extent to which associated structures integrate with the sign.*
 - *The potential of associated structures to impact any important or significant features of the building, site, streetscape, setting or landscape, views and vistas or area.*
- *The impact of any logo box associated with the sign:*
 - *The extent to which the logo box forms an integral part of the sign through its position, lighting and any structures used to attach the logo box to the sign.*
 - *The suitability of the size of the logo box in relation to its identification purpose and the size of the sign.*
- *The need for identification and the opportunities for adequate identification on the site or locality.*
- *The impact on road safety. A sign is a safety hazard if the sign:*
 - *Obstructs a driver's line of sight at an intersection, curve or point of egress from an adjacent property.*
 - *Obstructs a driver's view of a traffic control device, or is likely to create a confusing or dominating background which might reduce the clarity or effectiveness of a traffic control device.*
 - *Could dazzle or distract drivers due to its size, design or colouring, or it being illuminated, reflective, animated or flashing.*
 - *Is at a location where particular concentration is required, such as a high pedestrian volume intersection.*
 - *Is likely to be mistaken for a traffic control device, because it contains red, green or yellow lighting, or has red circles, octagons, crosses, triangles or arrows.*

(iii) Other Particular provisions

Other Particular provisions of relevance to the application include:

- Clause 52.06 which establish required car parking numbers and layout requirements.
- Clause 52.07 which relates to the provision of loading arrangements.
- Clause 52.10 relating to uses with potentially adverse amenity consequences. No mandatory provisions of the clause apply.
- Clause 52.17 relating to requirements for permission, subject to exemptions, for removal of native vegetation on lots of greater than 0.4 hectares.

(iv) General provisions

General provisions of the Planning Scheme of potential relevance to the application include:

- The general permit exemptions at Clause 62
- The existing use provisions at Clause 63.
- The general decision guidelines at Clause 65.
- The referral requirements of Clause 66.

3.8 Panel comment on statutory context

The Panel has set out the relevant controls in the Planning Scheme above.

The Panel comments that it does not appear that the application requirements for advertising signs have been properly addressed in the material submitted to the Council³⁶. The Panel finds itself unclear as to the precise location and scale of the proposed business signage, which is nevertheless understood to be non-illuminated and non-flood-lit. It is appropriate that the proponent be required to supply the necessary details before a permit is granted so the Council, and ultimately the Minister, can properly consider this element of the proposal.

3.9 Recommendation

The Panel recommends:

- 1. that before this Amendment/permit is further processed, application details for the advertising signs should be provided so that this element of the application can be properly assessed and conditions applied to the permit as necessary.**

³⁶ It is not clear that the Act requires these requirements to be met; however the application cannot be properly considered on the limited information to hand.

4 Need for the landfill

This is the first of the planning issues to be considered. The following chapters of the report up to and including Chapter 15 deal with further planning merits arguments raised in relation to the Amendment/permit.

4.1 The issue

The issue to be addressed is the assertion in the SITA Australia Pty Ltd (SITA) submission that there is no need for the landfill or at least that it is premature.

4.2 Evidence and submissions

SITA made a written submission in response to exhibition of the proposed Amendment/permit questioning the justification for the proposed facility. SITA owns and operates the Hampton Park Resource Recovery Precinct which incorporates the Hallam Road Landfill. It said that its landfill has permission for filling until 2040, including by solid inert waste. The submission said that *'The South East of Melbourne is currently serviced by 4 landfills providing disposal opportunities for both Municipal Solid Waste (MSW) and Commercial and Industrial Waste (C&I) or Solid Inert Waste'*. The submission suggested that this indicates that there is ample capacity in the region to manage solid inert waste in the short to mid term.

It further suggested that government initiatives encouraging waste recycling would see a lesser demand for landfill deposition.

The submission also referred to a recent report of the Ministerial Advisory Group on waste and resource recovery governance reform and submitted that the Council should defer the Amendment process until the governance reviews flowing from that report are complete. It was said that the Department of Environment and Primary Industries (DEPI), Sustainability Victoria (SV) and the Metropolitan Waste Management Group (MWMG) are responsible for those reviews.

We were not supplied with a copy of the Ministerial Advisory Group report referred to and no submissions were received from DEPI on this topic, or from SV or MWMG.

The Planning Authority referred in its submission to the specific identification of the site as suitable for a solid inert waste landfill in both the 2009 *Metropolitan Waste and Resource Recovery Strategic Plan* (MWRRSP) and the revised draft of 2013.

The 2009 MWRRSP includes at page 10:

The SBI Cranbourne site is included on the schedule as a solid inert landfill, which means that putrescible waste will not be allowed. The scheduling of this site is consistent with the strategic planning direction of this area, in that it will bring forward the closure of the existing quarry and allow the area to be used for other purposes after the cessation of landfilling in 2019. The site is located in the City of Casey and can service the solid inert waste disposal requirements of Casey, Frankston, Cardinia and southern Greater Dandenong. This region is the fastest growing area of Australia and a local

waste disposal option for solid inert material reduces the need to transport wastes long distances for disposal.

The 2013 consultation draft also contains a schedule of Refuse disposal facilities. It identifies the SBI Cranbourne site in the south-east region as being for inert waste only and seeking relevant approvals. It shows a start date of 2015.

The proponent's position is represented by the following submissions and reports:

- The material supporting the request included a Landfill Needs Assessment by Essential Economics dated September 2007. This report reviewed the then existing policies and trends and made the following concluding comments:
 - *The State Government Towards Zero Waste policy aims to significantly reduce the amount of waste going to landfill over the coming decades. However, the policy recognises the need for landfills for many years to come and the role of former quarry sites in supplying new landfill facilities.*
 - *The South Eastern Regional Waste Management Group's (SERWMG) Regional Waste Management Plan (RWMP) highlights the immediate need for one new large scale solid inert landfill facility in the south-east of the region. The RWMP sets criteria for selecting new solid inert landfill facilities and notes that the subject site is the only potential site which meets these criteria.*

The Essential Economics report presents a market analysis of the long term demand and supply of land facilities in the region. It included a review of proposed landfill facilities, concluding:

The status of these landfill proposals confirms that the subject site is now the only site in the south-east region which can be seriously considered as a solid inert landfill facility in the near future.

Concerning the availability of other existing sites, the report concluded:

There are currently four solid inert landfill facilities operating in the south-east region, three of which are in the northern part of the region in the Clayton area (ie Baxters, Twigg and GL Heatherton sites). All these sites are now owned by TransPacific Industries. The other landfill is located in the south of the region at Langwarrin (the Glen) and is now nearing capacity.

The report also noted that two of the facilities above were to close soon and the southern part of the region would have no facility.

- A report prepared by Traffix Group Pty Ltd dated April 2007. It provides an estimate of travel times for the disposal of solid inert waste from surrounding municipalities if the proposed facility were available. The methodology depends on an analysis of other landfill sites and their likely closure, the major local sources of solid inert waste, waste quantity, needed truck movements, waste and estimates of travel times on assumed routes. It compares the travel times to the then available disposal sites. For the four closest municipalities, the analysis indicates a travel time saving of about 3,500 hours per year based on an annual waste quantity of nearly 300,000 t/a

compared with taking the waste to landfills at Clayton. The report suggests benefits in decreased costs, and in reduced emissions and congestion.

- The P5 Panel Document prepared by the proponent included material on this matter at paragraph 83:

The 2013 Consultation Draft of the Metropolitan Waste & Resource Recovery Strategic Plan (the Strategic Plan) states in Section 21.1 "In 2011-12 the north west catchment disposed of approximately 1.46 million tonnes and the south east catchment 1.84 million tonnes." The Strategic Plan also indicates that the three remaining solid inert landfills in the SE will be full before the end of 2017. A fill rate of 252,000 tonnes per annum has been assumed for this site based upon the clear need for landfill airspace as expressed in the Strategic Plan and the requirement to construct the landfill liner ahead of filling, restricting the rate to less than 300,000 tonnes per annum. The rate of 252,000 tonnes per annum would provide a landfill life of 7.5 years. Assuming the site is open 5.5 days a week this provides 286 days a year at a daily fill rate of 881 tonnes.

- The submissions by Mr Morris at the Panel Hearing (in particular at paragraphs 30 to 43) included that the MWRRSP, while it emphasises resource recovery, nevertheless recognises that landfills will continue to have a role for the foreseeable future. He noted that Schedule 3 to the 2009 MWRRSP identifies the relatively short supply of landfill airspace in the south-east metropolitan region. He further noted the specific identification of the Ballarto Road site in the schedules to both the 2009 and 2013 MWRRSPs.

Mr Morris referred to the decision by the Supreme Court in *Barro Group Pty Ltd v Brimbank City Council and Ors* [2012] VSC 154 (24 April 2012) where the effect of the identification and ranking of a landfill site in the schedule to the MWRRSP was considered. He said that the case indicates that it is not possible for the Responsible Authority to substitute its own assessment of need for the landfill or to seek to subvert the identification and ranking of a landfill site. He said that the approval of the landfill application would be consistent with the timing and sequencing of landfills in the south-east region.

4.3 Discussion and conclusions

As discussed earlier in Section 2.4, VC103 resulted in the landfill component of the application no longer being prohibited in the Farming Zone, leaving a level of 'cloudiness' around the nature of the required assessment of at least this component of the proposal. It was indeed the issue of need for the proposed landfill, as raised in the SITA submission, which caused the Panel to consider this issue of the ambit of considerations. If the assessment to be made of the landfill component of the proposal were simply as a permit application, the issue of asserted absence of need would not likely be relevant³⁷.

³⁷ See, for example, the discussion in *Mt Eliza Cottage Pty Ltd v Mornington Peninsula SC* [2004] VCAT 1418 (15 July 2004) which refers to 'the normal ... view adopted by this Tribunal and its predecessors ... that the absence of need is not a consideration against the granting of a permit' (paragraph 43).

As indicated earlier, however, the Panel has proceeded to assess this Amendment/permit on the basis that a full strategic assessment of the landfill (as well as the signage) is required, in addition to consideration of the Planning Scheme provisions.

The Panel is of the view that the identification of this site as for the proposed landfill use in the metropolitan policy document concerning waste management, the MWRRSP, provides all the strategic justification that is required for the proposal. The need for the landfill and the suitability of the site has been assessed in a comprehensive regional manner. Our approach is consistent with the *Barro Group* decision.

In response to the particular matters raised in the SITA submission, we acknowledge that waste recycling is making incursions into the increase in solid and other wastes going to landfill, but we are persuaded by the evidence that the demand will continue to rise.

We note and accept the needs analysis undertaken by Essential Economics as an answer to the SITA assertion of capacity in other landfills in the south-east metropolitan region.

Concerning capacity at the Hallam Road landfill, operated by SITA since 1997, we note that it is a general waste landfill. No information was provided by the submitter about the relative volumes of solid inert waste and other waste streams at that facility. It is not possible to draw any conclusions about the capacity of that site in relation to solid inert waste alone.

Concerning the Ministerial Advisory Group pending report, we are aware that a number of changes have been made to the Victoria Planning Provisions in response to the Ministerial Advisory Group's recommendations. These relate to transfer stations and materials recycling facilities. We understand that the Committee was not required to address landfill issues. We see no need to await any further outcomes from that review process. To do so would in any case be to subvert the timing of the provision of waste facilities set out in the MWRRSP.

The Panel is also of the view that the Traffix Group traffic analysis and the asserted benefits in terms of decreased costs, reduced emissions and congestion support the need or at least desirability of locating a new solid inert landfill on the subject site. While the Panel recognises the uncertainty in the type of analysis done in the 2007 report, it appears that, since the study was carried out, at least some solid inert waste is taken from the area to Bacchus Marsh for disposal. This would suggest that the need for a facility in the subject area has further increased and the benefits of the development of the Ballarto Road facility would be greater now. We understand that the issue of waste transport was a factor in development of the MWRRSP.

5 Need for the quarry

5.1 The issue

The original documentation around the Amendment/permit provides considerable support for ceasing quarry operations and using the quarry void for a solid inert waste landfill. There was no material presented, however, that addressed the need or otherwise for the quarry as a source of aggregate. Also, no material was provided indicating that the quarry might serve a strategic need in supplying aggregate to the region, or that transport times and distances of aggregate to required sites might increase by closure of the quarry.

This issue of the need for the quarry was raised by the Panel at the Directions Hearing.

5.2 Evidence and submissions

No evidence or submissions were subsequently provided to us arguing that retention of the quarry is important in providing a local or regional supply of mudstone aggregate.

The Planning Authority said:

In the assessment of Amendment C115, council officers did not explicitly assess the need to retain the quarry. Rather the merits of establishing a landfill were assessed. As outlined previously, 2009 MWRRSP (Metropolitan Waste and Resource Recovery Strategic Plan) makes specific reference to the SBI quarry and recommends its use as a solid inert waste landfill to serve a need in Melbourne's outer South East. On this basis, it was not considered necessary to assess the need to retain the quarry, as the implications arising from the loss of this resource can reasonably be assumed to have formed part of the assessment undertaken in the development of the MWRRSP. (p.24)

Mr Morris, in his submission for the proponent, said:

The proposed establishment of a landfill on the SBI site finds significant support in the objectives and strategies of the State Planning Policy Framework (SPPF) and Local Planning Policy Framework (LPPF). In particular the proposal:

- will result in the closure of a quarry which provides only low grade rock which can be readily supplies by other quarry operations (Clause 19.03); (pp.10-11)*

and

The current stone resource (mudstone) produced by the quarry is not uncommon or highly valuable. The mudstone resource is unsuitable for highgrade applications. The supply of mudstone extracted from the quarry is readily available from a number of other quarries in the district, including Skye Sands in Ballarto Road, Skye and Aiden Graham and Rocla in Langwarrin. These operations will ensure that the crushed stone market for road sub-base and backfill (which is the use made of the stone resource

from the site) can continue to be well served post the closure of the SBI site. The quarry can cease production without creating a shortage of the stone resource and consequential impacts on the construction and road making industries.

The document provided by the proponent in response to Panel directions for information (Panel Hearing Document P5), and from which Mr Morris in part drew his submission, states:

4. These estimates (estimates in earlier clauses on the available rock resource and current extraction rate) are consistent with the current operation with approximately 5.2 million tonnes of mudstone remaining providing an approximate life of 26 years.

5. The site produces mudstone that is either blasted or ripped from the quarry area. Some stone is sold without further processing and other stone is crushed and screened. The stone is used for purposes of road sub base and backfill. Gate prices for the stone vary between \$10 per tonne for ripped stone to \$17 per tonne for crushed rock.

6. Competitors to the SBI site include Skye Sands in Ballarto Road, Skye and Aiden Graham and Rocla in Quarry Road, Langwarrin. Recycled concrete and brick products also compete in the same market as product from SBI. The market for low quality stone in the SE Metro area would be met by stone from Rocla, Skye, Aiden Graham and recycled products when the SBI site closes. Also existing high quality stone quarries such as Boral Lysterfield, Hillview Dromana, Holcin Pakenham could supply lower quality stone sourced from their sites into the market segment serviced by SBI...

7. The sedimentary stone produced by the quarry weathers and is unsuitable for higher grade applications such as hot mix asphalt, concrete aggregate and road base. Higher grade stone from Hornfels, Granite and Basalt quarries would have gate fees approximately \$10 per tonne higher. (p.3)

Mr Barlow stated as part of his assessment of net community benefit that:

The current stone resource produced by the quarry is not uncommon or highly valuable. A number of other existing quarries in the locality currently provide this stone resource. These operations will ensure that the crushed stone market for road sub-base and backfill can continue to be well served post the closure of the SBI site. (p.20)

5.3 Discussion

We understand that, at the current rate of extraction of about 200,000 tonnes each year, the quarry has a further operating life of around 26 years. That life is determined by the stone resource available on the site that can be extracted under the current Work Authority.

The information available to us is that the mudstone aggregate is suited to drainage backfilling applications and road sub-base. We understand that the quarry supplied such material for a number of recent major projects including road sub-base for the Westernport

Highway, EastLink and Peninsula Link. However, the material does not have the hardness to be suitable for applications such as concrete and road base.

No material was supplied to us to indicate that the closure of the quarry would seriously compromise the supply of this type of aggregate for construction purposes in the south-east metropolitan region. It was submitted that other quarries could meet the demand for this aggregate type, and substitutes such as recycled concrete were also available.

In answer to a question from the Panel, Mr Barlow expressed the view that other nearby quarries were currently under less pressure from encroaching residential development than the Ballarto Road quarry. In this respect we note that the subject quarry and the surrounding area were included within the Urban Growth Boundary following a 2006 extension to that boundary.

5.4 Conclusions

We conclude that the material submitted to us indicates that the loss of production of quarried materials at the site will be able to be taken up by other existing quarries in the region and by the use of substitute recycled material.

6 Defining solid inert waste

6.1 The issue

It is proposed that the waste deposited at the landfill would be solid and inert only and non-putrescible. This is in order to avoid generation of odours and avoid producing landfill gas. Given that solid waste is heterogeneous, however, the issue arises as to how the permitted waste might be defined and identified. A sufficiently clear definition the permitted waste is required so that there is a common understanding by the permit holder and the Responsible Authority.

The Panel asked that parties address the issue of how solid inert waste is or might be defined.

6.2 Evidence and submissions

The written submission by Mr Michael Paterson referred to the disparity between definitions of ‘solid inert waste’ in various documents. The submission said:

There appears to be no definitive definition of SIW as it seems to be up to the authors of reports to provide their own interpretation.

Also of note in relation to SIW, there is no indication as to how it is to be assured that only SIW is deposited in the proposed landfill. No plans to deal with vehicles that arrive with contaminated SIW or if contaminated SIW is discovered during the dumping process. Just a statement, that only SIW will be accepted.

The Council submitted that the proposed condition in the exhibited planning permit is sufficient in referring to the Works Approval and specifying a restriction on waste types.

That draft condition reads:

25. Any waste deposited on the land can only be placed on the land in accordance with requirements of the Works Approval and must be restricted to the following components:

(a) Fill material as defined by Table 2 of EPA Publication IWRG621 “Soil Hazard Categorisation and Management”.

(b) Solid inert waste (e.g. timber, hard waste collection wastes such as furniture, rocks, bricks, concrete, building and demolition wastes, but excluding asbestos).

The P5 Panel Hearing Document provided by the proponent advised:

23. This application is for a Planning Permit for the operation of a solid waste landfill. Solid inert waste is defined by the EPA as follows:

“Solid inert waste is hard waste that has negligible activity or effect on the environment. The waste may be either a municipal or industrial waste.”

Solid inert wastes consist of material such as building and demolition material, e.g. soils, concrete, bricks, dry timber, plastic, glass, metals. They

can also contain wastes from hard waste collections, transfer stations, and waste collected from commercial premises in bins and skips. Material deposition at solid inert waste landfills is controlled by the EPA Waste Discharge Licence. The waste discharge licence will contain a schedule setting out all permissible waste streams. Prescribed industrial waste such as contaminated soil and sludges, hazardous wastes and putrescible wastes containing food or green wastes are not permitted to be accepted at solid inert waste landfill sites. Accordingly, such wastes will not be listed in the schedule forming part of the waste discharge licence issued by EPA and therefore will not be capable of being accepted at the site.(p.6)

In the invited post-Hearing correspondence concerning the permit conditions, the proponent suggested that the exhibited draft permit condition 25 be deleted entirely, relying instead on the control of wastes through the EPA authorisations. The Planning Authority wished to retain it.

6.3 Discussion

The Panel agrees that a system must be established at the proposed landfill to inspect loads entering the site, as far as that is practical, to ensure that waste deposited meets the requirement that it be solid and inert. That may involve an overhead camera system at the entry point and a capacity to remove unacceptable material from the tipping area.

It is therefore important that, as far as is reasonably possible, the heterogeneous waste referred to as ‘solid and inert’ is clearly defined. It should be defined in such a way that landfill operators and those enforcing approval conditions can understand clearly what wastes may be deposited and what must be rejected.

We accept that EPA will define ‘solid inert waste’ as a key part of the Works Approval and Licence, and that a schedule will be developed as a part of that process that clearly describes waste types.

We consider that it is preferable that EPA develop the precise definition of ‘solid inert waste’ rather than attempting to include it in a planning permit condition for this site. EPA can be expected to be considerably familiar with various waste types and definitional issues, and would likely be concerned to see consistency across the State. Also if a particular definition was included in this planning permit, it runs the risk of inconsistency across the required approvals documents.

The Panel believes that it is appropriate that a general condition only be included in the planning permit that refers to the permitted waste type and recognises the management tools.

6.4 Recommendation

The Panel recommends:

- 2. that the exhibited permit condition 25 be deleted and replaced by the following renumbered condition in the revised permit:**

‘23. Waste deposited on the land must be only solid inert waste as allowed by the Works Approval and Licence issued by the Environment Protection Authority’.

7 Buffers to dwellings

7.1 The issue

A number of written submissions expressed the view that the proposed landfill would be too close to existing dwellings. Submissions asserted that the dwellings would be potentially affected by emissions of noise, dust, odour, land fill gas and the like.

The issue here is whether, having regard to its potential off-site impacts, the site is situated too close to dwellings to allow the landfill to be developed, or whether, instead, an adequate buffer distance is provided.

7.2 Evidence and submissions

The Contour Consultants Australia Pty Ltd planning report of 13 May 2013 supporting the request for the Amendment/permit included a discussion on land use buffers. It noted that Clause 52.10 of the Planning Scheme relating to uses with adverse amenity potential does not specify a particular buffer distance between a landfill and sensitive uses, but rather indicates that it is dependent on the processes to be used and the materials to be deposited.

The Contour Consultants' report also referred to the EPA guidelines, *Recommended Buffer Distances for Industrial Residual Air Emissions* (July 1990) (RBDIRAE). The report recommended a buffer distance, for a quarry (other than for hard rock) with blasting, of 300 metres, but made no specific recommendation concerning distance to landfills. The report instead referred to the then anticipated State Environment Protection Policy (SEPP) on landfills as setting appropriate distances.

The *SEPP (Siting and Management of Landfills Receiving Municipal Wastes)* later gazetted in July 1991 did subsequently recommend a minimum buffer distance from a residential area of a solid inert waste only landfill in a former extractive industry site. It recommended a separation distance of 50 metres (except where the quarry site was already located even closer). That SEPP was revoked and replaced in December 2004 by an EPA *Waste Management Policy (Siting, Design and Management of Landfills)*. The policy at Clause 13 indicates that, in siting landfills, a number of factors are relevant including buffer distances. It does not specify particular buffer distances.

The 1990 EPA *Recommended Buffer Distance report* was replaced on 7 March 2013 by *Recommended Separation Distances for Industrial Residual Air Emissions – Guideline*. This is potentially the current source for recommended buffers for the landfill. The new report recommends separation distances between industrial and sensitive uses based on consideration of odour and dust emissions alone³⁸. The 2013 report, however, does not recommend any particular separation distance between landfills and sensitive uses, but refers instead to the guidance offered by the 2010 Landfill BPEM.

The BPEM in turn deals with buffer distances at Section 5.2. It confirms that current buffer recommendations have been set with odour and land fill gas in mind, and this has been done on the assumption that the setbacks demanded by other off-site emissions would fall within

³⁸ The Panel understands that the earlier guidelines included consideration of risk.

those distances. It recommends that for a solid inert waste landfill, a buffer from surface waters of 100 metres should apply and 200 metres from buildings and structures. The buffers are measured from the sensitive land use to the edge of the closest cell. The report also notes that other activities which might cause a nuisance such as leachate ponds need to be considered. The BPEM further indicates that a solid inert landfill may be located within 100 metres from surface waters provided any necessary protective measures are put in place.

It was Mr Morris's submission for the proponent that the proposed landfill would operate within the established buffer for the quarry, thereby minimising conflict with nearby urban uses. He also said that the management of amenity impacts is largely addressed by the requirement for specified buffer distances to be met under the BPEM guidelines (Page 16).

7.3 Discussion

The actual distances to dwellings from the proposed landfill are set out in Section 2.1 of this Panel report. The recommended setback of 200 metres from the closest landfill cell is met by the proposal including for the closest dwelling to the north-east. In other parts of this report which follow, we discuss the proposed arrangements for management of various types of off-site emissions from the landfill and working areas around it. We are satisfied that, subject to the landfill being operated as proposed and the recommended measures being put in place, the separation distances which would apply between the landfill operation and dwellings would be adequate to protect residential amenity.

8 Traffic and road issues

8.1 The issue

Traffic to be generated by the proposed landfill operation was perhaps the issue that received most attention throughout the Panel process. This issue was raised in written submissions, and its importance was acknowledged by the proponent through the extent of material submitted to us and the calling of evidence by an expert traffic witness, Mr Jason Walsh from Traffix Group Pty Ltd.

An issue of concern has been accuracy of the traffic forecast for the number of heavy vehicles that would access the proposed landfill along Ballarto Road. There is a related issue of dust generated by these vehicles using the currently unsealed road. The Council proposes a permit condition requiring that Ballarto Road be sealed to the site entry. The length of the seal was of concern to some submitters and the particular road profile which should be applied was also an issue. On site traffic matters were also raised by the Panel.

8.2 Evidence and submissions

(i) Planning Authority

The submission by the Planning Authority commented on projected traffic volumes to the proposed landfill in response to a written submission that suggested there are discrepancies between the various traffic reports. The Council submission included:

110. The traffic impact assessment provided with the initial amendment request in 2007 predicted a 1-2per cent increase in traffic volumes associated with the proposed landfill. The traffic report was revised in 2013 prior to exhibition and utilised different assumptions relating to truck tonnages and movements which led to a predicted decrease in vehicle movements. Council's Traffic Engineering Department has provided advice that both assessments have merit and would be acceptable.

111. Additional material circulated within the past week predicts that the solid landfill will generate approximately 150 vehicle movements per day compared to the existing quarry which generates around 280 vehicle movements per day. Methodology used to determine this outcome is also considered plausible. The discrepancies between outcomes predicted in the three traffic reports is perhaps indicative of the possible range of vehicle movements to and from the site, and was not seen by Council as a ploy to reduce or manipulate the figures. (p.29)

On the sealing of Ballarto Road, a report to the Council on the Amendment of 19 August 2008 said that Ballarto Road is currently graded fortnightly and the pavement re-sheeted on an eight week cycle with about 100 tonnes of material per application. The report indicated that it was anticipated that the grading schedule would have to increase to weekly because more traffic would be associated with the landfill than had been generated by the quarry. It concluded that sealing was justified to reduce risk and liability.

The Council submitted to the Panel that it had been generally agreed with the proponent that Ballarto Road would be sealed from the Cranbourne-Frankston Road intersection to the site entry at the cost of the proponent. A condition on the draft permit reflects this. However, there had been no resolution on the design standard. The Council said:

93. Exhibited Planning Permit condition 17 required the construction of Ballarto Road in accordance with Council Standard Engineering Drawing S111B, which features a 7m pavement width with sealed shoulders and table drain, totalling up to 13m wide. It has since been identified that this cross section may be unsuitable as its construction would result in the removal of native roadside vegetation. In addition, a range of possible solutions exist to achieving the sealing of Ballarto Road, such as use of a different Standard Engineering Drawing or the design of a hybrid road profile tailored to the specific conditions of Ballarto Road.

94. For these reasons, Council submits that the road construction be criteria-based rather than based on a standard drawing. This will allow the proponent and Council time and design flexibility to negotiate an agreed road design. Council's revised Planning Permit conditions reflect this modification. (p.26)

The Council provided a response to written submissions made about Ballarto Road:

- The Council does not support the submission from the RBGC requesting a 40 km/h speed limit on Ballarto Road on the basis that that speed is appropriate only in hazardous urban situations.
- The exhibited permit requires Ballarto Road to be sealed to the site entry. For clarity the Council proposes to amend the condition to require sealing to 10 metres east of the entry.
- It is beyond the scope of a permit condition for the proposed use and development of the site to require the sealing of Ballarto Road to the east of the site entry as far as Cyril Beechey Lane as suggested in some written submissions.
- Similarly, no condition can be imposed requiring installation of a gate across Ballarto Road east of the site entry for protecting the horse precinct. Such a requirement would be unrelated to the application for a solid inert waste landfill. Further, Ballarto Road is a public road and it is not appropriate to block it off.

Traffic and road conditions in the exhibited draft planning permit are:

13. Access to and egress from the site for all vehicles must be from the designated entry/exit point on Ballarto Road.

14. All of the internal roads shall be formed and whilst in use be maintained, including repair grading and draining, to the satisfaction of the Responsible Authority to ensure access to the disposal areas in all weather conditions.

15. Private vehicles and small trailers shall not be granted access to the site for waste disposal purposes.

16. Appropriate signage including “Truck Entry”, “Truck Exit”, “One-Way”, “Stop”, and “Give Way” signs must be provided in accordance with Australian Standards.

17. Prior to the commencement of the use Ballarto Road must be sealed to a rural standard, in accordance with Casey Standard Drawing S-111B, between Pearcedale Road and the site entry, to the satisfaction of the Responsible Authority.

(ii) The proponent

The evidence given by Mr Walsh for the proponent included a description of the site and the adjoining road network. He advised that his company had conducted traffic counts in the area on two occasions. Both used a pneumatic tube counter. One count was from 6 to 12 November 2013 on Ballarto Road west of the quarry access. It provided a count of the total volume of traffic using the road. This count also measured travel speeds and estimated the number of commercial vehicles. An earlier count from 12 to 18 September 2012 was on the access road to the quarry – providing a count of only the vehicles using the site. He noted that the 2012 traffic count was for a reasonably busy period as the quarry was supplying road sub-base material for Peninsula Link, which was then under construction. The difference between the two counts, subject to any differences which might be brought about by the time disparity, also provides an estimate of the number of vehicles travelling to and from destinations east of the subject land.

Mr Walsh also informed us that the accuracy of a pneumatic tube counter under usual conditions of use is usually regarded as about ± 10 per cent.

Mr Walsh presented the results of the traffic count on Ballarto Road as the average daily two way traffic volume over seven days, being 533 vehicle movements (that is westbound plus eastbound). Commercial vehicles were about 32 per cent of the total. This equates to a daily average of 644 movements for a weekday, of which, Mr Walsh estimated, the commercial vehicles would constitute about 35-40 per cent.

The 85th percentile vehicle speed was 71 km/h with speeds typically in the range 50 to 70 km/h. He said that the results were consistent with his expectations for a road with low traffic volume, a high commercial vehicle component, and speeds reflecting the road condition.

The results of the traffic count on the quarry accessway were found to be 447 total vehicle movements (that is southbound plus northbound) per weekday (the quarry operates for 5.5 days per week). The data showed an anomaly in that the inbound count was consistently higher than the outbound by about 20-25 per cent. Mr Walsh attributed this to a characteristic of the measuring device in the way it responded to slow moving, turning and multi-axle vehicles. He also checked commercial vehicle movements to and from the site by referring to the number of dockets issued for departing loaded trucks. He also took into account the movements of light vehicles used by staff. From this he estimated that overall the quarry typically generates about 280 vehicle movements per day, of which about 250 are commercial vehicle movements.

In summary, the traffic movement evidence was that on a typical week day there are currently about 650 vehicle movements along the section of Ballarto Road from the Cranbourne-Frankston Road intersection to the site entry. Of those, about 280 go either to or from the quarry and about 250 of those are commercial vehicles. The balance of the 650 traffic movements, around 360 vehicle movements, are to and from other premises beyond the site entry. These are almost entirely light vehicles

Mr Walsh also informed the Panel that there was no record of any vehicle crashes along Ballarto Road over the last five years. Two crashes have been recorded at the intersection of Cranbourne-Frankston Road and Pearcedale Road.

Mr Walsh's evidence then provided an estimate of the number of vehicle movements expected for the landfill activities. This appears at Section 5.5, Table 1 (p.11) of his evidence statement. His statement indicates that the information about landfill fill rate had been provided to him by the proponent. The critical data for this section of the report is that it is estimated that 252,000 tonnes of solid inert waste will be deposited per annum and that the landfill facility will be open for 286 days per year. This equals 881.1 tonnes each day of waste.

Table 2 (p.11) of Mr Walsh's statement presents the estimates of vehicle numbers. Again, it indicated that the estimate of the mix of commercial vehicle types had been provided by the proponent. The table shows seven vehicle types: walking floor trailer, semi tipper, 30 metre skip tandem, 30 metre truck, 12 metre truck, compactor, and small truck. For each of these types there is assigned a typical payload and an estimate of the number of vehicles each day of each type. The sum of those vehicle numbers by type gives the total number of vehicles each day. Mr Walsh showed this to be 62 vehicles.

By adding anticipated light vehicle use, he concluded that the proposed landfill would generate about 150 total vehicle movements per day including 120 commercial vehicle movements.

The evidence suggested that 25-40 per cent of the waste may come from transfer stations which include council hard waste collections, 25-40 per cent from skip operators, a few percent from hire trucks, and the balance from front lift trucks.

In so far as Table 2 provides the total tonnage of waste each day delivered by each vehicle type (generated as the product of vehicle numbers and payloads by vehicle type), these daily volumes can be summed to get the total of volume of waste to be delivered daily. That is given as 881.2 tonnes each day.

From the above Mr Walsh concluded:

It is estimated the existing quarry use generates in the order of 280 movements per day, inclusive of 250 commercial vehicle movements, whilst it is projected that the Refuse Disposal Facility will generate 150 movements per day, inclusive of 120 commercial vehicle movements.

Based on the above, the proposed change of use will realise a reduction in traffic volumes along Ballarto Road, and therefore will not have any detrimental impact on the operation of the road. (Section 5.5, p.11)

Mr Walsh went on to say that, because the proposed use will generate less traffic than the present use, he considered that any improvements to Ballarto Road are not required as a result of the permit application. However, he acknowledged that the proponent had consented to seal the road.

Mr Walsh also addressed the road design issue. He said that he believed that Casey Standard Drawing S-111B is excessive in its requirements for the reconstruction of Ballarto Road. He observed that the drawing title box is marked for *High Speed – Rural Roads (Secondary Arterial Roads)* and that the notes on the drawing show the design:

- to be applicable to traffic volumes greater than 1000 vehicles per day
- to apply to through-roads
- to apply where a speed limit of 100 km/h is intended
- requires line marking.

Mr Walsh also noted that the design involves a sealed pavement width of seven metres, two metre shoulders on each side and a one metre verge with table drains on each side beyond the shoulders. That would require an 11 metre width excluding the table drains or 13 metres including them. Mr Walsh said that this constructed road width would have a significant impact on the roadside vegetation. Further, he advised that Ballarto Road is unlikely to carry more than 1000 vehicles each day, it is not a through road, and the 85th percentile speed of the present road is about 70 km/h.

He suggested that it would be more appropriate to require construction to Casey Standard Drawing S-111. The drawing title box for S-111 is marked for *Low Speed – Rural Roads* and the notes on the drawing show the design to be applicable to:

- traffic volumes of less than 500 vehicles per day
- non-through roads
- roads where a speed limit of 50 km/h is to operate.

Mr Walsh noted that that specification requires a sealed pavement width of six metres, and a one metre verge with table drains on each side. That would require an eight metre width overall including the table drains. Mr Walsh said in evidence that such a road standard was common in rural areas. He noted that the low traffic volumes would result in relatively few passing movements for commercial vehicles.

Mr Walsh further said that he considered it excessive to require the road to be constructed for a 20 year design life as had been proposed: he believed that 10 year design life would be sufficient.

Regardless of the road construction standard Mr Walsh recommended that VicRoads should be approached to apply a 50 km/h speed limit to this section of the road.

We were also supplied with a copy of a third standard: Casey Standard Drawing S-111C. That is for a high speed rural road with concrete kerb and channel. That would appear to require a constructed width of a minimum of nine metres.

In response to a Panel question about road safety issues on Ballarto Road, Mr Walsh said that a road safety audit might be considered. He advised that the auditor would assess and rate risks and advise on mitigation measures. He said, however, that some risks that might

be identified may already exist. He noted that an audit may well recommend that all roadside trees greater than 150 mm in diameter be removed.

Mr Walsh was asked about some on-site traffic management issues of concern to the Panel. He said that the site reception is about 50 metres from the road. That distance is sufficient to accommodate at least two trucks, so the queuing of trucks onto Ballarto Road while waiting entry to the weighbridge was unlikely. He expressed the view, however, that room would need to be provided to allow trucks carrying material rejected for disposal at the landfill to turn.

On access to the tipping area we were informed that the present road into the quarry is of ample width for trucks to pass each other safely.

Mr Walsh concluded that the development of the subject site would have no material impact on the operation of Ballarto Road, that the planning permit should be amended to reference Casey Standard Drawing S-111B for the Ballarto Road reconstruction, and that there are no traffic engineering reasons that should prevent the application being approved.

Mr Michael Barlow, in giving evidence on planning matters, discussed sources of dust emission:

These sources (traffic along Ballarto Road, vehicle movements on site, and operations at the landfill workface) are proposed to be dealt with by:

- *Sealing of Ballarto Road from the site entry to the intersection with Cranbourne Frankston Road*
- *Reduction in traffic associated with operations on the site from an average of 450 a day to around 124 per day.....(p.18)*

Under 'Traffic Impacts' his statement said:

Truck and vehicle access to the site from the surrounding area and broader region will rely on Ballarto Road and the allied major road network. Given the location of the site on Ballarto Road and excellent and direct access to the broader area via the main road network there is no need for trucks to travel through local residential streets in the locality to gain access to the site – indeed Ballarto Road is in effect a cul de sac serving a limited number of properties.

I also note the evidence of Mr Walsh that the number of movements will be significantly less than the current quarry operations and will have an insignificant effect on the operation of the road network. The reduced number of truck movements combined with the sealing of Ballarto Road will result in a significant improvement in terms of dust suppression, potential traffic conflicts and noise. (p.19)

Mr Morris relied on the evidence of Mr Walsh in his submission. Mr Morris said:

67. The proposed change of use will realise a reduction in traffic volumes along Ballarto Road from the order of 280 movements per day associated with the quarry use to 150 movements per day (inclusive of commercial vehicle movements) for the proposed landfill.

68. Accordingly, the development of the site as a landfill will not have any material impact on the operation of Ballarto Road and may in fact result in an improvement given the reduced traffic volumes. (p.19)

We note also that his paragraph 64.7 on dust emissions referred to:

- *.....the reduction in traffic associated with operations on the site from an average of 450 movements a day to around 124 per day. (p.18)*

At paragraphs 69 to 72, Mr Morris said that the proponent has no difficulty in principle in sealing the section of Ballarto Road between the Cranbourne-Frankston Road intersection and the entry to the site, but was of the view that the standard for the construction of the road should not be Casey Standard Drawing S-111B as proposed in the exhibited permit, but Casey Standard Drawing S-111 as supported by Mr Walsh. He said that:

- 71. *....the proposed condition is unreasonable and there is no nexus between the proposed condition and the proposed use and development of the site. (p.20)*

He described Casey Standard Drawing S111B as a 'Rolls Royce standard' for the road. He argued that S-111B was not justified because there would be less traffic from the proposed use than from the existing use, that the Council-proposed standard is for road and traffic features which are different from those of Ballarto Road, and that roadside vegetation would be lost.

He nevertheless advised that the proponent supported a speed limit of 50 km/h.

He informed us that the proponent did not agree with the Planning Authority that the reconstructed Ballarto Road should include a minimum pavement design life of 20 years. He submitted that 10 years would be sufficient given the expected less than 10 year life of the proposed landfill.

(iii) Environment Protection Authority

The written submission from the EPA did not refer to transport issues.

The EPA BPPEM, however, discusses traffic considerations at Section 6.10 (pp.37-38).

This notes that:

Due to safety concerns, noise, road grime and the increased cost of road maintenance, movement of trucks on local roads may be a concern to local residents and councils.

The guideline comments on limiting access roads and speeds, times of operation, and the design of the site layout to ensure separation from sensitive land uses. It advocates that consideration be given to the planning of the entrance to the landfill to minimise traffic impact including queuing along public roads, and to reduce dirt from the site being carried onto roads. It suggests that the deposition of dirt from a landfill site onto external sealed roads should be minimised by a wheel wash or equivalent being located near the site exit to clean wheels and under-bodies and allowing visual checking by the gatehouse attendant. The guideline advises that:

Where external roads are sealed, the road from the wheel wash should also be sealed and regularly cleaned to reduce the dirt re-entrained by the vehicle. Internal roads should also be sealed as far as possible into the site to reduce the amount of dirt accumulating on the vehicle and allow more time for dirt already on the vehicle to fall off before it leaves the site.

The guideline provides a five point summary of suggested traffic measures of the BPEM to comply with the Landfill Waste Management Policy.

(iv) Royal Botanic Gardens Cranbourne

The RBGC submission included comment on the floral and faunal values of the remnant indigenous vegetation along Ballarto Road.

The RBGC said that the vegetation along Ballarto Road provides a vegetated corridor connecting with the RBGC. It was said that any re-construction works on that road should be designed so that the existing indigenous roadside vegetation, which is listed as of local significance, is retained and conserved. Specifically RBGC submitted that:

- A speed limit of 40 km/h should be imposed to reduce road kill of native animals and to reduce dust which affects the health of the roadside vegetation.
- The road width should not be increased to avoid vegetation removal.
- Road reconstruction should not include kerb and drainage channels as they would reduce water availability for the vegetation.
- The 'Significant Roadside Vegetation and Wildlife Corridor' signs at either end of Ballarto Road should be restored and retained.

(v) Individual submitters

A number of the other written submissions raised traffic matters. There was a particular focus on Ballarto Road. Mr Geoff Cousins appeared at the Panel Hearing to support his submission that the road should be sealed.

A number of other submitters supported the sealing of Ballarto Road from Cranbourne-Frankston Road to the site entry, particularly to reduce the dust that would continue to be generated by vehicles as they accessed the proposed landfill. One submission suggested the sealing of the road beyond the site entry to its eastern end at the RBGC depot entry.

The sealing of Ballarto Road from the site entry to the RBGC depot entry was opposed by users of the horse training precinct adjoining the Cranbourne (Racecourse) Training Complex. That opposition was based on concerns for horses using Ballarto Road, and the danger presented by a sealed surface to the surety of their footing. Those submitters also said that while Ballarto Road was used by large horse floats, and as such the surface of the eastern end of the road needed to be well maintained, this could be achieved with a gravel surface. Users of that horse precinct further submitted that a keypad operated gateway should be provided across Ballarto Road at the transition point from sealed pavement to gravelled road, in order to discourage unnecessary use of the eastern section of the non-through road, and thereby reduce risk to horses. It was suggested that the gate was required because the landfill would be accessed by occasional users, rather than frequent users seeking quarry materials, and they would be less familiar with the appropriate route to the

site. It was said that access could also be made available through the gateway to those needing to enter that section of the roadway.

Some submissions advocated care for the vegetated roadside verges of Ballarto Road.

The submission by Mr Michael Paterson drew attention to substantial differences in a number of traffic reports of estimated traffic to the proposed landfill. That submission also noted the significant error in recent measurements of current quarry traffic whereby more vehicles were consistently shown to be entering the site than leaving.

In his submission at the Hearing Mr Cousins expressed satisfaction that the draft planning permit required the sealing of Ballarto Road. He submitted that internal roads should also be sealed: he said this had been done at a disposal facility near Pound Road.

8.3 Discussion

(i) Traffic volumes

The Panel accepts that there is a deal of uncertainty in presenting what is a typical traffic volume to the current quarry site given the dependence of traffic volumes on product demand. We also accept that there is probably even greater uncertainty in estimating traffic for a proposed solid inert waste landfill. We therefore do not believe that it would be reasonable to demand a high level accuracy in relation to future volumes. A reasonable understanding of the expected traffic numbers and vehicle types that will use the proposed landfill is necessary, however, for a proper analysis of the traffic issues.

The Panel is not satisfied about the accuracy of the traffic projections by the proponent. We suspect that the estimates presented may significantly underestimate the traffic volumes that might occur.

We provide the following advice on the matter of current traffic volumes and estimates.

The present production of quarried material is reported to be typically about 200,000 tonnes per annum (t/a) involving 120 vehicles per day (240 movements). We expect that the bulk density of the aggregate, of whatever grade, would be about 1.5 tonnes per cubic metre (t/m^3). Bulk density is the mass of a granular material per unit volume: the figure used is typical of sandstone or a similar material.

The proposed landfill operation is intended to receive about 250,000 t/a of solid inert waste. We were informed that 62 vehicles per day (124 movements) are estimated to deliver that waste. Mr David Maltby, a specialist landfill adviser to the proponent, who was present at the Hearing and was called by Mr Morris to assist the Panel, informed us that the bulk density of the received waste would be expected to be about 0.150 t/m^3 . He commented that a result of the government's landfill levy applied in recent times is that higher density material, such as metals and concrete, are increasingly recycled, and soils and rock are less often deposited in landfill than before. Further, Mr Maltby told us that the compacted solid inert waste, exclusive of covering material, would have a bulk density of about 0.75 t/m^3 .

It seems improbable to the Panel that a mass of waste imported annually to the site that would be 25 per cent greater than the mass currently being exported, could occur with only about half the number of vehicle movements. This is especially so given the imported waste

material has a bulk density approximately ten times less than that the graded rock currently been taken away from the site.

Mr Walsh informed us that he too had noticed this anomaly.

Further to this issue, the evidence of Mr Walsh was that there are typically 120 vehicles per day taking quarry materials (240 movements). On the basis that the quarry operates for fifty weeks per year and five and one half days per week, this translates to an average vehicle load of about 6 tonnes (t), or approximately 4 cubic metres (m³). Although that seems less than we might expect, we have no reason to doubt that the total quarry production and vehicle numbers are reliable data. The estimated truck activity for the proposed landfill has been presented as 62 vehicles per day (about 120 movements). That suggests an average load of solid inert waste of about 14 t, or approximately 90 m³ at a bulk density of 0.150 t/m³ as delivered. Whilst we have not been presented with evidence to suggest otherwise, we are surprised that that might be the volume of an average load of waste.

In other words, the data presented seems to suggest that about 1,700,000 m³ of uncompacted inert solid waste might be brought to the site each year compared with 130,000 m³ of aggregate being removed, and that it would be done using half the number of trucks. That indicates that the average truck load of solid waste that might arrive would bring a volume of solid inert waste about 13 times greater than the average volume of quarried material currently leaving the site.

To add to the uncertainty, a Traffix Group report of September 2007 (apparently submitted in support of the request for the Amendment) provided a different estimate of the possible commercial vehicle traffic to be generated by the proposed solid inert waste landfill. This estimate was based on the assumption that loads would be in the range 18-22 tonnes per truck and was premised on estimates of the relevant waste generation from the four municipalities likely to use the facility. This estimated waste generation drew on an earlier report by the same company of April 2007 which had calculated the waste generation at about 296,000 t/a. The September 2007 report estimated 47-57 trucks per day. We interpret this as about 100 movements and when adjusted for the now suggested annual fill rate of 250,000 t/a that equates to about 90 movements per day. This may be compared with the estimate given in Mr Walsh's evidence of about 120 commercial vehicle movements per day.

We can accept the likelihood that the arriving waste trucks will carry a considerably greater volume of material than the departing quarry trucks. However, based on our analysis, which admittedly uses quite limited data, we have reservations that the trucks accessing the proposed landfill will carry a volume of material as great as that which can be derived from the figures. This suggests that vehicle numbers may be considerably greater than estimated.

We accept the estimate from Mr Walsh that the proposed landfill will generate about 30 light vehicle movements per day, a figure very similar to the existing quarry.

The uncertainty in the traffic estimates for the landfill is also reflected in the different estimates and measurements of traffic to the existing quarry. As noted we were provided with three traffic reports prepared by Traffix Group.

The report of September 2007 says that the quarry generates about 250,000 t/a of aggregate, about 80 per cent of which is estimated to be carried by 20-22 tonne trucks and

the remainder in 12 tonne trucks. The report converts this to an average of between 46 and 49 truck loads each day, which is about 100 heavy vehicle movements per day. This contrasts with Mr Walsh's most recent expert evidence which includes that vehicle counts indicate that there are currently 250 such vehicle movements per day - for a lesser annual production of 200,000 t/a. The September 2007 report recorded the results of a traffic count taken on Ballarto Road. This gave a two-way week day traffic volume of 516 vehicles of which 28.5 per cent were commercial vehicles. That suggests a weekday commercial vehicle movement of about 150 vehicles per week day. This compares with the more recent data of about 650 vehicle movements each week day of which about 250 were estimated as commercial vehicle movements.

Hence, for quarry traffic, we seem to have about 100 commercial vehicle movements by estimation in September 2007, 150 also in September 2007, and 250 in November 2012. We do not suggest these data for commercial vehicle movements to and from the existing quarry are wrong, rather they are indicative of the uncertainty in estimating traffic movements and the variability of those actual movements along this road. They suggest that care has to be exercised in using the figures.

This being said, for the reasons presented above, we suspect that the traffic volumes to bring solid inert waste to the site may be greater, and perhaps significantly so, than the volumes estimated by the proponent. We do not have the necessary information available, however, to estimate a more likely traffic volume.

In addition to the traffic bringing waste material to the site, there may be some further traffic bringing material to the site for creation of the landfill liner as part of the landfill development, possibly bringing materials for the landfill capping on closure, and perhaps waste cover material during operation if insufficient is available on site.

Moreover, as earlier mentioned, late in the Hearing there was a suggestion that the proponent would be seeking to run-out the existing stockpiles of materials if necessary during the construction (or perhaps operation of the landfill). It was also said that there would likely be rock material produced as a bi-product of preparing the quarry face for the liner and this might be graded and sold.

Notwithstanding these concerns, we observe here that greater traffic volumes than estimated would be unlikely to present any particular difficulty in terms of road capacity given the proximity of the nearby arterial road network, the intended enhancement of Ballarto Road, and traffic management issues that might readily be implemented on-site.

Accordingly the matter of traffic volumes does not finally recommend against approval of the planning permit application.

(ii) Arterial road access

In his evidence, Mr Walsh drew our attention to the proximity of the site to the arterial Cranbourne-Frankston Road. This road provides access to the wider metropolitan arterial road network and has the capacity to handle the types and volumes of vehicles which would be delivering waste to the site. The arterial network provides excellent connection to inert solid waste generators. No submission suggested otherwise.

The Panel accepts that there is excellent arterial road access to within about a kilometre of the proposed landfill site. In the event that the traffic to the proposed solid inert waste landfill is significantly greater than that estimated by the proponent, we do not expect that it would have any material impact on the arterial road system.

The September 2007 Report from the Traffix Group considered traffic volumes in that arterial road access area. Based on the then estimate of about 100 vehicle movements per day to the proposed landfill, it concluded that that traffic increase at the intersection of Cranbourne-Frankston Road, Pearcedale Road and Ballarto Road would be less than 1-2 per cent, a change that it considered to be insignificant.

Even if the traffic volume linked to the operation of the proposed landfill is markedly greater than that projected it would seem that the increase in traffic volume at that intersection would be minor, and at most a small increase on that associated with the present quarry operation.

(iii) Ballarto Road

The unsealed Ballarto Road is maintained by Casey City Council. Documentation shows that aggregate is spread on the road and it is graded regularly. The Work Authority held by the proponent requires it to contribute materials to that maintenance.

The default speed limit is 100 km/h. Monitoring by Traffix Group shows actual speed to be generally much less than that.

The exhibited draft planning permit conditions concerning the sealing of Ballarto Road have been set out above at Section 7.2 (i) and the issues surrounding that sealing have been described.

During the Hearing, the Planning Authority and the proponent agreed on a compromise position concerning the design for the road pavement. They agreed that the road be constructed to a sealed pavement width of seven metres with one metre verges and table drains.

We support that road construction outcome with the following features:

- Ballarto Road will be sealed from the Cranbourne-Frankston Road intersection to the solid inert waste landfill site entry. The sealing will substantially eliminate road dust from traffic using that section of Ballarto Road.
- The pavement width of seven metres should allow for vehicles to pass safely (maximum heavy vehicle width is understood to be 2.6 metres plus mirrors) without using the road verges which assists safe passing and maintenance of the road edges and verges.
- The impact on the existing roadside vegetation should be small and certainly much less than would be the case if Casey Standard Drawing S-111B had been adopted (9 metre constructed road width with verges compared to 13 metres).
- It meets a number of the RBGC issues: the road width ensures retention of most of the remnant vegetation along Ballarto Road; runoff water is not channelled and hence is available for that vegetation; and dust impacting roadside vegetation is practically eliminated.
- It is an outcome supported by a number of individual submitters.

We consider that it is appropriate that the pavement be designed for a minimum life greater than the expected life of the landfill. This is because we expect that the number of commercial vehicles accessing the proposed landfill site may be significantly more than suggested, albeit with lighter loadings is appropriate that the road should be in a sound condition at the closure of the landfill.

We support the view that application should be made to VicRoads to impose a speed limit on Ballarto Road less than the present default limit of 100 km/h. Apart from increased safety for road users, the reduced speed would be consistent with the submission from the RBGC to reduce road kill of native animals. Our estimation is that, over the relatively short distance of Ballarto Road, the extra travel time with a speed limit of 60 km/h rather than 100 km/h would be less than half a minute. This is an action required to be undertaken by the Council independently of further processing of the Amendment/permit.

Concerning the matter of a possible road safety audit, the Council may consider this useful as an input to the final road design. The Panel suggests, however, that, in considering whether this is the case, the Council should be mindful of the advice from Mr Walsh that some traffic risks may already exist and not all risks would be linked to the new design of that road re-construction. It may not be appropriate to include a road safety audit in the Planning Permit conditions.

We believe that the proponent should accept responsibility for reasonable maintenance of the sealed Ballarto Road up until the time that capping and landscaping of the filled landfill is completed.

(iv) On site traffic

A number of issues were raised by the Panel relating to vehicle access and exit from the site and on site traffic movements.

One of these is the need to avoid queuing onto Ballarto Road.

We were advised that the present practice at the quarry is for loaded trucks leaving the site to be weighed on the weighbridge which is situated near the site entry point, and empty trucks from known clients to be tared only from time to time on the weighbridge when entering the site. There is therefore little likelihood of those trucks that are entering the site queuing and obstructing Ballarto Road.

For the proposed landfill, the activity on and near the weighbridge will differ. All entering vehicles will need to be weighed. Further, we were told that it is expected that loads would be checked to see that they contain only permitted solid inert waste and if any recyclable materials or prescribed waste is found, the trucks would not be permitted to proceed to the tipping area – some trucks would be directed away from the site and others to a recycling sorting area. As noted, we were informed that the distance between the road and the weighbridge would enable two of the largest vehicles expected to visit the site to queue without obstructing Ballarto Road. We were also told that vehicles, additional to the two queuing vehicles, that needed to be weighed and inspected, could be accommodated in space adjoining the weighbridge.

We consider that the description of the arrangements at the site entry indicates that there may be a need for more structured management of vehicle entry, weighing and checking to

avoid queuing onto Ballarto Road. This is particularly so given that it would appear that the number of vehicles accessing the site may be considerably greater than was suggested by the proponent.

Another issue raised it that of on-site generated by dust traffic. It can be expected that traffic on site will generate dust when using the dry unsealed access roads to the tipping face, just as the existing quarry traffic generates dust. The proponent submitted that dust is currently controlled by watering the roads as needed and the same practice will continue. We consider this to be a satisfactory arrangement.

The Planning Authority and EPA identified the need to avoid mud being carried onto the sealed Ballarto Road from truck tyres and under-bodies. Mud deposited on a sealed road can become a source of dust.

The EPA BPEM for landfills advocates sealing the section of the internal road from the wheel wash to the external sealed road. We note that the September 2007 report from Traffix Group at page 4 refers to this same issue. It cites Condition 44.4 of the Work Authority issued to the proponent for the quarry operation which requires sealing of the access road to the quarry when Ballarto Road is sealed; and, if directed, constructing and maintaining a wheel cleaning device.

An on-site wheel wash, or equivalent, near the exit for cleaning leaving vehicles is a proposed permit condition by the Council. We agree that this is an appropriate condition. We also consider that the roadway between the wheel wash and the Ballarto Road pavement should be sealed.

One further traffic matter was raised in the submissions by persons with interests linked to the Cranbourne horse precinct. It was suggested that there is a need to inform truck drivers that access to and egress from the site is to be direct from/to the Cranbourne-Frankston Road. This is a matter which it is appropriate for the proponent to address, especially when the new business is first established.

The on-site traffic issues are such that we believe that the preparation of an on-site traffic management plan would be beneficial. It might usefully clarify arrangements for parking. It should also cover on site vehicle safety and environmental management issues, as well as include advisory processes to inform truck drivers about access to and from the Cranbourne-Frankston Road.

(v) Permit conditions

Following the Hearing, the proponent proposed the following permit conditions for *Traffic Management*:

12. Access to and egress from the site for all vehicles must be from the designated entry/exit point on Ballarto Road.

13. All of the internal roads shall be formed and whilst in use be maintained, including repair grading and draining, to the satisfaction of the Responsible Authority to ensure access to the disposal areas in all weather conditions.

14. Private vehicles and small trailers shall not be used to access the site for waste disposal or materials recycling purposes.

15. Prior to the commencement of waste deposition a traffic management plan must be submitted to the satisfaction of the Responsible Authority.

16. Prior to the commencement of waste deposition, Ballarto Road must be fully constructed (asphalt surfacing) to a rural standard between Cranbourne-Frankston Road and 10 metres east of the site entry. The road construction standard must meet the following minimum requirements, to the satisfaction of the Responsible Authority:

- A minimum trafficable width of 7 metres in order to cater for the passage of heavy commercial vehicles.*
- A pavement design with a minimum design life of 20 years based on a Geotechnical Design Report.*
- Any reduced speed limit to be commensurate with the rural and treed nature of the road and subject to the approval of VicRoads.*
- The undertaking of a Road Safety Audit of the design.*
- An open drainage system sympathetic with the rural environment and existing roadside vegetation.*

Suitable engineering design drawings that satisfy the above requirements must be prepared by an appropriately qualified person and submitted, along with a Geotechnical Design report, to the Responsible Authority for approval prior to the commencement of any works.

The Planning Authority proposed variations to two conditions:

14. Private vehicles and small trailers shall not be granted access to the site for waste disposal or materials recycling purposes.

15. Prior to the commencement of waste deposition an on-site traffic management plan must be prepared to the satisfaction of the Responsible Authority. The traffic management plan must provide for the installation of appropriate directional signage.

The Panel considers that the intents of the Council version of Conditions 14 and 15 are preferable. We consider the proponent's other conditions are appropriate subject to some minor changes.

8.4 Conclusions

The Panel concludes that there is no traffic related impediment to developing the site for a solid inert waste landfill. We believe that the commercial vehicle traffic to the proposed landfill site may be greater, perhaps significantly more so, than that estimated by the proponent. Nonetheless, we conclude that the nearby arterial road system is well able to handle anticipated landfill traffic, the proposed reconstructed and sealed Ballarto Road will accommodate that traffic, and on site traffic can be adequately managed by the preparation and implementation of a traffic management plan.

8.5 Recommendations

The Panel recommends:

3. That conditions as shown in Appendix D of the Panel report be included on the planning permit for the refuse disposal facility to the effect that:
 - a) Access to and egress from the site for all vehicles must be from the designated entry/exit point on Ballarto Road.
 - b) All of the internal roads shall be formed and whilst in use be maintained, including repair grading and draining, to the satisfaction of the Responsible Authority to ensure access to the disposal areas in all weather conditions.
 - c) Non-commercial vehicles and small trailers must not be granted access to the site for waste disposal or materials recycling purposes. (This might be alternatively expressed as: Only vehicles of Austroads vehicle classification system Class 3 and above shall be granted access to the site for waste disposal or resource recovery purposes.)
 - d) Before on-site works associated with the use of the site as a landfill start, Ballarto Road must be fully constructed (asphalt surfacing) to a rural standard between Cranbourne-Frankston Road and 10 metres east of the site entry. The road construction standard must meet the following minimum requirements, to the satisfaction of the Responsible Authority:
 - A minimum trafficable width of 7 metres in order to cater for the passage of heavy commercial vehicles.
 - A pavement design with a minimum design life of 20 years based on a Geotechnical Design Report.
 - An open drainage system sympathetic with the rural environment and existing roadside vegetation.

Suitable engineering design drawings that satisfy the above requirements must be prepared by an appropriately qualified person and submitted, along with a Geotechnical Design report, to the Responsible Authority for approval before the commencement of any works.

- e) Before on-site works associated with the use of the site as a landfill start, a wheel wash that removes mud from vehicle wheels and under-bodies is to be installed at the exit of the proposed landfill and thereafter used by vehicles leaving the site. All waste from the wash area must be connected to the sewer or a settlement and oil separation system and disposed of in accordance with the *Environment Protection Act 1970*.
- f) Before on-site works associated with the use of the site as a landfill start, the section of on-site road between the wheel wash and Ballarto Road must be sealed to prevent mud being carried onto the public road.

- g) The emission of dust from on-site unsealed roads and other trafficked areas is to be controlled by watering or other technique(s) to the satisfaction of the Responsible Authority.**
- h) Before works associated with the use of the site as a landfill start, a traffic management plan must be prepared and implemented to the satisfaction of the Responsible Authority. The Traffic Management Plan must:**
- address on site safety and environmental issues;**
 - manage traffic circulation and parking especially adjacent to the site entry;**
 - minimise the frequency and amount of truck queuing on Ballarto Road;**
 - direct commercial vehicles to enter the site only via Ballarto Road from the Cranbourne-Frankston Road intersection and exit the site only via Ballarto Road to that intersection;**
 - include directional signage.**
- 4. That the Council should apply to VicRoads to introduce a speed limit on Ballarto Road that is less than the present default limit of 100 km/h.**
- 5. That the Council should consider whether a road safety audit of Ballarto Road should be required to be undertaken preparatory to the reconstruction of Ballarto Road.**

9 Air quality including dust, odour and landfill gas

9.1 The issue

This section discusses air quality with a focus on dust, odour and landfill gas which were matters raised in submissions. The generation of dust from the proposed landfill use was the most frequently raised issue.

9.2 Evidence and submissions

(i) Planning Authority

The Council indicated that some submissions had commented on possible emissions of dust and odour, and there was concern about the proposed flare to treat any landfill gas. The Council noted in its submission:

The proposed landfill will be subject to the granting of a Works Approval and Discharge Licence from the EPA. This approval will consider in detail any potential environmental impact including odour, noise and dust, monitoring and means of mitigation and this is reinforced by conditions in the proposed Planning Permit. (p.27)

In response to individual submissions suggesting that the proposed landfill site 'is located too close to residential areas' and may result in amenity impacts including noise, odour and dust, the Council said:

The site is located approximately 250m from the nearest dwelling in Brookland Greens and Settlers Run, or approximately 470m if measured from the voids to be filled. This exceeds the 200m requirement, measured from the nearest landfill cell, specified by EPA for solid inert landfills. (p.26)

Concerning emissions to air, the Council submission stated:

The proponent has prepared expert reports addressing noise and air quality. The air quality assessment lodged with the amendment request advises that air quality beyond the site boundary will comply with relevant SEPPs. (pp.26-27)

The Council submission at paragraphs 99 and 100 (p.27) also advises that a solid inert waste landfill may generate small quantities of landfill gas due to decomposition of some organic materials, and that detailed management of landfill gas would be a part of the EPA Works Approval and Licence. It would be expected that this would include specifications for lining the site, soil gas monitoring, and landfill gas treatment using a flare, all measures being the best available technology for the small volume of gas expected.

Further, at paragraph 98 (p.27) the Council responded to submitters' concerns that the use may become a putrescible waste landfill by stating that the acceptance of solid inert waste only will be controlled by the EPA Licence and by the planning permit conditions. Operating procedures would be put in place and significant penalties would apply to ensure compliance. Prohibiting putrescible waste would minimise both odour and landfill gas generation.

The Panel notes that a Council agenda item of several years ago (19 August 2008, Item 6), when the proposal was first considered, states under *Air quality*:

The current proposal results in reduced dust emissions compared to the existing quarry use. A Dust Assessment prepared by Environmental Science Associates, dated 19 September 2007, found dust-fall values at locations 100 metres and 200 metres to the north of Ballarto Road averaged 3.2 and 2.1 g/m³, respectively, which are below the 4.0 g/m³ per month that is generally accepted as being the desirable upper limit for residential areas. The report contends that Ballarto Road, which is unsealed, represents the major local dust source. The report concludes that dust generated by the landfill operation will fall by a factor of seven, compared to the quarry, due to the absence of crushing, blasting and screening activities associated with the quarry. (our emphasis)

A relevant condition is included in the exhibited draft permit:

12. Prior to the commencement of the use, a Dust Management Plan must be prepared to the satisfaction of the Responsible Authority and Environment Protection Authority. The plan should include measures to ensure that any dust from the operation in all weather conditions does not unreasonably impact upon the amenity of the area. The Dust Management Plan should address dust suppression measures within the site and for vehicles using the unsealed portions of Ballarto Road.

(ii) Proponent

Mr Morris said that the proponent relies upon the detailed *Air Quality Modelling Assessment: Proposed Solid Inert Waste Landfill* prepared by Golder Associates that was included with the application documentation.

Mr Morris noted that the EPA Landfill BPME provides for a 200 metre buffer between any sensitive land use and the nearest landfill cell. He said that this buffer will act as an effective mechanism to reduce amenity impacts of dust generated by the proposed landfill in the same way that the current quarry buffer operates.

With regard to dust generation, Mr Morris stated:

The potential for fugitive dust emissions will diminish with the cessation of the quarrying operations. Potential dust sources associated with the quarry include traffic movements along Ballarto Road and within the site and quarry hole, blasting, loading of rock, crushing and screening of rock and associated loading and unloading operations. The operation of a landfill on the site will not cause adverse impacts on the surrounding area by way of dust emissions. With the introduction of the landfill, dust from site operations will be reduced with the cessation of blasting, rock winning and crushing operations. Potential sources of dust from the landfill will include traffic operations along Ballarto Road, vehicle movements within the site and landfill and the 'working' of the landfill workplace including placing of daily cover. These sources of dust will be addressed by the sealing of

Ballarto Road from the site entry to the intersection with Cranbourne Frankston Road and the reduction in traffic associated with operations on the site from an average of 450 movements day to around 124 per day. The use of water trucks to wet down the entry to the site, internal access roads and the landfill area will also minimise dust emissions. (p.18)

With regard to odour, Mr Morris submitted that the buffer distance specified by the EPA of 200 m for this type of landfill is set to manage odour.

Mr Morris said:

The operations of the solid inert waste landfill are unlikely to give rise to odour impacts due to the non-putrescible nature of the material to be placed in the landfill. There will be a number of management measures in place to ensure that only solid inert waste is accepted including limiting access to the landfill by small vehicles, the use of overhead cameras to view loads on arrival and the checking of loads at the landfill working face.

Potential odour from future leachate can be minimised or negated by proper management of the water condition when in storage prior to disposal. (p.17)

The Panel notes that the *Air Quality Modelling Assessment: Proposed Solid Inert Waste Landfill* by Golder Associates is concerned exclusively with dust. It said that odour and landfill gas are not be expected to be significant, as the landfill would receive only solid inert waste. It was said that these air emissions matters would be considered as part of the Works Approval application. The report acknowledged that there would be emissions of air pollutants from vehicles and machinery on site, but stated that these would not be dominant concerns.

The dust estimation encompassed the landfill site but excluded Ballarto Road. The impact assessment involved modelling the dispersion of dust using a dispersion model that incorporated information on wind speed and direction and estimates of dust emissions from assumed activities on site. The results were expressed as PM₁₀ and PM_{2.5} (particle matter less than 10 and 2.5 micrometre in diameter respectively) and compared with EPA criteria.

The study concluded:

The potential PM₁₀ and PM_{2.5} impacts on the land surrounding the site due to the proposed landfill operations were modelled using AUSPLUME.

The maximum predicted PM₁₀ GLCs (ground level concentrations) were compliant with the assessment criteria at all locations beyond the boundary with the exception of a small area extending into non-sensitive use areas to the south-east. It is noted that these exceptions are contained within the recommended separation distance.

The maximum predicted PM₁₀ and PM_{2.5} GLCs were compliant with the assessment criteria at the nearest sensitive receptor.

The maximum predicted PM_{2.5} GLCs were compliant with the assessment criteria at all locations beyond the site boundary. (p.28)

The report proposed that dust be controlled by the following means:

...best practice air quality management to be implemented at the proposed landfill includes the following:

- *A reactive dust management strategy which includes real time monitoring of PM₁₀. The monitoring may be required at the boundary of the premises both upwind and downwind of the active landfill area to assess any impact and guide mitigation actions in accordance with the Landfill BPEM. An hourly trigger level of 80 µg/m³ will be used to assess the real time data. If exceeded additional dust management practices, such as increased water sprays and dust suppressants shall be applied. Dust suppression measures to be applied at the site include:*
 - *Vegetating or mulching of exposed areas and formation of internal roads, including sealing roads that are used regularly*
 - *Use of water or other dust suppressants on roads or exposed areas*
 - *Where leachate is to be used for dust suppression it may only be applied to areas that are within the active landfill cell to ensure the leachate does not contaminate stormwater run-off. (p.28)*

In relation to dust and odour, Mr Barlow stated:

In the early stages of the landfill the operations will be generally limited to areas within the existing quarry hole. The final stage brings the landfill up to a height above the existing ground level where the use of water trucks to wet exposed areas of the landfill surface will be particularly important. I understand that as the landfill stages are completed they will be progressively capped and landscaped to limit the extent of exposed surfaces.

Having regard to the detailed assessment of dust from future operations prepared by Golder Associates I am satisfied that:

- *The proposed operating conditions (e.g. wetting of access and work areas, planting of the cap of completed fill areas, etc.) will ensure that dust emissions from the site will be limited.*
- *The vegetated setbacks of the landfill operations from nearby properties will provide a significant buffer to potential impacts. (p.18)*

(iii) Environment Protection Authority

The written submission from the Environment Protection Authority of 30 July 2013 responding to the planning permit referral advised that EPA did not endorse dust management plans as referred to in Condition 12 but relevant Licence conditions would apply.

The EPA BPEM discusses air quality considerations at Section 6.7 (pp.30-34).

Section 6.7.4 discusses dust. It comments that any large area of disturbed land that is subject to vehicular traffic is likely to generate dust. It states:

Dust can impact on both health and amenity depending on the size of the particles. Reactive management strategies should be put in place including real time monitoring of PM₁₀. The monitoring may be required at the boundary of the premises both upwind and downwind of the active landfill area to assess any impact and guide mitigation actions.

An hourly trigger level of 80 µg/m³ should be used to assess the real time data. If exceeded, additional dust management practices, such as increased water sprays and dust suppressants should be applied. (PM₁₀ refers to particles less than 10 micrometre in diameter). (p.34)

The BPEM comments on measures to limit dust emissions and provides a four point summary of suggested dust control measures to comply with the Landfill Waste Management Policy. Methods such as vegetating or mulching exposed areas, sealing regularly used roads, and using water or other dust suppressants on exposed areas are discussed. It advises that if leachate is used for dust suppression that it must only be applied to areas within the active landfill cell to avoid contaminating surface waters.

Odour is discussed at section 6.7.3 of the BPEM. It states:

Landfill odours have two main sources: odour from the aerobic decomposition of freshly deposited wastes and odour from landfill gas generated by the anaerobic decomposition of wastes. Leachate ponds can also be a source of offensive odours. Good operation and adequate buffers are essential in odour management. These buffers are set to account for upset conditions and are not a substitute for best-practice management at the landfill or for normal operating conditions.

At all times, a landfill must be managed to prevent offensive odours beyond the boundary of the premises. (p.34)

It refers to the provision of prescribed buffers to minimise any odour impacts on surrounding sensitive areas.

On odours from landfill gas, the BPEM says:

While the major constituents of landfill gas, methane and carbon dioxide, are odourless, other minor constituents of landfill gases including organosulfur compounds can be very odorous. The key means of managing landfill gas odour is to manage the landfill gas in general by oxidising it through some of the measures discussed in section 6.7.1.

Landfill gas is presented in section 6.7.1. It says:

The microbial degradation of putrescible waste produces landfill gas. The composition of landfill gas varies according to conditions present within the landfill. Landfills typically pass through a number of phases of microbiological breakdown (Appendix B, Figure B.2). The onset and duration of each phase of landfill gas production varies both within and between sites. The quantity of water, nutrients and bacteria present are limiting factors in the rate of waste decomposition. (pp.30-33)

The section describes the possible adverse effects of landfill gas including flammability, suffocation, toxicity, odour, and corrosivity; potential routes for landfill gas emission; risk assessment; landfill gas monitoring; gas concentration action levels; and management of landfill gas.

(iv) Individual submitters

A number of submissions referred to the proposed landfill being too close to residential areas citing dust, noise and odour as concerns. They included the submission on behalf of Medallist projects Pty Ltd which expressed concerns about possible amenity impacts on both the Settlers Run estate and the Settlers Run Golf Course and Country Club. Ms Sahhar and Mr Selesnew expressed concerns in writing about impacts on their property which abuts the Brooklyn Greens Estate approximately one kilometre from the subject site.

9.3 Discussion

Since an EPA Works Approval has not been applied for and granted, it is not known what conditions might be on that statutory instrument and hence how planning permit conditions might complement that. We accept submissions from the Planning Authority and the proponent that planning permit conditions should not seek to duplicate what might be in a Works Approval and eventual Licence and that any inconsistencies in planning permit conditions and the statutory environmental approvals should be avoided. There should, however, be no major gaps in required regulation. We accept the proposition that the planning permit should include amenity issues; however, the difference between an amenity and an environmental issue is not always clear.

It is apparent that dust is an important amenity issue and has been identified as a concern with the present quarry operation. In general we accept the position of the proponent that there would be fewer dust sources associated with the proposed landfill than associated with the present quarrying operation. Off-site, the sealing of Ballarto Road to the site will remove a major source of dust associated with the proposed operation. On site, rock winning by blasting, ripping, crushing, screening, transporting, stockpiling and loading will cease. These will be replaced by preparing the landfill liner, transporting waste on site, compacting that waste, handling cover material, covering waste, and material recovery activities. As discussed before, we believe that the number of vehicles on site (and potentially creating dust) may be greater than anticipated.

The evidence presented to us suggests that the current operator has the equipment (the current water truck will be kept on site and water will be available) and the experience to control dust. If anticipated dust control methods prove insufficient some sealing of the most used internal roads may need to be considered.

We consider that the Golder Associates' *Air Quality Modelling Assessment* is a useful study to quantify dust emissions. We observe that there are probably substantial uncertainties in the estimates, particularly of emissions from individual sources. It appears to have some conservatism built into it, although, as noted, the number of vehicles on site may have been underestimated.

The Golder Associates' report and the BEPM suggest that there should be real time monitoring of fine particle matter. It is our understanding that such monitoring is quite

feasible and can allow various dust levels (PM levels over nominated averaging times) to be set that trigger dust reduction responses.

The required buffer distance from the proposed landfill is from the nearest landfill cell to a sensitive use. We observe that the landfill cell is not the only potential source of dust; there are possible dust sources nearer to the entrance that should be considered. The change from a quarry to a solid inert waste landfill reduces the buffer distance from the operating area from 300 metres to 200 metres. We suggest that it might be prudent for the Council to assess dust emissions from the site, including the first cell filled to above grade and capped, before considering the development of sensitive uses in that zone between 200m and 300m from the landfill cells.

In summary we are satisfied that dust emissions from the proposed activity, including from traffic on Ballarto Road, will most likely be less than that at present, and that protocols are available to manage dust so that amenity consequences can be avoided. We believe that the Works Approval and Licence will establish comprehensive conditions to manage dust on the proposed landfill site.

We are conscious that odour from landfills is a long recognised concern. However we understand that this is primarily an issue with landfills disposing of putrescible waste, and in particular those putrescible waste landfills that have not been well managed. We also are aware that leachate (the water pumped from the landfill originating from water generated by some waste decomposition and storm water falling on the void) can also be a source of odour. However, this proposal is for a solid inert waste landfill which will not accept putrescible waste and is hence expected to generate little odour and leachate. Further, the management of landfills, including their odour emissions, is now very tightly managed by the EPA through its statutory instruments.

We anticipate that the Works Approval and Licence will establish comprehensive conditions to manage odour from the proposed landfill including leachate. We believe that there should be no amenity impact due to odour from the waste deposited in the landfill provided that only solid inert waste is deposited, the waste is regularly covered, and the minimum recommended buffer distance of 200 m from any sensitive receptor to the nearest landfill cell is implemented.

Landfill gas is generated from some organic material due to microbial action. It can contain methane and is therefore flammable. We understand that it can also be odorous. Landfill gas is particularly generated from the decomposition of putrescible waste. Given the experience of the nearby and now closed Stevenson's Road putrescible waste landfill, from which landfill gas migrated through the soil to some of the adjoining housing estate, it might be anticipated that any landfill gas generation at this site will be closely managed.

We expect that that EPA will establish comprehensive controls through the Works Approval to collect and dispose of any landfill gas. The solid inert waste will generate relatively little landfill gas, the landfill will have an impervious liner preventing movement of landfill gas through the soil, and each of the four proposed cells will be capped when full. Any gas generated will be captured and treated.

The application documents refer to a landfill gas flare being provided to dispose of gas if needed. Mr Maltby suggested that from his experience it should be provided but may not need to be used for this type of landfill. He also suggested at the Hearing that a bio-filter might be used rather than a flare.

We agree with the view expressed in the Golder Associates' *Air Quality Modelling Assessment* report that exhaust emissions from vehicles and machinery on-site is unimportant in terms of air quality.

We suggest that the most satisfactory position would be for EPA to deal with all of the on-site air quality environmental issues in its regulatory instruments. We believe that provisions requiring regular reports of air quality performance would be appropriate.

We also believe that it is appropriate that the planning permit include a generic condition requiring an *air quality management plan* to protect amenity. We suggest that this might substitute for and be rather wider than the present proposal for a *dust management plan*. It might be anticipated that the air quality management plan would be identical to that required by the statutory environmental requirements.

The proponent and Planning Authority proposed a variation to the Dust Management Plan as follows:

11. *Before the development starts, a Dust Management Plan must be prepared to the satisfaction of the Responsible Authority. The plan should include measures to ensure that dust from the operation in all weather conditions does not unreasonably impact upon the amenity of the area.*

The previous reference to addressing dust from vehicles using the unsealed portions of Ballarto Road has been deleted because of the condition to seal that road from the Cranbourne-Frankston Road intersection to the site entry, and to remove the implication that the proponent could be responsible for dust control along the unsealed portion of Ballarto road to the east of the site entry. The reference to the Environment Protection Authority has been deleted at the request of EPA.

We suggest that the condition might be widened as follows:

11. *Prior to the commencement of the development, an Air Quality Management Plan must be prepared to the satisfaction of the Responsible Authority. The plan must include measures to ensure that dust, odour and landfill gas from the operation in all conditions does not unreasonably impact upon the amenity of the area.*

It would be appropriate for the development plan required by the planning permit to show the location of the proposed landfill gas flare or bio-filter and any other equipment needed for controlling air emissions, and the planning permit to include generic requirements for landfill lining and capping since they are part of landfill gas management.

9.4 Conclusions

The Panel would not expect adverse air quality amenity impacts at sensitive locations in the vicinity of the proposed landfill. We anticipate that stringent and comprehensive controls will be required by the EPA Works Approval and subsequent Licence to control emissions of dust, odour and landfill gas from the site. We conclude that

- protocols can be developed and implemented to limit dust emissions;
- odour from a well managed solid inert waste landfill is unlikely; and
- such a waste facility will, at most, generate only a small amount of landfill gas and any that is produced will be captured and treated.

9.5 Recommendations

The Panel recommends:

6. that only generic conditions relating to on-site emissions of air pollutants, including dust, odour and landfill gas should be included on the planning permit and otherwise they should be viewed as the province of the EPA issued Works Approval and subsequent Licence;
7. that the planning permit require an *air quality management plan* prior to the commencement of development recognising that this may be that required by the statutory environmental approvals;
8. that the Council should establish with EPA a protocol for responding to any air quality amenity complaints.

10 Noise effects

10.1 The issue

Noise from the proposed landfill was raised in some submissions. The issue is whether there would be unreasonable impacts.

10.2 Evidence and submissions

(i) Planning Authority

As was the case with air quality, the Council noted that some written submissions commented on the site being too close to residential areas leading to amenity impacts from noise. The Council noted in its submission to the Panel that noise would be controlled by a Works Approval and Licence from EPA, the distances from the nearest dwellings, and that a buffer zone that would be required to be maintained for the site of the landfill.

For noise the Council submission stated:

The proponent has prepared expert reports addressing noise and air quality. Subject to the development of a 3m-tall earth mound above the north-eastern edge of the landfill, noise levels will meet SEPP N-1 criteria³⁹. This has been conditioned into the proposed Permit. (p.26)

The Council agenda item of 19 August 2008: included:

It is anticipated that the proposed landfill would generate less noise than the existing quarry use due to the absence of crushing, blasting and screening activities associated with the quarry. Noise abatement would be further assisted by the 200-metre buffer prescribed by Clause 52.10 of the Casey Planning Scheme and conditions to be included in the Planning Permit requiring that noise levels comply with current EPA requirements.

The relevant condition included in the exhibited draft planning permit is:

22. *Noise levels emanating from the land must comply with the requirements of the Environment Protection Authority's Information Bulletin No. N3/89 Interim Guidelines for the Control of Noise in Country Victoria.*

A variation of this condition was provided to us by the Planning Authority reflecting a change in the status of the relevant EPA document thus:

24. *Noise levels emanating from the land must comply with the requirements of the Environment Protection Authority's Publication 1411 Noise from Industry in Regional Victoria⁴⁰.*

³⁹ State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1.

⁴⁰ *Noise from Industry in Regional Victoria: Recommended Maximum Noise Levels from Commerce, Industry and Trade Premises in Regional Victoria.*

(ii) Proponent

In his submission, Mr Morris said that the proponent relies upon the detailed *Cranbourne Landfill: Environmental Noise Assessment* (May 2013) prepared by Marshall Day Acoustics that was included with the application documentation.

Mr Morris noted⁴¹ that the EPA BPEM provides for a 200 metre buffer between any sensitive land use and the nearest landfill cell, which, he said, would continue to act as an effective mechanism to reduce amenity impacts of noise from the proposed landfill.

He stated:

In relation to noise impacts, the operations of the site are required to comply with SEPP N-1 at all times. An assessment of noise impact has been undertaken by Marshall Day. There will be a minor noise exceedance at 980 Ballarto Road during Stage 4 of the landfill. This impact arises from the operation during the 'worst case period' involving the operation of all onsite equipment and the arrival and departure of 6 trucks in a half hour period which is unlikely to occur. The suggested solution to ameliorate this impact is the construction of a 3 metre high bund along the north-east boundary. SBI accepts this recommendation. (p.19)

Mr Morris said that the site was just outside the boundary of the greater metropolitan area as defined by the EPA to which SEPP N-1 applies. He said that therefore the applicable guideline for noise control was *Noise from Industry in Regional Victoria* (NIRV). Nevertheless, the NIRV indicates that the noise requirement in this circumstance defaults to SEPP N-1.

The Marshall Day Acoustics' *Environmental Noise Assessment* modelled Stages 3 and 4 of the landfill as the likely worst case noise scenarios. These stages are closest to sensitive residential receptors. Stage 3 is filling of the south-west section of the landfill, which is the closest part to the Settler's Run housing estate. Stage 4 is filling of the north-east to south-east part, which is towards the top of the void followed by the final capping of the site. It was assumed that if these comply then Stages 1 and 2 would also comply as they are further from housing and deeper in the pit.

The Marshall Day Acoustics' study identified five receptors for evaluation. Four of these are existing residences and the fifth was chosen on the western boundary of the site to characterise noise should that adjoining property be developed for residential use. These are shown in Figure 1 of the Panel report. Noise monitoring was carried out at two of these residential sites over an approximately two week period. These background noise data are necessary to set permissible noise limits according to the legislation.

The report provides more detail on to the issue of the site's position in relation to the EPA defined boundary between SEPP N-1 and NIRV. The report stated:

The map shows SEPP N-1 is applicable for the land to the north, west and southwest of the site. For the land to the east and southeast of the site, NIRV applies.

⁴¹ At paragraph 62, p.16.

Part of the subject site and areas to the east and southeast of the site are located in an area which is considered to be a 'major urban area' as defined in the NIRV. The NIRV guidelines state that for 'major urban areas', the recommended noise limits should be determined following the procedures in SEPP N-1.

Therefore, SEPP N-1 criteria should be applied to all noise sensitive receivers near the site. (p.8)

The report therefore applied the methodology of SEPP N-1 to establish acceptable limits. The uses measured noise levels at a receptor, a zoning noise level, a time period (day time), and the application of a number of noise characteristics to derive an 'effective noise level'. Compliance is achieved if the actual noise level is below that 'effective noise level'. In this case the noise levels measured at the two receptors was applied to all five sites.

The study then developed a noise model of the proposed landfill at various key stages to estimate the likely noise at receivers. The model included noise from trucks and mobile plant at typical locations representing anticipated operational patterns and had regard to terrain and noise absorption or reflection from the ground. The 'worst case' half hour was modelled for Stages 3 and 4 assuming coincident operation of four items of mobile plant and 12 truck movements, all with nominated noise levels.

That exercise then enabled noise levels to be calculated at the five identified receptors and compared with the acceptable limits identified by the 'effective noise level'. This showed that:

For Stage 3 of the landfill operation, the predicted noise levels comply with the SEPP N-1 noise limits at all receivers without any specific noise mitigation. For Stage 4, the predicted noise levels comply with the criteria with the exception of Receiver C, which is located east of the site. (p.11)

The study then recommended that a 3 metre high earth mound be constructed between the most northern section of Stage 4 and that receiver. The modelling demonstrated that that mitigation measure would achieve compliance and hence applicable noise criteria would be achieved at all sensitive receptors.

The report also examined possible encroaching residential development from the west and the north. It advised that noise exceedances could occur. To manage noise emissions to the west, the report suggested that a natural rise in the terrain on the site be retained or an earth mound be constructed if that rise were to be removed. For places north, it said that the noise would be due to trucks entering and leaving the site, and recommended that some change to the entry might resolve that.

Mr Barlow's evidence commented on noise. In relation to the earth mound for noise attenuation at Stage 4 that:

This is one solution to ensure that the acoustic amenity of the nearby dwelling is protected at the later stage of the landfill operations. As the detailed operational plan for that final stage is developed other solutions might be considered. (p.19)

(iii) Environment Protection Authority

The written submission from the Environment Protection Authority of 30 July 2013 advised:

We note that there is vacant land to the immediate north of the site of the existing quarry, which may one day become a residential area. It is noted that this land is just outside the recommended 200 metre buffer. It is our experience that noise emissions from operational landfills can become problematic once waste deposition activities reach a "line of sight" to sensitive receptors. For this reason, Council may also wish to include a pre-emptive noise mitigation condition, in the event that future noise complaints are received from nearby future residential areas. A condition should be formulated requiring that, in the event that noise complaints are received from the site, a noise mitigation plan will be developed, which will inter alia, examine perimeter earthen bunds; smart reversing beepers and quieter landfill capping methods (such as a cap incorporating a geosynthetic clay liner).

It also said:

It is noted that the site is just outside the area covered by the State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) – N1. Condition 22 needs to be amended to reference EPA publication 1411 "Noise from Industry in Regional Victoria" (NIRV). The proposed Permit condition can be further strengthened by considering the implications of Part 4 of that Publication. For Council's information Publications 1413 and 1412 are also relevant in understanding the NIRV.

The EPA BPEM discusses noise at Section 6.9 (p.37). It notes that:

Landfill operations generally involve noisy plant and can impact detrimentally on the amenity of surrounding areas.

The guidelines refer to the SEPP N-1 or NIRV compliance requirement and note that statutory noise limits are tighter outside the normal working day, possibly requiring restrictions on the times of operation. The document comments on measures to limit noise and provides a three dot point summary of suggested noise control measures of the BPEM to comply with the Landfill Waste Management Policy.

(iv) Individual submitters

Few individual submitters commented on noise. Those that did remarked on the proposed landfill site being too close to residential development and noise being an amenity consequence of that. One noted the benefit of a cessation of blasting.

10.3 Discussion

As commented in relation to air quality issues, an EPA Works Approval has not been applied for and granted so it is not known what conditions might be required by that statutory instrument. We assume that the Works Approval will require compliance with SEPP N-1, either directly, or indirectly by compliance with NIRV which, as explained, defaults to SEPP N-1 in this case.

The evidence and submissions suggest that noise from the proposed landfill site is likely to be less than that from the present quarrying operation. Importantly, rock crushing and screening will cease as will blasting for rock winning⁴². Mobile plant will operate on the site much as at present. We believe that truck movements may increase.

We note that the *Buffer Assessment* report by Golder Associates observed:

The quarry rock crushing and screening plant (crushing plant) is located in the north-western corner of the site in the area nominated as the location for the proposed recycling centre (see Figure 1). The crushing plant is currently the primary source of noise on site. With the development of the SIW landfill, the crushing plant will be decommissioned and the proposed recycling centre established in its place. The recycling centre will function as a stockpile area for the temporary storage of recyclable SIW (e.g. bricks, concrete, metals etc.), prior to collection and transport to off-site recycling companies for reprocessing. (p.4) (our emphasis)

An important factor in noise management is the proposed permit condition that will restrict landfill operating hours to similar times to the operating times of the present quarry, to avoid night time noise. Another important factor in considering noise impacts is that the length of time that noisy operations will occur on the site will be considerably shorter than if the quarry were to continue until the rock resource was worked out. Noise will cease after the landfill has been filled, capped and rehabilitated after about 7.5 years. That can be contrasted with continued operation of the quarry for perhaps another 25-30 years. This would then likely be followed by a landfill operating for probably longer than 7.5 years as the quarry void would be larger.

In summary we are satisfied that the noise from the proposed landfill is likely to be less than that from the present quarry; that the noise will be generated during similar times to that associated with the quarry; and that noise will cease after the landfill is filled and capped which would be much sooner than if quarrying continues.

We also consider that the Marshall Day Acoustics' *Environmental Noise Assessment* report appropriately assesses likely noise impacts. We note that it assumes a greater number of vehicle movements than does the air quality assessment - a number that we believe may be more likely. The SEPP N-1 protocol will apply and the proponent has not contested the application of that.

The evidence provided to us suggests that noise issues are likely to be greatest when the filling of cells reaches near grade and when capping is being carried out. However the noise assessment indicates a substantial margin of compliance in relation to most existing residential properties.

We believe that it is prudent that the noise assessment identified the possible need for a noise attenuation measure linked to the filling of the Stage 4 cell and landfill capping, and that it proposed an earth mound as an acoustic barrier. We suggest that noise attenuation

⁴² Subject to some on-going works to the quarry face to prepare it for the landfill liner and treatment for sale of residual rock.

be provided only if further assessment based on experience indicates that need. Moreover, we suggest that care be taken to avoid damage to, or loss of, any native vegetation in that location. If a noise barrier is needed, a less damaging structure might be feasible.

The change from a quarry to a solid inert waste landfill reduces the buffer distance from the operation from 300 metres to 200 metres. We suggest that the Council should exercise caution in considering allowing development of sensitive uses in that zone given possible noise (and dust) effects. The greatest noise impact may be in the later stages of landfill operation and in capping.

We suggest that it is appropriate for EPA to deal with noise issues in its statutory instruments, but provision of regular reports on noise monitoring and compliance would seem desirable.

We believe that it is appropriate that the planning permit include a generic condition requiring noise control as well as the specification of permissible landfill opening and operating times.

The proponent proposed:

22. *Noise levels emanating from the land must comply with the standards published by the EPA, as amended from time to time.*

The Planning Authority proposed:

22. *Noise levels emanating from the land must comply with the requirements of the Environment Protection Authority's Publication 1411 Noise from Industry in Regional Victoria or any superseding standard.*

Given that we expect that a noise requirement will be included by EPA in the Works Approval and Licence, we suggest that it is sufficient to say:

22. *Noise from the site must comply with the Environment Protection Authority Publication 1411 Noise from Industry in Regional Victoria.*

We support Condition 21 as it is proposed in specifying times of operation for the proposed landfill.

We also agree with the EPA submission that there should be a condition to deal with noise complaints.

10.4 Conclusions

The Panel is satisfied that the proposed landfill can operate without adverse noise impacts on sensitive receivers. We anticipate that stringent and comprehensive controls will be required by the EPA Works Approval and subsequent Licence to control noise emissions. Noise monitoring is feasible to ensure compliance. Specifying operating times on the permit is supported.

10.5 Recommendations

The Panel recommends:

9. that precise measures to control noise from the proposed solid inert waste landfill should be the province of the EPA issued Works Approval and subsequent Licence;
10. that a permit condition should be included as follows:
Noise from the site must comply with the Environment Protection Authority Publication 1411 Noise from Industry in Regional Victoria;
11. that the permitted hours of operation of the landfill should be as exhibited; and
12. that a condition should be included on the permit to the effect that if noise complaints are received and established as justified, a noise mitigation plan must be put in place to the satisfaction of the Responsible Authority.

11 Fire issues

11.1 The issue

The supporting material for the Amendment/permit included *Bushfire Management Statement for the construction of two leachate tanks at 950 Ballarto Road, Cranbourne, VIC 3997* (May 2013) prepared by Terramatrix Pty Ltd. The exhibited draft planning permit contained a condition titled *Bushfire Management*.

Fire management is an important issue given the vegetated nature of the site and surrounds. The site is within a Wildfire Management Overlay under the Casey Planning Scheme. Moreover, care in designing and operating a landfill is important in preventing fires in the landfill itself.

The issue is whether the proposal is appropriate in the circumstances of the applicable bushfire hazard and whether the exhibited permit condition adequately addresses this hazard.

11.2 Evidence and submissions

The relevant exhibited draft planning permit condition is:

44. *The bushfire mitigation measures forming part of this Permit and/or contained in the Bushfire Management Statement prepared by Terramatrix dated May 2013, including those relating to construction standards, defensible space, water supply and access, must be maintained to the satisfaction of the responsible authority and the relevant authority on a continuing basis. This condition continues to have force and effect after the development authorised by this Permit has been completed.*

The Planning Authority informed us that it had referred the exhibited documents to the CFA but had not received a response.

Mr Morris said that the proponent relies upon the detailed application documentation which, among other things, includes the *Bushfire Management Statement* prepared by Terramatrix.

The *Bushfire Management Statement* includes:

This Bushfire Management Statement has been prepared to enable SBI Cranbourne Quarries to respond to the requirements of Clause 44.06 Bushfire Management Overlay (known from this point on as Clause 44.06), and associated Clause 52.47 Bushfire Protection Planning Requirements (known from this point on as Clause 52.47) for the construction of two leachate storage tanks that will be built as part of the landfill development. The leachate storage tanks will contain contaminated water leached from the landfill. Each tank's volume will be approximately 2 ML.

This Bushfire Management Statement contains two main components:

- *A locality and site description, which is used to identify the existing conditions of the site and surrounds in accordance with the application requirements of Clause 44.06-2; and*
- *A Bushfire Site Assessment, which calculates the defensible space and construction requirements and shows how the development can meet the relevant objectives, standards, mandatory standards and decision guidelines of Clause 52.47. (p.4)*

The Statement concluded:

As part of the development, two leachate tanks will be constructed on the site. These are classified as 'buildings and works' under the BMO (Bushfire Management Overlay) and are required to comply with the defensible space, water supply and access requirements of this overlay.

A large (approximately 3 ML) groundwater storage tank will be constructed as part of the development. This will sit next to the leachate storage tanks and will be fitted with CFA coupling. The groundwater storage tanks will hold a minimum volume of 50,000 L for use in emergency situations.

The leachate and groundwater storage tanks will be easily accessed via a gravel road, which will comply with CFA requirements.

Although the leachate storage tanks will not meet a BAL (Bushfire Attack Level) construction standard they will be provided with 40 metres of outer zone defensible space equivalent to a BAL-29 in relation to Forest vegetation on flat or upslope land. They will also be made out of steel. (p.25)

The EPA BPEM discusses fire at Section 7.9 (p.44). That section is concerned with landfill fires. It discusses the dangers of such fires and provides information on preventing, detecting and extinguishing them. It cautions that fires starting in a landfill may also spread outside it and trigger a bushfire. It advocates on-site availability of a minimum of 50,000 L of water for landfill fire fighting where reticulated water is not available. It also suggests that it may be appropriate to develop a fire management plan.

11.3 Discussion

The Panel makes three observations on this matter.

Firstly, the focus of the Bushfire Management Statement is on two proposed leachate storage tanks. The material before us suggests that, under the statutory requirements for bushfire management this proposed new facility on the site constitutes new 'buildings and works' and must be assessed and designed under the specified criteria. No evidence was submitted that these tanks could constitute a source of ignition, would be flammable, or could propagate fire. They are to be constructed of steel and will contain contaminated water (leachate).

Our second observation is that the proposed planning permit condition refers to *bushfire mitigation measures* and cites the *Bushfire Management Statement* prepared by Terramatrix as the source of those. The reference seems to suggest the Terramatrix statement as being a

more comprehensive report on bushfire management on the site than the restricted role articulated in that document.

Finally, we observe that, understandably, the EPA BPEM discusses fire prevention and prevention and extinguishment of fire in the landfill itself.

There appear to be a number of aspects of the fire issue requiring attention.

In the discussion at the Hearing on draft planning permit conditions, the shortcoming of the proposed condition in relating to leachate tanks only, and not being a comprehensive site bushfire management plan, was recognised. The following wording was proposed:

Bushfire mitigation measures including those contained in the Bushfire Management Statement prepared by Terramatrix dated May 2013 and on the advice of the CFA must be maintained to the satisfaction of the Responsible Authority.

It seems that bushfire management measures for any new buildings and works must be recognised in a planning permit condition as a statutory requirement. While only the leachate tanks may fall into this category⁴³, given that materials handled and stored on-site will no longer merely be rock and sand, and in the context of dense surrounding vegetation, it would appear prudent that a condition requiring a more comprehensive bushfire management strategy for the site be included on the planning permit. CFA advice should be sought.

So far as fires in the landfill material itself are concerned, because we were presented with no information either way, we have assumed that the EPA Works Approval and later Licence would contain conditions about preventing landfill fires, detecting the presence of any such fire, and if detected, procedures for extinguishing the fire. We assume that would include the availability of water on the site and plant and equipment for fire fighting.

For those reasons we support the proposed planning permit condition in principle. We suggest that it might be strengthened by requiring that the *bushfire mitigation measures* be prepared to the satisfaction of the Responsible Authority before development starts and thereafter maintained. The statutory requirement for acknowledging on-going effect also needs to be included.

11.4 Conclusions

The Panel concludes that the draft planning permit should include a condition requiring development and maintenance of bushfire mitigation measures for the site that includes the *Bushfire Management Statement* for the two proposed leachate tanks and broader measures developed on the advice of CFA. It is anticipated that that this permit condition would be complemented by requirements of the EPA Works Approval and subsequent Licence to prevent landfill fires.

⁴³ The difficulty of applying the definition of 'works' in the context of the current operation as a quarry and future landfill was briefly discussed at the Panel Hearing without any conclusion.

11.5 Recommendations

The Panel recommends:

13. that measures to prevent and control landfill fires at the landfill should be the province of the EPA issued Works Approval and subsequent Licence;

14. that the planning permit include the following condition:

Before the development starts, a Bushfire Management Plan including the mitigation measures in the Bushfire Management Statement prepared by Terramatrix dated May 2013, and on the advice of the CFA, must be prepared to the satisfaction of the Responsible Authority.

The bushfire mitigation measures including those relating to construction standards, defendable space, water supply and access, must thereafter be maintained to the satisfaction of the Responsible Authority and the CFA on a continuing basis. This condition continues to have force and effect after the development authorised by this permit has been completed.

12 Water management

12.1 The issue

The management of water quality in and around a landfill is important for avoiding pollution of surface water and groundwater.

The exhibited material to support the planning permit application did not include a specific report on water issues although a number of facets were included in various documents. An earlier report *Hydrogeological Assessment Melbourne Formation Aquifer, Cranbourne Area* (August 2007) by John Leonard Consulting Services was included in the background material provided to us.

12.2 Evidence and submissions

There was some discussion on this issue at the Hearing.

The relevant exhibited draft planning permit conditions entitled ‘*Drainage*’ are:

36. Polluted drainage must not be discharged beyond the boundaries of the lot from which it emanates, or into a watercourse or easement drain, but must be treated and/or absorbed on that lot to the satisfaction of the Responsible Authority.

37. Before the development starts, drainage plans to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. The plans must be drawn to scale and three copies must be provided.

38. The land must be filled in a manner that does not adversely affect the drainage of adjacent land.

39. All works must be undertaken in a manner that minimises soil erosion, and any exposed areas of soil must be stabilised to prevent soil erosion, to the satisfaction of the Responsible Authority.

40. A concrete truck wheel wash area must be installed to the satisfaction of the Responsible Authority and must be constructed so all waste from the wash area is connected to the sewer or a settlement and oil separation system in accordance with the Environment Protection Act 1970.

The Council said:

The solid inert waste landfill will be regulated by a Works Approval and Discharge Licence issued by EPA, with conditions which seek to protect ground water resources and other water bodies (Clause 14.02-2). Planning permit conditions including detailed drainage requirements and EPA requirements are also proposed.

This is consistent with the following policy objectives and strategies:

- *Ensure that land use activities potentially discharging contaminated runoff or wastes to waterways are sited and managed to minimise such discharges and to protect the quality of surface water and groundwater resources, rivers, streams, wetlands, estuaries and marine environments.*
- *Encourage the siting, design, operation and rehabilitation of landfills to reduce impact on groundwater and surface water. (Section 46, p.16)*

In discussing the relationship between providing detail in the planning permit versus Works Approval, the Council also said:

Similarly (that is to the lack of inclusion of technical details on landfill construction, lining or capping), proposed conditions do not specify technical drainage requirements such as the rate of discharge, water quality levels or infrastructure required to achieve a satisfactory drainage outcome. (Section 77, p.23)

The Council submission noted that one submitter referred to drainage water from the existing quarry site discharging onto the neighbouring Settlers Run golf course. The Council said that this had ceased and planning permit conditions were proposed to prevent such drainage discharge occurring.

In its submission on water issues, the proponent noted the consistency of the application with relevant clauses of the Planning Scheme. Mr Morris observed that EPA required a buffer distance of 100 metres from surface waters for a Type 3 (solid inert waste) landfill measured from the nearest landfill cell.

The EPA BPEM discusses water at Sections 6.5 and 6.6 (pp.26-30). It draws attention to there being three water components which need to be considered separately and kept physically separate *viz.* stormwater, leachate and groundwater.

Section 6.5.1 discusses the importance of ensuring that stormwater that falls from outside the landfill site is directed away from the area to be filled by techniques such as interception drains, and the possible need to treat some of that stormwater to remove sediment picked up from trafficked and cleared areas. Section 6.5.2 provides a discussion of managing leachate from the landfill which may contain high levels of nutrients and salts. This includes treatment and use options and avoiding the leachate contaminating groundwater and surface water. Vehicle wheel wash water is to be treated as leachate.

Sections 6.5.3 and 6.6 provide information on managing groundwater, including controlling its level and monitoring the quality of it. For those cases where the landfill is below the natural water table it comments on the importance of limiting the level of the groundwater to prevent the inward or upward force causing failure of the liner when there is insufficient waste loading to counter that force. Groundwater monitoring is needed to provide an early indication of any leachate contamination.

Section 6.5.4 provides information on discharge of water from the site. It indicates that the discharge of water, other than uncontaminated stormwater, requires a Works Approval and subsequent Licence.

Those sections contain a number of suggested measures to manage stormwater, leachate and groundwater.

12.3 Discussion

The material available to us suggests that all aspects of water management on-site will be subject to comprehensive and rigorous control by the EPA Works Approval and Licence.

We note that the existing quarry is below the water table although we were informed that the groundwater inflow is low. We are also aware that as a solid inert waste landfill there is likely to be less leachate generation than would be the case with a putrescible waste landfill. We expect that groundwater and leachate control will receive particular EPA attention and do not need planning permit conditions. We also anticipate that EPA conditions are likely to include measures to minimise stormwater from outside the landfill itself flowing into the landfill.

However, we are mindful that there is some surface water in the south-west part of the site and that there is a need to ensure that polluted stormwater from the site does not flow onto adjoining properties. To protect the remnant ecological values of the site and to prevent nuisance, we believe that planning permit conditions reflecting those issues are appropriate.

Arising from the Hearing, revised conditions under the title ‘*Drainage*’ were proposed by the proponent and the Planning Authority (variations proposed by the Planning Authority are underlined):

34/35 Polluted runoff must not be discharged from the site into drains, watercourses or into the remnant vegetation areas or landscape buffers abutting the Royal Botanic Gardens Cranbourne, to the satisfaction of the Responsible Authority.

35/36. Before the development starts, drainage plans to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. The plans must be drawn to scale and three copies must be provided.

36/37. The land must be filled in a manner that does not adversely affect the drainage of adjacent land.

37/38. A concrete truck wheel wash area must be installed to the satisfaction of the Responsible Authority, and in accordance with EPA requirements

We note that the previous exhibited condition 39 on soil erosion has been deleted. That proposed condition, in essence, duplicates the measures proposed in conditions 24/25 and 25/26.

12.4 Conclusions

We have dealt with the wheel wash condition in Chapter 7 of this report and have recommended a condition relating to it that might better be included in the ‘Traffic Management’ section of the planning permit.

We support the revised permit conditions for water management which focus on drainage and thereby amenity. We expect that these would complement the detailed technical water

management conditions of the Works Approval when issued, and thereby ensure the protection of surface and groundwater.

12.5 Recommendations

The Panel recommends:

- 15. that measures to control leachate and groundwater and aspects of stormwater from the proposed solid inert waste landfill should not be included in the permit and be the province of the EPA Works Approval and Licence;**
- 16. that the planning permit require drainage plans prior to the commencement of development recognising that this may be part of that required by the statutory environmental approvals; and**
- 17. that Casey City Council establish with EPA a protocol for responding to any water management complaints.**

13 Materials recovery

13.1 The issue

Resource recovery is an integral part of the Metropolitan Waste and Resource Recovery Strategic Plan 2009 and the 2013 Consultation Draft of that Plan. The purpose of resource recovery from the solid waste stream is to prevent useful materials going to landfill and to minimise the demand for landfill. The recovery of materials for recycling is a critical part of the waste management hierarchy.

The Council has indicated that it believes the landfill should have a materials recycling capability. The proponent now does not resist this arrangement.

13.2 Evidence and submissions

In its submission to us the Planning Authority, in responding to a submission from the exhibition of the draft planning permit that the proposal should include a recycling facility, said:

It is considered reasonable that an ancillary waste recovery facility be established on site as this aligns with the philosophy across all levels of government to reduce waste going to landfill. The proposed planning permit will be amended to include conditions that require a waste recovery facility to operate as an ancillary component of the landfill for the purpose of preventing recyclable materials from being deposited in the landfill. It is noted that a recycling facility was initially proposed, however was deleted by the proponent prior to exhibition. (pp.28-29)

No materials recycling condition was included in the exhibited draft planning permit.

The revised draft planning permit presented to us by the Council had added the following condition, entitled *Waste Recovery*:

6. A waste recovery facility must be established on the site as an ancillary component of the refuse disposal facility for the purpose of preventing recyclable materials from being deposited in the landfill.

Mr David Maltby, called by Mr Morris for the proponent, informed us that much less recyclable material was brought to landfills than had previously been the case. He said the driver for this was the landfill levy. The levy is imposed on a mass basis and since materials such as concrete and bricks have a high density it had become economical to direct these away from landfill. He said that much recyclable material from construction and demolition sites and municipal collections was sent directly to recyclers.

We were informed that it is the intention of the proponent to establish the materials recovery facility on the site of the present rock crushing, screening and stockpiling area. Vehicles arriving with recycling material would be directed to that area from the weighbridge.

The EPA BPEM discusses waste minimisation at Section 7.3 (p.40). It emphasises the importance of separating recyclable materials.

13.3 Discussion

While we understand that the amount of recyclable material brought to the site will not be large, we believe that there is merit in establishing the recycling facility as consistent with policy and in reducing the waste being deposited in the landfill. We understand that the most likely recyclable materials recovered would be concrete, bricks, possibly timber and perhaps some plastics.

Following the Hearing a revised condition was proposed by the proponent and the Planning Authority. They suggested:

5. *A materials recycling facility must be available on the site as an ancillary component of the refuse disposal facility for the purpose of preventing materials which can be reasonably and commercially recycled from being deposited in the landfill.*

We express some reservation about how enforceable that condition is given its inclusion of 'reasonably recycled'. However we can understand that this may overcome an overzealous enforcement regime and allow for arbitration of what may be deposited.

13.4 Conclusion

The Panel concludes that an on site facility for recovering materials for recycling is justified and supported by policy. We consider that the proposed revised condition is appropriate.

13.5 Recommendation

The Panel recommends:

18. that the revised permit should contain the following condition:

A materials recycling facility must be available on the site as an ancillary component of the Refuse disposal facility for the purpose of preventing materials which can be reasonably and commercially recycled from being deposited in the landfill.

14 Litter

14.1 The issue

Environmental policy is directed towards reducing litter. A landfill can be a source of litter, most particularly from the working area.

14.2 Evidence and submissions

The relevant exhibited draft planning permit condition is:

20. The operator shall ensure that litter on the site is regularly collected and placed in the landfill and shall use its best endeavours to ensure that litter does not blow out of site.

In his expert witness statement Mr Barlow commented on management of litter. Drawing on that evidence, Mr Morris said:

It is acknowledged that landfills can on occasion create litter. Good management of truckloads and at the tipping face together with the addition of cover soils at the end of each day will minimise the opportunity for litter to escape the landfill. Mobile litter control fences can be utilised at the operational area if required on particularly windy days or in exposed locations within the landfill. The landfill area will be fenced with a cyclone mesh fence to provide a further restriction on the movement of litter beyond the landfill operations area. Mr Barlow has also recommended that a regular litter patrol be undertaken along the edge of the landfill in the later stages of landfill activities. SBI accepts that recommendation. (p.19)

The P5 Panel Document prepared by the proponent at our request stated:

Litter will be managed by the following actions:

- *Minimising the daily tipping cell area to reduce the area where litter can be generated.*
- *Use of relocatable litter screen around the tipping area to be placed depending on the expected wind conditions and location of the tipping face.*
- *Placing the tipping face at less exposed areas of the landfill when wind conditions conducive to litter generation are predicted.*
- *Use of cyclone mesh fence around the landfill area.*
- *Reactive litter patrols to immediately collect litter that migrates from the tipping face before it can migrate from the site.*
- *Progressive use of daily soil or spray on daily cover as required on high wind days.*
- *Use of fixed litter screens on the site boundary will be considered if necessary to control litter generation. (p.12)*

The EPA BPEM discusses litter at Section 7.8 (p.43). It outlines means of litter control and indicates that the control measures will need to vary depending on circumstances such as wind speed and the orientation and elevation of the tipping area. The document says that

the litter control strategy must include engineering solutions and design options. It gives six dot points as suggested litter control measures to comply with the Landfill Waste Management Policy.

Mr Cousins' written submission sought amongst other things to have the '*rubbish*' removed from the Ballarto Road verges.

14.3 Discussion

The evidence presented to the Panel shows that a litter control program is needed at a landfill. The proposed planning permit condition responds to that.

It is apparent that a flexible litter control strategy will need to be developed and implemented that can respond to changing circumstances and include a comprehensive range of measures. Litter control might be expected to become more demanding as filling of the void approaches the top.

We are mindful that litter control measures must be respectful of protecting vegetated areas on the site, given the stated intention not to remove or destroy native vegetation and that they are protected by other planning permit conditions.

Neither the Planning Authority nor the proponent suggested any change to the relevant condition as exhibited.

We agree with Mr Cousins' submission, however, that some attention should be given to cleaning up any rubbish dumped or windblown litter on the Ballarto Road verges after the use commences.

We have extended the litter condition to include collection on the road verge adjacent to the subject site.

14.4 Conclusion

We conclude that litter control is needed and that a planning permit condition is appropriate.

14.5 Recommendation

The Panel recommends:

- 19. that a litter control condition should be included on the planning permit but extended to require cleanup of the road verges adjacent to the site.**

15 Other issues

The following are some outstanding matters arising from the submissions and Hearing:

15.1 Signage

We have earlier commented that the application material is lacking with respect to detail about the proposed signage. We have recommended that the Council request that this be supplied. It can then be considered and conditions applied if appropriate.

The Panel is not in a position to make a recommendation on the approval or otherwise of the signage component of the planning permit application at present. We would simply comment that:

- signage with a total area of six to nine square metres would not seem over-scaled given the size of the frontage to the land;
- a sign with an area of up to approximately six square metres would appear adequate to identify the business and its hours of operation with a smaller sign or signs setting out the conditions of entry and directions to the tip face; and
- issues such as placement of the sign, vegetation removal and the design of its structure require addressing.

15.2 On-going quarry functions

As noted earlier, late in the Hearing, during discussion of conditions, and in particular the condition which required the surrender of the current quarry EPA Work Authority (arising from the submission from the Department of State Development, Business and Innovation), Mr Morris mentioned that the proponent wished to continue the sales of graded rock material from the site. In particular, he said that the proponent wished to sell the material in the existing stockpiles and any new material that might be produced as a by-product of preparing the quarry face to take the landfill liner. He indicated that the preparation of the quarry hole for the liner may require some blasting.

While preparation of the quarry face is clearly part of the development (and hence use) of the land as a landfill and would fall within the ambit of the proposed permit, the ongoing rock sales would seem to mean that it is intended that the land would be used for two purposes for a period.

We suggest that it might be satisfactory for the planning permit to require only part ending of the quarry use and surrender of the EPA Work Authority for the quarry (the exception being the crushing and screening of rock and sale of product from the stockpiles) before commencement of preparatory works for the landfill (and hence use of the land for the purpose of the landfill). A limited time frame on the permitted rock crushing and sales should be applied. This might be required to be ended before waste is deposited or within six months afterwards as is proposed in the post-Hearing revised conditions. Consideration could be given to limiting the volume of material.

The Panel sees no major difficulty with the rock crushing and screening and sales as described occurring, except that the volume of traffic movements associated with activity on

the site will be greater for a time, as well as dust and noise emissions. These recommend that any concession allowing ongoing sales should at least be limited in time.

We have reviewed the post-Hearing condition which had been in essence agreed between the proponent and the Council and are satisfied that it is appropriate.

In as much as it is proposed that there be blasting during preparation of the void walls for the liner, a condition or conditions regulating blasting should be included on the permit restricting its hours and possibly requiring notice.

A related matter was raised in Mr Michael Paterson's written submission concerning inconsistent statements concerning the life of the quarry. He said that the proponent had indicated that the quarry was at the end of its productive life but other material claims a further 25-30 year life.

The Panel has noted the proponent arguments that community benefit would be better served by converting the site to a landfill now and having it developed as open space in around eight years, rather than at the end of 26 further years of quarrying and a subsequent even longer landfill period. We note also that Mr Morris submitted that the quarry's current Extractive Industry Work Authority (No.441) allows the quarry to expand further to the south-east and south-west, virtually doubling the size of the current quarry hole. We have no reason to think that information is incorrect and we are not in a position to understand the particular comments which were allegedly made earlier by the proponent.

15.3 Roadside clearing

Mr Cousins' written submission sought to have the '*undergrowth, weeds and rubbish*' removed from the Ballarto Road verges. He sought to have the area mowed and maintained.

On this issue, the Panel notes that the other parties to the Panel Hearing, including the RBGC, took the view that the roadside vegetation is of natural conservation significance and efforts should be made to preserve it.

We think this is appropriate.

15.4 Putrescible waste landfill storage and conversion of facility

Mr Stephen Morris's written submission forwarded by Jude Perera MP raised a further concern that the landfill would be able to be converted to a domestic waste dump (putrescible waste facility).

Mr Stephen Morris's submission had attached a petition with some 88 signatures, expressing similar concerns about the proposed landfill. The petitioners' concern was that the landfill at 200 metres from dwellings would create on-going noise problems and would likely become a '*fully blown*' tip.

Any change to a putrescible landfill is not possible without the grant of a different planning permit and EPA approvals.

Mr Morris was also concerned that, if any putrescible material was found in delivery trucks, it might be stored on site for some time before removal. The Panel believes that this matter will be adequately addressed by the waste regulation imposed through the EPA Licence. We were told by the proponent that all entering loads would be checked and any trucks with

loads found to be containing putrescible material would be turned away. The Panel expects that any small amount of putrescible material only identified at the tip face can be dealt with by daily covering. We would expect that site management arrangements such as these which would assist in managing odour would also be addressed in the Air Quality Management Plan.

15.5 Deferral until Stevenson's Road landfill issues resolved

Mr Michael Paterson said that the consideration of this Amendment/permit should await final resolution of the Pollution Abatement Notice served in relation to the Stevenson's Road tip. Issues associated with that tip had previously been a reason that progress on the request for the Ballarto Road landfill had stalled. The Panel sees no planning connection between the two landfills. The sites do not abut, the operator is not the same and they are at different stages of development.

15.6 Adequacy of the application

Mr Paterson noted that the application had been amended by hand and that the original requester no longer worked for the planning company concerned.

The Panel sees no difficulty with amendments having been made prior to exhibition and the true identity of the applicant is apparent from the application material.

As earlier noted, however, we consider the application material in relation to the signage needs supplementing.

15.7 Other matters

- The petition attached to Mr Stephen Morris's submission raised the matter of reduced property values. This is not a matter which can be taken into account in the absence of expert evidence. It is in the nature of a private economic effect in any case rather than a public impact which is the proper consideration here.
- Mr Paterson's submission queried whether the Community Engagement Group that was advertised on the proponent's website had been established.

This is not a matter for the Panel, except to say that we would regard consultation with such a group as beneficial in dealing promptly with any amenity or other issues as might arise. It would appear that the proponent has successfully managed community consultation to date given the minimal direct response to public notice and participation by third parties in the Panel process.

- The RBGC written submission requested the removal of reference to the site operations providing around 10 mega litres of groundwater for use by the Gardens. We understand that this is no longer proposed.
- No submissions raised the issue of visual impacts including from the RBGC. The Panel nevertheless assessed this matter during its site inspections and is satisfied that any views into the site are extremely limited and that the proposed extent of new structures is minimal.

15.8 Recommendation

The Panel recommends:

- 20. that a condition should be applied to the permit allowing limited sales of currently stockpiled material and grading and sale of any excess rock from the required preparation of the quarry void to take the landfill liner.**

16 Permit considerations

As noted earlier, at the Panel Hearing the Council presented a revised version of the exhibited draft permit which had incorporated changes made in response to some of the written submissions received. There was also further discussion of the permit conditions at the Hearing and the Council and proponent were given leave to further negotiate over the conditions and provide their preferred versions to the Panel for consideration. Further revised versions were supplied by both the Council and proponent, with the last of the post-Hearing correspondence on conditions received on 18 December 2013.

The Panel has prepared a recommended version of the permit taking into account that correspondence, the written submissions and matters discussed at the Hearing. We provide some necessary explanations of the components of the recommended permit below.

- The EPA letter of 30 July 2013 suggested that a number of changes should be made to the exhibited conditions. Some of these we have dealt with. Others were corrections to references to EPA guidelines and tightening of references to waste. These were addressed in the revised conditions presented by the Council.

One matter related to exhibited Condition 46 relating to the discharge of groundwater, stormwater and wastewater from the land in accordance with EPA requirements. The EPA indicated that this might be deleted and replaced with a condition providing that before the receipt of wastes, the applicant must be issued with a licence under the EPA Act.

In the Panel's view, the latter request is unnecessary as the EPA legislation itself imposes this requirement. It is better included on the permit as an advisory note as in the post-Hearing versions of the permit.

- The Settlers Run Owners' Corporation submission did not object to the landfill provided conditions were included on the permit to preclude deposition of putrescible waste or asbestos; preclude blasting; require sealing of Ballarto Road; and ensure conversion of the land to a reserve and parkland once filling has been completed.

All of these matters were addressed in the post-Hearing revised conditions except for the matter of some ongoing blasting to prepare the quarry face for the liner. The Panel has suggested a condition relating to this matter be applied.

- The RBGC submission requested that the required plans for the permit should show:

(d) The location of all access roads, tracks and gates.

(e) The location of the existing remnant indigenous vegetation and the propose vegetation buffer zones.

The location and elevations of all fencing and similar built structures.

These matters have been addressed in the post-Hearing permit drafts.

The RBGC submission also requested changes to the landscaping conditions including that it be consulted in relation to the landscaping plans.

These matters were addressed by the Council.

We support the changes.

- Further conditions were raised by RBGC concerning a wide range of matters: dust on native vegetation, litter management, site rehabilitation, further on-site signage relating to vegetation protection, drainage, annual monitoring of compliance with the Environmental Management Plan, notice of control burning, adding a time frame to the Flora and Fauna Management Plans, buffer planting, retention of fallen timber for habitat, fencing and planting out of vegetated areas, plant stock specifications and timing of planting, maintenance of planted areas and replacement of dead plants. All of these matters have been considered. The intents of all of the RBGC requests are addressed in the post-Hearing revised permits.
- The submission by the Department of Environment and Primary Industries raised a number of matters. These were already dealt with by the Council via exhibited permit conditions. One issue of note was the requested retention of a 30 metre vegetated buffer along the eastern side of the site. The Panel accepts the proponent and Council advice that the buffer is only 10 metres wide in places and this revised permit conditions post-Hearing appropriately reflect this.
- In the recommended permit we have provided for two section 173 agreements as requested by the proponent. We agree that the matters which have been included in the second agreement are complex and may take some time to resolve amongst a number of parties.

17 Overall conclusion and recommendations

Therefore, for the reasons outlined in this report, the Panel recommends that Amendment C115 to the Casey Planning Scheme should be adopted subject to the following recommendations:

- A. that the exhibited Planning Scheme Incorporated Document be altered to refer only to the changed category for consideration of advertising signs on this site.**
- B. that before the permit application is further processed, application details and plans for the advertising signs should be required to be supplied in order that this element of the application can be properly assessed and any further required conditions applied to the permit.**
- C. that subject to Recommendations A and B, the permit be adopted as shown in Appendix D to this report.**
- D. that the Council should apply to VicRoads to introduce a speed limit on Ballarto Road that is less than the present default limit of 100 km/h.**
- E. that the Council should consider whether a road safety audit of Ballarto Road should be required to be undertaken preparatory to the reconstruction of Ballarto Road.**
- F. that the Council establish with EPA a protocol for responding to any air quality amenity complaints.**
- G. that Casey City Council establish with EPA a protocol for responding to any water management complaints.**

Appendix A Exhibited draft permit

PROPOSED PERMIT

GRANTED UNDER DIVISION 5 OF
PART 4 OF THE PLANNING AND
ENVIRONMENT ACT 1987

Permit No.: PInA00857/07 (formerly P638/07)

Planning Scheme: Casey Planning Scheme

Responsible Authority: Casey City Council

ADDRESS OF THE LAND: 950 Ballarto Road, Cranbourne South, Lot 1 TPs:
190083Q & 257508P

THE PERMIT ALLOWS: Use and Development of a Refuse Disposal
Facility and Display of Business Identification
Signs

THE FOLLOWING CONDITIONS APPLY TO THIS PERMIT:

Plans Required

1. Before the use and development starts, amended plans to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plans will be endorsed and will then form part of the permit. The plans must be drawn to scale with dimensions and three copies must be provided. The plans must show:
 - (a) Elevation plans for buildings and works associated with the leachate tanks.
 - (b) Detailed location and elevation plans for any advertising sign/s to be displayed.
 - (c) Detailed location and elevation plans for the earth mound recommended by the Environmental Noise Assessment prepared by Marshall Day dated 10 May 2013.
2. The use and development as shown on the endorsed plans must not be altered without the written consent of the Responsible Authority.
3. The layout of the uses on the endorsed plans must not be altered without the written consent of the Responsible Authority.

Date Issued:

**Date Permit comes into
operation:**

(or if no date is specified, the permit
comes into operation on the same day as
the amendment, to which the permit
applies, comes into operation)

**Signature for the
Responsible Authority**

Permit No.:

Page 1 of

4. Once the development has started it must be continued and completed to the satisfaction of the Responsible Authority.
5. The exterior colour and cladding of any buildings or structures must be of a non-reflective nature and/or either painted or have a pre-painted finish in natural, muted toning (or such other colour that Responsible Authority at the request of the applicant approves) to the satisfaction of the Responsible Authority.

Landscaping

6. Before the development starts, a landscape plan prepared by a person suitably qualified or experienced in landscape design to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plan will be endorsed and will then form part of the permit. The plan must be drawn to scale with dimensions and three copies must be provided. The plan must show:
 - (a) A minimum 20m wide indigenous tree planting buffer along the south eastern boundary. The buffer must incorporate existing vegetation.
 - (b) A survey (including botanical names) of all existing vegetation to be retained and/or removed.
 - (c) Buildings and trees (including botanical names) on neighbouring properties within three metres of the boundary.
 - (d) Details of access ways.
 - (e) A planting schedule of all proposed trees, shrubs and ground covers, including botanical names, common names, pot sizes, sizes at maturity, and quantities of each plants.
 - (f) Appropriate fencing (e.g. post and wire) to protect remnant vegetation on site.
7. All species selected must be to the satisfaction of the Responsible Authority.
8. The landscaping shown on the endorsed plan must be maintained to the satisfaction of the Responsible Authority and used for no other purpose.
9. Except where specified on the endorsed plan, no vegetation may be removed from the site, without the written consent of the Responsible Authority.
10. Prior to the commencement of the use or by such later date as approved by the Responsible Authority in writing, the landscaping works as shown on the endorsed plans must be carried out and completed to the satisfaction of the Responsible Authority.

Section 173 Agreement

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11. Before the development starts the owner must enter into an agreement with the Responsible Authority made pursuant to section 173 of the Planning and Environment Act 1987 to provide for:

- (a) The immediate and permanent cessation of quarrying activities on site once a waste discharge licence has been granted by the Environment Protection Authority in association with the proposed landfill.

An application must be made to the Registrar of Titles to have the Section 173 Agreement registered on the title to the land under section 181 of the Act.

The owner must pay the reasonable costs of preparation, execution and registration of the agreement.

Dust Management Plan

12. Prior to the commencement of the use, a Dust Management Plan must be prepared to the satisfaction of the Responsible Authority and Environment Protection Authority. The plan should include measures to ensure that any dust from the operation in all weather conditions does not unreasonably impact upon the amenity of the area. The Dust Management Plan should address dust suppression measures within the site and for vehicles using the unsealed portions of Ballarto Road.

Traffic Management

13. Access to and egress from the site for all vehicles must be from the designated entry/exit point on Ballarto Road.
14. All of the internal roads shall be formed and whilst in use be maintained, including repair grading and draining, to the satisfaction of the Responsible Authority to ensure access to the disposal areas in all weather conditions.
15. Private vehicles and small trailers shall not be granted access to the site for waste disposal purposes.
16. Appropriate signage including "Truck Entry", "Truck Exit", "One-Way", "Stop" and "Give Way" signs must be provided in accordance with Australian Standards.
17. Prior to the commencement of the use, Ballarto Road must be sealed to a rural standard, in accordance with Casey Standard Drawing S-111B, between Pearcedale Road and the site entry, to the satisfaction of the Responsible Authority.

Amenity Requirements

18. The land must be filled in a manner that does not:

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- (a) cause an unreasonable amount of dust to be carried onto nearby land; and,
 - (b) adversely affect the drainage of adjacent land.
19. The operator shall ensure that an experienced and trained site manager is present at all times when the site is open to receive waste, together with a sufficient number of staff to ensure the satisfactory operation of the landfill. The gatehouse/weighbridge area shall be maintained at all times during the hours of operation of the landfill, to ensure access to the site is controlled and that only waste considered to be solid inert waste is received.
20. The operator shall ensure that litter on the site is regularly collected and placed in the landfill and shall use its best endeavours to ensure that litter does not blow out of the site.
21. Except with the further permission of the Responsible Authority, the use hereby permitted shall only operate between the following hours:
- Monday to Friday: 7.00 am to 6.00 pm
 - Saturdays: 7.00 am to 1.00 pm
 - Sundays: nil
 - Anzac Day, Christmas Day and Good Friday: nil
22. Noise levels emanating from the land must comply with the requirements of the Environment Protection Authority's Information Bulletin No. N3/89 *Interim Guidelines for the Control of Noise in Country Victoria*.
23. Any waste deposited on the land can only be placed on the land in accordance with the requirement of the works approval and must be restricted to the following components:
- (a) Clean fill (soil, bricks and concrete); and
 - (b) solid inert waste in the State Environment Policy (Siting and Management of Landfill Receiving Municipal Wastes).
24. Fill material that is contaminated must not be deposited on the land. For the purpose of this condition, the term 'contaminated' has the same meaning as that used in Ministerial Direction No. 1.
25. No waste may be discharged beyond the boundaries of the land.
26. The use and development must be managed to the satisfaction of the Responsible Authority so that the amenity of the area is not detrimentally affected through the:
- (a) transportation of materials, goods or commodities to or from the land;

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- (b) appearance of any buildings, works or materials;
 - (c) emission of noise, artificial light, vibration, smell, fumes, smoke, vapour, steam, soot, ash dust, waste water, waste products, grit or oil;
 - (d) presence of vermin.
27. All works must be undertaken in a manner that minimises soil erosion, and any exposed areas of soil must be stabilised to prevent soil erosion, to the satisfaction of the Responsible Authority.
28. Soil erosion control measures must be employed throughout the construction stage of the development to the satisfaction of the Responsible Authority.

Rehabilitation

29. Prior to the commencement of the filling of the site, a rehabilitation plan for the capping and grassing of the finished landfill must be prepared to the satisfaction of the Responsible Authority.
30. When waste disposal operations cease, final cover shall be provided and completed in accordance with the requirements of any works approval to the satisfaction of the Environment Protection Authority and the Responsible Authority.
31. The final surface of the landfill and any stages of it must be graded, drained and grassed to minimise erosion and to prevent ponding of stormwater in accordance with the endorsed plans and generally to the satisfaction of the Responsible Authority.

Signage

32. Suitable signage must be prominently displayed fronting Ballarto Road at the entrance to the site indicating:
- (c) the hours the site is open to accept waste material;
 - (d) the type of waste which may be deposited; and
 - (e) where wastes may be deposited.
33. The location and details of the signs, including those on the supporting structure, as shown on the endorsed plans, must not be altered without the written consent of the Responsible Authority.
34. The signs must not contain any lighting.
35. The signs must be constructed and maintained to the satisfaction of the responsible Authority.

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Drainage

36. Polluted drainage must not be discharged beyond the boundaries of the lot from which it emanates, or into a watercourse or easement drain, but must be treated and/or absorbed on that lot to the satisfaction of the Responsible Authority.
37. Before the development starts, drainage plans to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. The plans must be drawn to scale with dimensions and three copies must be provided.
38. The land must be filled in a manner that does not adversely affect the drainage of adjacent land.
39. All works must be undertaken in a manner that minimises soil erosion, and any exposed areas of soil must be stabilised to prevent soil erosion, to the satisfaction of the Responsible Authority.
40. A concrete truck wheel wash area must be installed to the satisfaction of the Responsible Authority and must be constructed so all waste from the wash area is connected to the sewer or a settlement and oil separation system in accordance with the Environment Protection Act 1970.

Environmental Management Plans

41. Fourteen (14) days before the use starts a site specific Environmental Management Plan for the development of the site (Site EMP) must be submitted to and approved by the Responsible Authority. The Site EMP must be prepared in accordance with Council's 'Site EMP Kit' to the satisfaction of the Responsible Authority. No alterations to the Site EMP may occur without the consent of the Responsible Authority. All works must be undertaken in accordance with the approved Site EMP to the satisfaction of the Responsible Authority.
42. In the preparation of the Site EMP, the applicant must use the environmental protection measures as set out in the EPA's publication 480 "Environmental management Guidelines for Major Construction Sites" unless it can be demonstrated that alternate techniques can fulfil the specified requirements.
43. Before the use starts, an environmental management plan for the management and operation of the use which is to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plan will be endorsed and will then form part of the permit. The environmental management plan must be reviewed and submitted to the Responsible Authority for further approval annually. The use must at all times be conducted in accordance with the endorsed plan. The environmental management plan must include:

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- (a) Overall environmental objectives for the operation of the use and techniques for their achievement.
- (b) Procedures to ensure that no significant adverse environmental impacts occur as a result of the use.
- (c) Proposed monitoring systems.
- (d) Identification of possible risks of operational failure and response measures to be implemented.
- (e) Day to day management requirements for the use.
- (f) Discharge of water currently existing on site.
- (g) Fill acceptance quality procedures.
- (h) Fill inspection procedures.

The Site Specific Environmental Management Plan must be prepared in accordance with the Site EMP Kit.

Bushfire Management

- 44. The bushfire mitigation measures forming part of this permit and/or contained in the Bushfire Management Statement prepared by Terramatrix dated May 2013, including those relating to construction standards, defendable space, water supply and access, must be maintained to the satisfaction of the responsible authority and the relevant fire authority on a continuing basis. This condition continues to have force and effect after the development authorised by this permit has been completed.

Environment Protection Authority

- 45. The applicant must apply for and be issued with a Works Approval from the Environment Protection Authority before the commencement of any works. The works approval application should follow the instructions in EPA publication 375.6 (or the latest version of this publication).
- 46. Discharge of groundwater, stormwater and wastewater from the land shall be in accordance with the requirements of the Environment Protection Authority.

Royal Botanic Gardens Cranbourne

- 47. An Indigenous Flora and Fauna Management Plan must prepared for approval by the Responsible Authority in consultation with the Royal Botanic Gardens Cranbourne. Prior to the commencement of construction works, all components of the Indigenous Flora and Fauna Management Plan must be implemented. The Indigenous Flora and Fauna Management Plan must include the following components:

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- (i) A list of existing weed species, and the associated recommendations for on-going maintenance and control of weed species.
 - (ii) Construction of a vermin-proof fence to protect the vegetation patches that contain indigenous flora and fauna and reduce the road kill of indigenous fauna on the access roads.
 - (iii) Measures to control the impact of pest animals, including foxes, rabbits, feral cats, unrestrained domestic cats and dogs, and introduced rodents.
 - (iv) Measures to facilitate wildlife movement between the vegetation patches. Such measures will be sufficient to ameliorate the impact of fragmentation, especially along the Ballarto Road wildlife corridor.
 - (v) The management and/or development of buffer zones of indigenous vegetation along the eastern property-line (adjacent to the Royal Botanic Gardens Cranbourne) and along the northern property-line (adjacent to Ballarto Road). The buffer zones will be a minimum of 30 metres wide.
48. Any soils that prove to be significantly infected with environmental weed species that could threaten the indigenous vegetation of the Royal Botanic Gardens Cranbourne must be removed from the site. Such action will be subject to assessment and discussion between the applicant, the Responsible Authority and the Royal Botanic Gardens Cranbourne.
49. Cats are not permitted on the property.
50. Dogs are not permitted within the indigenous vegetation areas.
51. A Fire Management Plan must be prepared for approval by the Responsible Authority in accordance with the Royal Botanic Gardens Cranbourne.

Permit Expiry

52. This permit will expire if the use hereby permitted is not started within four years of the date of this permit. The Responsible Authority may extend the periods referred to if a request is made in writing before the permit expires or within three months afterwards.

Notes:

- i) The site EMP Kit is available on the City of Casey's website, www.casey.vic.gov.au
- ii) Unless no permit is required under the Planning Scheme, vegetation must not be removed without a further permit.

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IMPORTANT INFORMATION ABOUT THIS PERMIT

WHAT HAS BEEN DECIDED?

The Responsible Authority has issued a permit. The permit was granted by the Minister administering the **Planning and Environment Act 1987** under section 96I of that Act.

WHEN DOES THE PERMIT BEGIN?

The permit operates from a day specified in the permit being a day on or after the day on which the amendment to which the permit applies comes into operation.

WHEN DOES A PERMIT EXPIRE?

1. A permit for the development of land expires if-
 - * the development or any stage of it does not start within the time specified in the permit; or
 - * the development requires the certification of a plan of subdivision or consolidation under the **Subdivision Act 1988** and the plan is not certified within two years of the issue of the permit, unless the permit contains a different provision; or
 - * the development or any stage is not completed within the time specified in the permit, or, if no time is specified, within two years after the issue of the permit or in the case of a subdivision or consolidation within 5 years of the certification of the plan of subdivision or consolidation under the **Subdivision Act 1988**.
2. A permit for the use of land expires if-
 - * the use does not start within the time specified in the permit, or if no time is specified, within two years after the issue of the permit; or
 - * the use is discontinued for a period of two years.
3. A permit for the development and use of land expires if-
 - * the development or any stage of it does not start within the time specified in the permit; or
 - * the development or any stage of it is not completed within the time specified in the permit, or, if no time is specified, within two years after the issue of the permit; or
 - * the use does not start within the time specified in the permit, or, if no time is specified, within two years after the completion of the development; or
 - * the use is discontinued for a period of two years.
4. If a permit for the use of land or the development and use of land or relating to any of the circumstances mentioned in section 6A(2) of the **Planning and Environment Act 1987**, or to any combination of use, development or any of those circumstances requires the certification of a plan under the **Subdivision Act 1988**, unless the permit contains a different provision -
 - * the use or development of any stage is to be taken to have started when the plan is certified; and
 - * the permit expires if the plan is not certified within two years of the issue of the permit.
5. The expiry of a permit does not affect the validity of anything done under that permit before the expiry.

WHAT ABOUT APPEALS?

- * Any person affected may appeal against-
 - a decision of the responsible authority refusing to extend the time within which any development or use is to be started or any development completed; or
 - a decision of the responsible authority refusing to extend the time within which a plan under the **Subdivision Act 1988** is to be certified, in the case of a permit relating to any of the circumstances mentioned in section 6A(2) of the **Planning and Environment Act 1987**; or
 - the failure of the responsible authority to extend the time within one month after the request for extension is made.
- * An appeal is lodged with the Victorian Civil and Administrative Tribunal.
- * An appeal must be made on a notice of Appeal form which can be obtained from the Victorian Civil and Administrative Tribunal, and be accompanied by the applicable fee.
- * An appeal must state the grounds upon which it is based.
- * An appeal must also be served on the Responsible Authority.
- * Details about appeals and the fees payable can be obtained from the Victorian Civil and Administrative Tribunal.

Appendix B List of submitters

Submission No.	Submitter
1	Department of State Development, Business and Innovation
2	Environment Protection Authority (EPA)
3	Cranbourne Turf Club
4	Proponent
5	SITA Australia Pty Ltd
6	Tract Consultants Pty Ltd for Settlers Run Golf Club and Country Club
7	Whittles Australia Pty Ltd for Settlers Run Owners Corporation
8	Lynn and Colin Alderson for Alderson Racing
9	Mary Quinn
10	Linda Sahhar and Michael Selesnew
11	Frank Puliafito
12	Geoff Cousins
13	Michael Paterson
14	C Alderson, L Childs, M C Kent, B Laming, B Musgrove and B Waterfall
15	Mr and Mrs Morris c/o Jude Perera MP
16	Royal Botanic Gardens Cranbourne (late submission)
17	Department of Environment and Primary Industries (late submission)

Appendix C Panel Hearing documents

Document Number	Date	Description	Presented by
PA1	25.11.2013	Submission by the City of Casey as the planning authority with four attachments: • exhibited incorporated document with tracked changes proposed as a result of Amendment VC103 • summary of submissions • extracts from the Metropolitan Waste and Resource Recovery Strategic Plan 2009 including Part 3 – Metropolitan Landfill Schedule • exhibited proposed permit base with post-exhibition revisions shown as tracked changes and incorporated.	Mr Peter Hobbs of Casey City Council
P2	25.11.2013	Expert witness statement on planning considerations.	Mr Michael Barlow of Urbis Pty Ltd called by Mr Stuart Morris QC
P3	25.11.2013	Victorian Government 2009 Metropolitan Waste and Resource Recovery Strategic Plan including appendices.	Mr Stuart Morris QC
P4	25. 11.2013	Victorian Government 2013 Consultation Draft of the Metropolitan Waste and Resource Recovery Strategic Plan.	Mr Stuart Morris QC
P5	25.11.2013	Proponent document describing existing operations and proposal in detail, provided in response to Panel Directions 8 to 10.	Mr Stuart Morris QC
6	25.11.2013	Environment Protection Authority (Victoria) Best Practice Environmental Management – Siting, Design, Operation and Rehabilitation of Landfills (Publication 788.1, September 2010).	Obtained by the Panel
PA7	26.11.2013	City of Casey standard drawing S-111C: High Speed Rural Roads (with concrete kerb and channel).	Mr Michael Pollard of Casey City Council

Document Number	Date	Description	Presented by
PA8	26.11.2013	Strategic Assessment Guidelines, Planning Practice Note 46, October 2013.	Mr Peter Hobbs of Casey City Council
P9	26.11.2013	Expert witness statement on traffic issues.	Mr Jason Walsh of Traffix Group Pty Ltd called by Ms Marita Foley
P10	26.11.2013	Austroads Vehicle Classification System from 1 to 12.	Mr Jason Walsh of Traffix Group Pty Ltd
P11	26.11.2013	Submissions on behalf of proponent.	Mr Stuart Morris QC

Appendix D Recommended permit

RECOMMENDED PERMIT

**GRANTED UNDER DIVISION 5 OF
PART 4 OF THE PLANNING AND
ENVIRONMENT ACT 1987**

Permit No.: PlnA00857/07 (formerly P638/07)

Planning Scheme: Casey Planning Scheme

Responsible Authority: Casey City Council

ADDRESS OF THE LAND:

950 Ballarto Road, Botanic Ridge, Volume 08086
Folio 978 (Lot 1 on TP 257508P) and Volume
09352 Folio 181 (Lot 1 TP 190083Q)

THE PERMIT ALLOWS:

Use and Development of the land for Refuse
Disposal (Solid Inert Waste Landfill) and Display
of Business Identification Signs

THE FOLLOWING CONDITIONS APPLY TO THIS PERMIT:

Plans required

1. Before the development starts, amended plans to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. When approved, the plans will be endorsed and will then form part of the permit. The plans must be drawn to scale with dimensions and three copies must be provided. The plans must show:
 - (a) Elevation plans for buildings and other structures.
 - (b) Detailed location and elevation plans for the advertising sign/s to be displayed.
 - (c) Detailed location and elevation plans for the earth mound recommended by the Environmental Noise Assessment prepared by Marshall Day dated 10 May 2013 or other such acoustic attenuation measure which is to the satisfaction of the Responsible Authority.
 - (d) Landscaping in accordance with condition 6.
 - (e) The wheel wash in accordance with condition 37.
 - (f) Details of access roads, tracks and gates.

2. The use and development as shown on the endorsed plans must not be altered without the written consent of the Responsible Authority.
3. Once the development has started it must be continued and completed to the satisfaction of the Responsible Authority.
4. The exterior colour and cladding of any buildings or structures must be of a non-reflective nature and/or painted or have a pre-painted finish in natural, muted toning (or such other colour that Responsible Authority at the request of the applicant approves) to the satisfaction of the Responsible Authority.
5. A materials recycling facility must be available on the site as an ancillary component of the refuse disposal facility for the purpose of preventing materials which can be reasonably and commercially recycled from being deposited in the landfill.

Landscaping

6. Before the development starts, a landscape plan prepared by a person suitably qualified and experienced in landscape design to the satisfaction of the Responsible Authority must be submitted to the Responsible Authority for approval. Note: In deciding whether approval will be granted, the Responsible Authority will invite and consider any comments from the Royal Botanic Gardens Cranbourne.

When approved, the plan will be endorsed and will then form part of the permit. The plan must be drawn to scale with dimensions and three copies must be provided. The plan must show:

- (a) Except within the transmission line easement, a minimum 30m wide indigenous tree planting buffer along the northern end of the eastern boundary. The buffer may be reduced to a minimum of 10m wide towards the southern end of the eastern boundary. The buffer must incorporate the existing indigenous vegetation and new planting only with indigenous plants of local provenance.
 - (b) A survey (including botanical names) of all existing vegetation based on a Remnant Vegetation Assessment which describes the Ecological Vegetation Classes and their quality.
 - (c) Buildings and trees (including botanical names) on neighbouring properties within three metres of the boundary.
 - (d) A planting schedule of all proposed trees, shrubs and ground covers, including botanical names, common names, pot sizes, sizes at maturity, and quantities of each plant. The tree planting buffer must be planted with indigenous plants of local provenance.
 - (e) Appropriate fencing (e.g. post and wire) to protect remnant and buffer vegetation on site, including signage indicating *'no access unless authorised'* to these areas.
 - (f) Provision for fauna gates or underpasses, where appropriate.
7. Planting of the tree planting buffers must only occur in the Cranbourne 'planting season' during May to September.

8. Before any waste is deposited, or by such later date as is approved by the Responsible Authority in writing, the landscaping works as shown on the endorsed plans must be carried out and completed to the satisfaction of the Responsible Authority.
9. The landscape areas shown on the endorsed plan must thereafter be maintained to the satisfaction of the Responsible Authority and used for no other purpose.

Section 173 agreement - cessation of quarrying

10. Before the development starts, the owner must enter into an agreement with the Responsible Authority made pursuant to section 173 of the *Planning and Environment Act 1987* to provide for:
 - a) The cessation of the quarrying use upon a Waste Discharge Licence being granted by the Environment Protection Authority for the landfill, other than crushing and screening of rock and the sale of product from the stockpiles for a further period of no more than 6 months from the date of the grant of that licence.
 - b) The surrender of Work Authority WA441.

Within one month of the agreement being reached, application must be made to the Registrar of Titles to register the section 173 agreement on the title to the land under section 181 of the Act.

The owner must pay the reasonable costs of preparation, execution and registration of the agreement.

Air Quality Management Plan

11. Before the development starts, an Air Quality Management Plan must be prepared to the satisfaction of the Responsible Authority consistent with any EPA requirements. The plan must include measures to ensure that dust, odour and landfill gas from site operations in all weather conditions do not unreasonably impact upon the amenity of the area and dust does not impact the health of nearby indigenous vegetation. The dust suppression measures should include watering or other measures to the satisfaction of the Responsible Authority.

Once approved the plan must be implemented on an ongoing basis to the satisfaction of the Responsible Authority.

Traffic management

12. Access to and egress from the site for all vehicles must be from the designated entry/exit point on Ballarto Road.
13. All of the internal roads must be formed and whilst in use be maintained, including repair grading and draining to ensure access to the disposal areas in all weather conditions to the satisfaction of the Responsible Authority.
14. Non-commercial vehicles and small trailers must not be granted access to the site for waste disposal or materials recycling purposes.
15. Before waste deposition starts, an on-site traffic management and parking plan must be prepared to the satisfaction of the Responsible Authority. The traffic management plan must:
 - Provide for the installation of appropriate directional signage.

- Address on-site safety and environmental issues.
 - Manage traffic circulation and parking especially adjacent to the site entry.
 - Minimise the amount and frequency of truck queuing on Ballarto Road.
 - Direct commercial vehicles to enter the site only via Ballarto Road from the Cranbourne-Frankston Road intersection and exit the site only via Ballarto Road to that intersection.
16. Before waste deposition starts, Ballarto Road must be fully constructed (asphalt surfacing) to a rural standard between Cranbourne-Frankston Road and 10 metres east of the current site entry. The road construction standard must meet the following minimum requirements to the satisfaction of the Responsible Authority:
- A minimum trafficable width of 7 metres.
 - A pavement design with a minimum design life of 20 years based on a Geotechnical Design Report.
 - An open drainage system sympathetic with the rural environment and existing roadside vegetation.

Suitable engineering design drawings that satisfy the above requirements must be prepared by an appropriately qualified person and submitted, along with a Geotechnical Design Report, to the Responsible Authority for approval prior to the commencement of any works.

Compliance with Works Approval and Waste Discharge Licence

17. The landfill must be constructed in accordance with the relevant Works Approval issued by the EPA.
18. The landfill must be operated in accordance with the conditions specified in a Waste Discharge Licence issued by the EPA.

Site management

19. The operator must ensure that an experienced and trained site manager is present at all times when the site is open to receive waste, together with a sufficient number of staff to ensure the satisfactory operation of the landfill. The gatehouse/weighbridge area must be staffed at all times during the hours of operation of the landfill, to ensure access to the site is controlled and that only waste permitted by the conditions of the EPA Waste Discharge Licence, as may be amended from time to time, is deposited in the landfill.
20. The operator must ensure that litter on the site is regularly collected and placed in the landfill and use its best endeavours to ensure that litter does not blow out of the site. If litter is blown from the site to the roadside verge adjoining the site, the operator must collect and dispose of that litter to the satisfaction of the Responsible Authority.
21. Except with the further consent of the Responsible Authority, the use hereby permitted may only operate between the following hours:
 - Monday to Friday: 7.00am to 6.00pm
 - Saturdays: 7.00am to 1.00pm
 - Sundays: nil
 - Anzac Day, Christmas Day and Good Friday: nil
22. Noise levels emanating from the land must comply with the requirements of the Environment Protection Authority's Publication 1411 *Noise from Industry in Regional Victoria* or any superseding standard.

If noise complaints are received when the use is in operation which in the opinion of the Responsible Authority unreasonably cause detriment to the amenity of the area, a noise mitigation management plan must be prepared and implemented to the satisfaction of the Responsible Authority.

23. The landfill must be lined in accordance with the Works Approval.
24. The use and development must be managed to the satisfaction of the Responsible Authority so that the amenity of the area is not detrimentally affected through the:
 - (a) transportation of materials, goods or commodities to or from the land;
 - (b) appearance of any buildings, works or materials;
 - (c) emission of noise, artificial light, vibration, smell, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil;
 - (d) presence of vermin.
25. All works, other than the construction of landfill cells, must be undertaken in a manner that minimises soil erosion, and any exposed areas of soil must be stabilised to prevent soil erosion, to the satisfaction of the Responsible Authority.
26. Soil erosion control measures must be employed throughout the construction stage of the development to the satisfaction of the Responsible Authority.

Rehabilitation

27. Before the filling of the site starts, a rehabilitation plan for the capping and planting of the finished landfill must be prepared to the satisfaction of the Responsible Authority.
28. When waste disposal operations cease, final cover must be provided and completed in accordance with requirements specified in the EPA Waste Discharge Licence or any Post-closure Pollution Abatement Notices issued by the EPA.
29. The final surface of the landfill and any stages of it must be graded, drained and planted to minimise erosion and to prevent ponding of stormwater in accordance with the endorsed plans and generally to the satisfaction of the Responsible Authority.

Section 173 agreement - transfer of filled void

29. Within two years of the commencement of the deposition of waste, the owner must enter into an agreement with the Responsible Authority made pursuant to section 173 of the *Planning and Environment Act 1987* to provide for:
 - a) The rehabilitation of the filled void to a condition suitable for use, or partial use, for the purpose of public recreation.
 - b) The specifications of the final contours of the landfill.
 - c) The landscaping of the final contours of the landfill which must be in accordance with the rehabilitation plan endorsed by the EPA under the Waste Discharge Licence and any Post-Closure Pollution Abatement Notice(s).
 - d) The transfer by the owner of ownership or right of occupancy of that part of the land comprising the filled void, including any additional land required to provide access to such land, to Council or a nominated government agency, free of charge, after rehabilitation is completed and at a time that is satisfactory to Council or other nominated agency.
 - e) The terms upon which the transfer of the ownership or right of occupancy of the filled void will be effected, including that the Council or other nominated government agency shall be responsible for public liability and all statutory charges (local, federal and State) for the duration of their ownership or occupancy.

Within one month of the agreement being reached, application must be made to the Registrar of Titles to register the section 173 agreement on the title to the land under section 181 of the Act.

The owner must pay the reasonable costs of preparation, execution and registration of the agreement.

Signage

30. The business identification sign/s approved under this permit must be prominently displayed at the entrance to the site and include the following information:
 - (a) the hours the site is open to accept waste material;
 - (b) the type of waste which may be deposited; and
 - (c) where wastes may be deposited.
31. The location and details of the signs, including those on any supporting structure, as shown on the endorsed plans, must not be altered without the written consent of the Responsible Authority.
32. The signs must not be illuminated or floodlit.
33. The signs must be constructed and maintained to the satisfaction of the Responsible Authority.

Drainage

34. Polluted drainage waters must not be permitted to be discharged from the site into drains, watercourses or the remnant vegetation areas or landscape buffers abutting the Royal Botanic Gardens Cranbourne, to the satisfaction of the Responsible Authority.
35. Before the development starts, drainage plans to the satisfaction of the Responsible Authority must be submitted to and approved by the Responsible Authority. The plans must be drawn to scale with dimensions and three copies must be provided. The drainage of the land must thereafter accord with those plans.
36. The land must be filled in a manner that does not adversely affect the drainage of adjacent land.
37. A truck wheel wash area with a concrete floor must be installed and operated to the satisfaction of the Responsible Authority, and in accordance with EPA requirements. The accessway between the wheel wash and the frontage to the land, and the road crossover to the edge of the road seal, must be fully constructed with a seal coat to the satisfaction of the Responsible Authority.

Construction Environmental Management Plan

38. Not later than 14 days before the development begins, a site specific Construction Environmental Management Plan for the development of the site (Construction EMP) must be submitted to the Responsible Authority for approval. The Construction EMP must be prepared in accordance with the City of Casey's 'Site EMP Kit' to the satisfaction of the Responsible Authority. When approved, all works must be undertaken in accordance with the Construction EMP to the satisfaction of the Responsible Authority. The Construction EMP may only be varied with the consent of the Responsible Authority.

39. The environmental protection measures in EPA publication 480 *Environmental Management Guidelines for Major Construction Sites* must be included in the Construction EMP unless consent is obtained for alternative techniques meeting the specified requirements. The Construction EMP must include requirements relating to blasting including permitted hours and notification to nearby properties.

Fire management

40. Before the development starts, a Bushfire Management Plan including the mitigation measures contained in the Bushfire Management Statement prepared by Terramatrix dated May 2013, and measures to manage fires within the landfill must be prepared to the satisfaction of the Responsible Authority upon the advice of the CFA and in consultation with the Royal Botanic Gardens Cranbourne. The mitigation measures including those relating to construction standards, defendable space, water supply and access, must thereafter be implemented and maintained to the satisfaction of the Responsible Authority and the CFA. This condition continues to have force and effect after the development is completed.
41. The proponent must notify owners and occupiers of neighbouring properties at least two weekdays prior to any controlled burn of indigenous vegetation.

Royal Botanic Gardens Cranbourne

42. Before the development starts, an Indigenous Flora and Fauna Management Plan must be prepared in consultation with the Royal Botanic Gardens Cranbourne and submitted to the Responsible Authority for approval. The Indigenous Flora and Fauna Management Plan must include the following components:
- a) A list of existing weed species, and the associated recommendations for on-going maintenance and control of weed species.
 - b) Measures to control the impact of pest animals, including foxes, rabbits, feral cats, unconstrained dogs and introduced rodents.
 - c) Measures to facilitate wildlife movement between vegetation patches.
 - d) The management and/or development of buffer zones of indigenous vegetation along the eastern boundary (adjacent to the Royal Botanic Gardens Cranbourne) and along the northern boundary (adjacent to Ballarto Road). The buffer zones will be within the range of 10-30 metres wide.
 - e) The landscaping shown on the endorsed Landscape Plan required by condition 6.
 - f) A timing schedule for the carrying out of all works provided for in the Indigenous Flora and Fauna Management Plan.

When approved, all components of the Indigenous Flora and Fauna Management Plan must be implemented and maintained to the satisfaction of the Responsible Authority.

43. Any soils that are significantly infected with environmental weed species that have potential to threaten the indigenous vegetation of the Royal Botanic Gardens Cranbourne must be removed from the site. Such action is to be subject to discussion between the applicant, the Responsible Authority and the Royal Botanic Gardens Cranbourne.
44. Cats are not permitted on the property.
45. Dogs are not permitted within the indigenous vegetation areas.

Permit Expiry

46. This permit will expire if waste deposition is not commenced within five years of the date of this permit. The time specified for completion is two years from the revocation of the EPA Waste Discharge Licence.

The Responsible Authority may extend the periods referred to if a request is made in writing before the permit expires or within six months afterwards.

Notes:

- a. The site EMP Kit is available on the City of Casey's website, www.casey.vic.gov.au
- b. Unless no permit is required under the Planning Scheme, vegetation must not be removed without a further permit.
- c. Both before the development starts and later upon completion of the landscaping, Council's Planning Investigations Officer is to be contacted in order to arrange inspections of the site.
- d. The applicant must apply for and be issued with a Works Approval from the Environment Protection Authority before the commencement of any works. The Works Approval application should follow the instructions in EPA publication 375.14 (or the latest version of this publication).
- e. Prior to the receipt of wastes, the applicant must be issued with a Waste Discharge Licence under the *Environment Protection Act 1970*.

IMPORTANT INFORMATION ABOUT THIS PERMIT

WHAT HAS BEEN DECIDED?

The Responsible Authority has issued a permit. The permit was granted by the Minister administering the **Planning and Environment Act 1987** under section 96I of that Act.

WHEN DOES THE PERMIT BEGIN?

The permit operates from a day specified in the permit being a day on or after the day on which the amendment to which the permit applies comes into operation.

WHEN DOES A PERMIT EXPIRE?

1. A permit for the development of land expires if-
 - * the development or any stage of it does not start within the time specified in the permit; or
 - * the development requires the certification of a plan of subdivision or consolidation under the **Subdivision Act 1988** and the plan is not certified within two years of the issue of the permit, unless the permit contains a different provision; or
 - * the development or any stage is not completed within the time specified in the permit, or, if no time is specified, within two years after the issue of the permit or in the case of a subdivision or consolidation within 5 years of the certification of the plan of subdivision or consolidation under the **Subdivision Act 1988**.
2. A permit for the use of land expires if-
 - * the use does not start within the time specified in the permit, or if no time is specified, within two years after the issue of the permit; or
 - * the use is discontinued for a period of two years.
3. A permit for the development and use of land expires if-
 - * the development or any stage of it does not start within the time specified in the permit; or
 - * the development or any stage of it is not completed within the time specified in the permit, or, if no time is specified, within two years after the issue of the permit; or
 - * the use does not start within the time specified in the permit, or, if no time is specified, within two years after the completion of the development; or
 - * the use is discontinued for a period of two years.
4. If a permit for the use of land or the development and use of land or relating to any of the circumstances mentioned in section 6A(2) of the **Planning and Environment Act 1987**, or to any combination of use, development or any of those circumstances requires the certification of a plan under the **Subdivision Act 1988**, unless the permit contains a different provision -
 - * the use or development of any stage is to be taken to have started when the plan is certified; and
 - * the permit expires if the plan is not certified within two years of the issue of the permit.
5. The expiry of a permit does not affect the validity of anything done under that permit before the expiry.

WHAT ABOUT APPEALS?

- * Any person affected may appeal against-
 - a decision of the responsible authority refusing to extend the time within which any development or use is to be started or any development completed; or
 - a decision of the responsible authority refusing to extend the time within which a plan under the **Subdivision Act 1988** is to be certified, in the case of a permit relating to any of the circumstances mentioned in section 6A(2) of the **Planning and Environment Act 1987**; or
 - the failure of the responsible authority to extend the time within one month after the request for extension is made.
- * An appeal is lodged with the Victorian Civil and Administrative Tribunal.
- * An appeal must be made on a notice of Appeal form which can be obtained from the Victorian Civil and Administrative Tribunal, and be accompanied by the applicable fee.
- * An appeal must state the grounds upon which it is based.
- * An appeal must also be served on the Responsible Authority.
- * Details about appeals and the fees payable can be obtained from the Victorian Civil and Administrative Tribunal.