# BSWWRRG Resource Recovery Centre Assessment

## Balmoral
## Site Assessment Report

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# BARWON SOUTH WEST WASTE AND RESOURCE RECOVERY GROUP

# RESOURCE RECOVERY CENTRE ASSESSMENTS

## Balmoral Site Assessment Report

| | |
|---|---|
| **Author** | Matt Genever |
| **Approver** | Matt Genever |
| **Site Name** | Balmoral Resource Recovery Centre |
| **Site Address** | 85-91 Horsham Rd, Balmoral VIC 3407, Australia |
| **Date** | 21/02/2018 |

*This report has been prepared for Barwon South West Waste and Resource Recovery Group under the agreement dated 12 January 2018. Reincarnate Pty Ltd (ABN: 83 620 459 387) cannot accept any responsibility for any use or reliance on the contents of this report by any third party.*

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# 1 SUMMARY TABLE

| **Balmoral** | |
|---|---|
| **Location** | 85-91 Horsham Rd, Balmoral VIC 3407, Australia |
| **Council** | Southern Grampians |
| **Population served** | 294 |
| **Siting considerations** | The site is set in a rural area which was formerly a greenfield site. Site is on a large parcel of rural land around 1km from town. It is situated back from the main road with little chance of encroachment. |
| **Constraints / limitations** | None. The site is very large with significant space to accommodate additional infrastructure. |
| **Upgrade priority** | |
| **Site infrastructure / upgrades recommended in line with better practice guidelines** | |
| **INFRASTRUCTURE** | **COMMENTS / UPGRADES REQUIRED** |
| Site fencing and security | The site is not secure with low level farm fencing and a farm gate. |
| Covered areas / sheds for recycling | The site lacks covered areas and/or shedding for the collection and storage of batteries, gas bottles and mattresses. |
| Complaint e-waste collection and storage area | E-waste is stored in a manner which is not compliant with AS5377. If the site is to continue accepting e-waste after 1 July 2019, new infrastructure will be required, such as a secure shed with bunded hardstand. |
| Hazardous materials / dangerous goods storage | Batteries should be stored in a secured shed with bunded hardstand. Gas bottles should be stored away from direct sunlight. The oil disposal unit requires bunding to the hardstand. |
| Improvements to layout and traffic flow | In the medium to long term the site would benefit from an improved layout that encouraged recycling cling and allowed for improved oversight over the green waste drop off area. |
| Paved roads and hardstand areas | The rear of the site would benefit from improved hardstands in the long term. |
| **MANAGEMENT PRACTICES** | **COMMENTS / CHANGES REQUIRED** |
| Improvements to oversight of incoming loads | Oversight on green waste disposal could be improved which would reduce contamination and improve the quality of material for processing. |
| Improvements to garden organics management | Green waste is currently stored and processed with timber, including some manufactured timber. This practice limits the quality and saleability of end products. Timber and green waste should be separated and processed separately, and improved oversight over this area of the site could reduce contamination and further improve conditions. There are legacy piles of processed material at the site that speak to the quality issues. These legacy piles should also be addressed in the short to medium term. |
| **Overall Site Findings** | The site in a significant parcel of land and appears to be generally well managed. However, new infrastructure for collection and storage of materials such as gas bottles, e-waste, batteries and mattresses is required. |

# 2 SITE OVERVIEW

## 2.1 Site Details

| | |
|---|---|
| **Facility Name** | Balmoral |
| **Consultant Name** | Matt |
| **Date** | 21/02/2018 |
| **Address** | 85-91 Horsham Rd, Balmoral VIC 3407, Australia |
| **Council** | Southern Grampians |
| **Site Operator** | Council |
| **SV BP Category** | 1 |
| **Customers** | Public only |
| **Approx. Population Serviced** | 294 |

## 2.2 Hubs and Spokes

| | |
|---|---|
| **Does council use a hub and spoke model for consolidating materials?** | No |

## 2.3 Site Security

| | |
|---|---|
| **Site staffing (no of staff)** | 1 |
| **Is the site fenced?** | No |

| | |
|---|---|
| **Take a photo of fencing issues** | |
| **Does the site have CCTV?** | No |
| **Does the site suffer break-ins and/or illegal dumping?** | No |

## 2.4 Siting Details

| | |
|---|---|
| **Site setting** | Rural area |
| **Distance from township (km)** | 1.0 |
| **Site screening** | Moderately screened |
| **Nearest sensitive receptor** | Residential |
| **Distance to nearest sensitive receptor (km)** | 0.5 |
| **Nearest environmental receptor** | Stream or creek |
| **Distance to nearest environmental receptor (km)** | 0.5 |
| **Prior land-use** | Greenfield site |
| **General comments on siting** | Site is on a large parcel of rural land around 1km from town. It is situated back from the main road with little chance of encroachment. |

| | |
|---|---|
| **Site constraints / limitations / concerns** | None. The site is very large with significant space to accommodate additional infrastructure. |
| **Take photos of the siting and screening** | |
| | |

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|---|---|
| | |
| | |

## 2.5 Climate adaptation

| | |
|---|---|
| **Is the site located in a flood prone area?** | No |

| | |
|---|---|
| **Is the site located in an area at risk of coastal inundation?** | No |
| **Is the site located in an area prone to bushfires?** | Yes |
| **Provide details** | Site is located adjacent to paddocks with long grass and the site itself has fuel load from grass and trees. |
| **Does the site have a climate change adaptation plan / assessment?** | No |

# 3 OVERVIEW OF SITE INFRASTRUCTURE

## 3.1 Site infrastructure

| | |
|---|---|
| **Infrastructure on site (select all)** | Gatehouse, Cages, Skip bins (covered), Engineered retaining walls, Concrete pad(s), Paved road(s) |
| **Utilities on site (select all)** | Power (mains), Water (tank), Phone (mobile) |
| **Extent of road paving at the site** | Some road paving |
| **Extent of concrete pads / hardstands** | Concrete pads beneath some bins |

# 4 MATERIALS ACCEPTED AND MANAGED AT THE SITE

## 4.1 Residual waste / general waste

| | |
|---|---|
| **Describe the area for residual waste collection** | Fully elevated platform |
| **How is the material stored?** | Skip bin |
| **Size of the bin or storage area** | Large stillage or skip bin (>20m3) |
| **Describe the construction of the elevated platform** | Fully engineered concrete walls |
| **Is there suitable guard railing to bin bays for the elevated platform?** | Yes |
| **Describe the hardstand / surfacing of the general waste area** | Bitumen hardstand |
| **Is the residual waste area covered?** | Not covered |
| **Can the residual waste bins be closed (e.g. with a lid or cover)** | Hard cover to skips |
| **General comments on residual waste collection area** | Skips have hard lids, but these are not closed despite the site not being open. Lids should be closed when site is closed. Area generally well developed with paved hardstand. |

| | |
|---|---|
| **Take photos of the general waste area, platform, hardstand and skip bins** | |
| | |

| | |
|---|---|
| | |

## 4.2 Commingled recyclables

| | |
|---|---|
| **Does the site accept commingled recyclables?** | Yes |
| **How is the material stored?** | Skip bin |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Collected by kerbside contractor |

## 4.3 Separated paper and cardboard

| | |
|---|---|
| **Does the site accept separated paper and cardboard?** | No |

## 4.4 Separated glass

| | |
|---|---|
| **Does the site accept separated glass?** | No |
| **Is their potential to accept this material in the future?** | Maybe |
| **Does the site have the capacity to accept this material?** | Yes, but new infrastructure would be required |

## 4.5 Separated plastics

| | |
|---|---|
| **Does the site accept separated plastics?** | No |
| **Is their potential to accept this material in the future?** | Maybe |
| **Does the site have the capacity to accept this material?** | Yes, but new infrastructure would be required |

## 4.6 Polystyrene

| | |
|---|---|
| **Does the site accept polystyrene** | No |
| **Does the site have the capacity to accept this material?** | Yes, but new infrastructure would be required |

## 4.7 Metals

| | |
|---|---|
| **Does the site accept metals?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |

| | |
|---|---|
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Collected and bulk hauled to Melbourne |

## 4.8 Timber

| | |
|---|---|
| **Does the site accept timber waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |

| | |
|---|---|
| | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Appears to be costored and coprocessed with green waste |

## 4.9 Brick / rock / rubble

| | |
|---|---|
| **Does the site accept brick / rock / rubble?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Provide details** | Crushed and used by council |

## 4.10 Concrete

| | |
|---|---|
| **Does the site accept concrete?** | Yes |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | As above |

## 4.11 E-waste

| | |
|---|---|
| **Does the site accept e-waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | E-waste is put in the metals pile |

## 4.12 Mattresses

| | |
|---|---|
| **Does the site accept mattresses?** | Yes |
| **How is the material stored?** | Skip bin |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Customers are required to strip mattresses before disposal. |

## 4.13 Tyres

| | |
|---|---|
| **Does the site accept tyres?** | No |
| **Is their potential to accept this material in the future?** | Maybe |
| **Does the site have the capacity to accept this material?** | Yes, site could accept this material in its current state |

## 4.14 Agricultural plastics (silage wrap)

| | |
|---|---|
| **Does the site accept separated agricultural waste (silage wrap)?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is there any onsite processing of the material?** | No |

## 4.15 Agricultural drums (DRUMuster)

| | |
|---|---|
| **Does the site accept agricultural drums (DRUMuster)?** | Yes |
| **How is the material stored?** | Cage |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.16 General comments on materials accepted

| | |
|---|---|
| **General comments on materials accepted at the site** | |

# 5 HAZARDOUS WASTES AND DANGEROUS GOODS ACCEPTED AND MANAGED AT THE SITE

## 5.1 Asbestos

| | |
|---|---|
| **Does the site accept asbestos?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.2 Household chemicals

| | |
|---|---|
| **Does the site accept household chemicals including paint (Detox)?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.3 Gas bottles

| | |
|---|---|
| **Does the site accept gas bottles?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.4 Lead-acid batteries

| | |
|---|---|
| **Does the site accept lead-acid batteries?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | None onsite but reportedly accepted. |

## 5.5 Waste oil

| | |
|---|---|
| **Does the site accept waste oil?** | Yes |
| **How is the material stored?** | Drum |
| **Is it stored in a covered or uncovered area / bin?** | Covered area with no sides |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | Full hardstand (concrete or bitumen) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |

## 5.6 Fluorescent light tubes

| | |
|---|---|
| **Does the site accept fluorescent light tubes?** | No |
| **Is there potential to accept this material in the future?** | No |
| **Why not? Provide details.** | Accepted at the general store |

## 5.7 General comments on hazardous / dangerous goods management

| | |
|---|---|
| **General comments / observations regarding hazardous waste / dangerous goods management** | |

# 6 GARDEN ORGANICS

| | |
|---|---|
| **Does the site accept green waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

## 6.1 Drop off area

| | |
|---|---|
| **Is the green waste drop off area sealed or unsealed?** | Unsealed (on dirt) |

| | |
|---|---|
| **Take a photo of the green waste area** | |
| **Is the green waste drop-off area visible from the gatehouse?** | No |
| **Provide details** | Rear of site |
| **Does water drain from the green waste area (visually or reportedly, look for pools of water)?** | Yes |
| **Is storm water runoff and leachate actively managed from the green waste area?** | No |
| **Provide details of storm water and leachate management** | Natural drainage |

## 6.2 Storage practices

| | |
|---|---|
| **Is timber (any type) combined with green waste for storage / processing?** | Yes |
| **Provide details** | Mixed timber of all types in with the green waste |

| | |
|---|---|
| **Take photos of combined timber and green waste storage** | |
| | |

| | |
|---|---|
| | |
| **Is there a stockpile of unprocessed green waste?** | Yes |
| **Take a photo of the unprocessed green waste stockpile** | |
| **Is there a stockpile of processed green waste?** | Yes |

| | |
|---|---|
| **Why is there a stockpile of processed green waste?** | It is slow to move because of the quality |
| **Provide details** | This is an old legacy stockpile of poor quality that cannot be used or sold |
| **Take a photo of the processed (mulch) green waste stockpile** | |

## 6.3 Processing and end products

| | |
|---|---|
| **Is green waste processed onsite?** | Yes |
| **Provide details** | Mulched and used onsite |
| **How often is it processed?** | Longer than 12 months |
| **How is contamination managed?** | Visual inspection at gatehouse |
| **Provide details of contamination management** | Poorly managed and visible contamination |

| | |
|---|---|
| **Take a close-up photo of visible contamination (if any can be seen)** | |
| **What happens to the mulch / compost?** | Council uses it on site |

# 7 RISK MANAGEMENT

| | |
|---|---|
| **Are there any obvious risks at the site?** | No |
| **Are all loads supervised upon entry to the site?** | Yes - inspected from ground level gatehouse |
| **Is the traffic flow unidirectional and free from cross-roads?** | Yes - traffic management is good |
| **Is there suitable signage that directs site users around the site and to different materials areas?** | No - signage requires improvement |
| **Detail site signage improvements required** | Signage improvements are required. |
| **Are there manual handling risks on site?** | No |

# 8 ENVIRONMENTAL MANAGEMENT

| | |
|---|---|
| **Describe general site amenity** | Neat and tidy |
| **Is windblown litter visible outside the site or is there a history of litter issues?** | No |
| **Is windblown litter or general debris visible within the site itself?** | No |
| **Are there issues with dust at the site, particularly in drier months?** | No |
| **Are there issues with odour at the site or have there been odour complaints?** | No |
| **Are there issues with noise at the site or have there been noise complaints?** | No |

## 8.1 Stormwater management

| | |
|---|---|
| **Is there any storm water management in place at the site?** | No |
| **Does Council believe that this poses an obvious risk (e.g. is it near sensitive receptors)?** | No |

# 9 SMART MATERIALS MANAGEMENT

| | |
|---|---|
| **Is the site layout arranged to maximise resource recovery?** | Partially |
| **Provide comment** | Layout generally ok. |
| **Does the site have a reuse shop?** | No |
| **Is there room for a reuse shop?** | No - site is too small |
| **Are any materials (apart from green waste) processed on site (e.g. concrete crushing?)** | Yes |
| **Provide comment** | Will be crushed onsite and used |
| **Are there suitable end markets for the processed material?** | Yes - moved easily |

## 9.1 General comments

| | |
|---|---|
| **General comments** | |

# 10 UPGRADES / IMPROVEMENTS REQUIRED

## 10.1 Infrastructure upgrades

| | |
|---|---|
| **Upgrades required to site fencing and security** | The site is not secure with low level farm fencing and a farm gate. |
| **Upgrades required to covered areas / sheds for recycling** | The site lacks covered areas and/or shedding for the collection and storage of batteries, gas bottles and mattresses. |
| **Upgrades required for complaint collection and storage of e-waste** | E-waste is stored in a manner which is not compliant with AS5377. If the site is to continue accepting e-waste after 1 July 2019, new infrastructure will be required, such as a secure shed with bunded hardstand. |
| **Upgrades required to hazardous materials / dangerous goods storage** | Batteries should be stored in a secured shed with bunded hardstand. Gas bottles should be stored away from direct sunlight. The oil disposal unit requires bunding to the hardstand. |
| **Improvements to site layout and traffic flow** | In the medium to long term the site would benefit from an improved layout that encouraged recycling cling and allowed for improved oversight over the green waste drop off area. |
| **Improvements to roads and hardstand areas** | The rear of the site would benefit from improved hardstands in the long term. |

## 10.2 Management practice improvements

| | |
|---|---|
| **Improvements to oversight of incoming loads** | Oversight on green waste disposal could be improved which would reduce contamination and improve the quality of material for processing. |
| **Improvements to garden organics management practices** | Green waste is currently stored and processed with timber, including some manufactured timber. This practice limits the quality and saleability of end products. Timber and green waste should be separated and processed separately, and improved oversight over this area of the site could reduce contamination and further improve conditions. There are legacy piles of processed material at the site that speak to the quality issues. These legacy piles should also be addressed in the short to medium term. |

## 10.3 Overall site summary

| | |
|---|---|
| **Overall site summary** | The site in a significant parcel of land and appears to be generally well managed. However, new infrastructure for collection and storage of materials such as gas bottles, e-waste, batteries and mattresses is required. |

# BSWWRRG Resource Recovery Centre Assessment

## Branxholme
## Site Assessment Report

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# BARWON SOUTH WEST WASTE AND RESOURCE RECOVERY GROUP

# RESOURCE RECOVERY CENTRE ASSESSMENTS

## Branxholme Site Assessment Report

| | |
|---|---|
| **Author** | Matt Genever |
| **Approver** | Matt Genever |
| **Site Name** | Branxholme Resource Recovery Centre |
| **Site Address** | 60 Branxholme-Byaduk Rd, Branxholme VIC 3302, Australia |
| **Date** | 21/02/2018 |

*This report has been prepared for Barwon South West Waste and Resource Recovery Group under the agreement dated 12 January 2018. Reincarnate Pty Ltd (ABN: 83 620 459 387) cannot accept any responsibility for any use or reliance on the contents of this report by any third party.*

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# 1 SUMMARY TABLE

| **Branxholme** | |
|---|---|
| **Location** | 60 Branxholme-Byaduk Rd, Branxholme VIC 3302, Australia |
| **Council** | Southern Grampians |
| **Population served** | 351 |
| **Siting considerations** | The site is set in a rural area which was formerly a [insert]. The site is located about 1km outside of the township in a farming and rural area. The nearest house is less than 100m away across the road from the front gate. It is a small facility on a small parcel of land adjacent the council depot. |
| **Constraints / limitations** | The size of the site would restrict large scale development, however there is scope for construction of covered areas and additional infrastructure. It is unclear whether the site is located on a closed landfill. |
| **Upgrade priority** | |
| **Site infrastructure / upgrades recommended in line with better practice guidelines** | |
| **INFRASTRUCTURE** | **COMMENTS / UPGRADES REQUIRED** |
| Site fencing and security | There is some evidence of break-ins with areas of barbed wire having been previously cut. Overall the fencing at the site is good and these are minor issues to be addressed into longer term. |
| Residual / general waste area | The site would benefit from improved guard railing and a sealed hardstand with linemarking for each bay. |
| Covered areas / sheds for recycling | The site lacks any developed infrastructure for collection and storage of recycling materials such as batteries, gas bottles, mattresses and e-waste. Investment is required in the construction of covered areas and/or shedding with hardstands. |
| Complaint e-waste collection and storage area | E-waste is stored in a manner which is not compliant with AS5377. If the site is to continue accepting e-waste after the 1 July 2019 new infrastructure will be required such as a secure shed with hardstand. |
| Hazardous materials / dangerous goods storage | It is unclear how batteries and gas bottles are currently stored at the site, nor whether these materials are actually received at the site. New infrastructure is required for the collection and storage of batteries and gas bottles such as a secure shed with bunded hardstand. |
| Garden organics infrastructure | The site lacks a clear space for the storage and processing of green waste, however this is a less pressing issue than those associated with management practices detailed below. |
| Improvements to layout and traffic flow | If the site is to remain open in the long term then improved layout and traffic management should be considered. |
| Paved roads and hardstand areas | The site lacks paved roads and hardstands throughout. If the site is to remain open in the long term then upgrades to surfacing is recommended, likely as part of a broader redevelopment of the site. |
| **MANAGEMENT PRACTICES** | **COMMENTS / CHANGES REQUIRED** |

| | |
|---|---|
| Improvements to site amenity / tidiness | The site is extremely untidy and suffers from litter and debris across almost the entire facility. The level of contamination and debris has significantly impacted visual amenity and is likely to be contributing to further poor practice at the site.<br><br>A full site clean up is required, and it is recommended as part of this that suitably qualified asbestos practitioners are engaged to examine likely asbestos debris and remove this material under controlled conditions. |
| Improvements to oversight of incoming loads | The level of contamination that is evident in material piles such as green waste and building rubble, and the general conditions at the site suggest that a full overhaul of load inspection processes is required. This should include further operator training, increased signage throughout the site and installation of CCTV cameras to capture the rear of the site where much of the dumping is occurring. |
| Improvements to overall management practices | As detailed above, site practices need to be significantly improved, including load oversight, directions for customers and management of litter and debris at the site. It was reported that a new operator has been engaged and is actively looking for areas to improve. |
| Improvements to management of hazardous materials / dangerous goods | As noted previously, it is unclear how and where batteries and gas bottles are stored. If the site does accept them then new infrastructure is required, if not then clearer signage is required. |
| Improvements to garden organics management | Garden organics are stored with timber and the current stockpile is heavily contaminated with plastics and other materials. Mulching occurs at long intervals and the product quality is likely to be very poor with material used on the site.<br><br>Timber and green waste should be collected, stored and processed separately to reduce contamination and improve overall product quality. |
| **Overall Site Findings** | This site is currently very poor with significant management issues and extensive littering and contamination. In the immediate term, risks associated with guard railing at the general waste bays and the potential presence of asbestos should be addressed, along with a full clean of the site.<br><br>The level of investment required to rectify the current issues and improve infrastructure and practices in line with better practice guidelines is likely to be high. The location of the site and the size of the community being serviced suggest that council should undertake strategic planning to assess the long term viability of the site prior to making significant investment decisions. |

# 2 SITE OVERVIEW

## 2.1 Site Details

| | |
|---|---|
| **Facility Name** | Branxholme |
| **Consultant Name** | Matt |
| **Date** | 21/02/2018 |
| **Address** | 60 Branxholme-Byaduk Rd, Branxholme VIC 3302, Australia |
| **Council** | Southern Grampians |
| **Site Operator** | Council |
| **SV BP Category** | 1 |
| **Customers** | Public only |
| **Approx. Population Serviced** | 351 |

## 2.2 Hubs and Spokes

| | |
|---|---|
| **Does council use a hub and spoke model for consolidating materials?** | No |

## 2.3 Site Security

| | |
|---|---|
| **Site staffing (no of staff)** | 1 |
| **Is the site fenced?** | Partially |
| **Does the site have CCTV?** | No |
| **Does the site suffer break-ins and/or illegal dumping?** | No |

## 2.4 Siting Details

| | |
|---|---|
| **Site setting** | Rural area |
| **Distance from township (km)** | 1.3 |
| **Site screening** | Well screened |
| **Nearest sensitive receptor** | Residential |
| **Distance to nearest sensitive receptor (km)** | 0.1 |

| | |
|---|---|
| **General comments on siting** | The site is located about 1km outside of the township in a farming and rural area. The nearest house is less than 100m away across the road from the front gate. It is a small facility on a small parcel of land adjacent the council depot. |
| **Site constraints / limitations / concerns** | The size of the site would restrict large scale development, however there is scope for construction of covered areas and additional infrastructure. It is unclear whether the site is located on a closed landfill. |
| **Take photos of the siting and screening** | |
| | |

## 2.5 Climate adaptation

| | |
|---|---|
| **Is the site located in a flood prone area?** | No |
| **Is the site located in an area at risk of coastal inundation?** | No |

| | |
|---|---|
| **Is the site located in an area prone to bushfires?** | No |
| **Does the site have a climate change adaptation plan / assessment?** | No |

# 3 OVERVIEW OF SITE INFRASTRUCTURE

## 3.1 Site infrastructure

| | |
|---|---|
| **Infrastructure on site (select all)** | Gatehouse, Engineered retaining walls, Skip bins (uncovered), Concrete pad(s) |
| **Utilities on site (select all)** | Water (tank) |
| **General comments on site infrastructure** | This is a poorly developed site that lacks any genuine infrastructure to support resource recovery. |
| **Take photos of key site infrastructure** | |
| | |

| | |
|---|---|
| **Extent of road paving at the site** | Roads unpaved |
| **Extent of concrete pads / hardstands** | Concrete pads beneath some bins |

# 4 MATERIALS ACCEPTED AND MANAGED AT THE SITE

## 4.1 Residual waste / general waste

| | |
|---|---|
| **Describe the area for residual waste collection** | Fully elevated platform |
| **How is the material stored?** | Skip bin |
| **Size of the bin or storage area** | Large stillage or skip bin (>20m3) |
| **Describe the construction of the elevated platform** | Partially engineered walls (e.g. timber retaining wall) |
| **Is there suitable guard railing to bin bays for the elevated platform?** | No |
| **Details** | There is no guard railing in place with a drop of some 3m directly onto a concrete pad. This is currently a significant risk and is breach of health and safety regulations. |
| **Describe the hardstand / surfacing of the general waste area** | No hardstand |
| **Does the site have concrete pads beneath general waste bins?** | Full concrete pads |
| **Is the residual waste area covered?** | Not covered |
| **Can the residual waste bins be closed (e.g. with a lid or cover)** | Hard cover to skips |
| **General comments on residual waste collection area** | Elevated platform with no hardstand and no guard rails. This area requires upgrades in the medium to long term, with guard rails needing to be installed as an immediate priority. |

| | |
|---|---|
| **Take photos of the general waste area, platform, hardstand and skip bins** | |
| | |

| | |
|---|---|
| | |
| | |

| | |
|---|---|
| | |

## 4.2 Commingled recyclables

| | |
|---|---|
| **Does the site accept commingled recyclables?** | Yes |
| **How is the material stored?** | Skip bin |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | Full hardstand (concrete or bitumen) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |

## 4.3 Separated paper and cardboard

| | |
|---|---|
| **Does the site accept separated paper and cardboard?** | No |

## 4.4 Separated glass

| | |
|---|---|
| **Does the site accept separated glass?** | No |

| | |
|---|---|
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.5 Separated plastics

| | |
|---|---|
| **Does the site accept separated plastics?** | No |
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.6 Polystyrene

| | |
|---|---|
| **Does the site accept polystyrene** | No |

## 4.7 Metals

| | |
|---|---|
| **Does the site accept metals?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Collected and bulk hauled to Melbourne |

## 4.8 Timber

| | |
|---|---|
| **Does the site accept timber waste?** | Yes |
| **How is the material stored?** | Loose in pile |

| | |
|---|---|
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

| | |
|---|---|
| | |
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | There are a number of timber piles, including a separate building rubble pile that appears to be contaminated with asbestos, and a green waste pile with timber throughout. A number of other timber piles are evident. |

## 4.9 Brick / rock / rubble

| | |
|---|---|
| **Does the site accept brick / rock / rubble?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

| | |
|---|---|
| | |
| **Is there any onsite processing of the material?** | No |

## 4.10 Concrete

| | |
|---|---|
| **Does the site accept concrete?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Provide details** | A number of piles of building rubble exist which are mixed with general building products including asbestos. |

## 4.11 E-waste

| | |
|---|---|
| **Does the site accept e-waste?** | Yes |
| **How is the material stored?** | Loose in pile |

| | |
|---|---|
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | WDEA collects |

## 4.12 Mattresses

| | |
|---|---|
| **Does the site accept mattresses?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Provide details** | Must be stripped first |

## 4.13 Tyres

| | |
|---|---|
| **Does the site accept tyres?** | Yes |

| | |
|---|---|
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Collected and recycled |

## 4.14 Agricultural plastics (silage wrap)

| | |
|---|---|
| **Does the site accept separated agricultural waste (silage wrap)?** | No |
| **Is their potential to accept this material in the future?** | No |

## 4.15 Agricultural drums (DRUMuster)

| | |
|---|---|
| **Does the site accept agricultural drums (DRUMuster)?** | Yes |
| **How is the material stored?** | Loose in pile |

| | |
|---|---|
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Medium stillage or skip bin (5 - 20m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

## 4.16 General comments on materials accepted

| | |
|---|---|
| **General comments on materials accepted at the site** | |

# 5 HAZARDOUS WASTES AND DANGEROUS GOODS ACCEPTED AND MANAGED AT THE SITE

## 5.1 Asbestos

| | |
|---|---|
| **Does the site accept asbestos?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.2 Household chemicals

| | |
|---|---|
| **Does the site accept household chemicals including paint (Detox)?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.3 Gas bottles

| | |
|---|---|
| **Does the site accept gas bottles?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Gas bottles are accepted but it is unclear where these are currently stored |

## 5.4 Lead-acid batteries

| | |
|---|---|
| **Does the site accept lead-acid batteries?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |
| **Provide details** | Batteries are accepted but it is unclear where these are stored. |

## 5.5 Waste oil

| | |
|---|---|
| **Does the site accept waste oil?** | No |
| **Is there potential to accept this material in the future?** | No |
| **Why not? Provide details.** | No unit on site, directed to Hamilton |

## 5.6 Fluorescent light tubes

| | |
|---|---|
| **Does the site accept fluorescent light tubes?** | No |
| **Is there potential to accept this material in the future?** | No |
| **Why not? Provide details.** | Directed to local store or Hamilton |

## 5.7 General comments on hazardous / dangerous goods management

| | |
|---|---|
| **General comments / observations regarding** | |

| | |
|---|---|
| **hazardous waste / dangerous goods management** | |

# 6 GARDEN ORGANICS

| | |
|---|---|
| **Does the site accept green waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

| | |
|---|---|
| | |
| | |

## 6.1 Drop off area

| | |
|---|---|
| **Take a photo of the green waste area** | |
| **Is the green waste drop-off area visible from the gatehouse?** | Yes |
| **Does water drain from the green waste area (visually or reportedly, look for pools of water)?** | Yes |
| **Is storm water runoff and leachate actively managed from the green waste area?** | No |
| **Provide details of storm water and leachate management** | Natural drainage at rear and drop off area on a slope that appears free draining |

## 6.2 Storage practices

| | |
|---|---|
| **Is timber (any type) combined with green waste for storage / processing?** | Yes |
| **Provide details** | Significant timber contamination. Material is due to be processed soon. |

| | |
|---|---|
| **Take photos of combined timber and green waste storage** | |
| | |
| **Is there a stockpile of unprocessed green waste?** | Yes |

| | |
|---|---|
| **Take a photo of the unprocessed green waste stockpile** | |
| **Is there a stockpile of processed green waste?** | No |

## 6.3 Processing and end products

| | |
|---|---|
| **Is green waste processed onsite?** | Yes |
| **Provide details** | Planned to be shredded and used by council, likely as cover at the landfill. |
| **How often is it processed?** | Longer than 12 months |
| **How is contamination managed?** | Visual inspection at gatehouse |
| **Provide details of contamination management** | Poor contamination management and contamination is evident throughout. |

| | |
|---|---|
| **Take a close-up photo of visible contamination (if any can be seen)** | |
| **What happens to the mulch / compost?** | Council uses it on site |

# 7 RISK MANAGEMENT

| | |
|---|---|
| **Are there any obvious risks at the site?** | Yes |
| **Detail obvious site risks** | Asbestos contamination and falls risk evident from the general waste platform |
| **Are all loads supervised upon entry to the site?** | Yes - inspected from an elevated gatehouse |
| **Is the traffic flow unidirectional and free from cross-roads?** | Yes - traffic management is good |
| **Is there suitable signage that directs site users around the site and to different materials areas?** | No - signage requires improvement |
| **Detail site signage improvements required** | Signage needs upgrades throughout the facility. |
| **Are there manual handling risks on site?** | No |
| **Take photos of each risk** | |

| | |
|---|---|
| | |
| | |

# 8 ENVIRONMENTAL MANAGEMENT

| | |
|---|---|
| **Describe general site amenity** | Messy and poorly kept |
| **Provide details** | This site is impacted by extensive littering and debris in all areas of the site. It is poorly managed and a significant issue from a visual amenity perspective. Piles of material are across the site, mostly mixed material which have now been grown over by vegetation. Immediate attention is required to improve the conditions of this facility and to make it safe for customers. |
| **Is windblown litter visible outside the site or is there a history of litter issues?** | Yes |
| **Is windblown litter or general debris visible within the site itself?** | Yes |
| **Provide details** | Throughout entire site |
| **Are there issues with dust at the site, particularly in drier months?** | Yes |
| **Are there issues with odour at the site or have there been odour complaints?** | No |
| **Are there issues with noise at the site or have there been noise complaints?** | No |
| **General comments about environmental management at the site** | This site is poorly managed and is in a condition that poses a risk to human health and the environment. |

| | |
|---|---|
| **Take photos of relevant environmental management issues** | |
| | |
| | |

Hisense

TYRES

| | |
|---|---|
| | |

## 8.1 Stormwater management

| | |
|---|---|
| **Is there any storm water management in place at the site?** | No |
| **Does Council believe that this poses an obvious risk (e.g. is it near sensitive receptors)?** | No |

# 9 SMART MATERIALS MANAGEMENT

| | |
|---|---|
| **Is the site layout arranged to maximise resource recovery?** | Partially |
| **Does the site have a reuse shop?** | No |
| **Is there room for a reuse shop?** | No - site is too small |
| **Are any materials (apart from green waste) processed on site (e.g. concrete crushing?)** | No |

## 9.1 General comments

| | |
|---|---|
| **General comments** | |

# 10 UPGRADES / IMPROVEMENTS REQUIRED

## 10.1 Infrastructure upgrades

| | |
|---|---|
| **Upgrades required to site fencing and security** | There is some evidence of break-ins with areas of barbed wire having been previously cut. Overall the fencing at the site is good and these are minor issues to be addressed into longer term. |
| **Upgrades required to residual / general waste disposal area** | The site would benefit from improved guard railing and a sealed hardstand with linemarking for each bay. |
| **Upgrades required to covered areas / sheds for recycling** | The site lacks any developed infrastructure for collection and storage of recycling materials such as batteries, gas bottles, mattresses and e-waste. Investment is required in the construction of covered areas and/or shedding with hardstands. |
| **Upgrades required for complaint collection and storage of e-waste** | E-waste is stored in a manner which is not compliant with AS5377. If the site is to continue accepting e-waste after the 1 July 2019 new infrastructure will be required such as a secure shed with hardstand. |
| **Upgrades required to hazardous materials / dangerous goods storage** | It is unclear how batteries and gas bottles are currently stored at the site, nor whether these materials are actually received at the site. New infrastructure is required for the collection and storage of batteries and gas bottles such as a secure shed with bunded hardstand. |
| **Upgrades required to garden organics infrastructure** | The site lacks a clear space for the storage and processing of green waste, however this is a less pressing issue than those associated with management practices detailed below. |
| **Improvements to site layout and traffic flow** | If the site is to remain open in the long term then improved layout and traffic management should be considered. |
| **Improvements to roads and hardstand areas** | The site lacks paved roads and hardstands throughout. If the site is to remain open in the long term then upgrades to surfacing is recommended, likely as part of a broader redevelopment of the site. |

## 10.2 Management practice improvements

| | |
|---|---|
| **Improvements to site amenity / tidiness** | The site is extremely untidy and suffers from litter and debris across almost the entire facility. The level of contamination and debris has significantly impacted visual amenity and is likely to be contributing to further poor practice at the site.<br><br>A full site clean up is required, and it recommended as part of this that suitably qualified asbestos practitioners are engaged to examine likely asbestos debris and remove this material under controlled conditions. |
| **Improvements to oversight of incoming loads** | The level of contamination that is evident in material piles such as green waste and building rubble, and the general conditions at the site suggest that a full overhaul of load inspection processes is required. This should include further operator |

| | |
|---|---|
| | training, increased signage throughout the site and installation of CCTV cameras to capture the rear of the site where much of the dumping is occurring. |
| **Improvements to overall management practices** | As detailed above, site practices need to be significantly improved, including load oversight, directions for customers and management of litter and debris at the site. It was reported that a new operator has been engaged and is actively looking for areas to improve. |
| **Improvements to management of hazardous materials / dangerous goods** | As noted previously, it is unclear how and where batteries and gas bottles are stored. If the site does accept them then new infrastructure is required, if not then clearer signage is required. |
| **Improvements to garden organics management practices** | Garden organics are stored with timber and the current stockpile is heavily contaminated with plastics and other materials. Mulching occurs at long intervals and the product quality is likely to be very poor with material used on the site.<br><br>Timber and green waste should be collected, stored and processed separately to reduce contamination and improve overall product quality. |

## 10.3 Overall site summary

| | |
|---|---|
| **Overall site summary** | This site is currently very poor with significant management issues and extensive littering and contamination. In the immediate term, risks associated with guard railing at the general waste bays and the potential presence of asbestos should be addressed, along with a full clean of the site.<br><br>The level of investment required to rectify the current issues and improve infrastructure and practices in line with better practice guidelines is likely to be high. The location of the site and the size of the community being serviced suggest that council should undertake strategic planning to assess the long term viability of the site prior to making significant investment decisions. |

# BSWWRRG Resource Recovery Centre Assessment

## Cavendish
## Site Assessment Report

reincarnate
strategic environmental consultants

REC | RANDELL ENVIRONMENTAL CONSULTING

reincarnate
strategic environmental consultants

# BARWON SOUTH WEST WASTE AND RESOURCE RECOVERY GROUP

# RESOURCE RECOVERY CENTRE ASSESSMENTS

## Cavendish Site Assessment Report

| | |
|---|---|
| **Author** | Matt Genever |
| **Approver** | Matt Genever |
| **Site Name** | Cavendish Resource Recovery Centre |
| **Site Address** | 2543 Henty Hwy, Cavendish VIC 3314, Australia |
| **Date** | 21/02/2018 |

*This report has been prepared for Barwon South West Waste and Resource Recovery Group under the agreement dated 12 January 2018. Reincarnate Pty Ltd (ABN: 83 620 459 387) cannot accept any responsibility for any use or reliance on the contents of this report by any third party.*

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# 1 SUMMARY TABLE

| Cavendish | |
|---|---|
| **Location** | 2543 Henty Hwy, Cavendish VIC 3314, Australia |
| **Council** | Southern Grampians |
| **Population served** | 334 |
| **Siting considerations** | The site is set in a rural area which was formerly a landfill (RRC is built adjacent to old fill area). The site is located on a large, relatively flat rural block with good buffers and limited chance of encroachment. |
| **Constraints / limitations** | None. Site has good scope for further development. |
| **Upgrade priority** | |
| **Site infrastructure / upgrades <u>recommended</u> in line with better practice guidelines** | |
| **INFRASTRUCTURE** | **COMMENTS / UPGRADES REQUIRED** |
| Site fencing and security | Evidence of break-ins at rear corner with barbed wire being cut. This should be repaired. |
| Residual / general waste area | The general waste area would benefit from improved hardstands and upgraded railing in the medium to long term |
| Covered areas / sheds for recycling | The site lacks covered areas and/or shedding for collection and storage of batteries, gas bottles and mattresses. New infrastructure is required if the site is to remain open into the future. |
| Complaint e-waste collection and storage area | E-waste is stored in a manner which is not compliant with AS5377. If the site is to continue accepting e-waste after 1 July 2019, new infrastructure will be required such as a secure shed with hardstand. |
| Hazardous materials / dangerous goods storage | New infrastructure for storage of batteries and gas bottles is required, such as covered areas and/or shedding with a bunded hardstand. |
| Paved roads and hardstand areas | The site lacks paved roads and hardstands throughout. Upgrades should be considered as part of upgrades to the site. |
| **MANAGEMENT PRACTICES** | **COMMENTS / CHANGES REQUIRED** |
| Improvements to site amenity / tidiness | The site suffers from extensive littering and debris across the site. A full clean up is required to improve visual amenity and reduce the risk of further poor practices. |
| Improvements to oversight of incoming loads | The likely presence of asbestos and extent of debris across the site suggests that oversight of loads requires significant improvement. This should include new signage, further operator training and potential installation of CCTV to the rear of the site where most of the dumping and debris occurs. |
| Improvements to overall management practices | As detailed above. |
| Improvements to management of hazardous | The current practice for collection and storage of batteries and gas bottles is unclear, nor is it clear whether these materials are actually accepted at the site. |

| | |
|---|---|
| materials / dangerous goods | If they are accepted then new infrastructure will be required, and if not, improved signage should be considered. |
| Improvements to garden organics management | At present, timber is stored and reportedly processed with green waste and there is clear evidence of contamination from plastics and other waste throughout the stockpile. Timber and green waste should be collected, stored and processed separately and site practices should be improved to reduce contamination.<br><br>Council should consider developing a strategic plan for the management of timber and green waste across all sites. |
| **Overall Site Findings** | The site is currently in poor condition with extensive debris, littering and contamination of materials. The likely presence of asbestos is a key risk and suitably qualified asbestos practitioners should be engaged to identify and remove asbestos contamination in the general building rubble piles and other areas if required as a priority.<br><br>In the short term, the site requires a full clean to improve visual amenity and reduce contamination. New signage and improved oversight of loads should be implemented to improve material separation and reduce the risk of further littering and debris. New infrastructure for collection and storage of materials such as gas bottles, e-waste, batteries and mattresses is required, such as secure shedding with hardstand.<br><br>The location and condition of the site and the small population serviced suggests that council should undertake strategic planning to examine the long-term viability of the site, particularly given its proximity to Hamilton. |

# 2 SITE OVERVIEW

## 2.1 Site Details

| | |
|---|---|
| **Facility Name** | Cavendish |
| **Consultant Name** | Matt |
| **Date** | 21/02/2018 |
| **Address** | 2543 Henty Hwy, Cavendish VIC 3314, Australia |
| **Council** | Southern Grampians |
| **Site Operator** | Council |
| **SV BP Category** | 1 |
| **Customers** | Public only |
| **Approx. Population Serviced** | 334 |

## 2.2 Hubs and Spokes

| | |
|---|---|
| **Does council use a hub and spoke model for consolidating materials?** | No |

## 2.3 Site Security

| | |
|---|---|
| **Site staffing (no of staff)** | 1 |
| **Is the site fenced?** | Yes |
| **Does the site have CCTV?** | No |
| **Does the site suffer break-ins and/or illegal dumping?** | No |

## 2.4 Siting Details

| | |
|---|---|
| **Site setting** | Rural area |
| **Distance from township (km)** | 1.3 |
| **Site screening** | Well screened |
| **Nearest sensitive receptor** | Residential |
| **Distance to nearest sensitive receptor (km)** | 0.4 |

| | |
|---|---|
| **Prior land-use** | Landfill (RRC is built adjacent to old fill area) |
| **General comments on siting** | The site is located on a large, relatively flat rural block with good buffers and limited chance of encroachment. |
| **Site constraints / limitations / concerns** | None. Site has good scope for further development. |
| **Take photos of the siting and screening** | |
| | |

## 2.5 Climate adaptation

| | |
|---|---|
| **Is the site located in a flood prone area?** | No |
| **Is the site located in an area at risk of coastal inundation?** | No |

| | |
|---|---|
| **Is the site located in an area prone to bushfires?** | No |
| **Does the site have a climate change adaptation plan / assessment?** | No |

# 3 OVERVIEW OF SITE INFRASTRUCTURE

## 3.1 Site infrastructure

| | |
|---|---|
| **Infrastructure on site (select all)** | Gatehouse, Engineered retaining walls, Skip bins (covered), Cages, Concrete pad(s) |
| **Utilities on site (select all)** | Power (mains), Water (tank), Phone (mobile), Toilet |
| **General comments on site infrastructure** | Site lacks infrastructure and hardstand areas throughout. |
| **Take photos of key site infrastructure** | |
| **Extent of road paving at the site** | Roads unpaved |
| **Extent of concrete pads / hardstands** | Concrete pads beneath some bins |

# 4 MATERIALS ACCEPTED AND MANAGED AT THE SITE

## 4.1 Residual waste / general waste

| | |
|---|---|
| **Describe the area for residual waste collection** | Partially elevated platform |
| **How is the material stored?** | Skip bin |
| **Size of the bin or storage area** | Medium stillage or skip bin (5 - 20m3) |
| **Describe the construction of the elevated platform** | Fully engineered concrete walls |
| **Is there suitable guard railing to bin bays for the elevated platform?** | Partially |
| **Details** | Guard railing is old and should be upgraded in the medium to long term. |
| **Describe the hardstand / surfacing of the general waste area** | No hardstand |
| **Does the site have concrete pads beneath general waste bins?** | Full concrete pads |
| **Is the residual waste area covered?** | Not covered |
| **Can the residual waste bins be closed (e.g. with a lid or cover)** | Hard cover to skips |

| | |
|---|---|
| **Take photos of the general waste area, platform, hardstand and skip bins** | |
| | |

| | |
|---|---|
| | |
| | |

## 4.2 Commingled recyclables

| | |
|---|---|
| **Does the site accept commingled recyclables?** | Yes |

| | |
|---|---|
| **How is the material stored?** | Skip bin |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

| | |
|---|---|
| | |
| **Is there any onsite processing of the material?** | No |

## 4.3 Separated paper and cardboard

| | |
|---|---|
| **Does the site accept separated paper and cardboard?** | Yes |
| **How is the material stored?** | Skip bin |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.4 Separated glass

| | |
|---|---|
| **Does the site accept separated glass?** | No |
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.5 Separated plastics

| | |
|---|---|
| **Does the site accept separated plastics?** | No |
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.6 Polystyrene

| | |
|---|---|
| **Does the site accept polystyrene** | No |

## 4.7 Metals

| | |
|---|---|
| **Does the site accept metals?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

| | |
|---|---|
| | |
| | |

| | |
|---|---|
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Collected and bulk hauled to Melbourne |

## 4.8 Timber

| | |
|---|---|
| **Does the site accept timber waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Will be chipped onsite. Significant asbestos contamination. |

## 4.9 Brick / rock / rubble

| | |
|---|---|
| **Does the site accept brick / rock / rubble?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

| | |
|---|---|
| | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Will be crushed and used by council |

## 4.10 Concrete

| | |
|---|---|
| **Does the site accept concrete?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | As above |

## 4.11 E-waste

| | |
|---|---|
| **Does the site accept e-waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | WDEA collects it |

## 4.12 Mattresses

| | |
|---|---|
| **Does the site accept mattresses?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.13 Tyres

| | |
|---|---|
| **Does the site accept tyres?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |

| | |
|---|---|
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

## 4.14 Agricultural plastics (silage wrap)

| | |
|---|---|
| **Does the site accept separated agricultural waste (silage wrap)?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.15 Agricultural drums (DRUMuster)

| | |
|---|---|
| **Does the site accept agricultural drums (DRUMuster)?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.16 General comments on materials accepted

| | |
|---|---|
| **General comments on materials accepted at the site** | |

# 5 HAZARDOUS WASTES AND DANGEROUS GOODS ACCEPTED AND MANAGED AT THE SITE

## 5.1 Asbestos

| | |
|---|---|
| **Does the site accept asbestos?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.2 Household chemicals

| | |
|---|---|
| **Does the site accept household chemicals including paint (Detox)?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.3 Gas bottles

| | |
|---|---|
| **Does the site accept gas bottles?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Appears to be in the metals pile |

## 5.4 Lead-acid batteries

| | |
|---|---|
| **Does the site accept lead-acid batteries?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Unclear where batteries are stored |

## 5.5 Waste oil

| | |
|---|---|
| **Does the site accept waste oil?** | No |
| **Is there potential to accept this material in the future?** | No |
| **Why not? Provide details.** | No unit on site, customers directed to Hamilton |

## 5.6 Fluorescent light tubes

| | |
|---|---|
| **Does the site accept fluorescent light tubes?** | No |
| **Is there potential to accept this material in the future?** | No |
| **Why not? Provide details.** | Township |

## 5.7 General comments on hazardous / dangerous goods management

| | |
|---|---|
| **General comments / observations regarding hazardous waste / dangerous goods management** | |

# 6 GARDEN ORGANICS

| | |
|---|---|
| **Does the site accept green waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

## 6.1 Drop off area

| | |
|---|---|
| **Is the green waste drop off area sealed or unsealed?** | Unsealed (on dirt) |

| | |
|---|---|
| **Take a photo of the green waste area** | |
| **Is the green waste drop-off area visible from the gatehouse?** | No |
| **Provide details** | At rear of site |
| **Does water drain from the green waste area (visually or reportedly, look for pools of water)?** | Yes |
| **Is storm water runoff and leachate actively managed from the green waste area?** | No |
| **Provide details of storm water and leachate management** | Natural drainage with some gullying |
| **General comments about drop off area** | Significant contamination evident |

## 6.2 Processing and end products

| | |
|---|---|
| **Is green waste processed onsite?** | Yes |
| **Provide details** | Planned to be mulched onsite |

| | |
|---|---|
| **How often is it processed?** | Longer than 12 months |
| **How is contamination managed?** | Visual inspection at gatehouse |
| **Take a close-up photo of visible contamination (if any can be seen)** | |
| **What happens to the mulch / compost?** | Council uses it on site |

# 7 RISK MANAGEMENT

| | |
|---|---|
| **Are there any obvious risks at the site?** | Yes |
| **Detail obvious site risks** | Asbestos present |
| **Are all loads supervised upon entry to the site?** | Yes - inspected from ground level gatehouse |
| **Provide details of load inspection process** | Inspection process need improvement as evidenced by contamination and asbestos waste |
| **Is the traffic flow unidirectional and free from cross-roads?** | Yes - traffic management is good |
| **Is there suitable signage that directs site users around the site and to different materials areas?** | Yes - signage is adequate |
| **Are there manual handling risks on site?** | No |
| **Take photos of each risk** | |

| | |
|---|---|
| | |
| | |

# 8 ENVIRONMENTAL MANAGEMENT

| | |
|---|---|
| **Describe general site amenity** | Messy and poorly kept |
| **Is windblown litter visible outside the site or is there a history of litter issues?** | No |
| **Is windblown litter or general debris visible within the site itself?** | Yes |
| **Are there issues with dust at the site, particularly in drier months?** | No |
| **Are there issues with odour at the site or have there been odour complaints?** | No |
| **Are there issues with noise at the site or have there been noise complaints?** | No |
| **General comments about environmental management at the site** | Poorly kept with significant housekeeping issues |

## 8.1 Stormwater management

| | |
|---|---|
| **Is there any storm water management in place at the site?** | No |
| **Does Council believe that this poses an obvious risk (e.g. is it near sensitive receptors)?** | No |
| **Provide details** | Old landfill site with natural rear drainage |

# 9 SMART MATERIALS MANAGEMENT

| | |
|---|---|
| **Is the site layout arranged to maximise resource recovery?** | Yes |
| **Does the site have a reuse shop?** | No |
| **Is there room for a reuse shop?** | No - site is too small |
| **Are any materials (apart from green waste) processed on site (e.g. concrete crushing?)** | Yes |
| **Provide comment** | As with other sites |
| **Are there suitable end markets for the processed material?** | Partially - can take some time to move |

## 9.1 General comments

| | |
|---|---|
| **General comments** | |

# 10 UPGRADES / IMPROVEMENTS REQUIRED

## 10.1 Infrastructure upgrades

| | |
|---|---|
| **Upgrades required to site fencing and security** | Evidence of break-ins at rear corner with barbed wire being cut. This should be repaired. |
| **Upgrades required to residual / general waste disposal area** | The general waste area would benefit from improved hardstands and upgraded railing in the medium to long term |
| **Upgrades required to covered areas / sheds for recycling** | The site lacks covered areas and/or shedding for collection and storage of batteries, gas bottles and mattresses. New infrastructure is required if the site is to remain open into the future. |
| **Upgrades required for complaint collection and storage of e-waste** | E-waste is stored in a manner which is not compliant with AS5377. If the site is to continue accepting e-waste after 1 July 2019, new infrastructure will be required such as a secure shed with hardstand. |
| **Upgrades required to hazardous materials / dangerous goods storage** | New infrastructure for storage of batteries and gas bottles is required, such as covered areas and/or shedding with a bunded hardstand. |
| **Improvements to roads and hardstand areas** | The site lacks paved roads and hardstands throughout. Upgrades should be considered as part of upgrades to the site. |

## 10.2 Management practice improvements

| | |
|---|---|
| **Improvements to site amenity / tidiness** | The site suffers from extensive littering and debris across the site. A full clean up is required to improve visual amenity and reduce the risk of further poor practices. |
| **Improvements to oversight of incoming loads** | The likely presence of asbestos and extent of debris across the site suggests that oversight of loads requires significant improvement. This should include new signage, further operator training and potential installation of CCTV to the rear of the site where most of the dumping and debris occurs. |
| **Improvements to overall management practices** | As detailed above. |
| **Improvements to management of hazardous materials / dangerous goods** | The current practice for collection and storage of batteries and gas bottles is unclear, nor is it clear whether these materials are actually accepted at the site.<br><br>If they are accepted then new infrastructure will be required, and if not, improved signage should be considered. |
| **Improvements to garden organics management practices** | At present, timber is stored and reportedly processed with green waste and there is clear evidence of contamination from plastics and other waste throughout the stockpile. Timber and green waste should be collected, stored and processed separately and site practices should be improved to reduce contamination. |

| | |
|---|---|
| | Council should consider developing a strategic plan for the management of timber and green waste across all sites. |

## 10.3 Overall site summary

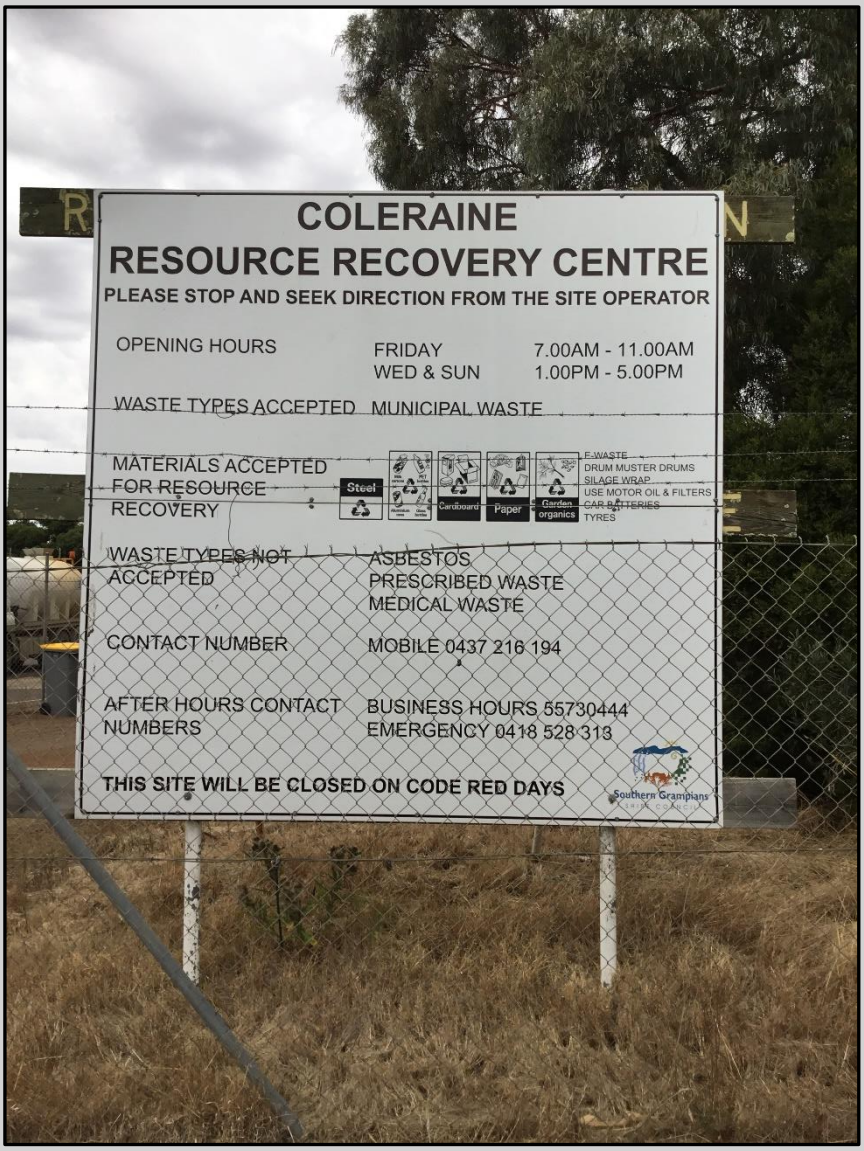
| | |
|---|---|
| **Overall site summary** | The site is currently in poor condition with extensive debris, littering and contamination of materials. The likely presence of asbestos is a key risk and suitably qualified asbestos practitioners should be engaged to identify and remove asbestos contamination in the general building rubble piles and other areas if required as a priority.<br><br>In the short term, the site requires a full clean to improve visual amenity and reduce contamination. New signage and improved oversight of loads should be implemented to improve material separation and reduce the risk of further littering and debris. New infrastructure for collection and storage of materials such as gas bottles, e-waste, batteries and mattresses is required, such as secure shedding with hardstand.<br><br>The location and condition of the site and the small population serviced suggests that council should undertake strategic planning to examine the long-term viability of the site, particularly given its proximity to Hamilton. |

# BSWWRRG Resource Recovery Centre Assessment

## Coleraine
## Site Assessment Report

reincarnate
strategic environmental consultants

REC | RANDELL ENVIRONMENTAL CONSULTING



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# BARWON SOUTH WEST WASTE AND RESOURCE RECOVERY GROUP

# RESOURCE RECOVERY CENTRE ASSESSMENTS

## Coleraine Site Assessment Report

| | |
|---|---|
| **Author** | Matt Genever |
| **Approver** | Matt Genever |
| **Site Name** | Coleraine Resource Recovery Centre |
| **Site Address** | 30 Racecourse Rd, Coleraine VIC 3315, Australia |
| **Date** | 21/02/2018 |

*This report has been prepared for Barwon South West Waste and Resource Recovery Group under the agreement dated 12 January 2018. Reincarnate Pty Ltd (ABN: 83 620 459 387) cannot accept any responsibility for any use or reliance on the contents of this report by any third party.*

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# 1 SUMMARY TABLE

| Coleraine | |
|---|---|
| **Location** | 30 Racecourse Rd, Coleraine VIC 3315, Australia |
| **Council** | Southern Grampians |
| **Population served** | 1029 |
| **Siting considerations** | The site is set in a built up area which was formerly a landfill (RRC is built adjacent to old fill area). The site is located within the Coleraine township, adjacent to the council depot. The nearest residence is around 20m from the boundary fence, directly across the road. The land parcel is small and steep at the rear, with a considerable drop from the general waste platform into the bins. |
| **Constraints / limitations** | Site shape and location of the depot and former landfill make the site difficult to develop further. |
| **Upgrade priority** | |
| **Site infrastructure / upgrades recommended in line with better practice guidelines** | |
| **INFRASTRUCTURE** | **COMMENTS / UPGRADES REQUIRED** |
| Site fencing and security | Fence is damaged in some areas with the barbed wire pulled down. The fencing should be repaired or upgraded in the short to medium term. |
| Residual / general waste area | The general waste area should be sealed with line marking to bays and traffic movements which could be undertaken as part of an overall redevelopment of the site. |
| Covered areas / sheds for recycling | The site lacks covered areas for the collection and storage of batteries, gas bottles and mattresses. New infrastructure such as covered areas and/or shedding should be considered as part of a redevelopment of the site. |
| Complaint e-waste collection and storage area | E-waste is currently stored in a manner which is not compliant with AS5377. If the site is to continue collecting e-waste after 1 July 2019, new infrastructure and practices for the collection and storage of e-waste will be required such as a covered area and/or shedding with a bunded hardstand. |
| Hazardous materials / dangerous goods storage | Gas bottles should be stored out of direct sunlight ideally on a hardstand area. Batteries should be stored in a covered area with bunded hardstand. |
| Improvements to layout and traffic flow | In the medium to long term the layout of the site should be considered, possibly as part of a redevelopment of the site |
| Paved roads and hardstand areas | The site lacks paved roads and hardstands which should be considered as part of an overall redevelopment of the site. |
| **Overall Site Findings** | This is the second largest site for Southern Grampians and it lacks infrastructure that supports the collection and storage of materials in better practice conditions. The site requires considerable investment, most likely through a large-scale redevelopment to add covered areas, hardstands and road surfacing. The site appears well run with no amenity issues apart from some dust in the drier months. |

| | |
|---|---|
| | However, the site is challenging due to the large mounded area currently used for general waste bays and the location of the depot. Council should undertake strategic planning and options analysis before investing in the site as other land (such as the parcel to the east of the site which is reportedly council owned) may be annexed to support improved layout and additional infrastructure. |

# 2 SITE OVERVIEW

## 2.1 Site Details

| | |
|---|---|
| **Facility Name** | Coleraine |
| **Consultant Name** | Matt |
| **Date** | 21/02/2018 |
| **Address** | 30 Racecourse Rd, Coleraine VIC 3315, Australia |
| **Council** | Southern Grampians |
| **Site Operator** | Council |
| **SV BP Category** | 1 |
| **Customers** | Public only |
| **Approx. Population Serviced** | 1029 |

## 2.2 Hubs and Spokes

| | |
|---|---|
| **Does council use a hub and spoke model for consolidating materials?** | Yes |
| **How does that work?** | Material is consolidated at Hamilton |
| **Is this site a hub or a spoke?** | Spoke |

## 2.3 Site Security

| | |
|---|---|
| **Site staffing (no of staff)** | 1 |
| **Is the site fenced?** | Partially |

| | |
|---|---|
| **Take a photo of fencing issues** | |
| **Does the site have CCTV?** | No |
| **Does the site suffer break-ins and/or illegal dumping?** | No |

## 2.4 Siting Details

| | |
|---|---|
| **Site setting** | Built up area |
| **Distance from township (km)** | 0.0 |
| **Site screening** | Well screened |
| **Nearest sensitive receptor** | Residential |
| **Distance to nearest sensitive receptor (km)** | 0.0 |
| **Prior land-use** | Landfill (RRC is built adjacent to old fill area) |
| **General comments on siting** | The site is located within the Coleraine township, adjacent to the council depot. The nearest residence is around 20m from the boundary fence, directly across the road. The land parcel is small and steep at the rear, with a considerable drop from the general waste platform into the bins. |
| **Site constraints / limitations / concerns** | Site shape and location of the depot and former landfill make the site difficult to develop further. |

| | |
|---|---|
| **Take photos of the siting and screening** | |
| | |

## 2.5 Climate adaptation

| | |
|---|---|
| **Is the site located in a flood prone area?** | No |
| **Is the site located in an area at risk of coastal inundation?** | No |
| **Is the site located in an area prone to bushfires?** | No |
| **Does the site have a climate change adaptation plan / assessment?** | No |

# 3 OVERVIEW OF SITE INFRASTRUCTURE

## 3.1 Site infrastructure

| | |
|---|---|
| **Infrastructure on site (select all)** | Gatehouse, Cages, Skip bins (uncovered) |
| **Utilities on site (select all)** | Water (mains), Power (mains), Phone (landline), Toilet |
| **General comments on site infrastructure** | The site lacks infrastructure and is not well developed |
| **Take photos of key site infrastructure** | |
| **Extent of road paving at the site** | Roads unpaved |
| **Extent of concrete pads / hardstands** | Concrete pads beneath some bins |

# 4 MATERIALS ACCEPTED AND MANAGED AT THE SITE

## 4.1 Residual waste / general waste

| | |
|---|---|
| **Describe the area for residual waste collection** | Fully elevated platform |
| **How is the material stored?** | Skip bin |
| **Size of the bin or storage area** | Large stillage or skip bin (>20m3) |
| **Describe the construction of the elevated platform** | Partially engineered walls (e.g. timber retaining wall) |
| **Is there suitable guard railing to bin bays for the elevated platform?** | Yes |
| **Describe the hardstand / surfacing of the general waste area** | No hardstand |
| **Does the site have concrete pads beneath general waste bins?** | Full concrete pads |
| **Is the residual waste area covered?** | Not covered |
| **Can the residual waste bins be closed (e.g. with a lid or cover)** | No cover to skips |
| **General comments on residual waste collection area** | The general waste area is on a high unsealed platform with partially covered drop area. |

| | |
|---|---|
| **Take photos of the general waste area, platform, hardstand and skip bins** | |
| | |

| | |
|---|---|
| | |
| | |

## 4.2 Commingled recyclables

| | |
|---|---|
| **Does the site accept commingled recyclables?** | Yes |

| | |
|---|---|
| **How is the material stored?** | Skip bin |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Collected by the contractor |

## 4.3 Separated paper and cardboard

| | |
|---|---|
| **Does the site accept separated paper and cardboard?** | No |

## 4.4 Separated glass

| | |
|---|---|
| **Does the site accept separated glass?** | No |
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.5 Separated plastics

| | |
|---|---|
| **Does the site accept separated plastics?** | No |
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.6 Polystyrene

| | |
|---|---|
| **Does the site accept polystyrene** | No |
| **Does the site have the capacity to accept this material?** | Yes, but new infrastructure would be required |

## 4.7 Metals

| | |
|---|---|
| **Does the site accept metals?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Bulk hauled to Melbourne |

## 4.8 Timber

| | |
|---|---|
| **Does the site accept timber waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Will be shredded onsite and reused |

## 4.9 Brick / rock / rubble

| | |
|---|---|
| **Does the site accept brick / rock / rubble?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Will be crushed and reused by council |

## 4.10 Concrete

| | |
|---|---|
| **Does the site accept concrete?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | As above |

## 4.11 E-waste

| | |
|---|---|
| **Does the site accept e-waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | E-waste goes straight into the metals pile |

## 4.12 Mattresses

| | |
|---|---|
| **Does the site accept mattresses?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Residents are required to strip mattresses with foam in landfill and springs in metal pile |

## 4.13 Tyres

| | |
|---|---|
| **Does the site accept tyres?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | In the past have been shredded onsite. Unsure what happens. |

## 4.14 Agricultural plastics (silage wrap)

| | |
|---|---|
| **Does the site accept separated agricultural waste (silage wrap)?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.15 Agricultural drums (DRUMuster)

| | |
|---|---|
| **Does the site accept agricultural drums (DRUMuster)?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Medium stillage or skip bin (5 - 20m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.16 General comments on materials accepted

| | |
|---|---|
| **General comments on materials accepted at the site** | |

# 5 HAZARDOUS WASTES AND DANGEROUS GOODS ACCEPTED AND MANAGED AT THE SITE

## 5.1 Asbestos

| | |
|---|---|
| **Does the site accept asbestos?** | No |
| **Is there potential to accept this material in the future?** | No |
| **Why not? Provide details.** | No infrastructure and not appropriate at this site |

## 5.2 Household chemicals

| | |
|---|---|
| **Does the site accept household chemicals including paint (Detox)?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.3 Gas bottles

| | |
|---|---|
| **Does the site accept gas bottles?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Residents are instructed to puncture gas bottles prior to disposal at RRC sites |

## 5.4 Waste oil

| | |
|---|---|
| **Does the site accept waste oil?** | Yes |
| **How is the material stored?** | Drum |
| **Is it stored in a covered or uncovered area / bin?** | Covered area with no sides |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | Full hardstand (concrete or bitumen) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Bunding to hardstand is required |

## 5.5 Fluorescent light tubes

| | |
|---|---|
| **Does the site accept fluorescent light tubes?** | Yes |
| **How is the material stored?** | Stillage |
| **Is it stored in a covered or uncovered area / bin?** | Fully enclosed area such as a shed |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | Full hardstand (concrete or bitumen) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | Yes |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |

## 5.6 General comments on hazardous / dangerous goods management

| | |
|---|---|
| **General comments / observations regarding hazardous waste / dangerous goods management** | |

# 6 GARDEN ORGANICS

| | |
|---|---|
| **Does the site accept green waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

## 6.1 Drop off area

| | |
|---|---|
| **Is the green waste drop off area sealed or unsealed?** | Unsealed (on dirt) |

| | |
|---|---|
| **Take a photo of the green waste area** | |
| **Is the green waste drop-off area visible from the gatehouse?** | No |
| **Provide details** | At rear of site with no visibility |
| **Does water drain from the green waste area (visually or reportedly, look for pools of water)?** | Yes |
| **Is storm water runoff and leachate actively managed from the green waste area?** | No |
| **Provide details of storm water and leachate management** | Some gullying at rear of property |

## 6.2 Storage practices

| | |
|---|---|
| **Is timber (any type) combined with green waste for storage / processing?** | No |
| **Is there a stockpile of unprocessed green waste?** | Yes |

| | |
|---|---|
| **Are there any design criteria for height, width and separation (e.g. through planning permit, fire restrictions etc.?)** | No |
| **Take a photo of the unprocessed green waste stockpile** | |
| **Is there a stockpile of processed green waste?** | Yes |
| **Why is there a stockpile of processed green waste?** | It has only recently been processed |
| **Provide details** | Small stockpile |

| | |
|---|---|
| **Take a photo of the processed (mulch) green waste stockpile** | |

## 6.3 Processing and end products

| | |
|---|---|
| **Is green waste processed onsite?** | Yes |
| **Provide details** | Shredded as mulch and used as cover or given away |

| | |
|---|---|
| **Take a photo of the product** | |
| **How is contamination managed?** | Visual inspection at gatehouse |
| **Take a close-up photo of visible contamination (if any can be seen)** | |
| **What happens to the mulch / compost?** | Council uses it on site |

# 7 PRIORITY “HARD TO RECYCLE” MATERIALS

| | |
|---|---|
| **Which materials would you class as priority or "hard to recycle"?** | Ag plastics (silage), Green waste, E-waste, Polystyrene, Timber, Tyres |
| **What actions are you taking or planning to take to address these materials?** | Silage wrap getting collected is a huge issue, many will separate but it then just sits on transfer stations. Green waste is costly and hard to get them to come and process without getting volumes. Other e-waste will be difficult. Looked at polystyrene but no processing options that make sense. Tyres costly to get rid of. |

# 8 RISK MANAGEMENT

| | |
|---|---|
| **Are all loads supervised upon entry to the site?** | Yes - inspected from ground level gatehouse |
| **Is the traffic flow unidirectional and free from cross-roads?** | No - traffic management needs improvement |
| **Detail traffic management improvements required** | Two points where loop road crosses the general waste road but can manage this ground vent number of customers |
| **Is there suitable signage that directs site users around the site and to different materials areas?** | No - signage requires improvement |
| **Detail site signage improvements required** | Almost no signage at the site for most materials |
| **Are there manual handling risks on site?** | No |

# 9 ENVIRONMENTAL MANAGEMENT

| | |
|---|---|
| **Describe general site amenity** | Generally clean but some areas need improvement |
| **Provide details** | Some litter and broken glass on the ground |
| **Is windblown litter visible outside the site or is there a history of litter issues?** | No |
| **Is windblown litter or general debris visible within the site itself?** | No |
| **Are there issues with dust at the site, particularly in drier months?** | Yes |
| **Provide details** | Not managed |
| **Are there issues with odour at the site or have there been odour complaints?** | No |
| **Are there issues with noise at the site or have there been noise complaints?** | No |

## 9.1 Stormwater management

| | |
|---|---|
| **Is there any storm water management in place at the site?** | No |
| **Does Council believe that this poses an obvious risk (e.g. is it near sensitive receptors)?** | No |

# 10 SMART MATERIALS MANAGEMENT

| | |
|---|---|
| **Is the site layout arranged to maximise resource recovery?** | Partially |
| **Does the site have a reuse shop?** | No |
| **Is there room for a reuse shop?** | No - site is too small |
| **Are any materials (apart from green waste) processed on site (e.g. concrete crushing?)** | Yes |
| **Provide comment** | Concrete and tyres and timber |
| **Are there suitable end markets for the processed material?** | Partially - can take some time to move |

## 10.1 General comments

| | |
|---|---|
| **General comments** | |

# 11 UPGRADES / IMPROVEMENTS REQUIRED

## 11.1 Infrastructure upgrades

| | |
|---|---|
| **Upgrades required to site fencing and security** | Fence is damaged in some areas with the barbed wire pulled down. The fencing should be repaired or upgraded in the short to medium term. |
| **Upgrades required to residual / general waste disposal area** | The general waste area should be sealed with line marking to bays and traffic movements which could be undertaken as part of an overall redevelopment of the site. |
| **Upgrades required to covered areas / sheds for recycling** | The site lacks covered areas for the collection and storage of batteries, gas bottles and mattresses. New infrastructure such as covered areas and/or shedding should be considered as part of a redevelopment of the site. |
| **Upgrades required for complaint collection and storage of e-waste** | E-waste is currently stored in a manner which is not compliant with AS5377. If the site is to continue collecting e-waste after 1 July 2019, new infrastructure and practices for the collection and storage of e-waste will be required such as a covered area and/or shedding with a bunded hardstand. |
| **Upgrades required to hazardous materials / dangerous goods storage** | Gas bottles should be stored out of direct sunlight ideally on a hardstand area. Batteries should be stored in a covered area with bunded hardstand. |
| **Improvements to site layout and traffic flow** | In the medium to long term the layout of the site should be considered, possibly as part of a redevelopment of the site. |
| **Improvements to roads and hardstand areas** | The site lacks paved roads and hardstands which should be considered as part of an overall redevelopment of the site. |

## 11.2 Overall site summary

| | |
|---|---|
| **Overall site summary** | This is the second largest site for Southern Grampians and it lacks infrastructure that supports the collection and storage of materials in better practice conditions. The site requires considerable investment, most likely through a large-scale redevelopment to add covered areas, hardstands and road surfacing. The site appears well run with no amenity issues apart from some dust in the drier months.<br><br>However, the site is challenging due to the large mounded area currently used for general waste bays and the location of the depot. Council should undertake strategic planning and options analysis before investing in the site as other land (such as the parcel to the east of the site which is reportedly council owned) may be annexed to support improved layout and additional infrastructure. |

# BSWWRRG Resource Recovery Centre Assessment

## Dunkeld
## Site Assessment Report

reincarnate
strategic environmental consultants

RANDELL ENVIRONMENTAL CONSULTING

reincarnate
strategic environmental consultants

# BARWON SOUTH WEST WASTE AND RESOURCE RECOVERY GROUP

# RESOURCE RECOVERY CENTRE ASSESSMENTS

## Dunkeld Site Assessment Report

| | |
|---|---|
| **Author** | Matt Genever |
| **Approver** | Matt Genever |
| **Site Name** | Dunkeld Resource Recovery Centre |
| **Site Address** | 134 Bellicourt Rd, Dunkeld VIC 3294, Australia |
| **Date** | 22/02/2018 |

*This report has been prepared for Barwon South West Waste and Resource Recovery Group under the agreement dated 12 January 2018. Reincarnate Pty Ltd (ABN: 83 620 459 387) cannot accept any responsibility for any use or reliance on the contents of this report by any third party.*

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# 1 SUMMARY TABLE

| Dunkeld | |
|---|---|
| **Location** | 134 Bellicourt Rd, Dunkeld VIC 3294, Australia |
| **Council** | Southern Grampians |
| **Population served** | 678 |
| **Siting considerations** | The site is set in a rural area which was formerly a landfill (RRC is built on top of old fill area). Site is located in a rural setting around 2km south of town. There are extensive buffers of more than 1km in each direction. It is a flat parcel of land that appear to overlap the old fill area. |
| **Constraints / limitations** | The site is on a small parcel of land that has limited scope for development due to location of fill area. |
| **Upgrade priority** | |
| **Site infrastructure / upgrades recommended in line with better practice guidelines** | |
| **INFRASTRUCTURE** | **COMMENTS / UPGRADES REQUIRED** |
| Site fencing and security | Some areas of fencing have been damaged and require repair in the medium term. |
| Residual / general waste area | The residual waste area would benefit from hardstands and linemarking in the medium to long term. In addition, bin lids should be closed when the site is not operational. |
| Covered areas / sheds for recycling | The site lacks infrastructure for the collection and storage of key materials such as gas bottles, batteries, mattresses and e-waste. New infrastructure is required in the short term such as covered areas and/or shedding with hardstands. |
| Complaint e-waste collection and storage area | E-waste is stored in a manner which is not compliant with AS5377. If the site is to continue accepting e-waste after the 1 July 2019 new infrastructure will be required such as a secure shed with hardstand. |
| Hazardous materials / dangerous goods storage | Storage of waste oil and used oil containers needs to be addressed as a priority, for example by construction of a bunded hardstand for the oil drum which will contain spills and leakage. Used bottles should be stored in a bin or stillage rather than loose on the ground.<br><br>The collection and storage of batteries and gas bottles does not meet better practice guidelines. New infrastructure is required such as a secure shed with hardstand. |
| Paved roads and hardstand areas | Paved roads and hardstands should be considered in the long term as part of overall development of the site. |
| **MANAGEMENT PRACTICES** | **COMMENTS / CHANGES REQUIRED** |
| Improvements to site amenity / tidiness | Litter and debris are visible across the site and outside of the boundary fence. A site clean is required and new signage should be installed to ensure customers use the correct areas. |
| Improvements to overall management practices | There are a number of piles of material that seemingly have no end use. These are causing a liability for council. The furniture pile should be removed as general waste and furniture should not be accepted at the site, instead being directed to the timber pile or general waste as |

| | |
|---|---|
| | required. In addition, legacy piles of building material and a large pile of hessian bags should be removed and not accepted other than in general waste in the future. |
| Improvements to management of hazardous materials / dangerous goods | As noted previously, oil spills are evident. New infrastructure and management practices are required for waste oil, batteries and gas bottles. |
| **Overall Site Findings** | In general the site appears to be well run apart from some legacy stockpiles and issues with litter in and outside of the site. In the short term, a bunded hardstand is required for the waste oil unit and the site would benefit from a full site litter clean. In addition, new infrastructure for collection and storage of batteries, gas bottles, mattresses and e-waste is required, such as a secure shed with hardstand.<br><br>Given the legacy stockpiles at the site, council should review materials that are accepted for recycling and change as required. Legacy piles should be addressed in the short to medium term to improve site amenity.<br><br>In the longer term, the site would benefit from hardstands and paved roads. |

# 2 SITE OVERVIEW

## 2.1 Site Details

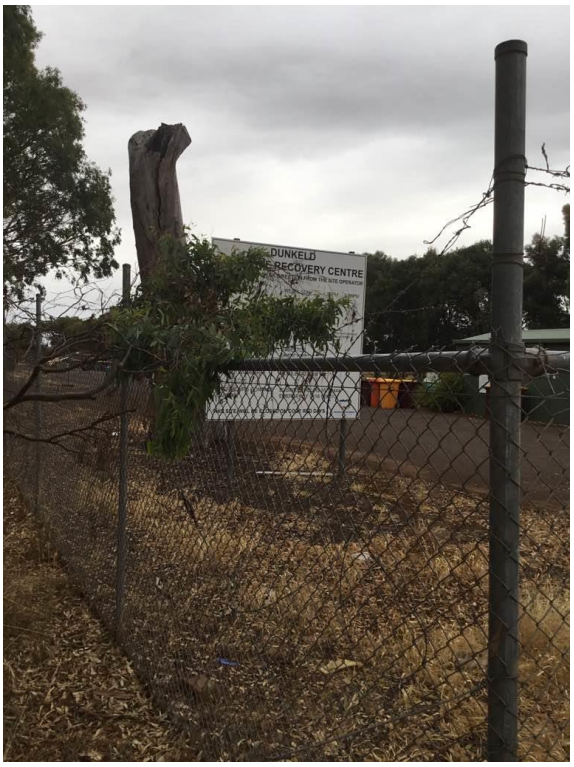
| | |
|---|---|
| **Facility Name** | Dunkeld |
| **Consultant Name** | Matt |
| **Date** | 22/02/2018 |
| **Address** | 134 Bellicourt Rd, Dunkeld VIC 3294, Australia |
| **Council** | Southern Grampians |
| **Site Operator** | Council |
| **SV BP Category** | 1 |
| **Customers** | Public only |
| **Approx. Population Serviced** | 678 |

## 2.2 Hubs and Spokes

| | |
|---|---|
| **Does council use a hub and spoke model for consolidating materials?** | No |

## 2.3 Site Security

| | |
|---|---|
| **Site staffing (no of staff)** | 1 |
| **Is the site fenced?** | Partially |

| | |
|---|---|
| **Take a photo of fencing issues** |  |
| **Does the site have CCTV?** | No |
| **Does the site suffer break-ins and/or illegal dumping?** | No |

## 2.4 Siting Details

| | |
|---|---|
| **Site setting** | Rural area |
| **Distance from township (km)** | 2.0 |
| **Site screening** | Well screened |
| **Nearest sensitive receptor** | Residential |
| **Distance to nearest sensitive receptor (km)** | 1.1 |
| **Prior land-use** | Landfill (RRC is built on top of old fill area) |
| **General comments on siting** | Site is located in a rural setting around 2km south of town. There are extensive buffers of more than 1km in each direction. It is a flat parcel of land that appear to overlap the old fill area. |
| **Site constraints / limitations / concerns** | The site is on a small parcel of land that has limited scope for development due to location of fill area. |

| | |
|---|---|
| **Take photos of the siting and screening** | |

## 2.5 Climate adaptation

| | |
|---|---|
| **Is the site located in a flood prone area?** | No |
| **Is the site located in an area at risk of coastal inundation?** | No |
| **Is the site located in an area prone to bushfires?** | No |
| **Does the site have a climate change adaptation plan / assessment?** | No |

# 3 OVERVIEW OF SITE INFRASTRUCTURE

## 3.1 Site infrastructure

| | |
|---|---|
| **Infrastructure on site (select all)** | Gatehouse, Engineered retaining walls, Skip bins (covered), Cages, Concrete pad(s) |
| **Utilities on site (select all)** | Power (mains), Water (mains), Phone (mobile), Portaloo |
| **Take photos of key site infrastructure** | |

| | |
|---|---|
| | |
| **Extent of road paving at the site** | Roads unpaved |
| **Extent of concrete pads / hardstands** | Concrete pads beneath some bins |

# 4 MATERIALS ACCEPTED AND MANAGED AT THE SITE

## 4.1 Residual waste / general waste

| | |
|---|---|
| **Describe the area for residual waste collection** | Fully elevated platform |
| **How is the material stored?** | Skip bin |
| **Size of the bin or storage area** | Large stillage or skip bin (>20m3) |
| **Describe the construction of the elevated platform** | Partially engineered walls (e.g. timber retaining wall) |
| **Is there suitable guard railing to bin bays for the elevated platform?** | Yes |
| **Describe the hardstand / surfacing of the general waste area** | No hardstand |
| **Does the site have concrete pads beneath general waste bins?** | Full concrete pads |
| **Is the residual waste area covered?** | Not covered |
| **Can the residual waste bins be closed (e.g. with a lid or cover)** | Hard cover to skips |
| **General comments on residual waste collection area** | Skip lids not closed |

| | |
|---|---|
| **Take photos of the general waste area, platform, hardstand and skip bins** | |
| | |

| | |
|---|---|
| | |

## 4.2 Commingled recyclables

| | |
|---|---|
| **Does the site accept commingled recyclables?** | Yes |
| **How is the material stored?** | Skip bin |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.3 Separated paper and cardboard

| | |
|---|---|
| **Does the site accept separated paper and cardboard?** | Yes |
| **How is the material stored?** | Skip bin |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.4 Separated glass

| | |
|---|---|
| **Does the site accept separated glass?** | No |
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.5 Separated plastics

| | |
|---|---|
| **Does the site accept separated plastics?** | No |
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.6 Polystyrene

| | |
|---|---|
| **Does the site accept polystyrene** | No |

## 4.7 Metals

| | |
|---|---|
| **Does the site accept metals?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

| | |
|---|---|
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Collected and bulk hauled to Melbourne |

## 4.8 Timber

| | |
|---|---|
| **Does the site accept timber waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Shredded onsite for use by council. Unclear how often this occurs. |

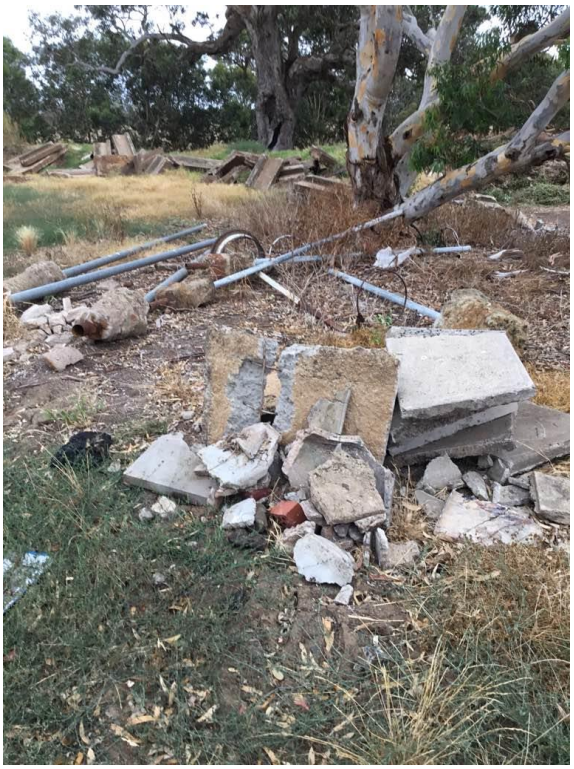
## 4.9 Brick / rock / rubble

| | |
|---|---|
| **Does the site accept brick / rock / rubble?** | Yes |
| **How is the material stored?** | Loose in pile |

| | |
|---|---|
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Provide details** | Intention is to crush this onsite and use |

## 4.10 Concrete

| | |
|---|---|
| **Does the site accept concrete?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** |  |
| | |

| | |
|---|---|
| | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Intention is to crush this and use it onsite |

## 4.11 E-waste

| | |
|---|---|
| **Does the site accept e-waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | WDEA collects this |

## 4.12 Mattresses

| | |
|---|---|
| **Does the site accept mattresses?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |

| | |
|---|---|
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Unclear, residents are asked to strip prior to disposal. |

## 4.13 Tyres

| | |
|---|---|
| **Does the site accept tyres?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.14 Agricultural plastics (silage wrap)

| | |
|---|---|
| **Does the site accept separated agricultural waste (silage wrap)?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Plasback |

## 4.15 Agricultural drums (DRUMuster)

| | |
|---|---|
| **Does the site accept agricultural drums (DRUMuster)?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |

| | |
|---|---|
| **Size of the bin or storage area** | Medium stillage or skip bin (5 - 20m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.16 General comments on materials accepted

| | |
|---|---|
| **General comments on materials accepted at the site** | |

# 5 HAZARDOUS WASTES AND DANGEROUS GOODS ACCEPTED AND MANAGED AT THE SITE

## 5.1 Asbestos

| | |
|---|---|
| **Does the site accept asbestos?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.2 Household chemicals

| | |
|---|---|
| **Does the site accept household chemicals including paint (Detox)?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.3 Gas bottles

| | |
|---|---|
| **Does the site accept gas bottles?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Unclear |

## 5.4 Lead-acid batteries

| | |
|---|---|
| **Does the site accept lead-acid batteries?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Unclear |

## 5.5 Waste oil

| | |
|---|---|
| **Does the site accept waste oil?** | Yes |
| **How is the material stored?** | Drum |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | No hardstand and evidence of leakage onto the ground. Bunded hardstand required. |

## 5.6 Fluorescent light tubes

| | |
|---|---|
| **Does the site accept fluorescent light tubes?** | No |
| **Is there potential to accept this material in the future?** | No |
| **Why not? Provide details.** | Other collection points |

## 5.7 General comments on hazardous / dangerous goods management

| | |
|---|---|
| **General comments / observations regarding hazardous waste / dangerous goods management** | |

# 6 GARDEN ORGANICS

| | |
|---|---|
| **Does the site accept green waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

## 6.1 Drop off area

| | |
|---|---|
| **Is the green waste drop off area sealed or unsealed?** | Unsealed (on dirt) |

| | |
|---|---|
| **Take a photo of the green waste area** | |
| **Is the green waste drop-off area visible from the gatehouse?** | No |
| **Provide details** | At rear of site |
| **Does water drain from the green waste area (visually or reportedly, look for pools of water)?** | No |
| **Is storm water runoff and leachate actively managed from the green waste area?** | No |

## 6.2 Storage practices

| | |
|---|---|
| **Is timber (any type) combined with green waste for storage / processing?** | No |
| **Is there a stockpile of unprocessed green waste?** | Yes |
| **Are there any design criteria for height, width and separation (e.g. through planning permit, fire restrictions etc.?)** | No |

| | |
|---|---|
| **Take a photo of the unprocessed green waste stockpile** | |
| **Is there a stockpile of processed green waste?** | Yes |
| **Why is there a stockpile of processed green waste?** | It is slow to move because of the quality |
| **Provide details** | Used as required by council, appears to have been here for some time |
| **Take a photo of the processed (mulch) green waste stockpile** | |

## 6.3 Processing and end products

| | |
|---|---|
| **Is green waste processed onsite?** | Yes |
| **Provide details** | Mulched onsite for council use |
| **Take a photo of the product** | |
| **How often is it processed?** | Longer than 12 months |
| **How is contamination managed?** | Visual inspection at gatehouse |
| **Provide details of contamination management** | Looks relatively clean |
| **What happens to the mulch / compost?** | Council uses it on site. Council uses it in parks and gardens |

# 7 RISK MANAGEMENT

| | |
|---|---|
| **Are there any obvious risks at the site?** | No |
| **Are all loads supervised upon entry to the site?** | Yes - inspected from ground level gatehouse |
| **Is the traffic flow unidirectional and free from cross-roads?** | No - traffic management needs improvement |
| **Detail traffic management improvements required** | There is no traffic signage and it is unclear which direction site users are required to travel. |
| **Is there suitable signage that directs site users around the site and to different materials areas?** | No - signage requires improvement |
| **Detail site signage improvements required** | Signage at bottom portion of site could be improved in the medium term |
| **Are there manual handling risks on site?** | No |

# 8 ENVIRONMENTAL MANAGEMENT

| | |
|---|---|
| **Describe general site amenity** | Generally clean but some areas need improvement |
| **Provide details** | Central areas are clean but around perimeter is messy with litter and debris. |
| **Is windblown litter visible outside the site or is there a history of litter issues?** | Yes |
| **Provide details** | Clearly evident opposite site along the road. Needs to be cleaned and addressed. |
| **Is windblown litter or general debris visible within the site itself?** | Yes |
| **Provide details** | Across perimeter of whole site |
| **Are there issues with dust at the site, particularly in drier months?** | Occasionally |
| **Are there issues with odour at the site or have there been odour complaints?** | No |
| **Are there issues with noise at the site or have there been noise complaints?** | No |
| **General comments about environmental management at the site** | Generally good apart from litter and debris. Also oil spills need to be addressed. |
| **Take photos of relevant environmental management issues** | |

| | |
|---|---|
| | |
| | |

| | |
|---|---|
| | |
| | |

| | |
|---|---|
| | |

## 8.1 Stormwater management

| | |
|---|---|
| **Is there any storm water management in place at the site?** | No |
| **Does Council believe that this poses an obvious risk (e.g. is it near sensitive receptors)?** | No |
| **Provide details** | No sensitive receptors nearby |

# 9 SMART MATERIALS MANAGEMENT

| | |
|---|---|
| **Is the site layout arranged to maximise resource recovery?** | Yes |
| **Does the site have a reuse shop?** | No |
| **Is there room for a reuse shop?** | No - site is too small |
| **Are any materials (apart from green waste) processed on site (e.g. concrete crushing?)** | Yes |
| **Provide comment** | Concrete brick and rubble planned to be processed in coming months |
| **Are there suitable end markets for the processed material?** | Partially - can take some time to move |

## 9.1 General comments

| | |
|---|---|
| **General comments** | |

# 10 UPGRADES / IMPROVEMENTS REQUIRED

## 10.1 Infrastructure upgrades

| | |
|---|---|
| **Upgrades required to site fencing and security** | Some areas of fencing have been damaged and require repair in the medium term. |
| **Upgrades required to residual / general waste disposal area** | The residual waste area would benefit from hardstands and linemarking in the medium to long term. In addition, bin lids should be closed when the site is not operational. |
| **Upgrades required to covered areas / sheds for recycling** | The site lacks infrastructure for the collection and storage of key materials such as gas bottles, batteries, mattresses and e-waste. New infrastructure is required in the short term such as covered areas and/or shedding with hardstands. |
| **Upgrades required for complaint collection and storage of e-waste** | E-waste is stored in a manner which is not compliant with AS5377. If the site is to continue accepting e-waste after the 1 July 2019 new infrastructure will be required such as a secure shed with hardstand. |
| **Upgrades required to hazardous materials / dangerous goods storage** | Storage of waste oil and used oil containers needs to be addressed as a priority, for example by construction of a bunded hardstand for the oil drum which will contain spills and leakage. Used bottles should be stored in a bin or stillage rather than loose on the ground.<br><br>The collection and storage of batteries and gas bottles does not meet better practice guidelines. New infrastructure is required such as a secure shed with hardstand. |
| **Improvements to roads and hardstand areas** | Paved roads and hardstands should be considered in the long term as part of overall development of the site. |

## 10.2 Management practice improvements

| | |
|---|---|
| **Improvements to site amenity / tidiness** | Litter and debris are visible across the site and outside of the boundary fence. A site clean is required and new signage should be installed to ensure customers use the correct areas. |
| **Improvements to overall management practices** | There are a number of piles of material that seemingly have no end use. These are causing a liability for council. The furniture pile should be removed as general waste and furniture should not be accepted at the site, instead being directed to the timber pile or general waste as required. In addition, legacy piles of building material and a large pile of hessian bags should be removed and not accepted other than in general waste in the future. |
| **Improvements to management of hazardous materials / dangerous goods** | As noted previously, oil spills are evident. New infrastructure and management practices are required for waste oil, batteries and gas bottles. |

## 10.3 Overall site summary

| | |
|---|---|
| **Overall site summary** | In general the site appears to be well run apart from some legacy stockpiles and issues with litter in and outside of the site. In the short term, a bunded hardstand is required for the waste oil unit and the site would benefit from a full site litter clean. In addition, new infrastructure for collection and storage of batteries, gas bottles, mattresses and e-waste is required, such as a secure shed with hardstand.<br><br>Given the legacy stockpiles at the site, council should review materials that are accepted for recycling and change as required. Legacy piles should be addressed in the short to medium term to improve site amenity.<br><br>In the longer term, the site would benefit from hardstands and paved roads. |

# BSWWRRG Resource Recovery Centre Assessment

## Hamilton
## Site Assessment Report

reincarnate
strategic environmental consultants

REC | RANDELL ENVIRONMENTAL CONSULTING

reincarnate
strategic environmental consultants

# BARWON SOUTH WEST WASTE AND RESOURCE RECOVERY GROUP

# RESOURCE RECOVERY CENTRE ASSESSMENTS

## Hamilton Site Assessment Report

| | |
|---|---|
| **Author** | Matt Genever |
| **Approver** | Matt Genever |
| **Site Name** | Hamilton Resource Recovery Centre |
| **Site Address** | Dale St, Hamilton VIC 3300, Australia |
| **Date** | 21/02/2018 |

*This report has been prepared for Barwon South West Waste and Resource Recovery Group under the agreement dated 12 January 2018. Reincarnate Pty Ltd (ABN: 83 620 459 387) cannot accept any responsibility for any use or reliance on the contents of this report by any third party.*

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# 1 SUMMARY TABLE

| **Hamilton** | |
|---|---|
| **Location** | Dale St, Hamilton VIC 3300, Australia |
| **Council** | Southern Grampians |
| **Population served** | 9974 |
| **Siting considerations** | The site is set in a semi-rural area which was formerly a landfill (RRC is built adjacent to old fill area). Site is collocated with operating landfill on a large parcel of land at the front (north east). There are residences in close proximity however these are more likely to be impacted by the landfill and its machinery. |
| **Constraints / limitations** | The location of the current landfill and potential buffer issues are constraints, however there is ample room for development within current footprint. |
| **Upgrade priority** | |
| **Site infrastructure / upgrades <u>recommended</u> in line with better practice guidelines** | |
| **INFRASTRUCTURE** | **COMMENTS / UPGRADES REQUIRED** |
| Covered areas / sheds for recycling | The site lacks infrastructure for the collection and storage of materials such as gas bottles, batteries and e-waste. New infrastructure is required at the site in the short term such as covered areas and/or shedding with hardstands. Given this is Councils primary RRC facility, a larger redevelopment of the recycling areas should be considered to increase diversion and meet better practice guidelines. |
| Complaint e-waste collection and storage area | E-waste is stored in a manner which is not compliant with AS5377. If the site is to continue accepting e-waste after the 1 July 2019 new infrastructure will be required such as a secure shed with hardstand. |
| Hazardous materials / dangerous goods storage | Storage of batteries is currently a key issue at the site with damaged and leaking batteries stored in the open and on the ground. Construction of new storage infrastructure for batteries (as well as other key materials outlined previously) should be a term priority for the site. |
| Improvements to layout and traffic flow | The site has a number of access roads, many of which lack signage and directional linemarking. A near miss between a residential customer and a landfill truck was observed at the time of the site visit.<br><br>Upgrades to signage and clear linemarking, such as colour coded lanes to separate customers from site vehicles is recommended. In addition, further driver education may be required as several site vehicles were observed travelling well in excess of walking pace. |
| Paved roads and hardstand areas | In addition to improved traffic management, the site would benefit from additional hardstands to recycling areas along the southern side of the site. |
| **MANAGEMENT PRACTICES** | **COMMENTS / CHANGES REQUIRED** |
| Improvements to site amenity / tidiness | New infrastructure for collection and storage of key recyclables would likely reduce debris around the batteries and e-waste area. |

| | |
|---|---|
| Improvements to overall management practices | Guard railing was not present at a number of general waste bays as the rails had been removed by the operator. The rails should remain up at all times. |
| Improvements to management of hazardous materials / dangerous goods | Collection and separation of batteries requires improvement with household batteries collected and stored loosely on the ground. The improvements to recycling infrastructure suggested previously should address this issue. |
| Improvements to garden organics management | At present, garden organics are stockpiled with timber and coprocessed into low grade mulch for use as landfill cover. This practice does not constitute recycling nor beneficial reuse and it is unclear how long EPA will allow it to continue at regional landfill sites.<br><br>A long term plan for the management of timber and garden organics is required for all a Southern Grampians sites as the current procedures appear fragmented and do not support the creation of high value organic products. |
| **Overall Site Findings** | The site is the largest in Southern Grampians and services a large regional centre. However, at present the site lacks critical infrastructure for collection and storage of key recycling materials.<br><br>In the short term, new infrastructure such as covered areas and/or shedding are required for the collection and storage of e-waste, batteries, gas bottles and mattresses. In addition, improvements to traffic management including new signage and road marking should also be considered. This could be part of a large redevelopment at the site which would provide a better practice hub for the Southern Grampians.<br><br>It is further recommended that council develop a plan for the management of timber and garden waste across all its sites, potentially looking at consolidating and processing well separated timber and green waste at Hamilton into higher value products that can be sold or given away safely to residents. |

# 2 SITE OVERVIEW

## 2.1 Site Details

| | |
|---|---|
| **Facility Name** | Hamilton |
| **Consultant Name** | Matt |
| **Date** | 21/02/2018 |
| **Address** | Dale St, Hamilton VIC 3300, Australia |
| **Council** | Southern Grampians |
| **Site Operator** | Council |
| **SV BP Category** | 2 |
| **Customers** | Public and commercial |
| **Approx. Population Serviced** | 9974 |

## 2.2 Hubs and Spokes

| | |
|---|---|
| **Does council use a hub and spoke model for consolidating materials?** | No |

## 2.3 Site Security

| | |
|---|---|
| **Site staffing (no of staff)** | 2 |
| **Is the site fenced?** | Yes |
| **Does the site have CCTV?** | No |
| **Does the site suffer break-ins and/or illegal dumping?** | No |

## 2.4 Siting Details

| | |
|---|---|
| **Site setting** | Semi-rural area |
| **Distance from township (km)** | 2.0 |
| **Site screening** | Well screened |
| **Nearest sensitive receptor** | Residential |
| **Distance to nearest sensitive receptor (km)** | 0.2 |

| | |
|---|---|
| **Prior land-use** | Landfill (RRC is built adjacent to old fill area) |
| **General comments on siting** | Site is collocated with operating landfill on a large parcel of land at the front (north east). There are residences in close proximity however these are more likely to be impacted by the landfill and its machinery. |
| **Site constraints / limitations / concerns** | The location of the current landfill and potential buffer issues are constraints, however there is ample room for development within current footprint. |
| **Take photos of the siting and screening** | |

## 2.5 Climate adaptation

| | |
|---|---|
| **Is the site located in a flood prone area?** | No |
| **Is the site located in an area at risk of coastal inundation?** | No |
| **Is the site located in an area prone to bushfires?** | No |
| **Does the site have a climate change adaptation plan / assessment?** | No |

# 3 OVERVIEW OF SITE INFRASTRUCTURE

## 3.1 Site infrastructure

| | |
|---|---|
| **Infrastructure on site (select all)** | Gatehouse, Weighbridge, Offices, Worksheds, Engineered retaining walls, Skip bins (covered), Concrete pad(s), Paved road(s), Cages, Resale shop |
| **Utilities on site (select all)** | Power (mains), Water (mains), Phone (landline), Toilet, EFTPOS, Computer, Internet |
| **Take photos of key site infrastructure** | |
| | |

| | |
|---|---|
| | |
| **Extent of road paving at the site** | Some road paving |
| **Extent of concrete pads / hardstands** | Concrete pads beneath some bins |

# 4 MATERIALS ACCEPTED AND MANAGED AT THE SITE

## 4.1 Residual waste / general waste

| | |
|---|---|
| **Describe the area for residual waste collection** | Fully elevated platform |
| **How is the material stored?** | Skip bin |
| **Describe the construction of the elevated platform** | Fully engineered concrete walls |
| **Is there suitable guard railing to bin bays for the elevated platform?** | No |
| **Details** | Guard rails have been removed at three of the five bays causing a falls hazard. |
| **Describe the hardstand / surfacing of the general waste area** | Concrete hardstand |
| **Does the site have concrete pads beneath general waste bins?** | Full concrete pads |
| **Is the residual waste area covered?** | Not covered |
| **Can the residual waste bins be closed (e.g. with a lid or cover)** | Hard cover to skips |
| **Take photos of the general waste area, platform, hardstand and skip bins** | |

COSCO

5
BINS
4 & 5
RECYCLE
ONLY

1
2
3
4
5

COSCO

1
2
3
4
5

| | |
|---|---|
| | |

## 4.2 Commingled recyclables

| | |
|---|---|
| **Does the site accept commingled recyclables?** | Yes |
| **How is the material stored?** | Skip bin |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large stillage or skip bin (>20m3) |
| **What surface is it (or its skip bin) stored on?** | Full hardstand (concrete or bitumen) |
| **Take photos of storage of this material** | |

Not Accepted
Steel cans
Paper
Cardboard

| | |
|---|---|
| | |
| | |
| **Is there any onsite processing of the material?** | No |

## 4.3 Separated paper and cardboard

| | |
|---|---|
| **Does the site accept separated paper and cardboard?** | No |

## 4.4 Separated glass

| | |
|---|---|
| **Does the site accept separated glass?** | No |

| | |
|---|---|
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.5 Separated plastics

| | |
|---|---|
| **Does the site accept separated plastics?** | No |
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.6 Polystyrene

| | |
|---|---|
| **Does the site accept polystyrene** | No |

## 4.7 Metals

| | |
|---|---|
| **Does the site accept metals?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Collected and bulk hauled to Melbourne |

## 4.8 Timber

| | |
|---|---|
| **Does the site accept timber waste?** | Yes |
| **How is the material stored?** | Loose in pile |

| | |
|---|---|
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

| | |
|---|---|
| | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Timber is stored and processed with green waste into a course product (100mm screen) for use as landfill cover. |

## 4.9 Brick / rock / rubble

| | |
|---|---|
| **Does the site accept brick / rock / rubble?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |

| | |
|---|---|
| | |
| | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Material is crushed and used as road base for tracks at landfill |

## 4.10 Concrete

| | |
|---|---|
| **Does the site accept concrete?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

| | |
|---|---|
| | |
| | |

| | |
|---|---|
| | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | As above. There are extensive stockpiles of concrete and brick around. |

## 4.11 E-waste

| | |
|---|---|
| **Does the site accept e-waste?** | Yes |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | WDEA collected onsite |

## 4.12 Mattresses

| | |
|---|---|
| **Does the site accept mattresses?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Covered area with sides |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |

| | |
|---|---|
| **What surface is it (or its skip bin) stored on?** | Full hardstand (concrete or bitumen) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Collected and transported to Geelong |

## 4.13 Tyres

| | |
|---|---|
| **Does the site accept tyres?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Medium stillage or skip bin (5 - 20m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Provide details** | Collected for recycling |

## 4.14 Agricultural plastics (silage wrap)

| | |
|---|---|
| **Does the site accept separated agricultural waste (silage wrap)?** | Yes |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Medium stillage or skip bin (5 - 20m3) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

| | |
|---|---|
| **Is there any onsite processing of the material?** | No |

## 4.15 Agricultural drums (DRUMuster)

| | |
|---|---|
| **Does the site accept agricultural drums (DRUMuster)?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.16 General comments on materials accepted

| | |
|---|---|
| **General comments on materials accepted at the site** | |

# 5 HAZARDOUS WASTES AND DANGEROUS GOODS ACCEPTED AND MANAGED AT THE SITE

## 5.1 Asbestos

| | |
|---|---|
| **Does the site accept asbestos?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.2 Household chemicals

| | |
|---|---|
| **Does the site accept household chemicals including paint (Detox)?** | No |
| **Is there potential to accept this material in the future?** | No |
| **Why not? Provide details.** | Should be a detox site here |

## 5.3 Gas bottles

| | |
|---|---|
| **Does the site accept gas bottles?** | Yes |
| **How is the material stored?** | Cage |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | Yes |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |

## 5.4 Lead-acid batteries

| | |
|---|---|
| **Does the site accept lead-acid batteries?** | Yes |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Significant sues with storage of batteries with leakage and broken batteries evident. Needs immediate attention. |

## 5.5 Waste oil

| | |
|---|---|
| **Does the site accept waste oil?** | Yes |
| **How is the material stored?** | Drum |
| **Is it stored in a covered or uncovered area / bin?** | Covered area with no sides |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | Full hardstand (concrete or bitumen) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | Yes |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Concrete pad should be bunded |

## 5.6 Fluorescent light tubes

| | |
|---|---|
| **Does the site accept fluorescent light tubes?** | Yes |
| **How is the material stored?** | Stillage |
| **Is it stored in a covered or uncovered area / bin?** | Fully enclosed area such as a shed |
| **Size of the bin or storage area** | Small stillage or skip bin (<5m3) |
| **What surface is it (or its skip bin) stored on?** | Full hardstand (concrete or bitumen) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | Yes |
| **Is there any onsite processing of the material?** | No |

## 5.7 General comments on hazardous / dangerous goods management

| | |
|---|---|
| **General comments / observations regarding hazardous waste / dangerous goods management** | |

# 6 GARDEN ORGANICS

| | |
|---|---|
| **Does the site accept green waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| | |

| | |
|---|---|
| | |
| | |

| | |
|---|---|
| | |
| | |

## 6.1 Drop off area

| | |
|---|---|
| **Is the green waste drop off area sealed or unsealed?** | Unsealed (on dirt) |

| | |
|---|---|
| **Take a photo of the green waste area** | |
| **Does water drain from the green waste area (visually or reportedly, look for pools of water)?** | No |
| **Is storm water runoff and leachate actively managed from the green waste area?** | Yes |
| **Provide details of storm water and leachate management** | Managed via gullies and a leachate pond servicing the landfill |
| **General comments about drop off area** | Huge area with at least 4 stockpiles plus some legacy piles of processed material |

## 6.2 Storage practices

| | |
|---|---|
| **Is timber (any type) combined with green waste for storage / processing?** | Yes |

| | |
|---|---|
| **Take photos of combined timber and green waste storage** | |
| **Is there a stockpile of unprocessed green waste?** | Yes |
| **Are there any design criteria for height, width and separation (e.g. through planning permit, fire restrictions etc.?)** | No |

| | |
|---|---|
| **Take a photo of the unprocessed green waste stockpile** | |
| **Is there a stockpile of processed green waste?** | Yes |
| **Why is there a stockpile of processed green waste?** | It has only recently been processed |
| **Provide details** | Processed regularly and used for landfill cover. Some legacy piles of material evident. Visible contamination throughout the processed material |
| **Take a photo of the processed (mulch) green waste stockpile** | |

## 6.3 Processing and end products

| | |
|---|---|
| **Is green waste processed onsite?** | Yes |
| **Provide details** | Processed regularly and used for landfill cover. Some legacy piles of material evident. Visible contamination throughout the processed material |
| **Take a photo of the product** | |
| **How often is it processed?** | Every 3 months |
| **How is contamination managed?** | Visual inspection at gatehouse |

| | |
|---|---|
| **Take a close-up photo of visible contamination (if any can be seen)** | |
| **What happens to the mulch / compost?** | Council uses it on site |

# 7 RISK MANAGEMENT

| | |
|---|---|
| **Are there any obvious risks at the site?** | Yes |
| **Detail obvious site risks** | Lack of railing at waste bays. |
| **Are all loads supervised upon entry to the site?** | Yes - inspected from an elevated gatehouse |
| **Is the traffic flow unidirectional and free from cross-roads?** | No - traffic management needs improvement |
| **Detail traffic management improvements required** | Visible speeding by site trucks, trucks driving straight over the line of weighbridge traffic. Near miss witnessed on day of inspection. More linemarking, speed signs, directional signs and staff training is required. Council reports new traffic management plan is in development. |
| **Is there suitable signage that directs site users around the site and to different materials areas?** | No - signage requires improvement |
| **Detail site signage improvements required** | As above |
| **Are there manual handling risks on site?** | No |
| **Take photos of each risk** | |

| | |
|---|---|
| | SCRAP METAL →<br>GREEN WASTE →<br>CONCRETE → |
| | |

| | |
|---|---|
| | 4<br>DO NOT USE<br>BINS 4 & 5<br>RECYCL ONLY |
| | |

# 8 ENVIRONMENTAL MANAGEMENT

| | |
|---|---|
| **Describe general site amenity** | Generally clean but some areas need improvement |
| **Provide details** | Some windblown litter arising from the landfill operation. |
| **Is windblown litter visible outside the site or is there a history of litter issues?** | Yes |
| **Provide details** | Some at and over the fence. |
| **Is windblown litter or general debris visible within the site itself?** | Yes |
| **Are there issues with dust at the site, particularly in drier months?** | Yes |
| **Are there issues with odour at the site or have there been odour complaints?** | Yes |
| **Provide details** | Landfill related. |
| **Are there issues with noise at the site or have there been noise complaints?** | No |
| **General comments about environmental management at the site** | Issues with battery storage at site with clear leakage from damaged batteries at the site. |
| **Take photos of relevant environmental management issues** | |

| | |
|---|---|
| | |
| | |

## 8.1 Stormwater management

| | |
|---|---|
| **Is there any storm water management in place at the site?** | Yes |

# 9 SMART MATERIALS MANAGEMENT

| | |
|---|---|
| **Is the site layout arranged to maximise resource recovery?** | No |
| **Provide comment** | Customers go over weighbridge straight onto general waste area |
| **Does the site have a reuse shop?** | Yes |
| **Provide comment** | Not council run |

## 9.1 General comments

| | |
|---|---|
| **General comments** | |

# 10 UPGRADES / IMPROVEMENTS REQUIRED

## 10.1 Infrastructure upgrades

| | |
|---|---|
| **Upgrades required to covered areas / sheds for recycling** | The site lacks infrastructure for the collection and storage of materials such as gas bottles, batteries and e-waste. New infrastructure is required at the site in the short term such as covered areas and/or shedding with hardstands. Given this is Councils primary RRC facility, a larger redevelopment of the recycling areas should be considered to increase diversion and meet better practice guidelines. |
| **Upgrades required for complaint collection and storage of e-waste** | E-waste is stored in a manner which is not compliant with AS5377. If the site is to continue accepting e-waste after the 1 July 2019 new infrastructure will be required such as a secure shed with hardstand. |
| **Upgrades required to hazardous materials / dangerous goods storage** | Storage of batteries is currently a key issue at the site with damaged and leaking batteries stored in the open and on the ground. Construction of new storage infrastructure for batteries (as well as other key materials outlined previously) should be a term priority for the site. |
| **Improvements to site layout and traffic flow** | The site has a number of access roads, many of which lack signage and directional linemarking. A near miss between a residential customer and a landfill truck was observed at the time of the site visit.<br><br>Upgrades to signage and clear linemarking, such as colour coded lanes to separate customers from site vehicles is recommended. In addition, further driver education may be required as several site vehicles were observed travelling well in excess of walking pace. |
| **Improvements to roads and hardstand areas** | In addition to improved traffic management, the site would benefit from additional hardstands to recycling areas along the southern side of the site. |

## 10.2 Management practice improvements

| | |
|---|---|
| **Improvements to site amenity / tidiness** | New infrastructure for collection and storage of key recyclables would likely reduce debris around the batteries and e-waste area. |
| **Improvements to overall management practices** | Guard railing was not present at a number of general waste bays as the rails had been removed by the operator. The rails should remain up at all times. |
| **Improvements to management of hazardous materials / dangerous goods** | Collection and separation of batteries requires improvement with household batteries collected and stored loosely on the ground. The improvements to recycling infrastructure suggested previously should address this issue. |
| **Improvements to garden organics management practices** | At present, garden organics are stockpiled with timber and coprocessed into low grade mulch for use as landfill cover. This practice does not constitute recycling nor beneficial reuse and it is unclear how long EPA will allow it to continue at regional landfill sites.<br><br>A long-term plan for the management of timber and garden organics is required |

| | |
|---|---|
| | for all a Southern Grampians sites as the current procedures appear fragmented and do not support the creation of high value organic products. |

## 10.3 Overall site summary

| | |
|---|---|
| **Overall site summary** | The site is the largest in Southern Grampians and services a large regional centre. However, at present the site lacks critical infrastructure for collection and storage of key recycling materials.<br><br>In the short term, new infrastructure such as covered areas and/or shedding are required for the collection and storage of e-waste, batteries, gas bottles and mattresses. In addition, improvements to traffic management including new signage and road marking should also be considered. This could be part of a large redevelopment at the site which would provide a better practice hub for the Southern Grampians.<br><br>It is further recommended that council develop a plan for the management of timber and garden waste across all its sites, potentially looking at consolidating and processing well separated timber and green waste at Hamilton into higher value products that can be sold or given away safely to residents. |

# BSWWRRG Resource Recovery Centre Assessment

## Penshurst
## Site Assessment Report

reincarnate
strategic environmental consultants

REC | RANDELL ENVIRONMENTAL CONSULTING

reincarnate
strategic environmental consultants

# BARWON SOUTH WEST WASTE AND RESOURCE RECOVERY GROUP

# RESOURCE RECOVERY CENTRE ASSESSMENTS

## Penshurst Site Assessment Report

| | |
|---|---|
| **Author** | Matt Genever |
| **Approver** | Matt Genever |
| **Site Name** | Penshurst Resource Recovery Centre |
| **Site Address** | 5408 Hamilton Highway, Penshurst VIC 3289, Australia |
| **Date** | 22/02/2018 |

*This report has been prepared for Barwon South West Waste and Resource Recovery Group under the agreement dated 12 January 2018. Reincarnate Pty Ltd (ABN: 83 620 459 387) cannot accept any responsibility for any use or reliance on the contents of this report by any third party.*

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# 1 SUMMARY TABLE

| **Penshurst** | |
|---|---|
| **Location** | 5408 Hamilton Highway, Penshurst VIC 3289, Australia |
| **Council** | Southern Grampians |
| **Population served** | 622 |
| **Siting considerations** | The site is set in a rural area which was formerly a landfill (RRC is built on top of old fill area). Site is located at the end of a long service road that is locked by a low gate at the main road. The site can easily be accessed when it is closed, however only by foot suggesting any issues associated with theft would be minimal. The site has extensive buffers of more than 1km in each direction. |
| **Constraints / limitations** | The block is significant in size and it is likely that council owns much of the surrounding land as the depot was located here in the past. The transfer station appears to be located on top of the fill which may restrict development in some areas. |
| **Upgrade priority** | |
| **Site infrastructure / upgrades recommended in line with better practice guidelines** | |
| **INFRASTRUCTURE** | **COMMENTS / UPGRADES REQUIRED** |
| Site fencing and security | Site is not secure, despite a long access road the site can easily be accessed on foot. Secure fencing should be considered in the medium to long term. |
| Residual / general waste area | The general waste area would benefit from hardstands and linemarking. In addition, the lids should be closed when the site is not operational. |
| Covered areas / sheds for recycling | The site lacks infrastructure for the collection and storage of key materials such as gas bottles, batteries, mattresses and e-waste. New infrastructure is required such as a secure shed with hardstand. |
| Complaint e-waste collection and storage area | E-waste is stored in a manner which is not compliant with AS5377, if the site is to continue accepting e-waste after the 1 July 2019 new infrastructure will be required such as a secure shed with hardstand. |
| Hazardous materials / dangerous goods storage | Batteries and gas bottles are stored in a manner which is not compliant with better practice guidelines. New infrastructure is required such as a secure shed with hardstand. |
| Paved roads and hardstand areas | The site would benefit from improved hardstands and linemarking in the medium to long term. |
| **MANAGEMENT PRACTICES** | **COMMENTS / CHANGES REQUIRED** |
| Improvements to site amenity / tidiness | A general clean of the site is required to improve visual amenity. |
| Improvements to oversight of incoming loads | Contamination is evident throughout material piles and there are a number of legacy piles that appear to be growing. Improved oversight and load inspection practices, supported by new signage, should be implemented in the short term. |

| | |
|---|---|
| Improvements to overall management practices | As detailed above |
| Improvements to garden organics management | Improved contamination management would improve the quality of outputs. The stockpiles of processed green waste suggest that council should be more proactive at using this material or look at other options to move it off site. |
| **Overall Site Findings** | This site lacks infrastructure apart from a poorly developed waste platform and a shipping container for storage of oil and batteries. The site suffers from litter and debris in the rear section and a number of legacy stockpiles exist that should be addressed in the short term.<br><br>If the site is to remain open in the long term then significant investment is required. In the short term, this would include construction of a fully elevated platform and covered areas and/or shedding for the collection and storage of gas bottles, e-waste and mattresses (and batteries as this would likely replace the current shipping container).<br><br>However, as with Woorndoo, council should undertake long term strategic planning on the viability of the site given it services a small community and requires significant investment to reach better practice standards. Investment at Mortlake to develop a better practice facility may be more beneficial to council and the community in the long run. |

# 2 SITE OVERVIEW

## 2.1 Site Details

| | |
|---|---|
| **Facility Name** | Penshurst |
| **Consultant Name** | Matt |
| **Date** | 22/02/2018 |
| **Address** | 5408 Hamilton Highway, Penshurst VIC 3289, Australia |
| **Council** | Southern Grampians |
| **Site Operator** | Council |
| **SV BP Category** | 1 |
| **Customers** | Public only |
| **Approx. Population Serviced** | 622 |

## 2.2 Hubs and Spokes

| | |
|---|---|
| **Does council use a hub and spoke model for consolidating materials?** | No |

## 2.3 Site Security

| | |
|---|---|
| **Site staffing (no of staff)** | 1 |
| **Is the site fenced?** | No |

| | |
|---|---|
| **Take a photo of fencing issues** | |
| **Does the site have CCTV?** | No |

## 2.4 Siting Details

| | |
|---|---|
| **Site setting** | Rural area |
| **Distance from township (km)** | 3.3 |
| **Site screening** | Well screened |
| **Nearest sensitive receptor** | Residential |
| **Distance to nearest sensitive receptor (km)** | 1.0 |
| **Prior land-use** | Landfill (RRC is built on top of old fill area) |
| **General comments on siting** | Site is located at the end of a long service road that is locked by a low gate at the main road. The site can easily be accessed when it is closed, however only by foot suggesting any issues associated with theft would be minimal. The site has extensive buffers of more than 1km in each direction. |
| **Site constraints / limitations / concerns** | The block is significant in size and it is likely that council owns much of the surrounding land as the depot was located here in the past. The transfer station appears to be located on top of the fill which may restrict development in some areas. |

| | |
|---|---|
| **Take photos of the siting and screening** | |

## 2.5 Climate adaptation

| | |
|---|---|
| **Is the site located in a flood prone area?** | No |
| **Is the site located in an area at risk of coastal inundation?** | No |
| **Is the site located in an area prone to bushfires?** | No |
| **Does the site have a climate change adaptation plan / assessment?** | No |

# 3 OVERVIEW OF SITE INFRASTRUCTURE

## 3.1 Site infrastructure

| | |
|---|---|
| **Infrastructure on site (select all)** | Gatehouse, Engineered retaining walls, Skip bins (covered), Cages |
| **Utilities on site (select all)** | Water (tank), Power (mains), Portaloo |
| **General comments on site infrastructure** | Site is poorly developed and lacks critical infrastructure |
| **Take photos of key site infrastructure** | |
| **Extent of road paving at the site** | Roads unpaved |
| **Extent of concrete pads / hardstands** | Concrete pads beneath some bins |

# 4 MATERIALS ACCEPTED AND MANAGED AT THE SITE

## 4.1 Residual waste / general waste

| | |
|---|---|
| **Describe the area for residual waste collection** | Fully elevated platform |
| **How is the material stored?** | Skip bin |
| **Size of the bin or storage area** | Large stillage or skip bin (>20m3) |
| **Describe the construction of the elevated platform** | Fully engineered concrete walls |
| **Is there suitable guard railing to bin bays for the elevated platform?** | Yes |
| **Describe the hardstand / surfacing of the general waste area** | No hardstand |
| **Does the site have concrete pads beneath general waste bins?** | Full concrete pads |
| **Is the residual waste area covered?** | Not covered |
| **Can the residual waste bins be closed (e.g. with a lid or cover)** | Hard cover to skips |
| **General comments on residual waste collection area** | Bin not closed and odour is present |

| | |
|---|---|
| **Take photos of the general waste area, platform, hardstand and skip bins** | |
| | |

| | |
|---|---|
| | |

## 4.2 Commingled recyclables

| | |
|---|---|
| **Does the site accept commingled recyclables?** | Yes |
| **How is the material stored?** | Skip bin |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |

## 4.3 Separated paper and cardboard

| | |
|---|---|
| **Does the site accept separated paper and cardboard?** | No |

## 4.4 Separated glass

| | |
|---|---|
| **Does the site accept separated glass?** | No |
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.5 Separated plastics

| | |
|---|---|
| **Does the site accept separated plastics?** | No |
| **Is their potential to accept this material in the future?** | No |
| **Why not? Provide details** | Captured through commingled bin |

## 4.6 Polystyrene

| | |
|---|---|
| **Does the site accept polystyrene** | No |

## 4.7 Metals

| | |
|---|---|
| **Does the site accept metals?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Collected and bulk hauled to Melbourne |

## 4.8 Timber

| | |
|---|---|
| **Does the site accept timber waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Intention is to chip and use on site |

## 4.9 Brick / rock / rubble

| | |
|---|---|
| **Does the site accept brick / rock / rubble?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |

| | |
|---|---|
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Intention is to crush and use this material onsite |

## 4.10 Concrete

| | |
|---|---|
| **Does the site accept concrete?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | Yes |
| **Provide details** | Intention is to crush this and use it onsite |

## 4.11 E-waste

| | |
|---|---|
| **Does the site accept e-waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.12 Mattresses

| | |
|---|---|
| **Does the site accept mattresses?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Unclear |

## 4.13 Tyres

| | |
|---|---|
| **Does the site accept tyres?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |

| | |
|---|---|
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |
| **Provide details** | Unclear |

## 4.14 Agricultural plastics (silage wrap)

| | |
|---|---|
| **Does the site accept separated agricultural waste (silage wrap)?** | No |
| **Is their potential to accept this material in the future?** | No |

## 4.15 Agricultural drums (DRUMuster)

| | |
|---|---|
| **Does the site accept agricultural drums (DRUMuster)?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |

| | |
|---|---|
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |
| **Is there any onsite processing of the material?** | No |

## 4.16 General comments on materials accepted

| | |
|---|---|
| **General comments on materials accepted at the site** | |

# 5 HAZARDOUS WASTES AND DANGEROUS GOODS ACCEPTED AND MANAGED AT THE SITE

## 5.1 Asbestos

| | |
|---|---|
| **Does the site accept asbestos?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.2 Household chemicals

| | |
|---|---|
| **Does the site accept household chemicals including paint (Detox)?** | No |
| **Is there potential to accept this material in the future?** | No |

## 5.3 Gas bottles

| | |
|---|---|
| **Does the site accept gas bottles?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |

## 5.4 Lead-acid batteries

| | |
|---|---|
| **Does the site accept lead-acid batteries?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Is the material stored in a manner that is required under the relevant regulations (e.g. bunding, fully enclosed, weatherproof etc.)?** | No |

| | |
|---|---|
| **Take a photo of how the material is stored** | |
| **Is there any onsite processing of the material?** | No |

## 5.5 Waste oil

| | |
|---|---|
| **Does the site accept waste oil?** | No |

## 5.6 Fluorescent light tubes

| | |
|---|---|
| **Does the site accept fluorescent light tubes?** | No |

## 5.7 General comments on hazardous / dangerous goods management

| | |
|---|---|
| **General comments / observations regarding hazardous waste / dangerous goods management** | |

# 6 GARDEN ORGANICS

| | |
|---|---|
| **Does the site accept green waste?** | Yes |
| **How is the material stored?** | Loose in pile |
| **Is it stored in a covered or uncovered area / bin?** | Uncovered area |
| **Size of the bin or storage area** | Large open area (e.g. metals or green waste area) |
| **What surface is it (or its skip bin) stored on?** | No hardstand (on dirt) |
| **Take photos of storage of this material** | |

## 6.1 Drop off area

| | |
|---|---|
| **Is the green waste drop off area sealed or unsealed?** | Unsealed (on dirt) |

| | |
|---|---|
| **Take a photo of the green waste area** | |
| **Is the green waste drop-off area visible from the gatehouse?** | Yes |
| **Does water drain from the green waste area (visually or reportedly, look for pools of water)?** | Yes |
| **Is storm water runoff and leachate actively managed from the green waste area?** | No |

## 6.2 Storage practices

| | |
|---|---|
| **Is timber (any type) combined with green waste for storage / processing?** | No |
| **Is there a stockpile of unprocessed green waste?** | Yes |
| **Are there any design criteria for height, width and separation (e.g. through planning permit, fire restrictions etc.?)** | No |

| | |
|---|---|
| **Take a photo of the unprocessed green waste stockpile** | |
| **Is there a stockpile of processed green waste?** | Yes |
| **Why is there a stockpile of processed green waste?** | There are limited local markets for the material |
| **Provide details** | Council is supposed to use this onsite |
| **Take a photo of the processed (mulch) green waste stockpile** | |

## 6.3 Processing and end products

| | |
|---|---|
| **Is green waste processed onsite?** | Yes |
| **Provide details** | Mulched |
| **Take a photo of the product** | |
| **How often is it processed?** | Longer than 12 months |
| **How is contamination managed?** | Visual inspection at gatehouse |
| **Provide details of contamination management** | Poor, contamination is evident throughout the stockpile |

| | |
|---|---|
| **Take a close-up photo of visible contamination (if any can be seen)** | |
| **What happens to the mulch / compost?** | Council uses it on site |

# 7 RISK MANAGEMENT

| | |
|---|---|
| **Are there any obvious risks at the site?** | No |
| **Are all loads supervised upon entry to the site?** | Yes - inspected from ground level gatehouse |
| **Is the traffic flow unidirectional and free from cross-roads?** | Yes - traffic management is good |
| **Is there suitable signage that directs site users around the site and to different materials areas?** | No - signage requires improvement |
| **Detail site signage improvements required** | Improved signage for materials and directions are required. |

# 8 ENVIRONMENTAL MANAGEMENT

| | |
|---|---|
| **Describe general site amenity** | Generally clean but some areas need improvement |
| **Provide details** | Some litter and debris but better than other sites in the area |
| **Is windblown litter visible outside the site or is there a history of litter issues?** | No |
| **Is windblown litter or general debris visible within the site itself?** | Yes |
| **Provide details** | Around the top of the site |
| **Are there issues with dust at the site, particularly in drier months?** | No |
| **Are there issues with odour at the site or have there been odour complaints?** | No |
| **Are there issues with noise at the site or have there been noise complaints?** | No |
| **General comments about environmental management at the site** | Significant buffers and no sensitive receptors nearby |

## 8.1 Stormwater management

| | |
|---|---|
| **Is there any storm water management in place at the site?** | No |
| **Does Council believe that this poses an obvious risk (e.g. is it near sensitive receptors)?** | No |

# 9 SMART MATERIALS MANAGEMENT

| | |
|---|---|
| **Is the site layout arranged to maximise resource recovery?** | Partially |
| **Provide comment** | One large loop, suitable given the size of the site |
| **Does the site have a reuse shop?** | No |
| **Is there room for a reuse shop?** | No - site is too small |
| **Are any materials (apart from green waste) processed on site (e.g. concrete crushing?)** | Yes |
| **Provide comment** | Concrete and timber are reportedly processed and used onsite |
| **Are there suitable end markets for the processed material?** | No - difficult to move |

## 9.1 General comments

| | |
|---|---|
| **General comments** | |

# 10 UPGRADES / IMPROVEMENTS REQUIRED

## 10.1 Infrastructure upgrades

| | |
|---|---|
| **Upgrades required to site fencing and security** | Site is not secure, despite a long access road the site can easily be accessed on foot. Secure fencing should be considered in the medium to long term. |
| **Upgrades required to residual / general waste disposal area** | The general waste area would benefit from hardstands and linemarking. In addition, the lids should be closed when the site is not operational. |
| **Upgrades required to covered areas / sheds for recycling** | The site lacks infrastructure for the collection and storage of key materials such as gas bottles, batteries, mattresses and e-waste. New infrastructure is required such as a secure shed with hardstand. |
| **Upgrades required for complaint collection and storage of e-waste** | E-waste is stored in a manner which is not compliant with AS5377, if the site is to continue accepting e-waste after the 1 July 2019 new infrastructure will be required such as a secure shed with hardstand. |
| **Upgrades required to hazardous materials / dangerous goods storage** | Batteries and gas bottles are stored in a manner which is not compliant with better practice guidelines. New infrastructure is required such as a secure shed with hardstand. |
| **Improvements to roads and hardstand areas** | The site would benefit from improved hardstands and linemarking in the medium to long term. |

## 10.2 Management practice improvements

| | |
|---|---|
| **Improvements to site amenity / tidiness** | A general clean of the site is required to improve visual amenity. |
| **Improvements to oversight of incoming loads** | Contamination is evident throughout material piles and there are a number of legacy piles that appear to be growing. Improved oversight and load inspection practices, supported by new signage, should be implemented in the short term. |
| **Improvements to overall management practices** | As detailed above |
| **Improvements to garden organics management practices** | Improved contamination management would improve the quality of outputs. The stockpiles of processed green waste suggest that council should be more proactive at using this material or look at other options to move it off site. |

## 10.3 Overall site summary

| | |
|---|---|
| **Overall site summary** | This site lacks infrastructure apart from a poorly developed waste platform and a shipping container for storage of oil and batteries. The site suffers from litter and debris in the rear section and a number of legacy stockpiles exist that should be addressed in the short term. |

| | |
|---|---|
| | If the site is to remain open in the long term then significant investment is required. In the short term, this would include construction of a fully elevated platform and covered areas and/or shedding for the collection and storage of gas bottles, e-waste and mattresses (and batteries as this would likely replace the current shipping container).<br><br>However, as with Woorndoo, council should undertake long term strategic planning on the viability of the site given it services a small community and requires significant investment to reach better practice standards. Investment at Mortlake to develop a better practice facility may be more beneficial to council and the community in the long run. |