

**Casey Planning Scheme
Amendment C225
Botanic Ridge Stage 4
SBI Landfill and Quarry Buffers
Expert Report**

**David Maltby
4 October 2017**

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INTRODUCTION

Botanic Ridge C225

Instructions

- I.1 I have been instructed by Merrylees Legal to prepare an independent expert report to be filed with Planning Panels Victoria. Their letter of engagement is attached to this report as Schedule 1.

Scope and sources of information

- I.2 I was provided with a number of documents to assist me in the preparation of my answers to the questions set out in the letter of engagement. A list of the documents provided by Merrylees Legal, filed in the Panel Hearing, is attached as Schedule 2 to this report.
- I.3 In undertaking the preparation of this report, I have considered the documents supplied by Merrylees Legal as well as other reports and publications I have sourced independently.

Work by Assistants

- I.4 No assistance was provided by any third parties to me in the preparation of this report.

Code of Conduct

- I.5 I have read and agree to be bound by the Planning Panels Victoria – Guide to Expert Evidence.
- I.6 I understand that as an expert witness, I have a paramount duty to the Panel and an overriding duty to assist the Panel impartially on matters relevant to my area of expertise.

Conclusions

- I.7 It is my opinion that the current quarry and planned waste management activities at the SBI Quarry site do not necessitate the imposition of a buffer into the 860 Ballarto Rd land beyond the current 33 metre fire buffer.
- I.8 The landfill will be required to operate in accordance with best practice as provided for in the BPEM. BPEM best practice is reflected in the EPA licencing guidelines. The licencing guidelines dictate the terms of the landfill licence. Compliance with landfill licence is assessed in regular audits the results of which must be provided to the EPA. There is every reason to expect therefore that the landfill will be managed in accordance with environmental best practice and will not give rise to adverse amenity impacts beyond the buffers.

Declaration

I.9 I have made all enquiries that I believe are desirable and appropriate and that no matters of significance that I regard as relevant have to my knowledge been withheld from the Panel.

A handwritten signature in black ink, appearing to read 'D. Maltby', written in a cursive style.

Signature:

Date: 4 October 2017

David Maltby

18 Central Ave Blairgowrie Victoria

1 BACKGROUND

Qualifications and experience

- 1.1. My experience with quarries, waste management facilities and landfills has been obtained in both operational and consulting roles. My involvement with contaminated sites and landfills commenced in 1986 and has continued to the present.
- 1.2. I obtained a Bachelor of Engineering (Geological Engineering) from RMIT in 1987. During the last three years of my course, I worked part time for Australian Hydrogeologists International (AHI) (a hydrogeological consulting firm), and was involved in contaminated site investigation and remediation and landfill related projects.
- 1.3. AHI was taken over by Dames and Moore (an international engineering and environmental consulting firm) in 1987. I continued employment with Dames and Moore working on contaminated land projects such as the remediation of the BP terminal Port Melbourne (now Beacon Cove) and waste projects such as site assessment and design of the Bacchus Marsh Shire landfill. In 1989, I was transferred to the Philadelphia office of Dames and Moore where I assisted in the provision of services in the areas of contaminated site assessment, landfill remediation projects, and due diligence assessments. In 1990, I transferred to the Seattle office of Dames and Moore and continued to work on contaminated site investigation and remediation. In 1991, I returned to the Melbourne office of Dames and Moore.
- 1.4. In 1991, I joined CSR Readymix as the Environment Coordinator for Victoria and Tasmania. As Environment Coordinator, I was responsible for the assessment and reporting on environmental issues such as EPA waste discharge licence compliance, surface water and groundwater discharges, noise, dust and odour. CSR Readymix operated quarries, concrete batching plants, asphalt plants, and precast concrete plants.
- 1.5. After the acquisition of the PBM group, the majority of my time was spent in supporting the combined group waste operations. In 1996, my role changed to Waste Technical and Development Manager for CSR and PBM landfill sites. In this role, I was responsible for managing compliance issues at the landfills and the growth of the waste business.
- 1.6. In 1999, I established the Melbourne office of HLA Envirosciences (HLA) with two other associates¹. My position at HLA was initially as a principal. In this role, I had oversight of contaminated site assessment and remediation projects, landfill assessments, landfill approvals, landfill construction and closures in Victoria and New South Wales (NSW). I undertook landfill levy audits for the EPA at a number of sites during my time at HLA. I also managed the HLA Melbourne office for 2 years to May 2004.

¹ HLA Envirosciences subsequently became ENSR trading as AECOM.

- 1.7. In 2004, I moved to the Mornington Peninsula to take up a position as waste manager for the Mornington Peninsula Shire. In this role, I was responsible for management of waste operations including the Rye landfill and aftercare of landfills in Hastings, Crib Point, Tyabb and Mt Eliza. Later in 2004, I took over as Executive Officer for the Mornington Peninsula Regional Waste Management Group², managing both the group and waste operations at the Shire.
- 1.8. In April 2005, I was appointed as Executive Officer, South Eastern Regional Waste Management Group (SERWVG). At the same time, I continued as Executive Officer of the Mornington Peninsula Regional Waste Management Group. Whilst at Mornington Peninsula, I authored the Mornington Peninsula Regional Waste Management Plan. In October 2006, my role with the SERWVG ceased with the creation of the Metropolitan Waste Management Group (MWMG).
- 1.9. From October 2006, I have been an environmental consultant. In this capacity I have performed a variety of tasks including:
- Site remediation for soils impacted by the landfill gas migration from the Brookland Greens Estate
 - Assistance in preparation of the landfill schedule for the Metropolitan Waste Management Plan³.
 - Content manager for the recent revision to the EPA Best Practice Environmental Management Landfill Guidelines (BPEM)⁴. I made a substantial contribution to the revised Landfill BPEM.
 - Provision of advice to mine operators and clients with land adjacent to quarries on the amenity impacts of the operations of the sites.
 - Project management and strategic advice to landfill operators, local government and other state government agencies.
 - Undertaking waste management project work with larger consultancies including Meinhardt, ERM, GHD and CT Management.

² Regional Waste Management Groups are responsible for planning the management of municipal solid waste in Victoria. In order to coordinate and direct the waste management activities of its member councils, each Regional Waste Management Group produces a regional plan. <http://www.sustainability.vic.gov.au/www/html/1999-about-regional-waste-management-groups.asp>

³ The Environment Protection Act 1970 requires the Metropolitan Waste Management Group (MWMG) to set out a Metropolitan Landfill Schedule identifying the location and sequence for the filling and operation of landfill sites. This Metropolitan Landfill Schedule comprises Part 3 of the Metropolitan Waste and Resource Recovery Strategic Plan.

⁴ EPA Victoria's *Best Practice Environmental Management publication Siting, design, operation and rehabilitation of landfills* (Landfill BPEM) is the source document for best practice environmental management measures for landfills. It gives direction on the best-practice siting, design, operation, performance and rehabilitation standards for landfills in Victoria, taking into account the risk they pose to the environment. It provides a guide for the measures required to meet legislative objectives.

- 1.10. From June 2008 to January 2011, I was business development manager (Victoria) on a part time basis with WSN Environmental Solutions.

Involvement with the SBI Group beyond my role as an expert witness in this Panel Hearing

- 1.11. I have acted as an advisor to SBI on the development of their quarry site as a landfill since approximately 2007.

Instructions

- 1.12. I have been instructed to:

- Review the material supplied to you in relation to the proposed Planning Scheme Amendment before the Panel;
- consider and formulate your own opinions with respect to the following matters, within the limits of your expertise:
 - Whether the buffers necessary to protect neighbouring sensitive receptors from our clients current and proposed future activities (see below) can effectively be internalised on our clients land at 950 Ballarto Rd:
 - Quarry (current)
 - Landfill (future)
 - Materials Recycling (including concrete crushing) (future)
 - Any other matter you consider relevant.
- If you are able to support the proposed planning scheme amendment having regard to the potential amenity and/or environmental impacts (if any) on the land at 860 Ballarto Road:
 - prepare a report which sets out the conclusions which you have reached, and states the basis upon which you have arrived at your conclusions, including any facts you have relied upon or assumption which you have made which form part of the reasoning by which you reach your conclusions; and
 - Appear at the Panel to give evidence in support of the proposed amendment.

2 ISSUES DESCRIPTION

- 2.1 Stevensons Brothers Industries Pty Ltd (SBI) operates a quarry at 950 Ballarto Rd, Botanic Ridge. SBI has obtained a Town Planning Permit and EPA Works Approval to develop a solid inert landfill at its site. The quarry extraction activities are required to cease once the landfill waste acceptance commences.
- 2.2 The quarry operation commenced approximately three decades ago with the mining of the Quaternary dune sands at the site. When the dune sands were removed SBI Quarries commenced a rock extraction operation in the Silurian aged sedimentary bedrock. Changes in land use and zoning in the surrounding area has made the long term use of the site as an ongoing quarry operation less compatible.
- 2.3 When the quarry site was included in the South Eastern Regional Waste Management Group landfill schedule in 2006, SBI saw the opportunity to convert the quarry operation to a solid inert landfill that would rehabilitate the quarry void to eventually public open space. Ultimately the surrounding buffer land owned by SBI will then be available for other developments/uses.
- 2.4 The development of the site as a landfill in 2007 required an amendment to the Planning Scheme as landfill was prohibited under the Farming Zone applying to the site. A planning scheme amendment was prepared and lodged when in August 2008 landfill gas from the former Casey Frankston unlined putrescible Stevensons Rd landfill was detected in high concentrations in the Brookland Greens residential estate located West of the landfill.
- 2.5 Consideration of the Planning Scheme amendment was deferred until the gas migration issues at the former Stevensons Rd landfill were considered to have been resolved. In June 2015 Amendment C115 was gazetted. That allowed for the development and use of the landfill. An EPA Works Approval allowing for the development of the site as a solid inert landfill was issued in February 2015.
- 2.6 SBI has been actively developing detailed designs and commissioning the works necessary for the development of the site as a landfill since the permit and Works Approval were issued. It is likely that the liner construction works commence later in 2017 with waste acceptance and hence surrender of the quarry work authority in late 2018.
- 2.7 The landfill Planning Permit PlnA00857/07 required the establishing a materials recycling facility at the SBI site to facilitate the diversion of waste from landfill.
- 2.8 The land subject to amendment C225 at 860 Ballarto Rd, Botanic Ridge will be developed North West of the existing quarry operations and the future landfill and recycling operations.

2.9 The future landfill and recycling facility require buffers to prevent any adverse amenity impacts to future residents at the proposed residential development at 860 Ballarto Rd.

3 BUFFER GUIDELINES

- 3.1 The Victorian Environment Protection Authority (EPA) has a number of publications that discuss industry buffers. EPA Publication 1518 *“Recommended Separation Distances for Industrial Residual Air Emissions”*, March 2013 provides a recommended distance for quarries of 250 metres without blasting and 500 metres with blasting or with airborne respirable crystalline silica. Publication 1518 is a guideline and the buffers within the publication are not mandatory, however a stated purpose of Publication 1518 is to inform strategic land use planning decisions, such as those associated with the C225 Amendment.
- 3.2 In the case of the Botanic Ridge development a lesser buffer of 300 metres has been applied by Department of Economic Development, Jobs, Transport and Resources (DEDJTR) to blasting from the SBI quarry. This lesser buffer is justified on the basis that the softer sedimentary rock requires a reduced buffer than a hard rock quarry such as granite or basalt. The softer rock means that less explosive force is required to break up the rock. Lower explosive force results in a lower potential for offsite blasting impacts.
- 3.3 EPA Publication 1518 provides a 250 metre recommended buffer for the crushing and screening of rock. This buffer would also apply to the crushing and screening of concrete as crushing and screening concrete has a similar potential to generate noise and dust as rock crushing and screening.
- 3.4 EPA Publication 1518 refers to the EPA Landfill BPEM⁵ for recommended buffer distances for landfills. The landfill BPEM requires a 200 metre buffer to buildings and structures for landfill gas migration, safety and amenity impacts.
- 3.5 EPA Publication 1518 does not have a recommended buffer for materials recycling but states that the buffer should be considered on a case by case basis.

⁵ EPA Victoria’s *Best Practice Environmental Management publication Siting, design, operation and rehabilitation of landfills* EPA Publication 788.3 2015

4 EXISTING QUARRY BUFFER

- 4.1 The current quarry operations involve the removal of stone by a combination of blasting and soft rock extraction techniques and the crushing and screening of the rock. Most of the operations take place within the quarry void including the majority of rock crushing and screening.
- 4.2 The current quarry operations do not require a planning permit as the use of the site as a quarry predates the requirement for a planning permit for that use. The Extractive Industry Work Plan Variation for Work Authority No. 441 March 2007 states the following;

“There will be a 200m buffer between the operational area and the Excision Area to the north-west. A 300m wide blasting exclusion zone will be maintained between the excision area and any blasting operations within the Operational Zone. “

The work plan variation for the quarry was prepared in 2007 by Bell Cochrane and Associates to facilitate the development of land at 860 Ballarto Rd.

- 4.3 A 300 metre blasting buffer is provided in the approved quarry work authority to the land at 860 Ballarto Road. There is an additional 33 metre fire buffer that in effect provided a 333 metre buffer from any blasting at the SBI Quarry to any potential sensitive uses in the 860 Ballarto Rd land. The blasting buffer is not consistent with the 500 metre blasting buffer as set out in EPA publication 1518, however this is consistent with previous EPA guidelines that allowed for a lesser buffer (300 metres as against 500 metres) for soft rock quarries.
- 4.4 A 200 metre buffer is applied to the quarry that allows for rock extraction by soft rock extraction techniques such as ripping with a bulldozer. Rock extracted in the zone between the 200 metre and 300 metre buffer must be extracted using the non blasting techniques.
- 4.5 The current quarry crushing and screening operations are largely conducted at the base of the quarry void. There is also some existing quarry crushing and screening plant located north of the quarry void. All of the existing quarry plant taking into account the 33 metre bushfire buffer would generally meet the 250 buffer to developable land at 860 Ballarto Rd. The use of this plant will cease when the landfill filling operations commence.

5 WASTE OPERATIONS

5.1 Landfill

- 5.1 Planning Permit PInA00857/07 allows for the development and use of the land at 950 Ballarto Rd for Refuse Disposal (Solid Inert Landfill). Condition 5 of the Planning Permit requires that a material recycling facility be available at the site as an ancillary component of the refuse disposal facility. Condition 10 of the Planning Permit requires the cessation of quarrying use upon granting of a Waste Discharge Licence by the EPA other than for a crushing and screening of rock from stockpiles for no more than 6 months from the date of licence issue.
- 5.2 The main activity at the site and the activity most likely to generate any offsite impacts will be the operation of the solid inert landfill. The other activities at the site such as the operation of the leachate system and operation of the recycling facility will have a lower potential to impact any offsite receptors. Consistent with the EPA Landfill BPEM requirements, the potential impacts of the development and use of the landfill on residential developments at 860 Ballarto Rd were considered during the assessment of the EPA Works Approval. The approval for the SBI landfill prohibits placement of waste closer than 200 metres from the common boundary of 860 Ballarto Rd.
- 5.3 Impacts from landfill operations will depend on the type of landfill, nature of the wastes deposited, the site setting and the controls used to manage the impacts. The proposed operations of the SBI landfill meet the EPA requirement for a 200 metre buffer. This buffer is internalised within the SBI land and a minimum 233 metre buffer would apply when considering the fire break on the 860 Ballarto Rd land. The main area of potential impacts from landfill operations include:
- Surface and groundwater pollution,
 - Noise,
 - Dust,
 - Litter,
 - Odour,
 - Subsurface gas Migration and
 - Vermin.
- 5.4 It is important to note that the SBI landfill will comply with or exceed all the engineering requirements for a solid inert landfill in Victoria. Key design features include:
- The landfill type is a largely a below ground landfill with more that 95% of wastes deposited below the natural surface. The landfill void is below high tension powerlines meaning that the height of waste placement is restricted compared to most other landfills where the majority of wastes are placed above the ground.

- Use of a 2 metre thick compacted clay liner for the landfill sides and composite clay and high density polyethylene liner for the landfill base.
- Surface water and leachate management systems.
- Groundwater and landfill gas monitoring systems.

5.5 Surface water and groundwater will be protected by the use of lining systems and operation of leachate extraction and management systems, protection of surface water and groundwater is one of the principal requirements of landfill operations.

5.6 Noise at landfills is generated by a variety of sources including waste haul vehicles, landfill compaction machinery and the excavation and placing of daily cover. Noise generated from the operations at the SBI landfill was assessed in detail during the works approval assessment process and it was found that the proposed operations would meet the requirements of the EPA Noise State Environment Protection Policy for any receptors at 860 Ballarto Rd. Key noise mitigation measures include the location of the landfill haul road on the south east side of the pit and the use of noise suppression equipment on landfill equipment in the later stages of landfill development.

5.7 Dust from landfill operations is generated mainly from vehicle movements and waste deposition and compaction. Dust will be managed by use of sprays, vegetated buffers, restriction on operations on high wind days and other measures as necessary. The *Air Quality Management Plan* prepared Tonkin & Taylor June 2017 details the dust risks and control measures for the site operations.

5.8 Litter from landfill can be a problem if adequate management procedures are not in place. Litter is generated mainly from wind mobilising litter as waste is discharged from vehicles at the tipping face. The SBI landfill has the advantage of operating below grade for the majority of the life of the facility reducing the litter generation potential. Litter controls required at landfills include:

- Progressive placement of daily cover
- Use of fixed and relocatable litter screens
- Litter patrols to collect litter
- Temporary cessation of waste placement on high wind days.

5.9 Odour generated from solid inert landfill does not pose a significant risk to amenity of surrounding areas due to the non odorous nature of the wastes that are deposited at the landfill. Landfill odour is derived from odour emanating from decomposing food and garden wastes, these materials are prohibited at the site and as such the potential for offensive odour is low.

5.10 Subsurface gas migration from the landfill does not pose a significant risk to the surrounding area. This is because solid inert waste does not generate significant volumes of landfill gas to drive migration from the landfill and the landfill liner and subsurface geology provide barriers to gas migration.

- 5.11 Landfills can provide habitat for vermin that can migrate to surrounding areas. The SBI site has an active vermin control program that will continue to mitigate any problems from vermin. The nature of the wastes to be managed at the site means that landfilled wastes will not provide a source of food to birds and rodents.
- 5.12 The landfill will be required to operate in accordance with best practice as provided for in the BPEM. BPEM best practice is reflected in the EPA licencing guidelines. The licencing guidelines dictate the terms of the landfill licence. Compliance with landfill licence is assessed in regular audits the results of which must be provided to the EPA. There is every reason to expect therefore that the landfill will be managed in accordance with environmental best practice and will not give rise to adverse amenity impacts beyond the buffers.

5.2 Recycling Facility

- 5.13 The landfill planning permit requires that the recycling facility must be available at the site for the purpose of preventing materials that can be reasonably and commercially recycled from being deposited in the landfill.
- 5.14 The recycling facility is an ancillary use at the site. Most waste loads coming to the site will not go to the recycling facility but will be directed to deposit wastes directly onto the landfill tipping face. Waste vehicles entering the site will fall into the following categories:
- Commercial and industrial collection loads from commercial front lift collection vehicles, these load will be directed to deposit the loads directly onto the tipping face as the wastes in these vehicles is largely non commercially recyclable. Where recyclable materials are identified in the wastes as they are deposited onto the landfill the wastes shall be salvaged for subsequent stockpiling in the recycling facility.
 - Residual wastes from demolition skip operators generally come to the site in 30 cubic metre bins and walking floor trailers. These wastes are the residual wastes derived from the residual waste sorting operations conducted by the skip operators. Skip operators are forced by market economics to sort all loads and remove the recyclable materials from the waste stream. The residual waste component of the skips is then sent to landfill, there are no salvageable materials in the residual wastes from these sorting facilities.
 - Mixed loads from block clearing and new house construction sites. These mixed loads do potentially contain commercially viable recyclable materials. These loads will be directed to the recycling area for recycling.
 - Occasional demolition skips that have not been sorted where a skip operator requires a quick turnaround on a skip will be directed to the recycling area for sorting.

5.15 Uncertainties about the location, nature and scale of the recycling activities had initially led to the potential for the imposition of buffers on the 860 Ballarto Rd land. Since the initial discussions, controls on the location of the recycling activities and the management of the activities have provided more certainty on the recycling activities that may occur on the SBI site. These controls are in the form of:

- Endorsed plans restricting the recycling to specific areas of the SBI land.
- Preparation of an Environment Management Plan that forms part of the endorsed plans that provides controls on the recycling activities to take place.
- Specific inclusion of the recycling area in the Air Quality Management plan that form part of the endorsed plans for the landfill planning permit.
- An amendment to the planning permit restricting recycling to the areas specified in the plans

The EPA was consulted during the preparation of the endorsed plans for the site. Consultation with the EPA included meeting with EPA officers at their Dandenong office and in a teleconference and provision of draft copies of the plans for comment prior to submission to Casey for endorsement.

5.16 Buffer concerns about the recycling were related to concerns about the potential impacts of concrete recycling and impacts from general recycling activities.

5.17 Figures 4 of the endorsed plans show where recycling is allowed to occur on the SBI site. Figure 5 further restricts concrete recycling to locations where a buffer of 250 metres to potential sensitive uses can be achieved.

5.18 The SBI Landfill - *Recycling Facility Environment Management Plan* July 2017 Zone Environmental forms part of the endorsed plans for the Planning Permit. This plan contains a discussion on the nature of the activities to be conducted at the Recycling Facility and discussed environmental controls and buffers.

5.19 Concrete recycling can be considered to be similar to quarry crushing where a recommended 250 metre buffer applies.

5.20 There is no recommended buffer for recycling activities, buffers for recycling are determined on a case by case basis.

5.21 Initially where space is available at the base of the quarry some 40 plus metres below the natural surface recycling activities will be conducted on the quarry floor adjacent to the licenced landfill area. When space is not available in the former quarry void recycling will occur in the areas shown on figures 4 and 5 of the endorsed plans.

5.22 Concrete recycling which is considered to have the greatest potential for offsite impacts will have the following controls used to minimise impacts:

- Be located a minimum of 250 metres away from any zone that may be developed for residential purposes.

- Concrete Crusher equipment will be operated 7m below grade. This will be achieved by operating the crusher adjacent to the quarry void in the clay borrow area where clay is to be excavated to provide clay for landfill liner construction purposes.
- There is a vegetated buffer some 12-15m high located between the crushing location and 860 Ballarto Rd land,
- Use of water carts and sprinklers for vehicle movement,
- Maintain all concrete feed and product stockpiles to less than 10m in height, and
- Use of a sealed truck wash area.

5.23 Other recycling activities will be restricted to the recycling areas shown on figures 4 & 5 of the endorsed plans for the Planning Permit.

5.24 The other non concrete recycling activities will be the sorting of loads deemed to contain commercially viable amount of recyclables and the stockpiling of recyclable materials.

5.25 Loads will be sorted using a combination of hand and machinery sorting.

5.26 The type of recyclables to be stockpiles would include:

- Concrete.
- Bricks.
- Soil.
- Timber.
- Plasterboard.
- Metals.
- Plastics.
- Cardboard.

5.27 Concrete will be collected until a sufficient volume of material is stockpiled to justify the operation of the crushing and screening equipment.

5.28 Other recyclables will be stockpiled until sufficient quantities of materials are collected to justify the transportation of a load of material offsite. For example scrap metal is normally stored in 30 cubic metre bins when two bins are full a truck and trailer would come and swap the full bins for empty ones.

5.29 The potential impacts from the crushing and other recycling activities include:

- Noise
- Dust
- Litter

5.30 Noise from the concrete crushing will be intermittent, it will be controlled by the operating the crusher and other equipment such as excavator shears either at the base

of the current pit or in a zone 7 metres below grade a minimum of 250 metres from potential residential developments.

- 5.31 Noise from the other recycling activities will mainly be generated from truck movements and the loading and unloading of bins and trucks. Noise from these activities will be relatively low intensity and be managed by the buffer distances.
- 5.32 Dust will be managed by wetting down unsealed areas with a water cart and the use of sprays on crushing and screening equipment.
- 5.33 Litter will be collected if it is generated, loads with a high litter generation potential such as commercial and industrial wastes will not be processed in the recycling area. Only construction and demolition wastes will be processed in the recycling area.

6 DISCUSSION OF BUFFERS

6.1 Quarry

- 6.1 Quarry buffers to residential development at Botanic Ridge for the existing operations at the SBI Quarry have been set at 300 metres for blasting and 200 metres for non blasting activities. These are less than those set out in EPA Publication 1518 and are lower than the guideline recommendations due to the softer nature of the rock quarried at the SBI site.
- 6.2 Rock extraction is required to cease upon the issue of a waste discharge licence from the EPA. A waste discharge licence is likely to be issued in 2018 consequently existing quarry operations are likely to cease years before any residential dwellings are constructed and occupied on the 860 Ballarto Rd land.

6.2 Waste Operations

- 6.3 The SBI Landfill will comply with the Landfill Best Practice guideline of 200 metres. This 200 metre is contained entirely within the SBI land. No restriction on residential developments at 860 Ballarto Rd is required due to the future operation of the SBI Landfill.
- 6.4 The Recycling facility has two components concrete recycling and general recycling.
- 6.5 The concrete recycling will meet a 250 Buffer to developable land taking into account the bushfire break of 33 metres. In addition to meeting the buffers, the crushing will take place in a zone that is well screened from offsite observers.
- 6.6 The other recycling activities do not have a recommended buffer. A buffer of 200 metres has been used from the recycling area to developable land at 860 Ballarto Rd. Use of a 200 metre buffer is conservative taking into account that this is the same buffer as would apply to a landfill. Landfills in general have a significantly higher potential to generate a loss of amenity due to the higher intensity of activities and greater potential for impacts such as dust, litter and noise.
- 6.7 The recycling facility is an ancillary use and will have a lower level of activity than the landfill.

7 CONCLUSIONS

- 7.1 The proposed landfill and recycling facility at SBI landfill meet or exceed the buffer guidelines with respect to adverse amenity impacts to any land at 860 Ballarto Rd.
- 7.2 In the case of general (non concrete) recycling a buffer of 200 metres has been applied which is conservative.
- 7.3 The existing quarry operations do not comply with the EPA buffer guidelines but due to the specific nature of the rock and quarrying activities the reduced buffer is considered to be satisfactory in relation to potential residential development at 860 Ballarto Rd land.

Schedule 1

Letter of instruction from Merrylees Legal

Schedule 2

1. Officers Report dated 20 June 2017 (including Draft DPO Schedule 23);
2. Council's proposed revised "Map 3 – Separation Distances";
3. Exhibited Planning Scheme Amendment Documents C225;
4. First round of submissions to Council (dated December 2016);
5. Second round of submissions to Council (dated April/May 2017);
6. EPA Publication 788.3 of the BPEM Siting, Design, Operation and Rehabilitation of Landfills – August 2015;
7. EPA Publication 1323.3 Landfill Licencing Guidelines - September 2016;
8. EPA Publication 1518 Recommended Separation Distances for Industrial Residual Air Emissions – March 2013;
9. Planning Permit PInA00857/07;
10. Set of Endorsed plans forming part of Planning Permit PInA00857/07;
11. Amended EPA Works Approval Number 111031;
12. Sustainability Victoria Publication – Guide to Best Practice at Resource Recovery Centres – 2009;
13. Extractive Industries Work Authority and Work Plan and Variation;