Statement of Environmental Effects

Proposed Development	**Biomass Processing Facility (Ancillary to existing Timber Mill))**
Property Address	**11 Markwell Road, BULAHDELAH NSW 2423**
LOT & DP	**Lot 322 DP 1309245**
Property Owner	**SA Relf & Sons Pty Ltd**

26 May 2025

REF. SP54/2024 | SWIFT PLANNING | ABN 172 060 762 29 | Contact: 0493 115 995 | peta@swiftplanning.com.au

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1. Summary

1.1. Overview

This proposal seeks development consent to establish a Biomass Processing Facility on land at 11 Markwell Road Bulahdelah. The proposed facility is ancillary to existing timber mill which has been continuously operating on the site for more than sixty (60) years. The proposed facility will be used to convert organic biomass waste, derived from the residue of timber mill operations, into a number of high-quality carbon-based products.

At the present time approximately 20,000 tonnes of residual timber waste (biomass) is transported off site annually to Vales Point Power station (a distance of 150km), where it is burnt. The proposed facility intends on using all of the biomass created by the mill on site to create 16,000 tonnes new sustainable clean energy products.

The proposal involves the construction of a large shed on the northern portion of the site and does not alter the current operations associated with the mill.

The proposal seeks a minor variation to the development standard for building height pursuant to clause 4.6 of the Great Lakes Local Environmental Plan 2014 (LEP). The stack associated with the charring machine and part of the roof of the proposed shed will exceed current building height provision.

1.2. Scope of Report

This Statement of Environmental Effects has been prepared to accompany the development application for the proposed development and provides information as required by the *Environmental Planning and Assessment Act 1979* (EP&A Act) to assist in the assessment of the proposal. This document addresses matters that are to be considered by the consent authority under the provisions of clause 4.15 of the EP&A Act.

1.3. Site History

The subject allotment, Lot 322 DP 1309245, was registered on the 10 September 2024. The allotment was the result of a boundary adjustment between Lot 81 DP 863232 and Lot 32 DP753150, which created Lot 321 and Lot 322.

Prior to the boundary adjustment, historical Lot 81 DP863232 comprised an established timber mill which has been operating continuously on the site for more than 60 years. Historical Lot 32 DP 753150 was a large rural allotment used for agriculture and comprising only stock holding yards.

The recent boundary adjustment was undertaken to provide additional land for the timber mill to accommodate a future detention basin and ancillary structures for the future expansion of mill operations. The boundary adjustment facilitated the transfer of approximately 2.8 hectares of land, located in the north-eastern corner of historical Lot 32 DP 753150, to Lot 81 DP863232 (now Lot 322).

Both Lot 321 and 322 remain substantially unchanged following the boundary adjustment. The timber mill is wholly contained within Lot 322 and continues to operate on the site.

1.4. Pre-Lodgement Advice

Advice was sought from the NSW Environment Protection Authority during the preparation of this proposal. A copy of an email from Ms Emma Coombs, Unit Head for Regional Operations North of the NSW Environment Protection Authority, is provided in **Appendix B**.

Ms Coomb's advice in relation to the proposed Biomass Processing Facility on the subject site, 11 Markwell Road Bulahdelah, confirms that the propose would not require a licence to operate. Ms Coombs confirms that provided the wood chip waste is to be processed **at the same site where it is generated**, and not received from offsite, the processing of the woodchip waste in the biocarbon facility **would not be a scheduled activity** pursuant to Schedule 1 of POEO Act and therefore not require a license.

Furthermore the processing of wood chip waste derived from the same site does not meet the definitions under either 'waste processing (non-thermal treatment)' or 'waste disposal (thermal treatment)'. Given that the proposal is not a Scheduled activity and does not require a licence, the *EPA's Resource Recovery framework* does not apply to the proposal.

As detailed below the proposed development is an ancillary function of the operational timber mill and will utilise only the woodchip waste generated by the mill. According to case law, something becomes waste if it is considered unwanted or surplus by the owner when it leaves the site. The wood chip waste generated by the mill will not be leaving the site and will instead be processed into products on the same site. Therefore this material does not become waste by the definitions held by the EPA's *Resource Recovery framework* and accepted under case law.

Advice has also been obtained by the proponent's barrister, Mr Matthew Fraser, with regards to the interpretation of the various environmental statutes and guidelines. This advice is provided in **Appendix B.**

The proponents also attended a pre-lodgement Development Assessment Panel meeting with Council on 10 December 2024. Advice received from this meeting has been considered and included in the proposal where relevant.

2. Site Description

2.1. Site Details & Description

Property Address:	11 Markwell Road BULAHDELAH NSW 2423
Land Description:	Lot 322 DP 1309245
Zoning:	RU2 Rural Landscape Zone, RU5 Village Zone
Site Area:	7.114 hectares
Owner:	SA Relf & Sons Pty Ltd

The subject land ("the site") comprises land described as Lot 322 DP 1309245, known as 11 Markwell Road Bulahdelah.

The land is an irregular shaped allotment with frontage to Markwell Road along its north-eastern boundary from which primary access to the site is obtained. The land has a second frontage to Prince Street, an unformed public road, along its southern boundary.

The site comprises two (2) land use zones under the provisions of the Great Lakes Local Environmental Plan 2014. The eastern portion of the site is zoned RU5 Village zone with the western portion being zoned RU2 Rural Landscape. The site has a total site area of approximately 7.114 hectares.

The site comprises an operational timber mill situated on the eastern village zoned portion of the land. The mill has been operating continuously on the site for more than sixty (60) years and consists of several large sheds, site offices, kilns and open storage areas.

The western rural zoned portion of the land is undeveloped and comprises an open forest consisting of regrowth eucalypt species with scattered trees and a modified understorey.

Large village zoned allotments contain existing dwellings adjoin the land to the south and east. A large rural zoned allotment adjoins the site to the north which contains an existing poultry farm. Land adjoining to the west is a large vacant rural allotment, comprising regrowth vegetation.

The site is classified as being bushfire prone land, however is not identified as being flood prone land. A locality map and land use zoning map depicting the site is provided in Figures 1 and 2 below.

Figure 1 –Site Locality Plan ***[source: Midcoast Council online mapping]***

Figure 2 – Site Landuse Zoning Map ***[source: Midcoast Council online mapping]***

2.2. Site Context and Surrounding Area

Bulahdelah is a small highway town located approximately 45 minutes' north of Raymond Terrace, the nearest regional centre. The allotment is located on the northern edge of the township, situated within the MidCoast Council Local Government Area.

The region around Bulahdelah is characterised by moderately to steeply sloping land associated with ridgelines that gently grade down to lower lying areas adjacent to the Myall River floodplain. The site is located on the eastern side of the Myall River and forms part of the floodplain lands.

The site is located at the interface of the village and rural zones which supports a variety of land uses including rural industry, agriculture, commercial, residential and a public cemetery. The site contains an existing timber mill, supported by several large industrial sheds and smaller office buildings.

The development site within the allotment is located adjacent to the northern property boundary in an area of the site currently used for the storage of logs, woodchip waste and vehicles. Plates 1 and 2 below depict the current site conditions of the development site.

Plate 1: Image depicting the existing site conditions of the proposed development site within 11 Markwell Road looking north-west over the site.

Plate 2: Image depicting the existing site conditions of the proposed development site within 11 Markwell Road looking west along the northern boundary from the Markwell Road frontage.

2.3. Topography and Soils Characteristics

The site comprises the northern aspect of the low hill with elevation ranging from 12-20m falling south to north across the site, with an average slope of 4%.

The predominant soils within the surrounding area are typically characterised by permeable and moderately well drained yellow podzolic soils 50-100mm, underlain by permeable red podzolic soils 50-100mm deep. Due to historical land use activities associated with the mill's operation involving heavy machinery, the clay soils on site have become hard packed and impervious.

The site is identified as containing class 5 Acid Sulfate Soils, pursuant to Acid Sulfate Soils maps contained within the Great Lakes Local Environmental Plan 2014 as shown in Figure 3 below.

Figure 3 – Acid Sulfate Soils Map ***[source: Midcoast Council online mapping]***

2.4. Vegetation

The eastern portion of the site contains no trees, however the western portion comprise an open eucalypt forest. Species include stringy bark, blood wood and smooth-barked apple. Based on historical photos, as well as the approximate age of the trees, these trees are predominantly regrowth following past clearing activities.

2.5. Contaminated Land

The site contains an established timber mill which has been operating on the land for more than sixty (60) years. Soil and water monitoring has been undertaken on the site over the past ten (10) years. In 2021 it was identified that tannins were leaching from uncovered woodchip waste piles and impacting on surface water. This matter was resolved by the construction of awnings extending from the green mill shed to enable woodchip waste piles to be stored undercover. This solution was reviewed by, and

acceptable to, Council. This is now standard practice and will continue to apply for the proposed development.

The site contains several water diversion drains around the perimeter of the timber mill area and two detention basins located in the northern and north-eastern part of the land. Additional voluntary water quality improvement works to further improve stormwater quality outcomes associated with the mill's operation are ongoing. In recent years the landholder has acquired additional land in the north-western portion of the site for the intended installation of a future detention basin, subject to Council approval.

2.6. Essential Services

The site has access to reticulated electricity supply from overhead transmission lines located within the site. Plate 3 below depicts an existing power pole and transmission lines located centrally within the northern part of the site.

The site is currently connected to Council's reticulated water and sewer infrastructure. Buildings ancillary to the existing mill contains a kitchen and bathroom amenities which are connected to Council's infrastructure.

The site is currently provisioned with a commercial waste collection service associated with the mill's operation.

2.7. Easements and Restrictions on Title

There are no formal easements or restrictions on title pertaining to drainage, sewer, water or electricity, however the existing transmission lines within the site are covered by an 'assumed easement' owing to their historical establishment prior to the *Electricity Supply Act 1995*.

The site is burdened by a right of carriageway (ROW) adjacent to the southern boundary. The ROW is identified as being 8 metres wide, covering the existing driveway access extending from the Markwell Road frontage. The ROW benefits the adjoining land to the south-east, Lot 80 DP863232.

Plate 3: Image depicting the existing power pole and overhead transmission lines within the northern part of the site within 11 Markwell Road

2.8. Site Access

The site gains primary access from Markwell Road, a sealed local road, via a formed driveway along its north-eastern boundary. Suitable sight distances >80m are available in both directions from this driveway.

A secondary access is available to the site from Prince Street along the site's southern boundary. Prince Street is an unsealed local road.

2.9. Hazards

2.9.1. Bushfire

The site is classified as being bushfire prone land on maps held by Council and the NSW Rural Fire Service. A map depicting the subject land within the bushfire prone area map is provided in Figure 4 below.

2.9.2. Flooding

The site is not identified as being flood prone land pursuant to the Great Lakes LEP 2014 Flood Planning map. A map depicting the site located outside the flood prone mapped area is provided in Figure 5 below.

2.10. Heritage

2.10.1. European Heritage

The site is not located within a heritage conservation area and there are no items of European heritage listed as being present on the land.

The site is located on land opposite a locally listed heritage item, I7 – Bulahdelah Cemetery, pursuant to the Great Lakes LEP 2014. A map showing the location of heritage item is provided in Figure 6 below.

2.10.2. Aboriginal Heritage

An AHIMS search for the site did not identify any Aboriginal sites or places on the land or within 200m of the land. **See Appendix H**. This particular site is not known to be an area of significance for local indigenous people.

Figure 4 – Bushfire Hazard Map ***[source: Midcoast Council online mapping]***

Figure 5 – Flood Planning Map ***[source: Midcoast Council online mapping]***

Figure 6 – Heritage Map showing location of locally significant heritage item , I7-Bulahdelah Cemetery [source: Midcoast Council online mapping]

3. Proposed Development

3.1. Proposal overview

The applicant is seeking consent to establish a Biomass Processing Facility at an existing timber mill site in Bulahdelah. The facility will turn organic biomass waste, derived from the timber mill's operations, into a number of high-quality carbon-based products.

Biocarbon Pty Ltd is an Australian company that has been developing innovative sustainable technologies. BioCarbon's Two Rivers Project will process the woodchip residue generated by SA Relf & Sons sawmill in Bulahdelah and convert it into a net zero biochar. The proposed facility will be the first of its kind in the world, using advanced renewable carbon manufacturing technology.

The products created by the proposed facility include biochar, known as GreenChar, and wood vinegar. These products are suitable for use in the steel industry as a direct replacement for coke (coal), and sustainable use in the agricultural industry. Biochar is expected to play a significant role in creating a sustainable, circular economy as the world seeks to significantly reduce global carbon emissions.

The proposed Biomass Processing Facility is an ancillary component of the existing timber mill and directly reliant on the continued operation of the mill for its supply of woodchip waste materials.

3.2. Biomass Processing

Biochar is a highly porous type of charcoal material made from biomass. Natural biochar occurs when vegetation is left to smoulder in layers on the forest floor following a forest fire. In this process biomass slowly bakes, locking in carbon.

New technology has been developed to replicate this process through a thermochemical conversion process known as pyrolysis. Pyrolysis is the scientific term for heating organic matter, such as biomass, without oxygen to produce biochar. Biomass pyrolysis is typically conducted at or above 500 °C, which provides sufficient heat to deconstruct the strong cellular biomass properties.

Figure 7 below describes the proposed biochar process which involves taking biomass, woodchip waste from the timber mill, and slowly baking it in a custom-built pyrolysis charring machine. The woodchip material requires no pre-processing and will be directly

transferred into the charring machine to undergo pyrolysis. BioCarbon's pyrolysis process will produce biochar, clean burning gas and a liquid product known as wood vinegar.

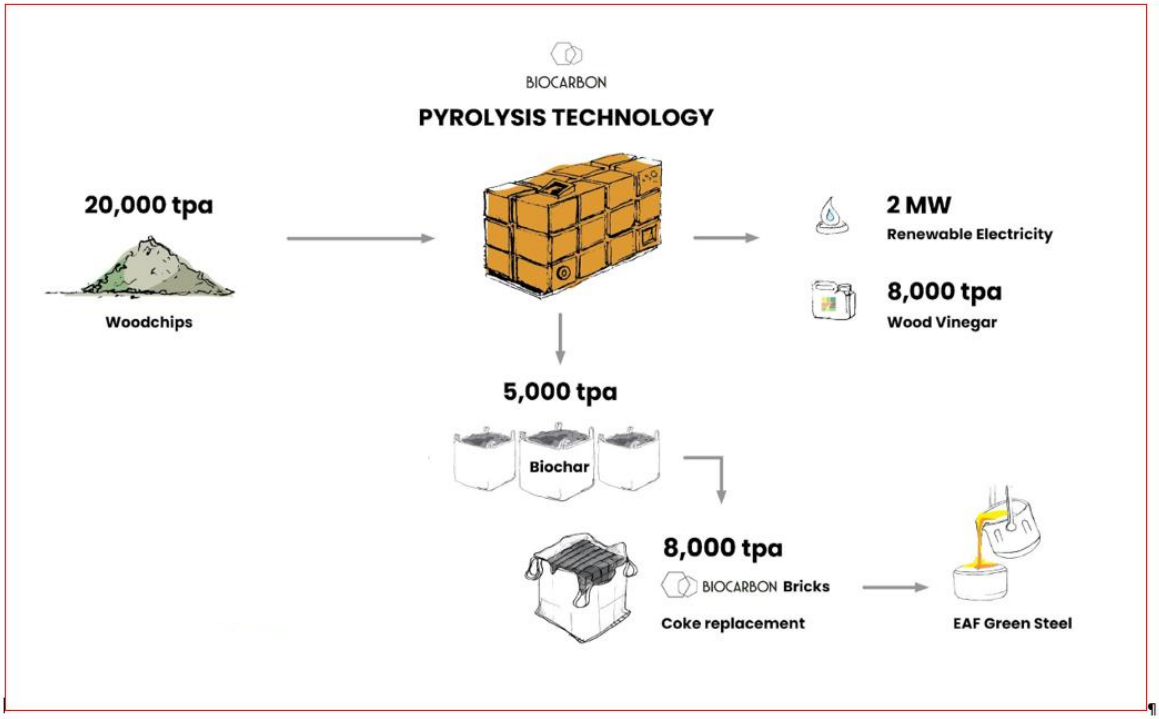

Figure 7 –Flowchart depicting the biomass processing of woodchip waste [source: Biocarbon Oty Ltd]

Plate 4 below depicts the biochar and wood vinegar products which will be produced by the facility. The wood vinegar will be sold as a bio stimulant for agriculture. The gas generated will be used for heating, redirected back to the charring machine. The pyrolysis process is an automated process and will run 24 hours per day. This process does not require any overnight supervision.

The biochar will be further processed with a natural additive to create GreenChar, a small black pellet as shown in Plate 5 below. The GreenChar will replace coke (derived from coal) in the Electric Arc Furnace (EAF) steel manufacturing industry. EAF steel manufacturing uses recycled metals to create steel in a process which is significantly more energy and resource efficient than conventional steel manufacturing. EAF steel produces fewer carbon emissions. EAF steel is an increasing market as global markets transition towards green steel products.

Biocarbon has formed commercial partnerships seeking to utilise these clean energy products. The use of Biocarbon's GreenChar in the EAF steel making process is a world first and is expected to become a leader in the industry.

Plate 4: Image depicting the biochar and wood vinegar products created from the pyrolysis process

Plate 5: Image depicting the biochar pellets, GreenChar, used as a direct replacement for coke in steel manufacturing

3.3. Shed and Plant

The proposed facility involves the construction of a purpose-built shed. The proposed shed will be located adjacent to the northern property boundary in an area of the site currently used for storing logs, woodchip waste and vehicles as depicted in Plates 1 and 2 above.

The proposed shed will utilise slab on ground construction for the foundations of the building and have a floor area of 1600m^2. An awning, comprising a roof area of 400m^2, extends from the southern side of the shed over the pyrolysis equipment area.

External materials will include a combination of masonry walls and Colorbond metal cladding with Trimdeck metal roofing.

The key elements of the proposal includes a:

- Green timber storage and drying area within the proposed shed for storing raw woodchip materials generated by the timber mill
- Pyrolysis equipment and processing area under awning outside the proposed shed for processing the woodchip waste
- GreenChar consolidation area within the proposed shed for storing biochar products after processing.
- Wood vinegar storage area within the proposed shed for storing wood vinegar products after processing
- Four (4) water tanks located on the northern side of the shed

The proposed development requires the relocation of existing power poles and overhead transmission lines currently located within the site.

3.4. Stormwater

Stormwater collected from the roof will be conveyed to four(4) x 20KL water tanks located along the northern elevation of the proposed shed. Some water will be reused within the building, with overflow from tanks being diverted away from structures and existing detention basins.

A Stormwater Assessment Report prepared by Whitehead & Associates Environmental Consultants Pty Ltd is provided in **Appendix C**. The report recommends that the overflow from the tanks be directed to the roadside drainage channel adjacent to Markwell Road.

The report also recommends a durable rock apron and energy dissipator be installed, connecting to an existing discharge swale from the main stormwater basin.

3.5. Operational Matters

3.5.1. Staffing, Operation Hours and amenities

The proposal is ancillary to the existing timber mill's operations located on the same land. The existing mill operates with approximately thirty-five (35) staff and has suitable staff facilities including bathroom amenities, meal rooms and office spaces available. The staff employed by the proposed Biomass Processing Facility will have access to these existing staff facilities.

The proposed Biomass Processing Facility will require the employment of four (4) staff to operate the facility over a 24 hour period. Staff will be responsible for handling woodchip waste, operating the charring machine and equipment, as well as packaging and storing products for distribution.

The facility is partially automated, allowing for the processing of materials to operate 7 days per week, 24 hours per day. However staff are only required on site during standard working hours, Monday – Saturday 8am-6pm.

3.5.2. Noise Management

The charring machine emits some low frequency noise, however it will be located 160m from the nearest dwelling. Existing buildings on the site will assist in attenuating noise from this machine.

An Acoustic Report prepared by Muller Acoustic Consulting Pty Ltd is provided in **Appendix D**. The report confirms that the noise emitted from the proposed facility will be well below operational criteria for all day, evening and night periods.

The report provides recommendations for attended noise monitoring to validate that the noise levels emitted are compliant once the facility is installed. The report also provides recommendations for noise mitigating measures during the construction stage of the facility.

3.5.3. Car parking and Truck Movements

As shown on the Plans in **Appendix A** the existing timber mill currently provides a total of forty-six (46) car parking spaces on-site for staff. Thirteen (13) of these spaces are located adjacent to the Markwell Street frontage, as shown in Plate 6 below. **Appendix G** provides a recent site survey which confirms that all parking spaces are located within the property boundary.

As discussed in Section 4.7.1.3 below, the existing timber mill has a surplus of on- site car parking spaces and can easily accommodate the additional parking demand generated by the proposed facility. No additional car parking is proposed.

The proposed development will significantly reduce the overall number of traffic movements associated with the current timber mill operations. Woodchip waste materials generated by the timber mill are currently transported off site to power stations in the Hunter Valley and Central Coast regions to be burnt. Its estimated that currently 526 pocket b-double trucks per year, an average of 10.1 trucks per week, enter and leave the site for the purpose of transporting approximately 20,000 tonnes woodchip waste materials off site.

Once the Biomass Processing Facility is in operation, these movements will cease completely. All woodchip waste material will remain on site for processing through the biomass facility.

The proposal will require truck movements to transport the biochar and wood vinegar products off site to market. It is conservatively estimated that the proposal will require 450 pocket b-double trucks per year, an average of 8.6 trucks per week to transport approximately 16,000 tonnes of biochar and wood vinegar products. Therefore the proposal will result in an overall net decrease in trucks to the site, conservatively estimated as 76 trucks annually, an average of 1.4 less trucks per week.

Plate 6: Image depicting the existing site conditions of the car parking area within the Markwell Road reserve adjacent to site entrance

4. Planning Controls & Environmental Assessment

4.1. Environmental Planning and Assessment (EP&A) Act 1979

The objects of the EP&A Act are:

(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,
(c) to promote the orderly and economic use and development of land,
(d) to promote the delivery and maintenance of affordable housing,
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,
(f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),
(g) to promote good design and amenity of the built environment,
(h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,
(i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,
(j) to provide increased opportunity for community participation in environmental planning and assessment.

The proposed development is consistent with the objects of the EP&A Act, and will promote good design that is undertaken with careful consideration of the site's constraints. The assessment below provides justification for the development against the relevant matters that must be taken into consideration by the determining authority.

4.2. Rural Fires Act 1997

The site is identified as being bushfire prone land, however the proposed development site contains no nearby vegetation which would present a significant bushfire hazard. The western portion of the site contains vegetation comprising on open eucalypt forest. Land

to the north and west is routinely managed by active grazing and farming practises (managed land). Land to the south comprises managed residential allotments.

Section 8.3.1 of the NSW Rural Fire Service's document "*Planning for Bush Fire Protection 2019" (PBP)* does not provide any specific bush fire performance requirements for class 5-8 buildings, as defined by the NCC. As such the proposed Biomass Processing Facility is not required to comply with AS3595 or the NASH Standard as a set of Deemed to Satisfy provisions, however compliance with the objectives pertaining to access, water supply and services, and emergency and evacuation planning need to be considered.

These objectives include:

- To provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation.
- To provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development.
- To provide adequate services of water for the protection of buildings during and after the passage of bush fire, and
- To locate gas and electricity so as not to contribute to the risk of fire to a building and provide for the storage of hazardous materials away from the hazards wherever possible.

The proposed development demonstrates compliance with the above objectives as follows:

i. Suitable access for emergency service personnel and occupants of the site is available to the proposed development. The site is accessed via driveways extending from Markwell Road and Prince Street, which connect to the local road network. The site currently contains suitably constructed driveways and parking areas for large trucks. The proposed building has been located and designed to ensure safe and efficient evacuation of the site.

ii. Suitable water resources and utilities are available to emergency personnel. The site has access to a reticulated water supply.

iii. No bottled or reticulated gas will be provisioned to the building. No hazardous materials will be used in the Biomass Processing Facility.

In considering the bushfire hazards in the vicinity, as well as the existing infrastructure and buildings on site, it is reasonable to determine that the proposed development presents a low bushfire risk to occupants of the building. The proposed development presents no significant increase in potential risk to occupants with regards to bushfire.

Furthermore, the proposed development can demonstrate compliance with the aims and objectives of PBP.

4.3. Protection of the Environment Operations Act 1997

In NSW the *Protection of the Environment Operations Act 1997 (the POEO Act)* provides a core list of activities that require a licence from the NSW Environmental Protection Authority in order to operate. These activities are listed in Schedule 1 of the *Protection of the Environment Operations (General) Regulation 2022*.

The proposed Biomass Processing Facility uses woodchip waste material derived from an existing timber mill operating on the same site. The proposal is not identified as a Scheduled Activity under Schedule 1 for which a licence is required.

4.4. Protection of the Environment Operations (Clean Air) Regulation 2022

The *Protection of the Environment Operations (Clean Air) Regulation 2022* came into force in December 2022 and is the key regulatory mechanism for reducing emissions of harmful air pollutants in NSW.

The regulation establishes criteria for air quality for both scheduled and non-scheduled activities, pursuant to Schedule 1 of the POEO Regulation (2022). The proposed Biomass Processing Facility, is a non-scheduled activity, and would be considered Group C under clause 50 of the regulations. Schedule 2 Part 3 of the regulations prescribe emissions criteria for air impurities for Group C. This includes criteria for solid particles (total <= 100mg/m3) and smoke (<=20% Opacity).

An Air Quality Assessment Report prepared by Zephyr Environmental is provided in **Appendix E**. This report was prepared in accordance with the NSW Environment Protection Authority's document titled *'Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2022)'.* The report includes modelling and confirms all predicted concentrations of modelled substances will be well below their respective individual air quality assessment criterion at all residential receptors.

4.5. Noise Policy for Industry (NSW Environmental Protection Authority (2017)

In 2017 the NSW EPA released the *Noise Policy for Industry (NPI)* which provides a process for establishing noise criteria for development proposals and licenses, enabling the EPA to regulate noise emissions from scheduled premises under the POEO Act.

The objectives of the NPI are to:

- provide noise criteria that can be used to assess the change in both short term and long-term noise levels.
- provide a clear and consistent framework for assessing environmental noise impacts from industrial premises and industrial development proposals.
- promote the use of best-practice noise mitigation measures that are feasible and reasonable where potential impacts have been identified, and
- support a process to guide the determination of achievable noise limits for planning approvals and/or licences, considering the matters that must be considered under the relevant legislation (such as the economic and social benefits and impacts of industrial development).

An Acoustic Report prepared by Muller Acoustic Consulting Pty Ltd is provided in **Appendix D**. This report was prepared in accordance with the NPI and confirms that the noise emitted from the proposed Biomass Processing Facility will be well below operational criteria for all day, evening and night periods.

4.6. State Environmental Planning Policies

4.6.1. State Environmental Planning Policy (Transport and Infrastructure) 2021

The aim of this SEPP is to facilitate the effective delivery of infrastructure in NSW. The SEPP applies to the proposed development as the site contains overhead transmission lines which must be considered in the assessment of the application.

Clause 2.48 of the SEPP makes provisions for the *Determination of development applications - other development*. This requires the consent authority to give written

notice to the electricity supply authority and invite comments about potential safety risks when applications for the following development are received:

(a) the penetration of ground within 2m of an underground electricity power line or an electricity distribution pole or within 10m of any part of an electricity tower,

(b) development carried out:

(i) within or immediately adjacent to an easement for electricity purposes (whether or not the electricity infrastructure exists), or

(ii) immediately adjacent to an electricity substation, or

(iii) within 5m of an exposed overhead electricity power line.

As shown in Figure 8 below overhead transmission lines are currently located within the footprint and area surrounding the proposed Biomass Processing Facility. These transmission lines are not currently contained within a formal electricity easement due to their existing prior to the *Electricity Supply Act 1995.*

The proposal requires the removal of three (3) power poles and reconfiguration of electrical infrastructure on the site. This includes removing an existing pole located adjacent to the north-western corner of the Green Mill shed and installing transmission line underground, connecting to the existing power pole located approximately 70m to the east.

The existing pole located within the development site (see Plate 3 above) will also be removed, and a new pole will be installed adjacent to the northern boundary. Figure 9 below depicts the proposed changes to the power poles and transmission lines.

The proposed development has been designed to ensure it will not interfere or impact the transmission lines within or adjacent to the site in the long-term.

Clause 2.121 of the SEPP makes provisions for *Development in or adjacent to road corridors and road reservations* pertaining to *Traffic Generating Development*. Timber Mills are not included in the list contained within Schedule 3 of the SEPP. Therefore, the development is not considered a traffic generating development for the purpose of this clause of the SEPP and does not require comment from the NSW Roads and Maritime Service.

Figure 8 – Site Survey showing location of transmission lines on the site [source: Zenith Surveying]

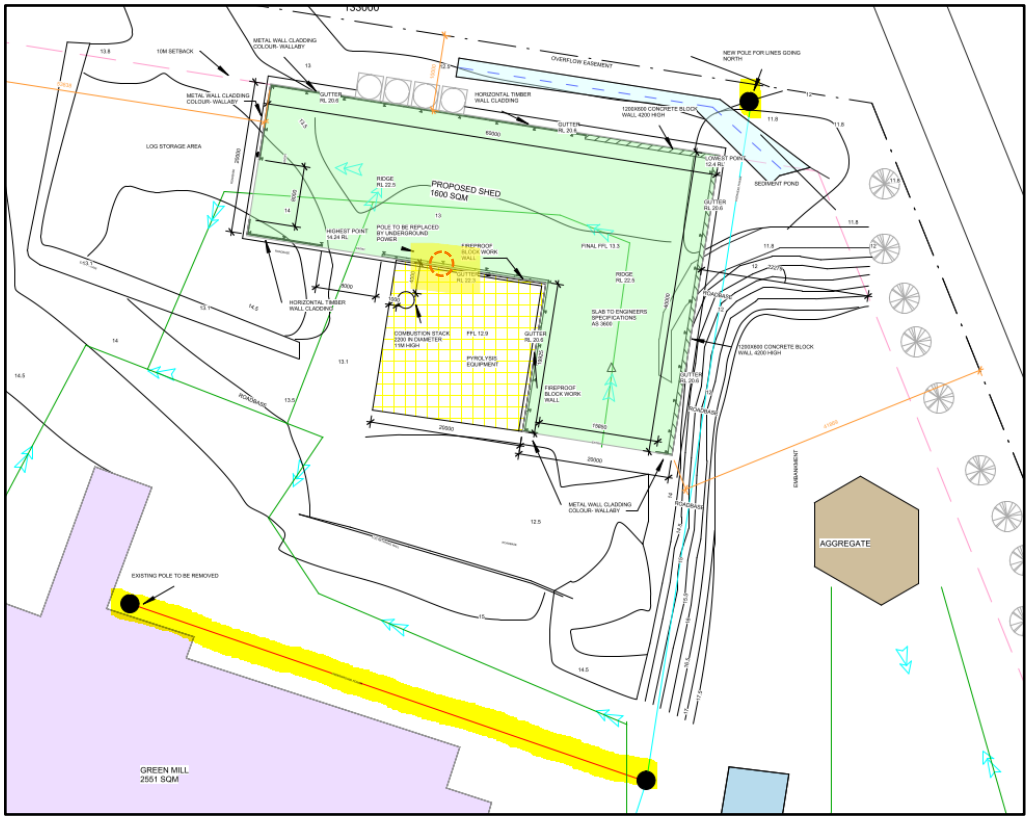

Figure 9 –Changes proposed to transmissions lines and poles within the site

4.6.2. State Environmental Planning Policy (Resilience and Hazards) 2021

The *State Environmental Planning Policy (Resilience and Hazards) 2021* is applicable to the proposal. The site is identified as being located within a "coastal environment area". A map depicting the site within the SEPP Coastal Management mapping area is provided in Figure 10 below.

Figure 10 – SEPP (Resilience & Hazards) 2021 Coastal Management Mapping [source: Midcoast Council online mapping]

The proposed development is for a Biomass Processing Facility, ancillary to an operating timber mill on the village zoned portion of the land. The proposed development is consistent with the provisions contained within the SEPP.

Detailed consideration of all relevant provisions of the SEPP is provided below:

Clause 2.10 Development on land within the coastal environment area	
Consideration	**Comment**
Development consent must not be granted to development on land that is within the coastal environment area unless the consent authority has considered whether the proposed development is likely to cause an adverse impact on the following:	
(a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment,	The proposal is unlikely to impact on ecological or hydrological values in the area.
(b) coastal environmental values and natural coastal processes,	The proposal is unlikely to impact coastal environmental values or coastal processes.
(c) the water quality of the marine estate (within the meaning of the *Marine Estate Management Act 2014*), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1,	The proposal will not impact on water quality in any marine estate.
(d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms,	The proposal will not have any adverse impacts on native vegetation, fauna or their habitats, headlands or rock platforms.
(e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,	The proposal will not have any adverse impacts any existing public space, or access to or along foreshores.
(f) Aboriginal cultural heritage, practices and places,	An AHIMs search has not identified any aboriginal cultural heritage places on the site or within 200m of the site.
(g) the use of the surf zone	The proposal will not impact on the use of any surf zone.
Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:	
(a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subclause (1), or	The proposed development is suitably sited to avoid adverse impacts on the coastal environment.
(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or	The proposal will not have a significant impact on the coastal environment.
(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.	The proposal will not have a significant impact on the coastal environment.

Division 5 General-Clause 2.12– Development not to increase risk of coastal hazards	
Consideration	**Comment**
Development consent must not be granted to development on land within the coastal zone unless the consent authority is satisfied that the proposed development is not likely to cause increased risk of coastal hazards on that land or other land.	The proposed development is located outside the coastal risk areas identified by Council's DCP and coastal hazard assessments.

4.7. Local Environmental Plan

4.7.1. Great Lakes Local Environmental Plan (LEP) 2014

The allotment is zoned RU2 Rural Landscape zone and RU5 Village zone pursuant to the provisions of the Great Lakes Local Environmental Plan 2014 (LEP). The proposed development demonstrates compatibility with the predominant land use in the surrounding area and is consistent with the relevant objectives of both zones.

Detailed consideration of the relevant provisions of the LEP is provided below:

Development standard	Comments
4.1 Minimum Subdivision Lot Size	N/A
4.3 Height of Buildings	Allowable: 8.5m Existing/Proposed: 10.66m **See Appendix F - Clause 4.6 Variation to Development Standard**
4.4 Floor Space Ratio	Allowable: 0.4: 1 Proposed: 0.1:1
4.6 Variation to Development Standards	The proposed development seeks a minor variation to the development standard for height of building. **See Appendix F - Clause 4.6 Variation to Development Standard**
5.10 Heritage Conservation	The proposed development is located within the vicinity of a Heritage Item listed in Schedule 5 of the LEP. The item is the Bulahdelah Cemetery and is of local historical significance. The proposed development is located on a site opposite the cemetery and contains an operational timber mill. The proposed development is well setback from the Markwell Road frontage will not have any adverse

	impacts on the heritage values associated with the cemetery.
5.21 Flood Planning	The site is not identified as being flood prone land.
7.1 Acid sulfate soils	The site is mapped as containing Class 5 potential Acid Sulfate Soils (ASS). The development will not result in the exposure of any ASS.
7.2 Earthworks	Earthworks are required for the proposed development to create a level building platform. The proposed works will not have a detrimental effect on soil stability or drainage patterns of the site.
7.5 Stormwater Management	A Stormwater Assessment Report prepared by Whitehead & Associates Environmental Consultants Pty Ltd is provided in **Appendix C**. This report makes recommendations with regards to OSD which have been included in the proposed design.
7.21 Essential services	The site is currently serviced by all essential services including reticulated sewer, water and electricity. The proposed development is capable of connecting all essential services.

4.8. Development Control Plan

4.8.1. Great Lakes Development Control Plan 2014

The Great Lakes Development Control Plan 2014 (DCP) makes detailed provisions which are applicable to the proposed development. The proposed development is consistent with the objectives of the DCP and is generally compliant with relevant provisions.

Detailed consideration of the relevant provisions of the DCP is provided below:

4.8.1.1. Section 4 - Environmental Considerations

DCP Section	Comments
4.1 Ecological Impacts	The proposal will not result in the removal of any trees and will not cause any significant adverse ecological impacts.
4.2 Flooding	The site is not identified as being flood prone and will not result in any increased risk of flooding for people or property.
4.3 Coastal Planning Areas	N/A -The site is not identified as being land within a coastal planning area.

4.4 Effluent Disposal	The proposed development is capable of connecting to Council's reticulate sewage system.
4.5 Poultry Farms	A poultry farm is located on adjoining land to the north. The proposed development will not impact on the adjoining farm.
4.6 Contaminated lands	The site contains an established timber mill which has been operating on the site for >60 years. Soil and water analysis of samples taken from the site in the past 10 years identifies contaminants commonly associated with an operational timber mill on the site. The proposed development involves the construction of a large shed on the northern portion of the site. The proposed shed will be used for industrial purposes, associated with the processing of woodchip waste materials to create biochar products.
4.7 Bushfire	The site is identified as being prone to bushfire, however the proposed development site within the lot contains no nearby vegetation which would present a significant bushfire hazard. The proposed development can demonstrate compliance with the aims and objectives of PBP.

4.8.1.2. Section 7 – Industrial Development

DCP Section	Comments
7.2 Building Setbacks	
a) A building is to be setback a minimum of 7.5m from the primary street frontage.	The proposed development is setback 21m from the Markwell Road frontage.
b) Single storey elements, with a maximum height of 4m may be permitted with a 4.5m setback from the primary street frontage. Where a single storey element is setback 4.5m from the primary street frontage, the remainder of the area between the building and the front boundary is to be landscaped (other than an access driveway).	N/A -
c) Car parking, access driveway's and water sensitive design elements are permitted in the front setback area,	Existing car parking and landscaping are located within the front setback. The setback of the

provided adequate landscape screening is provided to the street and sightlines are maintained for pedestrians and vehicle movement. A larger front building setback may be necessary to provide a suitable space for car parking, stormwater systems etc.	proposed building is considered appropriate given the context and scale of the development.
d) Where a site has frontage to two streets, a building is to be setback a minimum of 4.5m from the secondary street frontage and the areas between the building and the street boundary are to be adequately landscaped. Water sensitive design elements are permitted in this are	NA – The site has access to Prince Street, however this frontage is not characterised as a secondary frontage.
7.2 Appearance and General Amenity	
a) Elevations of buildings which are visible from a public road, public reserve, adjacent to or adjoining a residential area are to be constructed of: • Brick, masonry, pre-coloured profiled metal cladding; or • Appropriately finished concrete panel; or • Other light-weight cladding that is appropriately finished; or • A combination of these materials.	The proposed development will be constructed using a combination of masonry and colorbond metal external walls, with metal roof sheeting. The external materials also include horizontal timber cladding to provide visual interest and contrast. The materials are in keeping with the built form of the surrounding area and will not impact on the visual amenity of the area.
b) Building entries should be prominently located, clearly demarcated and positioned to maximise casual surveillance.	The shed is well setback from the street frontage. Entries to the building will predominantly be obscured from the street frontage, however will be clearly visible from within the site. Building entries open onto internal driveways.
c) External materials and colours are to be sympathetic to the existing streetscape. Highly reflective materials are not acceptable.	External materials include masonry walls and colorbond metal roof sheeting in earthtone neutral colours (colorbond wallaby). The proposed materials are consistent with the surrounding area and will not adversely impact upon the visual amenity of the landscape.
d) All driveways, car parking and manoeuvring areas shall be bitumen sealed or concrete paved.	All internal driveways within the site are unsealed. Given the context and scale of the site, the existing driveways connecting to the proposed shed will remain unsealed.

e) Where a single building is to be divided to provide a number of industrial factory units for separate occupation, the following additional requirements will apply. • the maximum number of factory units permissible is one unit for every 400m2 of site area; • each factory unit should have a minimum floor area of 100m2; • internal walls separating the various factory units are to be of brick or concrete masonry construction; • each unit is to have its own male and female toilet.	N/A - The proposed development is not proposed to be used for separate industry. The shed will be used in association with the proposed Biomass Processing Facility.
7.4 Landscaping	
All areas within setbacks which adjoin public areas are to be landscaped, except for approved access driveways and car parking spaces.	The site contains an operational timber mill. Landscaping is established adjacent to an existing building within the front setback to the north-eastern boundary. Roadside vegetation is located adjacent to the Markwell Road frontage. No additional landscaping is proposed.
7.5 Open Storage Areas	
Open work and storage areas are to be located behind the primary building line and screened from public view by the use of landscaping and/or screen fencing	The existing timber mill includes open storage areas throughout the site. No new open storage areas will be located within the front setback.
The storage or display of materials or goods will only be permitted forward of the primary building line where it is an integral component of the proposed use and Council is satisfied that the outcome will not detract from the visual amenity of the locality.	N/A – There are no storage or display areas associated with the proposal.
7.6 Security and Fencing	
1) All fencing must be located behind the building line. 2) Security fencing may be permitted forward of the building line where it is constructed as an open style fence with a high-quality finish such hollow-section steel vertical pickets, pre-finished metal palisade or black	An open style security fence currently exits around the perimeter of the timber mill site. No new fencing is proposed as part of this development.

chainmesh and where screen landscaping is provided in the front setback. Solid fencing, such as masonry, timber paling or colorbond is not permitted forward of the building line	

4.8.1.3. Section 10 – Car Parking, Access, Alternative and Active Transport

DCP Section	Comments
10.3.1.3 Car Parking Rates Timber Mills are not listed within the GLDCP or RMS's guide to Traffic Generating Developments. Warehouses = 1 space per 300m2, however assumes there are staff associated with these types of developments.	The characteristics of timber mill operations share similarities to a warehouse, given that much of the space within buildings associated with a mill is used for storage of raw materials and products. The proposed development is also predominately used for storage and best characterised as a warehouse for the purpose of determining car parking rates. The proposed development requires only four (4) staff to operate the facility. As such the proposal will not generate significant demand for onsite parking. The existing timber mill currently has forty-six (46) off street car parking spaces. The GFA of all existing buildings on the site associated with the timber mill is approximately 5583m$^{2.}$. Using the rate for 'warehouses' of 1 space per 300m^2 of GFA from the RMS's "Guide to Traffic Generating Development's", the current parking demand for the timber mill is calculated as being 18.6 (rounded to 19) off street parking spaces. The proposed development has a GFA of 1600m^2. Applying the same rate for 'warehouses' of 1 space per 300m^2 of GFA, the parking demand for the Biomass Processing Facility is calculated as being 5.3 (rounded to 6) off street parking spaces.

	A total of 25 off street parking spaces is therefore required to enable the existing and proposed development on the site to comply with RMS's guide for off street parking. The existing parking arrangements are therefore considered suitable to accommodate the proposed development. No additional parking spaces are proposed.
10.3.2.3 Car Space Design Controls (Industrial Controls) 1) Car parking that is located in front of the building is to be screened from the street by a landscaped garden bed with a minimum width of 2.5m. 2) All car parking spaces are to be adequately sealed, drained and line-marked. 3) Vehicles (especially trucks) should not be reversed onto any site from a public street nor onto a public street	The existing off street car parking spaces within the site are well setback from the street frontage. Parking spaces are adequately sealed and drained. All car spaces are in accordance with AS 2890.1 – Offstreet car parking. The existing driveways on the site have been designed to ensure all vehicles enter and leave the site in a forward direction.
10.3.3.3 Vehicle access and driveways (Industrial Controls) 1) Developments which generate truck movements are to be designed to facilitate the movement, loading and unloading of those vehicles wholly within the site. 2) Loading docks must be located behind the primary building line. 3) Access diveways, car parking and loading docks are to be designed and constructed in accordance with the current version of Australian Standard AS 2890.1 – Offstreet car parking and Australian Standard 2890.2 – Offstreet commercial vehicle facilities. 4) Access driveways are to be of a width that is consistent with the nature and needs of the development to avoid the obstruction of public roads by vehicles waiting for access to a site and which enables vehicles to be able to enter and leave the site in a forward direction.	The existing driveway has been designed to facilitate truck movements, loading and unloading onsite in accordance with the AS 2890.1 – Offstreet car parking and AS 2890.2 – Offstreet commercial vehicle facilities No new driveways are proposed. All loading docks associated with the new building are located behind the building line. The existing driveways are a suitable width and allow vehicles to enter and leave in a forward direction. The development will not result in the obstruction of public roads. All driveways and internal manoeuvring spaces will remain unsealed. The existing driveways are suitably setback from side boundaries and provide adequate landscaping.

5) Access driveways and car parking areas are to be constructed with a suitable impervious finish such as concrete or bitumen. 6) Driveways should be designed to avoid the obstruction of public roads by vehicles waiting for access to a site. 7) Driveways should not be closer than 1.5m to the side boundary at the street alignment (to allow for landscaping) and not closer than 6m to an intersecting street;	

4.8.1.4. Section 11 – Water Sensitive Urban Design

DCP Section	Comments
All development must meet the relevant water quality targets identified for that type of development as set out in the applicable Stormwater Quality Targets table within this DCP, except in the instance of a Council approved Stormwater Strategy or Drainage Plan which will specify the targets to be met for identified parcels of land. 11.4.4 Other Development Lots >2500m^2	Pursuant to Section 11.2 of the DCP, any alterations and additions for any other type of development (as outlined in section 11.4.4) are exempt to WSD requirements where **"an increase to the overall impervious surface is less than 10%".** The existing site contains an operational timber mill comprising several buildings. The site also contains compacted clay driveway aisles and road-base storage areas. More than 90% of the site's pre-development conditions is considered 'impervious', consistent with definitions described in MCC DCP (2014). These areas generate stormwater run-off volumes during rain events with negligible to very low infiltration. Plates 7 and 8 below depict images of surface water flows on the site during a rain event in January 2025. These images demonstrate the impervious nature of the site due to the heavily compacted clay soils and road base. The proposed development will therefore result in no nett increase in impervious surface area on the site. A Stormwater Assessment Report prepared by Whitehead & Associates Environmental Consultants Pty Ltd is provided in **Appendix C.** This report makes recommendations with regards to OSD which have been included in the proposed design.

Plate 7: Image depicting the surface flow of water due to existing impervious site conditions, taken 16 January 2025 by C Sheppeard

Plate 8: Image depicting the surface flow of water due to existing impervious site conditions, taken 16 January 2025 by C Sheppeard

4.9. Likely Impacts

The proposal seeks to establish a Biomass Processing Facility, ancillary to an existing timber mill. The existing mill has been in continuous operation on the site for more than sixty (60) years. The proposal involves the construction of a large shed for the storage of woodchip waste and products created by the new facility.

The proposed shed will be located in an existing cleared area of the allotment, currently used for storing woodchip waste and parking vehicles.

The site is free from significant land constraints, and the proposal is considered a suitable form of development given the context, setting and scale of the site. The proposed development will result in a nett decrease in traffic movements due to the cessation of transportation of woodchip waste offsite once the processing facility is operating.

The proposed development will not result in any significant social, environmental and economic impacts.

4.9.1. Environmental Impact

The proposed development has been designed to minimise environmental disturbance by adopting effective safeguards to protect the surrounding landscape.

Earthworks are required for the proposed development to create a level building platform. Suitable sediment and erosion control measures will be installed prior to construction to minimise the movement of soil off site during the construction stage. The site contains class 5 potential acid sulfate soils, however excavation works associated with the proposed development are unlikely to result in the exposure of acid soils.

The proposed development will be located within an existing cleared area of the site and will avoid the need for any tree removal. The site does not contain any threatened species or endangered ecological communities.

Stormwater from the roof of the proposed building will be captured and stored within water tanks to ensure the controlled dispersal of water, minimizing the potential for localised flooding.

The proposal is unlikely to have a significant impact on nearby waterways, threatened species or endangered ecological communities in the local area.

4.9.2. Traffic & Noise Impact

Suitable access to the proposed development is available from an existing driveway extending from the Markwell Road frontage. The site is located on a straight section of the road where adequate site distances >80m are available from the existing driveway in both directions.

The proposed development will not generate any additional traffic movements and will result in a net decrease in the overall truck movements relating to the site.

Sufficient off-street car parking spaces are currently provided onsite to accommodate the additional demand generated by the proposed development.

The proposed development will not contribute to any significant long term noise generating aspects to the surrounding area, with the exception of temporary noise during construction. Noise mitigation measures during construction recommended in the Acoustic Report in **Appendix D** will be implemented to ensure minimal noise disturbance to nearby residential receivers.

5. Site Suitability & Public Interest

The site is considered suitable to accommodate the proposed development. The proposed Biomass Processing Facility will retain all existing connections to all essential services and will not impact upon the environment or amenity of adjoining lands.

The proposed development is consistent with the objectives of all relevant legislative planning controls and is considered to be within the public interest.

6. Conclusion

Development consent is sought for the construction of a Biomass Processing Facility, ancillary to an established operating timber mill in Bulahdelah. The proposed facility will utilise woodchip waste from the mill, to create new sustainable products.

The proposed development is permissible with consent and is predominately compliant with the objectives and relevant provisions of the Great Lakes LEP 2014 and Great Lakes DCP 2014.

A request to vary a development standard is made pursuant to clause 4.6 in relation to building height. The proposed building height is considered reasonable given the context and setting of the development and will have no detrimental impact to the amenity of surrounding landscape.

The proposal is considered compatible with the existing land use and character of the local area.

As demonstrated by this document, the proposed development is unlikely to have any significant environmental impacts with regard to the matters for consideration under Section 4.15 of the *Environmental Planning and Assessment Act 1979*.

Appendix A Plans of Proposed Biomass Processing Facility

See attached

Appendix B Advice from NSW EPA and Barrister Mathew Fraser

See attached

Appendix C Stormwater Assessment Report

See attached

Appendix D Acoustic Report

See attached

Appendix E Air Quality Report

See attached

Appendix F Clause 4.6 Request to vary development standard

See attached

Appendix G Site Survey

See attached

Appendix H AHIMS Search Results

See attached