

Preliminary Environmental Assessment Report/ Development Overview

Proposed Biodigester

4 Bounty Street & 49 Hawken Street, Oberon, NSW

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Revision History

Rev No.	Revision Date	Author / Position	Details	Authorised	
				Name / Position	Signature
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1 Scope and Site Description

1.1 Scope and Structure of the Report

The purpose of this report is to characterise the proposed works and to provide an overview of its potential effects on the environment and the community.

The Preliminary Environmental Assessment Report (PEAR) is intended to provide Oberon Council, the New South Wales Department of Planning & Environment (DP&E) and other statutory agencies with sufficient information to establish the key environmental issues associated with the proposed project.

The project is classified as State Significant Development in accordance with Section 23 (6) of Schedule 1 of the SRD SEPP. As below;

(6) Development for the purpose of any other liquid waste depot that treats, stores, or disposes of industrial liquid waste and—

- (a) handles more than 10,000 tonnes per year of liquid food or grease trap waste, or*
- (b) handles more than 1,000 tonnes per year of other aqueous or non-aqueous liquid industrial waste.*

The proposal trigger's part (b) above, as we proposed to put industrial sludge from the Borgs Panel site into the digester.

1.2 Site Description

The site is located within the locality of Oberon in Central Western NSW. The site is identified as Lot 20 DP 1249431, 49 Hawken Street, Oberon and Lot 17 DP 749692, 4 Bounty Street, Oberon. The locality plan below shows the lot in relation to the existing Borg Panels site and surrounding lands. The two lots combined are approximately 3.4 ha in size.

Lot 20 DP 1249431 is currently owned by Oberon Council, with negotiations currently being finalised for the Borg purchase of the site. Lot 16 DP 749692 is already in the ownership of a Borg subsidiary.



Figure 1 Proposed Biodigester site- 4 Bounty Street and 49 Hawken Street, Oberon

1.3 Existing Site Activities

4 Bounty Street is currently used as a hardstand area for the storage of material associated with the Borg Panels site. Approval for the hardstand use was issued under DA 10.2020.21.1 on the 9th of June 2020 by Oberon Council. It currently facilitates the storage of logs and waste wood awaiting use in the production of MDF and Particle Board on the Borg Panels site, along with some pieces of machinery and equipment.

49 Hawken Street is currently vacant and is part of the Oberon Council industrial subdivision.

Both sites do not contain any native vegetation or items of heritage significance.

1.4 Surrounding Land Uses

The proposed site is located within the Oberon industrial area, with a mixture of uses surrounding. To the north of the site is the Borg Panels site, with rural lands beyond. To the East is a mix of vacant industrial lots and industrial uses including the proposed Bettergrow Landscape Supplies and Composting facility, along with the National Parks depot, asphalt plant and bus depot. To the south is more general industrial uses including engineering workshops, truck mechanics, auto electricians and truck depots, with Oberon town centre approx. 900m south. The West generally consist of general industrial uses including the ANL

complex and engineering workshops. Beyond this is the Oberon Rugby League Oval and the Oberon Timber Complex.

The nearest sensitive receiver is a dwelling located to the south-east located on Albion Street, it is approximately 540m from the site. Oberon High School is approximately 600m to the south of the site.

1.5 Access

The site is accessed from Maher Drive which is the western frontage of the site. A new heavy duty industrial crossover will be constructed to accommodate 26m and 19m trucks accessing the site. Maher Drive runs immediately off Albion Street and is unrestricted and suitable for b-double size trucks. Trucks will likely be coming from both directions along Albion Street, from Sydney and Bathurst, and utilising both left hand and right hand turns to access Maher Drive.

1.6 Utilities

Part of the site is a vacant lot in a recently completed Council subdivision. All necessary utilities are available to the site.

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2 Proposal

2.1 Proposal Overview

ReDirect (A Borg Company) propose to construct and operate a biodigester that will accept putrescible organics, grease trap waste and industrial Water treatment plant sludges.

A biodigester is a system that biologically breaks down organic material, generally anaerobically (without oxygen) it can also be carried out aerobically (with oxygen). To this application the process will be Anaerobic. Microbes and bacteria break down organic materials to release carbon-based compounds. Most food and organic matter (carbon containing), including fat and grease, can be processed in a biodigester.

Organics are delivered to the receival building in bulk deliveries or in separate packages on pallets, these materials are macerated, and all packaging is removed. The macerated material, which is liquid at this stage (referred to as soup), is stored in the buffer tank ready for introduction into the digester. The material stream passes from the buffer tank into the digester, then the post digester and finally into the digestate storage tanks or directly into road transport vehicles for offsite disposal/re-use.

Methane gas, Carbon dioxide, hydrogen sulphide and moisture are produced in the Post Digester, this gas is collected and filtered and will be used to offset natural gas consumption on the Borg Panels site. The gas could also be directed into the existing gas infrastructure network for sale.

The anaerobic digestion process also creates a nutrient rich liquid, digestate, that can be used in composting process undertaken by Bettergrow (A Borg company) or used for application to land in agricultural activities.

The proposed inputs for the digester.

- 50,000 tonnes of food waste diverted from landfill
- 10,000 tonnes of Industrial Liquid Wastes
- 5,000 tonnes of grease trap waste

This amounts to inputs of 65,000 tonnes per annum of wastes coming to site.

The infrastructure required for the digester will be:

- A series tanks differing in sizes,
 - Buffer tank (1 proposed)- 12m wide x 6m high
 - Digester Tank (1-2 proposed)- 19m wide x 16m high
 - Digestate storage tank (1 - 2 are proposed)- 25m wide x 8m high
 - Post Digester (2 proposed)- 25m wide x 6m high
- A purpose designed 3000m² receival shed with de-packaging machinery and storage areas
- Bio-gas scrubber and purifier to remove impurities from gas prior to use

- A gas flare to be utilised in times of Biogas generation with no consumption.
- 120m² office area
- Hardstand area

Figure 4 below shows the proposed site plan.

2.2 Capital Investment Value

The proposed works are valued at \$25.8 Million.

2.3 Project Need and Justification

Addressing the social, environmental, and economic consequences of food waste has become an urgent issue for governments and food industry stakeholders. The state of New South Wales (NSW) accommodates the largest population in Australia and is responsible for more than one-third of all waste generated in the country. This is one of the reasons we have earmarked the Oberon, NSW location as the project site.

ReDirect Pty Ltd (A BORG Company) was formed out of Borgs long-term strategy to build scale and capture income in emerging environmentally sustainable initiatives. Waste is now one of these key priority areas, not only for us as a manufacturer but the industry more broadly.

A conscious decision to invest into a Circular Economy and scale up to generate future growth and increase competitiveness has been made by the business. As such, ReDirect Energy has scoped this strategic project as it embraces new technology, innovation, and automation to commercialise the food waste challenge.

Figure 2 below identifies the different inputs from the range of Borg companies contributing to the digester project, and the outputs that will in turn benefit those businesses.

ReDirect Recycling Digester Process Flow Chart

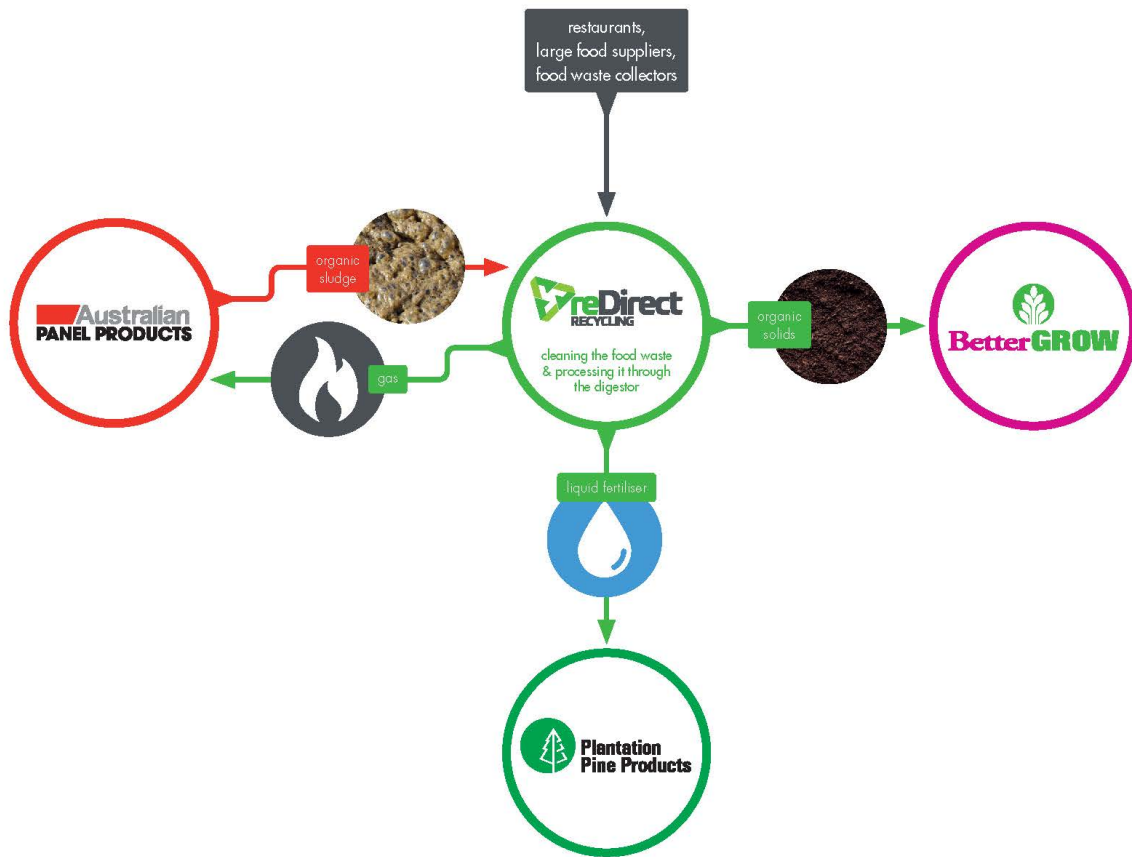


Figure 2 Flow chart showing Borg company inputs into the digester and the benefit from the digester flowing back to Borg Companies

2.4 Project Objective

1. **Emission Reduction** – Reduce the carbon footprint. And reduce greenhouse gas emissions in NSW
2. **Landfill reduction**- Divert waste from Landfill and capture embodied energy
3. **Energy Creation** – Capture and utilise the methane gas to power a tri generation system creating electricity and usable heat for the Borg Panels factory in Oberon
4. **Energy Reduction** – Capture and utilise the methane gas to reduce onsite consumption of energy at the Borg Panel Products factory in Oberon
5. **Increase Fertiliser Supply** – Increase both liquid and dry fertiliser supply in the market to agricultural and horticultural users and compost manufacturers
6. **Operating cost reduction** – Reduce operating costs of the Borg Panel Products Manufacturing factory at Oberon

2.5 Waste Streams

There are three distinct waste streams that will be utilised in the digester for the creation of biogas. These streams are outlined below.

1. **Food waste- 50,000 tonnes**- Much of the food waste going into the digester will come from commercial food suppliers in the Sydney area. Redirect has established supply contacts with restaurants, markets, supermarkets, and other large food waste generators. The facility will be able to take packaged food and de-package it within the proposed receival area. Redirect is hopeful of establishing a regional food waste collection program utilising waste from the surrounding Council areas to minimise its reliance on waste from Sydney. The food waste will be delivered by truck to site.
2. **Industrial Liquid Waste- 10,000 tonnes**- The industrial liquid waste will be Dissolved Air Flotation sludge from the adjoining Borg Panels manufacturing facility (owned by Borg) and other manufacturing facilities like Toohey's and other food producers/manufacturers. The sludge will be brought to site in sealed road transport vehicles.

Dissolved air flotation sludge is a by-product of a water treatment process. It is the separated suspended matter such as oils or solids from the industrial water used in the process. The solids removed are organic matter that can be converted in the bio-digestion process.

Borg produces 2500 Tonnes of DAF per annum from their water treatment process. Similar amounts of DAF are also expected to be sourced from Abattoirs and other food/industrial manufacturers.

3. **Grease Trap Waste- 5000 tonnes**- The grease trap waste will be sourced from large commercial food producers, restaurants, and other smaller food shops. Bettergrow (A Borg company) has a presence collecting grease trap waste in the Central West area

of the state already, this waste stream will be utilised along with further collections in the Sydney area. Grease trap waste will be brought to site in tankers.

2.6 Process Description

The proposed digester facility will have 6 main process area, they are described below.

- 1. Receival Shed-** All food waste received at the facility will either be palletised or in bulk bins/ truck trailers. All palletised waste will be received into the pallet area awaiting de-packaging. The bulk waste will be tipped within the organic bulk receival area, checked for contamination if required and pushed into sealed bulk storage hoppers awaiting maceration. The other proposed waste streams being the industrial liquid waste and grease trap waste will be delivered by tanker and unloaded straight into a storage tank.
- 2. De-packaging/ Maceration-** All packaged food waste will be put through specialist separation equipment to split the organic component from the packaging. Separation equipment operates at greater than 99% under the European Directives. The waste packaging from the separator will be collected and removed from site for further recycling or disposal. The organic matter will continue through the process into the macerator where it will be reduced to a liquid state, soup. The bulk food waste will be inspected for contamination and then loaded straight into the macerator. Once macerated the food waste will be pumped via pipe into the buffer tank.
- 3. Buffer Tank -** The buffer tank is used for the storage of waste awaiting dispersal into the digester tank. The buffer tank facilitates the commencement of the fermentation process of the waste through the process of hydrolysis and reduces potential fluctuation in the quality of the organic materials by homogenising all the raw materials delivered to the site in the previous few weeks. This homogenisation process prevents shock to biological environment in the Digester thus increasing productivity and maintaining quality and quantity of the gas produced.
- 4. Digester-** Liquid waste is transferred from the buffer tank into the digester by pipe. The process that occurs within an anaerobic digestion tank is the same decomposition process that occurs in landfills, but in a more accelerated and controlled environment (*DPIE 2021*). Beneficial bacteria are cultivated in the digester tank to enact the decomposition of the organics, the organic materials are the growth food source for the bacteria. The temperature is maintained in the Digester to ensure optimum bacterial activity, degradation and thus production of biogas. The digester tank utilises subtle agitation methods to ensure uniformity throughout the Bio-soup, this creates an environment high in bacterial activity but low in entrained oxygen and thus creates the Anaerobic digestion process. The process is monitored for bacterial activity, temperature, gas generation and overall pressure, this tank is sealed to contain odour, but it is unable to contain any pressure due to the relief systems installed.
- 5. Post Digester-** Once the substrate reaches a certain stage of digestion, it is transferred the post digester. The post digester further digests the organic materials by ensuring constant movement of the organic components facilitating the final

stages of efficient bacterial decomposition to a point where biogas is created/released, and liquids are separated. Methane gas, Carbon dioxide, moisture, and small quantities of hydrogen and sulphur are produced in the Post Digester. The gases are captured in the dome membrane, which is anchored and sealed against the top of the digester tank, captured gas is then removed by pumps for re-use within the Borg Panels plant. This is a continuous process, where the introduction of new organic materials, drainage of digestate and capture of gasses are continually happening, the overall process takes approximately 30 days to occur.

6. **Gas purification** -The captured gas will be transferred through the scrubber unit alongside the gas flare unit, to make it clean enough to use on the panels site or as saleable gas. The Biogas created requires some purification to reduce the contaminants generated during the digestion process, this process includes coarse particulate filtration, coalescing filtration to remove water, carbon filtration and desulphurisation.
An emergency flare is also installed to vent the gas in scenarios where the consumption of the gas is not equivalent to the creation. This is the preferred option as the regulation of gas production is not a very reactive process and cannot be enacted in emergency situations.
7. **Storage of Digestate**- Once the digestion process is complete, the remaining liquid referred to as digestate, which is a mix of liquid and very fine solids is drained to the digestate storage tank. The digestate undergoes coarse filtration to ensure foreign materials are removed from the liquid destined for land application. The digestate will be re-used by Bettergrow in the production of liquid and solid compost products. Some pure liquid digestates will be used by the agricultural sectors in regional NSW. Digestate is readily applied as a high-quality fertiliser to agriculturally intensive land in Australia and is extremely common practice in other parts the world

2.7 Outputs

The digester has 2 outputs being the biogas and digestate. Both are described below.

Biogas

Biogas is composed of methane (CH₄), which is also the primary component of natural gas, at a relatively high percentage (50 to 75 percent), carbon dioxide (CO₂), hydrogen sulphide (H₂S), water vapor, and trace amounts of other gases. Hydrogen Sulphide is the gas, which is responsible for odour, it is generally produced in large quantities when the biological process is operating in upset condition. The energy in biogas can be used like natural gas to provide heat, generate electricity, and power cooling systems, among other uses. Biogas can also be purified by removing the inert or low-value constituents (CO₂, water, H₂S, etc.) to generate renewable natural gas (RNG). This can be sold and injected into the natural gas distribution system, compressed, and used as vehicle fuel, or processed further to generate alternative transportation fuel, energy products, or other advanced biochemicals and bioproducts.

In this case, the biogas will be used on the adjoining panels site, to be burnt to provide heat for the dryers on the site. The gas will be transferred via low pressure pipeline, connecting into the existing gas infrastructure on the site. The gas can potentially be used to create

electricity via cogeneration for the site, which will be investigated further once the digester has been constructed and is operational. Excess gas not required on the panel site may be directed into the gas network and sold to the market. To meet the standards for usable gas, a suitable gas scrubber/purifier, which meets the market requirements such as AS4564:2020 General purpose natural gas, will be installed on the site to remove and impurities from gas.

It is expected that a 50,000 tonnes p.a. digester could produce 120,000 GJ of usable biogas per annum and approximately 40,000 tonnes of liquid fertiliser

Digestate

Digestate is the residual material left after the digestion process. It is composed of liquid and very fine solid portions. These are often separated and handled independently, as each have value that can be realized with varying degrees of post processing, the solids however can be left with the liquid if the digestion is completed well

With appropriate treatment, both the solid and liquid portions of digestate can be used in many beneficial applications, nutrient-rich fertilizer (liquids and solids), a foundation material for bio-based products (e.g., bioplastics), organic-rich compost (solids), and/or simply as soil amendment (solids), the latter of which may include the farm spreading the digestate on the field as fertilizer.

In this scenario the liquid digestates will be on sold as liquid fertiliser (under the Bettergrow brand) and will be used by Borg owned Pine Plantation Products Australia to fertilise pine plantations across the state. The solid digestate will be added to other organic wastes to produce compost for application to land. The majority of this will be transferred to the adjoining Bettergrow composting site on Maher Drive.

It is expected that the digester will create 42,000 tonnes of liquid fertiliser and 1,825 tonnes of solid digestate.

The figure below shows the breakdown of outputs from the proposed digester.

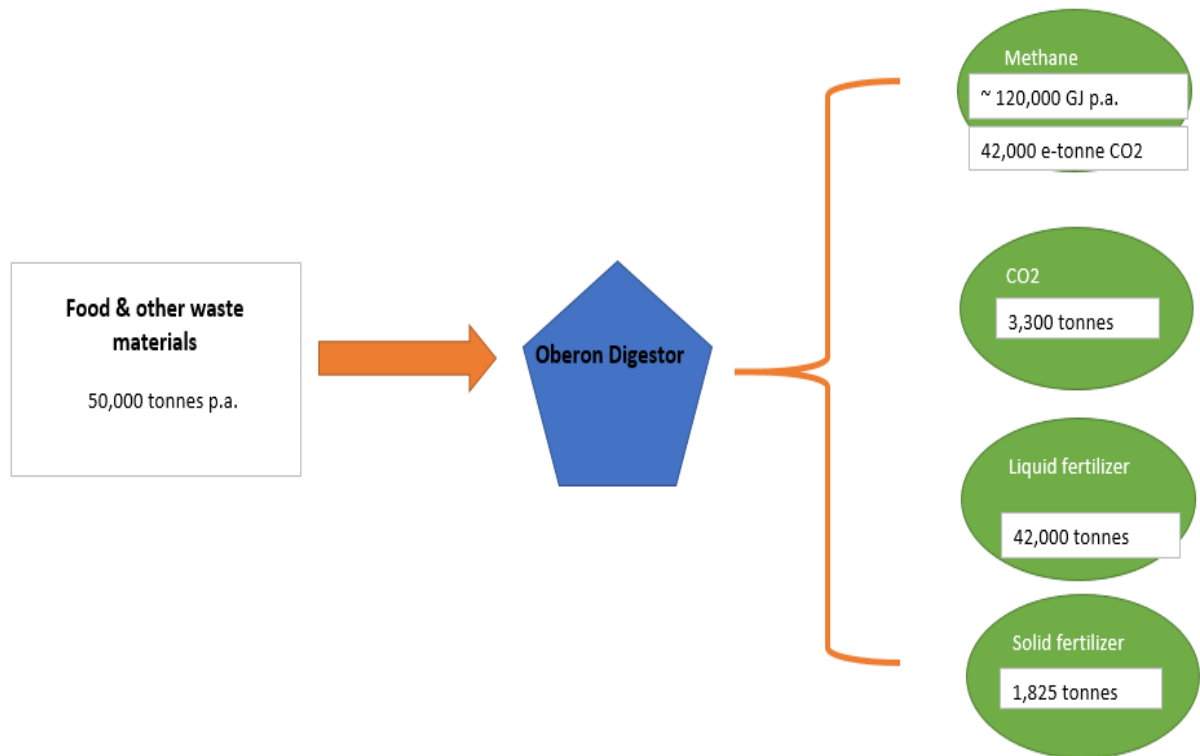


Figure 3 Diagram showing potential outputs from the Oberon digester

2.8 Employment

The project is expected to generate employment for about 15 people during operation. Construction of the project is expected to generate employment for up to 50 people during the peak construction period. Construction would also provide local employment and business opportunities as a result of construction revenue for businesses providing construction facilities and resources.

2.9 Traffic

It is likely that during operation the daily number of heavy vehicles accessing and exiting the site would be;

- 10 Heavy vehicles in including food waste trucks, industrial liquid waste tankers and grease waste tankers
- 10 Heavy vehicles out leaving the site after delivering

Additionally, there is likely to be 5-10 staff employed at the site, accessing it at different shift times, it expected that there will be 10-15 staff on site at any time.

Preliminary Environmental Assessment- Biodigester

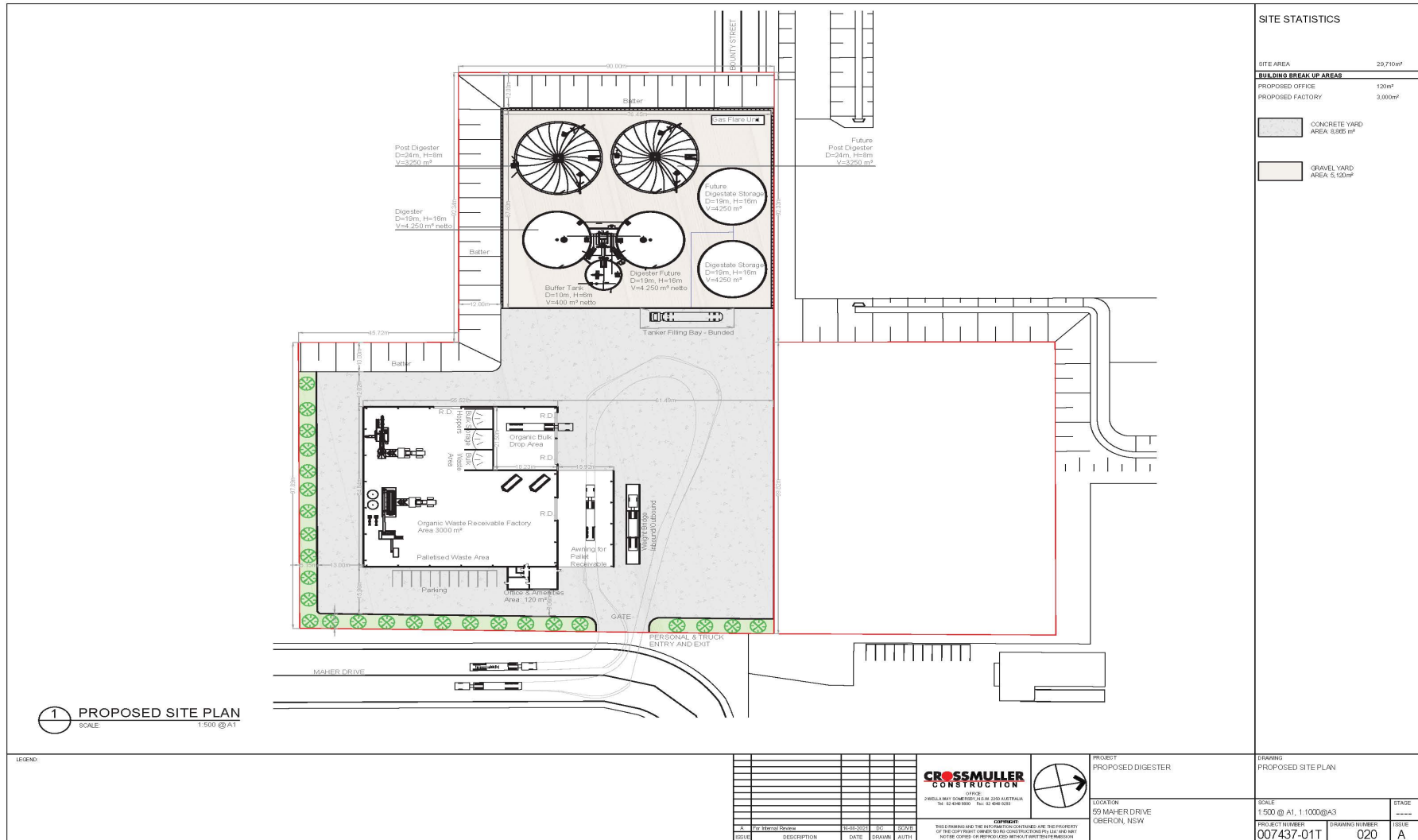


Figure 4 Proposed site layout of Digester

3 Planning and Legislative Requirements

3.1 Overview

This section identifies the legislative requirements and planning controls relevant to the Project and outlines the key policy and statutory considerations that would be addressed in more detail in the EIS.

The Project would be undertaken in accordance with the requirements of relevant environmental and planning legislation.

All associated environmental and planning approvals would be obtained as required for a State Significant Development (SSD) under Part 4 of the EP&A Act, including but not limited to:

- Commonwealth and State Government planning approvals
- Local government development approvals
- Operational approvals (such as an Environment Protection Licence)
- Other potential approvals required under relevant environmental and planning legislation and regulations.

3.2 Commonwealth Legislative Requirements

3.2.1 Environmental Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) requires the approval of the Commonwealth Minister for the Environment for actions that would have, or are likely to have, a significant impact on matters of National Environmental Significance (NES).

The EPBC Act lists seven matters of NES which must be addressed when assessing the impacts of a proposal, which are:

- World Heritage properties
- National Heritage places
- Wetlands of International Importance
- Listed threatened species and ecological communities
- Migratory species protected under international agreements
- Commonwealth Marine Areas
- Nuclear actions.

If potential significant impacts on a matter of NES are identified, then a referral to the Minister would be made in accordance with the requirements of the EPBC Act for a determination as to whether the Project is a Controlled action. There are no RAMSAR wetlands located close to the site.

A search of the EPBC Protected Matters Search Tool identified no world or national heritage properties, no threatened ecological communities, no threatened species and no migratory species within 5km of the site.

The assessment of the proposed Project's impacts on matters of NES and the environment of Commonwealth land found that there is unlikely to be significant impact on relevant matters of NES.

Accordingly, it is anticipated that the Project would not need to be referred to the Commonwealth Department of the Environment.

3.2.2 National Greenhouse and Energy Reporting Act 2007

The National Greenhouse and Energy Reporting Act 2007 (NGER Act) came into effect in September 2007 and introduced a single national reporting framework for the reporting and dissemination of information about greenhouse gas emissions, greenhouse gas projects and energy use and production by corporations. The NGER Act makes registration and reporting mandatory for corporations whose energy production, energy use or greenhouse gas emissions meet specified thresholds.

Redirect would continue to report emissions from the plant operations.

3.3 NSW Legislative Requirements

3.3.1 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) and the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) provide the framework for environmental planning in NSW and include provisions to ensure that proposals that have the potential to impact on the environment are subject to detailed assessment and provide opportunity for public involvement.

In NSW, development that is of State significance is assessed under the State significant assessment system which provides separate assessment pathways for State Significant Development (SSD) and State significant infrastructure (SSI). Development may be declared to be SSD under Part 4 Section 4.36 of the EP&A Act and the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP).

We are seeking clarification from Council regarding the approval pathway. It is Borg's opinion that the proposed is classified as an SSD, in accordance with Section 23 (6) of Schedule 1 of the SRD SEPP. As below.

(6) Development for the purpose of any other liquid waste depot that treats, stores, or disposes of industrial liquid waste and—

- (a) handles more than 10,000 tonnes per year of liquid food or grease trap waste, or*
- (b) handles more than 1,000 tonnes per year of other aqueous or non-aqueous liquid industrial waste.*

We believe that the proposal triggers part (b) above, as we proposed to put industrial sludge from the Borgs Panel site into the digester.

3.3.3 Protection of Environmental Operations Act 1997

The Protection of the Environment Operations Act 1997 establishes, amongst other things, the procedures for issuing licences for environmental protection on aspects such as waste, air, water, and noise pollution control. Environment protection licences are generally required for scheduled activities or scheduled development work. The definitions of scheduled activities provided in Schedule 1 include:

18 Energy recovery

(1) *This clause applies to the following activities— energy recovery from general waste, meaning the receiving from off site of, and the recovery of energy from, any waste (other than hazardous waste, restricted solid waste, liquid waste, or special waste).*

energy recovery from hazardous and other waste, meaning the receiving from on site or off site of, and the recovery of energy from, hazardous waste, restricted solid waste, liquid waste, or special waste.

41 Waste processing (non-thermal treatment)

(1) *This clause applies to the following activities—*

non-thermal treatment of general waste, meaning the receiving of waste (other than hazardous waste, restricted solid waste, liquid waste, or special waste) from off site and it's processing otherwise than by thermal treatment.

non-thermal treatment of hazardous and other waste, meaning the receiving of hazardous waste, restricted solid waste, or special waste (other than asbestos waste or waste tyres) from off site and it's processing otherwise than by thermal treatment.

non-thermal treatment of liquid waste, meaning the receiving of liquid waste (other than waste oil) from off site and it's processing otherwise than by thermal treatment.

non-thermal treatment of waste oil, meaning the receiving of waste oil from off site and it's processing otherwise than by thermal treatment.

non-thermal treatment of waste tyres, meaning the receiving of waste tyres from off site and their processing otherwise than by thermal treatment.

The project would receive up to 65,000 tonnes per year of, food waste, liquid industrial waste and grease trap waste and meets these definitions and would therefore require an environment protection licence.

Redirect Recycling would apply for an environment protection licence for the project. Section 4.42 of the EP&A Act provides that an EPL cannot be refused if it is necessary for carrying out an approved SSD project and is consistent with the development consent.

Heritage Act 1977

The Heritage Act 1977 aims to protect and conserve non-Aboriginal cultural heritage, including scheduled heritage items, sites, and relics. The Heritage Act is administered by the Office of Environment and Heritage.

The Oberon Station Precinct is identified as a State Heritage Item, and includes the Oberon Railway Stockyard, the precinct is located approximately 500-600m from the site. The old disused rail line which runs along Lowes Mount Road adjacent to the Borg Panels site is also identified a local heritage item under the Oberon Local Environmental Plan.

The proposal is not considered to have any adverse effect on the heritage significance of the Oberon Station Precinct nor the Oberon Railway Stockyard. The development will not create any additional visual impact from the heritage item over what is currently visible on site.

3.3.5 Water Management Act 2000

The Water Management Act 2000 provides the legislative basis for water use, management and planning. It is gradually replacing the planning and management frameworks in the Water Act 1912.

The Act provides for a range of water transactions known as access licence dealings or dealings and the Act also stipulate that a controlled activity approval may be required under the Water Management Act 2000 if works are to be undertaken within 40 metres of a water body/ watercourse.

3.3.6 National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 provides for the preservation of land, and the protection of that land, as well as the protection of flora and fauna and aboriginal heritage. At this stage no impacts on either flora and fauna, or aboriginal heritage are anticipated.

3.3.7 Biodiversity Conservation Act 2016

The purpose of the Biodiversity Conservation Act 2016 (BC Act) is to maintain a healthy, productive, and resilient environment for the greatest well-being of the community, now and into the future. The BC Act lists threatened species, populations, and ecological communities as well as critical habitat and key threatening processes to be considered when assessing an activity.

Under Section 7.9 of the BC Act an application to carry out SSD, is to be accompanied by a biodiversity development assessment report (BDAR) unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.

The Biodigester Facility would be located on cleared vacant industrial land adjacent to Borg Panels manufacturing plant. The site has no vegetation.

The project would be unlikely to have a significant impact on any threatened species, populations or ecological communities listed under the BC Act. A BDAR waiver is requested for the project with potential impacts to biodiversity considered in a chapter of the EIS.

3.4 State Environmental Planning Policies

3.4.1 State Environmental Planning Policy No.33 - Hazardous and Offensive Development

The State Environmental Planning Policy No.33 – Hazardous and Offensive Development (SEPP 33) aims to amend the definitions of hazardous and offensive development where used in environmental planning instruments, to ensure that in determining whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are considered and to ensure that in assessing any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimise the adverse impact.

A screening assessment will be undertaken in accordance with SEPP 33 to assess whether not the development is potentially hazardous.

3.4.2 State Environmental Planning Policy (State and Regional Development) 2011

The State Environmental Planning Policy (State and Regional Development) 2011 aims to identify development that is State Significant Development (SSD) and State significant infrastructure.

Projects which are declared in either of these categories are to be assessed by the Department of Planning and Infrastructure or may be referred to the Planning and Assessment Commission.

It is Redirects opinion that the proposed is classified as an SSD, in accordance with Section 23 (6) of Schedule 1 of the SRD SEPP. As below;

(6) Development for the purpose of any other liquid waste depot that treats, stores, or disposes of industrial liquid waste and—

- (a) handles more than 10,000 tonnes per year of liquid food or grease trap waste, or*
- (b) handles more than 1,000 tonnes per year of other aqueous or non-aqueous liquid industrial waste.*

We believe that the proposal triggers part (b) above, as we proposed to put industrial sludge from the Borgs Panel site into the digester.

3.4.3 State Environmental Planning Policy (Infrastructure) 2007

The aim of the *State Environmental Planning Policy (Infrastructure) 2007* is to facilitate the effective delivery of infrastructure across the State by improving regulatory certainty and efficiency through a consistent planning regime for infrastructure and the provision of services, and by providing greater flexibility in the location of infrastructure and service facilities.

Other key aims of the policy are to allow for the efficient development, redevelopment, or disposal of surplus government owned land, and identify the environmental assessment

category into which different types of infrastructure and services development fall (including identifying certain development of minimal environmental impact as exempt development). The policy also seeks to help proponents identify matters to be considered in the assessment of development adjacent to particular types of infrastructure development and providing for consultation with relevant public authorities about certain development during the assessment process or prior to development commencing.

The following waste and recycling facilities are covered under *Section 120 of the State Environmental Planning Policy (Infrastructure) 2007*:

- *"Resource recovery facility"* means a facility for the recovery of resources from waste, including such works or activities as separating and sorting, processing, or treating the waste, composting, temporary storage, transfer or sale of recovered resources, energy generation from waste gases and water treatment, but not including re-manufacture of material or goods or disposal of the material by landfill or incineration.
- *"Waste disposal facility"* means a facility for the disposal of waste by landfill, incineration, or other means, including associated works or activities such as recycling, resource recovery and other resource management activities, energy generation from waste gases, leachate management, odour control and the winning of extractive material to generate a void for disposal of waste or to cover waste after its disposal
- *"Waste or resource management facility"* means a waste or resource transfer station, a resource recovery facility, or a waste disposal facility.
- *"Waste or resource transfer station"* means a facility for the collection and transfer of waste material or resources, including the receipt, sorting, compacting, temporary storage and distribution of waste or resources and the loading or unloading of waste or resources onto or from road or rail transport.

Under Section 121 of the Policy, the following activities are permitted with consent:

- Development for waste or resource management facilities, other than development referred to below, may be carried out by any person with consent on land in a prescribed zone.
- Development for the purposes of a waste or resource transfer station may be carried out by any person with consent on land in a prescribed zone.

The policy defines 'prescribed zones' as being compatible with waste or resource recovery facilities:

- RU1 Primary Production
- RU2 Rural Landscape
- IN1 General Industrial
- IN3 Heavy Industrial
- SP1 Special Activities
- SP2 Infrastructure

The proposed development meets the definition of a “*Waste Disposal Facility*” under Section 120 of the *State Environmental Planning Policy (Infrastructure) 2007*. Given the proposed development is to occur in a prescribed IN1 General Industrial zoning, the development is consistent with Section 120 of the *State Environmental Planning Policy (Infrastructure) 2007*, being development, which is permissible subject to development consent.

3.4.4 State Environmental Planning Policy 55 – Remediation of Land

According to clause 7(1) of SEPP 55 - Remediation of Land (SEPP 55), a consent authority must not consent to the carrying out of any development on land unless:

- a) it has considered whether the land is contaminated, and
- b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and
- c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

Potential impacts would be identified and addressed in the EIS.

3.5 Local Environmental Planning Policies

3.5.1 Oberon Local Environment Plan

The applicable Local Environmental Planning Instrument is the *Oberon Local Environmental Plan 2013* (the LEP). The site is zoned IN1 General Industrial, Figure 5 below shows the zoning map.

While the LEP does not specifically state that ‘Waste Management Facilities or Work’s or ‘Waste Disposal Facilities’ are a permissible form of development in the General Industrial Zone, it states that any development that is not specifically prohibited or permitted without consent is permitted with consent. Waste Management Facilities and Waste Disposal Facilities are not specifically prohibited or permitted without consent.

Section 120 of the *State Environmental Planning Policy (Infrastructure) 2007* defines ‘Waste or Resource Management Facilities’ a form of development which is permissible subject to development consent within a prescribed zone. IN1 General Industrial is listed as a prescribed zone under this section, making the proposal permissible under the Infrastructure SEPP.

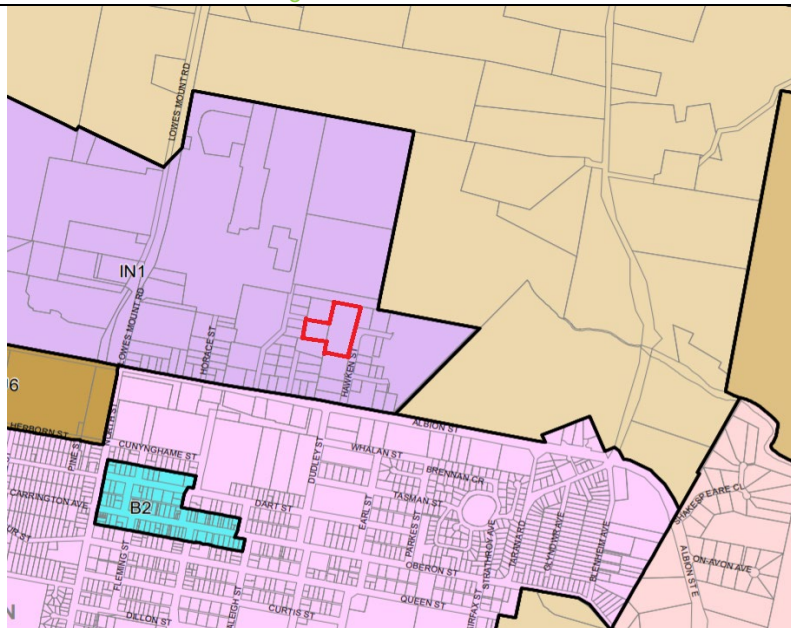


Figure 5 Excerpt of Oberon LEP zoning map showing site zoned as IN1- General Industrial

There are no specific building height of building limits or floor space ratio restrictions that apply to the site area.

The Oberon LEP sets out the following requirements for land located within an industrial buffer zone. The map for this zone is shown in Figure 3.1. The relevant clause (6.6) states:

- 1) *The objectives of this clause are as follows:*
 - a) *to protect the operational environment of industries operating within the Oberon Timber Complex,*
 - b) *to control development near the Oberon Timber Complex and waste disposal facilities to minimise land use conflict.*
- 2) *This clause applies to land identified as “Oberon Timber Complex” on the Industrial Buffer Map.*
- 3) *Before granting development consent to development on land to which this clause applies, the consent authority must consider the following:*
 - a) *the impact that any noise, odour, or other emissions associated with existing land uses may have on the development,*
 - b) *any proposed measures incorporated into the development that limit the impact of such noise and other emissions associated with the existing land use,*
- 4) *any opportunities to relocate the development outside the land to which this clause applies,*
- 5) *whether the development is likely to adversely affect the operational environment of any existing development on the land to which this clause applies.*

The proposed development is located within the industrial buffer area. The proposed digester facility is considered to be part of the “Oberon Timber Complex”, as the facility activities will link directly to the timber manufacturing supply chain by being connected to the Borg Panels site. In any case, suitable mitigation methods will be put in place to minimise the impact of the development on adjoining and nearby premises.

3.5.2 Oberon Development Control Plan

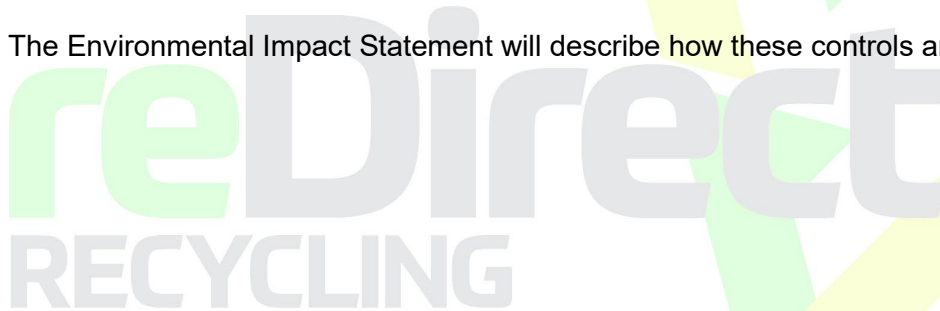
The purpose of the Oberon Development Control 2001 is:

- To provide detailed development controls within a single document which support the Local Environmental Plan.
- To ensure appropriate information is submitted with Development Applications.
- To ensure that development contributes to the quality of the natural and built environments.
- To encourage development that contributes to the quality of the public domain.
- To ensure future development responds positively to the qualities of the site and the character of the surrounding locality.
- To encourage the provision of development that is accessible and adaptable to meet the existing and future needs of all residents, including people with a disability.
- To ensure development is of a high design standard and energy efficient; and
- To ensure new development is consistent with the desired future character of the area.
-

The development is required to demonstrate full compliance with the following elements of the Oberon Development Control Plan 2001:

1. Part D: Commercial and Industrial Development.
2. Part F: Vehicle Circulation and Parking; and
3. Part H: Notification of Development Applications.

The Environmental Impact Statement will describe how these controls are complied with.

A large, semi-transparent watermark of the reDirect RECYCLING logo is overlaid on the page. It consists of the text "reDirect" in a large, bold, sans-serif font, with "RECYCLING" in a smaller, all-caps font below it. To the right of the text is a large, stylized recycling symbol composed of three arrows forming a triangle.

4 Summary of Environmental Impacts

4.1 Introduction

This chapter provides a preliminary overview of the potential areas of environmental impact that the Project may have.

These include:

- Hazard and risk screening
- Traffic
- Site interaction/ Cumulative Impacts
- Water Quality and Treatment
- Noise and Vibration
- Greenhouse gas

Additional environmental aspects considered in the assessment include.

- Waste Management
- Stakeholder Consultation

The assessment in the EIS would comprise these key parts, description of the existing environmental values and operations, proposed development and expected impacts; identification and quantification of impacts on these values and comparative assessment to existing impacts; and proposed mitigation measures to address increased impacts.

A site-specific Construction Environmental Management Plan (CEMP) will be prepared by Contractor prior to commencing works. Operational mitigation measures would also be developed.

The methods of assessment that would be used in undertaking technical studies to support the EIS are also presented.

4.2 Traffic and Transport

The project will include the delivery of 50,000 tonnes of food waste, 10,000 tonnes of industrial liquid waste and 5,000 tonnes of grease trap waste to site from all over NSW. During operation, there would be up to 10 heavy vehicles per day associated with delivery of wastes and export of digestates.

Heavy vehicle movements during operation are expected to be within daytime hours (7am to 7pm) seven days a week. During operation, it is expected that the project would generate up to 15 personal vehicles per day associated with staff arriving at the project site for their shift.

A traffic, transport and access impact assessment will be undertaken as part of the EIS. This assessment would be prepared with reference to the *Guide to Traffic Generating*

Development (RMS, 2002) and *Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments* (Austroads, 2020).

4.3 Air Quality and Odour

Operation has the potential to influence odour levels at the project site and the surrounding environment. While it is an enclosed connected system to avoid odour emissions, there is the potential for odours to be released during maintenance and there may be fugitive gas and odour emissions from the various processes involved with the biogas production process. The transportation of waste materials would have the potential to impact on odour at the project site and within the surrounding road network. These impacts are expected to be short term as the waste would be unloaded in the enclosed receival hall on arrival, furthermore odour control filtration devices will be installed within the facility.

Construction and operational air quality impacts require further assessment in the EIS. The EIS will include a detailed air quality and odour assessment which will consider both construction and operational impacts.

The odour assessment will consider guidance outlined in the *Technical framework: Assessment and management of odour from stationary sources in NSW* (DEC 2006).

4.4 Noise

The project would operate 24 hours a day 7 days a week and noise generated during operation is expected to be minimal and associated with traffic movements to the project site and the unloading of vehicles. Operational noise impacts are expected to be generally consistent with existing conditions within the Oberon Industrial area.

A noise and vibration impact assessment will be prepared for the EIS with regard to the *Noise Policy for Industry* (EPA, 2017), *Draft Construction Noise Guideline* (NSW EPA 2020), *State of NSW and Road Noise Policy* (DECCW, 2011)

4.5 Cumulative Impacts

The proposal could result in cumulative impacts either alone (through interactions between impacts resulting from this proposal) or in combination with other proposals and projects within the Oberon Timber Complex area. Although cumulative impacts can be either positive or negative, only potential negative cumulative impacts will be considered in the preparation of the EIS.

Consideration of these cumulative impacts can only be carried out once the identified environmental assessments are carried out. All cumulative impacts will be assessed with the EIS.

4.6 Water Quality and Treatment

The proposed digester has the potential to impact the water quality of surrounding water course and ground water. Stormwater will need to be managed to assure minimal impacts on surrounding lands and waters.

The EIS will include an assessment of potential impacts of the project on surface water and flooding. A qualitative assessment will be prepared based on previous flood studies, desktop assessments of available publicly flooding information, or data supplied by Council. The assessments will follow the requirements of the NSW Floodplain Development Manual.

A conceptual stormwater management plan will also be developed as part of the EIS for the proposed management of stormwater runoff at a concept level.

4.7 Hazard and Risk

An initial risk screening will be undertaken using criteria and guidance in DPIE's Applying SEPP 33 (DPIE 2011b), to confirm whether the project is classified as potentially hazardous, requiring a preliminary hazard analysis (PHA) and if so, the level of assessment required. The screening criteria relate to factors such as the types and quantities of hazardous materials to be stored on-site, how, and where they will be stored, and the anticipated frequency of road movements of this material to and from the site.

If a PHA is required, it will be conducted in accordance with SEPP 33 requirements, following relevant DPIE guidance. The PHA will identify potential hazards associated with the project and estimate the likelihood and consequences of them occurring, taking into account Innovating Energy's proposed controls. This information will then be reviewed to assess the level of off-site risk to people, property and the environment. Additional risk mitigation measures will be incorporated into the project design if required.

4.8 Other Environmental Issues

4.8.1 Stakeholder Consultation

As part of the EIS process, consultation with key stakeholders as well as relevant government and non-government agencies would be undertaken. Consultation with Council, the Department and other key agencies would be undertaken during the preparation of the EIS. Community consultation would be conducted during the exhibition stage of the EIS.

The consultation would include engagement with the local community, community representatives, landowners adjoining the project site as well as the local media.

Government stakeholders that would be consulted include:

- NSW Department of Planning, Industry and Environment
- NSW Department of Trade and Investment, Regional Infrastructure and Services;
- NSW Office of Water
- Oberon Council
- NSW Roads and Maritime Services
- Environmental Protection Authority.

It is likely that further relevant agencies and stakeholders would be identified during the preparation of the EIS and consultation would be undertaken accordingly.

4.8.2 Waste Management

Operation waste management is a key element of this project. The project would have the capacity to reduce the amount of organic waste that would ordinarily be directed to landfill. The residue, solid and liquid digestate would be used in the production of composts and used to fertilise pine plantations.

The EIS would include a high-level assessment of waste impacts that would assess the waste generated from the construction and operation of the project and provide waste management measures to mitigate potential environmental impacts.



5 Conclusion

This Preliminary Environmental Assessment Report (PEAR) has been prepared by Redirect and is submitted to the Department of Planning, Industry and the Environment.

Redirect Recycling (A Borg Company) proposed to construct and operate a biodigester that will accept putrescible organics, grease trap waste and industrial sludge from the Borg Panels site.

A biodigester is a system that biologically digests organic material, either anaerobic (without oxygen) or aerobically (with oxygen). Microbes and other bacteria break down organic materials in a biodigester. Most food, including fat and grease, can be processed in a biodigester. As the organics are broken down, methane gas is produced. This gas will be harnessed and will be used on the Borg Panels site, being burnt to create heat for dryers and other processes. The gas could also be directed into the existing gas infrastructure network for sale.

The digester will also create a nutrient rich liquid digestate that will be used in composting process undertaken by Bettergrow (A Borg company) or be used to fertilise Pine Plantations owned by Borg.

The proposed inputs for the digester;

- 50,000 tonnes of food waste diverted from landfill
- 10,000 tonnes of industrial sludge from Borg Panels site and industrial manufactures/food producers
- 5,000 tonnes of grease trap waste

The purpose of this document is to provide information to stakeholders in regard to the proposed development and likely impacts.

The key environmental issues that may arise from this Project are as follows:

- Hazards and risk;
- Water Quality and Stormwater;
- Traffic impact;
- Air quality; and
- Noise.

These risks will be fully identified and assessed as part of the EIS process. Where necessary mitigation measures will be identified, and impacts will be either avoided or reduced. Where residual impacts remain, these will be taken forward into a cumulative impact assessment.

The local community, as well as several government and non-government organisations will also be consulted as part of the EA process. Upon receipt of the SEARs, Redirect will prepare an EIS and submit the assessment to the Department as part of the development application process.