Jacobs

Planning Assessment Report

24 May 2023

Lilydale Waste to Energy Facility Yarra Valley Water

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Lilydale Waste to Energy Facility

Project No:IS0803L4Document Title:Planning Assessment ReportDocument No.:IS0803L4-EP-RP-0003Revision:CDate:24 May 2023Client Name:Yarra Valley Water

Jacobs Australia Pty Limited

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Document history and status

Revision	Date	Description	Author	Reviewed	Approved
С	24/5/23	Final Report	AW, AF	BM	HY





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- D.2 Decommissioned Rail Corridor Crossing, Minister for Transport Infrastructure (5/5/2022)
- D.3 Public Land Manager Consent for Permit Application, Transport for Victoria (12/5/2022)
- D.4 Rail Trail Crossing In-Principle Letter of Support, Yarra Ranges Council (1/10/2021)
- D.5 Pre-Development Advice, Melbourne Water (6 November 2017)
- D.6 Referral Decision under Environment Protection and Biodiversity Conservation Act 1999, Department of the Environment and Energy (26 April 2018)
- D.7 Cultural Heritage Management Plan No. 17255 approval letter, Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation (10/12/2021)

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Acronyms

BMO	Bushfire Management Overlay	
CEMP	Construction Environmental Management Plan	
СНМР	Cultural Heritage Management Plan	
DELWP	Department of Environment, Land, Water and Planning (Vi	c)
DoT	Department of Transport	
EPA	Environment Protection Authority (Vic)	
ESO	Environmental Significance Overlay	
EVC	Ecological Vegetation Classes	
FFG	Flora and Fauna Guarantee Act 1988	
GWZ	Green Wedge Zone	
LSIO	Land Subject to Inundation Overlay	
MW	Megawatt	
PUZ1	Public Use Zone	
STP	Sewerage Treatment Plant	
TRZ	Transport Zone	
WtE	Waste-to-Energy	ADV
YVW	Yarra Valley Water	



Executive Summary

Yarra Valley Water (YVW) proposes to use and develop the land at 83-85 Nelson Road, Lilydale for a Waste to Energy (WtE) facility, construct a private access road from the facility to Maroondah Highway, and remove vegetation.

The proposal is located within the Shire of Yarra Ranges and is subject to the provisions of the Yarra Ranges Planning Scheme (planning scheme). Pursuant to Clause 72.01-1 of the planning scheme, the Minister for Planning is the responsible authority for planning permit application as the proposed facility would have an installed capacity of 1MW or greater.

In accordance with the planning scheme, this planning permit application is seeking approval in accordance with the following provisions of the planning scheme:

• Use and development of a waste-to-energy facility in the Public Use Zone 1 (PUZ1).

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- Use and development of an access road ancillary to a waste-to-energy facility within the Transport Zone 1 (TZ1) (Yarra Valley Rail Trail), Green Wedge Zone Schedule 2 (GWZ2) and Schedule 4 (GWZ4).
- Use and development of transmission infrastructure ancillary to the WtE facility within the Public Use Zone 1 (PUZ1)
- Buildings and works, construction of a fence and the removal/lopping of vegetation within the Environmental Significance Overlay 1 (ESO1).
- Buildings and works, construction of a fence and the removal/lopping of vegetation within the Significant Landscape Overlay 2 (SLO2).
- Building and works within the Land Subject to Inundation Overlay (LSIO).
- The removal of native vegetation in accordance with Clause 52.17.
- The creation of a new access to the Principal Road Network (Maroondah Highway) in accordance with Clause 52.29.

This Planning Assessment Report and the suite of supporting specialist assessment demonstrate that the proposed use and development of the WtE facility is appropriate for the following reasons:

- It is consistent with State policy to co-locate renewable energy facilities on land that is used for wastewater treatment and where the separation from conflicting land uses can be provided.
- It is consistent with State policy to transition to a low-carbon economy, and it will:
 - Provide all of the renewable energy to the proposed facility, Lilydale Sewerage Treatment Plant, Lilydale Recycled Water Pump Station, and export excess renewable energy to the local grid.
 - Reduce fossil fuel emissions over the 25-year life of the facility.
 - Create over 173,000 Australian Carbon Credit Units.
 - Divert around 55,000 tonnes of organic food waste per year.
- It is consistent with the Planning Policy Framework and it:
 - Adequately mitigates potential impacts to the environment and surrounding land uses.
 - Is sited and designed to respond to the surrounding landscape, including the use of materials, landscaping and visual screening.

The project will result in an overall net community benefit by diverting waste to be made available energy, provide local employment opportunities during construction and operation fon the oral lipse provide local employment opportunities during construction and operation fon the oral lipse provide local employment opportunities during construction and operation fon the oral lipse provide local employment opportunities during construction and operation fon the oral lipse provide local employment opportunities during construction and operation for the oral lipse provide local employment opportunities during construction and operation for the oral lipse provide local employment opportunities during construction and operation for the oral lipse provide local employment opportunities during construction and operation for the oral lipse provide local employment opportunities during construction and operation for the oral lipse provide local employment opportunities during construction and operation for the oral lipse provide local employment opportunities during construction and operation for the oral lipse provide local employment opportunities during construction and operation for the oral lipse provide local employment opportunities during construction and review as a state of the oral lipse provide local employment opportunities during construction and review as a state of the oral lipse provide local employment opportunities during construction and review as a state of the oral lipse provide local employment opportunities during construction and review as a state of the oral lipse provide local employment opportunities during construction and review as a state of the oral lipse provide local employment opportunities during construction employment opportunities during construction and review as a state of the oral lipse provide local employment opportunities during construction employment opportunities during construction employment opportunities during construction employment opportunities during construction e

1. Introduction

This Planning Assessment Report has been prepared by Jacobs Group (Australia) Pty Ltd (Jacobs) on behalf of Yarra Valley Water (YVW) to support a planning permit application to the Minister for Planning for the use and development of a Waste to Energy (WtE) facility (the project) at 83-85 Nelson Road, Lilydale, the creation of access to the WtE facility, and the removal of vegetation.

1.1 Need for the Lilydale Waste to Energy project

Under the Statement of Obligations (Emission Reduction) of the *Water Industry Act 1994*, YVW are one of the Victorian water corporations subject to mandates to reduce greenhouse gas emissions. In support of this regulation, YVW is committed to source 100% of its own electrical energy requirements from renewable sources by 2025 and reduce greenhouse gas emissions to zero by 2030. One of the key projects central to YVW's net zero emissions strategy is the establishment of a second WtE facility – the Lilydale WtE facility.

The Lilydale WtE facility will process organic food waste using anaerobic digestion technology to break down the organic material and create biogas to generate electricity. The project will divert on average 150 tonnes of organic food waste daily (around 55,000 tonnes per year). This includes fats, oils and grease, food processing waste, dairy waste, animal processing waste, de-packaged spoilt food and/or liquids. Subject to separate Government approval(s), the digestate product can potentially be used as a fertiliser and thereby return valuable nutrients to the soil. This outcome is consistent with the State Government's circular economy policy *Recycling Victoria*, which encourages the use advanced technologies to process organics to realise the full economic value of organic wastes.

The project will have an installed capacity of approximately 2.4 megawatts (2.4MW), which will generate approximately 39,000 kWh daily of renewable energy and contribute to around 35% of YVW's overall electrical needs. The proposed WtE facility has been co-located on the Lilydale Sewerage Treatment Plant (STP) and will power the Lilydale STP, Recycled Water Pump Station and export excess renewable energy to the local grid. The proposed WtE facility will reduce YVW's fossil fuel emissions over the 25-year life of the WtE facility. It will also create over 173,000 Australian Carbon Credit Units through an alternative waste treatment methodology over the first seven years of operation.

The Lilydale WtE facility will replicate the success of the Wollert WtE facility which has operated since 2017. The Wollert WtE facility has diverted over 100,000 tonnes of food waste from landfill and supplies over 20% of YVW's energy requirements.

The Lilydale STP was chosen as the preferred site for its next WtE facility as not only is the land owned by YVW, which reduces costs and improves economically viable, but also because the location complements the existing treatment plant, the land is undeveloped, largely clear of environmental constraints, and is located on the urban fringe where it can be separated from sensitive land uses.

The project demonstrates YVW's commitment to align with state legislation and policy, including the *Statewide Waste and Resource Recovery Infrastructure Plan (2018), Water for Victoria (2018) and the Climate Change Act (2017),* which seek to reduce greenhouse gas emissions and strengthen climate change resilience. The project also supports the Victorian water industry's commitment to deliver alternative waste treatment and sustainable energy supplies, as well as benefitting customers and broader community by reducing YVW's operating costs (and thereby reducing customers' bills) and contributing to Victoria's economy with jobs during the construction and operation phases.



1.2 Overview of planning approvals

Planning approval is being applied for in accordance with the following provisions of the Yarra Ranges Planning Scheme (planning scheme):

- Use and development of a WtE facility in the Public Use Zone 1 (PUZ1)
- Use and development of an access road ancillary to the WtE facility within the Green Wedge Zone Schedule 2 (GWZ2) and Green Wedge Zone Schedule 4 (GWZ4)
- Use and development of an access road ancillary to the WtE facility within the Transport Zone 1 (TRZ1) (Yarra Valley Rail Trail)
- Use and development of transmission infrastructure ancillary to the WtE facility within the Public Use Zone 1 (PUZ1)
- Buildings and works, and the removal/lopping of any vegetation within the Environmental Significance Overlay (ESO1)
- Building and works within the Land Subject to Inundation Overlay (LSIO)
- Buildings and works and the removal of vegetation in accordance with the schedule to Clause 51.03
 Upper Yarra Valley and Dandenong Ranges Regional Strategy Plan
- The removal of native vegetation in accordance with Clause 52.17
- The creation of a new access to the Principal Road Network (Maroondah Highway) in accordance with Clause 52.29 Land Adjacent to the Principal Road Network.

This report describes the project and provides and assessment against the relevant provisions of the planning scheme.

1.3 Supporting documentation

This application is supported by the following correspondences, reports and plans:

- Appendix A: Certificates of Title
- Appendix B: Plans
 - **B1: Development Plans**
 - Plan A Access Road, Intersection Modifications, Culvert Replacement.
 - Plan B Waste to Energy Facility
 - Plan C Utility Infrastructure and Secondary Access
 - Plan D Overview Plan
 - **B2: Elevations**
 - **B3: Site Plans**
 - B4: Power Supply Plan
 - B.5: Native Vegetation Removal Plan
 - B.6: Tree Removal Plan
- Appendix C: Specialist Assessments
 - C1: Ecology Assessment
 - C2: Arboriculture Assessments
 - C3: Air Quality Assessment



- C4: Noise Assessment
- C5: Traffic and Transport Assessment
- C6: Landscape and Visual Assessment
- C7: Preliminary Land Management Plan
- Appendix D: Correspondence

Roads

- D1: Re Access Road and Intersection, Department of Transport (9/2/2022)

Rail

- D2: Decommissioned Rail Corridor Crossing, Minister for Transport Infrastructure (5/5/2022)
- D3: Public Land Manager Consent for Permit Application, Transport for Victoria (12/5/2022)
- D4: Rail Trail Crossing In-Principle Letter of Support, Yarra Ranges Council (1/10/2021)

Other

- D5: Pre-Development Advice, Melbourne Water (6 November 2017)
- D6: Referral Decision under Environment Protection and Biodiversity Conservation Act 1999, Department of the Environment and Energy (26 April 2018)
- D7: Cultural Heritage Management Plan No. 17255 approval letter, Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation (10/12/2021)
- Appendix E: Consultation Summary Report

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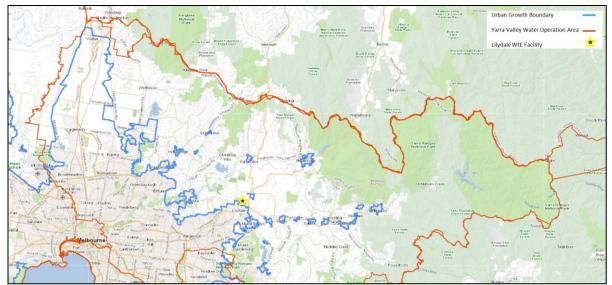
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2. Subject site and surrounds

The proposed WtE facility is to be located on the urban edge of Melbourne (Figure 2-1), within the Shire of Yarra Ranges.

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2.1 Site surrounds

The project site (Area A in Figure 2-2) is located outside of the Urban Growth Boundary and is surrounded by land that is used for farming (north), quarrying (east), recreation (west) and the Lilydale STP and industry (south). These adjoining land uses separate the proposed facility from sensitive land uses, including dwellings, schools and other urban uses located in the communities of Lilydale and Coldstream.

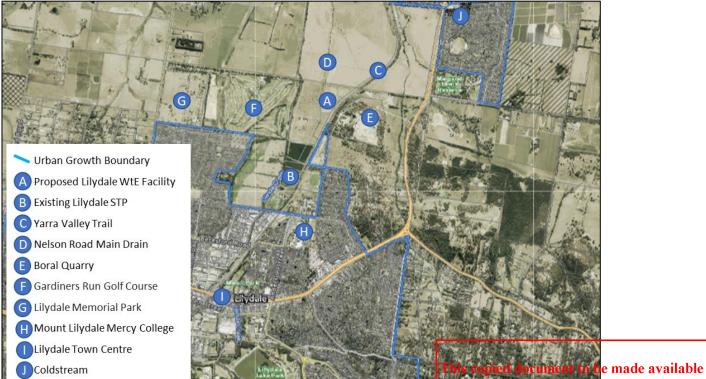


Figure 2-2: Project site and surrounds

The land to the north (Area D in Figure 2-2) is owned by YVW, is in the Green Wedge Zone and is used for agricultural purposes and is largely cleared of vegetation. The nearest residential dwelling to the northeast of the project area is approximately 1,000 metres, in the nearby community of Coldstream.

Located to the south (Area B in Figure 2-2) is the Lilydale STP. It comprises of wastewater treatment buildings, infrastructure and lagoons. The buildings are partially screened by vegetation that has been planted along the rail trail.

The land to the south-east (Area H in Figure 2-2) is used for industrial and warehouse uses. A BMX track is located on the south-side of Nelson Road, as well as the Mount Lilydale Mercy College. The college also leases a sportsfield (on YVW land) which is located on the northern side of Nelson Road, between Quarry Road and the Yarra Valley Rail Trail. The nearest residential dwelling in the south-east is approximately 850 metres from the project area. The residential land is separated from the site by land that is zoned for industrial purposes and used for storage and laydown.

The land to the east (Area E in Figure 2-2) is used by Boral for quarrying rock.

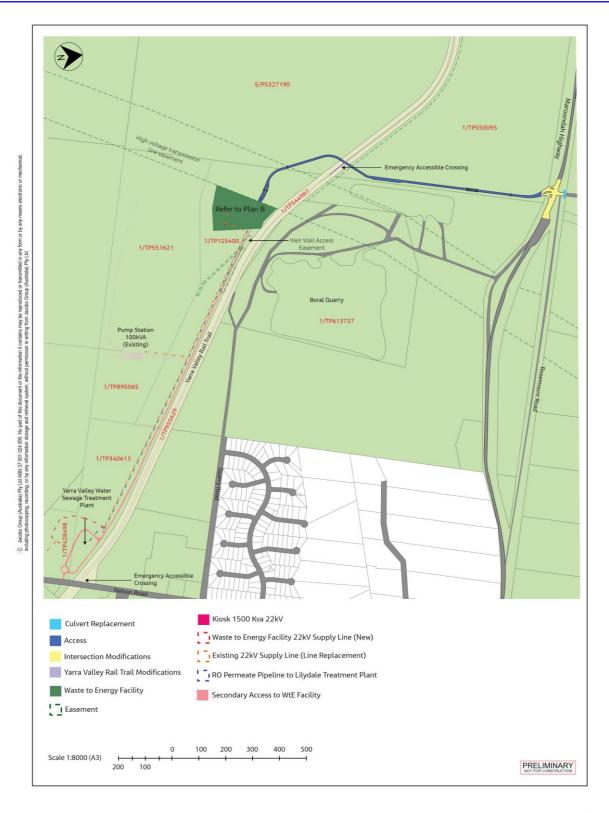
The land to the west (Area F in Figure 2-2) is Gardiners Run Golf Course. The land directly south of the golf course and west of the Lilydale STP is used for agricultural purposes and separates residents from the Lilydale STP. The nearest dwelling to the west of the project site is approximately 1,000 metres.

2.2 Project area

The proposed Lilydale WtE facility and its components are shown in Figure 2-3:

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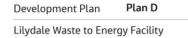
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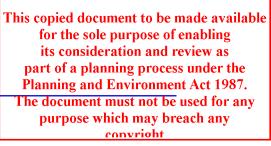
Yarra Valley Water Jacobs

Figure 2-3: Lilydale Waste to Energy Facility Project



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Waste to Energy facility

The proposed WtE facility is to be located at 83-85 Nelson Road, Lilydale. The property is owned by YVW, is zoned Public Use Zone 1 (PUZ1) and is used as a sewerage treatment plant. The proposed WtE facility will be located on Lot 1 of TP125400.

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The land is largely cleared of vegetation and is heavily disturbed by previous land uses. An easement in favour of Ausnet for high voltage electricity transmission lines applies to the northern edge of the land, including provision for its future duplication. Nelson Road Drain is located on the western edge of the facility and Yarra Valley Rail Trail is located on its eastern edge. Located to the south, within the balance of the PUZ1 land, is the Lilydale STP.

The subject site is flat, with an undulating topography directly to the north and west, and hills to the east and south. Views of the subject site from publicly accessible land, other than the rail trail, are screened by the topography.

Photo 2-1 shows the view from the Yarra Valley Rail Trail looking north-west over the project site. Photo 2-2 shows the view from the Yarra Valley Rail Trail looking west over the project site. Photo 2-3 shows the view Yarra Valley Rail Trail looking east away from the project site.



Photo 2-1: View looking north-west from the Yarra Valley Rail Trail towards the subject site



Photo 2-2: View looking west from the Yarra Valley Rail Trail towards northern edge of the subject site



Photo 2-3: View looking east from the Yarra Valley Rail Trail towards industrial zoned land and towards Boral Quarry

Access road

A new access road is proposed along the southern edge of 535-537 Maroondah Highway Coldstream (Lot 5 of PS327190 and Lot 1 of TP550095 which are owned by YVW). The road will connect the proposed WtE Facility to Maroondah Highway. and cross over the Yarra Valley Rail Trail (Lot 2 of TP18019).

The majority of the land for the road is in the Green Wedge Zone, and is used for agricultural purposes. The Yarra Valley Rail Trail is in the Transport Zone 1 and it is a decommissioned railway (historical Coldstream Railway line) that is now used as a walking and cycling trail.

An unnamed waterway (a branch of the Lilydale East Drain) is located in Lot 1 of TP550095 and it will be crossed by the proposed access road.

The area is largely cleared of vegetation with the following exceptions - the Yarra Trail, as well as within Lot 1 of TP550095 where trees overhang the southern boundary from the neighbouring lot and along the waterway (unnamed).

Maroondah Highway intersection

The proposed access road is to connect with a new intersection at Maroondah Highway. The new intersection is to be located across from Ingram Road.

Maroondah Highway is a primary arterial road that is managed by the Department of Transport. It has a single lane in each direction, with a right-hand turning lane into Ingram Road for north-bound traffic. A service lane runs along the eastern side of Maroondah Highway, just south of Ingram Road.

Ingram Road is a local road managed by the Yarra Ranges Shire Council. It has a single lane in each direction. Ingram Road crosses over the Lilydale East Drain near the intersection. Branching off Ingram Road (near the intersection with Maroondah Highway) is Rosemont Road.

There is existing vegetation on both sides of Maroondah Highway.

Photo 2-4 shows the intersection of Maroondah Highway and Ingram Road from Rosemont Road.

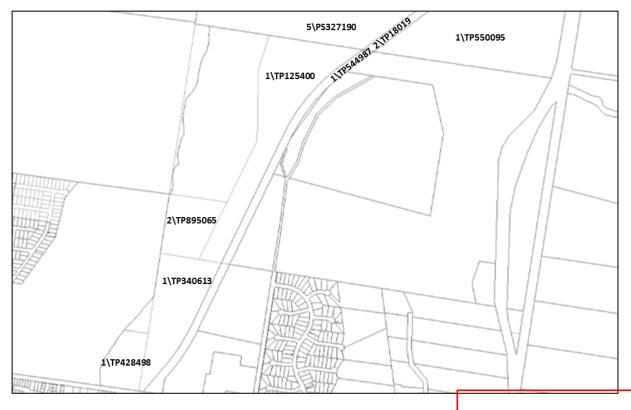
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Photo 2-4: View looking north-west across the Maroondah Highway and Ingram Road intersection

2.3 Land Tenure

The proposed development will be located on land shown in Figure 2-4, as well as Maroondah Highway and Ingram Road. The tenure of the affected land is provided in Table 2-1. There is an easement in favour of Ausnet that limits the development of land of Lot 1 of TP125400, and as a result buildings and landscaping have been designed outside of the easement. There are no other restrictions or easements on the titles that affect the proposed development. YVW does not propose to amend any existing easements as part of this application.



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Figure 2-4: Affected land

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Table 2-1 Land tenure details

			<u>convright</u>
Details	Land owner	Restrictions	Easements
The WtE facility is to be located on this site.	Yarra Valley Water	There are no restrictions on title.	There are easements for access, quarrying, a channel and a pipeline.
Nelson Road Drain is located within the title boundary.			A high voltage electricity transmission easement (E1) bisects the north-east corner.
		1	
The access road is to be located on the land.	Yarra Valley Water	There are no restrictions on title.	There are no easements on title
The access road is to be located on the land.	Yarra Valley Water	There are no restrictions on title.	A high voltage electricity transmission easement (E1) bisects the north-east corner.
The access road is to be located across the land	VicTrack	There are no restrictions on title.	There are no easements on title. YVW has permission to obtain a licence from VicTrack for access across the land.
Pedestrian control devices. Information board.	VicTrack	There are no restrictions on title.	There are no easements on title.
		1	
Roadworks and modification of the intersection	Road reservation, Department of Transport	Not applicable	Not applicable
Roadworks and modification of the intersection	Road reservation, Yarra Ranges Shire Council	Not applicable	Not applicable
1	I	I	
22kV poweline	Yarra Valley Water	There are no restrictions on title.	There are no easements on title.
22kV poweline	Yarra Valley Water	There is a caveat in favour of Eastern Energy Ltd	There are no easements shown on title.
22kV poweline	Yarra Valley Water	There are no restrictions on title.	There is a passageway easement on title.
	The WtE facility is to be located on this site. Nelson Road Drain is located within the title boundary. The access road is to be located on the land. The access road is to be located on the land. The access road is to be located across the land Roadworks and modification of the intersection Roadworks and modification of the intersection 22kV poweline 22kV poweline	The WtE facility is to be located on this site.Yarra Valley WaterNelson Road Drain is located within the title boundary.Yarra Valley WaterThe access road is to be located on the land.Yarra Valley WaterThe access road is to be located on the land.Yarra Valley WaterThe access road is to be located on the land.Yarra Valley WaterPedestrian control devices. Information board.VicTrackRoadworks and modification of the intersectionRoad reservation, Parra Ranges Shire CouncilRoadworks and modification of the intersectionRoad reservation, Yarra Ranges Shire Council22kV powelineYarra Valley Water	The WtE facility is to be located on this site.Yarra Valley Water helson Road Drain is located within the title boundary.There are no restrictions on title.The access road is to be located on the land.Yarra Valley WaterThere are no restrictions on title.The access road is to be located on the land.Yarra Valley WaterThere are no restrictions on title.The access road is to be located on the land.Yarra Valley WaterThere are no restrictions on title.The access road is to be located across the landVicTrackThere are no restrictions on title.Pedestrian control

3. Proposal

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3.1 Use of the land for a waste to energy facility

YVW is proposing to use and develop land to generate energy from waste. The land use is defined in the planning scheme as a 'Waste-to-Energy Facility', as follows:

Land used for the combustion, treatment or bio-reaction of waste to produce energy for use off site. It includes the activities to collect, temporarily store, process, or transfer waste materials for energy production.

The WtE facility is designed to process around 55,000 tonnes per year of blended organic waste feedstock via anaerobic digestion. Anaerobic digestion is a well-established technology in which organic waste is broken down in the absence of oxygen. This results in the generation of 'biogas', which is rich in methane (the main constituent of natural gas). The organic material is broken down in a sealed vessel called a digester. The biogas can be burnt to produce renewable electricity, which results in reduced dependence on coal fired electricity generation.

3.2 Development of the waste to energy facility

Development of the WtE facility would comprise of:

- Construction of buildings, installation of plant and undertaking of works
- Construction of an access road from Maroondah Highway to the WtE facility
- Modification of Maroondah Highway and Ingram Road intersection
- Utility infrastructure
- Replacement of an existing culvert at Ingram Road
- Removal of vegetation
- Works to modify the existing topography of the land.

Figure 3-1 shows a 3D render of the proposed WtE facility.



Figure 3-1: 3D Render of Proposed WtE Facility (view from the south-west)



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development of the land is as follows:

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The proposed Development Plans are provided in Figure 3-2, Figure 3-3 and Figure 3-4. The use and breach any

Waste Receival Shed

The waste receival shed comprises of four inground concrete waste receival storage bays (120 m³ each) and a 20 kL self-bunded poly tank for storage of separated digestate liquor will be contained within the waste receival shed. The shed has a storage capacity of 600 m³ (45m (L) x 25m (W) x 11m (H) in dimensions). A potable water tank with a nominal volume of 10 kL will be attached on the side of the shed.

Dimensioned site and elevation plans are provided in Appendix B.

Tanks

The tank farm contains one 1.461ML pre-digestion inlet tank, two 3.416ML anaerobic digestion tanks, one 1.461ML post-digestion outlet tank, one 1.461ML aerobic digestion tank, one 0.85ML Anoxic reactor, two 10KL UF-permeate tanks and two 30KL RO concentrate tanks.

The tank farm has been designed in accordance with EPA Victoria guidelines to contain the spillage in case of tank failure and to prevent spills from escaping to the surrounding environment. Each tank provides primary containment and is located within a tank farm with a bund wall that is 200mm thick and 1400mm high to further contain spillages. The maximum containment volume of the tank farm is 4.06 ML, which exceeds the required containment volume of 3.66ML. The tank farm floor will be made of reinforced concrete slab with a water proofing additive to prevent water ingress.

Dimensioned plans and elevations are provided in Appendix B. The two digestor tanks will be 25m in diameter and 13.2m high. The inlet and outlet tanks will be 16.7m in diameter and 11.7m high. Dimensioned plans are provided in Appendix B.

- Administration, operations, staff amenities and car parking:
 - One portable building (12m x 3.1m x 2.79m) is to contain the 'open plan' administration office (main office) and master control room.
 - A second portable room (12m x 3.1m x 2.79m) is to contain staff amenities.
 - Co-located with the administration buildings will be a staff meeting room (6m x 6m x 2.78m) that can also be used to host visitors to the site (marked as 'visitor centre' on the plan) to inform them about the operation (e.g. YVW staff and school groups).
 - The adjoining staff amenities are to comprise of twin unisex toilets and a disabled toilet.
 - 8 car parking spaces (inclusive of one disability parking space) within a sealed hardstand area with line-marking and drainage. The hardstand area can accommodate overflow car parking.
- Other associated infrastructure/structures include:
 - An electricity kiosk within the WtE facilty site
 - A 22kV powerline above and below ground sections of cable from the WtE facility to the Lilydale STP, Recycled Water Pump Station and external energy grid. Where above ground, sections will comprise of poles, new and restrung wires
 - A permeate and sewer pipeline 'RO/sewer pipeline' (approximately 50mm diameter) from the WtE Facility to the sewerage treatment plant to be constructed under the existing road edge and with a trenchless bore under the Nelson Road Drain
 - A 20m deck weighbridge located on the main vehicle accessway into the WtE facility
 - Eight biofilters (4.6m diameter each)
 - Two aboveground firewater tanks (10.4m diameter x 2.5m high, with a nominal volume of 144 kL each), linked to a diesel firewater pump (with an integrated 500 L diesel tank)

- A reverse osmosis (RO) water tank used to treat the separated digestate liquor (10.4m diameter and 2.5m high, with a nominal volume of 144 kL)
- A flare stack used for emergency treatment or disposal of biogas (3m (W) x 2.2 (L) x 8 m (H))
- A chiller booster
- A detention pond with a nominal volume of 375 kL, used to collect stormwater from the site prior to discharge to the local drain
- A flood storage compensation area with a nominal volume of 380 kL
- A security fence of open weave construction and less than 1.8 metres in height around the facility
- A rural fence less than 1.8 metres in height around the detention pond, and parallel to the northern side of the proposed access road.

The development has been located outside of the high voltage powerline easement in accordance with Ausnet's requirements. The access road which traverses the easement maintains a minimum vertical clearance of 15 metres between the finished surface level of the road and the conductors. The weigh bridge has been located outside of the easement. The flood storage compensation area has been located a minimum distance of 30 metres from any existing or future tower location.

During construction, standard construction plant and equipment will be used, including excavators, cranes and haulage vehicles. There will be no use of explosives or rock piling. A Construction Environmental Management Plan (CEMP) will be prepared by the contractor prior to construction, which will be subject to regular auditing by YVW. The CEMP will articulate the roles, responsibilities and monitoring requirements for the construction phase of the project.

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Figure 3-2. Site Layout Plan

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Figure 3-3. Utility infrastructure





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3.2.1 Access road

YVW is proposing to construct a new access road from Maroondah Highway to the WtE facility. Figure 3-4 shows the location of the proposed access road. The proposed access road will comprise of a single lane in each direction. From Maroondah Highway, the road will head west through YVW's land (Lot 1 on TP55095), running parallel to the southern boundary of property. Midway across the property (Lot 1 on TP55095) the road will cross the waterway (Lilydale East Drain (branch)) with a bridge. The road will continue west, with a truck waiting bay to be located between the waterway and the Yarra Valley Rail Trail. The access road will then continue further west to cross the Yarra Valley Rail Trail. It will then continue west through YVW's land (Lot 5 on PS327190) and then arc south to enter the WtE facility located on Lot 1 on TP55095.

The access road will cross the Yarra Valley Rail Trail at-ground level. The rail trail crossing is to be designed in accordance with the '*Typical Trail Entry/Exit Point Detail – Specification Plan, Yarra Ranges Shire Council 16/06/2019*'. An example of the design, which is used for other road crossing points, is shown in Photo 3-1.



Photo 3-1: Example of proposed Entry/Exit on Yarra Valley Rail Trail -

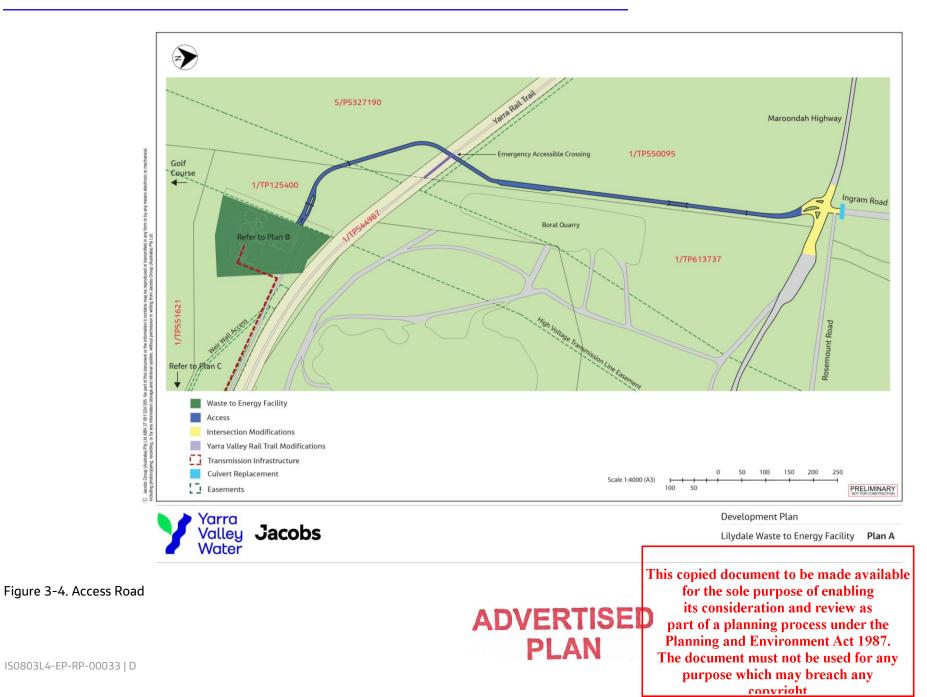
The Yarra Valley Rail Trail is on land owned by VicTrack. Prior to lodging this planning permit application, YVW has obtained:

- A letter from the Minister for Transport Infrastructure confirming the land is a Decommissioned Rail Corridor Crossing
- A letter from the Head of Transport Victoria, in accordance with the requirements of the Transport Zone, that the Head of Transport for Victoria consents to the application being made
- Permission to obtain an Occupational Crossing Licence for the passage of vehicles over the Yarra Valley Rail Trail.

The proposal for the access road includes roadworks to modify the Maroondah Highway and Ingram Road intersection. The proposed signalised intersection provides for one lane in each direction along Maroondah Highway, plus left and right turning lanes into Ingram Road and the proposed access road to the WtE facility. The Head of Transport for Victoria advised YVW in February 2022 of its decision to give in-principle support for the proposal, subject to resolution of the concept layout plan and the details of a Functional Layout Plan. It was also recognised that the layout would require agreement from Yarra Ranges Shire Council as Ingram Road is a local road under its management.

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3.2.2 Vegetation removal

The proposed development will require the removal of native and non-native vegetation.

Native vegetation

The ecology report has identified the removal of the following vegetation as a result of the project, including the WtE facility, the access road and modification of the intersection:

- 0.180ha of native vegetation patches (EVCs), comprising of
 - 0.0855ha of EVC 821: Tall Marsh
 - 0.0944ha of EVC 134: Creekline Herb-rich Woodland.

An offset of 0.054 general habitat units is required to offset the loss of the native vegetation in accordance with the Guidelines.

The native vegetation is in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map). Removal of less than 0.5 hectares of native vegetation in this location will not have a significant impact on any habitat for a rare or threatened species. The native vegetation to be removed is in shown in Figure 3-5.

Native and non-native trees

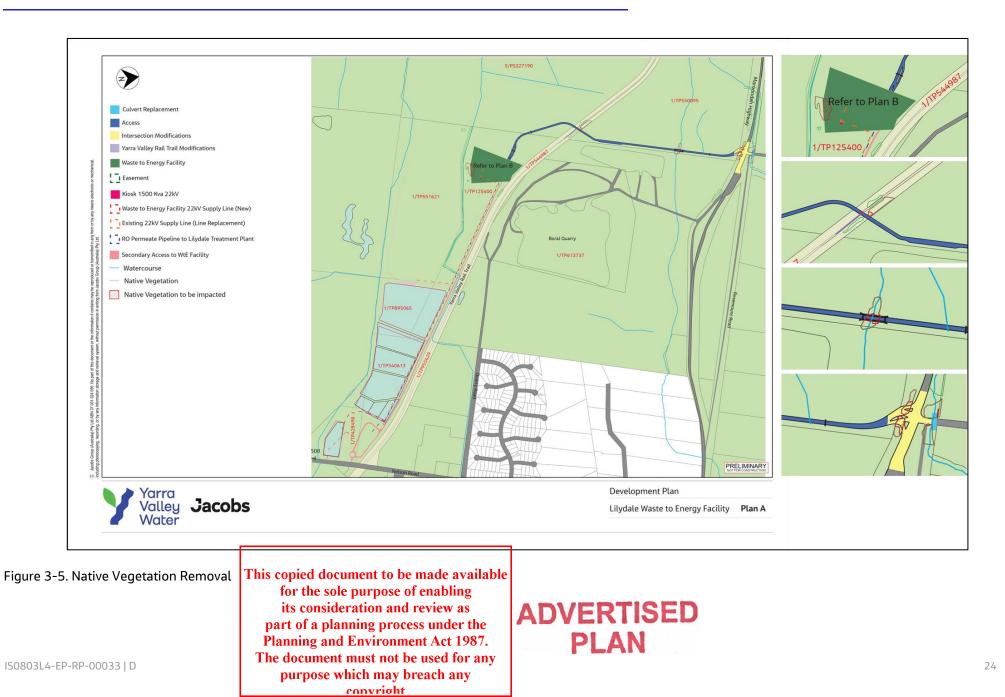
The Arboriculture Assessment (Ironbark Environmental Arboriculture, 2023) identified the removal of 42 trees, and the encroachment of four (4) trees but where the tree will be retained. Of the 42 trees to be removed, a permit is required to remove 17 within the ESO1, 15 within the SLO2 and 22 in accordance with Clause 52.17¹. Table 3-1 lists all trees to be removed and these trees are shown in the tree removal plans in Figure 3-6.

The RO/sewer pipeline and transmission infrastructure that will run from the WtE Facility through the Lilydale STP to existing buildings, and to Nelson Road will not require the removal, destruction of lopping of native or non-native vegetation.

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¹ Multiple trees require approval under overlapping planning controls.

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Table 3-1 Trees to be removed

Area	ID	Genus	Origin	Height (m)	DBH (cm)*	Visual Amenity Value	Retention Value	Encroachment	Remove / Retain	Permit required (1 or more triggers)
Drain (Area 1)	4	Eucalyptus	Planted Victorian	22	100	High	Very High	Minor	Retain	No
Drain (Area 1)	8	Eucalyptus	Planted Victorian	18	90	High	Very High	Minor	Retain	No
Drain (Area 1)	15	Acacia	Indigenous	4	40	Low	Low	Major/Within	Remove	Yes
Drain (Area 1)	16	Acacia	Indigenous	5	14	Low	Low	Major/Within	Remove	Yes
Drain (Area 1)	17	Acacia	Indigenous	8	50	Low	Low	Major/Within	Remove	Yes
Drain (Area 1)	22	Eucalyptus	Indigenous	6	40	Moderate	Moderate	Major/Within	Remove	Yes
Drain (Area 1)	23	Eucalyptus	Indigenous	7	35	Low	Low	Major/Within	Remove	Yes
Drain (Area 1)	28	Quercus	Exotic	20	80	Significant	Very High	Minor	Retain	Yes
Highway	36	Acacia	Indigenous	5	36	Low	Very High	Major/Within	Remove	Yes
Highway	37	Eucalyptus	Australian	12	75	Significant	Very High	Major/Within	Remove	Yes
Highway	38	Pinus	Environmental Weed	3	15	Low	Very High	Major/Within	Remove	No
Highway	39	Acacia	Indigenous	3	22	Low	Very High	Major/Within	Remove	Yes
Highway	40	Melaleuca	Australian	4	26	Moderate	Very High	Major/Within	Remove	Yes
Highway	41	Acacia	Environmental Weed	3	4	Low	Very High	Major/Within	Remove	No
Highway	42	Acacia	Environmental Weed	2	3	Low	Very High	Major/Within	Remove	No
Highway	43	Acacia	Environmental Weed	7	26	Moderate	Very High	Major/Within	Remove	No
Highway	44	Acacia	Environmental Weed	7	50	Moderate	Very High	Major/Within	Remove	No
Highway	45	Acacia	Indigenous	3	6	Low	Very High	Major/Within	Remove	Yes
Highway	46	Acacia	Indigenous	3	8	Low	Very High	Major/Within	Remove	Yes
Highway	47	Acacia	Indigenous	2	2	Low	Very High	Major/Within	Remove	Yes
Highway	48	Acacia	Indigenous	3	6	Low	Very High	Major/Within	Remove	Yes
Highway	49	Acacia	Indigenous	4	10	Low	Very High	Major/Within	Remove	Yes
Highway	50	Acacia	Indigenous	4	6	Low	Very High	Major/Within	Remove	Yes
Highway	51	Acacia	Indigenous	5	14	Low	Very High	Major/Within	Remove	Yes
Highway	52	Acacia	Environmental Weed	2	5	Low	Very High	Major/Within	Remove	No
Highway	53	Melaleuca	Australian	5	28	Low	Very High	Major/Within	Remove	Yes
Highway	54	Acacia	Environmental Weed	8	60	Moderate	Very High	Major/Within	Remove	No
Highway	55	Acacia	Environmental Weed	1	1	Low	Very High	Major/Within	Remove	No
Highway	56	Acacia	Environmental Weed	2	2	Low	Very High	Major/Within	Remove	No
Highway	57	Allocasuarina	Indigenous	3	4	Low	Very High	Major/Within	Remove	Yes
Highway	58	Allocasuarina	Indigenous	6	18	Moderate	Very High	Major/Within	Remove	Yes
Highway	59	Acacia	Environmental Weed	4	8	Low	Very High	Major/Within	Remove	No
Highway	60	Acacia	Environmental Weed	1	2	Low	Very High	Major/Within	Remove	No
Highway	61	Acacia	Environmental Weed	3	8	Low	Very High	Major/Within	Remove	No
Highway	62	Acacia	Environmental Weed	4	10	Low	Very High	Major/Within	Remove	No
Highway	63	Acacia	Environmental Weed	4	10	Low	Very High	Major/Within	Remove	No
Highway	64	Acacia	Environmental Weed	5	8	Low	Very High	Major/Within	Remove	No
Highway	65	Allocasuarina	Indigenous	3	5	Low	Very High	Major/Within	Remove	Yes
Highway	66	Acacia	Environmental Weed	7	16	Moderate	Very High	Major/Within	Remove	No
Highway	98	Eucalyptus	Indigenous	7	25	Low	Low	Major/Within	Remove	Yes
Highway	99	Eucalyptus	Indigenous	7	9	Low	Low	Major/Within	Remove	Yes
Highway	100	Prunus	Environmental Weed	6	14	Low	Low	Major/Within	Remove	No
Highway	103	Acacia	Indigenous	8	22	Low	Low	Minor	Retain	Yes
Highway	104	Eucalyptus	Indigenous	17	91	High	High	Minor	Retain	Yes
Rail Trail (Area 2)	48	Acacia	Indigenous	6	18	1 ×	Low	Major/Within	Remove	Yes
Rail Trail (Area 2)	60	Acacia	Indigenous	-	12	Low	Low	Major/Within	Remove	Yes
Rail Trail (Area 2)	61	Acacia	Indigenous		16	Low	Low	Major/Within	Remove	Yes
· · · · ·	_		gest has been listed.			•			•	

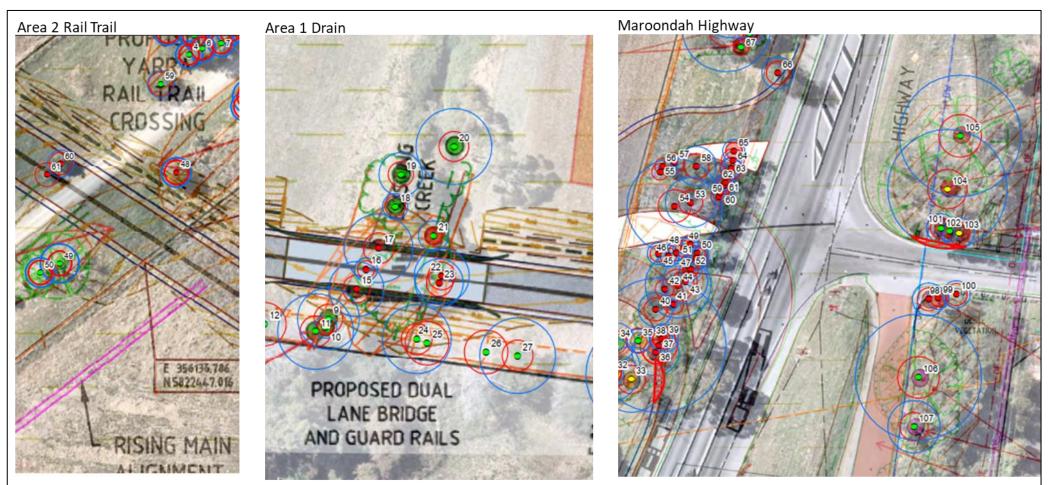
*Where multiple branches occur, the largest has been list

Refer to map Figure 3-6.

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Note: The tree numbers in Area 2 Rail Trail and Maroondah Highway have been duplicated (i.e. Tree No.s 48, 60 and 61 appear in both). The record of each tree in the spreadsheet is identifiable by the location name and then the tree number

Figure 3-6. Tree Removal



3.3 Operation of the waste to energy facility

Staff

The operation will be managed by five full-time staff located at the facility.

Hours of Operation

The WtE facility will accept organic waste and dispatch consignments of digestate each weekday and on Saturday mornings during the following hours:

- Monday to Friday: 6:00AM to 6:00PM
- Saturday: trucks by appointment and any unscheduled maintenance only.

The Anaerobic Digestion process and power generation processes will operate 24 hours a day. Outside of waste delivery hours the plant mostly runs automatically without an operator present.

Vehicle movements per day

The delivery of waste to the site and disposal of digestate from the site will result in approximately 30 trucks movements per day. Vehicles will come throughout the day, but experience from YVW's existing WtE facility in Wollert indicates deliveries are likely to be more frequent in the morning. Prior to leaving the site, vehicles will be washed down to remove residual waste from trucks with waste directed back into the facility for reuse.

Despite the low number of vehicle movements, it was agreed with VicRoads and relevant authorities that a new access road from Maroondah Highway to the WtE facility would be provided by YVW. This was the preferred approach by Council as it would avoid placing additional trucks on Nelson Road and thereby avoid impacts on residential amenity and conflicts with the school traffic zone on Nelson Road.

Other vehicles to the site associated with construction and operation of the facility will also use the new access road, except whilst the access track is under construction. Around 5 light vehicles and the occasional mobile plant will use the Nelson Road access point. This will be used for approximately eight weeks.

By-Product Management

The anaerobic digestion process produces a by-product of inert organic digestate material. The WtE facility is expected to generate approximately 127 tonnes per day and YVW is progressing opportunities to re-use the waste by-product for beneficial applications such as a fertiliser or soil treatment. Until a re-use is developed, the waste will be collected and disposed off-site.

Plant and equipment noise

The primary sources of noise within the WtE facility will be the two Combined Heat and Power generator units and the two digestors. Other noise sources include low-noise equipment such as motors, pumps and flares. The facility's uses low noise equipment, acoustic lining for intake and discharge duct work, noise attenuation housing on external pumps and fans, and silencers on the flare and extraction fans. As the main source of noise, the Combined Heat and Power generator units will be fully enclosed units with noise attenuation cladding, vent mufflers and two x 1,000 L self-bunded lube oil tanks.

Plant maintenance

Plant maintenance will typically be undertaken within the waste delivery hours on weekdays. Essential maintenance may need to be undertaken periodically outside these hours. This copied document to be made as





Odour management

The facility is to be designed to control odour so that the facility will comply with the operating licence (to be issued separately by the EPA). The main sources of odour are the waste transport vehicles, waste reception shed, digestate transport vehicles, two digestors that generate biogas and the detention pond.

To manage these odour sources the design includes:

- Highly odorous loads to be rejected or given priority access to the waste shed
- All waste inspection and unloading only to occur inside the shed, with the doors closed
- All wastes to be stored inside the facility to ensure odours are minimised, with sufficient holding capacity within the shed for two days of operation
- The reception shed is to be fitted with automatic fast opening doors and is to be maintained under negative pressure to minimise fugitive emissions when the doors open
- Liquid wastes will be piped from enclosed tankers into the shed, minimising the need to open the shed
- Air from within the building is to be drawn into eight (8) biofilters before being discharged to the atmosphere. The reception shed air will be treated using a biofilter that condenses the moisture and removes the odours before it is release to the atmosphere (and the collected water would be recycled though the digestors)
- No permanent open vents on the digestors, and the digestors will be fitted with a flare to burn-off any gas that is expelled
- The digestate solid waste material that is to be sent offsite will be loaded inside the shed. Liquid wastes will be piped to the enclosed tanker located outside of the shed.

Flaring

To ensure the safe operation of the site, ignition of the flare occurs automatically when the biogas control parameters are outside of the permitted operating range. The flare can also be started via manual intervention. The rate of combustion is automatically regulated by the air supply and control functions are integrated to maintain the optimum combustion temperature. The flare will be designed in compliance with *ISO 22580:2020 Flares for combustion of biogas and AS/NZS 60079 Explosive gas atmospheres.*

Lighting

Daily operation are between 6am and 6pm and as such specialist flood lighting is not required for site illumination that would affect sensitive land uses (e.g. dwellings) located more than 800m from the site.

Protection of waterways

The facility is located in proximity to Olinda Creek and Nelson Road Drain. To minimise the potential impacts of the facility on stormwater and surface water quality, the design includes:

- Bunding of the tank farm to retain liquid material in the event of a leakage with waste material directed back to the reception shed
- Enclosure of waste receival and storage areas to protect against rainwater ingress
- Emergency spill response procedures
- The treatment of generated wastewater before disposal
- Bathrooms, shower and domestic style sinks will be treated in an onsite septic system and subject of available separate consent by Yarra Ranges Shire Council. The treated wastewater will be discussed of enabling subsurface irrigation-style drains to a dedicated area east of the tank faith. Consideration and reviewill^{as} periodically be removed from the site for disposal at a permitted facility. The treated matter and the process under the Planning and Environment Act 1987.

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Waste management

Waste generated from the operation of the WtE facility is expected to come from pre-processing activities (e.g. unpackaging of food products), maintenance activities, replacement of plant and equipment, and general office and administration activities.

All waste will be segregated at the source and appropriately stored, including storage of liquid waste in individual bunded areas inside the waste reception shed, storage of solid wastes in appropriate closed bins in protected waste handling areas, and spill kits located in all waste storage areas. Waste will be disposed in accordance with relevant regulations.

The WtE facility will generate around 127 ton/day of digested organic material, known as digestate. The waste will be further process on site where water will be removed from the digestate and sent to the STP for reuse. The solid faction and some of the liquid faction will be used as soil improver or fertiliser, subject to EPA approvals.

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4. Stakeholder and Community Consultation

YVW has prepared a Stakeholder and Community Engagement Plan current as of September 2022. The plan identifies the stakeholder groups to be engaged, the project's objectives and the engagement mechanisms to be employed. Engagement for the WtE project commended in early 2017 and is ongoing. To date, YVW has written to 9,100 owners and occupiers in Lilydale, Coldstream and Chirnside Park (as shown in Figure 4-1) in August 2020, November 2020 and May 2022, held online information sessions (August 2020-October 2020), and responded to phone calls and emails.

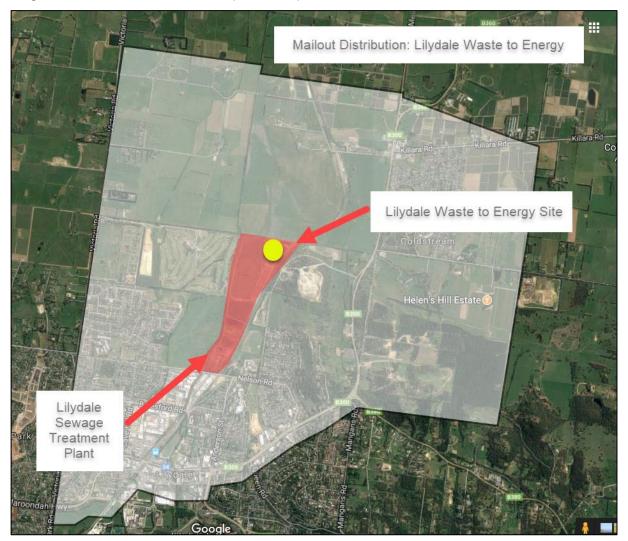


Figure 4-1: Community Consultation Zone

YVW established working relationships with local councils, councillors, government authorities and community groups to raise awareness of the Project, seek feedback and allow for concerns and ideas to be effectively addressed. Consultation included face-to-face meetings, bus tours, briefing presentations, mailers, and an interactive website. In general, the feedback received from stakeholders was very supportive. The key concerns and recommendations raised are summarised in Table 4-3.



Table 4-1. Community Feedback

Perspective	Summary of Comments
Support	Excitement for a time in the future when the facility would be able to also accept household waste
	 Support for 'clean energy', especially from prospective waste suppliers
Concern	 Project impacts on nearby residents or the environment
	 Odour impacts as the existing STP smells when certain winds are blowing
	 Odour impacts due to the community going through major odour issues from ANL composting facility that got shut down, approximately 12 years ago
	Safety fears regarding the access road crossing the Yarra Valley Trail
	 Noise impacts from trucks such as the noise of trucks breaking
	Potential property price drop in the area due to impacts
	Traffic impacts including the management of truck speed limits
	Environmental impacts of pollution in the adjacent stormwater flow and Olinda Creek
Suggestions	Colour-blend the facility with the surrounding landscape
	 Plant trees to screen the WtE facility from view
	Plant trees to screen the existing STP from view
	 Beautify the facility with art murals or a sculpture
	 Improve the active areas (i.e. drainage at the footpath) around the WtE facility and at the Nelson Road STP entry
	 Blend the existing STP holding ponds with a corridor of new plantings to make the ponds accessible to wildlife
	Improve wetland amenity
	Limit truck speed to protect animals from being hit
	Build a bridge on the access road that goes over the Yarra Valley Trail
	Build an overpass structure over Maroondah Highway instead of putting traffic lights
	 Use sustainable materials and innovations during construction and operation
	Build an education centre that schools can visit
	 Instil community pride by getting the community involved in the construction (e.g. school kids decorating bricks)
	 Include a bike path from Ingram Road to Yarra Valley Trail
	Make use of waste heat from the facility
	 Be sensitive to local indigenous culture

Representatives from Local and State government and Regulatory Authorities with responsibilities over this type of development were also identified and included in the consultation program. The stakeholders consulted to date are summarised in Table 4-2.

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Table 4-2. Project Stakeholders

Local and State Government	Statutory Authorities	Other Affected Stakeholders
 Yarra Ranges Council Bridget Vallence, state member for Evelyn (elected official) Department of Transport (DoT) Minister for Transport and Infrastructure Minister for Water 	 Department of Environment, Land Water and Planning (DELWP) EPA Melbourne Water VicTrack VicRoads AusNet YVW (Operations) 	 Melbourne Water Wurundjeri Yarra Ranges Councillors Mayor Cr Jim Child Deputy Mayor Cr Johanna Skelton Cr Fiona McAllister Cr David Eastham Cr Tim Heenan Cr Richard Higgins Cr Sophie Todorov Cr Andrew Fullugar Cr Len Cox OAM Chirnside Park Country Golf club Coldstream Voice Coldstream Quarry

An online consultation using the Social Pinpoint platform was developed and can be viewed at: <u>https://yvw.mysocialpinpoint.com.au/lilydale-waste-to-energy</u>. The site includes project information, videos, information slides, accessible icons and graphics, background information about YVW, a 'frequently asked questions' section and a web contact form. The platform enables the community to provide feedback in a variety of interactive ways, e.g., forum questions, map comments, and an Ideas Wall.

A project email address was also established for stakeholders to use as a point of contact. Senders receive an automatic reply with receipt of the response and the project team replies to their email within five business days. The email address will continue to be included on all Project communications: <u>LilydaleWTE@yvw.com.au</u>

Optional 30-minute conversations for members of the community using tele/video chat on Microsoft Teams was promoted in the mailouts. This provided the public a chance to speak live with members of the project team so they could find out more about the project and/or provide feedback. People were required to book their conversation in advance through Eventbrite or by calling YVW's contact centre. The project team also offered a phone call conversation to people who cannot access the internet by calling YVW's contact centre.

4.1 Consultation feedback

Feedback from the community

Five key themes were found in the 62 entries on Social Pinpoint. The entries included suggestions for the design of the WtE facility, insight into the local community and feedback on community issues and priorities. A summary of the comments and recommendation are provided in Table 4-3



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Торіс	Feedback
Native Flora & Fauna	Native and flora should be protected leaving no detrimental impact to the environment, wetlands, Olinda Creek and animals in the area. Plant plenty of trees to screen the facility from view as well as planting trees in the project area
Environment	The air and environment should be protected from potential pollutants and greenhouse emissions. Use sustainable materials and innovations during construction and operation
Odour	Stringent odour controls are required as nearby residents lived through strong odour problems with the ANL composting facility. Residents are concerned that similar issues may occur. Some residents also report odours from the Lilydale STP on the Yarra Valley Trail near Nelson Road.
Landscape & Visual	The design of the facility should colour-blend with the surrounding landscape and the facility could be beautified with art. Many residents are interested in what the WtE facility will look like and how tall the facility will be
Yarra Valley Trail	The access roads should be safe where it crosses the Yarra Valley Trail for pedestrians, cyclists, cars and trucks. Users raised safety and speed concerns and proposed suggestions to place a pedestrian crossing as well as a bike path on the Yarra Valley Trail.

Table 4-3: Community Consultation Feedback Themes

Feedback from Government & Regulatory Authority Representatives

Feedback from the local community overlaps with the topics raised during consultation with local and state government, as summarised in Table 4-4.Table 4-4 The key concerns raised by the community and government stakeholders include safety, odour, noise, amenity and environmental. They have been considered and integrated with the planning and design process to help inform the development of the Project.

Table 4-4: Government 8	Regulatory	Authority's Feedback
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Stakeholder	Engagement	YVW Project Response
Yarra Ranges Council	 Briefed council road engineers on the upcoming referral they will receive from DELWP Planning (November 2021) Sought advice for the crossing of the Yarra Valley trail. Council proposed adopting chicanes as a safety measure and condition to approve the rail crossing (December 2020) Council's Parks & Bushland team provided advice on tree species selection and locations (February 2022) Email update to the Council's CEO announcing YVW's contract with Delorean is signed (April 2022). 	 YVW adopted chicanes in the design of the rail crossing as a safety measure YVW adopted Council's Parks and Bushland team's advice into the landscape plan. The project is arranging funding for planting within the rail corridor to screen the trail from the facility Council's CEO emailed support of milestone (April 2022).
Local Councillors	 Local Councillors toured the Wollert site in February 2020 and are supportive of the Project but stated the need to protect the newly built Yarra Valley Trail bike path from odours Provided a project update to Local Councillors in a private council meeting in 2017, 2019 and 	 YVW is ensuring the WtE facility's design includes odour control, and the site will comply with the operating license issued by the EPA.
	 2021 Feedback from Yarra Ranges council has noted that in 2010, the neighbouring composting facility was shut down by the EPA because it was 	This copied document to be made a for the sole purpose of enabli its consideration and review

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Stakeholder	Engagement	YVW Project Response	
	odourous with a large number of odour complaints.		
State Government	 Presented the Project description to MP Vallence in April 2019, September 2020 and emailed updates in August 2020, November 2020, December 2021 and June 2020. 	 Supportive of the Project with no feedback to consider. 	
DELWP	 Informed DELWP of the pending Planning Permit submission Email update to DELWP Executive Director announcing YVW's contract with Delorean is signed (April 2022). 	 DELWP Executive Director acknowledged email update and requested media Q&A's (April 2022). 	
EPA Victoria	 Informed EPA's CEO of pending DLA submission and provided an update on YVW's proposal (November 2020) Occasional updates to EPA assessors through 2021 and 2022 (meetings and or email). 	 EPA's regional manager wrote to YVW in response and commended the open and transparent approach to the Project (December 2020) Occasion meetings / emails. 	
VicRoads	 Engaged VicRoads (now known as DoT) since 2020, seeking conditions for connecting the Ingram Road and Maroondah Highway intersection The letter of approval has been provided but awaiting DoT conditions. 	 YVW are continuing to work with DoT to agree upon conditions for the connection at the Ingram Road and Maroondah Highway intersection. 	
Victrack	 Victrack own the rail corridor which YVW will be leasing for the rail crossing area. 	 Victrack referred YVW to DoT (Planning Practice) to achieve a crossing of the rail corridor which is being used as a bike path by Yarra Ranges Council. Conditions of DoT have been met. As of August 2022, Victrack are developing the licence conditions for the lease. 	
DoT Planning Practice	 DoT Planning Practice are Victrack's referral authority who advised YVW to complete a Transport Impact Assessment and brief the Minister for Transport and Infrastructure. 	 Transport Impact Assessment submitted to DoT The Minister for Transport & Infrastructure approved the crossing The proposal was referred back to Victrack to develop the licence (underway). 	
Minister for Transport & Infrastructure	 Legislation requires YVW to write to the Minister for Transport requesting approval for the crossing. 	 YVW wrote to the Minister for Transport requesting approval for the crossing. This was approved on 5th May 2022. 	
Minister for Water	 Briefing presentation to MP Shing (February 2021) Letter to MP Neville requesting approval for the Project (May 2022) Email update to the Deputy Chief of Staff and MP Shing announcing YVW's contract with the Contractor who will deliver the WtE facility is signed (April 2022). 	Email response of support (April 2022). This copied document to be ma for the sole purpose of en- its consideration and rev part of a planning process Planning and Environment The document must not be u	
Melbourne Water	Flooding advice provided.	 Follow the advice on Land Subject to Inundation 	
Wurundjeri	 Access track is near a listed artifact. 	 Complex Cultural Heritage Assessment required (completed). An amendment is underway. 	

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Stakeholder	Engagement	YVW Project Response
Chirnside Park Country Golf Club	 Project letter to the community (August 2020) Communication via email & phone. 	 Trees provided to Chirnside Park Country Golf Club to help screen the WtE facility from their property.
Coldstream Quarry (Boral Property Group)	 Project letter to the community (August 2020) Occasional phone call / email updating Email update to the Project Director announcing YVW's contract with Delorean is signed (April 2022). 	 Neutral response to project No response to email re: contract.

4.2 Next steps

YVW remains committed to a meaningful interaction with key stakeholders and the community during the planning, design and delivery of the project. The existing email inbox continues to be monitored by the project team and all enquiries will be responded to via this channel in between consultation periods. The project team continues to update the project's website with new information as it becomes available.

The stakeholder engagement program will continue to operate throughout the project approvals phase and subsequent construction and commissioning phases.



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5. Legislation and planning porpose which may breach any

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5.1 Legislation

The Planning and Environment Act 1987 controls land use and development in Victoria and is implemented through the planning scheme of each local government area. The site is subject to the provisions of the Yarra Ranges Planning Scheme and a planning permit is required for the proposed use and development, and for vegetation removal. This Planning Assessment Report has been prepared in support of the application for a planning permit in accordance with the requirement of the Planning and Environment Act 1987.

Other relevant legislation that the project has been assessed against and where separate approvals may be required are:

Water Act 1989

YVW has received approval from the Minister for Water under Section 127 of the Victorian Water Act 1989 to:

enter into partnership, or into any arrangement for sharing of profits, union of interest, cooperation, joint venture, reciprocal concession or otherwise, with any person carrying on or engaged in, or about to carry on or engage in, any business or transaction (whether within or outside the State) which is capable of being conducted so as directly or indirectly to benefit the Authority.

YVW will separately apply to Melbourne Water for consents to work in waterways in accordance with the Water Act 1989.

Environment Protection and Biodiversity Conservation Act 1999

In accordance with the requirements of the Environment Protection and Biodiversity Conservation Act 1999, YVW made a referral to the Department of the Environment and Energy in April 2018 based on the potential presence of a threatened species (Growling Grass Frog). The Minister for the Environment and Energy determined that the project is not a controlled action.

Flora and Fauna Guarantee Act 1988

The project does not impact on flora or fauna protected under the Flora and Fauna Guarantee Act 1988 (FFG Act).

Environment Protection Act 2017

A Development Licence from the EPA is required in accordance with the *Environment Protection Act 2017*. A separate application running in parallel to this planning permit application has been lodged with the EPA.

Aboriginal Heritage Act 2006

A Cultural Heritage Management Plan (CHMP) has been approved by the Wurundjeri Woi-wurrung Cultural Heritage Corporation (the Registered Aboriginal Party) on the 10 December 2021 (CHMP #17255) for the project. The scope of the CEMP covers the waste receival area, waste processing centre, anaerobic digesters and access road. An amendment to the CHMP is currently being prepared for the area impacted by the proposed Maroondah Highway intersection where it is located outside the property boundary of 535-537 Maroondah Highway. The CHMP will be amended for the Maroondah Highway intersection once the final design has been agreed with the Department of Transport.



Road Management Act 2004

A road opening consent would be required for the works in road reserves from the relevant road authority.

Wildlife Act 1975

The contractor would obtain permissions to handle animals be applying for a Wildlife Act permits may be necessary.

5.2 Planning strategies and policy

The following planning policy is relevant to this application.

Plan Melbourne 2017-2050 - Metropolitan planning strategy

Plan Melbourne 2017-2050 (DELWP, 2017) is the long-term metropolitan planning strategy that will shape Melbourne over the next 35 years. Plan Melbourne aims to manage Melbourne's growth by integrating land use, infrastructure and transport planning, setting out strategies and policies to support jobs and growth while developing Melbourne's liveability and sustainability. Responsible authorities must consider and apply the strategy in Plan Melbourne where appropriate.

The project is consistent with the Outcomes, Directions and Policy contained in Section 6 of Plan Melbourne.

Outcome 6 'Melbourne is a sustainable and resilient city'. identifies that Melbourne will need to be a more sustainable and resilient city that manages its energy and waste resources in a much more integrated way. The project will reduce the volume of waste disposed to landfill and supply an alternative source of energy for YVW's energy requirements. The Project will contribute to around 35% of YVW's total electricity needs. It will reduce or offset CO2-e emissions by over 173,000t over the life of the 25 year project.

Direction 6.1 'Transition to a low-carbon city to enable Victoria to achieve its target of net zero greenhouse gas emissions by 2050' and Policy 6.1.2 seek to facilitate the uptake of renewable energy. They also flag support for renewable energy in Melbourne's green wedge and peri-urban areas. The project is suitably located on Melbourne's urban fringe where it transitions to the green wedge and where land use buffers can be managed. Consistent with the policy, project will co-locate a renewable energy source on YVW's land and it will power the existing Lilydale STP.

Direction 6.7 'Reduce waste and improve waste management and resource recovery' and Policy 6.7.1 encourage integrated solutions for waste, water and energy issues, such as converting waste to energy. The project will divert around 55,000 tonnes of waste per year that would have otherwise gone to landfill or liquid-receiving waste facilities. Consistent with the policy, the facility is an integrated solution as it is colocated on and will provide energy to the Lilydale STP.

The project contributes to the achievement of Victoria's renewable energy target and Action 84 'Renewable energy technologies to achieve Victorian renewable energy targets of 25 per cent by 2020 and 40 per cent by 2025'. The WtE facility will have an installed capacity of approximately 2.4MW which will generate approximately 39,000 kWh daily of renewable energy that is exported to the energy grid and used to power the Lilydale STP.

The project contributes to the achievement of Action 99 'Forward planning for waste and resource recovery infrastructure' by diverting waste from landfill and thereby reducing the reliance on landfills.



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Statewide Waste and Resource Recovery Infrastructure Plan 2018 any

The Statewide Waste and Resource Recovery Infrastructure Plan 2018 provides a roadmap to improve Victoria's waste and recycling infrastructure. The roadmap aims to create an integrated waste and recycling system that maximises opportunities to reprocess and use recycled materials, reduce the need for raw materials and send less waste to landfill.

The proposed WtE facility aligns with the road map by diverting materials from landfill, generating a reusable digestate product and developing markets for the local reuse of the treated digestate. It also aligns with the Plan's encouragement of integrated waste and resource recovery system and outcomes that ensure waste services and supporting infrastructure are delivered in line with Victoria's population growth.

The project will support broader State policies that aim to reduce and recycle waste within the community. In accordance with the Plan, Victorians' will have increased access to organic waste receival services which could lead to the supply of up to 650,000 tonnes of food and garden waste each year. This will create significant demand for waste infrastructure, particularly food WtE facilities. The development of biological WtE treatments, such as anaerobic digestion, will become a key component to Victoria's strategy to recover organic wastes and generate renewable energy.

The Plan also emphasises that facilities should include mechanisms to protect the community and environment and prevent incompatible activities that might affect their viability over the long term. The proposed WtE facility has been appropriately located on land in Melbourne's urban fringe that is currently used to treat wastewater and where appropriate land use buffers are already established. The proposed development of the site has been informed by suite of specialist assessments that have identified potential impacts to the environment and community. These assessments have informed the proposed design and recommended measures to avoid, minimise, mitigate and manage those potential impacts.

Victorian Organics Resource Recovery Strategy, 2015

The Victorian Organics Resource Recovery Strategy 2015 is a key priority to delivering the Statewide Waste and Resource Recovery Infrastructure Plan 2018. The Strategy provides a 30-year vison for the management of organic waste in Victoria. The vision seeks to encourage organic waste recovery and its use as an energy source for local infrastructure, whilst also addressing potential environmental and human impacts. The Strategy also recognises the opportunity to develop markets for bio-products that are generated from the waste to energy process.

The proposed WtE facility is consistent with the Strategy. It locates an organic receival site on land that is currently used to treat wastewater. It will be used to supply local infrastructure with a renewable source of energy. As the only facility located in Melbourne's eastern region, it will provide a local destination for the processing of organic wastes from nearby businesses, reduce transport costs, provide local employment, and (once approved) provide a by-product that can be used in local agri-businesses.

Metropolitan Waste and Resource Recovery Implementation Plan 2016

The *Metropolitan Waste and Resource Recovery Implementation Plan 2016* sets out a plan for the delivery of waste and resource recovery infrastructure for the greater Melbourne region. The strategic objectives of the Plan are to reduce waste sent to landfill and increase organic waste recovered, as well as to deliver community, environmental and economic benefits and plan for Melbourne's growing population.

Strategic Objective 2 'Increase organic waste recovered' encourages the expansion of Melbourne's organic recovery and processing network to meet the planned the collection of 400,000 tonnes of municipal food and garden waste by 2025 and 600,00 tonnes by 2026. To meet this demand, the Plan encourages the development of new and expanded facilities, including the co-location of facilities on wastewater treatment plants.



The Plan provides high-level guidance to inform the siting of waste and resource recovery facilities in the Melbourne region. It is recognised that not all facilities will be located within the hubs and locations identified in the Plan, as ultimately such investment decisions are led by industry and are subject to approvals. The Plan also recognises that the supply of suitably located land within the Melbourne's built-up areas is constrained and highlights that the supply of land for waste to energy facilities has been a challenge in other cities. Whether facilities are located in the potential locations identified in the Plan or elsewhere, the Plan expects that they will be located on appropriately zoned land, provide appropriate buffer distances from sensitive land uses and have adequate transport connections.

The proposed WtE facility is consistent with the Plan. The proposed development is located on appropriately zoned land, where land use separation distances from sensitive land uses can be provided and where the new access road to Maroondah Highway will provide suitable access from the principal road network.

Upper Yarra Valley and Dandenong Ranges Regional Strategy Plan

The Regional Strategy Plan applies to all land in the Shire of Yarra Ranges. The Strategy seeks to ensure planning, land use and development appropriately responds to the special character and features of the region. The proposed WtE facility is located within land that is subject to the Rural 1 Policy. The proposed access road is located in land that is subject to the Rural Landscape 2 Policy.

The Rural 1 Policy seeks to maintain soils and water resources for agriculture activities, and for development to respond to the landscape character, protect and enhance native vegetation, and maintain and enhance water quality. The Rural Landscape 2 Policy seeks to provide for farming and to maintain native vegetation, wildlife, water quality and to maintain and enhance landscape value and character.

The use of land in the two rural policy areas is to be compatible with the regional goals and objectives for rural land. The construction of buildings is to be compatible with the rural and agricultural land uses, and should protect and enhance the landscape, water resources, indigenous flora and fauna, human health hand amenity.

The proposed development has appropriately responded to the use and buildings policies in the Strategy, as follows:

- The WtE facility is co-located on YVW's land that is used for utility infrastructure and it and the proposed access road would not impact on the use of affected and adjoining land for agriculture.
- The development is not located on sloped land.
- The development is in a floodplain, but meets the requirements of Clause 10.03 of the Strategy and has ensured that the development will be in accordance with Melbourne Water's requirements.
- The development is partially located within the Bushfire Management Overlay, but is not a use or development that requires a planning permit. The proposal was presented to the Country Fire Authority who did not raise any concerns of significance.
- An onsite septic system will be provided subject to a separate consent by Yarra Ranges Shire Council. The treated wastewater will be discharged to a dedicated area east of the tank farm and the residual septic sludge will be periodically removed and disposed at a permitted facility. The system has been located and designed to not adversely affect the water quality of Olinda Creek.
- To manage the localised changes to the landscape, the project has opted for muted colour tones for the buildings, proposed substantial planting and located infrastructure at the rear of the receival shed where they are away from views and partially screened from the rail trail.



6. Yarra Ranges Planning Scheme

The project is located within the Shire of Yarra Ranges and is subject to the Yarra Ranges Planning Scheme (planning scheme). The proposed WtE facility will have an installed capacity of 2.4MW. The energy will power the WtE facility, the co-located Lilydale STP and Recycled Water Pump Station, with the excess power exported to the grid. In accordance with Clause 72.01-1 of the planning scheme, the Minister for Planning is the responsible authority for planning permit applications for an *'energy generation facility with an installed capacity of 1 MW or greater'*.

Clause 73 of the planning scheme provides defines the land use terms and these definitions are used in the assessment of planning permit applications in accordance with the planning scheme. The proposed land use is defined as a *Waste-to-Energy Facility*, which is:

• Land used for the combustion, treatment or bio-reaction of waste to produce energy for use off site. It includes the activities to collect, temporarily store, process, or transfer waste materials for energy production.

A Waste-to-Energy Facility is nested under *Energy Generation Facility*, which is defined as:

• Land used to generate energy for use off site other than geothermal energy extraction. It includes any building or other structure or thing used in or in connection with the generation of energy.

6.1 Planning Policy Framework

The following provisions of the Planning Policy Framework are relevant to the application:

- Clause 11.01-1R Green wedges Metropolitan Melbourne
- Clause 11.01-1L-04 Green wedge
- Clause 11.03-35 Peri-urban areas
- Clause 11.03-55 Distinctive areas and landscapes (Yarra Ranges Localised Planning Statement 2017)
- Clause 12.01-1S Protection of biodiversity
- Clause 12.01-1L Biodiversity
- Clause 12.01-25 Native vegetation management
- Clause 12.03-15 River and riparian corridors, waterways, lakes, wetlands and billabongs
- Clause 12.05-15 Environmentally sensitive areas
- Clause 12.05-25 Landscapes
- Clause 12.05-2L Rural landscapes
- Clause 13.02-15 Bushfire planning
- Clause 13.03-15 Floodplain management
- Clause 13.04-15 Contaminated and potentially contaminated land
- Clause 13.05-15 Noise management
- Clause 13.06-15 Air quality management
- Clause 13.07-1S Land use compatibility
- Clause 14.02-15 Catchment planning and management
- Clause 14.02-1L Catchment systems
- Clause 14.02-25 Water quality

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- Clause 15.01-25 Building design
- Clause 15.03-25 Aboriginal cultural heritage
- Clause 19.01-15 Energy supply
- Clause 19.01-25 Renewable energy
- Clause 19.01-2R Renewable energy Metropolitan Melbourne
- Clause 19.03-55 Waste and resource recovery

An assessment against the Planning Policy Framework is provided in Section 7.

6.2 Planning controls

The following zones (see Figure 6-1) are relevant to the use and development of the land:

- Clause 36.01 Public Use Zone Schedule 1 Service and Utility (PUZ1)
- Clause 36.04 Transport Zone Schedule 1 State Transport Infrastructure (TRZ1)
- Clause 36.04 Transport Zone Schedule 2 Principal Road Network (TRZ2)
- Clause 35.04 Green Wedge Zone Schedule 2 (GWZ2)
- Clause 35.04 Green Wedge Zone Schedule 4 (GWZ4).

The following overlays (see Figure 6-2 to Figure 6-4) are relevant to the development of the land:

- Clause 42.01 Environmental Significance Overlay Schedule 1 Highest biodiversity habitat areas and biolink corridors (ESO1)
- Clause 42.03 Significant Landscape Overlay Schedule 6 Rolling hills and bushy agriculture landscape (SLO6)
- Clause 44.04 Land Subject to Inundation Overlay (LSIO)
- Clause 44.06 Bushfire Management Overlay (BMO).

The proposed development is adjacent to, but is not located in in the Significant Landscape Overlay Schedule 2 – Open valley landscape (SLO2).

The following particular provisions, which apply to all land within the project area, are relevant to the development of the land:

- Clause 51.03 Upper Yarra Valley and Dandenong Ranges Regional Strategy Plan
- Clause 52.17 Native Vegetation
- Clause 52.06 Car Parking
- Clause 52.29 Land Adjacent to the Principal Road Network
- Clause 52.34 Bicycle Facilities
- Clause 53.02 Bushfire Planning
- Clause 53.10 Uses with Adverse Amenity Potential.





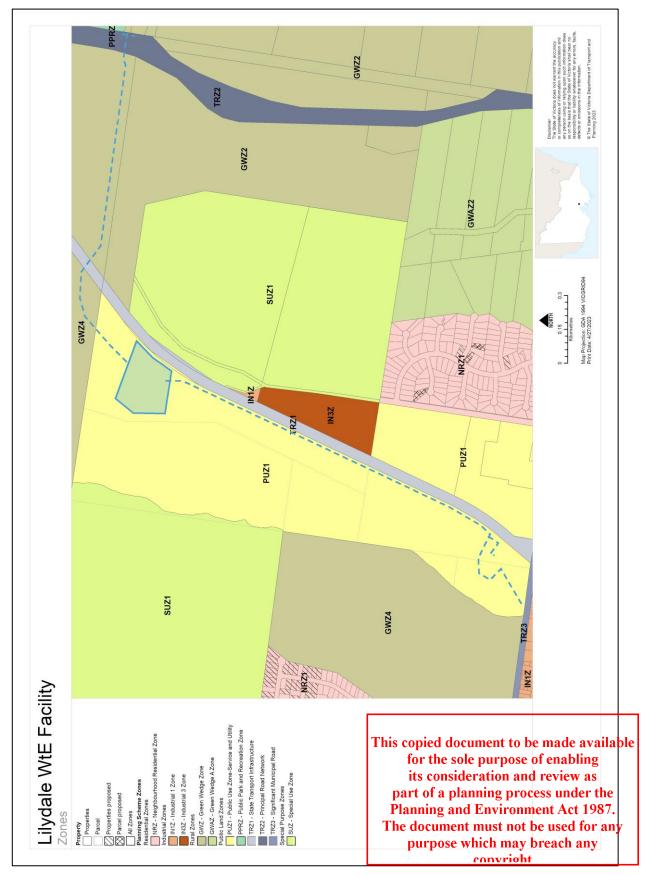


Figure 6-1: Zones

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Figure 6-2: Environmental Significance Overlay





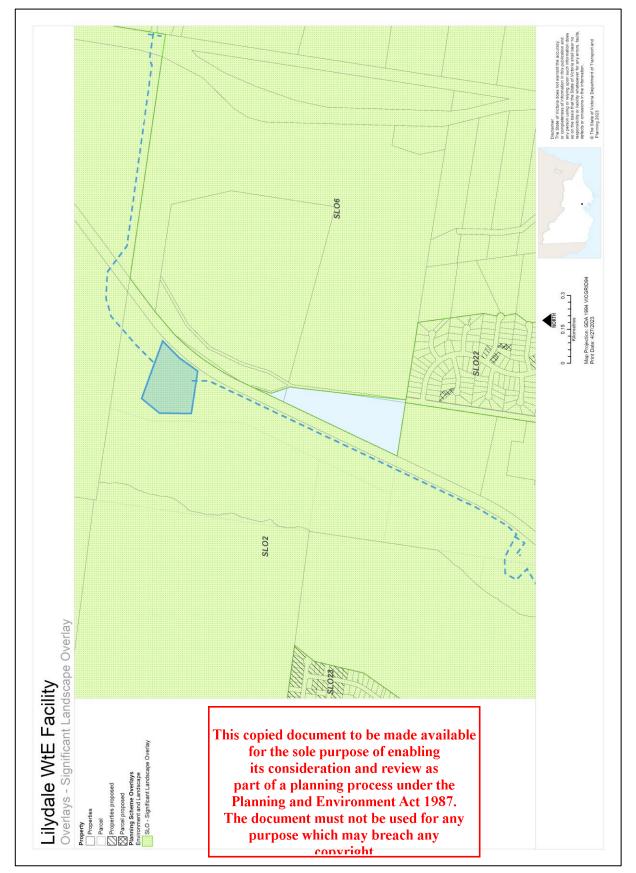


Figure 6-3: Significant Landscape Overlay



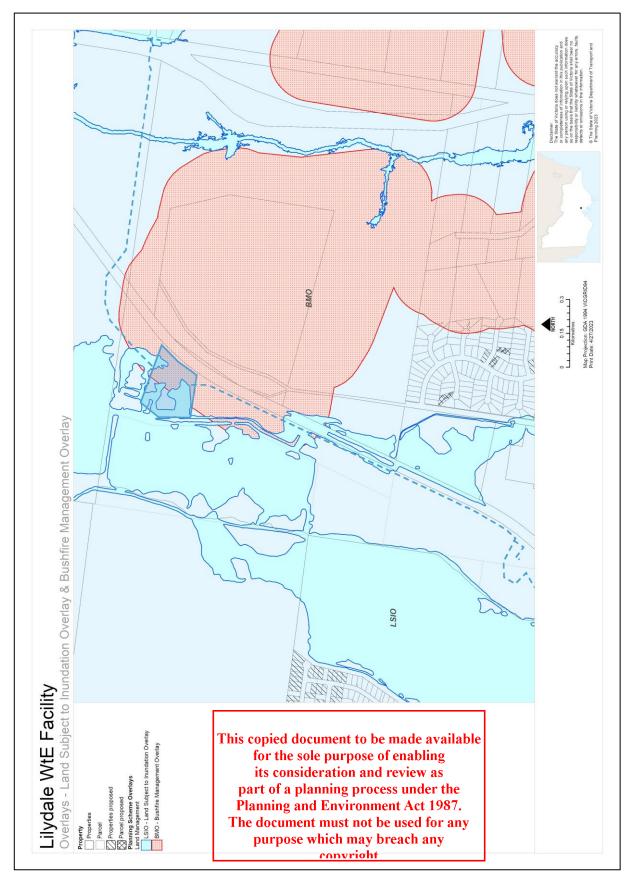


Figure 6-4: Land Subject to Inundation Overlay and Bushfire Management Overlay



6.3 Referral and notice provisions

Clause 66 outlines the referral and notice requirements for the planning permit application. Referrals will be required to the authorities listed in Table 6-1.

Authority	Provision	Authority status	Comments
Environment Protection Authority	Clause 66.02-1	Determining	 For a use or development requiring any of the following: A Development Licence or Operating Licence in accordance with Part 4.4 of the <i>Environment Protection Act 2017</i>. Amendment of a licence in accordance with Part 4.3 of the <i>Environment Protection Act 2017</i>.
Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation</i> , <i>Forests and Lands Act</i> 1987)	Clause 66.02-2	Recommending	 To remove, destroy or lop native vegetation in the Detailed Assessment Pathway as defined in the Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017). To remove, destroy or lop native vegetation if a property vegetation plan applies to the site. To remove, destroy or lop native vegetation on Crown land which is occupied or managed by the responsible authority.
AusNet	Clause 66.02-4	Determining	To construct a building or construct or carry out works on land within 60 metres of a major electricity transmission line (220 Kilovolts or more) or an electricity transmission easement.
Melbourne Water Corporation	Clause 66.03	Determining	Applications under the LSIO within the waterway management district of Melbourne Water.
Head, Transport for Victoria	Clause 52.29	Determining	An application to create or alter access to, or to subdivide land adjacent to, a road declared as a freeway or an arterial road under the <i>Road Management Act 2004</i> , land owned by the Head, Transport for Victoria for the purpose of a road, or land in a Public Acquisition Overlay if the Head, Transport for Victoria is the acquiring authority and the acquisition is for the purpose of a road.
VicTrack	Planning and Environment Act S.52	Affected party	VicTrack as the owner of the land in the Transport Zone 1.

As described in Section 4, YVW has undertaken extensive consultation with stakeholders and the community prior to the submission of this planning permit application. Further notification of the planning permit application will be determined by the Minister for Planning.



7. Planning Assessment

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This section of the report assesses the proposed use and development of the WtE facility against the planning scheme.

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7.1 **Planning Policy Framework**

The proposal is consistent with the strategy in Clause 11.01-1R Green Wedges – Metropolitan Melbourne and Clause 11.01-1L-04 Green Wedge, which support the use and development of renewable energy generation in the green wedges of Melbourne. The proposal is also consistent with the objective of this clause to protect the green wedge from inappropriate development. The proposal will not result in the loss of agricultural land or affect extractive uses within the green wedge. The proposed development has also been sited to minimise the visual impact of the buildings, with the use of planted vegetation to partially screen the views of buildings and tanks from the Yarra Valley Rail Trail.

The policies contained in Clause 12.01-15 Protection of Biodiversity, Clause 12.01-25 Native vegetation management, Clause 12.01-1L Biodiversity and Clause 12.03-1S River and riparian corridors, waterways, lakes, wetlands and billabongs which seek to protect and conserve Victoria's biodiversity and waterways, with no net loss of native vegetation. Consistent with the policy, an ecological assessment has been undertaken and has been used to inform the design. In accordance with the policy, the proposal has avoided and minimised impacts on native flora and fauna. The ecology report and the Preliminary Land Management Plan set out the approach to manage environmental impacts during construction and postdevelopment.

The ecology assessment reports that the main project site is highly disturbed with minimal native vegetation present. It has identified remnant native vegetation that could be impacted by the project and provides recommendations to avoid and minimise impacts to native vegetation and habitat. It also provides guidance on measures to manage the impacts of construction on native vegetation, such as nogo and tree protection zones.

The proposal would not result in a significant impact on the local environment or biodiversity as the WtE facility site and access road has been previously disturbed and largely consists of non-native vegetation that provides poor quality habitat. Where the project intersects with the Yarra Valley Rail Trail, waterways and the Maroondah Highway the road corridor has been reduced to the minimum corridor width required to provide suitable access and to undertake construction.

The removal of native vegetation will be in accordance with the Guidelines for the removal, destruction, or lopping of native vegetation (DELWP, 2017), including the provision of off-sets. The ecology assessment found that the project would require the removal of 0.180ha of native vegetation patches (EVCs), comprising of 0.0855ha of EVC 821: Tall Marsh and 0.0944ha of EVC 134: Creekline Herb-rich Woodland. The ecology assessment confirms that the removal of less than 0.5 hectares of native vegetation in this location will not have a significant impact on any habitat for a rare or threatened species.

The of native vegetation identified to be removed will be managed in accordance with the Permitted Clearing of Native Vegetation Biodiversity Assessment Guidelines, with suitable offsets secured to meet the objectives of no net loss to the contribution made by native vegetation to Victoria's biodiversity. An offset of 0.054 general habitat units is required to offset the loss of the native vegetation in accordance with the Guidelines. The offset must be in place prior to the removal of any native vegetation.

The Arboriculture Assessment (Ironbark Environmental Arboriculture, 2023) identified the removal of 42 trees, and the encroachment of four (4) trees but where the tree will be retained. Of the 42 trees to be removed, a permit is required to remove 17 within the ESO1, 15 within the SLO2 and 22 in accordance with Clause 52.17². The trees to be removed along the Yarra Valley Rail Trail and Lilydale East Drain

² Multiple trees require approval under overlapping planning controls.

(Branch) are of low visual amenity and low retention value (except one tree which is rated as moderate but which cannot be avoided). The trees to be removed at the Maroondah Highway intersection are generally of low-moderate visual amenity value, but of high retention value. Due to the need to align the intersection with Ingram Road, the proposed intersection cannot be moved further north or south to avoid impacts to the affected trees.

The proposed development addresses the policies contained in *Clause 12.05-1S Environmentally sensitive areas*, *Clause 12.05-2S Landscapes* and *Clause 12.05-2L Rural landscapes*, which seek to protect and conserve environmentally sensitive areas, significant landscapes and open spaces. A Landscape and Visual Assessment was prepared to assess the proposed development and recommend measures to manage the interface.

The landscape assessment found that the proposed site is immediately adjacent to farmland to the north and industrial areas to the east and south, with most views toward the site not considered to be visually sensitive as the landscape is already highly disturbed. It was recognised that the site would be visible from the Yarra Valley Rail Trail and the Gardiner Run Golf Course. It also found that it will be visible to a lesser extent from public areas in the residential area and sportsfield (located on YVW's land) located to the south-east.

While infrastructures will change the landscape visually, the location is already highly developed and there would be minimal visual impacts to the landscape as a result of the project. To enhance the visual amenity and reduce the visibility of buildings, structures, parking and infrastructure from the Yarra Valley Rail Trail and other nearby locations, the assessment recommended the use of materials and screening vegetation (in areas outside of the Ausnet easement). The landscape concept plan in Figure 7-1 and the visualisations in Figure 7-2 show the proposed landscape treatments.

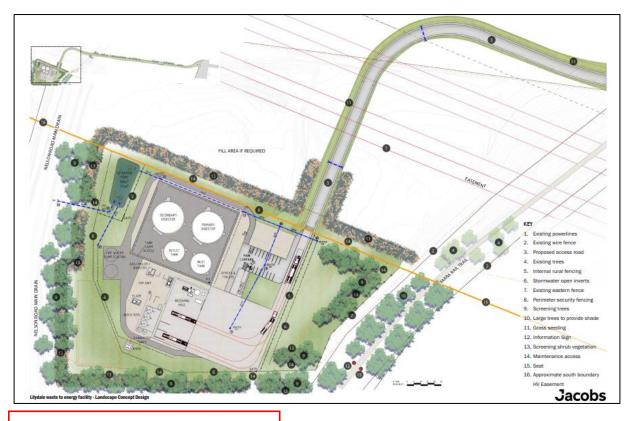


Figure 7-1: Landscape Concept This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any 150803 Jule Purpose which may breach any convright

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Figure 7-2 Visualisation from Yarra Valley Rail Trail

The Shire of Yarra Ranges seeks to encourage good design outcomes in the built environment, not simply limited to aesthetically pleasing design, but which also contributes to a sense of local identity that also seeks to improve people's experience of a space or locality. The policies encourages outcomes that contribute to creating places that people want to be in. The policies also require developments to minimise adverse impacts on the character and appearance of an area or features of environmental or landscape significance. The policies encourage external surfaces, including roofs, be treated with non-reflective materials and subdued colours to reduce the visual impact of the development on the surrounding area. The policies also seek to retain and protect the scenic landscapes, rural and green wedge character and special environmental features of the Shire.

As discussed above, a Landscape Plan has been developed to identify opportunities to enhance the aesthetics of the interface to the WtE facility. To contribute to the sense of place and to improve people's experience to the Yarra Valley Rail Trail, YVW has proposed a stopping point along the trail, with seating and an 'information kiosk' that conveys information about the facility. This aligns with existing stopping points developed by YVW (in conjunction with Yarra Ranges Shire Council) and others as shown in Figure 7-3 and Figure 7-4. These do not form part of this application and would be subject to a separate agreement with Council and VicTrack, as well as approvals in accordance with the planning scheme.





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Figure 7-3: Lilydale STP Rest Area and Viewing Platform



Figure 7-4: Quarry Rest Area and Information Kiosk

The development applies good design to improve amenity, this includes:

- Automatic fast opening doors that minimise the time that inside air is exposed to the outside.
- Negative pressure within the receiving shed to draw air (and thus odour) into the building when the doors are open, with the air pumped through bio-filters before it is released at the rear of the shed.
- Locating the plant and equipment at the 'back-of-house' so that they are visually screened from pedestrians on the Yarra Valley Rail Trail.

The development also uses a colour palette that is complimentary to the surrounding landscape. Pale Eucalypt (colorbond) is proposed for the digester cladding and receiving shed and Evening Haze for the office building in order to aid legibility on site. The canvas dome on the tanks will be a pale beige tone. The colour palette will blend well with the proposed landscape that would envelope the site.



Figure 7-5 Proposed colour palette

Clause 13.02-1S Bushfire planning seeks to reduce the vulnerability of communities to bushfire. In accordance with the policy VYVW has consulted with the Country Fire Authority (23 February 2022) to describe the project, present plans and discuss what would be stored on site. The Country Fire Authority did not express any significant concerns with the proposed development. Whist the proposed development is within the BMO, it does not trigger the requirement for a planning permit and there is no requirement to meet Clause 53.02-4. Notwithstanding this, the development has been sited to minimise the risk from bushfire to the extent possible. The proposed buildings are located to maximise the separation distance to the bushfire hazard. The existing roads within YVW's land, the proposed access road and the Yarra Valley Rail Trail will provide appropriate access for emergency vehicles. The development includes Fire Fighting Water and Pump Station and a RO Water Tank which collective provide 432kL that can be used for fire-fighting.

The proposed WtE facility is located within a flood prone area as identified by the LSIO that applies to the land (see Figure 6-4). *Clause 13.03-1S floodplain management* seeks to ensure the protection of life, property and community infrastructure from flood hazards, to maintain the natural flood carrying capacity of rivers, streams and floodways, and to maintain the flood storage function of floodplains and waterways. The proposed development has sought and responded to Melbourne Water's pre-development advice and is consistent with the intent of Clause 13.03-15.

In accordance with the advice, the development is designed to be above the 1% flood level grades (from 83.6 metres to AHD at the south boundary down to 83.3 metres to AHD at the north boundary) and the finished floor levels are designed to be 600mm above the graded flood level outlined above. Also in accordance with the advice, a Flood Storage Compensation Area (with a volume of 380kL) is provided within the development to off-set the area of the existing flood storage area that is impacted by the development³.

Melbourne Water's advice also confirmed in-principle support for the proposed crossing of waterways (Ref MWA-1198220 & MWA-1006530), and noted that separate approval from Melbourne Water's Asset Maintenance Services team would be required prior to the commencement of works and that the works would need to be compliant with Melbourne Water's Bridge Crossing Guidelines. The planning permit will contain Melbourne Water's conditions, including the requirement for calculations or hydraulic modelling as may be appropriate.

Clause 13.04-1S Contaminated and potentially contaminated land seeks to ensure that the use of potentially contained land is suitable for its intended use. Soil sampling of the site confirmed that there is no significant contamination that poses a risk to human health or the environment based on the proposed use of the land. The tank farm has been designed in accordance with EPA Victoria guidelines to contain the spillage in case of tank failure and to prevent spills from escaping to the surrounding environment. Each tank is the primary containment. Along the perimeter of the tank farm, a bund wall 200mm thick and 1400mm high will be built to contain spillages. The maximum containment volume in the tank farm is 4.06 ML and this exceeds the required containment volume of 3.66ML. The tank farm floor will be made of reinforced concrete slab with a water proofing additive to prevent water ingress.

The proposed development has been sited to provide suitable separation between conflicting land uses and designed to manage the potential effects of noise on nearby sensitive land uses (e.g. dwellings and schools) in accordance with *Clause 13.05-1S Noise management*. A Noise Assessment (Appendix C.4) has been undertaken for the proposed development. It demonstrates that project will comply with the general environmental duty (GED) of the *Environment Protection Act 2017*, which requires anyone conducting an activity that poses risks to human health and the environment to understand and minimise those risks so far as reasonably practicable.

The noise assessment has considered the nearest sensitive receiver in each direction and has had regard to their exposure to noise from the facility, the prevailing background noise and the rural and urban settings as relevant to the receiver. The WtE facility is expected to meet the noise limits at all receivers during steady state operation during the day, evening and night-time conditions, under worst-case meteorological conditions. The predicted noise level at the nearest receiver (R1) during the night-time period, when noise limits are the most stringent, is approximately 7dB(A) below the noise limit criteria. The noise contours of the night time period are shown in Figure 7-6.



³ Melbourne Water's advice (2017) identified an existing flood storage area of 795m³. The proposed development will mell a for any the existing flood storage and as such the compensation area only needs to be 380kL.

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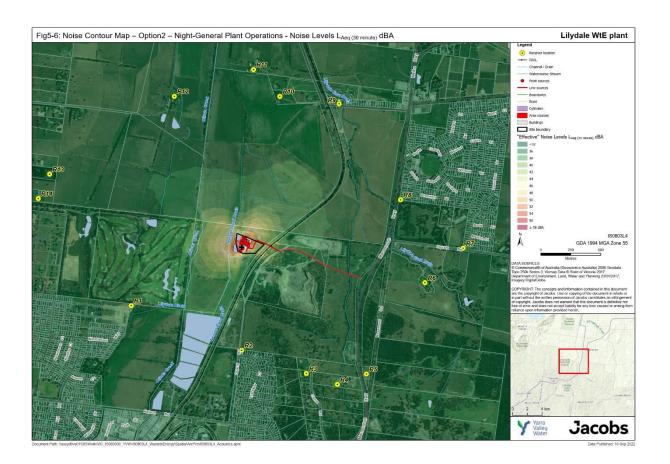


Figure 7-6: Modelled Noise Contours – Normal Night-time Operation

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Clause 13.06-1S Air quality management seeks to assist with the protection and improvement of air quality and to provide suitable separation between conflicting land uses. An Air Quality Assessment (Appendix C.3) has been undertaken to assess odour emission from the proposed WtE and the cumulative effect of odour emissions from the proposed WtE and the existing Lilydale STP. The assessment demonstrates that project will comply with the general environmental duty (GED) of the *Environment Protection Act 2017*.

The 1 OU contour is a conservative benchmark for the potential for offensive odour at sensitive receptors such as residences. The 1 OU contour extends beyond the boundary to the north (YVW's land) and east (Yarra Valley Rail Trail and Boral Quarry), but does not extend to sensitive receptors. Users of the Yarra Valley Rail Trail may occasionally detect an odour when passing close to the WtE Plant, but the highest predicted concentrations represented on the figure are generally limited to night time (usually between 11pm and 6am). The rare user of the trail at this time of day is unlikely to find the odour offensive.

The odour impacts on sensitive receptors from the proposed operation of the WtE facility is expected to be minimal. The maximum predicted concentration for any of the sensitive receptors is 0.24 OU, occurring at the residential zone on the eastern boundary of the YVW site (see receptor R5 in Figure 7-7).

The assessment considered the cumulative impact of the WtE Facility and the existing Lilydale STP. The maximum predicted concentration for any of the sensitive receptors is 3.7 OU at R1 in the south-east corner of the Lilydale STP. The WtE project represents a very small incremental odour concentration increase of 0.06 OU.

The assessment found that in isolation the predicted odour emissions from the WtE facility pose a very low. risk of causing offensive odours beyond the site boundary. For receptors close to the Lilydale STP (such as R1-R5), the STP is the dominant odour source relative to the WtE facility and there is no change to the risk part of a planning process under the

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of occurrence of offensive odours due to the cumulative emissions from both sources, compared to the current situation. It is unlikely that the cumulative odour level would be seen as 'offensive' at any sensitive receptors and it is noted that there have been no odour complaints received from neighbours.

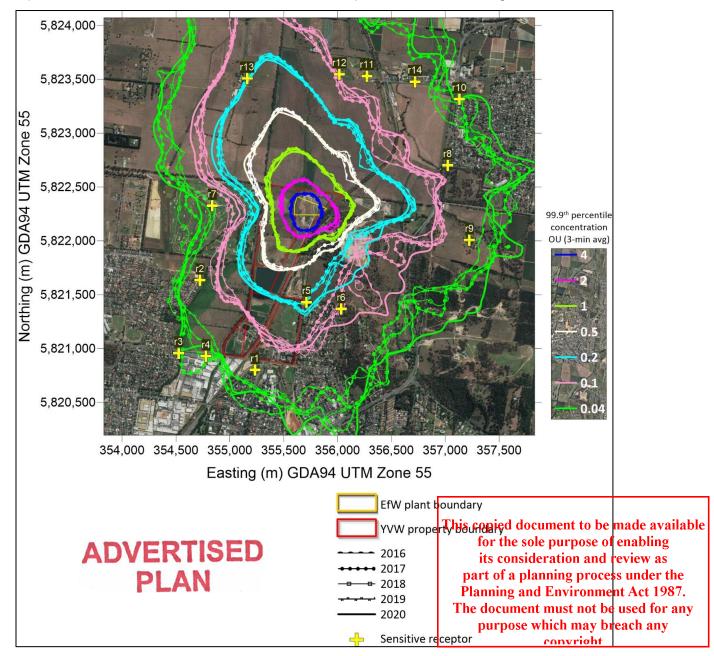


Figure 7-7: Odour Modelling Contours – WtE odour emissions only (3-minute average, 99.9th percentile)

The proposal is consistent with *Clause 13.07-1S Land Use Compatibility*, which seeks to protect human health and amenity by the appropriate siting new land uses and avoiding land use conflicts. The policy refers to the *Recommended separation distances for industrial residual air emissions (Publication 1518, Environment Protection Authority, March 2013)* to inform decision making. Publication 1518 states that land use separation distances for an 'advanced resource recovery technology facility' (i.e. a waste to energy facility) should be determined on a case-by-case basis.

The supporting noise and air quality assessments summarised above (and attached) demonstrate that the WtE facility has been appropriately sited and designed to manage potential impacts to human health and amenity. Measures to manage odour and noise emissions are described in Section 3.



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Clause 14.02-15 Catchment planning and management, Clause 14.02-25 Water Guary and 44.02-1 L, which seek to protect catchments, waterways and water bodies and their environs, with developments to be designed with regard to the Urban Stormwater - Best Practice Environmental Management Guidelines (Victorian Stormwater Committee, 1999). The policies also seek to minimise the discharge of contaminated runoff or wastes to waterways, and where permitted to do so that water quality is protected. To avoid the contamination of Olinda Creek and the flood storage compensation area, the following measures will be implemented:

- The site will be raised above the 1/100 year flood event line (600 mm above graded floor level).
- Any waste or leaks within the tank farm will be directed back into the receival shed for reuse.
- Any roof and road run-off will be directed to the detention pond.

The proposed siting and design of buildings has had regard to *Clause 15.01-2S Building design* and the proposal seeks to make a positive contribution to the local context, enhance the public realm and support environmentally sustainable development.

The WtE facility makes a significant contribution to environmentally sustainable development as it will develop renewable source of power that will be used to power the facility, the co-located Lilydale STP and Recycled Water Pump Station, with the excess power exported to the grid. The design process has had regard to the receiving environs and seeks to achieve an interface with the public realm that supports personal safety and which responds to public amenity in terms of form, scale, and appearance of the development.

The WtE facility is suitably located on the urban fringe of Melbourne where it is separated from nearby sensitive land uses. The topography surrounding the site minimise views of the proposed facility from public areas and roads, with the exception of the Yarra Valley Rail Trail, Gardiner Run Golf Course, and parts of the residential area and sports field to the south-east. In response, the proposed plant and equipment have been located behind buildings in order to screen these structures from the Yarra Valley Rail Trail. A Landscape Plan has been developed to enhance the visual amenity and this is described in the response to *Clause 12.05-1S Environmentally sensitive areas* and *Clause 12.05-2S Landscapes* (see above). A proposed colour palette is provided in Figure 7-5.

The proposed access road will require the removal of vegetation. An arboriculture assessment has been undertaken and it has provided recommendations to avoid and minimise the removal of vegetation along the southern boundary of Lot 1 of TP550095 and at the proposed intersection at Maroondah Highway.

Clause 15.03-25 Aboriginal cultural heritage seeks to protect and conserve places of Aboriginal cultural heritage significance. An Aboriginal Heritage Assessment was undertaken for the project. It found that the project area intersects with three areas of Cultural Heritage Sensitivity, however, due to former and existing land uses, the area is substantially disturbed due to agricultural practices, urbanisation, and the construction of roads and rail. It is therefore unlikely that lithic artefacts of Aboriginal heritage significance remain in situ.

The assessment concluded that while there are Cultural Heritage Sensitivity areas present, the project activity does not constitute a high impact activity, and therefore a mandatory CHMP is not required for the project. A voluntary CHMP No.17255 (Jacobs, 2020) was prepared and it was approved by the Wurundjeri Woi-wurrung Cultural Heritage Aboriginal Corporation on 10 December 2021 (Appendix D.7).

An amendment to the CHMP is currently being prepared for the area impacted by the proposed Maroondah Highway intersection where it is located outside the property boundary of 535-537 Maroondah Highway. The CHMP will be amended for the Maroondah Highway intersection once the final design has been agreed with the Department of Transport.

The policies at *Clause 19.01-1S Energy supply, Clause 19.01-2S Renewable energy,* and Clause 19.01-2R Renewable energy – Metropolitan Melbourne *and Clause 19.03-5S Waste and resource recovery* which encourage Victoria's transition to a low-carbon economy and supports waste from energy developments

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in suitable locations. Clause 19.01-2R encourages the uptake of renewable energy technologies in green breach any wedge and peri-urban areas.

The WtE facility assists with the transition to a low-carbon economy. An assessment of the energy use, greenhouse gas emissions and climate change commissioned by YVW found that the WtE facility is expected to remove over 1.6 million tonnes CO₂-equivalent of greenhouse gases from the atmosphere over its 25 year lifespan. The project will also create approximately 173,000 Australian Carbon Credit Units, by diverting waste from landfill (applicable to the first seven years of operation), and will produce Largescale Generation Certificates by displacing fossil-fuel electricity from the grid.

The assessment also found that if the project did not proceed, then 150 tonnes of food waste per day would continue to be disposed to landfill (or, in the case of liquids, sent to a liquid waste treatment facility). Not proceeding with the project will maintain higher levels of greenhouse gas production, including methane (CH₄) and carbon dioxide (CO₂) which contribute to global warming.

As discussed in the responses above, the WtE facility has been appropriately sited and designed in response to the receiving environs.

7.2 Planning controls

An assessment against the relevant decision guidelines is provided below. An overview of the planning permit triggers is provided in Appendix F.

Clause 36.01 Public Use Zone Schedule 1 (PUZ1)

A planning permit is required for the use of the land within the PUZ1 for a WtE facility. Whilst the use is being carried out on behalf of the public land manager (YVW) and will supply power to the Lilydale STP, the facility is not wholly ancillary to the Lilydale STP as the majority of power that is generated will be exported to the grid. The use has therefore been classified as a new use.

Having regard to the decision guidelines, the proposed use and development of the site:

- Is supported by the Minister for Water who has provided approval under s127 of the Water Act for YVW to enter into a commercial arrangement for the WtE facility on the subject site.
- Has been appropriately sited and designed having regard to the existing use of the land as a . sewerage treatment plant, the location of existing and planned high voltage transmission powerlines, as well as the interfacing amenity of nearby sensitive land uses and visual amenity of the area.
- Is consistent with the use of the land as a utility installation as it will supply the Lilydale STP and . Recycled Water Pump Station with energy sourced from a renewable resource.

Clause 36.04 Transport Zone Schedule 1 (TRZ1)

A planning permit is required for the use of a private access road that is ancillary to WtE facility. A planning permit is also required for buildings and works for the access road. The attached letter from the public land manager of the Transport Zone 1 (Head, Transport for Victoria) provides consent to the application being made.

Having regard to the decision guidelines:

- The access road is consistent with the Planning Policy Framework. .
- The Traffic Impact Assessment confirms that the impact to users of the rail trail is low with the longest delay in pedestrian/trail user time to give way to Lilydale WtE facility traffic was 0.6 seconds
- The rail trail crossing is to be designed in accordance with the 'Typical Trail Entry/Exit Point Detail • Specification Plan, Yarra Ranges Shire Council 16/06/2019'. An example of this design, which is used for other road crossing points, is shown in Photo 3-1

- The Minister for Transport Infrastructure confirmed via letter on 5 May 2022 that the Yarra Valley Rail Trail is a decommissioned rail corridor and an at-grade crossing is supported on the proviso that VicTrack issues a licence to YVW for the crossing
- The Head of Transport for Victoria has provided in principle support for the crossing
- Yarra Ranges Shire Council has provided a letter of no objection for the road on the proviso that the conditions in its letter to YVW on 1 October 2021 are met
- YVW has permission to obtain a licence from VicTrack for access across the land.

Clause 36.04 Transport Zone Schedule 2 (TRZ2)

A planning permit is not required for the use a road or for buildings and works for a road (i.e. redesign of the Maroondah Highway intersection). The access road connection would be assessed in accordance with Clause 52.29.

Clause 35.04 Green Wedge Zone Schedule 2 (GWZ2) and Schedule 4 (GWZ4)

A planning permit is required in the GWZ2 and GWZ4 for the use of an access road that is ancillary to WtE facility. A planning permit is also required for buildings and works for the access road.

Having regard to the decision guidelines, the proposed access road:

- Is to be located to minimise the loss of land used for agricultural purposes, whilst also offsetting it from the boundary to the minimum extent necessary to avoid impacts on the Tree Protection Zones of vegetation along the southern boundary of 535-537 Maroondah Highway (Lot 1 on TP550095)
- The development of the access road would not alter the use and development of the subject land, which is owned by YVW and would continue to be used for farming purposes
- Does not conflict with the use of the land to the south for extractive industry (Boral Quarry).

Clause 42.01 Environmental Significance Overlay Schedule 1 (ESO1)

Within the ESO1, a planning permit is required for:

- The removal of any vegetation, except where exempt
- Buildings and works
- A fence, where not a post and open weave wire rural fence that is less than 1.8 metres in height.

Trees within the ESO1 that are to be removed are (also refer to plan in Figure 3-6):

- Within the Lilydale East Drain (Branch) Tree ID 15-17 and 22-23.
- Within the Maroondah Highway Intersection works Tree ID 37, 40, 45-47, 49, 50, 51, 53, 57, 58 and 65.

Trees within the ESO1 where the root zone will be lopped are (also refer to plan Figure 3-6):

• Within the Maroondah Highway Intersection works – Tree ID 103 and 104 (less than 10% of TPZ).

Trees within the ESO1 located along the access road within the Lilydale STP will not be impacted. While the RO/sewer pipeline will be within the Tree Protection Zone of four planted trees, non-destructive construction methods will be used to avoid the need to remove, destroy or lop the roots of the four trees. The transmission in frastructure will be outside of the Tree Protection Zone and canopy of all trees, except in the vicinity of existing powerlines at Nelson Road. Vegetation at Nelson Road will be removed to the minimum extent necessary prior construction for the sole purpose of enabling

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The construction of the RO/sewer pipeline would not impact on any trees within the ESO. Where the pipeline would be within the Tree Protection Zone, then non-destructive construction methods (e.g. horizontal directional drilling) to avoid impacts on trees.

A planning permit is not required for the proposed security fence and rural fence as they will be of openweave wire and less than 1.8 metres in height.

Having regard to the decision guidelines, the proposed development:

- Would not impact on remnant bushland.
- Has been sited on land that has been significantly disturbed in the past.

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- Has been sited to minimise the removal of native and non-native vegetation.
- Has been sited to minimise the impact to areas of environmental significance.
- The visual amenity of the trees to be removed are low, with the exception of Tree ID 22, 40 and 58 (which are rated as moderate) and 37 (which is rated as significant).
- The removal of Tree ID 104 and 106 have been avoided given their high amenity and retention value.

Clause 42.03 Significant Landscape Overlay 2 (SLO2)

Within the SLO2, a planning permit is required for:

- The removal of vegetation that is native to the Shire of Yarra Ranges (indigenous vegetation)
- The removal of a substantial tree with a trunk circumference greater than 0.35m of a diameter at 1.3m above ground
- Buildings and works with a height of more than 7 metres above ground
- Buildings and works within 4 metres of a tree trunk with a 0.35m diameter at 1.3m above ground.
- A fence, where not a post and open weave wire rural fence that is less than 1.8 metres in height

The trees to be removed within the SLO2 that are indigenous or where the trunk is equal to or greater than 0.35m diameter are (also refer to plan in Figure 3-6):

- Within the Lilydale East Drain (Branch) Tree ID 15-17 and 22-23.
- Within the Maroondah Highway Intersection works Tree ID 37, 40, 45-47, 49, 50, 51, 53, 57, 58 and 65.

Trees within the SLO2 where there would be minor encroachments of the TPZ where a planning permit is required are:

- Within the Lilydale East Drain (Branch) Tree ID 28.
- Within the Maroondah Highway Intersection works Tree ID 103 and 104.

Trees within the SLO located along the access road within the Lilydale STP will not be impacted. While the RO/sewer pipeline will be within the Tree Protection Zone of four planted trees, non-destructive construction methods will be used to avoid the need to remove, destroy or lop the roots of the four trees. The transmission infrastructure will be outside of the Tree Protection Zone and canopy of all trees, except in the vicinity of existing powerlines at Nelson Road. Vegetation at Nelson Road will be removed to the minimum extent necessary in accordance with the Fire Protection exemption at Clause 42.01-3.

Works within 4 metres of a tree with a diameter greater than 0.35m and where the tree is to be retained are (also refer to plan in Figure 3-6): This copied document to be made available.

- Within the Lilydale East Drain (Branch) Tree ID 9
- Within the Maroondah Highway Intersection works Tree ID 103 and 104

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Buildings and works that exceed 7 metres (refer to Figure 3-2 and Appendix B) are the:

- Receival hall (11.1m)
- Tanks within the tank farm (Hydrolysis tanks 11.7m and Digestor tanks 13.2m)
- Top of plant, including flare (7.6m)

A planning permit is not required for the proposed security fence and rural fence as they will be of openweave wire and less than 1.8 metres in height.

Having regard to the decision guidelines, the proposed development:

- Would not impact on remnant bushland.
- Has been sited on land that has been significantly disturbed in the past.
- Has been sited to minimise the removal of native and non-native vegetation.
- Has been sited to minimise the impact to areas of environmental significance.
- The visual amenity of the trees to be removed are low with the exception of Tree ID 22, 40 and 58 (moderate) and 37 (significant).
- The removal of Tree ID 104 and 106 has been avoided given their high amenity and retention value.
- A Preliminary Land Management Plan has been prepared showing actions to be undertaken by the proponent to support re-establishment of the canopy along the Lilydale East Drain (Branch).
- The replacement of (or fee payment for) vegetation removed from the Yarra Valley Rail Trail and Maroondah Highway is to be determined post-approval of the planning permit in consultation with VicTrack, the Department of Transport, Yarra Ranges Council and the Minister for Planning (as may be required).
- The landscape assessment found that the proposed site is immediately adjacent to farmland and industrial areas, with most views toward the site not considered to be visually sensitive as the landscape is already highly disturbed. While infrastructures will change the landscape visually, the location is already highly developed and there would be minimal visual impacts to the landscape as a result of the project.
- To enhance the visual amenity and reduce the visibility of buildings, structures, parking and infrastructure from the Yarra Valley Rail Trail and other nearby locations, the visual assessment recommended the use of materials and screening vegetation (in areas outside of the Ausnet easement). The landscape concept plan in Figure 7-1 and the visualisations in Figure 7-2 show opportunities to landscape the interface.

Clause 44.04 Land Subject to Inundation Overlay (LSIO)

A planning permit is required for the WtE facility and the access road where it crosses the creek (branch of the Lilydale East Drain) in 535-537 Maroondah Highway (Lot 1 on TP550095). A planning permit is not required for the Maroondah Highway intersection roadworks as the proposal would not redirect or obstruct the flowpath.

Having regard to the decision guidelines, the proposed development:

- Is consistent with the pre-development advice provided by Melbourne Water
- The site has been designed above the applicable 1% flood level grades (from 83.6 metres to AHD at the south boundary down to 83.3 metres to AHD at the north boundary) This copied document to be made available
- The finished floor levels are designed to be 600mm above the graded flood lever the sole purpose of enabling
- A Flood Storage Compensation area has been provided within the development to offset the loss to part of a planning process under the Planning and Environment Act 1987

- The proposed crossing of waterways will be comply with Melbourne Water's Bridge Crossing Guidelines and separate approval from Melbourne Water's Asset Maintenance Services team will be obtained prior to the commencement of construction.
- The proposed development has address potential flood risks to life, health and safety. The project
 includes design mitigation measures to off-set the storage loss, as well as to protect waterways and
 waterbodies from the proposed development.

Clause 44.06 Bushfire Management Overlay

A planning permit is not required for the proposed development, a bushfire assessment is not required and the application does not need to meet the provisions of Clause 53.02.

Clause 51.03 Upper Yarra Valley and Dandenong Ranges Regional Strategy Plan

In accordance with the schedule to the Clause 51.03, a planning permit is not required for buildings and works.

In accordance with the schedule to the Clause 51.03, a permit is only required to remove native vegetation or trees greater than 5 metres where the affected land is in the Commercial 1 Zone, Commercial 2 Zone and Industrial 3 Zone; or is in the Public Use Zone or Special Use Zone within the Urban Growth Boundary. The project area is located within the Public Use Zone, but is outside of the Urban Growth Boundary and therefore this clause does not apply and a planning permit is not required to remove any vegetation under this provision.

Clause 52.06 Car Parking

A planning permit is not required.

In accordance with Clause 52.06-6, the provision of car parking for the proposed WtE must be provided to the satisfaction of the responsible authority.

The development proposes a bitumen/concrete sealed vehicle parking area with line-marking and drainage and provision for 8 car parking spaces, inclusive of one disability parking space. This exceeds the day-to-day operational requirements of the five on-site staff and infrequent visitors to the site. The hardstand area has provision for additional parking (not line-marked).

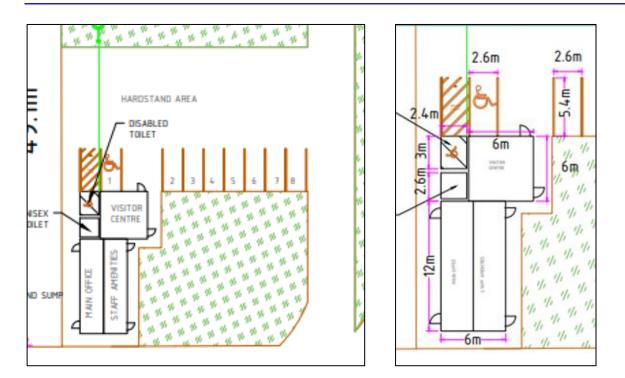
The car parking area (Figure 7-8) has been designed in accordance with the Australian Standards and meet the requirements of Clause 52.06-9, the car park and hardstand area:

- Provides an accessway that meets the minimum width requirement of 3 metres.
- Allows vehicles to exit in a forward direction with one manoeuvre.
- Has sufficient area near the entrance to the car park for vehicles to pass.
- Has parking bays at 90 degrees with a width of 2.6m and a length of 5.4m (exceeding the 4.9m requirement).
- Would not exceed 1:10 grades (10 per cent) along the accessway.
- Would be in proximity to and visible from the adjoining administration buildings.

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Clause 52.17 Native Vegetation

Having regard to the decision guidelines, the proposed development has undertaken an assessment to avoid, minimise and offset the removal of native vegetation in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation (Department of Environment, Land, Water and Planning, 2017)*. A copy of the assessment is provided in Appendix C.1.

A planning permit is required to remove the following native vegetation:

- 0.180ha of native vegetation patches (EVCs), comprising of
 - 0.0855ha of EVC 821: Tall Marsh
 - 0.0944ha of EVC 134: Creekline Herb-rich Woodland.

The ecology assessment found that the removal of less than 0.5 hectares of native vegetation in this location will not have a significant impact on any habitat for a rare or threatened species.

An offset of 0.054 general habitat units is required to offset the loss of the native vegetation in accordance with the Guidelines.

The arborist assessment identifies the following native trees that are to be impacted by the proposed works and which require approval for removal:

- Within the Lilydale East Drain (Branch) Tree ID 15-17 and 22-23.
- Within the Maroondah Highway Intersection Tree ID 36, 39, 45-51, 57, 58, 65, 98 and 99.
- Within the Yarra Valley Rail Trail Tree ID 48, 60 and 61.

The arborist assessment identified the following native trees that are to be encroached by the proposed works and which require approval for lopping of the root zone (but where the tree will be retained): This copied document to be made available

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The arborist assessment identified the following native planted trees that are to be encroached by the proposed works (where the tree will be retained) and where a planning permit is not required to lop the root zone of the planted tree:

Within the Lilydale East Drain (Branch) (Area 1) – Tree ID 4 and 8.

Native vegetation along the access road within the Lilydale STP will not be impacted. While the RO/sewer pipeline will be within the Tree Protection Zone of four planted trees and a patch of native vegetation, non-destructive construction methods will be used to avoid the patch and to avoid the need to remove, destroy or lop the roots of the four trees. The transmission infrastructure will be outside of the Tree Protection Zone and canopy of all trees, except in the vicinity of existing powerlines at Nelson Road. Vegetation at Nelson Road will be removed to the minimum extent necessary in accordance with the Fire Protection exemption at Clause 42.01-3.

The sewerage treatment ponds within the STP are mapped as Current Wetlands in VicPlan. They are artificial water bodies and therefore exempt from the requirements on Clause 52.17.

Clause 52.29 Land Adjacent to the Principal Road Network

A planning permit is required to create, modify or alter access to a road in a road in Transport Zone 2. A planning permit would be required for the proposed access road.

A planning permit is not required to create or alter access, or subdivide land, if carried out by or on behalf of the Head, Transport for Victoria. As such, a planning permit would not be required to signalise the intersection if undertaken on behalf of the Head, Transport for Victoria.

The Traffic Impact Assessment (Appendix C.5) provides an assessment of the options to provide a new access road and to upgrade the intersection. The concept layout, as discussed in the Traffic Impact Assessment shows an enlarged, signalised intersection with one lane in each direction along Maroondah Highway, plus left and right turning lanes into Ingram Road and the proposed access road to the WtE facility.

DoT reviewed the report and provided a letter to YVW confirming its in-principle support including the concept layout and signalisation of the intersection, subject to the details of a Functional Layout Plan and resolution of the concept layout. It was also recognised by DoT that the layout would require agreement with the Yarra Ranges Shire Council as Ingram Road is a local road under its management.

The new intersection will be a four-way signalised intersection. During the operation phase traffic will enter the proposed development via the newly constructed western approach of the Maroondah Highway/ Ingram Road intersection. The *Traffic and Transport Assessment* estimated maximum daily increases in traffic volumes (travelling one-way) during the peak construction year (2023) to be 60 vehicles (20 heavy vehicles and 40 light vehicles), with 46 vehicles expected to enter the site during peak hour periods. The estimated maximum daily traffic volume (travelling one-way) during the opening year (2025), which is set to commence at 100% capacity, is 43 vehicles (33 heavy vehicles and 10 light vehicles). It is estimated that 20 of these vehicles (10 heavy vehicles and all 10 light vehicles) are expected to enter the site during peak-hour periods.

The midblock performance along the Maroondah Highway in the vicinity of the intersection has remained unchanged (Level of Service - A). Therefore, the existing road network has sufficient capacity to accommodate the estimated traffic demand for the peak construction year (2023), the opening year (2025) and the twenty-year operation horizon (2045). It is noted that the twenty-year operation horizon (2045) scenario contains four lanes along Maroondah Highway to support the proposed future duplication for Maroondah Highway (that is currently being investigated by DoT).

Overall, the intersection analysis results indicate that the intersection of Maroondah Highway, Ingram Road and the new access road would perform within the acceptable range of degree of saturation and delays for both peak periods during the peak construction year (2023), the opening year (2025), and the twenty-year operation horizon (2045). In addition, the performance of Ingram Road is improved with the implementation of a signalised intersection, with delays and level of service improving.

Clause 52.36 Bicycle Facilities

The proposed use of a WtE facility is not listed use in Clause 52.34-5. As such, bicycle and end of trip facilities do not need to be provided. The proposed development includes provision for one change/room shower co-located within the disabled toilet.

Clause 53.02-4 Bushfire planning

The clause operates in unison with Clause 44.06 and in itself it does not trigger the requirement for a planning permit. The proposed use is not of a type that triggers the requirement for a permit in accordance with Clause 44.06 and therefore there is no requirement to meet Clause 53.02-4. Notwithstanding this, YVW met with a representative of the Country Fire Authority on 23 February 2022 to describe the project, present plans and discuss what would be stored on site. The Country Fire Authority did not express any significant concerns with the proposed development.

The development has been sited to minimise the risk from bushfire to the extent possible. The proposed buildings are located to maximise the separation distance to the bushfire hazard. The existing roads within YVW's sewerage treatment plant, the proposed access road and the Yarra Valley Rail Trail will provide appropriate access for emergency vehicles. The development includes Fire Fighting Water and Pump Station and a RO Water Tank, near the entrance to the site, which collective provide 432kL that can be used for fire-fighting.

Clause 53.10 Uses with Adverse Amenity Potential

This clause does not trigger the requirement for a planning permit.

The purpose of this clause is to ensure uses and activities with potential to cause impacts to amenity are mitigated through achieving appropriate threshold distances. For this project the threshold distance specified in this clause is the distance from any part of the land of the proposed use to land in a residential zone. Under this clause, the WtE facility is classified as a facility that uses "combustion, treatment or bio-reaction of waste to produce energy". The threshold specified for this use is variable and dependent on the processes to be used and the materials to be processed or stored.

Measures to manage odour and noise emissions are summarised in the Section 3. The supporting noise and air quality assessments summarised above (and attached) demonstrate that the WtE facility has been appropriately sited and designed to manage potential impacts to human health and amenity.



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8. Conclusion

This Planning Assessment Report describes the project and provides and assessment against the relevant provisions of the Yarra Ranges Planning Scheme in support of the planning permit application for the:

- Use and development of a WtE facility in the Public Use Zone 1 (PUZ1)
- Use and development of an access road ancillary to the WtE facility within the Green Wedge Zone Schedule 2 (GWZ2) and Green Wedge Zone Schedule 4 (GWZ4)
- Use and development of an access road ancillary to the WtE facility within the Transport Zone 1 (TZ1).
- Use and development of transmission infrastructure ancillary to the WtE facility within the Public Use Zone 1 (PUZ1)
- Buildings and works, construction of a fence, and the removal/lopping of any vegetation within the Environmental Significance Overlay 2 (ESO1)
- Buildings and works, construction of a fence, and the removal/lopping of any vegetation within the Significant landscape Overlay 2 (SLO2)
- Building and works within the Land Subject to Inundation Overlay (LSIO)
- Removal of native vegetation in accordance with Clause 52.17
- Creation of a new access to the Principal Road Network (Maroondah Highway) in accordance with Clause 52.29.

As demonstrated by this assessment and the suite of specialist reports, the proposed WtE facility is consistent with State government policy to encourage the development of renewable energy generation is support of the plan to transition to a low-carbon economy. The proposed facility has been appropriately sited on the urban fringe of Melbourne and in a location that is sufficiently separated from sensitive land uses.

To manage the localised changes to visual amenity, the project has opted for muted colour tones for the buildings and proposes planting to partially screen the WtE facility from key public areas, especially the views from the Yarra Valley Rail Trail. The development would not seek to turn its back on the trail, but instead would use the opportunity to build on the sense of place by providing am additional stopping point along the Yarra Valley Rail Trail to view the WtE facility.

The project recognises the potently risks to the environment that are posed by the developments processes. The project has been designed in accordance with relevant regulations, standards and guidelines and seeks to minimise those risks so far as reasonably practicable. This is reflected in the adoption of measures to reduce noise and odour emissions, and to contain wastes and leakages so that the environment is not contaminated.

The project has also sought to avoid and minimise the impacts to native and non-native vegetation by appropriately locating the facility, plant, equipment, infrastructure and the private access road. The project has avoided/minimised the removal of native and non-native vegetation by locating the access road approximately 10 metres from the southern boundary of 535-537 Maroondah Highway, crossing the Yarra Valley Rail Trail at a point where there is an existing gap in the vegetation, and narrowing the width of the culvert crossing over the branch of the Lilydale East Drain.

The proposed development will result in an overall net community benefit, as the facility will significantly increase the amount of renewable energy generated within the local area, and divert waste that would otherwise go to landfill. The visibility and success of the project will likely strengthen the community's commitment to contribute to the responsible recycling of organic wastes.





Appendix A. Certificates of Title

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Appendix B. Plans

B.1 Development Plans

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B.2 Elevations

ADVERTISED PLAN



B.3 Site Plans

ADVERTISED PLAN



B.4 Power Supply Plan

ADVERTISED PLAN



B.5 Native Vegetation Removal Plan

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B.6 Tree Removal Plan

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Appendix C. Specialist Assessments

C.1 Ecology Assessment

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C.2 Aboriculture Assessments

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C.3 Air Quality Assessment

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C.4 Noise Assessment

ADVERTISED PLAN



C.5 Traffic and Transport Assessment

ADVERTISED PLAN



C.6 Landscape and Visual Assessment

ADVERTISED PLAN



C.7 Preliminary Land Management Plan

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Appendix D. Correspondence

D.1 Access Road Intersection, Transport for Victoria (9/2/2022)

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D.2 Decommissioned Rail Corridor Crossing, Minister for Transport Infrastructure (5/5/2022)

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D.3 Public Land Manager Consent for Permit Application, Transport for Victoria (12/5/2022)

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D.4 Rail Trail Crossing In-Principle Letter of Support, Yarra Ranges Council (1/10/2021)

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D.5 Pre-Development Advice, Melbourne Water (6 November 2017)

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D.6 Referral Decision under Environment Protection and Biodiversity Conservation Act 1999, Department of the Environment and Energy (26 April 2018)

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D.7 Cultural Heritage Management Plan No. 17255 approval letter, Wurundjeri Woi Wurrung Cultural Heritage Aboriginal Corporation (10/12/2021)

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Appendix E. Consultation Summary Report

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Appendix F. Planning Permit Triggers

Provisions	Planning Permit Triggers		
	Use	Building & Works	Vegetation Removal
Zones			
Clause 35.04 Green Wedge Zone Schedule 2 (GWZ2) for a private access road (driveway) that is ancillary to the WtE facility	Yes	Yes	N/A
Clause 35.04 Green Wedge Zone Schedule 4 (GWZ4) for a private access road (driveway) that is ancillary to the WtE facility	Yes	Yes	N/A
Clause 36.01 Public Use Zone Schedule 1 (Services and Utility) (PUZ1) for a Waste- to-Energy Facility	Yes	Yes	N/A
Clause 36. 04 Transport Zone 1 (TRZ1) for a private access road (driveway) that is ancillary to the WtE facility	Yes	Yes	N/A
Clause 36. 04 Transport Zone 2 (TRZ2) for a road	No	No	N/A
Overlays			
Clause 42.01 Environmental Significance Overlay Schedule 1, shown in the planning scheme map as:	N/A	Yes	Yes
(ES01-Z6) (Lilydale Purification Plant) for the removal of protected vegetation			
 (ESO1-B14) (Eucalyptus yarraensis stands Coldstream, Yarra Glen districts) 			
Clause 44.04 Land Subject to Inundation Overlay (LSIO)	N/A	Yes	N/A
Clause 44.06 Bushfire Management Overlay (BMO)	N/A	No	N/A
Particular Provisions			
Clause 51.03 Upper Yarra Valley and Dandenong Ranges Strategy Plan	N/A	No	No
Clause 52.06 Car Parking	N/A	N/A	N/A
Clause 52.17 Native Vegetation	N/A	N/A	Yes
Clause 52.29 Land Adjacent to the Principal Road Network	N/A	Yes	N/A
Clause 52.34 Bicycle facilities	N/A	No	N/A
Clause 53.10 Uses with Adverse Amenity Potential	N/A	N/A	N/A

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