# Modification Report

**PROPOSED MODIFICATION APPLICATION (MOD 34) TO MP06_0228 SHOALHAVEN STARCHES EXPANSION PROJECT**

**PROPOSED EXTENSION OF EMERGENCY GRAIN STORAGE APPROVAL TIME LIMIT AND CONSTRUCTION OF EMERGENCY GRAIN STORAGE SHED**

Shoalhaven Starches
Bolong Road, Bomaderry

Prepared for
Shoalhaven Starches Pty Ltd
April 2026

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# Modification Report

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| Project | Application to Modify Project Approval MP06_0228, Shoalhaven Starches Expansion Project (Modification Application No. 34 (Mod 34) - Proposed extension of emergency grain storage approval time limit and construction of emergency grain storage shed. |
| Address | Bolong Road, Bomaderry |
| Our ref | 132129 |
| Prepared by | Emma Mytka – Senior Town Planner<br>and Stephen Richardson – Principal Town Planner |
| Draft | 7 April 2026 |
| Final | 14 April 2026 |
| Amended Final | 3 June 2026 |

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# 1.0 EXECUTIVE SUMMARY

Shoalhaven Starches is a member of the Manildra Group of companies. The Manildra Group is a wholly Australian owned business and the largest processor of wheat in Australia. It manufactures a wide range of wheat-based products for food and industrial markets both locally and internationally.

The Shoalhaven Starches factory located on Bolong Road, Bomaderry produces a range of products for the food, beverage, confectionary, paper and motor transport industries including starch, gluten, glucose and ethanol.

Project Approval MP06_0228 was granted by the Minister for Planning on the 28 January 2009 for the Shoalhaven Starches Expansion Project. This approval also encapsulated previous approvals for the site into one overall approval for the site (at that time).

The Shoalhaven Starches Expansion Project sought to increase ethanol production at the Bomaderry plant in a staged manner from 126 million litres per year to 300 million litres per year. To accomplish the increase in ethanol production, this project required a series of plant upgrades and increase in throughput of raw materials, principally flour and grain. Following the Minister's determination Shoalhaven Starches have been implementing and commissioning works in accordance with this Project Approval.

On the 20 June 2023 the delegate for the Minister for Planning & Public Spaces approved Modification 28 which granted approval for Shoalhaven Starches to establish a temporary emergency grain storage bunker on the Shoalhaven Staches Environmental Farm adjacent to the existing Wastewater Storage Dam 6. This approval was subject to condition 6B which limited the operation of this grain storage bunker for a period of 36 months from the 20 June 2023. This period will expire on the 20 June 2026.

As the Department is aware, Shoalhaven Starches have been preparing a separate Modification Application (Mod 26) that will involve the construction of additional grain storage and handling facilities at the former Dairy Farmers site that is now owned by the Manildra Group of Companies. It was anticipated at the time of Mod 28 that this Modification Project would take at least 2 years to be approved, constructed and then commissioned. These Mod 26 works would therefore be unable to address the more imminent concern that forecast weather patterns will potentially have to the Shoalhaven Starches operations before the Mod 26 project was able to be commissioned.

Whilst the preparation of Mod 26 has progressed, and as the Department is aware the scope of the project has changed over time, due to economic circumstances, the Company will be unable to construct the additional grain storage envisaged under Mod 26 in the short to medium-term period.

Further it should be noted that under their Project Approval the Shoalhaven Starches operations are able to produce 1,112,800 tonnes of flour per annum. About 80% of flour yield comes from grain, which therefore equates to 1, 391,000 tonnes per annum, or 3, 810 tonnes per day of grain. The additional grain storage (three silos) envisaged by Mod 26 will provide additional grain storage of approximately 3,600 tonnes per day.

At present the Shoalhaven Starches operations are able to store 3,600 tonnes of grain or a reserve of less than 1 day (0.9 days). Under Mod 26 this will increase to 30,600 tonnes or reserve equivalent to 8 days.

However, the above assumes that each of the grain silos will be full at all times. In reality, as grain is processed the grain storage in the silos in reduced. If a disruption to the rail system occurs when grain storage in these new silos is depleted, then this will result in potential production stoppages at the plant.

The emergency storage of grain as approved by Mod 28 is therefore still required, however, to minimise the effects from the interruption of grain supply to the Shoalhaven Starches site, and as detailed in the Mod 28 application. Given these circumstances Shoalhaven Starches wish to extend the life of the temporary storage of grain on this site and retain the use of this part of their site for emergency grain storage without any time limit. They therefore seek the deletion of condition 6B.

In addition, they also wish to construct a shed to be sited within the approved grain storage bunker area. The proposed shed will provide several advantages over the grain bunker including:

- The shed will provide a reduced risk of moisture ingress which will extend the life of the stored grain.
- The shed will reduce the potential for vermin and birds to gain access to the grain.
- The shed will provide cost efficiencies as it will be cheaper to operate and maintain.
- The shed will also be easier to operate when compared to the current grain bunker.

This Modification Report has been prepared to address the above Modification Proposal.

The Shoalhaven Starches Expansion Project was a 'transitional Part 3A Project' for the purposes of Schedule 6A of the Environmental Planning & Assessment Act 1979 (EP & A Act). As of the 1 March 2018 the transitional arrangements for former Part 3A projects were discontinued. The discontinuation of the transitional arrangements for Part 3A projects and concept plans meant that modifications are assessed through the State Significant Development (SSD) pathway. As such this Modification Application is made pursuant to Section 4.55(1A) of the EP & A Act.

This Modification Report is supported by the following expert consideration:

- Noise Assessment prepared by GHD concludes that based on the proposed modification, it is anticipated to have no contribution to the overall noise levels from the site as the predicted noise levels are below the design noise goals.

  A construction noise assessment was undertaken to determine the potential for increase in noise levels at sensitive receivers. Three construction scenarios were modelled to predict noise levels at representative sensitive receivers. The predicted noise levels indicate no exceedances of the noise management levels for all the construction activities at the sensitive receivers. The predicted noise levels are below the noise

management levels at all receivers, and as such no construction noise impacts are anticipated. Nonetheless, recommendations for mitigation measures are provided in **Attachment 1.**

Noise sources associated with the operation of the proposed modification were identified and modelled in the site-wide noise model developed by GHD as part of the noise pollution reduction program. Operational noise associated with formalising the temporary grain storage as permanent storage is not anticipated to change, Noise mitigation and management measures detailed in the operational noise management plan prepared for the temporary grain storage (MOD28) should continue to be implemented once the grain storage is permanent. The proposed modification is anticipated to have no contribution to the overall noise levels from the site as the predicted noise levels are below the design noise goals.

- Air Quality Assessment prepared by GHD concludes that b*ased on the qualitative, risk-based assessment undertaken in accordance with the IAQM (2024) guidance, MOD34 is not expected to result in significant adverse air quality impacts. During construction, a medium risk of dust impacts has been identified, which is consistent with similar construction activities and can be effectively managed through the implementation of standard and site-specific mitigation measures. For track-out and operational activities, the risk of dust impacts is assessed as low.*

*Operational dust emissions associated with MOD34 would occur intermittently and for short durations only, primarily during active grain transfer activities associated with contingency grain supply events. For the purposes of this assessment, operational impacts have been conservatively assessed based on the higher-frequency operational scenario anticipated prior to the commissioning of MOD26.*

*Overall, MOD34 is considered a minor modification with respect to emissions to air. The proposed grain storage shed represents an improvement over the existing MOD28 open-air bunker by reducing the potential for wind-blown dust generation and off-site dispersion. Any use of the shed following the commissioning of MOD26 would be limited to infrequent emergency events only and would not result in material ongoing air quality impacts. Refer to the full report in* **Attachment 2***.*

A Site Hazard Analysis was prepared by Pinnacle Risk Management that does not include any recommendations for this Modification Proposal. Refer to the full report in **Attachment 3**.

To assess the potential impact of stormwater runoff, the Modification is supported by an Integrated Water Cycle Management Strategy (IWCMS) that was prepared to address the provisions of Chapter G2 of the Shoalhaven Development Control Plan and is provided at **Appendix 7.** The IWCMS concluded the proposed works were unlikely to generate stormwater pollutants within the site.

## 2.0 INTRODUCTION

Project Approval MP06_0228 was granted by the Minister for Planning on the 28 January 2009 for the Shoalhaven Starches Expansion Project. This approval also encapsulated previous approvals for the site into one overall approval for the site (at that time).

The Shoalhaven Starches Expansion Project sought to increase ethanol production at the Bomaderry plant in a staged manner from 126 million litres per year to 300 million litres per year. To accomplish the increase in ethanol production, this project required a series of plant upgrades and increase in throughput of raw materials, principally flour and grain.

Following the Minister's determination, Shoalhaven Starches have been implementing and commissioning works in accordance with this approval.

On the 20 June 2023 the delegate for the Minister for Planning & Public Spaces approved Modification 28 which granted approval for Shoalhaven Starches to establish a temporary emergency grain storage bunker on the Shoalhaven Staches Environmental Farm adjacent to the existing Wastewater Storage Dam 6. This approval was subject to condition 6B which limited the operation of this grain storage bunker for a period of 36 months from 20 June 2023, with this period expiring on the 20 June 2026.

As the Department is aware, Shoalhaven Starches have been preparing a separate Modification Application (Mod 26) that will involve the construction of additional grain storage and handling facilities at the former Dairy Farmers site that is now owned by the Manildra Group of Companies. It was anticipated at the time of Mod 28 that this Modification Project would take at least 2 years to be approved, constructed and then commissioned. These Mod 26 works would therefore be unable to address the more imminent concern that forecast weather patterns will potentially have to the Shoalhaven Starches operations before the Mod 26 project was able to be commissioned.

Mod 26 has been submitted to the Department for their initial review prior to lodgement, and as the Department is aware the scope of the project has changed over time, due to economic circumstances, the Company will be unable to construct the additional grain storage envisaged under Mod 26 in the short to medium-term period.

Further it should be noted that under their Project Approval the Shoalhaven Starches operations are able to produce 1,112,800 tonnes of flour per annum. About 80% of flour yield comes from grain, which therefore equates to 1, 391,000 tonnes per annum, or 3, 810 tonnes per day of grain. The additional grain storage (three silos) envisaged by Mod 26 will provide additional grain storage of approximately 3,600 tonnes per day.

At present the Shoalhaven Starches operations are able to store 3,600 tonnes of grain or a reserve of less than 1 day (0.9 days). Under Mod 26 this will increase to 30,600 tonnes or reserve equivalent to 8 days.

However, the above assumes that each of the grain silos will be full at all times. In reality as grain is processed the grain storage in the silos in reduced. If a disruption to the rail system occurs when grain storage in these new silos is depleted, then this will result in potential production stoppages at the plant.

The emergency storage of grain as approved by Mod 28 is therefore still required, to minimise the effects from the interruption of grain supply to the Shoalhaven Starches site. Given these circumstances Shoalhaven Starches wish to extend the life of the temporary storage of grain on this site past the initial expiry of 20 June 2026 and to retain the use of this part of their site for emergency grain storage without any time limit.

In addition, they also wish to construct a shed to be sited within the approved grain storage bunker area. The proposed shed will provide several advantages over the grain bunker including:

- The shed will provide a reduced risk of moisture ingress which will extend the life of the stored grain.
- The shed will reduce the potential for vermin and birds to gain access to the grain.
- The shed will provide cost efficiencies as it will be cheaper to operate and maintain.
- The shed will also be easier to operate when compared to the current grain bunker.

The modification proposal will not result in any increases in production rates from the site, nor will it involve any changes in level of impacts arising from the approved development.

The Modification Application is made pursuant to Section 4.55(1A) of the EP & A Act. This Modification Report has been prepared in support of the Modification Application.

The Modification Application is supported by plans supplied by Shoalhaven Starches.

This Modification Application is supported by the following expert assessments:

- A Noise Impact Assessment by GHD Pty Ltd (**Attachment 1**)
- An Air Quality Assessment prepared by GHD Pty Ltd (**Attachment 2**)
- A Site Hazard Analysis prepared by Pinnacle Risk Management (**Attachment 3**)
- Integrated Water Cycle Management Strategy (**Attachment 7)**

It is considered that the components associated with this Modification Application will not result in any significant adverse environmental impacts. Accordingly, as a result of this Modification Application, the development to which Project Approval MP06_0228 (as modified) relates will remain substantially the same as the development for which the consent was originally granted.

# 3.0 SITE AND SURROUNDS

The Shoalhaven Starches factory complex is situated upon various allotments of land along Bolong Road, Bomaderry, within the Shoalhaven local government area.

The Shoalhaven Starches factory site is located on the southern side of Bolong Road on the northern bank of the Shoalhaven River with some operations located on the northern side of Bolong Road. The Shoalhaven Starches factory site (excluding the former Dairy Farmers and former Australian Paper Mill (APM) sites) has an area of approximately 12.5 hectares. The components of this Modification Proposal will be located within the factory site.

The Company also carries out irrigation activities on the Company's Environmental Farm located over 1000 hectares on the northern side of Bolong Road. This area is cleared grazing land and also contains a wastewater treatment plant, wet weather storage ponds and spray irrigation lines. The Environmental Farm stretches over a broad area of the northern floodplain of the Shoalhaven River stretching from Bolong Road in the south towards Jaspers Brush in the north. Apart from the Environmental Farm this broad area is mainly used for grazing (dairy cattle).

The works associated with this Modification Application are located within the Environmental Farm and are limited to Lot 2 DP 833181, Lot 4 DP 610696 and Lot 1 DP 131008 Hanigans Lane and Bolong Road, Bolong.

All the lands associated with this Modification Application are included in the Project Approval MP 06_0228 (as amended) (Mod 16).

**Figure 1** below is a site locality plan depicting the location of the lands associated with this Modification Application.

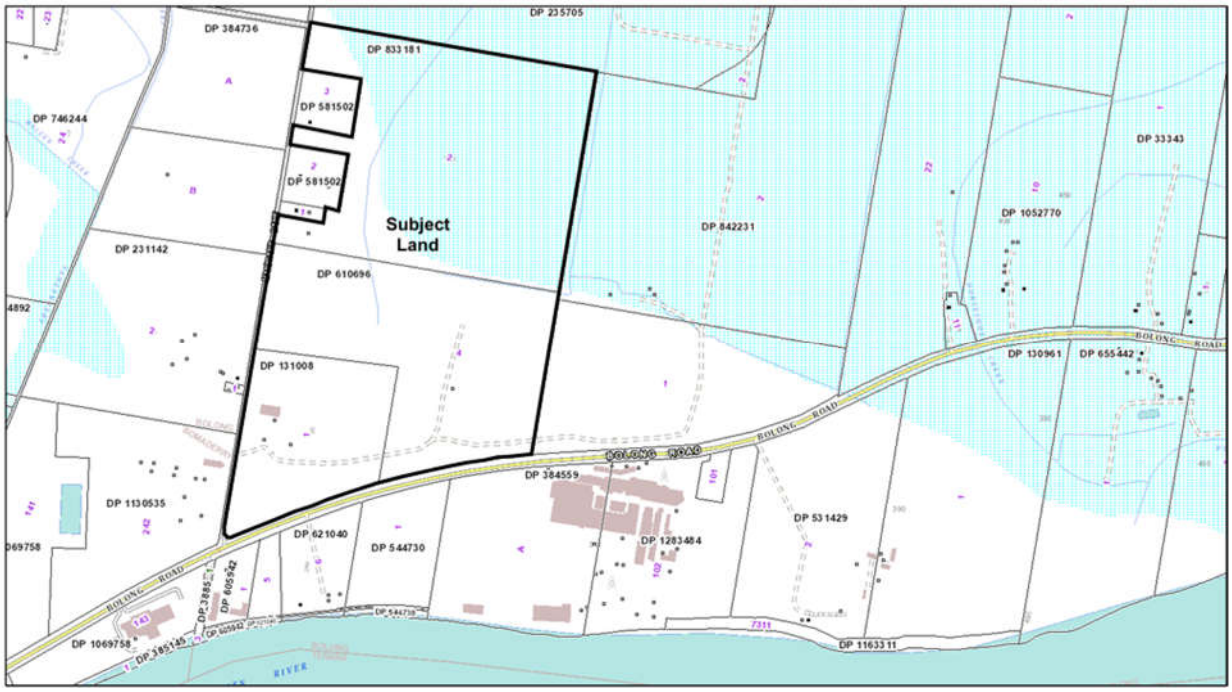


*Figure 1 – Site Locality Plan (Source: Near Maps)*

The lands associated with this Modification Proposal are primarily zoned RU1 Primary Production zone under the provisions of Shoalhaven Local Environmental Plan 2014 (SLEP 2014). Refer to **Figure 2** for a map view of the location of the existing emergency grain storage bunker.

The town of Bomaderry is located just over 1.5 km (approx.) to the west of the former Dairy farmers factory site, and the Nowra urban area is situated 3.0 km to the south-west of the site. The "Riverview Road" area of the Nowra Township is situated approximately 2.0 km to the south-east of the former APM site across the Shoalhaven River.

The village of Terara is situated approximately 1.2 kilometres to the south of the former Dairy Farmers site, across the Shoalhaven River. Burraga (Pig) Island is situated between the factory site and the village of Terara and is currently used for dairy cattle grazing.

There are a number of industrial land uses which have developed on the strip of land between Bolong Road and the Shoalhaven River. Industrial activities have included a metal fabrication factory, the Shoalhaven Starches site and the former Dairy Farmers factory and APM (now owned by the Manildra Group of Companies). The industrial area is serviced by a privately owned spur railway line that runs from just north of the Nowra-Bomaderry station to the Starches Site.

The state railway terminates at Bomaderry with a separate, privately owned spur line to the factory site and which extends up to the western boundary of the former APM site.


*Figure 2: Aerial image of location of emergency grain storage bunker*

# 4.0 BACKGROUND

## 4.1 PRODUCTION PROCESSES

The production process at the Shoalhaven Starches plant have evolved over a number of decades. Originally, the plant was primarily concerned with the production of starch and gluten from flour. However, the Company has pursued a number of technological innovations particularly with respect to reducing the environmental impacts of the Company's operations. As a result, Shoalhaven Starches has been moving towards a "closed" system of production. Essentially this entails the efficient use of end products to ensure wastage is reduced to a minimum.

The first step in the production process is the delivery of flour and grain, by rail, from the Company's flour mills at Manildra, Gunnedah and Narrandera. The trainloads are brought into the plant via the switching yard at Bomaderry.

The Company has previously received approval from the Minister for Planning for the erection of flour mills on site to enable the milling of part of the Company's flour requirements to be processed directly on the site. The remainder of the Company's flour requirements continue to be sourced from the Company's off-site flour mills.

Flour is transferred via storage to the "wet end" of the plant where fresh water is added. The subsequent mixing and separation process produces starch and gluten. The gluten is dried to enable it to be packaged and distributed as a high protein food additive for human consumption. This product is then taken from the site after packaging for both local and export markets.

The starch that is separated from the flour is either dried or remains in liquid form. The dried and liquid starch is sold to the paper and food industries. The starch is used for food, cardboard, paper and other industrial purposes. Liquid starch is used in the ethanol production process.

Starch is also used in the production of syrups on the site. The syrups plant products include glucose and brewer's syrup. These are used for foods, chocolates, confectionery, beer, soft drinks and fruit juice. The syrups plant products can also be used in the ethanol process.

The by-products from the starch, gluten and syrup production processes are combined to feed the fermentation and distillation stage of ethanol production. The outputs are fuel, industrial, beverage and hand sanitising grade alcohol. Industrial grade ethanol is used in producing pharmaceuticals, printer's ink and methylated spirits.

Ethanol production results in some liquid and solid by-products, which are processed through the stillage recovery process plant (which was approved as part of PRP No. 7 in 2005). The solids in the stillage are recovered as Dried Distillers Grains and Syrup (DDGS), dried and sold as a high protein cattle feed with the remaining water used for irrigation.

The wastewater resulting from the ethanol production is treated in the wastewater treatment plant located on the northern side of Bolong Road and is re-used in the Starch

Plant and the surplus is irrigated onto Shoalhaven Starches Environmental Farm to the north of Bolong Road. This farmland is used for fodder crops, pasture and cattle grazing.

Boilers are used to produce steam which is used for a multitude of purposes throughout the factory site wherever product is dried, evaporated or heated.

## 4.2 RECENT DEVELOPMENT AND APPROVAL HISTORY

### 4.2.1 PROJECT APPROVAL MP 06_0228

On the 28 of January 2009 the then Minister for Planning, issued Project Approval MP 06_0228 for the Shoalhaven Starches Expansion Project.

The primary objective of the Shoalhaven Starches Expansion Project was to increase the Company's ethanol production capacity to meet the expected increase in demand for ethanol primarily, arising from the then NSW Government's mandate to increase ethanol content by volume in petrol in NSW from 2% to 6% from October 2011, by upgrading the existing ethanol plant.

The approval, subject to certain conditions, enabled Shoalhaven Starches to increase ethanol production in a staged manner at its Bomaderry Plant from 126 million litres per year to 300 million litres per year.

To accomplish the increase in ethanol production, the Project Approval enabled Shoalhaven Starches to upgrade the plant and increase the proportion of raw materials, principally comprising flour and grain.

Following the Minister's determination, Shoalhaven Starches has been implementing and commissioning works in accordance with this approval.

As outlined in previous modifications, the expected increase in demand for ethanol to meet the demand arising from the NSW Government's mandate to increase the blending of ethanol in the total volume of petrol sold in NSW has, however, not occurred. This is due largely to a failure of the mandate to be imposed on petroleum suppliers. As a result, Shoalhaven Starches has been investigating alternative markets for products used in the manufacture of ethanol, and Shoalhaven Starches now proposes to undertake further modifications to the Shoalhaven Starches Expansion Project Approval (MP06_0228) as listed below. Allen Price Pty Ltd has prepared this Modification Report on behalf of Shoalhaven Starches Pty Ltd for the following modifications.

Under Mod 16 Shoalhaven Starches obtained approval to utilise grain, that was approved to directly feed the fermentation process in the ethanol production process, to instead increase the amount of flour that was produced on site (with the installation of an additional Flour Mill) to in effect increase starch and gluten production.

In addition, under Mod 16 Shoalhaven Starches obtained approval for the construction of a new industrial building adjoining the recently constructed Starch Dryer No. 5 building to the west of Abernethy's Creek.

This new industrial building will contain:

- The construction of a Specialty Product Building within which a range of modified gluten products for the food industry; and modified starches for both paper manufacturing as well as food production.

- The resultant increase in starch and gluten production would require the conversion of two existing Gluten Dryers (Nos. 1 and 2) into starch production. Mod 16 therefore included the construction of a new Gluten Dryer (D8), to replace the capacity lost by the conversion of Dryers Nos. 1 and 2 to starch.

The footprint of the GD8 building was subsequently increased under Mod 17. The increase in the footprint of the GD8 building under Mod 17 provided for the reorientation of the dryer to provide operational efficiencies and to enable the installation of a Wet End Processing Plant within the building.

Shoalhaven Starches obtained modification approval for Mod 18 to enable the production of 120 ML per annum of hand sanitizer grade alcohol, out of the overall 300 ML per annum approved production limit imposed by Project Approval MP 06_0228. Mod 18 follows a request by the Federal Government's Department of Industry, Sciences and Energy to produce more hand sanitizer alcohol in response to the Coronavirus COVID 19 crisis. Mod 18 will not involve production increasing above the 300 ML per annum limit imposed by MP 06_0228.

In addition, Shoalhaven Starches obtained modification approval for Mod 19 that enabled a further increase in the proportion of 'beverage' grade ethanol that is able to be produced on the site. Mod 19 will enable increased flexibility in terms of the range of types of ethanol produced at the site (i.e. between fuel, industrial, pharmaceutical and beverage grade ethanol) to meet market demands. Mod 19 will enable an increase in capacity of the plant to produce an additional 100 ML per year of beverage grade ethanol. Mod 19 will **not** however involve an increase in the overall ethanol production at the site above the current approved 300 ML per year.

In addition to the above, Shoalhaven Starch have also been investigating alternative starch and gluten products and most notably with the introduction of the Specialised Product Building under Mod 16.

In addition, a further critical component of the Shoalhaven Starches Expansion Project (SSEP) was the introduction of a Waste Water Treatment Plan (WWTP), that would treat the increased volume of wastewater arising from the expansion of site operations proposed under the SSEP. The wastewater treatment process was a mandatory odour control as part of the SSEP which has significantly reduced odours from the premises. Under the SSEP it was proposed that waste waters would be treated sequentially through anaerobic and aerobic digestion systems located and incorporated within one of the existing waste water storage ponds to fully treat all organic material.

The waste water treatment process envisaged the treatment of in the order of 9.6 ML/d of wastewaters; with 7.1 ML/d treated to a standard that it was able to be recovered for re-use in the factory processes.

The waste water treatment process under the SSEP introduced Anaerobic digestion, a biological process conducted in the absence of oxygen. Anaerobic digestion (or fermentation) of organic matter is carried out by a special mixed group of anaerobic microorganisms (bacteria). During anaerobic treatment, these microorganisms utilize the organic matter contained in the wastewater as a source of food and energy. As a result, microorganisms essentially convert organic matter to biogas containing methane (65%). Under the SSEP this biogas was able to be used as an energy source for the Shoalhaven Starches operations. Under the existing SSEP the existing waste water treatment plant produces in the order of 1,700 GJ/d of biogas which is supplied to power (in part) the existing gas fired boilers at the factory site.

The SSEP approval also included approval to establish a new Packing Plant, container loading area and a rail spur line on the northern side of Bolong Road. These works are presently under construction. In 2019 the Independent Planning Commission approved Mod 16 which included the construction of a Specialty Product Facility and additional Gluten Dryer. The Specialty Products Building would enable the production of an increased range of specialised products as an extension to Shoalhaven Starches existing product line. The specialty products comprise a range of modified gluten products for the food industry; and modified starches for both paper manufacturing as well as food production. Shoalhaven Starches identified under the subsequent Mod 21 that as a result of the increase in the range of products that will be able to be produced arising from the works associated with Mod 16, amendments were required to the approved Packing Plant on the northern side of Bolong Road to accommodate these different products. This involved the provision of twenty (20) silos to accommodate the storage of an increased variety of finished products.

Under the recent Mod 25 , approval has been obtained to modify the SSEP approval to enable the extension of the rail line from its present terminus at the south-western boundary of the former Paper Mill site to a point to the north-eastern boundary of this site; as well as carrying out additions to product dryers 3 and 4 building involving installation of starch grinding bag houses. .

### 4.2.2 APPROVAL HISTORY FOLLOWING MP 06_0228 DA 10/1843 – UPGRADE VEHICLE ENTRANCE (FORMER DAIRY FARMERS FACTORY SITE)

Project Approval MP 06_0228 required vehicle access points to the Bomaderry site to be upgraded to the satisfaction of Council and the RMS. The subsequent upgrading works included the construction of a concrete median along the centre of Bolong Road to the east of Abernethy's drain in such a manner that prevented vehicles travelling east along Bolong Road turning right into the central vehicle access point to the Shoalhaven Starches site and prevented vehicles turning right out from this access point and travelling east along Bolong Road.

These works also prevented vehicles turning right out from the BOC Carbon Dioxide Plant located opposite the Shoalhaven Starches site. Shoalhaven Starches therefore sought approval from Shoalhaven City Council to upgrade the former Dairy Farmers site vehicular access and relocate the access to enable vehicles to enter Access Point 2 from the east. These works would also allow vehicles wishing to travel west from BOC Carbon Dioxide Plant to leave this site to first travel east; by allowing vehicles to travel to the former Dairy

Farmers Factory Complex and using the upgraded access to turn around before travelling west along Bolong Road.

*RA 11/1002 Interim Packing Plant*

Following Project Approval MP 06_0228 Shoalhaven Starches also obtained a separate development approval to use an existing factory building located at 22 Bolong Road (Lot 21 DP 100265) as an Interim Packing Plant from Shoalhaven City Council (RA 11/1002 dated 26 October 2011). This Interim Packing Plant operates in conjunction with the Company's existing Packing Plant which is located within the existing factory site.

*DA 11/1855 – Widening of Driveway*

A further development application (DA 11/1855) was submitted to Shoalhaven City Council on the 4 August 2011 seeking approval to widen the driveways serving 22 Bolong Road Bomaderry (i.e. the site of the Interim Packing Plant) to accommodate semi-trailers. This development application was approved by Shoalhaven City Council on the 24 August 2011.

*DA 13/1713 – Demolition of Dimethyl Ether Plant*

On the 5 July 2013 Shoalhaven Starches submitted a development application to Shoalhaven City Council seeking the demolition of a Dimethyl Ether Plant on the site. This development application was approved by Shoalhaven City Council on the 15 July 2013.

*DA 14/2161 – Additional Two (2) Grain Silos*

On the 19 September 2014 Shoalhaven Starches submitted a development application to Shoalhaven City Council seeking development consent to erect two additional grain silos on the factory site within the vicinity of the existing Flour Mill, to provide security of raw material storage and supply when there are closures of the Illawarra rail line serving the Shoalhaven Starches site. Shoalhaven City Council approved this development application on the 27 April 2017.

*DA 16/1827 – Demolition of Existing Air Compressor Shed*

On the 7 July 2016 Shoalhaven Starches submitted a development application to Shoalhaven City Council seeking the demolition of an existing air compressor shed on the site. This development application was approved by Shoalhaven City Council on the 29 July 2016.

*Other Approvals*

There have been other approvals that have been issued by Shoalhaven City Council that are associated with the Shoalhaven Starches operations, but which do not directly relate to the operations of Shoalhaven Starches including:

- DA 11/1936 – Algae Demonstration Plant for evaluation of algae production and processing for alternative fuel and $CO_2$ sequestration. Proponent - Algae Tec Pty Ltd at 220 Bolong Road (former Dairy Farmers factory site).

- DA 14/1327 – Alterations to existing building (former Dairy Farmers Factory Building) and re-use as a meat processing plant. Proponent – Candal Investments Pty Ltd at 220 Bolong Road (former Dairy Farmers factory site).

- DA 15/1892 – Installation of Liquid Oxygen Vessel (6,000 L). Proponent – Argyle Prestige Meats Ltd at 220 Bolong Road (former Dairy Farmers factory site).

### *Modification Applications*

Project Approval MP 06_0228 has also been the subject of the following modifications applications (**Table 1**).

*Table 1 - Summary of Modification Applications for MP 06_0228*

| Modification | Summary of Modifications | Approval Date |
|---|---|---|
| Modification 1 | Removed the requirement for dried distillers' grain (DDG) pelletising plant from the list of mandatory odour controls.<br>Implement alternate odour controls including a new loading chute with dust extractor and extension of the load-out shed to fully enclose truck loading. | 30/9/2011 |
| Modification 2 | Install additional infrastructure to improve operational and energy efficiency, including two additional fermenter tanks, an evaporator, beer column, heat exchangers, substation and compressors. | 14/9/2012 |
| Modification 3 | Relocate approved 60 space staff car park to the former Dairy Farmers site and include the site in the project approval, following acquisition by the Applicant. | 9/10/21012 |
| Modification 4 | Relocate the approved DDG pelletising plant within the factory site, increases its footprint and approved height, from 21m to 28m. | 24/3/2014 |
| Modification 5 | Modify the design, footprint and odour controls on the DDG pelletising plant including a 49m air discharge stack and 8 storage silos. | 16/9/2015 |
| Modification 6 | Demolish a disused industrial building "Moorehouse" purchased by the Applicant<br>Construct a temporary car park on the northern side of Bolong Road. | 25/112015 |
| Modification 7 | Relocate the approved Starch Dryer No. 5 to the former "Moorehouse" site, increase the footprint and construct a substation, pipework and pipe | 18/12016 |

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| | gantry. | |
| Modification 8 | Extend the existing flour mill to increase flour production from 265,000 to 400,000 tonnes per annum (tpa) and offset imports of flour to the factory from mills in western NSW. | 1/3/2016 |
| Modification 9 | Increase the size of the approved packing plant to increase the type and volume of packaged dried products.<br>Construct a container storage and truck loading area with noise barriers.<br>Extend and duplicate the approved rail spur line.<br>Install product pipes under Bolong Road, a small bag packer at the DDG pellet plant and a new stormwater detention tank. | 8/3/2017 |
| Modification 10 | Construct a new flour mill B and increase flour production on site from 400,000 tpa to 842,400 tpa. Relocate storage silos and construct a mill feed structure. | 18/4/2017 |
| Modification 11 | Reducing the number of approved DDGS Dryers from six to four.<br>A minor modification to the footprint of the four DDG dryers.<br>Relocation of the cooling towers in the DDG Plant.<br>A Mill Feed Silo and structure to feed DDG dryers.<br>Expanded use of the existing coal and woodchip storage area within the SS Environmental farm.<br>The addition of two biofilters to cope with the increased number of DDG Dryers.<br>A forklift maintenance building adjacent to the relocated DDG dryers, along with a container preparation area adjacent to the relocated DDG Dryers. | 1/9/2017 |
| Modification 12 | Modifications to the existing Ethanol Distillery Plant to increase the proportion of 'beverage" grade ethanol that is able to be produced on the site. This modification will enable increased flexibility in terms of the range of types of ethanol produced at the site (i.e. between fuel, industrial and beverage grade ethanol) to meet market demands; and modify the type and location of the Water Balance Recovery Evaporator that has been previously approved under Mod 2 adjacent to the Ethanol Plant. | 1/9/2017 |
| Modification 13 | Modification of boilers 2 and 4, with the conversion of boiler 4 from gas fired to coal fired. | 18/1/2018 |

| | | |
|---|---|---|
| | Installation of an additional baghouse on boiler 6. | |
| Modification 14 | Modifications to the former Australian Paper Mill site, i.e. The site associated in part with this Modification Application. This Modification sought approval to use this site for:<br><br>The use of existing buildings on the site for the storage of finished products, as well as engineering plant.<br><br>The use of existing storage tanks for the storage of syrups.<br><br>The use of external areas on the site to lay down plant and materials that are to be used in the construction of approved plant on the Shoalhaven Starches factory site as well as temporary and overflow shipping container storage.<br><br>The use of existing administration buildings for office staff; and<br><br>The use of existing workshops for maintenance purposes. | 27/4/2018 |
| Modification 15 | Construction of the Supagas CO2 plant at the former Dairy Farmers factory site. | 7/8/2018 |
| Modification 16 | Installation of a third flour mill C within the existing flour mill B building.<br><br>Undertaking modifications to flour mills A and B.<br><br>The construction of a new industrial building adjoining the Starch Dryer No. 5 building containing:<br><br>The new product dryer;<br><br>Plant and equipment associated with the processing of specialised speciality products.<br><br>Addition to Starch Dryer No. 5 building to house a baghouse for this dryer<br><br>Conversion of two existing gluten dryers (1 and 2) to starch dryers.<br><br>Additional sifter for the interim packing plant.<br><br>Construction of a coal-fired co-generation plant to the south of the existing boiler house complex. The co-generation plant will house a new boiler (no. 8).<br><br>Construction of lime silos: The lime injection system will consist of two storage silos and associated equipment for injecting powdered lime into each of the coal fired boilers.<br><br>Relocation of the existing boiler no. 7 to the northern side of the overall boiler house complex. | 18/6/2019 |

| | | |
|---|---|---|
| | Construction of an indoor electrical substation on the northern side of Bolong Road.<br><br>Construction of an additional rail intake pit for the unloading of rail wagons.<br><br>Extension of the existing electrical substation located within the main factory area.<br><br>An additional coal fired co-generation plant was also approved under Mod 16. This coal fired co-generation plant was to be sited immediately to the south of the existing boiler house complex situated to the east of Abernethy's Creek. This coal fired co-generation plant would generate a total of 15 MW of power for the site. It is proposed that this coal fired co-generation plant will be in part replaced by the proposed gas fired co-generation plant as part of this Modification Application. | |
| Modification 17 | Relocation of Baghouse for Starch Dryer No. 5.<br><br>Installation of Service Lift adjacent to Starch Dryer No. 5.<br><br>Elevating Service Conduit extending from factory site on southern side of Bolong Road to approved packing plant on northern side of Bolong Road above ground.<br><br>Use of woodchips as fuel source in Boilers 2 and 4.<br><br>Modification to condition 14J(e) – Amendment to design specification for silencers to exhaust fans for Flour Mill B.<br><br>The increase in the building footprint of Product Dryer Building (PDB).<br><br>The increase in the building footprint of the Specialty Products Building (SPB) which adjoins the PDB building.<br><br>The provision of additional bulk chemical storage to the south of the PDB and SPB buildings.<br><br>Demolition of part of the existing Maintenance Office and Stores to facilitate the extension of the PDB and SPB buildings to the west.<br><br>Repurposing the remaining part of the Maintenance building to provide staff amenities and Plant Operation Control Rooms.<br><br>To facilitate internal truck movements associated with the amendments to the SPB, existing car parking (48 spaces) currently located to the north and west of the Maintenance Building will be relocated to an existing approved car parking located on the north side of Bolong Road. | 23/10/2020 |

| | | |
|---|---|---|
| | Extend the sifter room situated on top of the interim packing plant.<br>Install a Product Dryer (No. 9) within the footprint of the SPB as approved under Mod 16. | |
| Modification 18 | Relocation of Approved Gas Fired Boiler and other Associated Works to Facilitate Production of 'Hand Sanitiser' Alcohol in response to COVID 19 Crisis. | 4/9/2020 |
| Modification 19 | Expansion of the ethanol distillery plant including new distillery columns, three ethanol storage tanks and cooling towers to facilitate the production of 100 mega litres (ML) of beverage grade ethanol within the approved limits and additional site infrastructure. | 8/320/21 |
| Modification 20 | Alterations to Existing CO2 Plant (Supagas) | 26/10/2021 |
| Modification 21 | Modification to Packing Plant including the reconfiguration of existing silo storage into 16 small storage silos, additional rail spur and associated train tunnel, and ancillary additions; installation of a raw wastewater tank; nitrogen generator and storage tanks; an Indirect Cooking Facility; and relocation of car parking. | 16/5/2022 |
| Modification 23 | Modification to construct and operate a 60-megawatt gas fired co-generation plant to replace two approved, but not constructed, co-generation plants. | 28/4/2022 |
| Modification 24 | Modification to the approved Gluten Dryer No. 8 (GD8) Building including the increase in building footprint, increase in building height, re-siting of the GD8 building and the relocation of site infrastructure to accommodate changes to the GD8 building. | 15/2/2022 |
| Modification 25 | Rail line extension and additions to product dryers 3 & 4 building involving installation of starch grinding bag houses. | 5/6/2025 |
| Modification 27 | Modification to approved RWW Buffer Tank | 5/10/2022 |
| Modification 28 | Proposed Temporary Emergency Grain Storage | 20/6/2023 |
| Modification 29 | Additional MVR evaporator and relocation of approved cooling towers; additional stillage evaporators and associated equipment; re-configuration of the approved biofilter's; substations and switch room. | 19/12/2024 |

# 5.0 CONSULTATION AND STAKEHOLDER ENGAGEMENT

Consultation with relevant government agencies and community stakeholder engagement has been undertaken in relation to this proposed modification. To ensure clarity this section of the Modification Report addresses the outcome of the most recent consultation with government agencies as they relate to this current Modification Proposal.

## 5.1 CONSULTATION WITH RELEVANT AUTHORITIES

Prior to the preparation of this Modification Report for this Modification Proposal consultation was undertaken with the following Federal, state and local government agencies:

- Department of Planning, Housing and Infrastructure (DPHI)
- NSW EPA
- NSW Fire & Rescue
- Shoalhaven City Council (SCC)

At the time of preparing this Modification Report responses have been received from:

- DPHI **(Attachment 8)**
- NSW EPA **(Attachment 5)**
- NSW Fire & Rescue **(Attachment 6)**

Copies of the above government agency responses are included with this Modification Application documentation.

**Table 2** below is a summary of the issues raised by government agencies to this proposal at the time of preparing this report, and our responses as to how the issues have been addressed in this Modification Report.

*Table 2 – Summary of Issues Raised by Government Agencies*

| GOVERNMENT AGENCY | COMMENTS |
|---|---|
| **DPHI**<br><br>The Department has not issued any comments on the scoping for the proposed MOD 34.<br><br>We are ok for you to proceed with providing the draft modification package via email before formally uploading to the portal for lodgment. | The Department's response is noted. |
| **NSW EPA**<br><br>Thank you for your email dated 10 December 2025 to the Environment Protection Authority (EPA) requesting any matters from us that should be considered on the above proposed Modification 34 for the Shoalhaven Starches Pty Ltd premises at Bomaderry.<br><br>On the basis of a review of the information provided (including the Scoping Report and plans) the EPA does not have any additional assessment requirements from those already outlined in your email.<br><br>The EPA may have further comments or request additional information upon receipt and review of the Modification 34 documentation once it is formally lodged. | The EPA's response is noted. |
| **Fire & Rescue NSW** | Fire & Rescue NSW's response is noted. |

| GOVERNMENT AGENCY | COMMENTS |
| --- | --- |
| FRNSW will not comment on this project at this time, however, will provide advice through the Dept. of Planning or other consent authority as the project progresses.<br><br>FRNSW and DPHI have established processes for review and recommendations for State Significant Development (SSD), and with consent authorities for Designated Development. It would be FRNSW expectation that regular applicable processes (FEBQ and FER), codes and standards (NCC) and legislative instruments will be followed for this proposal and FRNSW will engage with the consent authority through those established processes. | |

# 6.0 PROPOSED MODIFICATION TO PROJECT APPROVAL MP06_0228

## 6.1 BACKGROUND

During recent years Shoalhaven Starches have experienced significant disruptions to their supply of grain to their site operations due to:

- Drought, which resulted in reduction in wheat production.
- Floods which have disrupted the rail network for extended periods.
- Rail infrastructure upgrades and maintenance which have also resulted in extended periods during which grain could not be transported by rail to the site.

These disruptions to grain supply have had significant impacts on the Shoalhaven Starches operations. The threat of future disruptions to the rail network due to recent weather forecasts which predict continued wet weather in the coming months are a particular concern for Shoalhaven Starches.

As the Department is aware Shoalhaven Starches has prepared a separate Modification Application (Mod 26) that will involve the construction of additional grain storage and handling facilities at the former Dairy Farmers site that is now owned by the Manildra Group of Companies. It was originally envisaged however that this Modification Project will take at least 2 years to be approved, constructed and then commissioned.

The works associated with Mod 26 would therefore be unable to address the more imminent concern that forecast weather patterns will potentially have to the Shoalhaven Starches operations before the Mod 26 project was able to be commissioned.

During the interim, before Mod 26 was able to be approved, constructed and commissioned, to minimise the potential for interruptions to grain supply to the Shoalhaven Starches factory operations caused by potential rail disruptions, it was proposed to establish temporary emergency grain storage immediately to the north of the Wet Weather Storage Ponds located on the Shoalhaven Starches Environmental Farm located on the northern side of Bolong Road.

On the 20 June 2023 the delegate for the Minister for Planning & Public Spaces approved Modification 28 which granted approval for Shoalhaven Starches to establish a temporary emergency grain storage bunker on the Shoalhaven Staches Environmental Farm adjacent to the existing treated water Storage Dam 6. This approval was subject to condition 6B which limited the operation of this grain period for a period of 36 months from the 20 June 2023. This period will expire on the 20 June 2026.

Mod 26 has been lodged with the Department for their initial review prior to lodgement, and as the Department is aware the scope of the project has changed over time, due to economic circumstances, the Company will be unable to construct the additional grain storage envisaged under Mod 26 in the short to medium-term period.

Further it should be noted that under their Project Approval the Shoalhaven Starches operations are able to produce 1,112,800 tonnes of flour per annum. About 80% of flour yield comes from grain, which therefore equates to 1, 391,000 tonnes per annum, or 3, 810 tonnes per day of grain. The additional grain storage (three silos) envisaged by Mod 26 will provide additional grain storage of approximately 3,600 tonnes per day.

At present the Shoalhaven Starches operations are able to store 3,600 tonnes of grain or a reserve of less than 1 day (0.9 days). Under Mod 26 this will increase to 30,600 tonnes or a reserve equivalent to 8 days.

However, the above assumes that each of the grain silos will be full at all times. In reality as grain is processed the grain storage in the silos is reduced. If a disruption to the rail system occurs when grain storage in these new silos is depleted, this will result in potential production stoppages at the plant.

The continued storage of grain will therefore still be required within the grain bunker site, to minimise the effects from the interruption of grain supply to the Shoalhaven Starches site, and as detailed in the Mod 28 application. Given these circumstances Shoalhaven Starches wish to extend the life of the emergency storage of grain on this site on a permanent basis. Shoalhaven Starches seek to retain the use of this part of their site for emergency grain storage without any time limit. They therefore seek the deletion of condition 6B which presently limits the use of the emergency grain storage bunker to a period of 36 months from the 20 June 2023. This period will expire on the 20 June 2026.

In doing so they also wish to be able to construct a shed to be sited upon the emergency grain storage bunker area.

The proposed shed will provide several advantages over the grain bunker including:

- The shed will provide a reduced risk of moisture ingress which will extend the storage life of the grain.
- The shed will reduce the potential for vermin and birds to gain access to the grain.
- The shed will provide cost efficiencies as it will be cheaper to operate and maintain.
- The shed will also be easier to operate when compared to the current grain bunker.

In addition to the above, the proposed grain storage shed will provide Shoalhaven Starches with greater flexibility and cost savings to purchase grain direct from the Farmer and transport directly from the farm gate to the Shoalhaven Starches facility. This removes the additional transporting, receival and storage costs if the grain was to be transferred from the farmer to a grain aggregator and storage facility.

## 6.2 SUMMARY OF MODIFICATION PROPOSAL

In summary the Modification Proposal will include the following aspects:

**Summary of Proposed Modification Proposal**

| *Factory Component* | *Proposed Works* |
|---|---|
| Remove time limit on use of emergency grain storage bunker. | • Delete condition 6B of the Project Approval which limits the operation of this grain storage bunker for a period of 36 months from the 20 June 2023. This period will otherwise expire on the 20 June 2026. |
| Grain Storage Shed | • Construction of grain storage shed with dimensions of:<br>– 24 metres width<br>– 60 metres length<br>– 9.5 metres height<br>The shed will be sited within the footprint of the temporary grain storage bunker approved under Mod 28. |

## 6.3 MODIFICATION PROPOSAL

### *1. Deletion of Condition 6B*

As outlined above the continued storage of grain will be required within the existing emergency grain storage bunker site to minimise the effects from the interruption of grain supply to the Shoalhaven Starches site, and as detailed in the Mod 28 application.

Given these circumstances Shoalhaven Starches wish to extend the life of the emergency storage of grain on this site on a permanent basis. Shoalhaven Starches seek to retain the use of this part of their site for emergency grain storage without any time limit.

This Modification Proposal therefore seeks the deletion of condition 6B which presently limits the use of the emergency grain storage bunker to a period of 36 months from the 20 June 2023. This period will expire on the 20 June 2026.

### *2. Proposed Emergency Grain Storage Shed*

Shoalhaven Starches also seek to be able to construct a shed to be sited upon the emergency grain storage bunker area.

The proposed shed will provide several advantages over the grain bunker including:

- The shed will provide a reduced risk of moisture ingress which will extend the storage life of the grain.
- The shed will reduce the potential for vermin and birds to gain access to the grain.

- The shed will provide cost efficiencies as it will be cheaper to operate and maintain.
- The shed will also be easier to operate when compared to the current grain bunker.

In addition to the above, the proposed grain storage shed will provide Shoalhaven Starches with greater flexibility and cost savings to purchase grain direct from the Farmer and transport directly from the farm gate to the Shoalhaven Starches facility. This removes the additional transporting, receival and storage costs if the grain was to be transferred from the farmer to a grain aggregator and storage facility.

It is proposed that the proposed grain storage shed will have dimensions of:

- 24 metres width
- 60 metres length
- 9.5 metres height

The shed will be entirely sited within the footprint of the temporary grain storage bunker approved under Mod 28. Refer to **Figure 3** and **Figure 4** below for site plans and refer to **Attachment 4**.

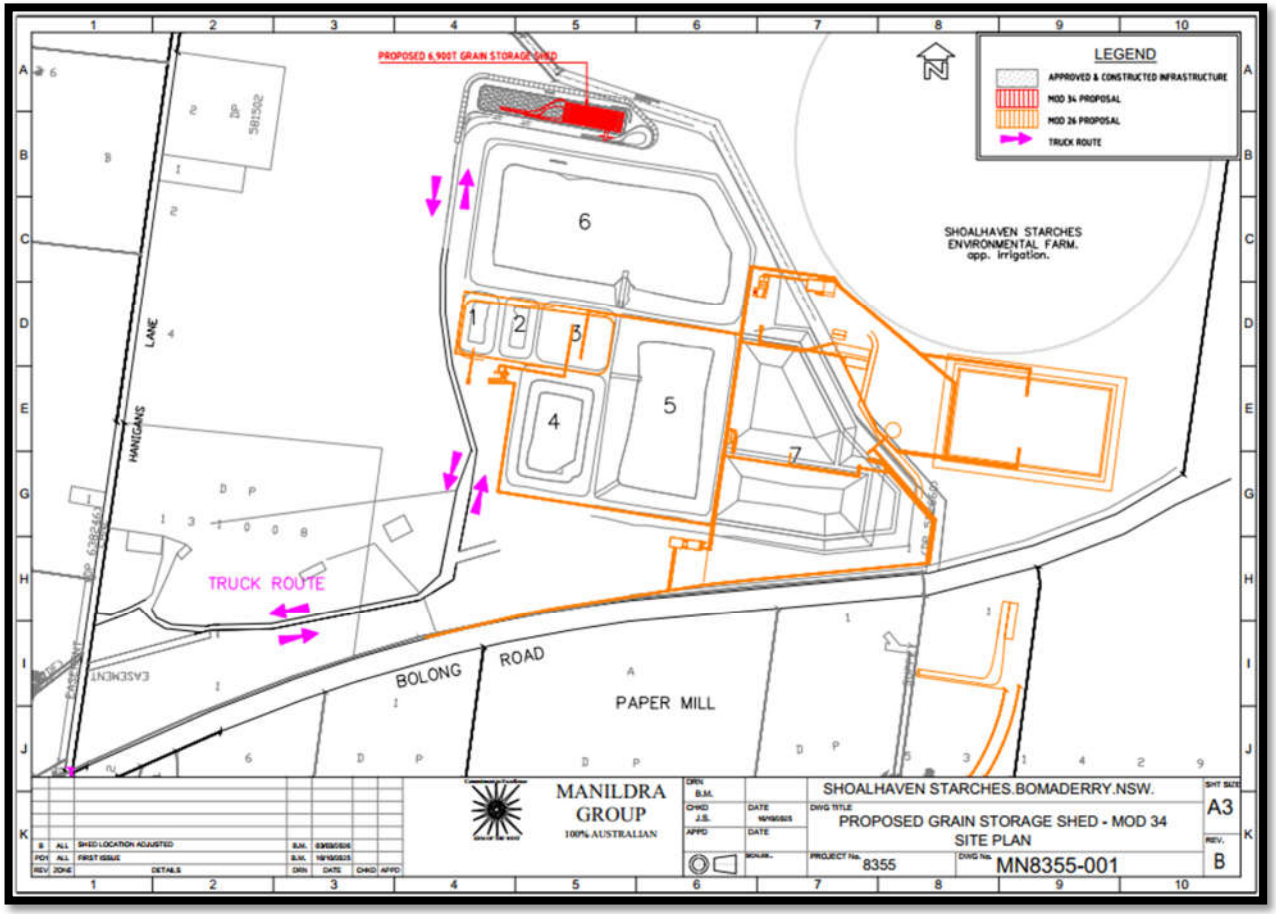


Figure 3 - Overall Site Plan of proposed works associated with Modification Application (Source: Shoalhaven Starches Pty Ltd)

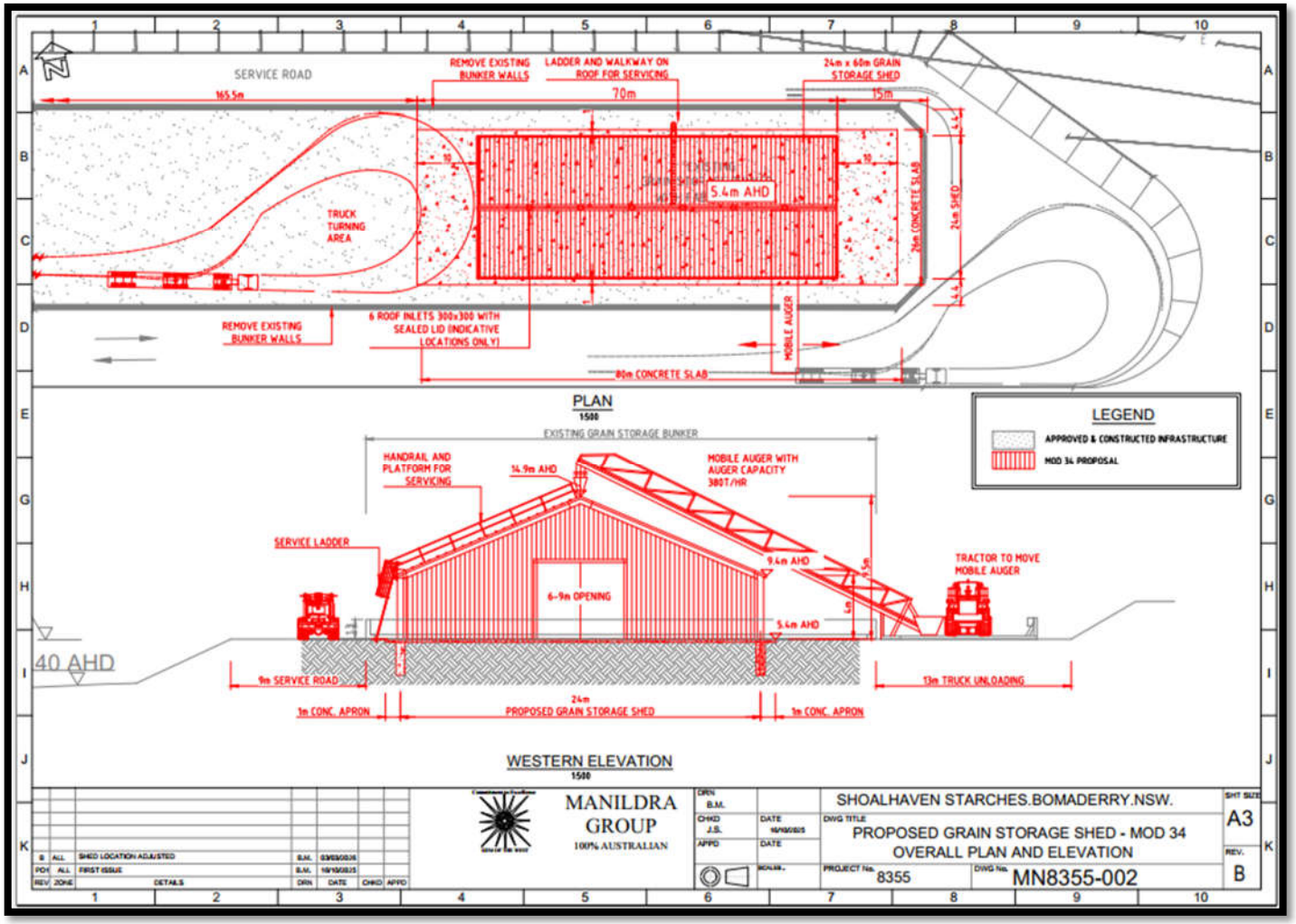


*Figure 4: Plan and elevations of Proposed Emergency Grain Storage Shed (Source: Shoalhaven Starches)*

## 7.0 SECTION 4.55(1A) OF THE EP&A ACT

This application is made pursuant to Section 4.55(1A) of the EP&A Act.

Section 4.55(1A) of the EP&A Act reads:

> *(1A) **Modifications involving no or minimal environmental impact.** A consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify the consent if—*
>
> *(a) it is satisfied that the proposed modification is of no or minimal environmental impact, and*
>
> *(b) it is satisfied that the development to which the consent as modified relates is the same or substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all), and*
>
> *(c) it has notified the application in accordance with—*
>
> *(i) the regulations, if the regulations so require, or*
>
> *(ii) a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and*
>
> *(d) it has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be.*
>
> *Subsections (1) and (2) do not apply to such a modification.*

The "Modifying an Approved Project" draft guidelines produced as part of the Draft Environmental Impact Assessment Guidance Series by the NSW Department of Planning and Environment in June 2017, provides some guidance when assessing modifications of State Significant development:

> *For SSD, a proponent must demonstrate that the change, if carried out, would result in a development that would be substantially the same development as the original development. In order to draw this conclusion, a proponent must have regard to the following considerations, which have been established through decisions of the NSWLEC:*

- ''Substantially'' means ''essentially or materially'' or ''having the same essence.''

- A development can still be substantially the same even if the development as modified involves land that was not the subject of the original consent (provided that the consent authority is satisfied that the proposal is substantially the same).

- If the development as modified, involves an ''additional and distinct land use'', it is not substantially the same development.

- Notwithstanding the above, development as modified would not necessarily be substantially the same solely because it was for precisely the same use as that for which consent was originally granted.

- To determine whether something is ''substantially the same'' requires a comparative task between the whole development as originally approved and the development as proposed to be modified. In order for the proposal to be ''substantially the same'', the comparative task must:

    - *result in a finding that the modified development is ''essentially or materially'' the same*

    - *appreciate the qualitative and quantitative differences in their proper context*

    - *in addition to the physical difference, consider the environmental impacts of proposed Modification Applications to approved developments.*

Comment

It is considered the modification proposal is substantially the same as that approved and is development that could be considered "materially the same as that previously approved". Furthermore, it is considered that the modifications proposed are of the same 'essence' as the approved development given that:

- The proposal maintains the current approved land uses and does not seek to alter the over-riding character of development over the site.

- The proposed built form is substantially the same as that already approved, in that development is to consist of industrial and or farm buildings, structures, plant and equipment located within the general confines of the overall approved Shoalhaven Starches operations and the Shoalhaven Starches Environmental Farm.

- The proposed modifications do not represent an expansion of the Shoalhaven Starches' footprint, and the modifications will be located within the areas of the site that already contain approved development.

- The proposed development maintains the same form as that approved with due consideration given in the Modification Application to relevant issues pertaining to air quality, noise and flood impacts.

- The proposal does not seek to increase overall production from the site, nor will it involve the generation of any additional significant environmental impacts.

*A development can still be substantially the same even if the development as modified involves land that was not the subject of the original consent (provided that the consent authority is satisfied that the proposal is substantially the same).*

Comment

The Modification Proposal does not involve land that was not the subject of the approval which was in place at the time that the Shoalhaven Starches Expansion Project site transitioned from the Transitional Part 3A provisions to being assessed as State Significant Development

*If the development as modified, involves an ''additional and distinct land use'', it is not substantially the same development.*

Comment

The Modification Proposal does not involve an 'additional and distinct land use'. The proposed modification involves the continuation of the existing approved emergency grain storage bunker and the construction of a shed within the footprint of the existing emergency grain storage bunker.

*Notwithstanding the above, development as modified would not necessarily be substantially the same solely because it was for precisely the same use as that for which consent was originally granted.*

Comment

The modification proposal does not seek to change the nature of the approved use of the site; it will remain as originally approved i.e. the use will remain for the purpose of emergency grain storage.

*To determine whether something is ''substantially the same'' requires a comparative task between the whole development as originally approved and the development as proposed to be modified. In order for the proposal to be ''substantially the same'', the comparative task must:*

- *result in a finding that the modified development is ''essentially or materially'' the same*
- *appreciate the qualitative and quantitative differences in their proper context*
- *in addition to the physical difference, consider the environmental impacts of proposed Modification Applications to approved developments.*

Comment

Quantitatively, the proposal does not represent any increases in production in the terms of processing of flour and starch / gluten or overall ethanol production.

The qualitative elements of the proposal demonstrate that the environmental and amenity impacts of the modification proposal are limited and justifies this proposal being considered as a modification.

The rationale that underpins this Modification Proposal does not seek to enable an increase in production from the site but rather to protect on-going sustainable operations from disruptions to grain supply in the future.

This proposal will not significantly expand the overall footprint of the approved Shoalhaven Starches operations. The proposed modification works are confined within the footprint of the existing emergency grain storage bunker. The bulk, character and scale of the structures associated with this modification application will not be dissimilar to that of other industrial and rural type development associated with the existing factory and the Environmental Farm. The works will be sited in the midst of the Wastewater Treatment Plant complex and will be viewed within this context.

The works associated with this modification application do not represent an additional and or distinct land use as all proposed modifications facilitate and improve the existing approved production processes.

The proposal will not comprise any qualitative or quantitative changes in overall production from the site. The proposal essentially seeks provide a more overall sustainable and efficient factory operation.

The modified proposal represents a scale of development that will be commensurate with the bulk, scale and character of the approved development.

It is our view that the proposed modification will not have significant environmental impacts, and the modified development is substantially the same as approved Project. As such the modification proposal is considered consistent with provisions of Section 4.55(1A) of the Act in this instance.

Given the above circumstances it is our view the development as modified by this modification application will be substantially the same development as the development for which consent was originally granted having regard to both the qualitative and quantitative elements of that development.

# 8.0 SECTION 4.15(1)(A) – ENVIRONMENTAL PLANNING PROVISIONS

In determining an application made pursuant to Section 4.55 of the EP&A Act the consent authority must take into consideration such of the matters referred to in Section 4.15(1) as are of relevance to the development the subject of the application.

## 8.1 ENVIRONMENTAL PLANNING INSTRUMENTS

### 8.1.1 STATE ENVIRONMENTAL PLANNING POLICIES

**Table 3** details State Environmental Planning Policies (SEPP) that apply to the land and whether they are applicable to the proposal.

*Table 3 - State Environmental Planning Policies that Apply to the Subject Site*

| STATE ENVIRONMENTAL PLANNING POLICY | APPLICABLE YES/NO |
|---|---|
| State Environmental Planning Policy (Planning Systems) 2021 | Yes (Proposal involves modification of SSD) |
| State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 | No |
| State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 | No |
| State Environmental Planning Policy (Biodiversity & Conservation) 2021 | Yes |
| State Environmental Planning Policy (Housing) 2021 | No |
| State Environmental Planning Policy (Transport & Infrastructure) 2021 | Yes |
| State Environmental Planning Policy (Industry and Employment) 2021 | No |
| State Environmental Planning Policy No 65-Design Quality of Residential Apartment Development | No |
| State Environmental Planning Policy (Primary Production) 2021 | No |
| State Environmental Planning Policy (Precincts – Central River City) 2021 | No |
| State Environmental Planning Policy (Precincts – Western Parklands City) 2021 | No |
| State Environmental Planning Policy (Precincts – Eastern Harbour City) 2021 | No |
| State Environmental Planning Policy (Precincts – Regional) 2021 | No |
| State Environmental Planning Policy (Primary Production) 2021 | No |
| State Environmental Planning Policy (Resilience & Hazards) 2021 | Yes |

## SEPP – Transport & Infrastructure

*Schedule 3 -Traffic Generating Development*

Division 17, Schedule 3 of the SEPP - Transport & Infrastructure identifies categories of development considered to be traffic generating due to their scale, type, or location. Developments that meet or exceed the specified thresholds – such as certain industrial uses, residential estates, retail centres, or freight and logistics facilities – are required to be referred to Transport for NSW (TfNSW) for review and comment.

Division 17 of this SEPP relates to Road and Traffic while Schedule 3 of the SEPP outlines traffic generating development which requires referral to TfNSW.

Schedule 3 includes the following criteria that may have relevance to this proposal:

| *DEVELOPMENT PURPOSE* | *COLUMN 1: SIZE OR CAPACITY – SITE WITH ACCESS TO ANY ROAD* | *COLUMN 2 SIZE OR CAPACITY—SITE WITH ACCESS TO CLASSIFIED ROAD OR TO ROAD THAT CONNECTS TO CLASSIFIED ROAD (IF ACCESS WITHIN 90M OF CONNECTION, MEASURED ALONG ALIGNMENT OF CONNECTING ROAD)* |
|---|---|---|
| Industry | 20,000m$^2$ in site area or (if the site area is less than the gross floor area) gross floor area | 5,000m$^2$ in site area or (if the site area is less than the gross floor area) gross floor area |
| Any other purpose | 200 or more motor vehicles per hour | 50 or more motor vehicles per hour |

The Modification Proposal does not trigger the above criteria therefore the Modification Application is not required to be referred under the provisions SEPP.

## *SEPP – Resilience & Hazards*

*Part 2 - Costal Management*

Part 2 of the SEPP (Resilience and Hazards) 2021 sets out development controls for land identified within Coastal Management Areas under the Coastal Management Act 2016. The intent of these provisions is to ensure that development in coastal environments is appropriately located, designed, and managed to protect coastal processes, maintain public access, and safeguard environmental, social, and economic values.

Division 1 outlines the controls to be applied to development in the Coastal Wetlands and Littoral Rainforests Area.

### *Coastal Wetlands and Littoral Rainforests Area.*

Mapping supporting the SEPP outlines the subject land is not mapped as containing coastal wetlands or littoral rainforest.

*Coastal Environment Area*

Division 3 of the SEPP stipulates the controls to be applied to development in the Coastal Environment Area.

The subject land is not mapped under this SEPP Mapping as being located within the Coastal Environment Area as seen below in **8**.

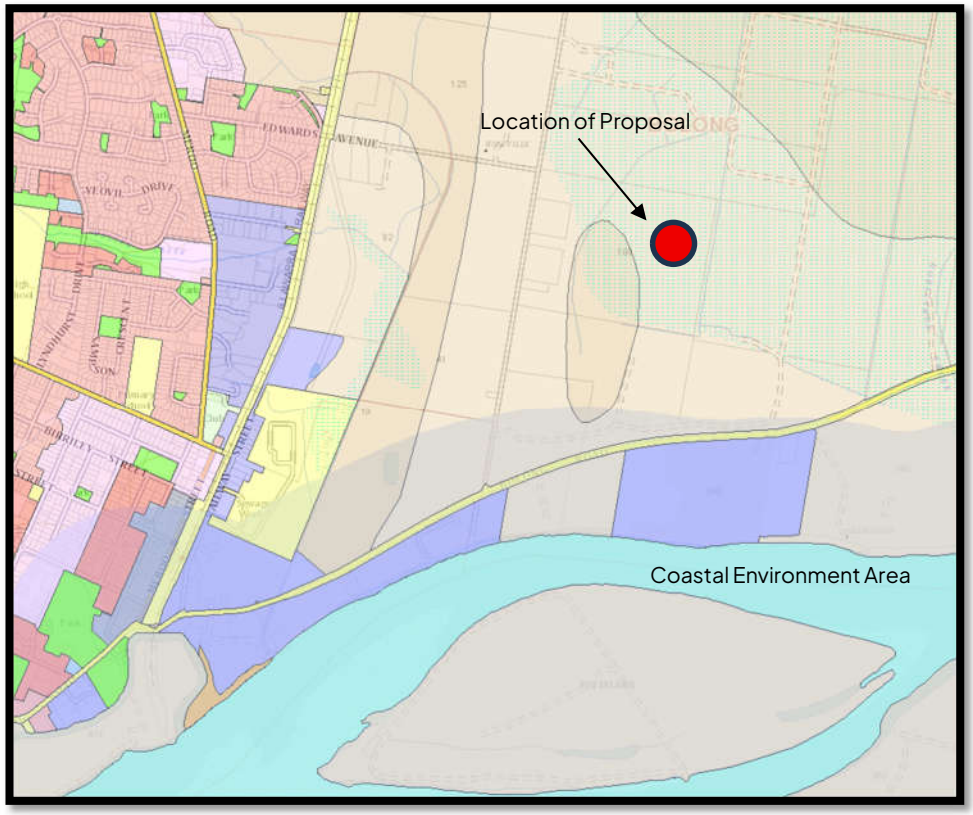


*Figure 5 - Coastal Environment Area Map (Source: NSW Spatial Viewer)*

**Coastal Use Area**

Division 4 of the SEPP specifies the controls to be applied to development in the Coastal Use Area. The subject land is not located within the Coastal Use zone as seen below in **Figure 6**.

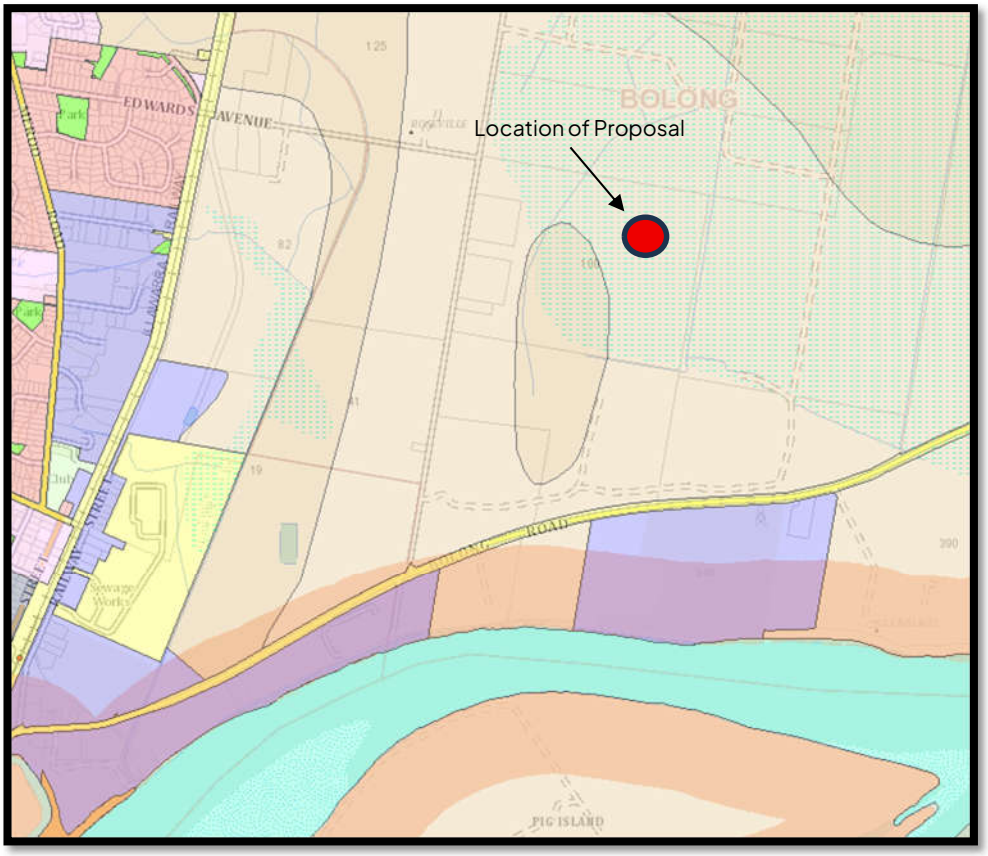


Figure 6 - Coastal Use Area Map (Source: NSW Spatial Viewer)

### *SEPP – Resilience & Hazards*

*Chapter 3 - Hazardous & Offensive Development*

Chapter 3 of the SEPP (Resilience and Hazards) 2021 deals with Hazardous and offensive development. Clause 3.11 of the SEPP requires that a person who proposes to carry out development for the purposes of a potentially hazardous industry must prepare a preliminary hazard analysis in accordance with the current circulars or guidelines published by the Department of Planning and submit the analysis with the development application.

The Modification Proposal is supported by a Hazard Analysis prepared by Pinnacle Risk Management Pty Ltd, located in **Attachment 3.**

### *SEPP – Resilience & Hazards*

*Chapter 4 - Remediation of Land*

Chapter 4 of the SEPP (Resilience and Hazards) 2021 provides a state-wide planning approach to the remediation of contaminated land. Under Chapter 4, the consent authority is required to consider whether land is contaminated and whether the proposed remediation of any proposed contaminated site will satisfactorily render the land suitable for the intended use, when determining a Development Application.

The proposal seeks to extend the approved use of this part of the site for emergency grain storage. Under Mod 28, as excavation works were not proposed, and as the site was to be filled to raise the level of the ground surface for the grain bunker, it was considered that site contamination was not a significant issue that required further assessment.

Given this proposal involves the continuation of this approved use; and for the construction of a shed on this same area, it is considered that site contamination remains an issue that is not significant and therefore does not require further assessment.

### 8.1.2 LOCAL ENVIRONMENTAL PLAN

**Shoalhaven Local Environmental Plan 2014**

The land associated with the emergency grain storage bunker is zoned RU1 Primary Production under the *Shoalhaven Local Environmental Plan 2014* (refer Figure 7).

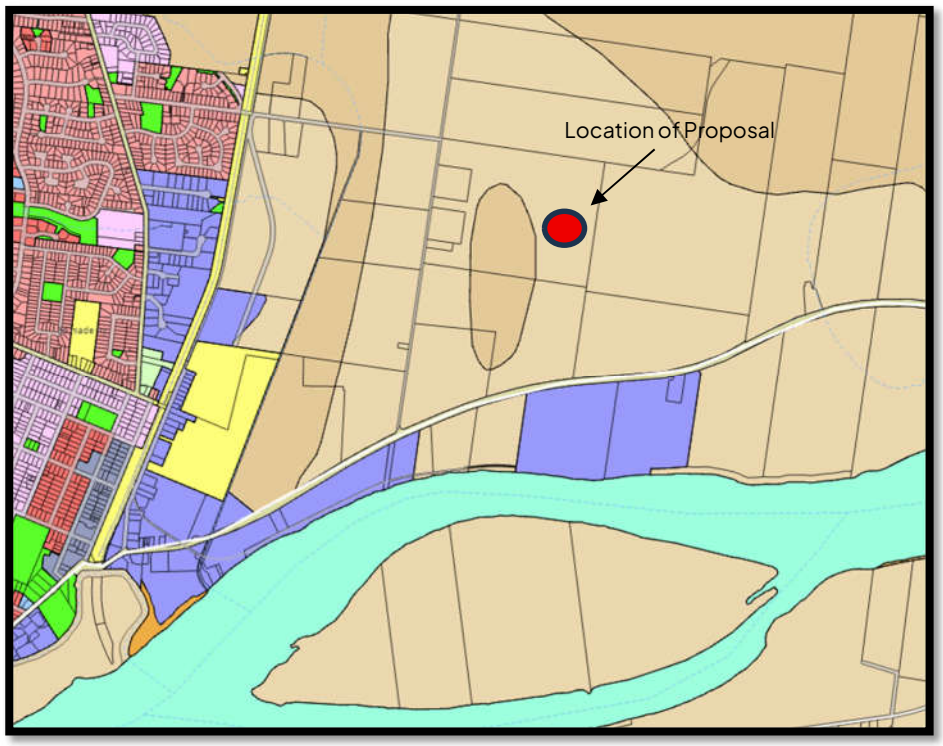


*Figure 7- Extract of zoning map (Source: SLEP 2014)*

The objectives of the RU1 zone are:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*

- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- *To conserve and maintain productive prime crop and pastureland.*
- *To conserve and maintain the economic potential of the land within this zone for extractive industries.*

It is our view that the proposal is consistent with these objectives as the proposal involves modifications to an existing approved rural industrial operation; and giving its siting to the rear of the existing wet weather storage ponds will not have an adverse impact on the rural landscape.

**Table 4** outlines the land use table provisions applicable to the RU1 zone an.

*Table 4 - Land Use Permissibility –RU1 Zone Shoalhaven LEP 2014*

| | |
|---|---|
| **Permitted without consent** | Extensive agriculture; Forestry; Home occupations |
| **Permitted with consent** | Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Aquaculture; Artisan food and drink industries; Boat building and repair facilities; Boat sheds; Building identification signs; Business identification signs; Camping grounds; Cellar door premises; Cemeteries; Charter and tourism boating facilities; Community facilities; Crematoria; Depots; Dual occupancies (attached); Dwelling houses; Eco-tourist facilities; Educational establishments; Environmental facilities; Environmental protection works; Extractive industries; Farm buildings; Flood mitigation works; Food and drink premises; Group homes; Helipads; Home-based child care; Home businesses; Home industries; Information and education facilities; Intensive livestock agriculture; Intensive plant agriculture; Marinas; Markets; Mooring pens; Moorings; Offensive industries; Open cut mining; Places of public worship; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Roads; Roadside stalls; **Rural industries**; Rural workers' dwellings; Tourist and visitor accommodation; Veterinary hospitals; Water recreation structures; Water supply systems |
| **Prohibited** | Hotel or motel accommodation; Pubs; Serviced apartments; Any other development not specified in item 2 or 3 |

"Rural industries" are defined for the purposes of the SLEP 2014 as meaning:

***rural industry*** *means the handling, treating, production, processing, storage or packing of animal or plant agricultural products for commercial purposes, and includes any of the following—*

*(a) agricultural produce industries,*

*(b) livestock processing industries,*

(c) *composting facilities and works (including the production of mushroom substrate),*

(d) *sawmill or log processing works,*

(e) *stock and sale yards,*

(f) *the regular servicing or repairing of plant or equipment used for the purposes of a rural enterprise.*

*Note—*
*Rural industries are not a type of* ***industry****—see the definition of that term in this Dictionary.*

The Shoalhaven Starches overall operations process wheat, other grains and flour to produce a range of products. Such an activity is consistent with the definition of an 'agricultural produce industry" which is defined under the SLEP 2014 as meaning:

> ***agricultural produce industry*** *means a building or place used for the handling, treating, processing or packing, for commercial purposes, of produce from agriculture (including dairy products, seeds, fruit, vegetables or other plant material), and includes wineries, flour mills, cotton seed oil plants, cotton gins, feed mills, cheese and butter factories, and juicing or canning plants, but does not include a livestock processing industry.*
>
> *Note—*
> *Agricultural produce industries are a type of* ***rural industry****—see the definition of that term in this Dictionary.*

As outlined in the 'note' in the above definition Agricultural produce industries are a type of rural industry. The existing emergency gain storage bunker to which this Modification Proposal relates forms part of the Shoalhaven Starches operations. Such a use is ancillary to the use of the site as a rural industry and therefore permissible with consent within the RU1 zone (refer **Table 5**).

The SLEP 2014 also has a number of specific provisions that apply to the land. The implications that these provisions have in relation to this proposal are discussed in **Table 5** below:

*Table 4 - Shoalhaven Local Environment Plan Provisions*

| CLAUSE | PROVISIONS | COMMENTS |
|---|---|---|
| 4.3<br>Height of Buildings | *(1) The objectives of this clause are as follows:*<br>*(a) to ensure that buildings are compatible with the height, bulk and scale of the existing and desired future character of a locality,*<br>*(b) to minimise visual impact, disruption of views, loss of privacy and loss of solar access to existing development,*<br>*(c) to ensure that the height of buildings on or in the vicinity of a heritage item or within a heritage conservation area respect heritage significance.*<br>*(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.*<br>*(2A) If the Height of Buildings Map does not show a maximum height for any land, the height of a building on the land is not to exceed 11 metres.* | Although there is no maximum height specified for the subject land, Clause 4.3(2A) imposes a maximum building height of 11 m where no specific height limit is designated.<br><br>The proposed grain storage shed will have a maximum height above ground level of 9.5 metres which is below the 11-metre height limit that applies to the land under Clause 4.3(2A). |
| *Clause 5.10 Heritage Conservation* | *(1) The objectives of this clause are:*<br>*(a) to conserve the environmental heritage of Shoalhaven; and*<br>*(b) to conserve the heritage significance of heritage items and heritage conservation areas including associated fabric, settings and views; and*<br>*(c) to conserve archaeological sites; and*<br>*(d) to conserve Aboriginal objects and Aboriginal places of heritage significance.*<br>*(2) Development consent is required for any of the following:*<br>*(a) demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):*<br>*(i) a heritage item,*<br>*(ii) an Aboriginal object*<br>*(iii) a building, work, relic or tree within a heritage conservation area,* | There are no heritage items within the subject land, and the subject site is not located within a heritage conservation area.<br><br>The proposed development as modified will not impact on any heritage items in the vicinity of the site and is not considered to have any archaeological potential. |

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| | *(b) altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,*<br>*(c) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being, discovered, exposed, moved damaged or destroyed,*<br>*(d) disturbing or excavating an Aboriginal place of heritage significance,*<br>*(e) erecting a building on land:*<br>*(i) on which a heritage item is located or that is within a heritage conservation area;*<br>*(ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,*<br>*(f) subdividing land:*<br>*(i) on which a heritage item is located or that is within a heritage conservation area, or*<br>*(ii) on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.* | |
| *Clause 5.21 Flood Planning* | *(1) The objectives of this clause are as follows—*<br>*(a) to minimise the flood risk to life and property associated with the use of land,*<br>*(b) to allow development on land that is compatible with the flood function and behaviour on the land, taking into account projected changes as a result of climate change,*<br>*(c) to avoid adverse or cumulative impacts on flood behaviour and the environment,*<br>*(d) to enable the safe occupation and efficient evacuation of people in the event of a flood.*<br>*(2) Development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the development—* | The Mod 28 application for the existing grain storage bunker was supported by a Flood Compliance Assessment prepared by WMA Water. This assessment concluded the changes in flood level due to construction of the temporary grain storage bunker would be negligible.<br><br>As the footprint of the proposed works associated with this Modification will be confined to within the footprint of the existing temporary grain storage bunker, it is not anticipated that the construction of the shed will result in any additional flooding issues that have already been considered by this previous assessment. Under these circumstances no further |

| | | |
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| | *(a) is compatible with the flood function and behaviour on the land, and*<br>*(b) will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and*<br>*(c) will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and*<br>*(d) incorporates appropriate measures to manage risk to life in the event of a flood, and*<br>*(e) will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses.*<br>*(3) In deciding whether to grant development consent on land to which this clause applies, the consent authority must consider the following matters—*<br>*(a) the impact of the development on projected changes to flood behaviour as a result of climate change,*<br>*(b) the intended design and scale of buildings resulting from the development,*<br>*(c) whether the development incorporates measures to minimise the risk to life and ensure the safe evacuation of people in the event of a flood,*<br>*(d) the potential to modify, relocate or remove buildings resulting from development if the surrounding area is impacted by flooding or coastal erosion.*<br>*(4) A word or expression used in this clause has the same meaning as it has in the Considering Flooding in Land Use Planning Guideline unless it is otherwise defined in this clause.*<br>*(5) In this clause—*<br>*Considering Flooding in Land Use Planning Guideline means the Considering Flooding in Land Use Planning Guideline published on the Department's website on 14 July 2021.* | consideration of this issue is considered necessary by this Modification Proposal. |

<table>
<tr><td></td><td>Flood planning area has the same meaning as it has in the Floodplain Development Manual.<br>Floodplain Development Manual means the Floodplain Development Manual (ISBN 0 7347 5476 0) published by the NSW Government in April 2005.</td><td></td></tr>
<tr><td>Clause 7.1 Acid sulphate soils</td><td>(1) The objective of this clause is to ensure that development does not disturb, expose or drain acid sulphate soils and cause environmental damage.<br>(2) Development consent is required for the carrying out of works described in the Table to this subclause on land shown on the Acid Sulphate Soils Map as being of the class specified for those works, except as provided by this clause.<br><table><tr><th>Class of Land</th><th>Works</th></tr><tr><td>1</td><td>Any works.</td></tr></table></td><td>An Acid Sulphate Soils Management Plan has been formulated for the site in accordance with Condition 21 of the original Project Approval. The footprint of the proposed works associated with this Modification Proposal will be confined to within the footprint of the existing temporary grain storage bunker. Under these circumstances it is not envisaged that the proposal will involve excavation works that are likely to disturb ASS and therefore no further assessment is considered necessary in this regard.</td></tr>
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| | | | |
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| | *2* | *Works below the natural ground surface.*<br>*Works by which the water table is likely to be lowered.* | |
| | *3* | *Works more than 1 metre below the natural ground surface.*<br>*Works by which the water table is likely to be lowered more than 1 metre below the natural ground surface.* | |
| | *4* | *Works more than 2 metres below the natural ground surface.*<br>*Works by which the water table is likely to be lowered more than 2 metres below the natural ground surface.* | |
| | *5* | *Works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is below 5 metres Australian Height Datum by which the water table is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.* | |
| | *(3) Development consent must not be granted under this clause for the carrying out of works unless an acid sulphate soils management plan has been prepared for the proposed works in accordance with the Acid Sulphate Soils Manual and has been provided to the consent authority.*<br>*(4) Despite subclause (2), development consent is not required under this clause for the carrying out of works if:*<br>*(a) a preliminary assessment of the proposed works prepared in accordance with the Acid Sulphate Soils Manual indicates that an acid sulphate soils management plan is not required for the works, and*<br>*(b) the preliminary assessment has been provided to the consent authority and the consent authority has confirmed the* | | |

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| | *assessment by notice in writing to the person proposing to carry out the works.*<br>*(5) Despite subclause (2), development consent is not required under this clause for the carrying out of any of the following works by a public authority (including ancillary work such as excavation, construction of access ways or the supply of power):*<br>*(a) emergency work, being the repair of the works of the public authority required to be carried out urgently because the works have been damaged, have ceased to function or pose a risk to the environment or to public health and safety,*<br>*(b) routine management work, being the periodic inspection, cleaning, repair or replacement of the works of the public authority (other than work that involves the disturbance of more than 1 tonne of soil).*<br>*(c) minor work, being work that costs less than $20,000 (other than drainage work).*<br>*(6) Despite subclause (2), development consent is not required under this clause to carry out any works if:*<br>*(a) the works involve the disturbance of less than 1 tonne of soil, and*<br>*(b) the works are not likely to lower the watertable.* | |
| *Clause 7.4 Coastal Risk Planning* | *(1) The objectives of this clause are as follows:*<br>*(a) to avoid significant adverse impacts from coastal hazards,*<br>*(b) to ensure uses of land identified as coastal risk are compatible with the risks presented by coastal hazards,*<br>*(c) to enable the evacuation of land identified as coastal risk in an emergency,*<br>*(d) to avoid development that increases the severity of coastal hazards.*<br>*(2) This clause applies to the land identified as "Coastal Risk Planning Area" on the Coastal Risk Planning Map.* | The *Coastal Risk Planning Map* that accompanies the SLEP 2014 does not identify the subject land as a "*Coastal Risk Planning Area*".<br>The provisions of this clause therefore do not apply to the subject site. |

| | | |
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| | *(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development:*<br>*(a) will avoid, minimise or mitigate exposure to coastal processes, and*<br>*(b) is not likely to cause detrimental increases in coastal risks to other development or properties, and*<br>*(c) is not likely to alter coastal processes and the impacts of coastal hazards to the detriment of the environment, and*<br>*(d) incorporates appropriate measures to manage risk to life from coastal risks, and*<br>*(e) is likely to avoid or minimise adverse effects from the impact of coastal processes and the exposure to coastal hazards, and*<br>*(f) provides for the relocation, modification or removal of the development to adapt to the impact of coastal processes and coastal hazards, and*<br>*(g) has regard to the impacts of sea level rise.*<br>*(4) A word or expression used in this clause has the same meaning as it has in the NSW Coastal Planning Guideline: Adapting to Sea Level Rise (ISBN 978-1-74263-035-9) published by the NSW Government in August 2010, unless it is otherwise defined in this clause.*<br>*(5) In this clause:*<br>***coastal hazard** has the same meaning as in the Coastal Protection Act 1979.* | |
| *Clause 7.5 Terrestrial Biodiversity* | *(1) The objective of this clause is to maintain terrestrial biodiversity, by:*<br>*(a) protecting native flora and fauna,*<br>*(b) protecting the ecological processes necessary for their continued existence, and*<br>*(c) encouraging the recovery of native flora and fauna, and their habitats.*<br>*(2) This clause applies to land:*<br>*(a) identified as "Biodiversity—habitat corridor" or "Biodiversity—significant vegetation" on the Terrestrial Biodiversity Map, and* | The Terrestrial Biodiversity Map that accompanies the SLEP 2014 does not identify the subject land as including areas of Biodiversity - habitat corridor and/or Biodiversity - significant vegetation.<br>Given the developed nature of the subject site, the proposal is unlikely to have any adverse impacts on the ecological value of the land. |

| | | |
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| | *(b) situated within 40m of the bank (measured horizontally from the top of the bank) of a natural waterbody.*<br>*(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider:*<br>*(a) whether the development is likely to have:*<br>*(i) any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and*<br>*(ii) any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and*<br>*(iii) any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and*<br>*(iv) any adverse impact on the habitat elements providing connectivity on the land, and*<br>*(b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.*<br>*(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:*<br>*(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or*<br>*(b) if that impact cannot be reasonably avoided by adopting feasible alternatives—the development is designed, sited and will be managed to minimise that impact, or*<br>*(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.*<br>*(5) For the purpose of this clause:*<br>*bank means the limit of the bed of a natural waterbody.*<br>*bed, of a natural waterbody, means the whole of the soil of the channel in which the waterbody flows, including the portion that is alternatively covered and left bear with an increase or diminution in the supply of water and that is adequate to contain the waterbody at its average or mean stage without reference to extraordinary freshets in the time of flood or to extreme droughts.* | |

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| *Clause 7.6 Riparian land and watercourses* | *(1) The objective of this clause is to protect and maintain the following:*<br>*(a) water quality within watercourses,*<br>*(b) the stability of the bed and banks of watercourses,*<br>*(c) aquatic and riparian habitats,*<br>*(d) ecological processes within watercourses and riparian areas.*<br>*(2) This clause applies to all of the following:*<br>*(a) land identified as "Riparian Land" on the Riparian Lands and Watercourses Map,*<br>*(b) land identified as "Watercourse Category 1", "Watercourse Category 2" or "Watercourse Category 3" on that map,*<br>*(c) all land that is within 50 metres of the top of the bank of each watercourse on land identified as "Watercourse Category 1", "Watercourse Category 2" or "Watercourse Category 3" on that map.*<br>*(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider:*<br>*(a) whether or not the development is likely to have any adverse impact on the following:*<br>*(i) the water quality and flows within the watercourse,*<br>*(ii) aquatic and riparian species, habitats and ecosystems of the watercourse,*<br>*(iii) the stability of the bed and banks of the watercourse,*<br>*(iv) the free passage of fish and other aquatic organisms within or along the watercourse,*<br>*(v) any future rehabilitation of the watercourse and its riparian areas, and*<br>*(b) whether or not the development is likely to increase water extraction from the watercourse, and*<br>*(c) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.*<br>*(4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:* | The Riparian Lands and Watercourses Map that accompanies the SLEP 2014 identifies a category 1 watercourse (Shoalhaven River), adjacent to the southern boundary of the Shoalhaven Starches factory site and a category 2 watercourse Abernethy's Creek flowing through the factory site (north south). The works associated with this Modification Application are not located within proximity of these watercourses. |

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| | *(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or*<br>*(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or*<br>*(c) if that impact cannot be minimised—the development will be managed to mitigate that impact*<br>*(5) For the purpose of this clause:*<br>*bank means the limit of the bed of a watercourse.*<br>*bed, of a watercourse, means the whole of the soil of the channel in which the watercourse flows, including the portion that is alternatively covered and left bear with an increase or diminution in the supply of water and that is adequate to contain the watercourse at its average or mean stage without reference to extraordinary freshets in the time of flood or to extreme droughts.* | |
| *Clause 7.7 Landslide risk and other land degradation* | *(1) The objective of this clause is to maintain soil resources and the diversity and stability of landscapes, including protecting land:*<br>*(a) comprising steep slopes, and*<br>*(b) susceptible to other forms of land degradation.*<br>*(2) This clause applies to the following land:*<br>*(a) land with a slope in excess of 20% (1:5), as measured from the contours of a 1:25,000 topographical map, and*<br>*(b) land identified as "Sensitive Area" on the Natural Resource Sensitivity—Land Map.*<br>*(3) Before determining a development application for development on land to which this clause applies, the consent authority must consider any potential adverse impact, either from, or as a result of, the development in relation to:*<br>*(a) the geotechnical stability of the site, and*<br>*(b) the probability of increased erosion or other land degradation processes.*<br>*(4) Before granting consent to development on land to which this clause applies, the consent authority must be satisfied that:* | The land associated with this Modification Application is not identified as sensitive land under the SLEP 2014 mapping. Under these circumstances the provisions of this clause do not apply to this proposal. |

| | | |
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| | *(a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or*<br>*(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or*<br>*(c) if that impact cannot be minimised ≡ the development will be managed to mitigate that impact.*<br>*(5) In this clause, topographical map means the most current edition of a topographical map, produced by Land and Property Information division of the Department of Finance and Services, that identifies the Council's local government area and boundary.* | |
| *Clause 7.8 Scenic protection* | *(1) The objective of this clause is to protect the natural environmental and scenic amenity of land that is of high scenic value.*<br>*(2) This clause applies to land identified as "Scenic Protection" on the Scenic Protection Area Map.*<br>*(3) In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must:*<br>*(a) consider the visual impact of the development when viewed from a public place and be satisfied that the development will involve the taking of measures that will minimise any detrimental visual impact, and*<br>*(b) consider the number, type and location of existing trees and shrubs that are to be retained and the extent of landscaping to be carried out on the site, and*<br>*(c) consider the siting of the proposed buildings.* | The subject land is not identified as being within a "Scenic Protection" area by Scenic Protection Area Mapping that accompanies the SLEP 2014.<br>The provisions of this clause therefore do not apply to the subject site.<br>The visual impact associated with this proposal are discussed in **Section 8.2.**5 of this Modification Report. |

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| *Clause 7.9*<br>*HMAS Albatross airspace operations* | *(1) The objectives of this clause are as follows—*<br>*(a) to provide for the effective and on-going operation of the HMAS Albatross Military Airfield by ensuring that such operation is not compromised by proposed development that penetrates the Limitation or Operations Surface for that airport,*<br>*(b) to protect the community from undue risk from that operation.*<br>*(2) If a development application is received and the consent authority is satisfied that the proposed development will penetrate the Limitation or Operations Surface, the consent authority must not grant development consent unless it has consulted with the relevant Commonwealth body about the application.*<br>*(3) The consent authority may grant development consent for the development if the relevant Commonwealth body advises that—*<br>*(a) the development will penetrate the Limitation or Operations Surface but it has no objection to its construction, or*<br>*(b) the development will not penetrate the Limitation or Operations Surface.*<br>*(4) The consent authority must not grant development consent for the development if the relevant Commonwealth body advises that the development will penetrate the Limitation or Operations Surface and should not be carried out.*<br>*(5) In this clause—*<br>**Limitation or Operations Surface** *means the Obstacle Limitation Surface or the Procedures for Air Navigation Services Operations Surface as shown on the Obstacle Limitation Surface Map or the Procedures for Air Navigation Services Operations Surface Map for the HMAS Albatross Military Airfield.*<br>**Relevant Commonwealth body** *means the body, under Commonwealth legislation, that is responsible for development approvals for development that penetrates the Limitation or Operations Surface for the HMAS Albatross Military Airfield* | The proposed works associated with this Modification Proposal are to be situated within the Nowra Airfield Defence Aviation Area declaration however will not involve a height above 90 metres. Under these circumstances no further assessment is required in this regard. |

### 8.1.3 DEVELOPMENT CONTROL PLANS (DCP) AND POLICIES

***Shoalhaven Development Control Plan (SDCP) 2014***

*Chapter G2 Sustainable Stormwater Management and Erosion / Sediment Control*

The purpose of this chapter of the SDCP is to provide guidance about how to implement sustainable stormwater management and design principles for stormwater management.

The Mod 28 project was supported by an Integrated Water Cycle Management Strategy (ICMS) that was prepared to address the provisions of this chapter of the SDCP). The IWCMS concluded the proposed works were unlikely to generate stormwater pollutants within the site.

Potential short term stormwater quality impacts from the construction works could, according to Allen Price be mitigated by the implementation of an erosion and sediment control plan and staged earthworks such that the performance objectives and criteria in Chapter G2 be satisfied. Allen Price indicates that the proposal is considered adequate from a stormwater management perspective.

The proposed grain storage shed under this Modification Proposal will sit within the confines of the footprint of the approved emergency grain storage bunker. It is considered the requirements of the IWCMS prepared for Mod 28 will still be applicable for this Modification Proposal.

*Chapter G9: Development on Flood Prone Land*

The provisions of *Chapter G9: Development on Flood Prone Land* of the Shoalhaven SDCP 2014 have relevance to this proposal.

The Mod 28 application for the existing grain storage bunker was supported by a Flood Compliance Assessment prepared by WMA Water. This assessment concluded the changes in flood level due to construction of the temporary grain storage bunker would be negligible.

As the footprint of the proposed works for the storage shed associated with this Modification will be confined to within the footprint of the existing temporary grain storage bunker, it is not anticipated that the construction of the shed will result in any additional flooding issues that have already been considered by this previous assessment. Under these circumstances no further consideration of this issue is considered necessary by this Modification Proposal.

### 8.1.4 ENVIRONMENTAL PLANNING & ASSESSMENT (EP & A) ACT

The EP&A Act is the principal planning and development legislation in New South Wales.

Section 4.36(2) of the EP&A Act declares development that is state significant development (SSD), and further details that a State Environmental Planning Policy may declare any development to be SSD. The proposal is identified as SSD under State Environmental Planning Policy (Planning Systems) 2021 (the "Planning Systems SEPP").

Section 4.38 outlines the parameters for which the consent authority is to determine a development application in respect of State significant development including a development being partly prohibited by an environmental planning instrument under section 4.38 (3).

Sections 4.41 and 4.42 identify the relevant approvals that are not required for developments classified as state significant developments. Upon consideration of the types of approvals applied under this part, the following permits were determined to be applicable to the proposed development:

- An environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997 (for any of the purposes referred to in section 43 of that Act); and

### 8.1.5 PROTECTION OF THE ENVIRONMENT OPERATIONS ACT AND ASSOCIATED REGULATIONS

The existing Shoalhaven Starches factory site and Environmental Farm are subject to an Environmental Protection Licence (EPL) under the Protection of the Environment Operations Act 1997 (POEO Act) (EPL No. 883) issued by the EPA. The licence imposes requirements in terms of:

- discharges to air, water and land;
- irrigation controls;
- management of irrigation;
- maintenance of irrigation reticulation;
- odour control;
- noise.

If approved, the proposed modification may necessitate the terms/provisions of this licence to be also reviewed.

### 8.1.6 BIODIVERSITY CONSERVATION (BC) ACT & REGULATIONS

The *Biodiversity Conservation Act 2016 (BC Act)* establishes a framework and scientific method for measuring the impact of proposed developments on biodiversity values and subsequent tools to avoid, minimise and offset any identified impacts. This requires certain matters in respect of biodiversity values and vegetation clearing to be addressed by proposed developments.

Part 6 of the BC Act establishes a Biodiversity Offset Scheme (BOS) which aims to ensure there is no net loss of biodiversity values. Entry into the BOS is triggered by exceeding the thresholds as outlined in Part 7 of the NSW *Biodiversity Conservation Regulation 2017* (BC Reg) and includes those listed in **Table 6** below.

*Table 5: Biodiversity Offset Scheme (BOS) Triggers*

| Potential Trigger | Threshold | Triggered | Comment |
|---|---|---|---|
| Area threshold | > 0.5 ha of native vegetation clearance based on a minimum lot size of one to 40 hectares | No | Clearing not expected to exceed the 0.5 ha clearing threshold. |
| Biodiversity Values Map (BVM) | Impacts to any areas identified on the BVM | Yes | The property is on the BVM. |
| State Significant Development (SSD) | BOS automatically triggered by all SSD | No | The proposed is a modification to a SSD. In this instance, it's not an automatic trigger of the BOS. |

Section 30A of the Biodiversity Conservation (Savings and Transitional) Regulation 2017 stipulates that a BDAR is required to be submitted and taken into consideration if Division 4 of Part 7 of the BC Act would have applied to the original development (as proposed to be modified) if planning approval had been granted after the commencement of the new Act. Section 30A(2)(c) however indicates that a biodiversity development assessment report is not required to be submitted if the authority or person determining the application for modification (or determining the environmental assessment requirements for the application) is satisfied that the modification will not increase the impact on biodiversity values

This proposal involves in part the erection of a grain storage shed within the footprint and confines of the existing emergency grain storage bunker. No native vegetation will be disturbed by this Modification Proposal. Given these circumstances it is our view that the Modification Proposal will not increase impacts on biodiversity vales and therefore a biodiversity development assessment report is not required for this modification proposal.

### 8.1.7 FEDERAL ENVIRONMENT AND BIODIVERSITY CONSERVATION (EPBC) ACT

The EPBC Act establishes a process for assessing the environmental impact of activities and developments where MNES may be affected. Under the Act any action which "has, will have, or is likely to have a significant impact on a matter of national environmental significance" is defined as a "controlled action", and requires approval from the Commonwealth Department of Climate Change Energy, the Environment and Water who is responsible for administering the EPBC Act.

This proposal involves in part the erection of a grain storage shed within the footprint and confines of the existing emergency grain storage bunker. No native vegetation will be disturbed by this Modification Proposal. Given these circumstances it is our view that the Modification Proposal will not increase impacts on biodiversity vales.

## 8.2 THE LIKELY IMPACTS OF THE DEVELOPMENT, INCLUDING ENVIRONMENTAL IMPACTS ON BOTH NATURAL AND BUILT ENVIRONMENTS, AND SOCIAL AND ECONOMIC IMPACTS IN THE LOCALITY

### 8.2.1 RISK ASSESSMENT OF POTENTIAL ENVIRONMENTAL IMPACTS

The purpose of this section of the Modification Report is to provide a risk assessment of the potential environmental impacts associated with the modification proposal. This section (**Table 7**) compares the potential impacts from the proposed modification against the approved project. The comparison uses the key environmental impacts assessed in the original EA that supported the original MP06_0228 and summarises the relative change in environmental impacts associated with the proposed modification.

*Table 6 - Risk Assessment*

| *RELATIVE CHANGE IN ENVIRONMENTAL IMPACT* | *ADDITIONAL MANAGEMENT OR MITIGATION MEASURES REQUIRED* | *SIGNIFICANCE OF ISSUE WITH THIS MODIFICATION PROPOSAL* |
|---|---|---|
| **Air Quality (including Odour) Assessment** | | |
| One of the primary issues that was addressed in the original EA for the Shoalhaven Starches Expansion Project concerned the need for a comprehensive air quality assessment (including odour assessment) and reduction of odours as part of the project.<br>The Modification Application is supported by an Air Quality Assessment prepared by GHD.<br>The Air Quality Impact Assessment concludes<br><br>*Based on the qualitative, risk-based assessment undertaken in accordance with the IAQM (2024) guidance, MOD34 is not expected to result in significant adverse air quality impacts. During construction, a medium risk of dust impacts has been identified, which is consistent with similar construction activities and can be effectively managed through the implementation of standard and site-specific mitigation measures. For track-out and operational activities, the risk of dust impacts is assessed as low.*<br><br>*Operational dust emissions associated with MOD34 would occur intermittently and for short durations only, primarily during active grain transfer activities associated with contingency grain supply events. For the purposes of this assessment, operational impacts have been conservatively assessed based on the higher-frequency operational scenario anticipated prior to the commissioning of MOD26.*<br><br>*Overall, MOD34 is considered a minor modification with respect to emissions to air. The proposed grain storage* | The Air Quality Assessment prepared by GHD proposes mitigation measures to further minimise the risk of dust impacts at receptor locations during construction works include:<br>• *Inform the residents at 92 Hanigans Lane when construction activities (i.e. delivery of steel framing components) are proposed and provide them with a number to contact during construction if they have any questions or complaints*<br>• *Prepare a dust management plan for the construction and operation of the modification*<br>• *Inform construction workers of activities likely to cause high dust emissions and appropriate methods, including:*<br>  ○ *Avoid scabbling (concrete roughening) where possible.*<br>  ○ *Store sand and other aggregates in bunded areas and keep them damp unless drying is required for a specific task; if so, apply additional controls.*<br>  ○ *Keep bags of fine powdered materials sealed after use and store them to prevent dust emissions.*<br>• *Use dust suppression watering via water truck or cart during high dust generating activities*<br>• *Reducing or stopping construction works if dust plumes are observed travelling off site beyond the site boundary, particularly towards receptors to the west (i.e. towards 92 Hanigans Lane)*<br>• *Covering of loads during transport to prevent loss of material during haulage* | This matter is further addressed in **Section 8.2.2** of this Modification Report, and the full report is attached in **Attachment 2**. |

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| *shed represents an improvement over the existing MOD28 open-air bunker by reducing the potential for wind-blown dust generation and off-site dispersion. Any use of the shed following the commissioning of MOD26 would be limited to infrequent emergency events only and would not result in material ongoing air quality impacts.* | • *Minimise grain drop heights when transferring grain between haulage trucks and the stockpile where possible* | |
| Transport and Traffic | | |
| The Mod 28 application was supported by a Traffic Impact Assessment (TIA) prepared by ARC Traffic & Transport ("ARC"). The TIA prepared by ARC concluded that:<br>• *All access to the new infrastructure – both during construction and operation - will be provided via the intersection of Bolong Road & Hanigans Lane, which provides for the movements of the largest vehicles accessing the Farm in accordance with its designation as a RAV route.*<br>• *The additional trip generation of the new storage facility once operational is anticipated to be very moderate, averaging approximately 6 truck trips per hour during short inbound truck periods. This level of trip generation would have no impact on the operation of the key local intersections, and moreover would likely only occur once or twice a year.*<br>• *The additional trip generation during the construction of new storage facilities is similarly anticipated to be very minor at up to 6 truck trips per day and 4 – staff vehicle trips in the peak periods. This level of trip generation would have no impact on the operation of the key local intersections, and moreover occur only for a short 3 month period.*<br>• *Parking for construction staff will be fully accommodated within the Farm.* | No additional management or mitigative measures are proposed in terms of this issue. | This issue is not further addressed in this Modification Report. |

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| • *The Project Manager engaged by Manildra to undertake the construction works will implement comprehensive construction management strategies and protocols through the construction period to maximise the on and off-site safety of staff and the general public;*<br><br>• *The broader CTMP will be reviewed throughout the construction period, and appropriately updated as required.*<br><br>Further the TIA concluded that:<br><br>*In summary, arc traffic + transport has determined that MOD 28 is entirely supportable further to access, traffic and parking considerations*<br><br>This Modification Proposal does not seek to increase the amount of grain that is transported to this part of the site. Nor does it seek to change the transportation measures addressed as part of the TIA prepared by ARC and that supported Mod 28. Under these circumstances no further consideration of this issue is considered necessary by this Modification Proposal. | | |
| Site Contamination | | |
| The proposal seeks to extend the approved use of this part of the site for emergency grain storage. Under Mod 28, as excavation works were not proposed, and as the site was to be filled to raise the level of the ground surface for the grain bunker, it was considered that site contamination was not a significant issue that required further assessment.<br><br>Given this proposal involves the continuation of this approved use; and for the construction of a shed on this same area, it is | No additional management or mitigative measures are proposed in terms of this issue. | Not a key issue. This issue is not further addressed in this Modification Report. |

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| considered that site contamination remains an issue that is not significant and therefore does not require further assessment | | |
| **Acid Sulphate Soils** | | |
| An Acid Sulphate Soils Management Plan has been formulated for the site in accordance with Condition 21 of the original Project Approval. This proposal involves the placement of fill over the development site to raise the storage bunker level. Under these circumstances it is not envisaged that the proposal will involve excavation works that are likely to disturb ASS. | No additional management or mitigative measures are proposed in terms of this issue. | Not a key issue. This issue is not further addressed in this Modification Report. |
| **Noise** | | |
| The Noise Impact Assessment prepared by GHD indicates that the noise mitigation and management measures outlined in the operational noise management plan for the temporary grain storage facility (MOD28) should continue to be implemented once the facility becomes permanent. An assessment of potential annoying noise characteristics was undertaken and confirmed that the proposed modification would not generate tonal or low-frequency noise. Overall, the assessment concludes that the proposed modification is not anticipated to contribute to the site's overall noise levels, as predicted noise emissions remain below the applicable design noise criteria. | The Noise Impact Assessment prepared by GHD proposes mitigation measures to mitigate potential noise during both construction of the proposal grain storage shed and during operation of the existing grain storage bunker or the proposed grain storage shed.<br>Construction noise mitigation measures to be actioned are:<br>• Site inductions<br>• Behavioural practices<br>• Implement community consultation measures<br>• Construction hours and scheduling<br>• Equipment selection<br>• Use and siting of plant<br>• Plan worksites and activities to minimise noise<br>• Minimise disturbance arising from delivery of goods to construction sites<br>Operational noise impacts associated with MOD34 are predicted to comply with the relevant noise criteria. The mitigation and management measures detailed in the Shoalhaven Starches MOD28 Operational Noise Management Plan (SoundIn, 2023) should continue to be | Noise impacts are further addressed in **Section 8.2.3** of this Modification Report and refer to **Attachment 1** for the full report. |

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| | implemented for MOD34; these are:<br>• All employees, contractors and sub-contractors are to receive an induction prior to commencing works on site – as required;<br>• All plan and mobile equipment used on site will be fitted with properly maintained noise suppression devices and non-tonal reversing alarms in accordance with the manufacturer's specifications. Defective plant will not be used operationally until fully repaired - ongoing;<br>• All plant and equipment used on the site will be maintained in an efficient condition, in accordance with the manufacture's specification. If a piece of plant equipment is found to exceed the noise levels included in modelling the following will occur;<br>- If available and appropriate, a quieter piece of plant or equipment will be utilised in place of the offending plant/equipment;<br>- On-site mitigation will be reviewed and/or the noise assessment will be repeated with the accurate noise level of the plan/equipment to confirm compliance with noise criteria - ongoing.<br>• The grain auger should only be operated in close proximity to the grain bunker site and not in remote locations closer to residential areas – ongoing;<br>• The mobile grain auger is selected such that the sound pressure level is no greater than 85dBA at one metre from the unit – prior to operations;<br>• All inbound grain deliveries would be scheduled during day-time period where possible - ongoing;<br>• Where evening and nighttime deliveries are unavoidable, trucks entering the bunker site outside of daytime hours to unload grain, should not be left to idle unnecessarily for extended periods of time - ongoing; | |

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| | • Prior to the commencement of operations, the local community will be notified via the Community Newsletter, which is to be posted out to nearby residents – prior to operations. | |
| **Hazards** | | |
| The Modification Proposal is supported by a Site Hazard Analysis prepared by Pinnacle Risk Management that does not include any recommendations for this Modification Proposal. | No additional management or mitigative measures are proposed in terms of this issue. | This issue is further addressing **Section 8.2.4** of this Modification Report, refer to the full report in **Attachment 3**. |
| **Flooding** | | |
| The subject site is inundated during the 1% Annual Exceedance Probability (AEP) flood event by floodwaters from the Shoalhaven River.<br><br>The Mod 28 application for the existing grain storage bunker was supported by a Flood Compliance Assessment prepared by WMA Water. This assessment concluded the changes in flood level due to construction of the temporary grain storage bunker would be negligible.<br><br>As the footprint of the proposed works associated with this Modification will be confined to within the footprint of the existing temporary grain storage bunker, it is not anticipated that the construction of the shed will result in any additional flooding issues that have already been considered by this previous assessment. Under these circumstances no further consideration of this issue is considered necessary by this Modification Proposal. | No additional management or mitigation measures proposed. | Not a key issue. This issue is not further addressed in this Modification Report. |

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| **Waste Management** | | |
| The proposed modifications will not alter the way waste is managed on the site. The site is already subject to an existing Waste Management Plan prepared in accordance with the original Project Approval. | No additional management or mitigation measures proposed, although any approval for this Modification Application should require the existing Waste Management Plan to be revised to incorporate the elements that form part of this Modification Application. | Not a key issue. This issue is not further addressed in this Modification Report. |
| **Site Stormwater Management** | | |
| The Mod 28 project was supported by an Integrated Water Cycle Management Strategy (ICMS) that was prepared to address the provisions of this chapter of the SDCP (Attachment 7). The IWCMS concludes the proposed works are unlikely to generate stormwater pollutants within the site.<br><br>Potential short term stormwater quality impacts from the construction works can, according to Allen Price will be mitigated by the implementation of an erosion and sediment control plan and staged earthworks such that the performance objectives and criteria in Chapter G2 can be satisfied. Allen Price indicates that the proposal is considered adequate from a stormwater management perspective.<br><br>The proposed grain storage shed under this Modification Proposal will sit within the confines of the footprint of the approved emergency grain storage bunker. It is considered the requirements of the IWCMS prepare for Mod 28 will still be applicable for this Modification Proposal. | No additional management or mitigation measures proposed. | Not a key issue. This issue is not further addressed in this Modification Report. |
| **Visual Impact** | | |
| The majority of the works associated with this modification will be situated within to the rear of the existing Wet Weather Storage Ponds and will therefore not be visually prominent with | No additional management or mitigation measures proposed. | The visual impacts associated with this modification proposal are addressed in **Section 8.2.5** |

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| this broader landscape. | | of this Modification Report. |
| **Flora and Fauna** | | |
| The location of the proposed works associated with tis Modification Proposal is cleared of native vegetation. No native vegetation will be required to be disturbed by this Modification Proposal. It is not anticipated that this Modification Proposal will result in any additional ecological impacts. | No additional management or mitigation measures proposed. | Not a key issue. This issue is not further addressed in this SEE. |
| **Effluent Irrigation and Storage** | | |
| This Modification Proposal does not seek to increase production rates associated with the Shoalhaven Starches operations and will not result in any changes to wastewater generated from the Shoalhaven Starches operations. | No additional management or mitigation measures proposed. | Not a key issue. This issue is not further addressed in this Modification Report. |
| **Wastewater Treatment** | | |
| *Water Discharges*<br>The Shoalhaven Starches Factory and Environmental Farm are licensed premises under the Protection of the Environmental Operations Act. Wastewater discharges from the site are licensed by the DEC (EPL 883).<br>The plant has a licensed outfall into the Shoalhaven River. The outfall point is a 50 cm diameter metal pipe discharging at the end of an existing jetty. It also has a cooling water discharge comprising a 50 cm diameter pipe which discharges onto a gabion spillway.<br>Under the terms of the Company's EPL discharge streams associated with the plant include:<br>• river water passed through the boiler condensers and the primary side of the heat exchangers;<br>• boiler water treatment plant regeneration waters; and<br>• pH adjusted glucose plant ion exchange unit regeneration | No additional management or mitigation measures. | Not a key issue. This issue is not further addressed in this Modification Report. |

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| waters.<br>All these must be discharged from the cooling water discharges.<br>The limiting conditions in relation to these discharges include:<br>• The volume of water discharged from the cooling water discharges must not exceed 100,000 kilolitres per day.<br>• The wastewaters discharged at both points shall not exceed a temperature of 32°C.<br>• This Modification Proposal will not involve any changes to these discharge waters. | | |

### 8.2.2 AIR QUALITY ISSUES

GHD were engaged to conduct an Air Quality Assessment for the proposed modifications associated with this Modification Application. This section of the Modification Report provides a summary of the findings of the GHD Air Quality Impact Assessment for this Modification Application.

#### Assessment of potential air quality impacts

##### Modification implications to air quality

A review of the proposed construction methodology and operational activities associated with MOD34 has been undertaken by GHD to identify potential emissions to air arising from the Modification Proposal. The primary potential emission to air, according to GHD, is particulate matter (dust), generated during construction activities and during mechanical handling of grain when it is delivered to, and removed from, the existing grain storage bunker or proposed grain storage shed.

The proposed Modification Proposal is not expected to generate odour emissions and would not contribute to, or alter, existing odour impacts from the Shoalhaven Starches facility according to GHD.

Assessment of the existing grain storage bunker is presented in the Modification 28 – Emergency grain storage air quality assessment (GHD, 2022a). This identified emissions to air were considered minor and would include infrequent dust emissions of relatively low magnitude, which would occur for short periods of time. Continued operation of the grain storage bunker has therefore not been further assessed by GHD.

During operation of the proposed grain storage shed, dust emissions may be generated during grain transfer activities associated with delivery to the storage shed and subsequent transfer of grain to the Manildra factory during periods of supply disruption. These activities are expected to occur intermittently and for relatively short durations. In a typical contingency event, dust emissions associated with shed operation are anticipated to occur for a maximum continuous period of approximately one week, after which the stored grain supply would be exhausted.

For the purposes of their assessment, air quality impacts associated with this Modification Proposal have been conservatively assessed by GHD based on the higher-frequency operational scenario anticipated prior to the commissioning of MOD 26. Following the commissioning of MOD 26, the grain storage shed would be retained for emergency business continuity purposes only, with use limited to infrequent, short-duration contingency events. Any post-MOD 26 operation would therefore result in substantially lower emissions than those considered in this assessment.

Overall, GHD indicate that emissions to air from the operation of this Modification Proposal are expected to occur only intermittently and primarily during active grain

transfer activities. Compared to the existing MOD28 open-air grain bunker, the proposed fully enclosed grain storage shed represents, according to GHD, an improvement in terms of air quality outcomes, as it would significantly reduce the potential for wind-blown dust generation and off-site dispersion.

In addition, the proposed grain storage shed would allow Shoalhaven Starches to procure grain directly from farm locations and transport it directly to the site, reducing the need for intermediate grain handling, receival and storage activities. This streamlined supply pathway would further reduce the potential for dust generation associated with grain handling operations.

## Assessment of Potential Dust Impacts

*Construction Dust Detailed Assessment*

A risk-based approach in accordance with Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction (Institute of Air Quality Management, 2024) was adopted by GHD to assess potential particulate matter impacts during the construction of the proposed modification.

The IAQM guidance recommends that a detailed risk assessment be undertaken where there is a human receptor within 250 m or an ecological receptor within 50 m of the construction footprint, or where there is a human or ecological receptor within 50 m of any haulage routes up to 250 m from the site entrance.

The location of the proposed grain storage shed is shown in **Figure 8.** Nearby sensitive human receptors were identified by GHD based on a review of aerial imagery. All identified receptors (R1, R2 and R3) are residential dwellings.

Although the identified off-site receptors (R1–R3) are located approximately 300–400 m from the proposed works and therefore beyond the IAQM screening distances for mandatory detailed assessment, a detailed risk assessment has nevertheless been undertaken by GHD. This approach has been adopted on a conservative basis, noting the presence of onsite workers within the Modification Proposal area and to robustly characterise potential construction-related dust risks associated with the proposed modification.

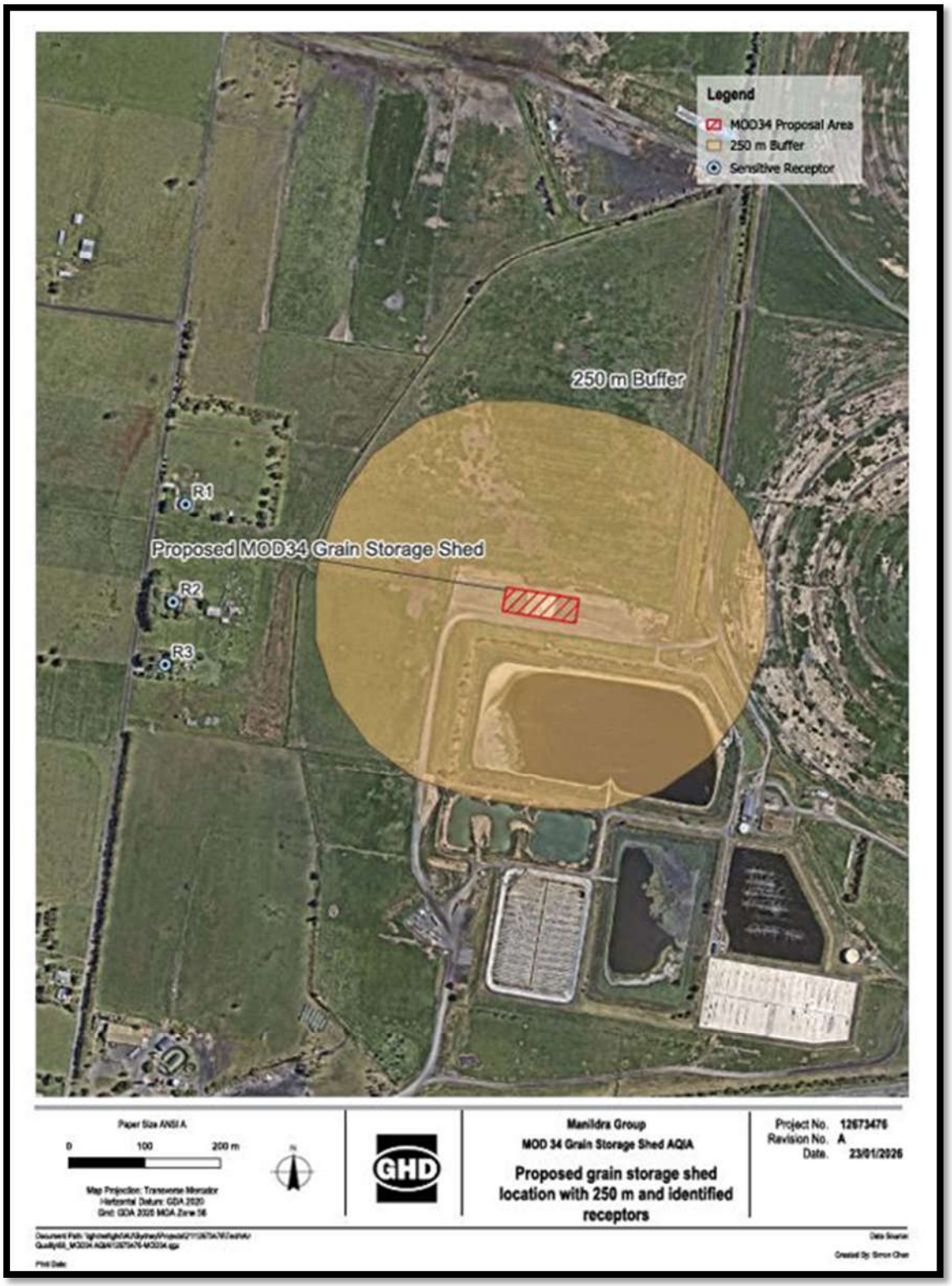


Figure 8 : Proposed grain storage shed location with 250 m and identified receptors (Source GHD)

*Risk identified*

The construction and operation of the Modification Proposal have been divided into five activity groups by GHD that have potential to cause dust emissions. These activities are demolition, earthworks, construction, track-out and operation. To identify the risk of dust impact from each activity group, the size and scale of each activity must be determined as well as the sensitivity of the surrounding environment.

*Potential dust emission magnitude*

The size and scale of the activities are determined by not only the physical size of the project but other factors that are likely to increase or decrease the amount of dust created during each activity. Table 3.1 outlines these factors for each activity and if applicable, the resulting size and scale descriptor as defined by the IAQM Guidance.

*Table 7 :Size and scale of activities (Source GHD)*

| Activity | Description | Size and scale descriptor of dust emission magnitude |
|---|---|---|
| Demolition | – The grain storage bunker onsite is proposed to be demolished<br>– Total building volume to be demolished of <12,000 $m^3$ | Small |
| Earthworks | – The total area of the MOD28 bunker is approximately 6,868 $m^2$ (GHD, 2022), as the proposed shed will be constructed within this area, the total grain storage shed footprint area is < 6,868 $m^2$ | Small |
| Construction | – The total building volume is approximately 13,000 $m^3$, which is above 12,000 $m^3$ | Medium |
| Track-out | – Estimated that there will be < 10 vehicle movements per day during construction and earthworks<br>– Vehicle movements may occur on a short length of unpaved road | Small |
| Operation | – Dust emissions could be generated from mechanical transfers of grain when it is delivered to the storage shed and again when it is taken from the shed to the factory site. This is expected to be a localised emissions source of relatively low magnitude. | Small |

*Sensitivity of the area*

Receptor sensitivity

The sensitivity of the surrounding environment is determined, according to GHD, by the number of high risks, medium risk and low risks receptors within a certain proximity of the construction footprint. High sensitivity receptors include dwellings, educational institutions, and medical facilities. Medium sensitivity receptors include commercial, and industrial premises. Low sensitivity receptors include farmland, recreational parklands, and other public spaces.

The sensitivity is determined for three areas of concern, these are:

- Sensitivities of people to dust soiling effects
- Sensitivities of people to the health effects of PM10
- Sensitivities of receptors to ecological effects.

According to the IAQM Guidance, it is not necessary to provide an exact count of individuals for assessing the number of sensitive receivers; a residential property is generally treated as a single receiver. For non-residential receptors, professional judgment is applied to estimate the number of sensitive receptors. For instance, temporary onsite workforce is categorised as "less than 100 persons". However, since workers are not expected to be exposed to the onsite dusts for more than eight hours (at any one time) and based on the IAQM Guidance which classifies workers as medium sensitivity receptors, the temporary onsite workforces are considered medium sensitivity receptors.

Ecological receivers in the vicinity of the site are considered to meet the definition of low sensitivity receptors in accordance with the IAQM Guidance.

Sensitivity of an area

The sensitivity of each area to dust deposition effects (as outlined in Table A.3 in Appendix A) is determined by receptor sensitivity (classified as medium for temporary onsite workers and low for ecological receptors) and the number of sensitive receptors located within the site footprint.

The sensitivities for each area for all construction activities are outlined in Table 9.

*Table 8 : Categorisation of the sensitivity of receptors to dust deposition, human health and ecological effects (Source GHD)*

| Potential impact | Receiver category/ sensitivity | Sensitivity of the area | Justification |
|---|---|---|---|
| Dust soiling | Temporary onsite workers and operational staff | Medium | – Receptor sensitivity: Medium<br>– Less than 100 people working onsite for less than 8 hours for any one time |
| Human health – Dust effects ($PM_{10}$) | Temporary onsite workers and operational staff | Low | – Receptor sensitivity: Medium<br>– The annual average $PM_{10}$ concentration from the closest three DCCEEW air quality monitoring stations is < 24 µg/m³ (based on measurements recorded at Albion Park South, Wollongong and Kembla Grange stations for the period between 01/01/2021 – 31/12/2025)<br>– Less than 100 people working onsite for less than 8 hours for any one time |
| Ecological effects | Ecological | Low | – Receiver sensitivity: Low<br>– No high or medium sensitive ecological features within 50 m of the construction activity |

According to GHD the sensitivity of the area to the identified receivers is assessed to be medium to dust soiling and low to human health and ecological effects.

*Risk of Impacts*

The risk matrix uses the sensitivity and scale to determine the risk of dust impacts on the surrounding receptors. Table 10 outlines the risk matrix determined for the construction and operation of the temporary emergency grain storage bunker. The risk identified for construction activities was Medium Risk while the risk identified for all other activities was Low risk for all sensitivity types.

*Table 9 : Risk Matrix for dust impacts during construction (Source: GHD)*

| Impact | Risk | | | | |
|---|---|---|---|---|---|
| | Demolition | Earthworks | Construction | Track-out | Operation |
| Dust soiling | Low risk | Low risk | Medium risk | Low risk | Low risk |
| Human heath | Negligible | Negligible | Low risk | Negligible | Negligible |
| Ecological | Negligible | Negligible | Low risk | Negligible | Negligible |

## Cumulative impact

Activities which would contribute to cumulative impacts according to GHD include:

- Construction of the proposed grain storage shed concurrently with operation of the grain storage bunker
- Ongoing Shoalhaven Starches site operations with operation of the grain storage bunker, and/or construction and operation of the proposed grain storage shed

Distance between the proposed modifications and the nearest receptors is more than 300 metres, and the risk of residual impacts after implementation of mitigation measures according to GHD is expected to be low and not significant. Therefore, the risk of cumulative impacts from construction of the proposed grains storage shed and operation of the grain storage bunker is anticipated by GHD to be minimal.

Predicted particulate impacts from the Shoalhaven Starches site were most recently assessed in the Shoalhaven Starches Modification 26 – Air Quality Impact Assessment (GHD, 2025). Compliance with the assessment criteria was predicted at all receptors for all particulate matter fractions. Predicted particulate impacts assessed for MOD26 were highest at the commercial receptors to the west of the site near the Shoalhaven Starches Factory and packing plant, rather than towards the environmental farm.

GHD indicate that emissions to air from the proposed modifications are not anticipated to materially increase emissions from the Shoalhaven Starches site, and risk of cumulative impacts is anticipated to be minimal.

Recommended mitigation measures

Specific mitigation measures proposed by GHD to further minimise the risk of dust impacts at receptor locations during construction works include:

- Inform the residents at 92 Hanigans Lane when construction activities (i.e. delivery of steel framing components) are proposed and provide them with a number to contact during construction if they have any questions or complaints
- Prepare a dust management plan for the construction and operation of the modification
- Inform construction workers of activities likely to cause high dust emissions and appropriate methods, including:
    - Avoid scabbling (concrete roughening) where possible.
    - Store sand and other aggregates in bunded areas and keep them damp unless drying is required for a specific task; if so, apply additional controls.
    - Keep bags of fine powdered materials sealed after use and store them to prevent dust emissions.
- Use dust suppression watering via water truck or cart during high dust generating activities
- Reducing or stopping construction works if dust plumes are observed travelling off site beyond the site boundary, particularly towards receptors to the west (i.e. towards 92 Hanigans Lane)
- Covering of loads during transport to prevent loss of material during haulage
- Minimise grain drop heights when transferring grain between haulage trucks and the stockpile where possible

The Air Quality Assessment prepared by GHD concludes:

> *An air quality assessment has been undertaken to support Modification 34 (MOD34), which proposes to extend use of the existing temporary open-air grain bunker on a permanent basis, and construct a fully enclosed grain storage shed within the approved MOD28 footprint.*
>
> *Based on the qualitative, risk-based assessment undertaken in accordance with the IAQM (2024) guidance, MOD34 is not expected to result in significant adverse air quality impacts. During construction, a medium risk of dust impacts has been identified, which is consistent with similar construction activities and can be effectively managed through the implementation of*

*standard and site-specific mitigation measures. For track-out and operational activities, the risk of dust impacts is assessed as low.*

*Operational dust emissions associated with MOD34 would occur intermittently and for short durations only, primarily during active grain transfer activities associated with contingency grain supply events. For the purposes of this assessment, operational impacts have been conservatively assessed based on the higher-frequency operational scenario anticipated prior to the commissioning of MOD26.*

*Overall, MOD34 is considered a minor modification with respect to emissions to air. The proposed grain storage shed represents an improvement over the existing MOD28 open-air bunker by reducing the potential for wind-blown dust generation and off-site dispersion. Any use of the shed following the commissioning of MOD26 would be limited to infrequent emergency events only and would not result in material ongoing air quality impacts.*

### 8.2.3 NOISE IMPACT ISSUES

GHD has undertaken a noise impact assessment of the proposed Modification Application (**Attachment 1**). This section of the report provides a summary of the findings of the Environmental Noise Impact Assessment for this Modification Application.

The assessment considered noise impacts associated with both the construction of the proposed grain storage shed and the ongoing operation of the existing grain storage bunker, as well as the operation of the grain storage shed once constructed. Overall, the assessment concludes that the proposed modification is not anticipated to contribute to the sites overall noise levels, as predicted noise levels remain below the design noise criteria.

Notwithstanding the above, the assessment identifies a range of mitigation measures to be implemented during both the construction and operational phases of the development, as outlined in **Table 11** and **Table 12** below.

*Table 11 – Proposed Construction Noise Mitigation Measures (Source: GHD)*

| Action required | Details |
|---|---|
| **General controls** | |
| Site inductions | All employees, contractors and subcontractors are to receive an environmental induction. The induction should include:<br>– All relevant project specific and standard noise mitigation measures<br>– Relevant licence and approval conditions<br>– Permissible hours of work<br>– Location of nearest sensitive receivers<br>– Construction employee parking areas<br>– Designated loading/unloading areas and procedures<br>– Site opening/closing times (including deliveries)<br>– Environmental incident procedures. |
| Behavioural practices | No swearing or unnecessary shouting or loud stereos/radios on site.<br>No dropping of materials from height, throwing of metal items and slamming of doors. |
| Implement community consultation measures | Contact will be established with the local residents and the construction program and progress communicated on a regular basis, particularly when noisy activities are planned.<br>Affected receivers will be notified of the intended work, its duration and times of occurrence.<br>This may include a local community update letters for specific construction activities and a project info line. |
| Implement complaints management measures | Complaints will be managed in accordance with the procedure outlined below. Signage at each site will clearly and visibly provide a contact number and name to receive complaints and enquiries about construction.<br>In this instance the response would be to:<br>– Verbally respond to complainant<br>– Provide a written response within seven calendar days if the complaint cannot be resolved verbally<br>– Log the complaint, and any actions taken with regards to the complaint within a complaints register<br>– Undertake monitoring at the complainant's residence(s)<br>– Investigate the nature and reasons of the impact<br>– Investigate and implement further mitigation measures to minimise the impact |
| **Source controls** | |
| Construction hours and scheduling | Comply with the recommended standard construction hours outlined by the ICNG, unless out of hours work has been approved.<br>No truck movements before 7.00 am or after 6.00 pm.<br>For any work that would take place outside of normal construction hours:<br>– Undertake an assessment of the potential noise impacts associated with the proposed activities and outline specific mitigation measures.<br>– Residents potentially affected by such activities will be notified at least five days before hand. |

*Table 11 continued – Proposed Construction Noise Mitigation Measures (Source: GHD)*

| Action required | Details |
|---|---|
| | – Minimise consecutive night activities in the same locality and provide periods of quiet if activities occur for extended periods during the night.<br>– Conduct activities in a manner that eliminates or minimises the need for audible warning alarms. |
| Equipment selection | Use quieter construction methods where reasonable and feasible (e.g. vibratory or bored piling instead of impact hammer piling). |
| Use and siting of plant | Simultaneous operation of noisy plant within discernible range of a sensitive receiver is to be avoided.<br>The offset distance between noisy plant and adjacent sensitive receivers is to be maximised.<br>Plant used intermittently to be throttled down or shut down. Noise-emitting plant to be directed away from sensitive receivers. |
| Plan worksites and activities to minimise noise | Plan traffic flow, parking and loading unloading areas to minimise reversing movements within the site. |
| Minimise disturbance arising from delivery of goods to construction sites | Loading and unloading of materials/deliveries is to occur during standard construction hours.<br>Contractors are to avoid dropping materials from height where practicable, during loading and unloading.<br>Delivery vehicles to be fitted with straps rather than chains for unloading, wherever possible. |

*Table 12 – GHD Proposed Operational Noise Mitigation Measures (Source: GHD)*

| ID | Management Measure | Timing | Responsibility |
|---|---|---|---|
| NM01 | All employees, contractors and subcontractors are to receive an induction prior to commencing work on site. The induction will include:<br>– Existence and requirements of this NMP<br>– Relevant legislation and guidelines<br>– Location of noise sensitive receivers.<br>– Complaints handling procedures.<br>– How to implement noise management measures.<br>– Specific responsibilities to minimise impacts on the community from noise. | As required | Site Manager |
| NM02 | All plant and mobile equipment used on site will be fitted with properly maintained noise suppression devices and non-tonal reversing alarms in accordance with the manufacturer's specifications. Defective plant will not be used operationally until fully repaired. | Ongoing | Site Manager |
| NM03 | All plant and equipment used on the site will be maintained in an efficient condition, in accordance with the manufacturers' specification. If a piece of plant or equipment is found to exceed the noise levels included in modelling, the following will occur:<br>– If available and appropriate, a quieter piece of plant or equipment will be utilised in place of the offending plant / equipment.<br>– On-site mitigation will be reviewed and/or the noise assessment will be repeated with the accurate noise level of the plant / equipment to confirm compliance with noise criteria. | Ongoing | Site Manager |
| NM04 | The grain auger should only be operated in close proximity to the grain bunker site and not in remote locations closer to residential areas. | Ongoing | Site Manager |
| NM05 | The mobile grain auger is selected such that the sound pressure level is no greater than 85 dBA at one metre from the unit. | Prior to operations | Site Manager |

*Table 12 continued – GHD Proposed Operational Noise Mitigation Measures (Source: GHD)*

| ID | Management Measure | Timing | Responsibility |
|---|---|---|---|
| NM06 | All inbound grain deliveries would be scheduled during day-time period where possible. | Ongoing | Site Manager |
| NM07 | Where evening and night time deliveries are unavoidable, trucks entering the bunker site outside of daytime hours to unload grain, should not be left to idle unnecessarily for extended periods of time. | Ongoing | Site Manager |
| NM08 | Prior to the commencement of operations, the local community will be notified via the Community Newsletter, which is to be posted out to nearby residents. | Prior to operations | Site Manager |

The Noise Impact Assessment concluded that predicted noise levels associated with the proposed modification comply with the applicable design noise goals at all sensitive receivers. The noise mitigation and management measured outlined in the operational noise management plan for the temporary grain storage facility (Mod 28) and outlined above in Table 12 are to continue to be implemented once the facility becomes permanent.

An assessment of potential annoying noise characteristics determined that the proposed modification would not generate tonal low-frequency noise. Cumulative noise scenarios, including current operations, the proposed modification, approved but not yet constructed modifications and the railway line, were also assessed. While low-frequency noise from the existing site operations were identified at sensitive receivers and exceedances of EPL noise limits were noted, these attribute to existing noise sources and are subject to ongoing compliance monitoring under the sites bi-annual acoustic compliance reporting.

Overall, the proposed modification is not anticipated to contribute to the sites overall noise levels, with predicted noise emissions remaining below the applicable design noise criteria.

### 8.2.4 SITE HAZARD ANALYSIS

Pinnacle Risk Management were engaged to undertake a Site Hazard Analysis for the proposed modifications. A copy of Pinnacle Risk Management's report in connection with this Modification Application is included as **Attachment 3** to this Modification Report.

Given that grain and grain dust can be present within the proposed shed associated with this Modification Proposal then according to Pinnacle Risk Management the main potential hazardous events are fires and dust explosions.

Pinnacle Risk Management indicates that propagation from the proposed grain storage shed that forms part of this Modification Proposal, is not expected given the remote location and open adjacent area, e.g. Pond 6. The explosion overpressures also do not travel off-site, therefore, there is no off-site contribution to risk from this event.

Given these circumstances, Pinnacle Risk Management make no recommendations for the proposed grain storage shed as part of this Modification Proposal.

### 8.2.5 VISUAL IMPACT

The Shoalhaven Starches factory site is situated on Bolong Road, the gateway to Bomaderry, within an area currently containing a mixture of rural and industrial land uses. These different land uses contrast with each other and result in a mixed visual character.

The rural areas, much of which comprises the Shoalhaven Starches Environmental Farm, are generally flat to gently undulating and planted with pasture grasses. These areas have a typical rural/agricultural character, common throughout the region.

The approved emergency grain storage bunker is located to the rear of the wet weather storage ponds associated with Shoalhaven Starches Waste Water Treatment Plant complex. The Waste Water Treatment Plant complex is located within the overall Environmental Farm and situated opposite the former Australian Paper Mill site.

The existing wet weather storage ponds are visually prominent when viewed from along the northern side of Bolong Road. The location of the approved emergency grain storage bunker is situated to the rear of the existing wet weather storage ponds when viewed from along Bolong Road, and therefore partially screened from view from along Bolong Road.

The potential vantage points from where the approved emergency grain storage and the proposed grain storage shed associated with this Modification Proposal may be visible (see **Figure 9**) would include:

- The Princes Highway – views of the Environmental Farm are possible from various vantage points along the Princes Highway, however the visibility of that part of the Environmental Farm associated with this Modification Proposal is reduced by virtue of the distance between the plant; the intermittent nature of the views; a rise in topography which screens the site from view; and vegetation.
- Burraga (Pig) Island – Burraga Island is situated in the middle of the Shoalhaven River and provides the closest vantage point to the southern boundary of the site. The island however is privately owned and not accessible to the public. Vegetation screening along the riverbank adjacent to the site also reduces the visibility of the location of the works associated with this Modification Application.
- Bolong Road – Bolong Road runs along the frontage of the site. Views of the Wet Weather Storage Ponds are possible when travelling in either an easterly or westerly direction along the road. Some attempts have been made to provide tree screening along the boundaries to "soften" the appearance of the existing Wet Weather Storage Ponds complex. The location of the approved emergency grain storage bunker is situated to the rear of the existing wet weather storage ponds when viewed from along Bolong Road, and therefore partially screened from this vantage point.
- Hanigans Lane – Hanigans Lane forms the eastern boundary of the subject site and connects with Bolong Road. Hanigans Lane is the main vehicle access to the Environmental Farm and provides access to a number of rural acreages not associated with the Shoalhaven Starches operations. Hanigans Lane extends to Edwards Avenue and provides an alternative vehicle access into the northern part of the Bomaderry urban area. The approved emergency grain storage bunker is situated approximately 440 metres from Hanigans Lane.
- Nowra Bridge – The Nowra Bridge crosses the Shoalhaven River and provides limited opportunities for views of the factory site. The dominant visual elements from the bridge are the river, vegetation along the riverbanks and the escarpment. The location

of approved emergency grain storage bunker will not be visible from this vantage point.

- Bomaderry urban area – Bomaderry is slightly elevated and some locations within the urban area do have extensive views of the factory site. However, the location of the approved emergency grain storage bunker is not visible from this vantage point.
- Terara – Distant views of the factory site are possible from a number of vantage points in and around the village of Terara on the southern bank of the River. The visual impact of the site however is reduced by distance, the intervening landform of Burraga (Pig) Island and the vegetated riverbanks. The part of the Environmental Farm associated with this Modification Proposal is not however visible from this vantage point.
- Riverview Road – Views of the factory site are available from residential development on the southern bank of the Shoalhaven River. Views of the location of the approved emergency grain storage bunker however are not visible from this vantage point.
- Cambewarra Lookout – Cambewarra lookout is a popular tourist lookout providing panoramic views over the Shoalhaven floodplain and estuary. Shoalhaven Starches, like the other significant industrial sites, is visible from the lookout. The approved emergency grain storage bunker is not readily discernible from this vantage point within the broader landscape.

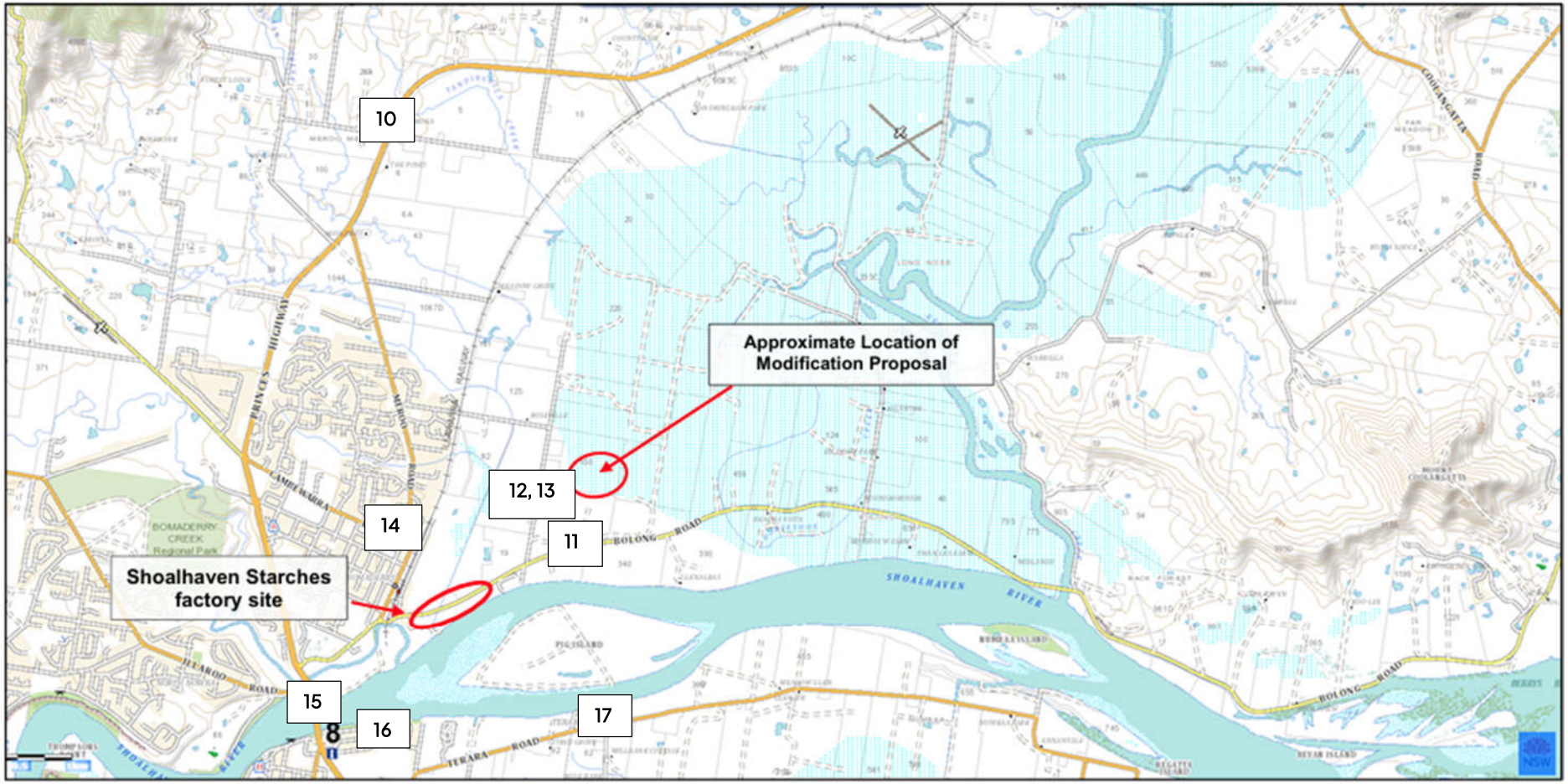


*Figure 9: Vantage Points for Figure 10 - 16.*

*The Princes Highway*

The Shoalhaven Starches factory and the Waste Water Treatment Plant are visible from a section of the Princes Highway between Boxsells Lane and Devitts Lane, Jaspers Brush (refer **Figure 10**). Due to the configuration of the highway and the siting of the factory, only southbound vehicles view the site. Vantage points along this section of the highway are 4.5 to 5.0 km from the site. The site becomes less exposed and is eventually obscured by a rise in topography further south of Boxsells Lane.


Figure 10: View of Shoalhaven Starches Factory from Princes Highway (within vicinity of Devitts Lane). (Site of proposed works not clearly visible from this vantage point.)

Given the distance from these vantage points, the emergency grain storage bunker is barely visible from this vantage point. Stands of vegetation within the rural areas between the vantage point and the grain storage area will largely screen these works from view. The existing emergency grain storage bunker is visible only due to the grain cover comprising a 'white' coloured cover. It is envisaged the grain storage shed will comprise materials that will be more subdued in the landscape. Notwithstanding the existing emergence grain storage bunker is not dissimilar in appearance to many silage bunkers that dot the rural landscape within the Shoalhaven.

Given the distance of these views, and the screening of the site attributed to terrain and vegetation, it is considered the works associated with this modification proposal will not adversely impact on views from these vantage points.

*Bolong Road*

As outlined above the existing emergency grain storage is situated to the north of the existing Wet Weather Storage Ponds No. 6. The pond walls of Wet Weather Storage Pond No. 6 are up to around 7.5 metres AHD. The augur and top of any grain storage, and the roof of the proposed grain storage shed may therefore rise above the pond wall height of this Wet Weather Storage Pond.

However, the location of the works are sited almost 650 metres from the Bolong Road frontage of the site and to the rear of the entire Wet Weather Storage Pond complex which comprises 6 ponds. Further there is screen plantings both along the Bolong Road frontage as well as within the Environmental Farm that assist in screening the works associated with this Modification Proposal from view from this vantage point. It is unlikely that the proposed works will be visually prominent when viewed in this context. **Figure 11** is a view of the wet weather storage pond complex from the Bolong Road frontage of the site.

*Figure 91: View from Bolong Road. Wet weather storage ponds situated between road frontage of site of proposed works and screened from view by existing screen plantings along road frontage and within site*

*Hanigans Lane*

The existing approved emergency grain storage bunker is situated approximately 440 metres from Hanigans Lane. There is a dense tree screen planted along much of the length of the Environmental Farm boundary with Hanigans Lane, which assists with obscuring the Wet Weather Storage Ponds from view from along this boundary (**Figure 12**). There are however intermittent gaps in this boundary screen plantings where the existing emergency grain storage bunker is visible from along specific sections of this laneway (**Figure 13**).

*Figure 102: Existing tree planting screen along Hanigans Lane frontage of site.*


*Figure 113: View of existing emergency grain storage bunker from Hanigans Lane (where no boundary plantings occur.*

The existing emergency grain storage bunker is visible largely due to the a 'white' colour of the cover. It is envisaged the grain storage shed will comprise materials that will be more subdued in the landscape. Notwithstanding the existing emergence grain storage bunker is not dissimilar in appearance to many silage bunkers that dot the rural landscape within

the Shoalhaven. Further Hanigans Lane is not a main thoroughfare and does not carry a significant amount of passing traffic.

Given the distance of these views, and the screening attributed for much of the length of Hanigans Road by boundary plantings, it is considered the works associated with this modification proposal will not adversely impact on views along Hanigans Lane.

*Bomaderry Urban Area*

The township of Bomaderry is slightly elevated and some locations within this urban area have extensive views of the site (refer **Figure 14**).


*Figure 14: View east from corner of Railway Street, and Cambewarra Road, Bomaderry.*

The works associated with this Modification Proposal will be largely or partially screened by existing industrial development and vegetation when viewed from this vantage point.

*Nowra Bridge*

The view from Nowra Bridge to the east is mainly dominated by the river, riparian vegetation and the floodplain (refer **Figure 15**).

The site of the Modification Proposal is not visible from this vantage point.

*Figure 125: View of Shoalhaven Starches factory site from Nowra Bridge, over the Shoalhaven River.*

*Riverview Road*

Figure 16 below provides a view of the Shoalhaven Starches factory site from Riverview Road located on the south side of the Shoalhaven River. This view is from a distance of almost 3 kilometres to the location of the proposed works. Riverside vegetation along both the northern and southern banks of the river, as well as Bomaderry Creek, soften much of the factory's site from view. The proposed works however will not be visible from this vantage point.

Figure 16: View of Shoalhaven Starches factory site from Riverview Road area.

*Terara*

The village of Terara is located over 2 kilometres from the siting of the proposed works. The existing Waste Water Treatment Plant complex is not visible from this vantage point due largely to Pig (Burraga) island that is situated within the Shoalhaven River between Terara and the northern banks of the river as shown in **Figure 17**.

The view from this vantage point is across and over Burraga (Pig) Island. Vegetation on the island and along the northern banks of Shoalhaven River obscure the view of the site. The proposed works will not be visible from this vantage point.

*Figure 137: View north from Terara via (West Berry Street) towards Shoalhaven Starches Waste Water Treatment Plant location.*

*Cambewarra Lookout*

Cambewarra Lookout is situated about 7 km to the north-west of the site. Views from the lookout are from an elevation over 620 m ASL and encompass the Shoalhaven River floodplain and the coast including Jervis Bay. Whilst the factory site and Environmental Farm are visible from this vantage point, due to scale of the view, it would be extremely difficult to make out the works associated with the project from this vantage point.

Overall, it is considered that the proposed works will not create a significant adverse visual impact due, principally, due to the works comprising a scale and character consistent with existing development on the site, and as the proposed works will be situated to the north of the existing wet weather storage pond complex and therefore largely screened from view from major potential vantage points.

## 8.3 THE SUITABILITY OF THE SITE FOR DEVELOPMENT

In our view the site is suitable for the development, and including the development as modified by this application:

- The subject land is suitably zoned, and the proposal satisfies state and local planning provisions applying to the land.
- The modified proposal will not have any significant additional impacts on the environmental values of this locality over and above those envisaged by the original approved development.
- The modified development will not result in any significant adverse effects on local amenity.
- The modification proposal does not seek to alter the approved physical extent of operations. Under these circumstances the proposal will not result in any increased inputs to the production process; increased production; or increases in traffic or other impacts on the locality.

Given these circumstances it is our view that the subject site is suitable for the proposed development.

## **8.4** THE PUBLIC INTEREST

It is our view that the modification proposal is in the public interest:

- The proposal is consistent with the objectives of state and local planning provisions applying to the site.
- The modified proposal will not result in any significant adverse environmental impacts.
- The modified proposal will not result in any significant amenity impacts in the locality.
- The modified proposal will be substantially the same development as that approved under the Project Approval.

# 9.0 CONCLUSION

The Shoalhaven Starches factory located on Bolong Road, Bomaderry produces a range of products for the food, beverage, confectionary, paper and motor transport industries including starch, gluten, glucose and ethanol.

Project Approval MP06_0228 was granted by the Minister for Planning on the 28th January 2009 for the Shoalhaven Starches Expansion Project. This approval also encapsulated previous approvals for the site into one overall approval for the site (at that time).

The Shoalhaven Starches Expansion Project sought to increase ethanol production at the Bomaderry plant in a staged manner from 126 million litres per year to 300 million litres per year. To accomplish the increase in ethanol production, this project required a series of plant upgrades and increase in throughput of raw materials, principally flour and grain.

On the 20 June 2023 the delegate for the Minister for Planning & Public Spaces approved Modification 28 which granted approval for Shoalhaven Starches to establish a temporary emergency grain storage bunker on the Shoalhaven Staches Environmental Farm adjacent to the existing Wastewater Storage Dam 6. This approval was subject to condition 6B which limited the operation of this grain storage bunker for a period of 36 months from the 20 June 2023. This period will expire on the 20 June 2026.

As the Department is aware, Shoalhaven Starches have prepared a separate Modification Application (Mod 26) that will involve the construction of additional grain storage and handling facilities at the former Dairy Farmers site that is now owned by the Manildra Group of Companies. It was anticipated at the time of Mod 28 that this Modification Project would take at least 2 years to be approved, constructed and then commissioned. These Mod 26 works would therefore be unable to address the more imminent concern that forecast weather patterns will potentially have to the Shoalhaven Starches operations before the Mod 26 project was able to be commissioned.

Mod 26 has now been lodged with the Department for their initial review prior to lodgement, and as the Department is aware the scope of the project has changed over time, due to economic circumstances, the Company will be unable to construct the additional grain storage envisaged under Mod 26 in the short to medium-term period.

Further it should be noted that under their Project Approval the Shoalhaven Starches operations are able to produce 1,112,800 tonnes of flour per annum. About 80% of flour yield comes from grain, which therefore equates to 1, 391,000 tonnes per annum, or 3, 810 tonnes per day of grain. The additional grain storage (three silos) envisaged by Mod 26 will provide additional grain storage of approximately 3,600 tonnes per day.

At present the Shoalhaven Starches operations are able to store 3,600 tonnes of grain or a reserve of less than 1 day (0.9 days). Under Mod 26 this will increase to 30,600 tonnes or re reserve equivalent to 8 days.

However, the above assumes that each of the grain silos will be full at all times. In reality as grain is processed the grain storage in the silos in reduced. If a disruption to the rail system

occurs when grain storage in these new silos is depleted, this will result in potential production stoppages at the plant.

The emergency storage of grain as approved by Mod 28 is therefore still required, however, to minimise the effects from the interruption of grain supply to the Shoalhaven Starches site, and as detailed in the Mod 28 application Shoalhaven Starches wish to extend the life of the temporary storage of grain on this site and retain the use of this part of their site for emergency grain storage without any time limit. They therefore seek the deletion of condition 6B.

In addition, they also wish to construct a shed to be sited within the approved grain storage bunker area. The proposed shed will provide several advantages over the grain bunker including:

- The shed will provide a reduced risk of moisture ingress which will extend the life of the stored grain.
- The shed will reduce the potential for vermin and birds to gain access to the grain.
- The shed will provide cost efficiencies as it will be cheaper to operate and maintain.
- The shed will also be easier to operate when compared to the current grain bunker.

This Modification Report has been prepared to address the above Modification Proposal.

The Modification Report is supported by the following expert assessments:

- An Air Quality Impact Assessment prepared by GHD which concludes:

  *Based on the qualitative, risk-based assessment undertaken in accordance with the IAQM (2024) guidance, MOD34 is not expected to result in significant adverse air quality impacts. During construction, a medium risk of dust impacts has been identified, which is consistent with similar construction activities and can be effectively managed through the implementation of standard and site-specific mitigation measures. For track-out and operational activities, the risk of dust impacts is assessed as low.*

  *Operational dust emissions associated with MOD34 would occur intermittently and for short durations only, primarily during active grain transfer activities associated with contingency grain supply events. For the purposes of this assessment, operational impacts have been conservatively assessed based on the higher-frequency operational scenario anticipated prior to the commissioning of MOD26.*

  *Overall, MOD34 is considered a minor modification with respect to emissions to air. The proposed grain storage shed represents an improvement over the existing MOD28 open-air bunker by reducing the potential for wind-blown dust generation and off-site dispersion. Any use of the shed following the commissioning of MOD26 would be limited to infrequent emergency events only and would not result in material ongoing air quality impacts.*

- A Noise Impact Assessment also prepared by GHD which concludes the proposed modification is not anticipated to contribute to the site's overall noise levels, with predicted noise emissions remaining below the applicable design noise criteria.

- A Hazard Assessment prepared by Pinnacle Risk Management that does not include any recommendations for this Modification Proposal. Notwithstanding this, there have been proposed mitigation and management measures outlined in the operational noise management plan for the temporary grain storage facility (MOD28), which are to continue to be implemented once the facility becomes permeant along with additional mitigation measures to be put in place for the construction of the grain storage shed which are outlined in this report.

The Modification Application will not involve changes to the size, scale or intensity of the existing Shoalhaven Starches operations. The modification proposal will not result in any increases in overall production rates from the site, nor will it involve any significant changes in level of impacts arising from the approved development.

The Modification Report includes an assessment of the proposal having regard to the relevant matters for consideration as listed under Section 4.15 of the Environmental Planning and Assessment Act, 1979. The assessment concludes that the modification proposal, within its local context, is satisfactory and should be approved.

Approval for this Modification Application is sought.

**Emma Mytka**
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**Allen Price Pty Ltd**

**Stephen Richardson**
**Registered Planner Plus (EIA) REAP**