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Planning Report - Amended

Use and Development of a Waste-to-energy and Utility Installation

374 Hendersons Road and
1861 Sale-Toongabbie Road,
Toongabbie

Our reference – 20437

27 August 2024

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FS 520900



**MEMBER
FIRM**

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Estimated cost of works: \$30m

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1. Introduction

This Planning Report (Amended) is prepared in support of a proposed Waste-to-energy facility at 374 Hendersons Road, Toongabbie.

Planning Application PA2402859 was lodged with the Department of Transport & Planning on 12 April 2024 seeking approval for the use and development of a Renewable Energy Facility.

The Department has subsequently formed the view that the proposal would best be characterised as a Waste-to-energy facility, and has requested the Planning Application be amended accordingly. We understand this is principally related to concerns regarding the ability to “rapidly replace” the organic matter relied upon as a renewable energy resource.

Whilst we have conceded the definition of the proposed use at the Department’s request, we have retained within this report relevant statements which in our view demonstrate sound strategic alignment with local and State policy objectives relating to renewable energy and circular economy aspirations.

This Planning Report (Amended) accompanies a request to amend the application pursuant to Section 50 of the *Planning & Environment Act 1987*.

The requested change to the description of the proposal does not result in a higher application fee as specified by the Table to Regulation 9 of the *Planning & Environment (Fees) Regulations 2016*. As notice of the application has not been given under Section 52 of the *Planning & Environment Act 1987*, we understand there is no additional application fee associated with the amended proposal, in accordance with Regulation 12 of the *Planning & Environment (Fees) Regulations 2016*.

Pursuant to Clause 72.01-1, the Minister for Planning is the Responsible Authority for the use and development of an Energy generation facility (Waste-to-energy facility), and for a Utility Installation used to store, transmit or distribute electricity.

The Report addresses the provisions of the Farming Zone and Particular Provisions relating to uses and activities with potential adverse impacts of Clause 53.10 of the *Wellington Planning Scheme*.

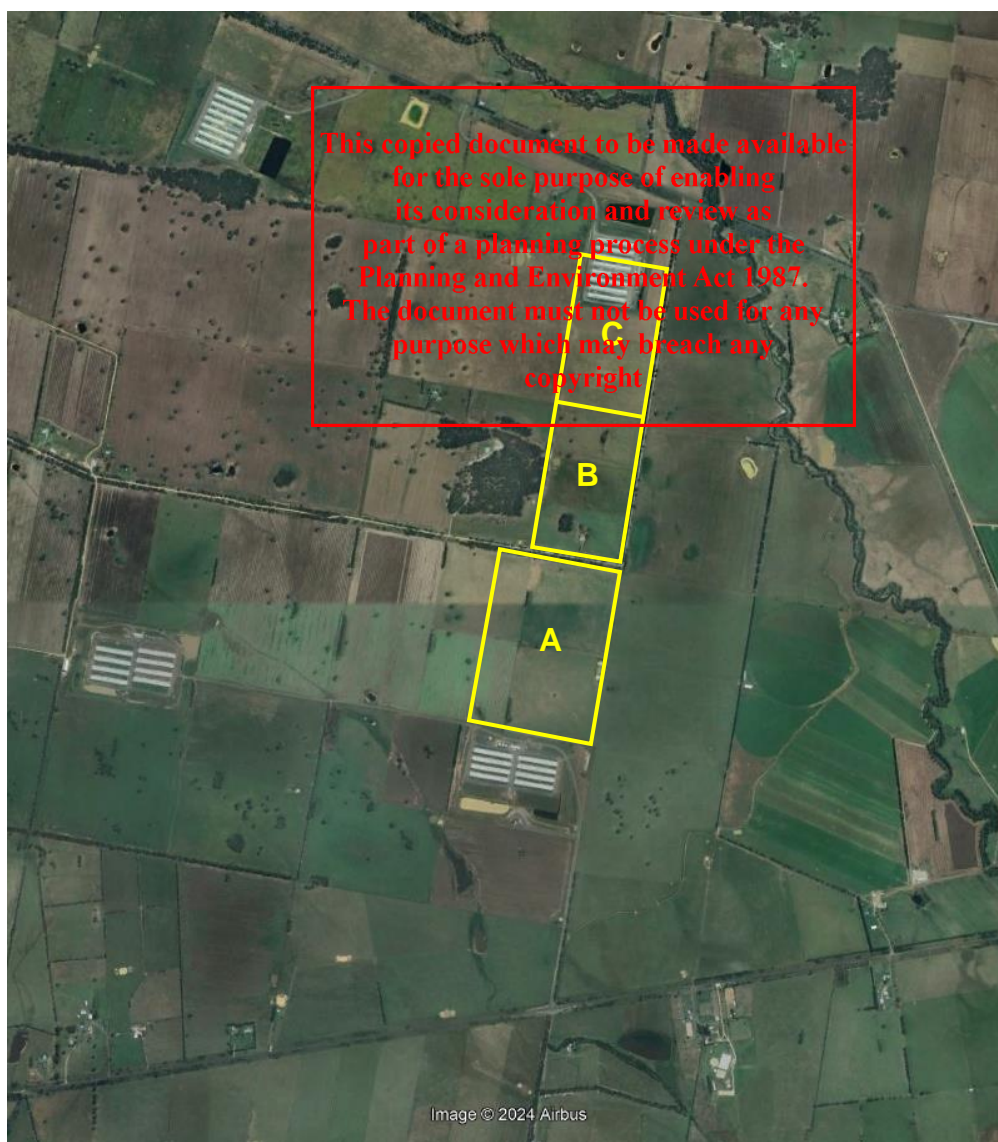
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2. Site and Context Analysis

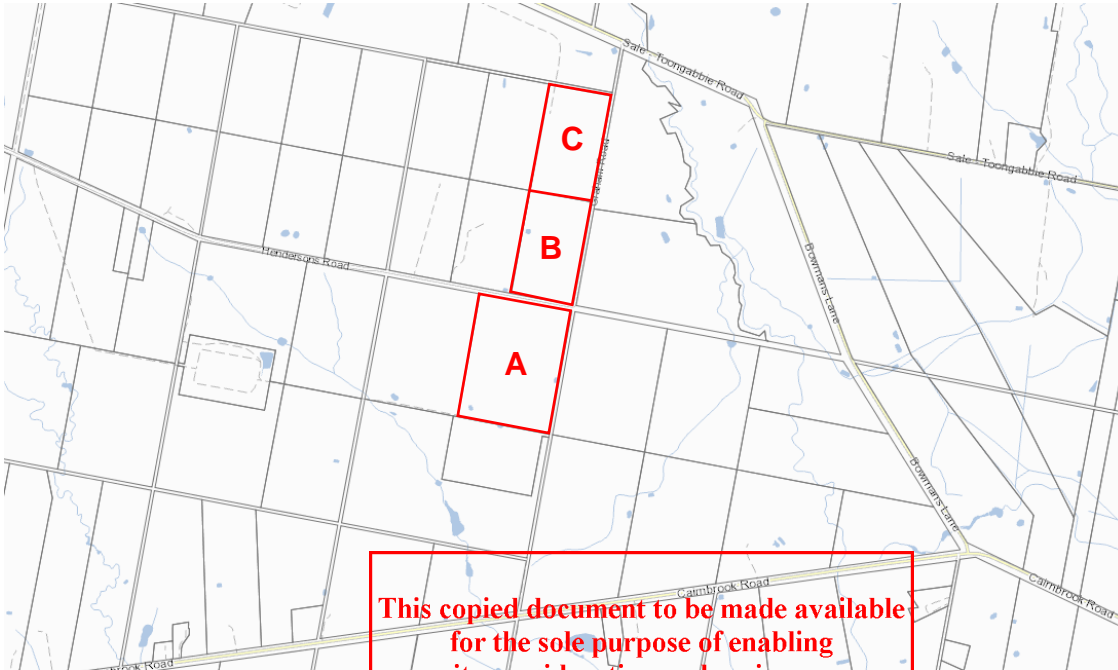
The subject land comprises three separately transferrable parcels described as follows:

Formal description	Street address	Area	Reference
Lot 4 on PS835778	374 Hendersons Road, Toongabbie	48.55ha	Property A
CA 18, Parish of Toongabbie South	1861A Sale-Toongabbie Road, Toongabbie	27.11ha	Property B
CA 1, Parish of Toongabbie South	1861A Sale-Toongabbie Road, Toongabbie	27.81ha	Property C



*Aerial photograph depicting approximate boundaries of subject land
(Source: Google Earth)*

Each of the three properties are regular in shape and adjoin Graham Road to the west. Hendersons Road adjoins property A to the north and Property B to the south.



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Property A currently comprises vacant agricultural land which is cropped for fodder. Small dams have been constructed adjacent to the eastern boundary, and in the south-western corner of the site, primarily to assist with drainage of the land. The property is fenced into four separate paddocks, with some scattered trees established immediately adjoining these internal fences.



Aerial photograph of Property A (Source: Google Earth, 1 January 2024)



*View south over Property A from Hendersons Road
(Date of photograph: 26 January 2024)*



View north across Property A from south-east corner (Date of photo: 7 April 2023)

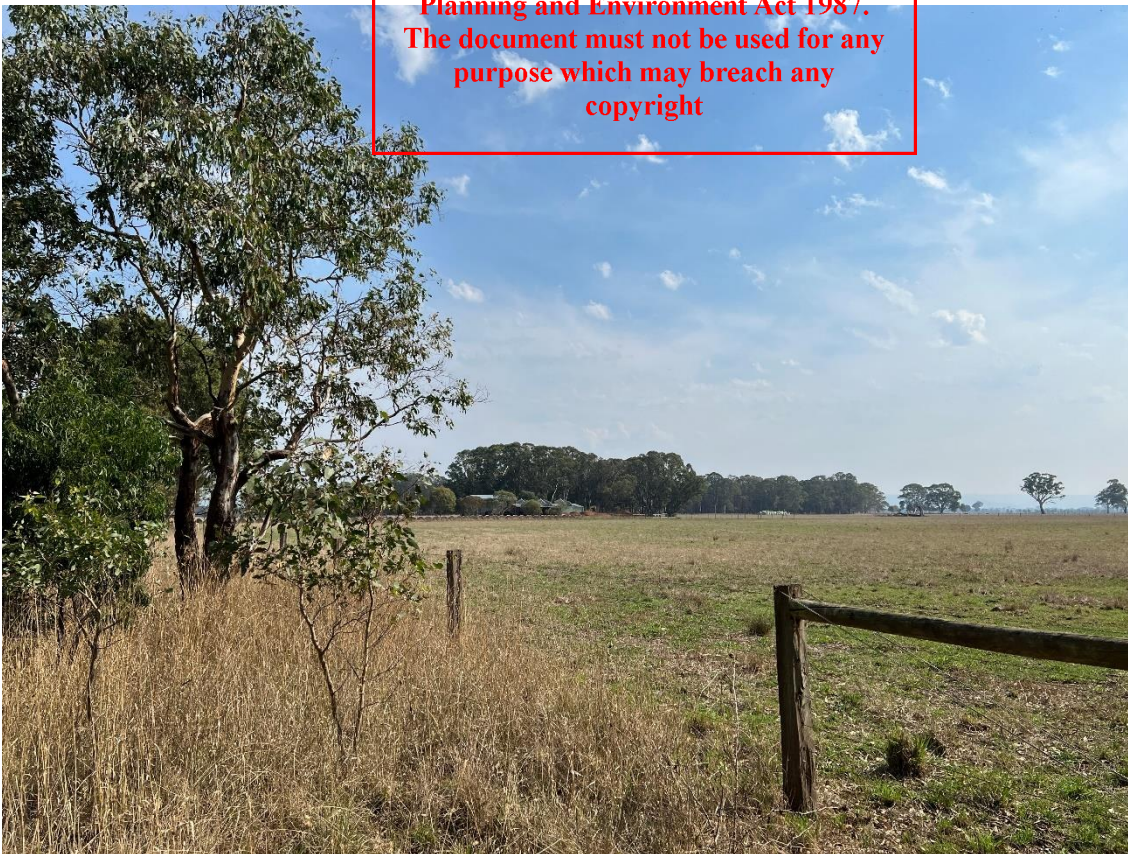
Property B is developed with an agricultural shed in the southern third of the allotment, with vehicular access provided from Hendersons Road. A patch of remnant vegetation is located to the west of the shed, with some scattered vegetation located within the northern third of the allotment. A small dam is located centrally along the western boundary to assist with the drainage of paddocks which are cropped for fodder.

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Aerial photograph of Property B (Source: Google Earth, 6 December 2023)

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Existing shed on Property B, viewed from the south-eastern corner of Property B
(Date of photograph: 7 April 2023)

Property C is partially developed with a Broiler Farm which extends beyond the subject land to the north. The balance of the property is either cropped for fodder or grazed, with a set of stockyards in the north-eastern corner of the site accessible from Graham Road.



Aerial photograph of Property C (Source: Google Earth, 6 December 2023)

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Existing broiler farm partially developed on Property C, viewed from Graham Road
(Date of photograph: 7 April 2023)

The landform across the subject land is even, with no discernible variation in grade. Vegetation on site is predominantly pastoral grasses, with roadside vegetation adjoining the subject land within the Hendersons Road road reserve. Vegetation is also present within the Graham Road road reserve adjoining Properties B & C, the majority of which are planted Monterey Pines.

Graham Road is a Local Access B road with gravel surface and grassed verges containing areas of linear planting and scattered native vegetation.

The Graham Road road reserve extends from Sale-Toongabbie Road in the north, through to Cairnbrook Road in the south, both of which are good quality, bitumen sealed roads.

Graham Road is predominantly unconstructed south of the intersection with Hendersons Road, other than for a length of approximately 800m extending north from Cairnbrook Road.

The section of Graham Road adjoining Property A is currently licensed to the adjoining property to the east for the purposes of grazing.

(R) Diagram demonstrating the varying constructed elements of Graham Road (Source: Google Earth)



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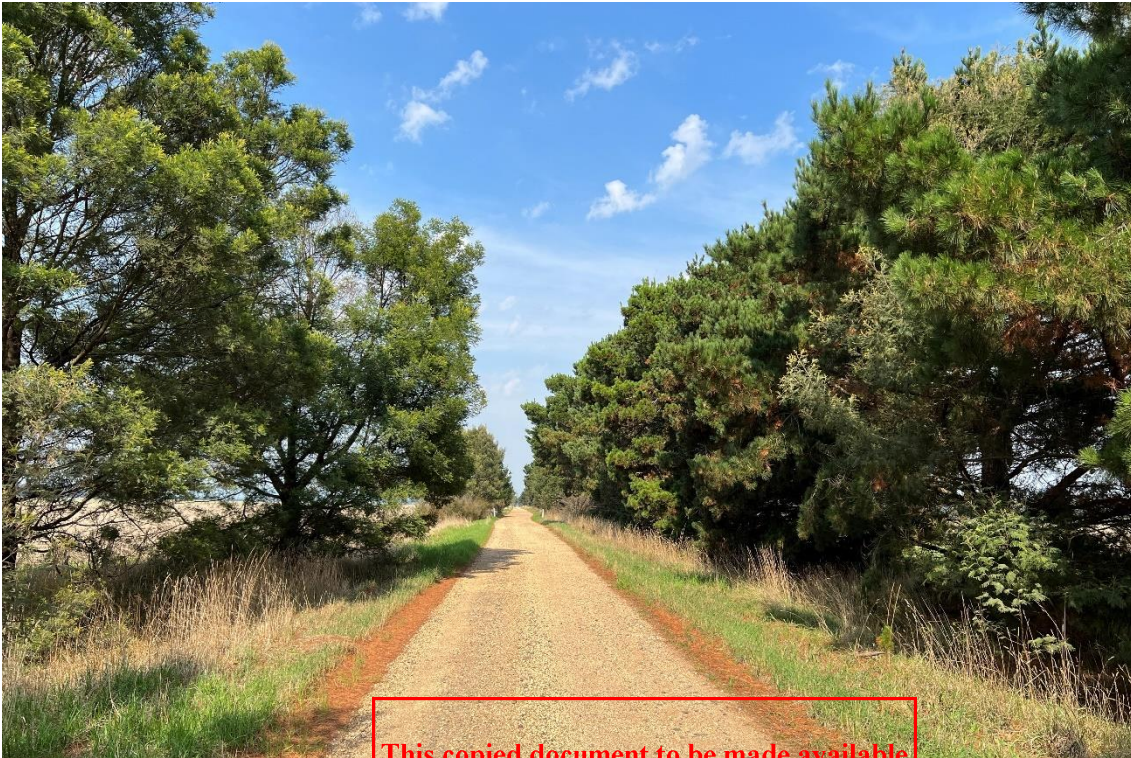


Graham Road viewed from Sale-Toongabbie Road, with existing broiler farm on Property C in background (Date of photograph: 26 January 2024)



Looking north along Graham Road towards Sale-Toongabbie Road, from the north-eastern boundary of Property C (Date of photograph: 7 April 2023)

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Looking south along Graham Road, along the eastern boundary of Property C
(Date of photograph: 7 April 2023)



Looking north along Graham Road, along the eastern boundary of Property B
(Date of photograph: 7 April 2023)

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Road along the eastern boundary
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Looking south along unconstructed section of Graham Road, along the eastern boundary of Property A (Date of photograph: 7 April 2023)



Looking north along unconstructed section of Graham Road along eastern boundary of Property A (date of photo: 7 April 2023)

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Looking south along unconstructed section of Graham Road, from the south-eastern boundary of Property A (Date of photo: 7 April 2023)



Southernmost extent of Graham Road, viewed from the north (Date of photograph: 7 April 2023)

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Looking north along Graham Road, viewed from intersection with Cairnbrook Road
 (Date of photograph: 26 January 2024)

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Hendersons Road is a rural standard road with gravel surface, grassed verges, and large areas of roadside native vegetation. Hendersons Road is unconstructed east of the intersection with Graham Road. The Hendersons Road road reserve extends from Bowmans Lane in the east, all the way to the Toongabbie township to the north-west.



Diagram demonstrating the varying constructed elements of Graham Road
 (Source: Google Earth)

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Looking west along Hendersons Road, west of Property B, with existing broiler farm at 1861A Sale-Toongabbie Road visible to the right of picture (Date of photograph: 26 January 2024)



Looking west along Hendersons Road from intersection with Graham Road (Date of photo: 7 April 2023)

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Looking north-west towards Henderson Road from north-east corner of Property A

Property A is owned by Alan and Judith Paul and operated by Millring Pastoral, whilst Properties B & C are owned by Johnson Poultry Farms Pty Ltd. A current copy of title for each property forms part of this Application. There are no covenants or Section 173 Legal Agreements registered on any part of the subject land.

A 20m wide easement adjoins the southern boundary of Property A for the purposes of carriageway, water supply, gas and telecommunications, in favour of Lots 1-9 (inclusive) on Plan of Subdivision 835778Y.

The same area also serves as a powerline easement in favour of Ausnet Electricity Services Pty Ltd.

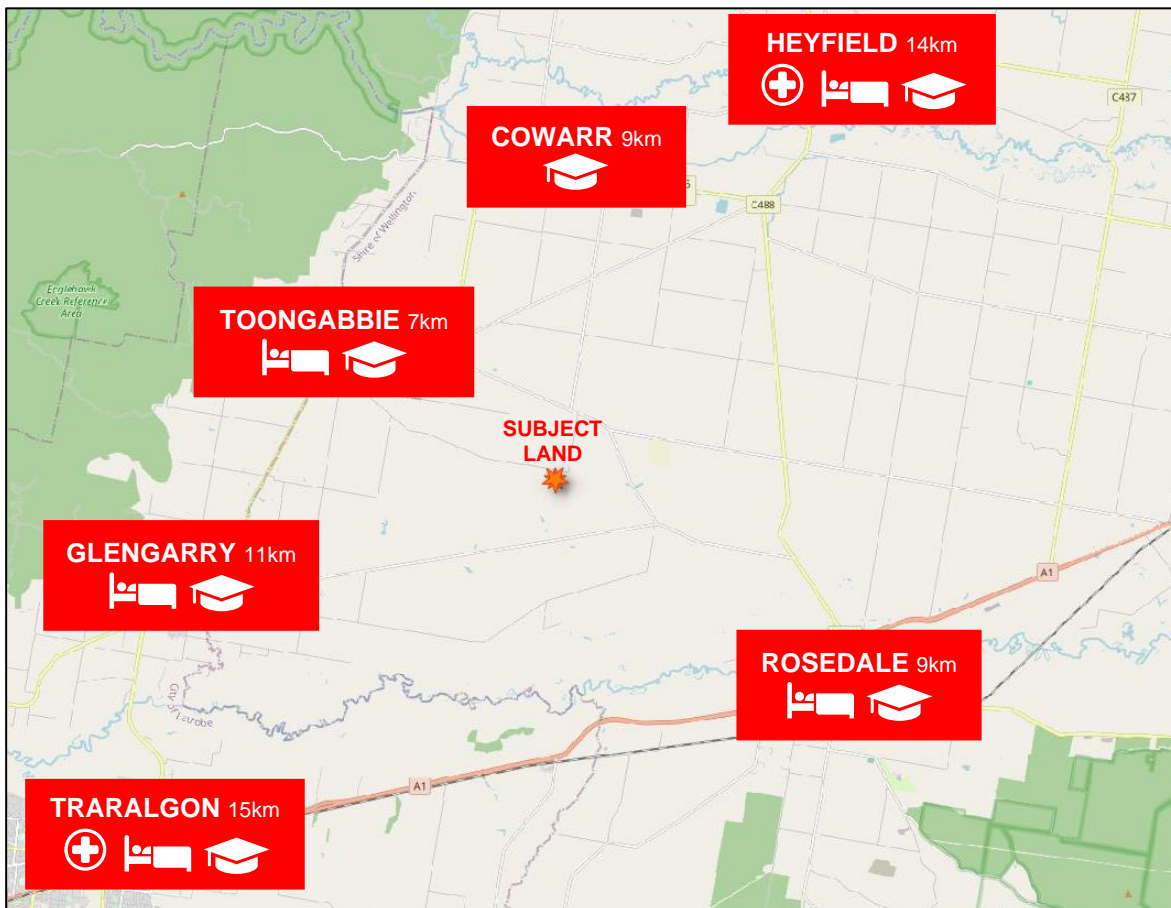
(R) Extract from PS835778Y, with easement highlighted in red



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The subject land is located approximately 15 km to the north-west of Traralgon, a major regional centre for higher level goods and services. The site is also within easy proximity of numerous smaller towns including Toongabbie (approximately 7 km to the north-west), Cowarr (approximately 9 km to the north), Heyfield (approximately 14 km to the north-east), Glengarry (approximately 11 km to the south-west) and Rosedale (approximately 9 km to the south-east).

The following diagram illustrates the proximity of the subject land to



Locality Plan showing proximity to accommodation, hospitals and education centres

The subject land is located within a rural context, consistent with the underlying zoning of the precinct. Properties closer to infrastructure associated with the Macalister Irrigation District are actively cropped, with the Nambrok Denison Main Channel located approximately 900m to the east of the subject land, east of Fells Creek. Multiple Broiler farms are located within close proximity of the subject land.

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Aerial photograph illustrating the varying agricultural activities occurring in the locality
(Source: Google Earth, 1 March 2024)

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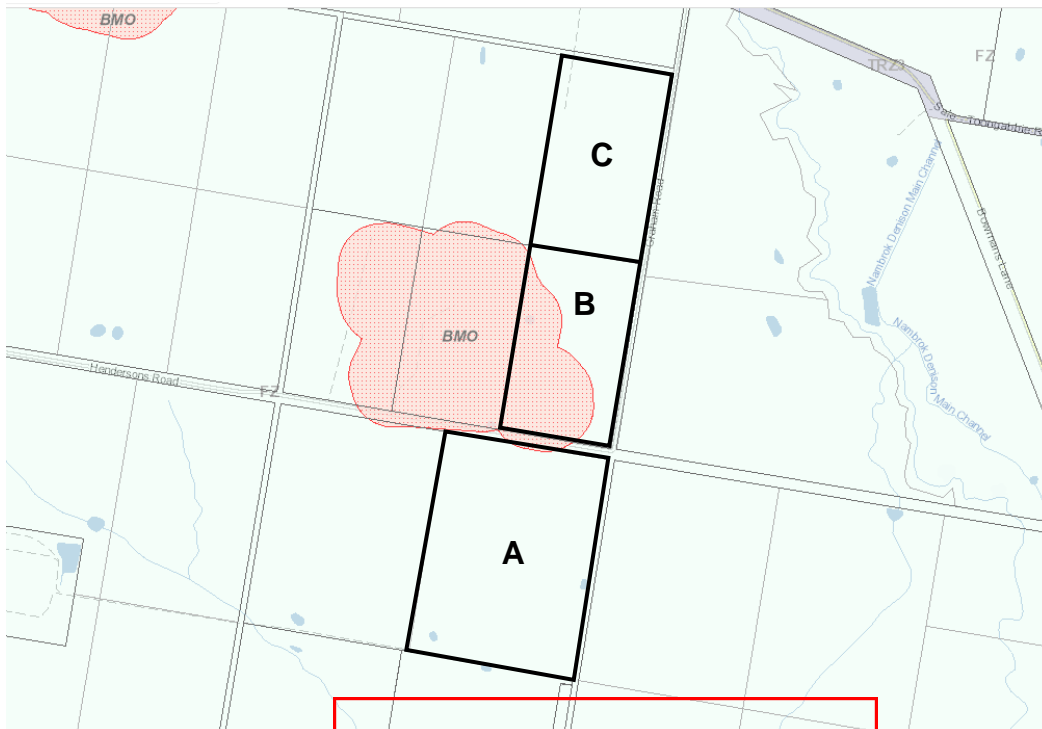
The following diagram illustrates the existing electricity grid servicing the locality.



Local Electricity Grid

The subject land is included within the Farming Zone. The Bushfire Management Overlay ('BMO') applies to a small portion of Property A, adjoining the northern boundary, and to the south-western quadrant of Property B as depicted in the following image.

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Extract from BMO mapping depicting the limited portion of the subject land affected by the Overlay (Source of this Plan)

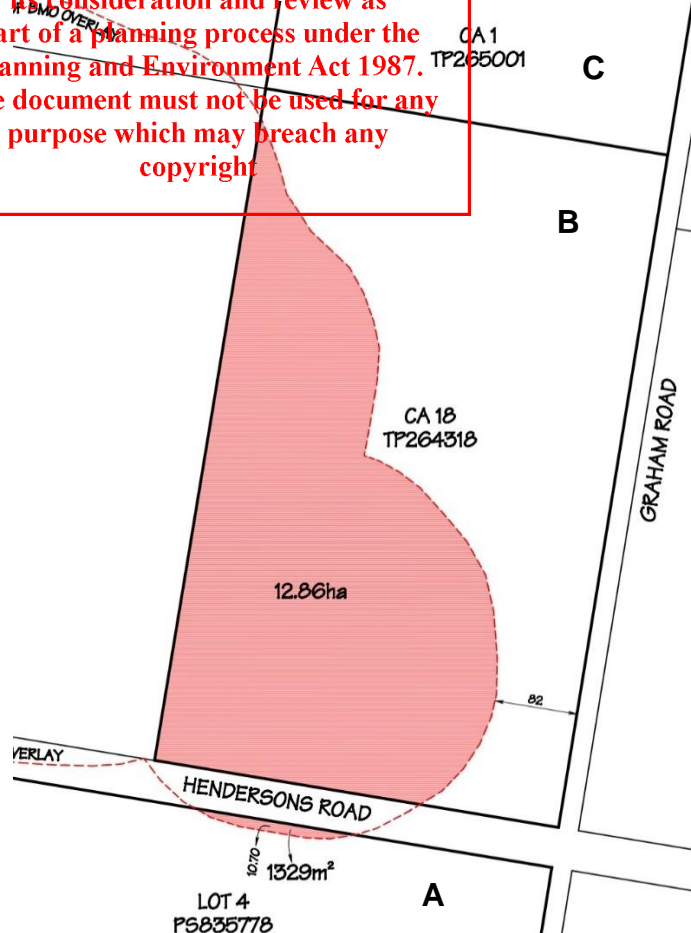
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The extent of the BMO applying to Property A is an area of approximately 1,329m² immediately adjoining the northern boundary, which at its widest point has a width of 10.7m.

Over half of Property B is unencumbered by the BMO, with the easternmost extent of the Overlay offset approximately 82m from the frontage to Graham Road.

Property C is unencumbered by the BMO.

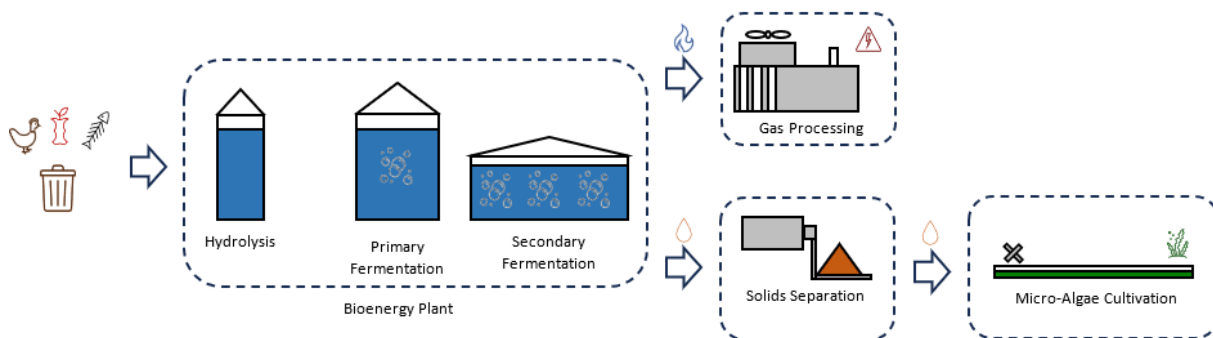
(R) Extent of subject land encumbered by BMO



There are no other Overlays applicable to the subject land.

3. Description of Proposal

The Application seeks approval to establish a Waste-to-energy facility in the form of an Anaerobic Digester for the treatment of organic waste. The project will also include the cultivation of micro-algae grown utilising digestate, the byproduct of the energy process, achieving circular economy principles and processes.



*Illustration of the flow of waste through the proposed Waste-to-energy facility
(Source: C-Loop)*

Historically, animal housing has been reliant on the timber industry for bedding materials, such as hardwood shavings and sawdust. As the State transitions towards plantation timber, the supply of bedding materials has become less reliable, with straw recovered from cereal crops (such as chopped wheat or barley straw) becoming a widely adopted source of animal bedding.

This presents a challenge for disposal, with spent litter and bedding containing straw more fibrous and problematic to treat using open air composting, compared with litter containing wood shavings or sawdust.

The lower density yet higher volume of spent litter containing straw is more expensive to transport, and Planning provisions relating to broiler farms prevents the storage of spent litter on site. Treatment within proximity to the waste origin that is suitable for disposal year-round presents a practical solution for managing primary industry waste.

The facility will also have capacity to accept and process reportable priority putrescible/organic waste from food processing facilities, such as grease trap interceptor waste, liquid organic waste from commercial food premises, and solid commercial food waste. Organic waste from food manufacturing with a fat/oil base are particularly appealing as they contain a higher energy density, and have generally already undergone the cycle of degradation from solids separation processes.

The proposal aims to treat approximately 15,000 tonnes (t) of agricultural waste and food processing wastes annually, and will utilise a two-stage Anaerobic Digestion process to treat waste with a hydraulic treatment capacity of 15 megalitres (ML).

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The two-stage process will break down organic waste, utilising the embedded carbon to produce a methane rich gas commonly known as biogas. Biogas produced at a continuous flow rate will be combusted in a Combined Heat and Power Unit (1.1 megawatts) (MW), generating electricity and thermal energy.

Plans accompanying the Application prepared by C-Loop provide detail on the layout of the proposed facility. Waste received on site from nearby poultry farms in a batch consignment will initially be stored within a waste receipt bunker with capacity to store up to 5,000m³ (or 2,000t) of dry, friable material. A 100kL liquid storage tank is proposed for the receipt and storage of reportable priority waste.

Waste will then be moved to the Digester for treatment which comprises the following elements:

- 1 x 0.4ML mixing container
- 1 x 1.3ML Hydrolyser
- 2 x 4.2ML Uni Digester
- 1 x 3.88ML Post Digester
- 1 x 2.16ML Storage tank for leachate

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Waste material is fed into the hydrolyser to aid the fermentation process ahead of a two stage digestion process, producing biogas. Biogas is collected in the headspace of the Uni Digesters and Post Digester. The biogas is treated into a CHP to generate power and heat. This extremely efficient process recovers between 15-20% of the feedstock calorific value as energy through each stage of the process supporting volatile solids reduction.

The Bioenergy process will also produce digestate, a byproduct consisting of a solids rich material and leachate containing ammonia and other mineralised nutrients. Digestate is a key enabler to produce high value protein products for food and pharmaceutical applications, applying low carbon methods for cultivation and extraction.

Organic waste from intensive animal industries provides the ideal feedstock to produce biogas and ammoniacal nitrogen, due to it containing a large portion of carbohydrates (straw) and denatured proteins passed through the animals. The combustion of biogas in a power generator will produce electricity and thermal energy which will be utilised to cultivate micro-algae within a series of raceway ponds in a climate-controlled greenhouse. Waste heat, digestate and flue gas from Bioenergy are the key inputs to the cultivation process.

On a daily basis the digestate is separated into dry solids and ammonia-rich leachate using solids separation technology to provide the necessary inputs to support the cultivation of micro-algae with high protein content. Leachate is rich in ammonia and will be used for fertigation of raceway ponds where micro-algae will be cultivated and harvested year-round using a temperature controlled passive solar greenhouse.

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The targeted micro-algae species is Spirulina (*anthrospira spira*), which has grown in popularity after being successfully used by NASA as a dietary supplement for space missions. Spirulina naturally grows in alkaline conditions, making the alkalinity produced from elevated levels of organic nitrogen produced through the Anaerobic Digestion process ideal for cultivation.



Micro-algae biomass (Source: C-Loop)

Using raceway ponds for the growth of micro-algae is vastly superior to inefficient land based horticulture crops which rely on the application of nitrogen fertilisers produced using fossil fuels. Environmental conditions, soil geology and precipitation influence rates of fertiliser uptake in land based methods, and in some situations require repeat application to ensure sufficient nutrient levels. The proposed pond method achieves higher carbon and nitrogen conversion efficiency through the capacity to utilise digestate year-round, producing high value, highly concentrated forms of protein with a broad amino acid profile.

The Application proposes to establish 1.2 hectares of micro-algae cultivation area. This is expected to produce between 62kg and 182kg per day of biomass dried onsite from an initial biomass concentration in raceway ponds of 0.5g/L.

The project will produce up to 160t of high value spirulina biomass supported by low emissions technology.

The pond method is an example of agricultural adaptation to climate variability, reducing the risk of interruption from flood, drought or fire, and enables the production of a high quality product year-round on low value, marginal agricultural land. The Agricultural inputs and outputs will be measured daily, providing assurance for food safety compliance and resulting in the cultivation of an export-grade product free of contamination.

Risk associated with pathogens and bacteria from the source feedstock is reduced by supplementing the micro-algae ponds with bicarbonate, and using CO₂ to aid cultivation. This controlled environment also negates the requirement for herbicides or pesticides, and has wider applications for wastewater treatment.

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Example of raceway ponds and greenhouse structure proposed for micro-algae cultivation (Source: C-Loop)

The project will generate 11,000MW/h of electricity and thermal energy annually, and up to 20% of the electricity generation will be utilised on site for operational needs, including cultivation and harvesting of micro-algae with the bulk of electricity generated to be exported to the local AusNet network.

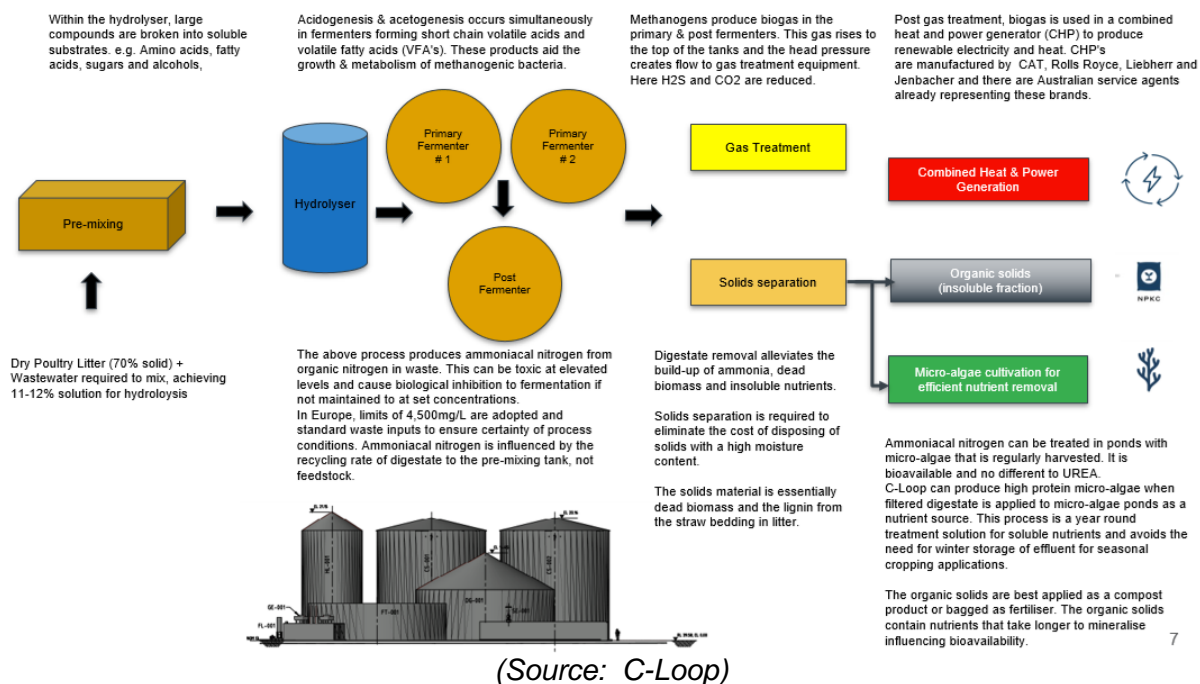
The site will supply all its own energy requirements and be a net exporter of electricity to the local Ausnet network. Over 11,000MWh of electricity will be generated each year, and 12,000MWh of heat will be used for maintaining digester conditions, raceway pond temperatures and drying harvested micro-algae biomass.

Digestate captured through this process is then refined to separate into solid fertiliser and leachate. The leachate will be stored in an open storage tank and pumped daily to raceway ponds for micro-algae cultivation, optimising the ammoniacal nitrogen content for protein production. The leachate is slowly diluted with large volumes of process water within the raceway ponds, avoiding risk to health or the environment.

Some digestate will be recycled for conditioning dry feedstock material pre-hydrolyser. Solid fertiliser will be dried and on-sold to end users as a soil conditioner.

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The following infographic depicts the proposed operation by asset.



Site selection

The subject land, in particular Property A, is located inside the prescribed separation distances from multiple broiler farms as specified by the *Victorian Code for Broiler Farms 2009*. This has been a critical consideration in determining the most appropriate location for the proposed facility, mindful that agriculture presents as the only alternative land use permissible without creating a sensitive receptor conflict on the subject land.

The suitability of the development site has been determined based on an evaluation of the isolation from other sensitive receptors, the relatively flat topography, and proximity to complementary farming activities.

The proponent has also undertaken a preliminary risk assessment to validate its selection of the development site. This is a key element of the proponent's EPA development licence and the determination around how it has assessed risks relating to the project from a statutory context.

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Sensitive Receptor Details, with existing dwellings denoted by red dot
 (Source: C-Loop, produced 24/10/2023)

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Visual impact

The proposed development is located adjacent to cleared farmland in all directions, with the exception of linear strips of vegetation adjoining road reserves or waterways. The subject land is a relatively flat area that is not located along any ridgelines, valleys or other important vistas. The overall visual amenity of the wider landscape is considered highly disturbed, with most views towards the site not considered to represent a visually sensitive landscape.

Consideration of visual impact is limited to the proposed buildings and works on Property A, given the extent of works proposed for Property B and Property C is limited to electricity infrastructure, which for the most part will be laid underground.

Proposed structures on Property A will be partially visible from Cairnbrook Road, sited behind the existing Broiler Farm and agricultural shed constructed to the south.

Most sensitive receptors within the precinct have established landscaping which screens these properties from external view, providing privacy to current occupants.

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Distances to Sensitive Receptors (Source: C-Loop)

A Visual Impact Assessment has been prepared in support of the Application, consistent with the requirements of Clause 53.12-2. The Assessment concluded there are no significant values within the locality, and demonstrates the proposed structures will not have an unreasonable impact on the visual amenity of the precinct. There are no distinctive or inspirational features within the wider landscape that warrant an elevated level of visual amenity protection.

Accordingly, the proposed development is not considered to result in an unreasonable visual impact.

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Access

Whilst the proposed Waste-to-energy facility has frontage to a constructed road to the north (Hendersons Road), access is proposed from the south-eastern corner of the subject land, utilising a purpose built accessway established within private land to the south in association with existing broiler farms, providing connection to Cairnbrook Road.

Cairnbrook Road is considered the preferable route for access, given it is a good quality road identified on Council's Public Road Register as a Collector Road. Cairnbrook Road is widely used by large vehicles including dairy tankers, feed trucks servicing broiler farms within the precinct, and until recently, logging trucks.

The intersection of Cairnbrook Road and Graham Road has been constructed to accommodate large vehicle movements, with localised widening providing a channelised turn into Graham Road for both east and west bound vehicles.



*Looking east along Cairnbrook Road from intersection with Graham Road
(Date of photograph: 26 January 2024)*

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Looking west along Cairnbrook Road from intersection with Graham Road
(Date of photograph: 26 January 2024)

The existing access is provided from the intersection of Cairnbrook Road, developed within the ~~Public Road reservation for a length of approximately 800m. This section of Graham Road is not maintained by Council, and does not appear on Council's Register of Public Roads.~~

This road reservation for a length of approximately 800m is not maintained by Council, and does not appear on Council's Register of Public Roads. It is under consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright.

The accessway then moves westward into private property, gently curving in a north-westerly direction in an alignment consistent with that established via existing carriageway easements over Lots 8A and 9A on PS840677B.



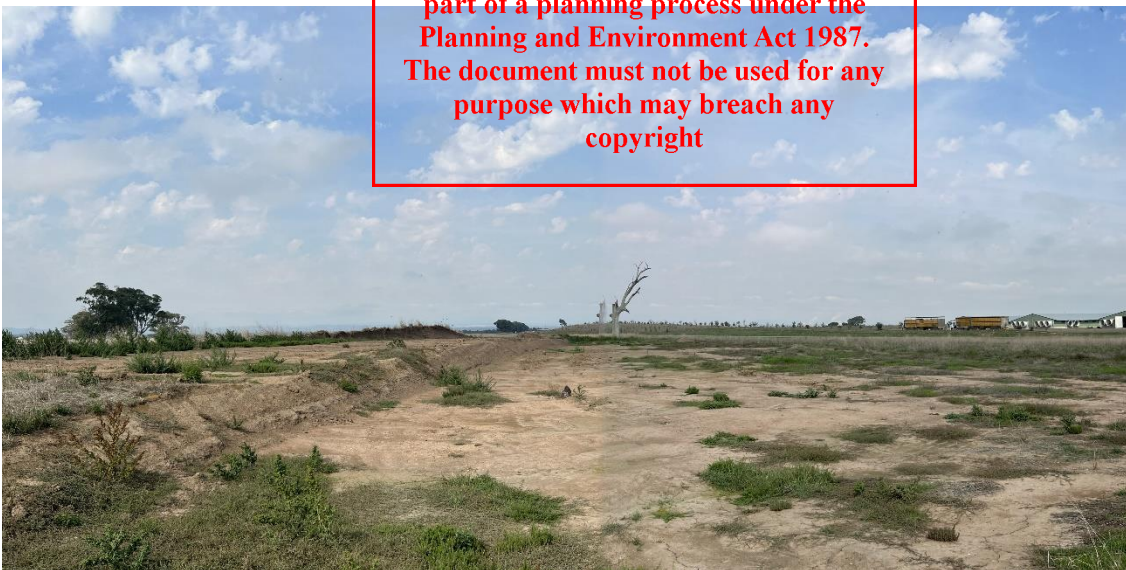
Existing access shown in yellow, proposed access in blue, and Property A in red
(Source: Google Earth, 1 January 2024)



*Looking north along existing accessway curving to the north-east from Graham Road
(Date of photograph: 7 April 2023)*

A new section of accessway will branch off in the north-eastern corner of the adjoining properties, providing access to the subject land in the south-eastern corner, parallel to the unmade section of Government Road.

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*Site of proposed access , viewed from south-eastern corner of Property A,
with existing broiler farm to the right of picture (Date of photo: 7 April 2023)*

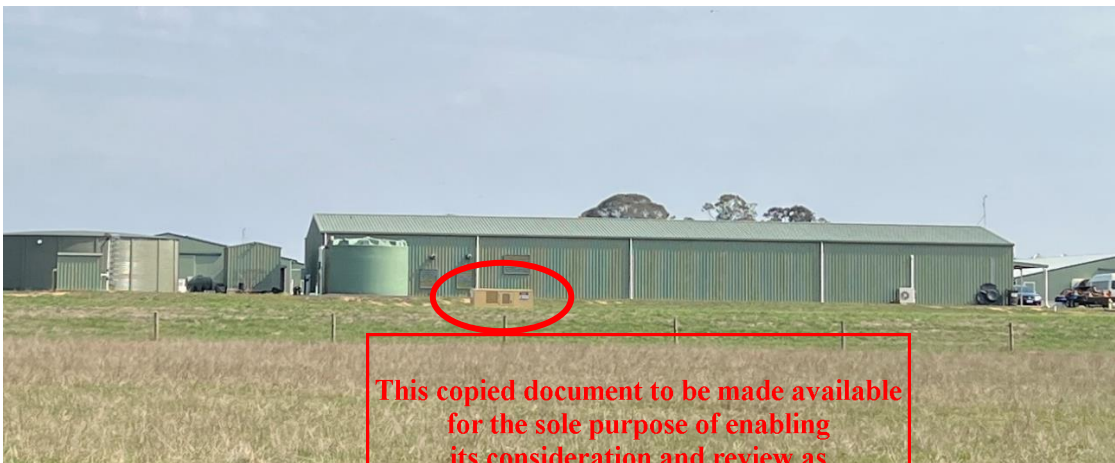
The Site Layout Plan (Dwg No. 142-GEN-001) illustrates the proposed integration of the additional access with the current private access network from Graham Road.

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Electrical infrastructure

The site will produce 11,000MWh of baseload renewable electricity, 8,000-10,000MWh of which is proposed to be exported to the Ausnet network annually. The remaining generation will be utilised on site for 'behind the meter' usage.

The site is well suited to connect via underground means to the existing transmission network on Property C which currently contains a 5MVA kiosk owned and operated by Ausnet.



Existing 5MVA kiosk on Property C (Date of photograph, 7 April 2023)

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An agreement with Ausnet is required to enable the project to export electricity to existing infrastructure located on Property C, pursuant to the Electricity Safety Act 1998 and Electricity Safety (Installation) Regulations 2009.

Electricity generated on site will be directed to a 2x2 MVA Kiosk in the north-eastern corner of Property A, extending through Property B before connecting to existing infrastructure in Property C enabling electricity generated on the subject land to be fed into the grid. Underground transmission lines will be constructed by under boring across Hendersons Road, from which it will be conveyed underground through Property B into Property C, at which point it will connect to the existing Kiosk, feeding into the 22kV distribution powerline. This network is documented on the Site Easements drawing prepared by C-Loop (Dwg. No. 142-GEN-016).

Whilst initial concepts for the proposal had anticipated the construction of underground powerlines within the Graham Road road reserve, investigations determine this may have an impact on native and planted roadside vegetation. Accordingly, a revised alignment is now being pursued within Properties B & C, appropriately offset from roadside vegetation to avoid either assumed or consequential impacts on native vegetation.

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Looking north along eastern boundary of Property B along proposed easement route, with broiler farm on Property C visible in the distance (Date of photo: 7 April 2023)

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A back-up diesel generator will be stored onsite to ensure all essential processes can operate in the event of a power outage.

The proximity to suitably sized infrastructure, regulations surrounding the transmission of electricity and surrounding land uses is what has been used to determine the suitability of the subject land.

This proposed facility is a more efficient metric than centralised landfill biogas projects which historically create 2t of CO₂ abatement from every tonne of organic waste, but have no mechanism to drive further value from waste stored.

The Application is supported by a GHG and Energy Impact Assessment prepared by Energy Link Services which confirms the facility will generate 14,499MWh of renewable energy. Approximately 3,888MWh will be generated from the site's solar array, for onsite consumption, with 11,632MWh fed back into the local electricity grid.

The Assessment concludes:

“the project will emit as little as 1,575 tCO₂e per annum of Scope 1 GHG emissions” (p.15).

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Operation

Hours of operation will vary across the individual elements of the facility, summarised in the following table.

Site Activities	Hours of operation	Staff on-call
Bioenergy Generation	Continuous operations 24 hours / 7 days	Yes
Micro-Algae Cultivation	Continuous operations 24 hours / 7 days	No
Micro-Algae Harvesting and Processing	Monday to Saturday 8am-4pm	No
Waste receival		
- Agricultural waste	Daily operations 8am-Midnight	Yes
- Putrescible/Organic waste	Monday to Friday 8am-4pm	No - strict entry requirements

The proposed operation will create new jobs in the order of 6-10 full time equivalent staff.

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Traffic impacts

The existing road network has been designed to an appropriate standard to accommodate large vehicle movements, including the intersection of Cairnbrook Road which provides an eastbound turning lane for access to Grahams Road, designed to accommodate B-double truck movements.

The proposal is expected to result in an overall reduction in vehicle movements within the wider road network, given the surrounding broiler farms current require external contractors to collect spent litter via b-double trucks, utilising the existing access via Cairnbrook Road as the primary entry and exit point. Once the Waste-to-energy facility is operational, these truck movements to and from Cairnbrook Road, which currently occur every 7-8 weeks, will no longer be required.

It is acknowledged there will be an increase in vehicular movement during the construction phase of the project.

An estimation of likely vehicle movements has been informed by empirical evidence of vehicle movements recorded by Yarra Valley Water during the construction of their Waste-to-energy facility in Lilydale, where a peak of 40 light vehicles (for construction personnel and operator staff) and 20 heavy vehicles (for construction delivery, plant and equipment) was observed per day, with approximately 30% of vehicle movements found to occur at the start and end of a working day (which for them was at 7am and 5pm).

Applying the same rates to the subject Application, with adjustments for scale, it is estimated that peak construction vehicle movements associated with the subject application will be 20 heavy vehicles per day.

This peak period is only expected for a short period of time when construction calls for the continuous supply of bulk materials, such as concrete delivery for site foundations, and is unlikely to exceed more than 2-3 consecutive days at any given time.

Deliveries associated with other construction materials are expected to be limited to a single b-double delivery per day for a minimum of six months.

The proposal will deliver overall benefits to the broader road network by reducing the need for heavy vehicles to access surrounding broiler farms to collect and remove chicken litter on a regular basis.

The existing road infrastructure, including the intersection of Cairnbrook Road, will continue to function at acceptable levels during both the construction and operational phases of the project.

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Consideration of amenity impacts

The subject land forms part of an actively farmed precinct containing existing dairy and broiler farms. Neighbouring properties are unlikely to experience any substantial influence on their existing operations.

Noise generated from energy intensive activities, such as the CHP operation, will be shielded from distant sensitive receptors to avoid any negative acoustic impacts.

The proposal is supported by a Noise Assessment Summary prepared by Echo Acoustic Consulting which confirms that predicted noise levels for the closest sensitive receptors will be compliant at all times, achieving noise levels below levels nominated in *Noise Protocol (EPA Publication 1826.4: Noise Limit and Assessment Protocol for the Control of Noise from Commercial, Industrial and Trade Premises and Entertainment Venues, 20 May 2021)*. The assessment confirmed that no specific engineering noise control measures will be required.

Consideration of glint and glare has minimal relevance to the proposal, given the proposed solar array will provide behind the meter electricity and is therefore exempt from Planning consideration. Nonetheless, the site is well separated from sensitive receptors and major travel routes which will reduce the risk of glare to passing motorists in the vicinity of the Property A.

Baffled lighting angled downwards within the cultivation area will promote photosynthesis of algae, particularly during winter periods. Outside this area, lighting will be directed to pedestrian and vehicle areas, appropriately baffled to ensure no off-site effects. There are no underlying sensitive receptors influenced by the use of lights at the project site.

The process avoids emissions aside from exhaust emissions from the CHP generator combusting biogas, and maintenance events which may trigger the need to use an emergency flare. Biogas will be collected from each fermenter into a single gas train and divert to the flare as required.

The proposal is considered to achieve substantial improvements to air quality, with waste from nearby intensive uses diverted from stockpiling and composting. Feedstock stored on site will be covered to prevent odour. The quantity of feedstock stored on site will be consistent with volumes stored within nearby operating broiler farms.

There is significant separation from the subject land and potential sensitive receptors. The site is self-contained, with perimeter swales designed to capture any runoff, directing it to an onsite retention basin for treatment. Groundwater contamination will be avoided by a specified pavement design and containment to prevent the risk of soil or groundwater contamination. These combined factors will significantly reduce the likelihood of negative amenity impacts to air, land or water.

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There are no sensitive receptors in proximity susceptible to electromagnetic interference. Localised source may occur within the CHP containers where power generation and communications are centrally located, primarily related to the operation of the plant, making it easy to monitor. There is no transmission

The operation of the proposed facility will not give rise to unreasonable amenity impacts.

All structures within the Waste-to-energy facility will be constructed with external colorbonded steel cladding in a darkened shade to minimise visual impacts. The proponent has indicated colours will be of low level reflectivity in a darkened shade, which is expected to be either Monument or Woodland Grey.

No landscaping is proposed. This is considered appropriate given the retention of all roadside vegetation, and the limited visual impacts within the broader precinct.

Car parking is provided onsite for 8-10 vehicles, surrounding the proposed office to the north and east. Car parking areas will be constructed with a crushed rock pavement. There are considered to be no off-site impacts.

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Consultation

The proponent has been actively consulting with the broader Toongabbie/Winnindo community since 2019 in their role as Project Manager of numerous Planning Applications for Broiler Farms approved by Wellington Shire Council. A sound working relationship has been developed with Council who have been briefed on the proposal on multiple occasions as the proposal has advanced from a concept to a definitive project.

The proponent has viewed similar developments in Europe over the past 2-2 years and gained an understanding of the main concerns associated with these types of developments.

Other key local stakeholders have included participants from the food and beverage industry who were actively involved in a proponent-led investigation with RMIT University in 2020 assessing the compatibility of different waste streams for co-digestion.

Engagement has also occurred with EPA, DEECA (formerly DELWP), West Gippsland Catchment Management Authority, Regional Development Victoria and Sustainability Victoria over the last 18 months.

Community engagement undertaken in relation to this specific project includes the following activities:

- ABC Gippsland radio interview, 22 June 2023.
- 7 newspaper articles, in June 2023.
- Presenting to the National Renewables in Ag Conference and Expo, held in Dubbo on 21 June 2023.
- Presenting to the Poultry Hub Ideas Exchange Conference, held in Adelaide on 17 October 2023.
- Personal calls to all neighbours within a 2 km radius of site on 1-2 November 2023.
- On site meeting with adjoining owners and a representative from the EPA Gippsland Region on 18 November 2023.
- Newspaper advertisements placed in the Gippsland Times-Maffra Spectator on 17, 21, 24 and 28 November 2023.
- Participation in the Working Group for Heyfield & District – Ag Skills and Training.
- Ongoing meetings with Wellington Shire Council since 11 March 2020. Subsequent meetings have been held on 15 November 2022, 21 July 2023 and 26 October 2023.
- A webpage (<https://www.c-loop.com.au/>) providing specific information on the subject Application is regularly updated, with a feedback option available for visitors to raise concerns and seek further information.

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Overall feedback received to date from the community has been positive.



Newspaper Article published in seven newspapers in June 2023 (Source: C-Loop)

Do not swim in channels
Do not use treated water for domestic use and stock

For enquiries:
Contact Southern Rural Water on 1300 139 510 or visit www.srw.com.au
As a reminder, channel water is not treated for human consumption.
Please don't drink it!
Swimming and fishing in our channels is banned at all times.

Classifieds Typesetter
C/- Office Manager
reception@gippslandtimes.com.au
Applications close Friday, December 1, 2023

Check out the Trades and Services Guide in the **Gippsland Times**

Public Notices

A local business is building an Anaerobic Digester in Gippsland. Anaerobic digestion (AD) is the process of transforming organic waste into green energy. We are keen to tell you about it and hear your feedback about the project. Please visit our website to learn more and access the community feedback page. Visit c-loop.com.au to learn more.

15,000 tonnes of waste repurposed	2,000 households receiving heat/cool renewable energy in the local area from Toongabbie	12,000 tonnes of CO ₂ emissions avoided from C-Loop Toongabbie Electricity
Phase I	Phase II	
+55 tonnes of microalgae	~150 tonnes of pure proteins from microalgae	
6-10 full-time jobs	14-25 full-time jobs	

EVERY STUDENT EVERY DAY

Applications are invited for:

College Timetabler (POL 3)
VCE Mathematical Methods Teacher

Full time role commencing January 2024

Further information available at www.ccsale.catholic.edu.au
All applications are to be forwarded to principal@ccsale.catholic.edu.au

Applications Close: 4:00pm Wednesday 29th November

Page 26 - Times-Spectator, Tuesday, 21 November, 2023

Copy of advertisement in Gippsland Times/Maffra Spectator on 21 November 2023 (Source: C-Loop)

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4. Application triggers

The proposed use and development of Property A for the purposes of a Waste-to-energy facility will require a Planning Permit under the Farming Zone, being a Section 2 use.

Infrastructure required to connect the Waste-to-energy facility on Property A to the existing Ausnet distribution network on Property C, via Property B, is defined as a Utility Installation, which is a Section 2 use under the Farming Zone.

The cultivation and harvesting of Spirulina on Property A constitutes agriculture, and is therefore an 'as of right' activity under the Farming Zone. Whilst buildings and works associated with agriculture are also 'as of right', the northernmost section of the proposed raceway ponds and associated greenhouse will be within 20m of the Hendersons Road road reserve.

The subject Application therefore requires consideration of the following clauses of the Wellington Planning Scheme:

Planning Scheme Clause No.	Description of what is proposed
Clause 35.07-1 Farming Zone	Use of land for a Waste-to-energy facility
Clause 35.07-1 Farming Zone	Use of land for a Utility Installation
Clause 35.07-4 Farming Zone	Buildings and works associated with a Section 2 use (Waste-to-energy facility)
Clause 35.07-4 Farming Zone	Buildings and works associated with a Section 2 use (Utility Installation)
Clause 35.07-4 Farming Zone	A building with a setback of less than 20 metres from a road

Whilst the Bushfire Management Overlay applies to parts of the subject land, no buildings and works are proposed within those parts of the site affected by the Overlay. Furthermore, the proposed uses are not within those listed at Clause 44.06-2 of the Bushfire Management Overlay as requiring approval for buildings and works under the Overlay. Accordingly, the subject Application does not trigger consideration of the provisions of Clause 44.06.

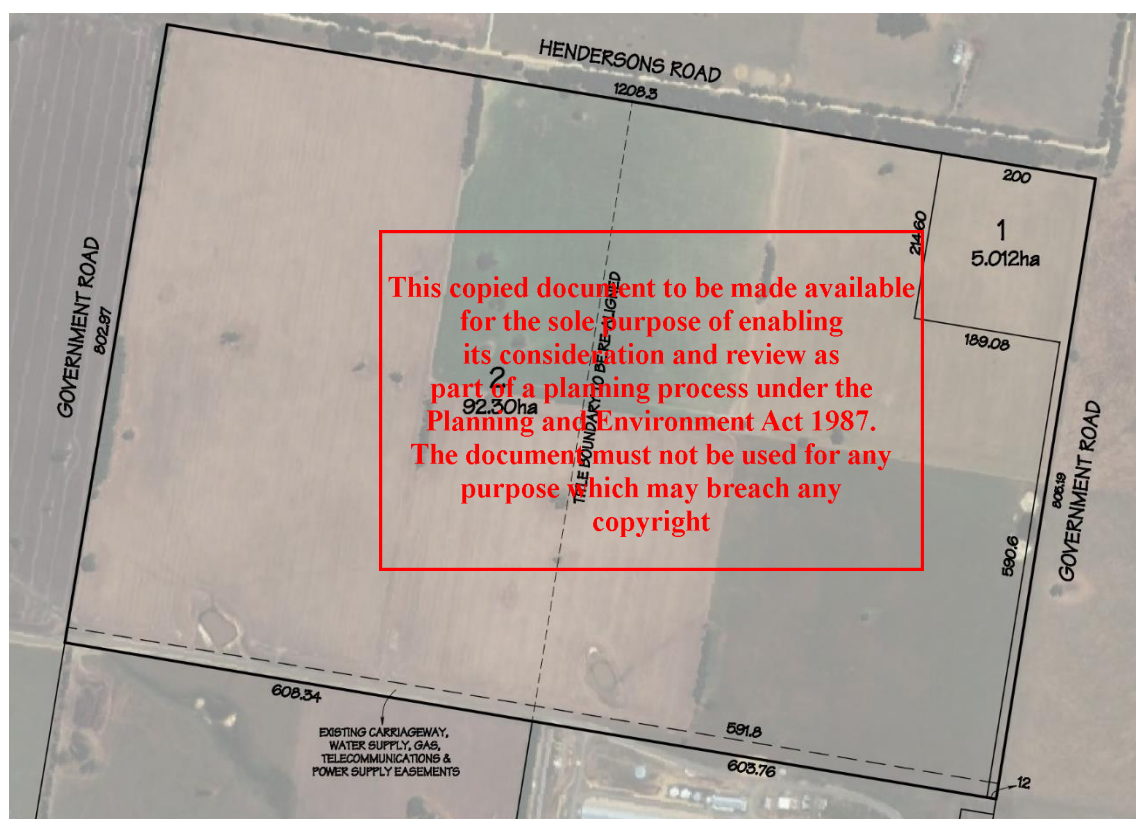
The combustion, treatment or bio-reaction of waste to produce energy is listed in the Table to Clause 53.10-1 relating to *Uses and activities with potential adverse impacts*. No threshold distance is specified in the Table, requiring referral to the EPA under Section 55 of the *Planning & Environment Act 1987*.

A Referral Response was received from the EPA on 5 June 2024, confirming the EPA had no objection to the proposal, providing comments for consideration by the Responsible Authority.

Parallel approval processes

In parallel to the subject Application, two separate Planning Permits have been obtained from Wellington Shire Council which relate to the proposed development.

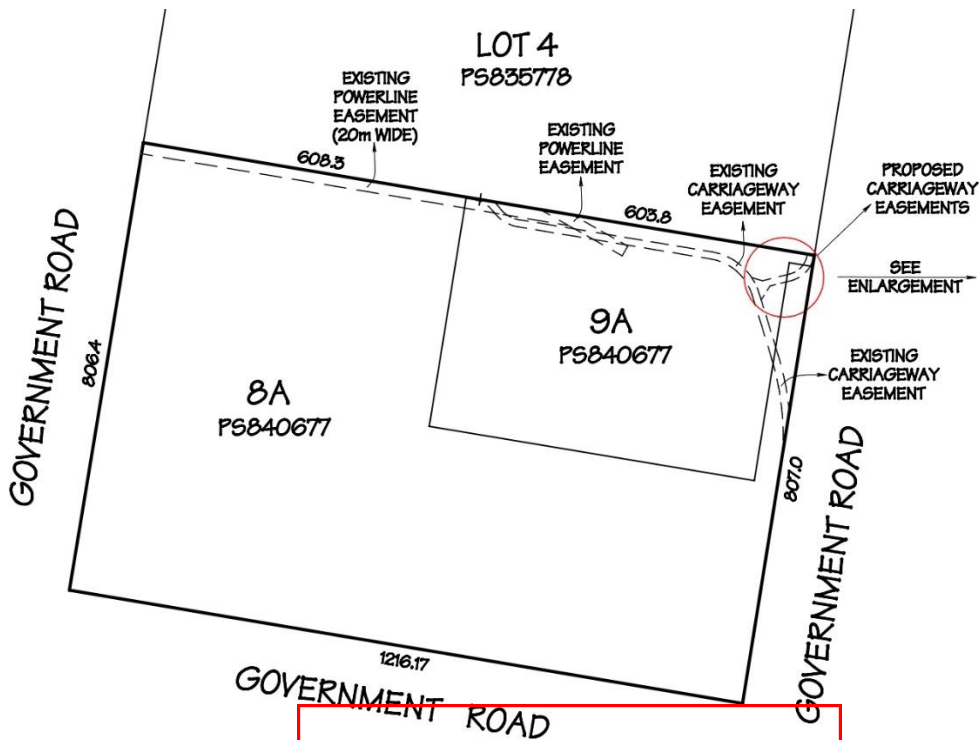
Planning Permit P131/2021A issued on 25 July 2024 approved a two lot subdivision (boundary realignment), permitting the creation of an allotment containing the Waste-to-energy facility and associated access. The intention of the proposed boundary realignment of Lots 3 and 4 on Plan of Subdivision 835778Y is to minimise the extent of land associated with the Waste-to-energy facility, retaining a rural balance of approximately 92.3ha.



Concept Plan for proposed boundary realignment (STCA)
(Our ref: 20419 Prop V2)

Planning Permit P132/2024 issued on 22 July 2024 will formalise the aforementioned access arrangements upon which the subject Application will rely, approving the Creation of Carriageway Easements over Lots 8A and 9A on PS840677B. Whilst these arrangements could be formalised independent of the Planning process via the Transfer of Land Act 1958, in the interests of transparency a Planning Permit was obtained pursuant to Clause 52.02 of the *Wellington Planning Scheme*.

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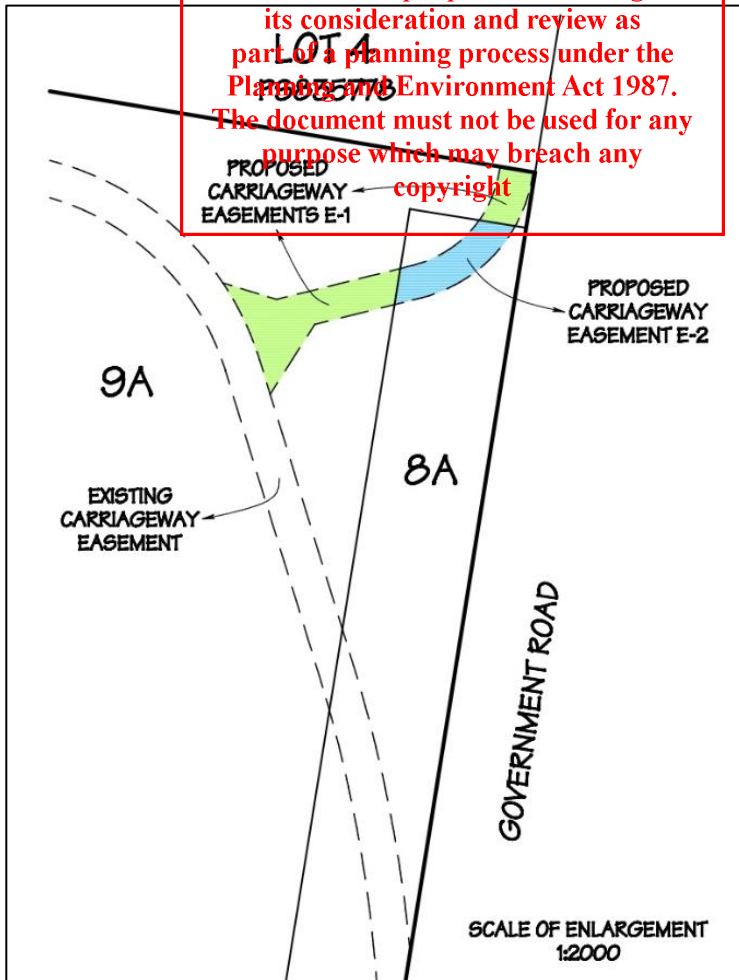


Extract from Plan of Proposed Easements V1

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Enlargement of proposed easements (Our ref: 20437 V1)

Should the subject Application be determined favourably, further approval will need to be sought from Wellington Shire Council for registration as a Class 2 Food Premises, associated with the proposed cultivation, harvesting and drying of spirulina biomass.

Subsequent approval will also be required under the *Victorian Gas Safety (Gas Installation) Regulations 2018* for gas trains and pipelines exceeding 200kPA.

The proposal incorporates four separate prescribed activities which will each require a licence from the EPA. EPA Application ID APP035082 was submitted to the EPA in April 2024, with the following types of licences sought:

A01 Reportable Priority Waste Management: a licence is necessary to store, treat, reprocess, contain or dispose of any reportable priority waste generated at another site, other than the wastes/activities set out in Table 1, Schedule 1 of the *Environment Protection Regulations 2017*. The site will receive industrial waste for processing (animal manures - K220) and reportable priority wastes for processing (i.e. grease trap interceptor waste – K110, K200, K210).

A07a – Organic Waste Processing (Large): An operating licence is required for processing organic waste by aerobic or anaerobic biological conversion if one of more of the following applies:

- More than 100t or 200m³ of organic waste is accepted in any month.
- More than 70t or 140m³ of organic waste is accepted in any month and more than 50t of pasteurised material, compost or digestate is produced in any month.

A08 – Waste to Energy: An operating licence is required for recovering energy from waste at a rated capacity of at least 3MW of thermal capacity, or at least 1MW of electrical power. The project will contain a duty/standby configuration of combined heat and power generators, each capable of producing 1.3MWt and 1.1Mwe operating with a targeted capacity factor greater than 95%.

B06 – Fish Farms & Aquatic Organisms: An operating licence is required for cultivating other edible aquatic organisms in a land-based on on-shore facility with a design water flow rate of 0.2ML or more per day. The project will produce between 62kg and 182kg per day of biomass dried on site from an initial biomass concentration in raceway ponds of 5g/L.

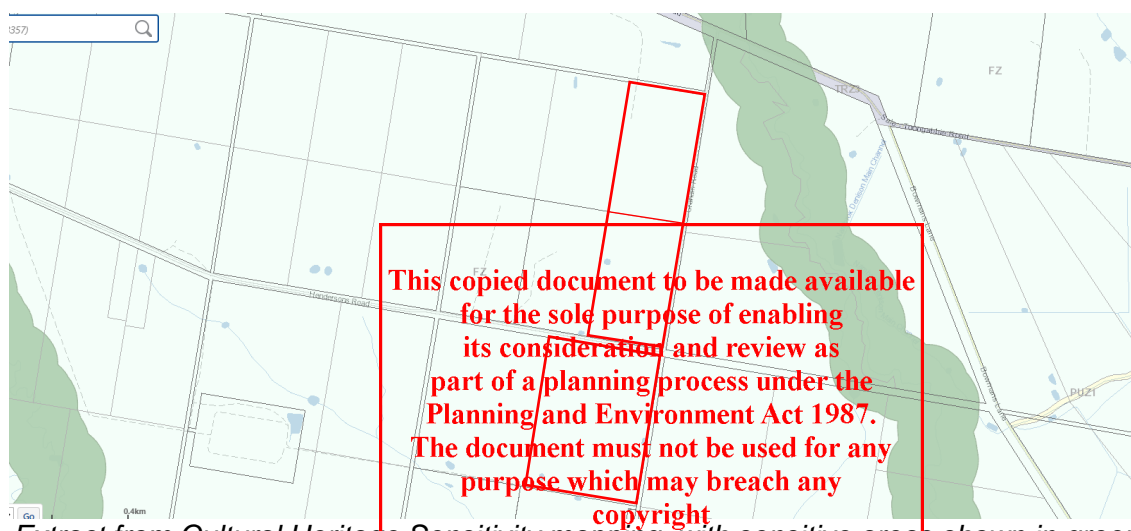
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4. Cultural Heritage

Pursuant to Regulation 7 of the *Aboriginal Heritage Regulations 2018*, a CHMP is required for an activity if:

- (a) *all or part of the activity area for the activity is in an area of cultural heritage sensitivity; and*
- (b) *all or part of the activity is a high impact activity*

Whilst the proposed use constitutes a high impact activity pursuant to Regulation 46(1)(xxx) of the *Aboriginal Heritage Regulations 2018*, the subject land is not identified as an area of cultural heritage sensitivity.



Extract from Cultural Heritage Sensitivity mapping, with sensitive areas shown in green and subject land outlined in red (Source: VicPlan)

Accordingly, the proposal does not require the any mandatory preparation of a Cultural Heritage Management Plan (CHMP) under the *Aboriginal Heritage Act 2006*.

A Cultural Heritage Due Diligence Assessment prepared by Anita Barker, Heritage Advisor accompanies this submission, concluding that “*neither a Cultural Heritage Permit, nor a mandatory CHMP, is required for the study area*”.

Preparation of the Due Diligence Assessment included consultation with the GunaiKurnai Land & Waters Aboriginal Corporation, being the Registered Aboriginal Party for this area. Written advice from GKLAWAC is included at page 16 of the Assessment, which accepts the advice from the Heritage Advisor that no further assessment is required.

Whilst the Due Diligence Assessment relates only to Property A, the general observations and characteristics are reflected for Properties B & C, indicating the conclusions are assumed to be consistent.

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6. Planning Policy

6.1 Planning Policy Framework

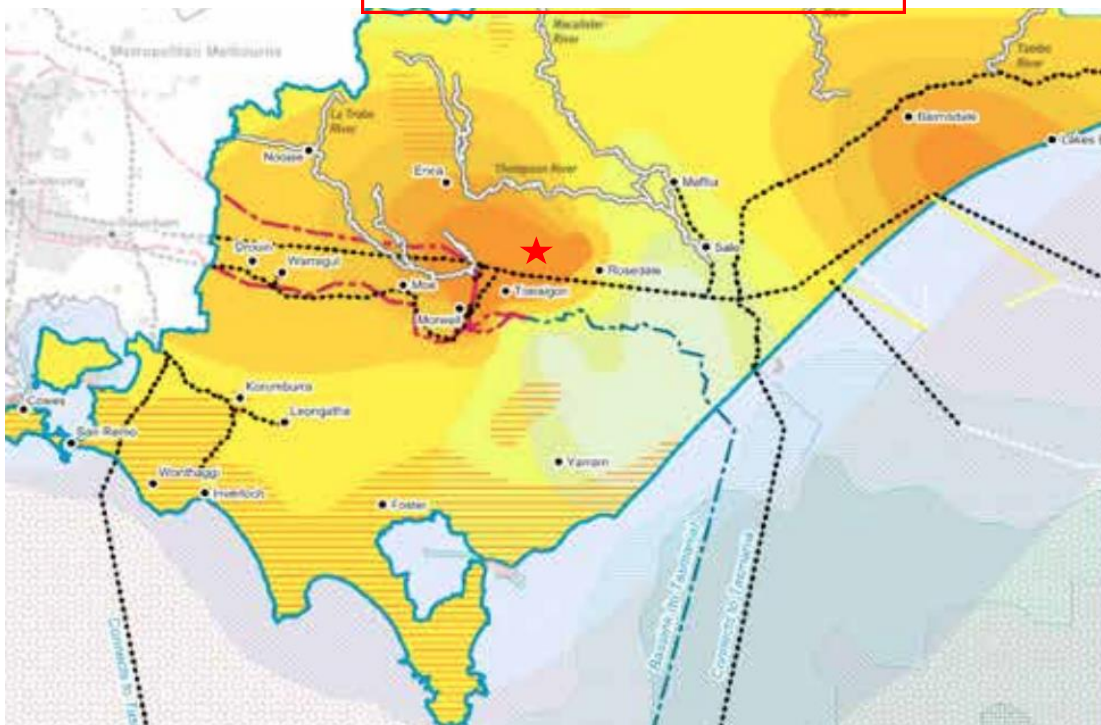
The proposal is entirely consistent with objectives relating to *Settlement* (Clause 11) which encourage the siting of compatible land uses close together to minimise amenity impacts. The proximity of the proposed development to existing intensive animal industries, inside separation distances already established from sensitive receptors takes full advantage of existing investment in infrastructure. The proposal will achieve a sound, integrated planning outcome focused on waste minimisation and resource recovery.

The proposal gives effect to strategies which encourage the development of alternative energy generation infrastructure, contributing to net zero greenhouse gas emissions (Cl. 11.01-1S).

Strategies specific to *Settlement – Gippsland* (Cl. 11.01-1R) reference the *Gippsland Regional Growth Plan* (Victorian Government, 2014). This Plan encourages initiatives which will assist with the transition of energy production to lower carbon options, promoting investment in clean and renewable energy, in particular those which create greener value-adding opportunities.

Guiding principles seek to strengthen the region's resilience through innovation in energy production and agriculture, promoting opportunities such as that proposed by the subject Application which will contribute to a reduction in greenhouse gas emissions. The proposal is consistent with objectives which look to maintain Gippsland's role as the State's energy hub, utilising the region's existing electricity distribution network within a low-emissions energy future.

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*Future Directions for renewable energy, with red star denoting subject land
(Source: GRGP, 2014, p.41)*

Potential for bioenergy opportunities, in light of the region's growing role as a food bowl for Australia and Asia, is acknowledged by strategies which specifically encourage the utilisation of agricultural residue for bioenergy production (p.30).

The more recently developed *Gippsland Regional Plan 2020-2025* (Regional Development Victoria,) recognises the region as an area that will lead innovation and technological advancements in energy production, embracing the possibilities of the circular economy. The subject Application is well placed to take advantage of the established high-capacity electricity transmission network, utilising a stable quantity of input waste that is not currently critical to higher order recycling or composting treatments. (p.24).

The proposal will not give rise to any negative biodiversity impacts, with proposed buildings and works deliberately sited to avoid roadside vegetation, consistent with strategies relating to *Protection of biodiversity* (Cl. 12.01-1S). The site of the proposed buildings and works comprises pastoral grasses with no remnant native vegetation or designated waterways located on site. The precinct does not constitute a significant landscape or an environmentally sensitive area as recognised at Clause 12.05 relating to *Significant Environments and Landscapes*.

A Desktop Assessment undertaken by EcoLink Consulting identified eleven threatened flora, 28 threatened fauna species listed under the FFG Act an EPBC Act, and one threatened ecological community listed under the EPBC Act may occur within or near the subject land. Given the degraded nature of habitats within the study area and absence of suitable habitats, EcoLink concluded none of the identified flora or fauna species are likely to occur.

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The EcoLink noted a moderate likelihood of Grey-headed Flying-foxes or White-throated Needletails flying over the study area, concluding:

*“the proposed development is unlikely to significantly impact either of these species, because neither of these species are likely to rely on the habitat within the study area for important phases of their lifecycle”.*¹

No 'protected flora' species were observed within the study area, meaning a *Permit to Take Protected Flora* is not required.

Ensuring land use compatibility was the primary consideration for site selection, working within established buffers from sensitive receptors consistent with strategies relating to *Environmental Risks and Amenity* (Clause 13). The proposed facility incorporates features to mitigate potential risks, including appropriate storage of feedstock and by-products to control against odour, spills or contamination, with all structures designed for ongoing resilience to extreme weather events resulting from climate change impacts.

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¹ *Biodiversity Assessment, 374 Hendersons Road, Toongabbie, Victoria, EcoLink Consulting, August 2023*

The subject land is not identified as being prone to erosion or flooding, minimising consideration of strategies relating to *Floodplains* (Cl. 13.03) and *Soil Degradation* (Cl.13.04).

Buildings and works have been intentionally sited outside those parts of the site included within the Bushfire Management Overlay. Whilst the subject land is within a designated Bushfire Prone Area, the proposed use is not one that will result in people congregating in large numbers. Accordingly, consideration of policy relating to *Bushfire planning*(Cl.13.02-1S), and more specifically to *Use and development control in a Bushfire Prone Area*, has little relevance to the subject Application.

The proposal has appropriately considered strategies relating to *Noise management* (Cl.13.05-1S). A summary of the findings of the Noise Assessment Summary prepared by Echo Acoustic Consulting is provided at Section 3 of this Report. The proposal will not result in noise exposure to nearby sensitive receptors.

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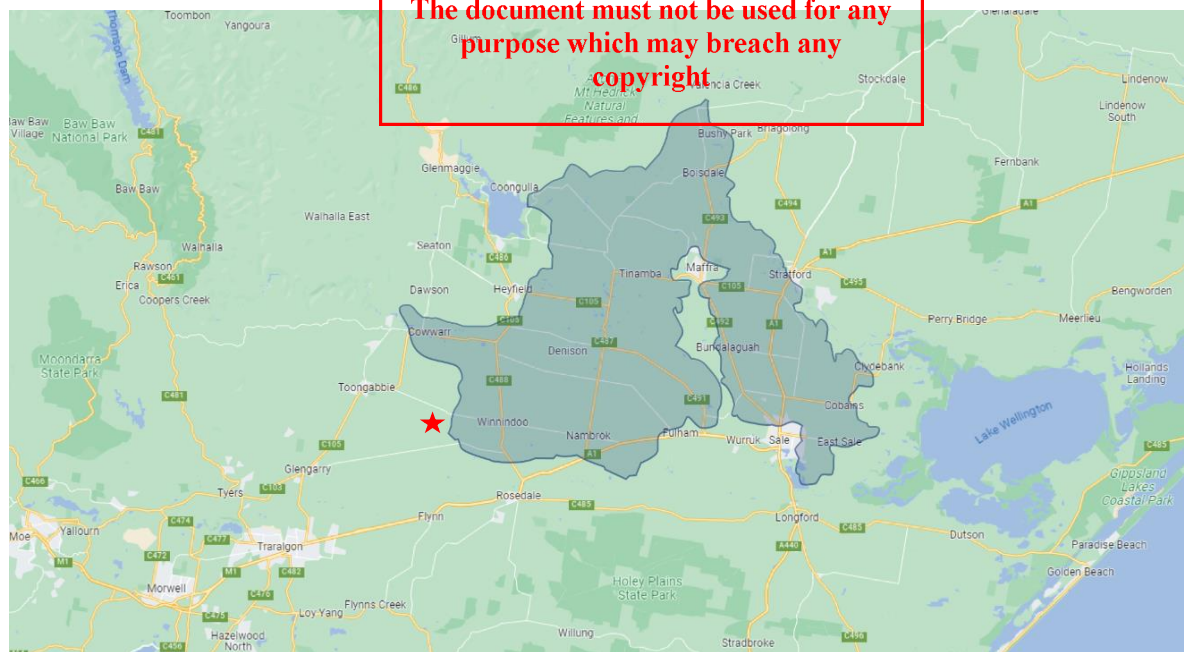
Air quality management (Cl. 13.06-1S) has been appropriately addressed by co-locating the proposed facility within existing buffer distances from nearby sensitive receptors, achieving separation to ensure no negative amenity impacts with respect to Air quality, as addressed in more detail within Section 3 of this Report. The proposal does not constitute a *Major Hazard Facility* as described at Clause 13.07-2S.

A driving focus of the proposal is to support the sustainable management of agricultural activities, consistent with policy statements at Clause 14 pertaining to *Natural resource management*.

Consistent with strategies relating to *Agriculture* (Cl. 14.01), the proposal will complement existing intensive animal industries established on surrounding properties, whilst also enabling innovation in agriculture associated with the cultivation of micro-algae. The agricultural element of the proposal is expected to deliver yields significantly greater than the land is every likely to achieve as a grazing parcel, eliminating any perception that the proposed Waste-to-energy facility would result in land being removed from primary production.

The subject land is not recognised as productive farmland of strategic significance in the local or regional context, consistent with Clause 14.01-1S relating to *Protection of agricultural land*. The site is located outside the key strategic area of the Macalister Irrigation District, as recognised within strategy regarding *Protection of agricultural land – Gippsland* at Clause 14.01-1R.

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Map of Macalister Irrigation District , with subject land denoted with star
(Source: Southern Rural Water)

The proposal demonstrates a direct link to agricultural land uses in the immediate vicinity, avoiding adverse residential amenity concerns consistent with use and development strategies relating to *Protection of agricultural land – Wellington* (Cl.14.01-1L).

By embracing circular economy principles, the proposal will aid the reduced usage of existing natural resources, with the by-product of the bioenergy process able to replace fertilizer products such as urea which are typically imported. This innovative and value-adding approach gives effect to strategies pertaining to *Sustainable agricultural land use* (Cl. 14.01-2S), achieving an intensive and diversified horticultural activity as encouraged by *Diversifying agriculture – Wellington* (Cl. 14.01-2L).

The subject land does not contain any designated waterways, is not located within a Special Water Supply Catchment Management Area or a Declared Irrigation District, minimising considerations relating to *Water* (Cl.14.02). The proposal provides for the appropriate detention and treatment of stormwater onsite, ensuring no off-site impacts consistent with strategies relating to *Water quality* (Cl. 14.02-2S).

The proposed built form is not dissimilar to other structures within the surrounding landscape, consistent with policy statements relating to *Built environment and heritage* (Clause 15). Whilst the proposed Digester and Storage Tanks structures have a maximum height above ground of approximately 21 metres, they are not altogether dissimilar to a feed silo in terms of form and scale; features which are common in the immediate landscape.



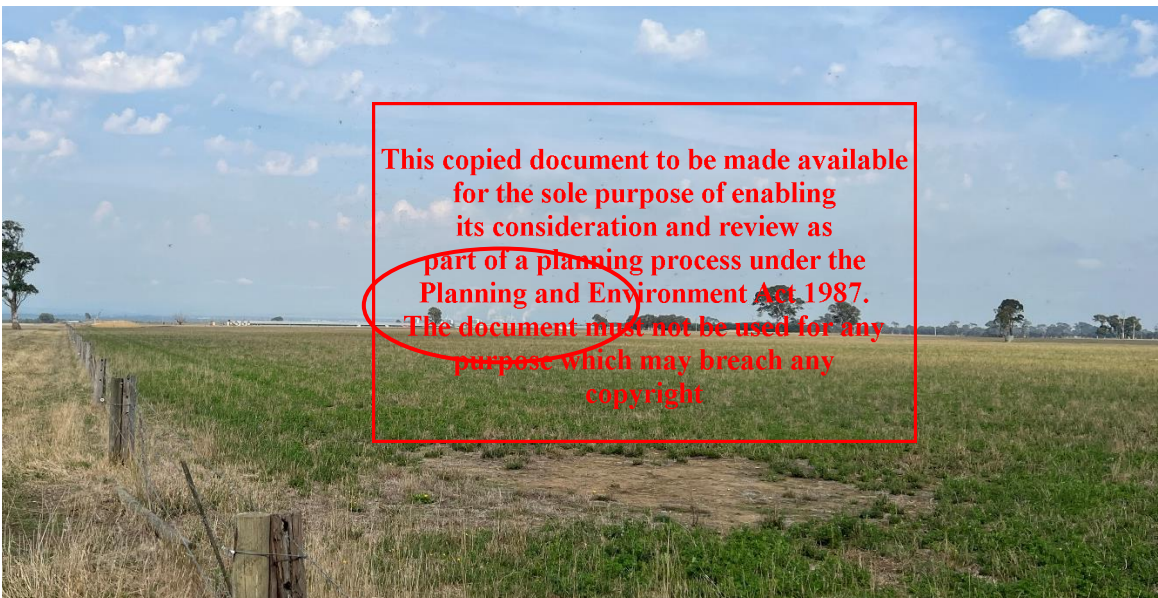
Existing grain silos located on broiler farm to south of subject land (Source: C-Loop)

Infrastructure associated with power generation is a notable feature within the wider landscape, with the substantial Loy Yang Power Station visible both from the subject land and from viewsheds within the public realm, despite being located approximately 20km to the south-west. The proposed scale is significantly less than that of these much larger structures.

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Loy Yang Power Station from River Road (Date of photograph: 26 January 2024)



Loy Yang Power Station visible from subject land (Date of photograph: 7 April 2023)

The proposed design and siting has attempted to minimise detrimental impacts on the natural environment, with existing vegetation within the landscaping assisting to screen development from nearby sensitive receptors. The proposed development is well setback from township approaches and sensitive tourist routes, and will not obscure natural scenery and landscape features, consistent with *Design for rural areas* (Cl. 15.01-6S).

The proposal gives effect to policy statements which acknowledge the need for development that supports the transition to net zero greenhouse gas emissions, minimising waste generation and supporting resource recovery whilst avoiding detrimental impacts on the public realm (Clause 15).

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By siting the proposed facility within the separation distances established for surrounding broiler farms, the proposal avoids land use conflict enabling the proposal to maximise its economic potential, consistent with statements relating to *Economic development* (Clause 17). The subject land's location within the Gippsland Renewable Energy Zone, with proximity to an established high-capacity electricity transmission network makes it well placed to harness emerging economic opportunities, reflecting strategies for a *Diversified economy* (Cl. 17.01-1S).

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Map of Victoria's Renewable Energy Zones, with subject land denoted with star
(Source: <https://www.energy.vic.gov.au/renewable-energy/vicgrid/renewable-energy-zones>)

The electricity sector is the largest Greenhouse Gas (GHG) emitter in Victoria, accounting for 50% of all annual GHG emissions. The State Government has developed ambitious emission reduction targets by 2035, seeking a 75-80% emissions reduction on 2005 levels. The project will contribute to State Government targets which look to 40% of Victoria's electrical energy to come from renewable sources by 2025, and 50% by 2030.

The proposal will achieve strategies for *Diversified economy – Gippsland* (Cl.17.01-1R) through the introduction of a facility that will add value to local agriculture, and will produce an agricultural product that is highly valued on the export market.

The proposal presents a contemporary solution to an existing agricultural challenge, achieving diversification without additional demand for, or burden on the region's natural resources, according with strategies for a *Diversified economy – Wellington* (Cl. 17.01-1L).

The proposal leverages the immediate locality's competitive strengths associated with the number of broiler farms nearby, through an innovative approach to reducing greenhouse gas emissions whilst also facilitating economic growth consistent with *Innovation and research* (Cl.17.01-2S) and *Innovation and research – Gippsland* (Cl.17.01-2R).

The proposal provides for the safe and efficient movement of feedstock between existing broiler farms and the proposed facility, contributing to environmental sustainability in accordance with Clause 18 relating to *Transport*, in particular Clause 18.01-1S relating to *Land use and transport integration*.

The site is not dependent on highway or rail infrastructure, and is therefore appropriately located to avoid disruption of major transport corridors, consistent with strategies relating to *Land use and transport planning – Wellington* (Cl.18.01-1L).

In accordance with policy statement relating to Infrastructure (Clause 19), the proposal will complement the operation of existing major infrastructure for the distribution of energy, providing additional energy generation without reliance on fossil fuels.

The proposal will provide **This is the generation of energy from waste with low emissions, deliberately located to avoid land use conflicts, and will be resilient to the impacts of climate change, respectful of strategies relating to Energy supply (Cl.19.01-1S). The proposal will lower the emissions footprint attributed to farming and food processing without adding additional cost to the customer. Spirulina grown and processed on site will provide a low emissions, high value source of consumer product year round, with strong climate resilience.**

Significant strategic alignment is found at Clause 19.01-2S relating to *Renewable energy*, with the proposal a direct response to objectives that encourage appropriately sited renewable energy facilities. Impacts to the local community and environment are minimised by locating the facility within proximity to existing intensive animal industries, taking advantage of established buffers from sensitive receptors.

The proposal will divert feedstock from traditional landfill disposal, enabling the sustainable management of waste in close proximity to the source, giving effect to strategies relating to *Waste and resource recovery* (Cl.19.03-5S).

The proposal aligns both with the State Government renewable energy target and circular economy policy monetising the opportunities that come from upcycling waste. The concentration of intensive animal industries in the locality provides an ideal opportunity for a coordinated approach for the management of primary industry waste, adopting Bioenergy as a waste management and value accretive solution, consistent with strategies that encourage circular economy initiatives.

The *Circular Economy (Waste Reduction and Recycling) Act 2021* aims to introduce a circular economy in Victoria that maximises the continued use of products and waste material over their life cycle and account for their environmental impacts.

The proposal provides a sound response to ambitious Government goals to divert 72% of waste from landfill by 2025 and reducing organic waste currently sent to landfill by 50% by 2030.

Whilst the proposal is primarily focussed on the treatment of agricultural waste, the model will also take in a portion of prescribed industrial waste from selected markets, consolidating specific third-party waste streams which are compatible feedstocks for bioenergy production, and would otherwise have less compatibility with composting practices.

Increased options for the biological treatment of waste, such as anaerobic digestion as proposed by the subject Application, will be critical as Victoria recovers more organic waste, consistent with the *Statewide Waste and Resource Recovery Infrastructure Plan (2018)*². The proposed development provides a roadmap 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.

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The principles of waste-to-energy complemented by circular economy outcomes creates an unrivalled treatment process for organic waste in Australia which is scalable and has global appeal. The subject Application will be the first demonstration of a commercially operating biorefinery in Australia, with multiple value drivers delivering market opportunities for both high and low value micro-algae products into the future. The proposed model redefines the *reuse, reduce, recycle* waste hierarchy, producing multiple outcomes with sustainable sources of revenue.

The proposal presents a sound response to multiple tiers of State Government Policy, giving effect to strategies that seek to deliver sustainability, environmental and economic benefits.

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² <https://www.sustainability.vic.gov.au/about-us/our-mission/our-strategies/statewide-waste-and-resource-recovery-infrastructure-plan-swrrip>

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6.2 Municipal Planning Strategy

Local policy acknowledges the major role played by the agricultural sector in the prosperity of the Wellington Shire (Cl. 02.01).

The 2021-2025 Council Plan identifies alternative energy generation as an exciting growth industry with opportunity to transition the local economy, whilst also contributing to reduced emission levels, consistent with the municipal *Vision* (Cl.02.02).

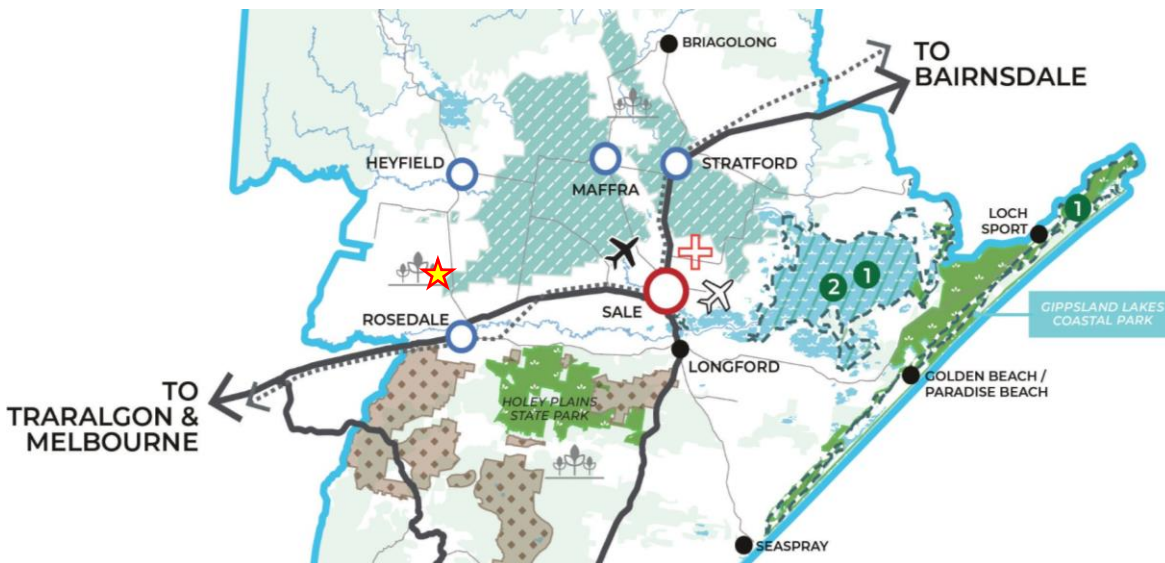
The subject land and surrounding precinct is not recognised at Clause 02.03-2 as comprising any important *Environmental and landscape values*, with the developing avoiding impacts on waterways or remnant vegetation. Located outside the Macalister Irrigation District, the subject land does not comprise high quality agricultural land, with the proposed development compatible with the protection of productive land as encouraged within policy statements relating to *Natural resource management* (Cl. 02.03-4).

The subject land is not within an area identified as comprising strategically important agricultural land, properties further east within the Macalister Irrigation District. The proposed use and development will not compromise current agricultural activities being undertaken on surrounding properties. The subject land is ideally located to take advantage of the abundant amount of organic waste available in the immediate vicinity.

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The importance of environmentally sustainable green energy is acknowledged at Clause 02.03-6 relating to *Economic development*, with the proposal’s strong strategic alignment demonstrated by the following statement:

“Renewable energy production presents opportunities for Wellington to capitalise on Gippsland’s potential to be a future leader in new, low emission energy technologies such as biomass.”



Extract from Wellington Shire Strategic Framework Plan, with subject land denoted by star (Source: Clause 02.04)

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7. Farming Zone

The subject Application is entirely consistent with the purpose to the Farming Zone through the expansion of agricultural activities undertaken on the subject land. The concept has been derived based on a sound understanding of comprehensive and sustainable land management practices and infrastructure provision, both of surrounding intensive animal industries and the circular economy principles proposed on site.

The proposal responds to the decision guidelines of Clause 35.07-6 of the Farming Zone through the following:

General issues

- A comprehensive assessment of the proposal's compliance with the Municipal Planning Strategy and the Planning Policy Framework has been provided at Section 6 of this Report.
- The subject land is located on the periphery of the Latrobe local area, which extends from Warragul in the west to Rosedale in the east, as described within the *West Gippsland Regional Catchment Strategy 2021-2027*. The proposal is entirely consistent with This statement to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Land Capability Assessment Act 1995. This confirms the land is able to accommodate the proposed development, including the disposal of effluent, and for the irrigation of nearby paddocks with treated digestate whilst raceway ponds are being constructed and commissioned. The proposal acknowledges the positive environmental benefits that will arise from the economic transition away from coal fired power plants towards a "cleaner and greener future" (RMCG, 2020).
- The Application is supported by a Land Capability Assessment prepared by Ag-Challenge and ETS which confirms the land is able to accommodate the proposed development, including the disposal of effluent, and for the irrigation of nearby paddocks with treated digestate whilst raceway ponds are being constructed and commissioned.
- Sustainable land management practices underpin the proposal, complimenting surrounding intensive animal industries and providing for the cultivation of micro-algae in a climate resilient setting.
- The proposal is deliberately located for compatibility with adjoining and nearby uses, taking advantage of existing separation distances from nearby sensitive receptors.
- The proposal is fuelled by the generation of poultry litter (soiled animal bedding) in the nearby vicinity. The subject land is well located to feed energy generated on site back into the grid, taking advantage of existing investment in the high capacity transmission network.

Agricultural issues and the impacts from non-agricultural issues

- The proposal will enhance intensive agricultural activities undertaken on surrounding broiler farms, creating an efficient and sustainable method for the disposal of poultry litter. The by-products of the waste treatment process will enable the cultivation of micro-algae in a sustainable manner, enhancing agricultural production on the subject land which is currently limited to marginal grazing.

- The proposal will see some parts of Property A developed with hardstand or structures, however it is considered the overall increase in agricultural production will far exceed the current productive capacity of the land. The process involves treatment and processing all year round promoting opportunities which are not susceptible to seasonal demands or climatic events.
- The proposal will compliment adjoining and nearby agricultural uses, with any expansion of these activities likely to generate additional feedstock for treatment within the proposed facility, and therefore encouraged.
- The scale of the agricultural use is currently limited, with ample capacity for future expansion as the demand for product increases.
- The nature of the proposed use is that it is not dependent on highly productive soils or water entitlements. The proposed development will see marginal grazing land transition to a high yield productive operation producing export-quality crops.
- A document specifically titled 'integrated land management plan' has not been prepared for the site. The subject Application is considered to provide a detailed outline for the proposed use of the property.
- The proposal will not give rise to demand for rural worker accommodation. It is expected that the facility may provide employment opportunities for locals whose jobs were lost as a result of the closure of the hardwood timber industry, or from the pending closure of coal fired power plants.

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Environmental issues

- The proposal will not impact the physical features and resources of the area. The relatively flat topography of the wider precinct will ensure no risk of erosion or soil degradation, and there will be no off-site impacts with respect to stormwater, with runoff detained and treated on site before re-use.
- The proposal has been deliberately sited to avoid impact to flora and fauna, either on site or within the adjacent road reserves. The proposal will impact pastural grasses on Property A only, with appropriate buffers maintained, and existing points of access utilised to avoid impact on roadside vegetation.
- The proposal will not impact the biodiversity of the area, with no remnant vegetation, faunal habitat, waterways, gullies or ridgelines found on site.
- On-site effluent disposal areas will be deliberately sited to avoid any off-site impacts, consistent with the recommendations of the Land Capability Assessment.

Design and siting issues

- The proposed buildings are clustered in the north-eastern corner of Property A to avoid any adverse impacts on surrounding agricultural uses.
- The supporting Visual Impact Assessment demonstrates the proposed built form will not have an unreasonable impact when viewed from the public realm.

- There are no features of architectural, historic or scientific significance within the wider locality, nor of natural scenic beauty or importance.
- The development will utilise existing infrastructure available in the locality. Natural gas, reticulated water and sewerage are not available in the locality, and the development will connect to the electricity grid via underground means. There is no drainage infrastructure within the vicinity, with the proposal inclusive of on-site stormwater management infrastructure.
- The proposal will not require traffic management measures, either during the construction phase or once fully operable. Existing road infrastructure is of sufficient standard to accommodate the proposed development. Access to the facility will require only a minor extension of the existing accessway established within adjacent private land.
- The proposal is not a wind energy facility.
- No buildings will be used for accommodation, and the site is not within 500m of an existing or proposed extractive industry.

The proposal achieves sound compliance with the provisions of the Farming Zone.

8. Conclusion

The proposed Waste-to-energy facility at 374 Hendersons Road, Toongabbie is considered to accord with all relevant provisions of the *Wellington Planning Scheme*. The proposal is consistent with Planning Policy Framework and Local Policy and has been intentionally located to avoid negative amenity impacts on adjoining properties.

For these reasons we respectfully request the favourable consideration of the merits of the Application through the grant of a Planning Permit.

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