



# Part 3 – Metropolitan Landfill Schedule

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# 1 Overview

## 1.1 Legislative requirements

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*. The requirements of the Act are set out in Appendix A. Although not a legal requirement, the Environment Protection Authority (EPA) asked for a compliance checklist to be included (Appendix L).

### 1.1.1 Planning period

This Schedule covers the ten-year period to 2017–18 and will be reviewed periodically. To determine the need for new sites in the period under consideration, this Schedule assesses the projected need for landfill in the metropolitan area and compares it to the capacity of the sites currently scheduled for development. The Act also requires the Schedule to identify options for future landfill capacity. These requirements of the Act are also set out in Appendix A.

## 1.2 Strategic intent

### 1.2.1 Policy requirements

This Schedule is required to be consistent with relevant policies, including state environment protection policies, the waste management policy and strategies, and the *Towards Zero Waste Strategy* (TZW).

While the focus of the Strategic Plan is on resource recovery and achieving TZW targets, the TZW Strategy notes that landfills will continue to have a role for the foreseeable future, but that it is desirable to have fewer landfills that are well located and well managed. The overarching aim is to minimise the development and use of landfills in line with the State Government's *Waste Management Policy (Siting, Design and Management of Landfills)*.

The Waste Management Policy is the key policy providing guidance to the development of the Schedule. While all principles of the policy were considered in the preparation of the Schedule, a key guiding principle from the policy was:

- 8 (1) *Integration of Economic, Social and Environmental Considerations*
- (a) *Sound environmental practices and procedures should be adopted as a basis for ecologically sustainable development for the benefit of all human beings and the environment.*
  - (b) *This requires the effective integration of economic, social and environmental considerations in decision making processes with the need to improve community well-being and the benefit of future generations.*
  - (c) *The measures adopted should be cost-effective and in proportion to the significance of the environmental problems being addressed.*

Similarly, all elements of the intent of the policy were considered in developing the Schedule. Of particular relevance was:

- 9 (3) *the development and use of landfills for the management of waste in Victoria be minimised consistent with the policy principles.*

This requirement of the policy means that those scheduled landfills that are not currently operating should not come into operation until the closure or imminent closure of existing operating landfills in their relevant subregion has created a demonstrable need for new landfill space.

The Waste Management Policy also provides the criteria for selection of landfill sites. The site selection criteria require that the MWMG take into account the siting considerations established in the EPA *Best Practice Environmental Management, Siting, Design, Operation and Rehabilitation of Landfills Publication 788*. Issues such as buffers, landfill type and protection of groundwater are addressed.

### 1.2.2 Waste management hierarchy

Whilst this Schedule sets out future landfill requirements for metropolitan Melbourne, the broad focus of the Strategic Plan is on resource recovery and greater diversion of waste from landfill. It is underpinned by the waste management hierarchy (Figure 3 in the Introduction), which places disposal to landfill as the least preferred option for managing wastes. The hierarchy provides a framework aimed at minimising both resource consumption and the consequent environmental and economic costs associated with resource extraction and harvesting, as well as the processing, manufacture, transport and disposal of materials.

There are a number of existing state, local and community driven programs and initiatives aimed at both minimising waste generation and diverting solid waste from landfill. Following the direction and targets established in the *Towards Zero Waste Strategy* (TZW) for 2013–14, the development of this Schedule considers the diversion of the waste stream generated in metropolitan Melbourne.

## 1.3 Solid inert and putrescible waste

This Schedule considers two waste streams that are landfilled – solid inert and putrescible. These wastes come from manufacturing, construction, commercial, processing and services industries and waste generated within residential dwellings, but does not include prescribed industrial wastes and liquid wastes. Putrescible waste readily decomposes and includes food waste and organic waste from gardens. Solid inert waste includes non-hazardous, non-prescribed, solid waste materials ranging from municipal waste to industrial waste. The most significant difference between solid inert and putrescible landfills is that, as solid inert landfills do not generate significant quantities of landfill gas or odour, the EPA-recommended buffer for solid inert waste landfill is 200 metres as opposed to 500 metres for putrescible landfills.

Information relating to the collection of the EPA landfill levy is the primary source of information on waste quantities disposed of to landfill. The levy applies to all waste – municipal solid waste (MSW), commercial and industrial (C&I) and construction and demolition (C&D) waste and prescribed industrial wastes deposited at licensed landfills in Victoria.

The data used from the landfill levy covers the period from 1997–98 to 2005–06. The data prior to 2002–03 combined municipal and industrial tonnages; from 2002–03 municipal and industrial tonnages are given separately. The data was aggregated by the previous metropolitan regional boundaries to maintain confidentiality.

The MWMG was established on the 1 October 2006 under the *Environment Protection (Amendment) Act 2006*, replacing the four former regional waste management groups (RWMGs).

## 2 Landfill capacity

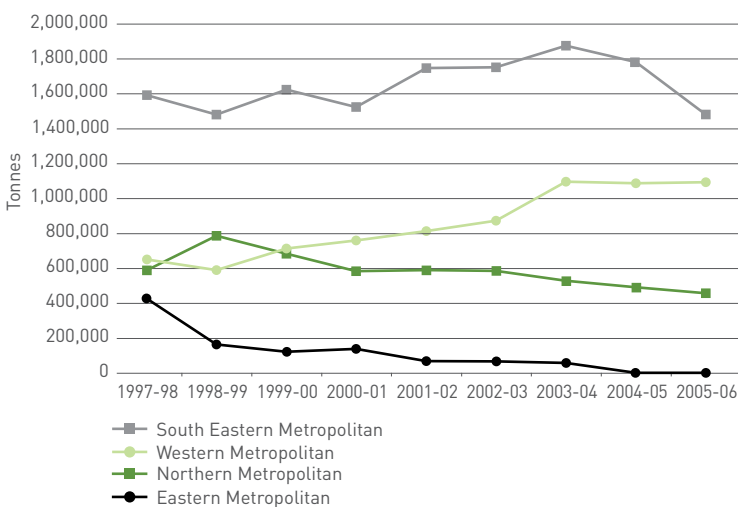
### 2.1 Historical regional trends

A graph of the historical landfill levy trends across metropolitan Melbourne is shown below in Figure 1. The data from the former eastern region shows a decline in landfilling from more than 400,000 tonnes per annum in 1997–98 down to zero in 2004–05 when the last landfill in the region closed.

After the closure of sites in the eastern region, residual waste generated there was disposed of in the former south-eastern region. C&I waste generated in the former eastern region was disposed of at sites in both the former south-eastern and western regions, depending on pricing and transportation options after the closure.

The former northern region data shows a similar decline in landfilling, which is related to landfill closures.

Figure 1: Historical region levy data (daily cover adjusted)



The data from the former south-eastern region indicates that MSW disposal in the region has been relatively stable. The Clayton landfill temporarily closed in June 2004 and reopened in 2008. Stonnington and Boroondara councils have transported waste to the western region for disposal since closure of the Clayton landfill. Disposal of C&I waste in the former south-eastern region has declined significantly since 2003–04.

In contrast to the other three regions, the former western region has shown steady increases in disposal rates. These increases can be attributed to greater availability of airspace (landfill capacity) and numbers of landfills providing greater competition than other regions, with the result that waste has been transported into that region for disposal.

The raw data shows an approximate 10 per cent decrease of waste disposal in 2002–03 when the automatic 15 per cent daily cover allowance was introduced into landfill levy calculations. This reduction is a result of the new rules introduced into the calculation of landfill levy, not an actual decrease in waste disposal. As such, EPA data was adjusted to account for this variance when it was used in the development of this Schedule.

### 2.2 Cross-regional disposal

The landfill levy information does not provide any data on the source of the wastes disposed of in regions neighbouring the metropolitan region. Significant volumes of wastes are transported out of the metropolitan area for disposal. In particular, the Maddingley Brown Coal site in Moorabool Shire (Highlands region) accepts large volumes of solid inert wastes from metropolitan Melbourne.

Waste management groups from adjoining regions were consulted during the preparation of this Schedule to determine the likely waste flows during the life of the Schedule. Some shires adjoining the metropolitan area, such as Moorabool Shire and Macedon Ranges Shire, use metropolitan sites for waste disposal. For the purposes of this Schedule it is assumed that current cross-regional waste movements will continue.

The Mornington Peninsula region has both a solid inert and a putrescible landfill. These sites and potential replacement sites within that region give Mornington Peninsula sufficient capacity to meet internal region waste disposal needs for the foreseeable future.

There are some short- to medium-term waste movements planned in the next five years. These include:

- City of Latrobe using metropolitan landfills during the development of the new Traralgon South site
- diversion of C&I waste from City of Bendigo to metropolitan Melbourne in order to preserve the life of the existing landfill site
- potential disposal of some C&I waste from the Barwon region in metropolitan Melbourne landfills after the closure of the Corio landfill in 2009 – this will depend on the rate of filling of the Drysdale landfill owned by City of Greater Geelong.

The waste disposal from non-metropolitan Melbourne regions does not affect this Schedule, as these wastes will be disposed of at sites in the west that have available airspace for a very long time. A list of neighbouring regions and local government shires is shown in Appendix J. The transport of wastes out of metropolitan Melbourne to Maddingley Brown Coal further reduces the need to schedule any sites in the north and west of Melbourne.

## 2.3 Airspace consumption projections

The rate of airspace consumption was derived assuming two scenarios:

- meeting the TZW targets
- no reduction in waste to landfill.

Projections took into account population growth to 2030. The projection based on meeting the TZW targets uses the Sustainability Victoria waste to landfill projections that indicate waste to landfill by 2013–14 will be 63 per cent of 2005–06 levels.

This assumes that the rate of reduction in waste to landfill will be small (2.5 per cent per annum) until 2010–11, when advanced resource recovery facilities will begin to be commissioned. The rate of waste disposal to landfill is then assessed to reduce to about 12 per cent per annum until 2013–14. From 2014 to 2017 no further decreases in waste reduction are projected for the purposes of developing this Schedule.

The ratio of solid inert waste to putrescible waste was analysed for 2002–03 and 2005–06, and there was no discernable change in the ratio between these two periods.

The projections for airspace demand for the period 2006–07 to 2016–17 are shown in Table 1 and Figure 2, which illustrate the two airspace demand scenarios broken down by sub-region and waste type.

Exact data on solid inert waste disposal compared to putrescible waste disposal is not available, as landfill levy data only provides information on the quantity disposed of at sites without breaking it into categories. The larger putrescible waste licensed sites in the north and west of Melbourne accept solid inert wastes, which are therefore included in the putrescible waste data.

The scenario assuming 'no waste reduction' is based on there being no change from 2005–06 filling rates. This scenario was used to evaluate airspace requirements if alternative waste processing facilities are not introduced in the period of this Schedule. This is consistent with waste trends since 2003 that have not shown any significant variations in annual waste to landfill.

Consumption projections have been based on the worst-case scenario of the 2013–14 TZW targets not being met. This would extend closure dates.

Figure 2: Airspace demand – meeting TZW targets and no change to waste disposal to landfill

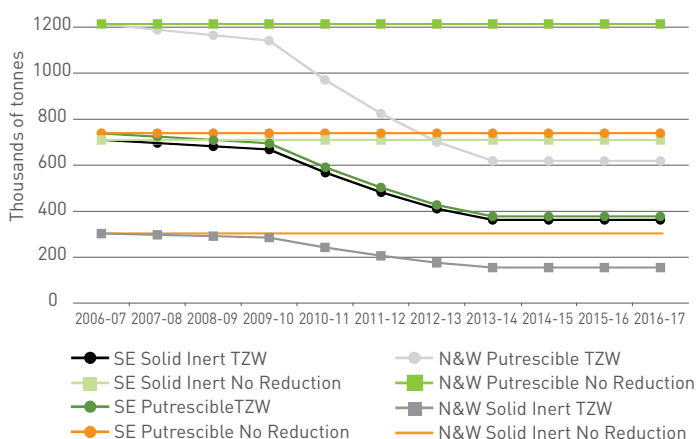


Table 1: Airspace consumption – meeting TZW targets and no change to waste disposal to landfill ('000 cubic metres)

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
S&E* Solid Inert TZW	710	696	682	668	568	483	410	362	362	362	362
S&E Putrescible TZW	739	724	710	695	591	502	427	377	377	377	377
N&W** Solid Inert TZW	303	297	291	285	243	206	175	155	155	155	155
N&W Putrescible TZW	1,213	1,189	1,165	1,142	970	825	701	619	619	619	619
S&E Solid Inert No Reduction	710	710	710	710	710	710	710	710	710	710	710
S&E Putrescible No Reduction	739	739	739	739	739	739	739	739	739	739	739
N&W Solid Inert No Reduction	303	303	303	303	303	303	303	303	303	303	303
N&W Putrescible No Reduction	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213	1,213

Notes

\* S&E – south and east

\*\* N&W – north and west

### 3 Future landfill needs

To analyse the needs for future landfill, four key factors must be considered:

- total volumes of waste for disposal, including potential for diversion
- available airspace
- transportation logistics
- market security.

#### 3.1 Waste volumes to landfill

For the purposes of preparing this Schedule, the metropolitan area has been assumed to operate as two catchments. The south-east and east is considered to operate as one catchment and northern and west operates as the other. Whilst some wastes are transported from east to west, it is desirable to transport waste between the two catchments only after examining economic, social and environmental factors.

The availability of airspace in the entire metropolitan region is adequate to satisfy demand for many decades. However, most of this airspace is located to the north and west of Melbourne. Landfill airspace is in relatively short supply to the south-east, and little is available in the east.

The former *South Eastern Region Waste Management Plan 2005–2010* identified the need for an additional solid inert landfill located in the south-eastern segment of the south-eastern region (Casey, Frankston or Cardinia councils). The only other sites identified were possible replacement sites when the exiting sites in the Clayton area are filled and rehabilitated.

The eastern metropolitan area has limited availability of suitable landfill sites. No expressions of interest were received for prospective landfill sites in the former eastern region.

In developing this Schedule the volumes of solid inert and putrescible airspace available at approved sites were calculated based on data provided by landfill operators. Volumes of waste to landfill were then extrapolated based upon the following:

- landfill levy data to 2005–06
- waste projections to 2017, based on achieving the TZW targets and a business-as-usual estimation
- the assumption that the ratio of solid inert waste to putrescible wastes would remain constant.

The projected volume of wastes to landfill was then compared to available airspace to derive landfill life expectancy. The airspace availability in the south and east and the north and west is shown on Tables 2 and 3. The graphs of landfill airspace availability for the south and east and the north and west are shown in Figures 3 and 4.

Table 2: Airspace availability south and east ('000 cubic metres)

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
S&E solid inert TZW	14,179	13,469	12,773	12,091	11,423	10,855	10,372	9,962	9,600	9,237	8,875	8,513
S&E putrescible TZW	16,220	15,481	14,757	14,047	13,352	12,767	12,259	11,832	11,415	11,078	10,701	10,324
S&E solid inert, no reduction	14,179	13,469	12,759	12,049	11,339	10,629	9,919	9,209	8,499	7,789	7,079	6,369
S&E putrescible, no reduction	16,220	15,481	14,742	14,003	13,264	12,526	11,787	11,048	10,309	9,570	8,831	8,092

Figure 3: South and east landfill availability

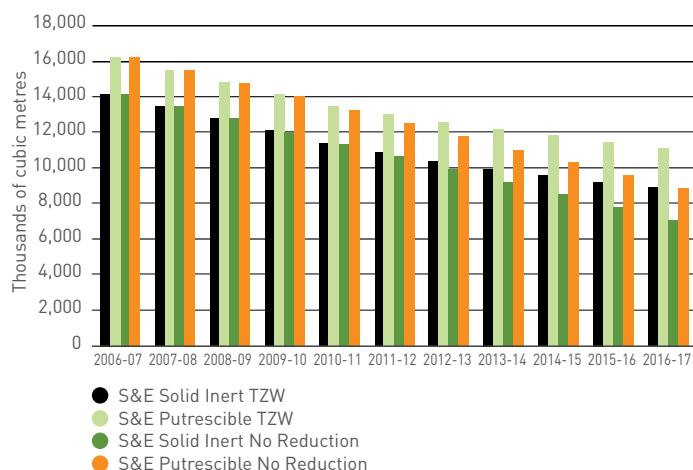
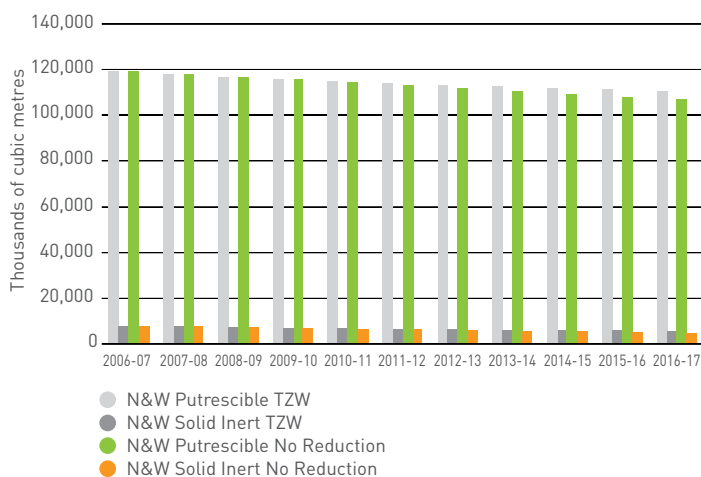


Table 3: Airspace availability north and west ('000 cubic metres)

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
N&W solid inert TZW	7,605	7,302	7,011	6,726	6,446	6,246	6,076	5,932	5,797	5,643	5,488	5,333
N&W putrescible TZW	119,100	117,887	116,698	115,533	114,391	113,421	112,596	111,895	111,276	110,657	110,038	109,419
N&W solid inert, no reduction	7,605	7,302	6,999	6,695	6,392	6,089	5,786	5,482	5,179	4,876	4,573	4,270
N&W putrescible, no reduction	119,100	117,887	116,674	115,461	114,248	113,035	111,822	110,609	109,396	108,183	106,970	105,757

Figure 4: North and west landfill availability



**Note:** Low level contaminated soil

Category C prescribed waste or low-level contaminated soil data was not used in the preparation of the Metropolitan Landfill Schedule. Low-level contaminated soils are generally used either as daily cover or are disposed of at sites that accept only prescribed wastes. As such, the disposal of these soils will have limited effect on the life of solid industrial waste sites in the metropolitan area.

Low-level contaminated soils historically have been approximately 7 per cent of waste disposal to landfill in Victoria. Due to the relatively higher density of soil compared to waste, low-level contaminated soil would occupy less than 4 per cent of landfill airspace in Victoria.

### 3.2 Transportation

There are two issues to be considered regarding the transportation of waste:

- east-to-west waste transportation
- transportation within the collection zones.

The environmental, economic and social consequences of transporting wastes over long distances (more than one hour from the east to the west) should be considered. Therefore, haulage over long distances should be avoided if other suitable sites for landfill and/or resource recovery facilities are available. Landfill sites are best located close to areas of waste generation within collection zones.

Waste collection vehicles are inefficient for haulage over long distances. Kerbside collection vehicles servicing residential or commercial premises are designed to pick up mobile garbage bins with side-loading arms or one- to three-metre skips with front- or rear-loading mechanisms. These vehicles then transport the wastes to a landfill or transfer station. Similarly, skip trucks collect wastes from building sites and commercial generators and transport these skips to landfills and transfer stations.

These collection vehicles mostly have a payload of less than 10 tonnes and are therefore not cost-effective for transportation over long distances. Generally these vehicles are appropriate to transport wastes for only 30 to 60 minutes from the last collection point. Where landfill facilities are not available within such a travel distance, transfer stations have been developed to allow for aggregation of wastes for transportation in larger vehicles.

Bulk transportation of wastes from transfer stations to landfill or processing facilities is largely performed by 'walking floor' semi-trailers. These vehicles have a maximum payload of approximately 25 tonnes. The advantages of bulk-hauling are reduced labour costs and reduced fuel costs. The disadvantages are that bulk-hauling requires the construction and operation of transfer facilities and the purchase and operation of additional transfer units.

## 4 Landfill sites

Much of the east-to-west transportation of wastes requires using parts of the tollway network, such as the Burnley and Domain tunnels and Eastlink.

In recent years increasing volumes of wastes have been transported across Melbourne from east to west. An example of this is the Casey transfer station wastes that are transported more than 100 km for disposal at the Maddingley Landfill, Bacchus Marsh.

The cost of transferring waste from Casey to Bacchus Marsh is about \$26 to \$35 per tonne more than transporting it to a site in the nearby Cranbourne area.

Once wastes have been loaded into a walking floor trailer for transportation, they are more likely to be transported across town for disposal, as the landfill gate fee differential from east to west provides a sufficient price incentive to transport the wastes. If, however, a landfill site is available for drop-off from a waste collection vehicle, it is likely that wastes will be disposed of there and not transported long distances for disposal. This analysis applies only to the metropolitan Melbourne region: in non-metropolitan regions there are different transportation and landfill cost factors.

### 3.3 Market security

The intention of previous regional waste management plans, when there were four regional waste management groups in Melbourne, was to provide for one or more putrescible or solid inert landfills in each region (where potential landfill sites were available) to guarantee security of airspace. However, more recently there has been an increasing trend for waste to be transported from east to west (Section 3.2). This has been driven by some landfill closures in the east and greater availability of airspace and competition in the west.

The Schedule does not provide a one-for-one replacement for landfill sites. At present the current scheduled sites are considered sufficient to meet the demand for landfill space in the metropolitan region.

In addition to sites that are currently scheduled for development, the MWMG sought expressions of interest for new sites to be included in the Metropolitan Landfill Schedule. Forty-one submissions were received relating to existing and new solid inert sites requesting inclusion in the Schedule. There were multiple submissions from some operators and two submissions for one site.

All submissions were for sites that are former, current or future extractive industry sites. Submissions were also received for sites outside the metropolitan area. These submissions could not be considered, as the regional waste management groups outside metropolitan Melbourne are responsible for scheduling sites within their regions.

The geology, hydrogeology and patterns of development in metropolitan Melbourne are such that there is a relative abundance of sites that could be suitable for development of landfills. Furthermore, the extraction rate from metropolitan Melbourne quarries is creating space about six times faster than it is being filled. As such, it is likely that many potentially suitable quarry sites will never be used as landfills.

### 4.1 Scheduled sites

In preparing this Schedule, the MWMG evaluated airspace availability, compared to filling rates, developing various scenarios. Even a conservative scenario, which assumes that there will be no reduction in waste to landfill over the Schedule period to 2017–18, does not indicate the need for any additional landfill sites. A flowchart of the scheduling process used to add new sites to the schedule is given in Appendix M.

The need for additional sites takes into account the airspace available at existing landfills and airspace available at existing scheduled sites. Section 50BC Part 3 (2) (a) of the Act requires that the Metropolitan Landfill Schedule specify the proposed sequence for the filling of available landfill sites for at least the next ten years. The sequence is included in Appendix N.

The Schedule anticipates that a number of existing sites will close during the next ten years, but there is adequate airspace available at the other scheduled sites to cater for the waste disposal needs of metropolitan Melbourne.

Consistent with the *Waste Management Policy (Siting, Design and Management of Landfills)*, works approvals and licences allowing the development of new landfills (or new cells of existing landfills) should not be granted until the closure or imminent closure of existing operating landfills in their relevant subregion has created a demonstrable need for new landfill space.

The Barro Kealba solid inert landfill site, which was scheduled in the 1997 Western Regional Waste Management Plan, has been included as a scheduled site in this Schedule. It had a works approval issued in 2002 and the owners will apply for a licence in the near future.

The SBI Cranbourne site was included in the previous schedule. Inclusion in the schedule does not mean that a site is guaranteed to become a landfill. The schedule identifies potential sites that have been through the first stage of a multi-staged screening process. The SBI Cranbourne site is included on the schedule as a solid inert landfill, which means that putrescible (i.e. decomposable and therefore landfill gas-generating) 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 site 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.

Two of the three existing Transpacific Industries (TPI) Clayton sites are expected to close during the life of the Schedule (Clarinda Rd and Victory Rd); however, the remaining Heatherton Sands (Bunnys Lane) site has sufficient airspace to cater for the Clayton sub-catchment needs. There will also be closures of sites in the north and west including TPI Brooklyn, TPI Market Road and Bulla Rd Tip.

None of these landfill closures could be considered to reduce competition or generate the need for a new site, as they are either owned by a company with another site close by, or they will be closed in areas that already have excess landfill capacity.

## 4.2 Potential future sites

The Schedule includes two sites (SBI Cranbourne and Barro Kealba) that are currently not licensed, but which were listed in previous RWMG plans. It does not provide for any new sites in the scheduled period. However, the Act requires that the Schedule identify options for future landfill capacity.

It is clear there is substantial airspace capacity in the north and west of Melbourne for many decades. There is significantly less airspace available in the south and east of Melbourne. The Schedule must identify potential sites so that appropriate land-use planning can protect options for landfill where it is required. The sites that are included as potential sites were listed on the basis of the information available at the time of writing. Between now and the next review of the Schedule, additional information on potential sites may alter the view of the MWMG on these sites.

Before any of these sites are included in a future landfill schedule, they will be assessed against siting criteria in the *Waste Management Policy (Siting, Design and Management of Landfills)* and the *Best Practice Environmental Management, Siting, Design, Operation and Rehabilitation of Landfills Publication 788*.

### 4.2.1 North and west metropolitan area

The combined airspace capacity of Wyndham, Hanson and Boral putrescible landfill sites is in excess of 50 years. As such, the identification of future putrescible sites in the north or west is beyond the scope of this present Schedule.

Planning for solid inert landfills is more difficult. The Maddingley Brown Coal landfill accepts some hundreds of thousands of tonnes of solid inert waste from the metropolitan area. If this site is not extended in the next two to three years then potentially – with the closure of Bulla Sunbury Road, TPI Market Road and the Sunshine Groupe Jones Road landfills within the next 10 to 12 years – the need to consider new sites could arise.

As the MWMG is not responsible for either the scheduling or the works approval for extensions to the Maddingley site, its future capacity cannot be considered in this Schedule. Therefore, the need for future solid inert landfill sites will be considered during the next review of the Schedule, in four years time.

## 5 Landfill rehabilitation

### 4.2.2 South and east metropolitan area

New landfill sites in the south and east are likely to be needed within the next 10 to 20 years due to a number of closures. At a minimum, TPI Carroll Rd, TPI Victory Rd, The Glen, SBI Cranbourne and the Clayton Regional Landfill will be closed before 2020. Other sites such as TPI Fraser Rd may close by about 2020.

Sites seeking inclusion in this Schedule from the south and east catchments were for solid inert waste only and a combination of solid inert and putrescible waste. The earliest new site needed will be for a replacement for SBI Cranbourne in approximately 2018, and it would be best located in the outer south and east corridor of metropolitan Melbourne.

When the solid inert sites in the Clayton area close, it will be possible to schedule an additional site in this area. This will not occur until the latter stages of the life of the TPI Heatherton Sands site. The Delta site at Kingston Road, Heatherton (which is located immediately south of the Heatherton Sands site) would potentially be a suitable replacement site when the other Clayton solid inert sites are filled.

The City of Kingston released a draft Northern Non Urban Framework Plan in September 2007. This plan supports the filling of the Delta site in order to facilitate the development of the Chain of Parks. This Schedule supports the use of the Delta site in accordance with the Kingston Plan. The timing of the filling of the Delta site should be further considered in the next review.

SITA has purchased the Kingsvale site (adjacent to the Hallam Road landfill site) from Rinker. The Kingsvale site is soon to be closed as a sand-mining operation. This site could potentially be used as an extension of the existing Hallam Road landfill, when the space at the Hallam Road site is filled.

None of the other sites seeking inclusion in the Schedule would be required for the foreseeable future. It should be noted that the sites discussed above are not required for the current Schedule, but may be included after 2018.

Section 50BC (2) (b) of the Act requires the Metropolitan Landfill Schedule to include a program for replacing and rehabilitating existing landfill sites.

In preparing this Schedule, the EPA was provided with a list of existing landfill sites that may close during the period of the schedule. The EPA advised that all the subject sites have submitted rehabilitation plans, which have been approved by either specifying rehabilitation conditions directly in the licence or by approval of their Environment Improvement Plan (EIP), which contains rehabilitation plans. These are publicly available from the EPA.

The MWMG may amend the Metropolitan Landfill Schedule at any time in accordance with the *Environment Protection Act*. The *Metropolitan Waste and Resource Recovery Strategic Plan* must be reviewed within four years of the date that it takes effect, under the provisions of section 50BD of the Act. It is anticipated that a review of the Metropolitan Landfill Schedule will take place at the same time as the review of the Metropolitan Waste and Resource Recovery Strategic Plan.

## 6 Future review

### 6.1 Key findings

The key findings acknowledge the fundamental issues that need to be addressed in the development of programs and infrastructure needs to support the waste sector achieving TZW targets.

	KEY FINDINGS
Capacity of scheduled sites	<ul style="list-style-type: none"><li>• The current scheduled sites provide adequate space for the term of the Scheduled (2008–09 to 2017–18).</li></ul>
Transportation	<ul style="list-style-type: none"><li>• There has been an increasing trend of transporting waste from east to west, in particular solid inert wastes.</li></ul>

### 6.2 Future directions

The future directions have been developed to outline key paths for steering the waste sector to achieving TZW targets. To achieve these future directions action will be required by all parties involved in resource recovery – ie, state and local government, the waste and resource recovery industry and environmental organisations. It is expected that some further partnerships will emerge to realise common goals.

	FUTURE DIRECTIONS
Future landfills	<ul style="list-style-type: none"><li>• Landfills will continue to have a role for the foreseeable future, but there will be fewer landfills, and they will be well located and well managed.</li><li>• The overarching direction is to minimise the development and use of landfills in line with the state government's Waste Management Policy (Siting, Design and Management of Landfills).</li></ul>
Closure of landfills	<ul style="list-style-type: none"><li>• By 2018, 36 percent of metropolitan Melbourne landfills will be closed.</li></ul>