



**Planning &  
Environment**

## **ASSESSMENT REPORT**

**Shoalhaven Starches Ethanol Expansion Project  
Section 75W Modification - MP 06\_0228 MOD 9  
Modification to Packing Plant**



Cover photo: Artists impression of modified packing plant  
Source: Environmental Assessment, Cowman Stoddart Pty Ltd March 2016

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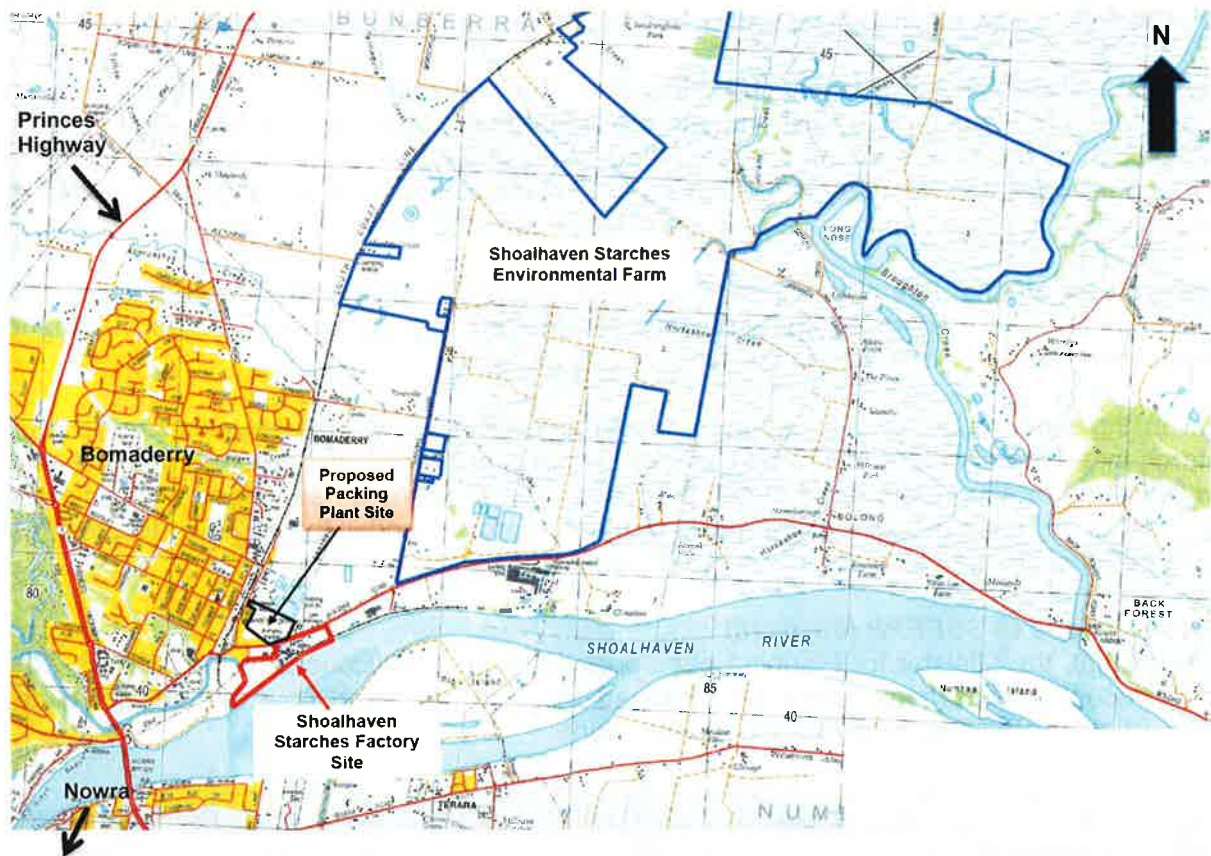
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## 1. BACKGROUND

This report assesses a modification request by Shoalhaven Starches Pty Ltd (the Proponent) to modify an approved packing plant at its factory in Bomaderry on the NSW south coast.

The Proponent operates a factory on Bolong Road, Bomaderry in the Shoalhaven local government area (see **Figure 1**). The factory has been in operation since 1979, processing wheat and grain to produce flour, starch, gluten and ethanol. These products are distributed from the factory by road and rail to local, regional and international markets.

Wastewater generated from processing activities is stored in ponds on a nearby 'environmental farm' owned by the Proponent. The environmental farm covers over 1,000 hectares (ha) of rural land on the northern bank of the Shoalhaven River and contains a wastewater treatment plant and extensive irrigation system for discharging treated wastewater from the factory (see **Figure 1**).



**Figure 1** - Shoalhaven Starches factory, packing plant site and environmental farm, Bomaderry

The factory and environmental farm are located on the eastern fringe of Bomaderry and 2 kilometres (km) to the north-east of the township of Nowra. The factory is surrounded by other industrial uses, including a metal fabrication factory, meat packaging works and a paper mill. The nearest residences are located in Bomaderry, 300 metres (m) to the west of the packing plant site and 500 m north-west of the factory.

Shoalhaven City Council's sewage treatment works is located 180 m to the north of the factory and immediately north of the approved packing plant site. Bomaderry railway station is located 140 m to the west of the packing plant site. The Proponent has a private rail spur line which extends from the railway station across Railway Street and Bolong Road into the factory site.

## 2. SITE HISTORY – PROJECT APPROVALS

### **Shoalhaven Starches Ethanol Expansion Project (06\_0228)**

In January 2009, the then Minister for Planning approved the Shoalhaven Starches Ethanol Expansion Project (SSEEP) under the now repealed Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The SSEEP project approval consolidated all previous planning approvals issued for the site with the aim of simplifying regulation and compliance.

The SSEEP is shown on **Figure 2** and involved:

- staged increases of ethanol production from 126 megalitres a year (ML/yr) to 300 ML/yr following successful implementation of a range of odour controls;
- implementation of mandatory odour controls including a wastewater treatment plant and biofilter; and
- installation of additional infrastructure at the dried distillers grain, ethanol and starch plants, a new packing plant, rail siding and product and wastewater pipelines.

By June 2012, the Proponent had installed the mandatory odour controls and the Department of Planning and Environment (the Department) approved the increase in ethanol production to the maximum volume permitted being 300 ML/yr, subject to conditions. The Proponent continues to carry out quarterly odour monitoring and annual odour audits as required by the project approval

Demand for ethanol has not increased as predicted, therefore the Proponent has installed only some of the approved infrastructure for the ethanol expansion project. Ethanol production levels in 2014 were in the order of 230 ML/yr.

Given the reduced demand for ethanol, the Proponent now proposes to divert more liquid starch into dried starch, and is progressively installing approved infrastructure that will allow optimisation of flour, starch and gluten products. The Proponent has lodged a modification request to increase the size of the packing plant approved under the SSEEP, to provide a range of packaging options for the increased output of dried products.

### **Modifications to SSEEP (06\_0228)**

Since 2009, the Minister for Planning has approved eight modifications to the SSEEP. The most recent modifications reflect the changed focus to increased flour, starch and gluten production. **Table 1** summarises the modifications.

**Table 1: Modifications to the Shoalhaven Starches Ethanol Expansion Project (06\_0228)**

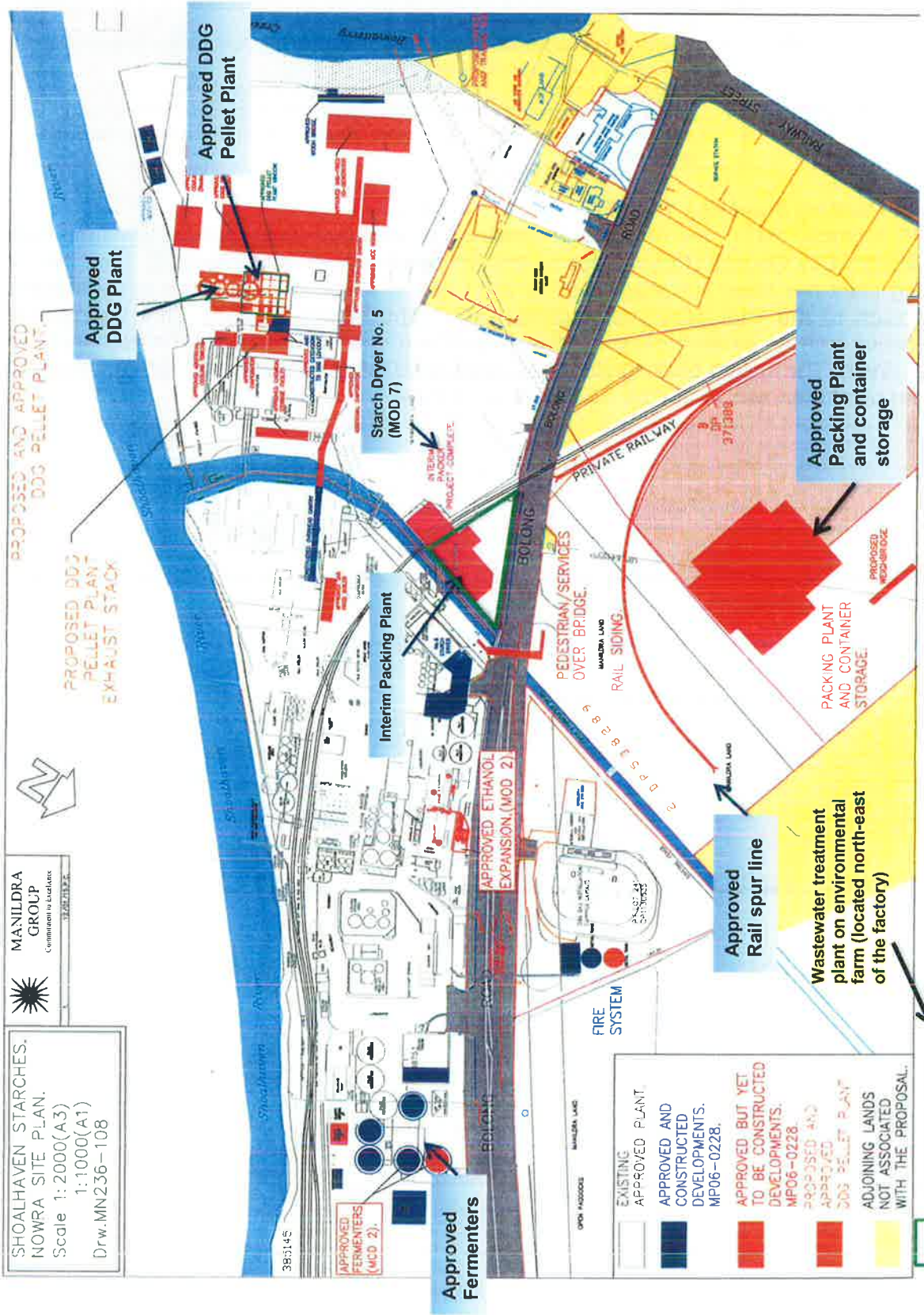
MOD No.	Date Approved	Description
1	30 Sept 2011	<ul style="list-style-type: none"> <li>• Remove the requirement for the dried distillers grain (DDG) pelletising plant from the list of mandatory odour controls; and</li> <li>• Implement alternate odour controls including a new loading chute with dust extractor and extension of the load-out shed to fully enclose truck loading.</li> </ul>
2	14 Sept 2012	<ul style="list-style-type: none"> <li>• Install additional infrastructure to improve operational and energy efficiency, including two additional fermenter tanks, an evaporator, beer column, heat exchangers, substation and compressors.</li> </ul>
3	9 Oct 2012	<ul style="list-style-type: none"> <li>• Relocate an approved, but not constructed, staff car park of 60 spaces to the former Dairy Farmers site;</li> <li>• Include the former Dairy Farmers site at 220 Bolong Road in the project approval, following acquisition by the Proponent.</li> </ul>
4	24 Mar 2014	<ul style="list-style-type: none"> <li>• Relocate the approved DDG pelletising plant and increase the footprint and approved height, from 21 m to 28 m.</li> </ul>
5	16 Sept 2015	<ul style="list-style-type: none"> <li>• Modify the design, footprint and odour controls on the DDG pelletising plant including a 49 m high air discharge stack; and</li> <li>• Construct eight storage silos up to 26 m high.</li> </ul>
6	25 Nov 2015	<ul style="list-style-type: none"> <li>• Demolish a disused industrial building "Moorehouse" purchased by the</li> </ul>

MOD No.	Date Approved	Description
		Proponent; and <ul style="list-style-type: none"> <li>Construct a temporary car park on the northern side of Bolong Road adjacent to the Shoalhaven Water pumping station.</li> </ul>
7	18 Jan 2016	<ul style="list-style-type: none"> <li>Relocate the approved Starch Dryer No. 5 to the former "Moorehouse" site and increase the overall footprint; and</li> <li>Construct a substation, pipes and pipe gantry to supply the starch dryer.</li> </ul>
8	1 Mar 2016	<ul style="list-style-type: none"> <li>Extend the existing flour mill to increase flour production from 265,000 to 400,000 tonnes per annum and offset imports of flour to the factory from mills in western NSW.</li> </ul>

#### ***Interim Packing Plant (RA 11/1002)***

On 26 October 2011, the Proponent obtained a separate development consent from Shoalhaven City Council (Council) for an interim packing plant, see **Figure 2**. The interim packing plant has been in operation since 2011 as the Proponent has been re-considering the design of the final approved packing plant. The interim packing plant operates in conjunction with an existing packing plant to package dried product from the flour mill and starch dryer. The interim packing plant was considered temporary until such time as the final packing plant approved under the SSEEP is operational.





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 NOWRA SITE PLAN.  
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MANILDRA GROUP  
 COMMITMENT TO EXCELLENCE

Figure 2 - Shoalhaven Starches approved ethanol expansion project (06\_0228)

### 3. PROPOSED MODIFICATION

On 22 March 2016, the Proponent lodged a modification request under Section 75W of the EP&A Act to modify the ethanol expansion project to increase the size of the approved packing plant to improve the efficiency of packaging operations.

In July 2016, the Proponent sought to include other minor infrastructure components in the modification. In November 2016, the Proponent also sought to amend the modification to allow train movements to the packing plant during the night-time period.

All aspects of the modification are described below, summarised in **Table 1** and shown on **Figures 3 to 6**. Further details are included in the Environmental Assessment (EA) in **Appendix B**.

**Table 1: Proposed Modification**

Aspect	Description
Packing plant	<ul style="list-style-type: none"> <li>increase the floor area from 3,050 metres squared (m<sup>2</sup>) to 6,200 m<sup>2</sup> to accommodate a range of packing options and increased storage including (see <b>Figure 3</b>):               <ul style="list-style-type: none"> <li>12.5 kilogram (kg) bags;</li> <li>25 kg bags;</li> <li>1 tonne bulk bags for containerisation; and</li> <li>direct into containers for export markets.</li> </ul> </li> <li>dimensions of 108 metres (m) x 60 m with a height above ground level of 13 m, incorporating bag filling stations and a warehouse for bag storage;</li> <li>construction of a container and truck loading area between the packing plant and the two large silos; and</li> <li>packing 450 to 480 tonnes per day of product.</li> </ul>
Storage silos	<ul style="list-style-type: none"> <li>two 1,000 tonne storage silos with a height of 26.5 m;</li> <li>three silos for storage of gluten and starch, each 20.7 m high;</li> <li>a gantry connecting silos to the packing plant with a height of 22.5 m; and</li> <li>a dust collector contained within housing above the packing plant building, extending to a total height of 34.3 m.</li> </ul>
Second rail spur line	<ul style="list-style-type: none"> <li>an additional rail spur line run in parallel to the approved rail spur line for loading containers onto trains. The length of each line is 260 m and 300 m;</li> <li>realignment of the two rail spur lines to widen the arc and enable longer trains to access the site, improving transport efficiency;</li> <li>consolidate the storage and handling of containers in the approved container storage area to reduce rail crossings on Bolong Road; and</li> <li>allow for train movements and container loading and unloading during the night-time period.</li> </ul>
Internal access road	<ul style="list-style-type: none"> <li>relocate the internal access road 10 m closer to Abernathy's Creek to accommodate the realigned rail spur lines;</li> <li>relocate the 30 space staff carpark to the north of the packing plant building; and</li> <li>extend the width of the riparian corridor revegetation adjacent to Abernathy's Creek.</li> </ul>
Under-boring pipes	<ul style="list-style-type: none"> <li>installation of four pipes (blowlines) under Bolong Road to transfer dried product from the factory to the storage silos at the packing plant (see <b>Figure 4</b>); and</li> <li>inclusion of Lot 21, DP 1000265 in the project approval.</li> </ul>
Dried Distillers Grain (DDG) pellet plant	<ul style="list-style-type: none"> <li>installation of one small silo, bag packer and storage shed at the DDG pellet plant (see <b>Figure 5</b>).</li> </ul>
Stormwater management	<ul style="list-style-type: none"> <li>installation of a 27 cubic metre in-ground concrete stormwater tank to replace the existing sedimentation pond, (see <b>Figure 6</b>).</li> </ul>

The modifications would:

- provide a range of packaging options to facilitate an increase in dried product outputs from 280 to 448 shipping containers per week (an increase of 168 shipping containers per week);
- enable longer trains to access the site to improve transport efficiency;
- consolidate container handling and storage on the northern side of Bolong Road, reducing train crossings on Bolong Road;

- enable the Proponent to package DDG product into small bags for sale to smaller farming operations;
- not change the DDG pellet plant capacity or production rate; and
- improve the management of stormwater at the site and address a pollution reduction program on the EPL.

Construction works are estimated to take up to 12 months, with piling for foundations taking around two weeks. A total of 27 construction staff would be required on site daily.

#### **4. STATUTORY CONTEXT**

##### Approval Authority

The Minister for Planning was the approval authority for the original project application, and is consequently the approval authority for this request.

However, as reportable political donations were made by the Proponent, the request will be determined by the Planning Assessment Commission (the Commission) in accordance with the Minister's Instrument of Delegation, dated 14 September 2011.

##### Section 75W

In accordance with Clause 12 of Schedule 6A of the EP&A Act, Section 75W of the Act as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A, continues to apply to transitional Part 3A projects.

Under Section 75W of the EP&A Act, the Minister is obliged to be satisfied that what is proposed is a modification of the original proposal, rather than being a new project in its own right.

The Department notes:

- the primary function and purpose of the approved project would not change as a result of the modification;
- the modification involves alterations to approved infrastructure (see Section 5);
- the modification is of a scale that warrants the use of Section 75W of the EP&A Act; and
- any potential environmental impacts would be minimal and appropriately managed through the existing or modified conditions of approval.

Consequently, the Department considered the request should be assessed and determined under Section 75W of the EP&A Act rather than requiring a new development application to be lodged.





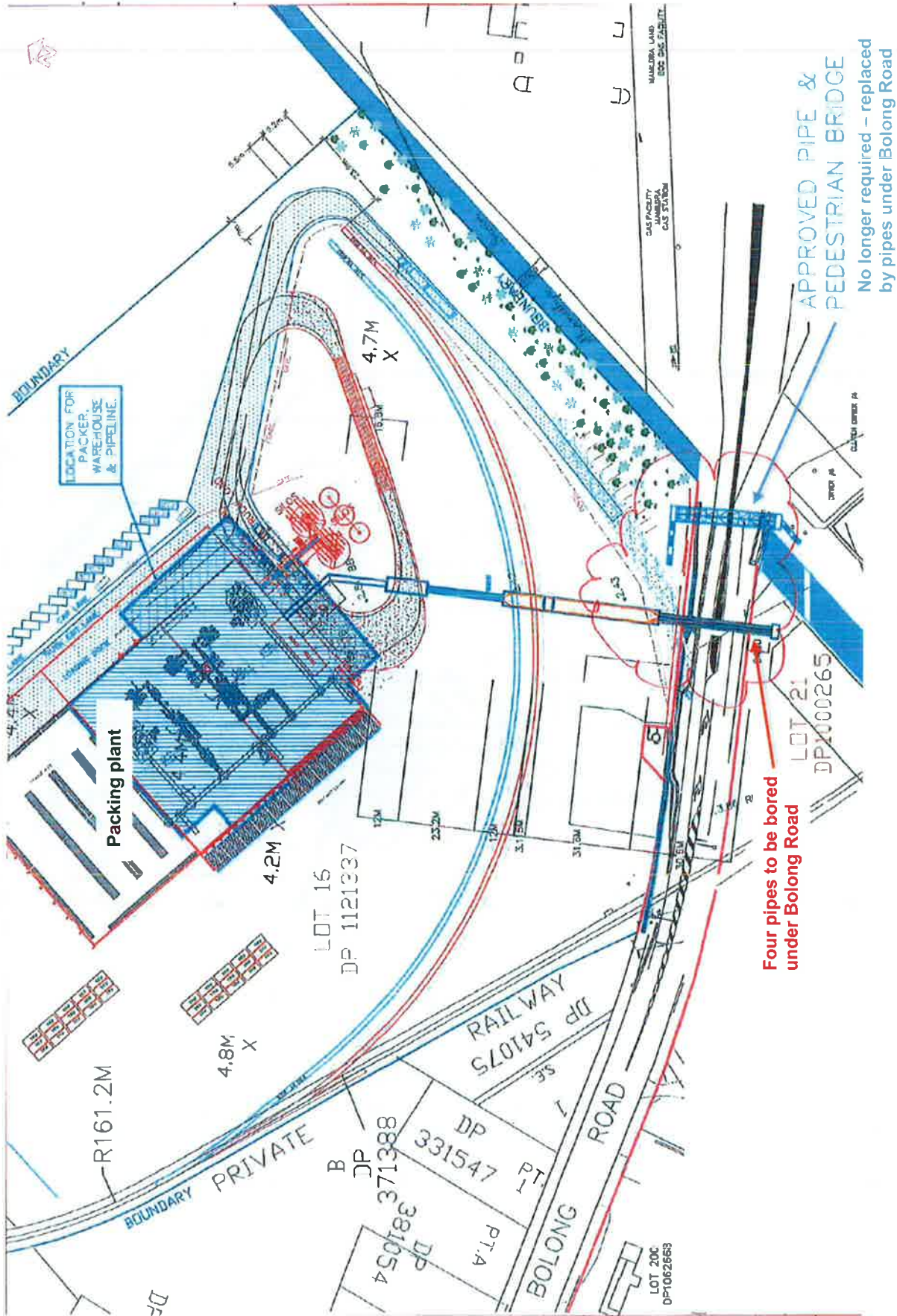


Figure 4 – Under-bore pipes under Bolong Road



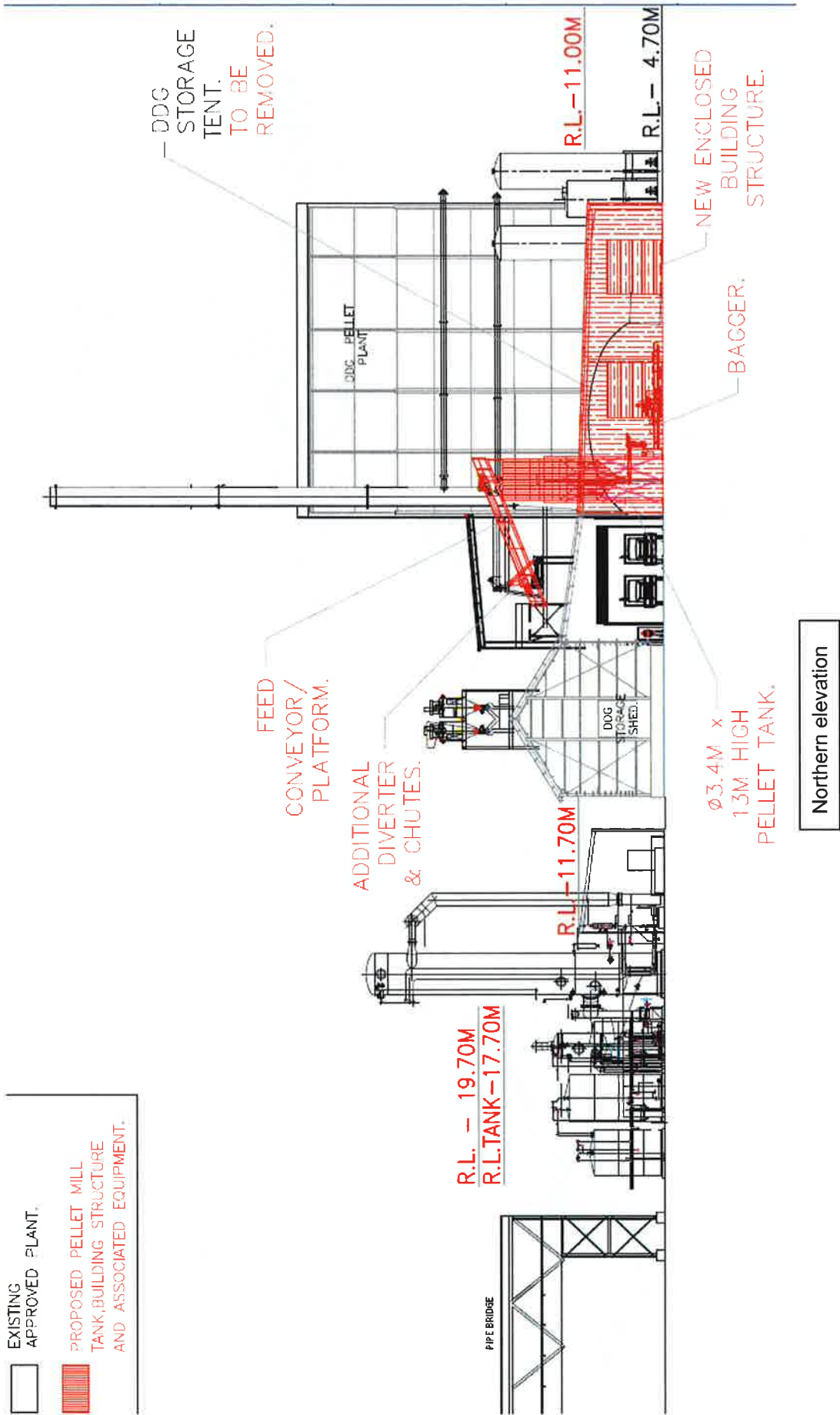
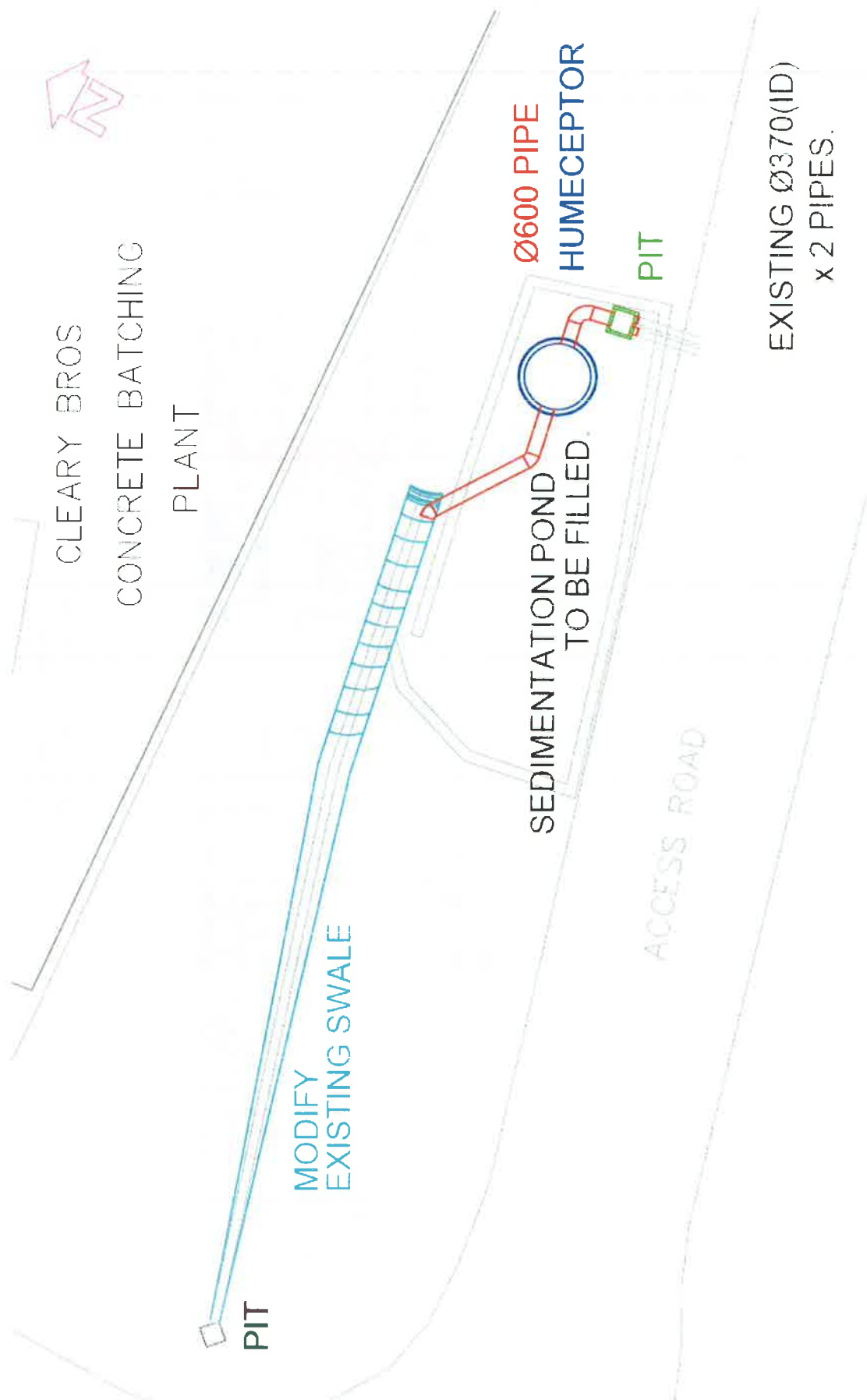


Figure 5 – Bag packer, storage shed and silo at DDG pellet plant



**Figure 6 – Stormwater tank (Humeceptor)**

## 5. CONSULTATION & SUBMISSIONS

Under Section 75W of the EP&A Act, the Department is not required to notify or exhibit the request. However, following review of the EA, the Department considered the request should be publicly exhibited, to enable nearby landholders the opportunity to comment on the proposal. The Department:

- made the request publicly available from **Monday 16 May 2016** until **Wednesday 15 June 2016**:
  - on the Department's website;
  - at the Department's Information Centre (Bridge Street, Sydney);
  - at the Department's Office (Crown Street, Wollongong); and
  - at Shoalhaven City Council (Bridge Street, Nowra).
- notified nearby landowners about the exhibition period by letter;
- notified relevant State government authorities and Shoalhaven City Council by letter; and
- advertised the exhibition in the Nowra South Coast Register and the Shoalhaven and Nowra News.

A total of seven submissions were received on the modification, with all seven submissions from public authorities. No submissions objected to the development. No submissions were received from the general public. A summary of the issues raised is provided below, with a copy of each submission included in **Appendix C**.

In November 2016, the Proponent requested the modification request be amended to allow train movements and containing stacking and loading during the night-time period. The Proponent provided a revised noise impact assessment, which included amendments to the height and locations of the proposed noise walls to reduce noise impacts during the night-time period. The Department re-exhibited the amended request and revised noise impact assessment at the same exhibition locations listed above. The request was re-exhibited from **Monday 5 December 2016** to **Monday 19 December 2016**. The Department received two additional submissions, one from the Environment Protection Authority and one from Roads and Maritime Services. The additional submissions did not raise any further issues to address.

### **Environment Protection Authority (EPA)**

The EPA did not object to the modification and provided recommended conditions relating to noise, air quality and waste. The EPA recommended permanent noise walls be constructed, rather than using shipping containers as noise barriers. The EPA also recommended a noise validation be undertaken within the first 12 months of operation of the modified packing plant. For the amended proposal involving night-time train movements, loading and container stacking, the EPA advised it was satisfied the proposed night time activities are not likely to cause unacceptable noise impacts upon the surrounding community, provided the additional noise mitigation measures proposed are implemented. The Department has included a condition requiring implementation of the additional noise mitigation measures

In relation to odour and air quality, the EPA noted emissions from the modified plant are predicted to fall well below relevant impact assessment criteria. The EPA also noted the packing plant had been considered in the odour assessment for the original project application and the modification would not result in additional cumulative odour impacts.

The EPA recommended conditions to manage the import and use of 34,000 cubic metres (m<sup>3</sup>) of fill on the site, requiring the use of either virgin excavated natural material or material covered by a Resource Recovery Exemption and Order under the *Protection of the Environment Operations (Waste) Regulation 2014*. The Department has incorporated the EPA's recommendations into the modified conditions.



### **Shoalhaven City Council (Council)**

Council did not object to the modification but raised concerns about access on Railway Street and the need for road widening and rail safety improvement works. Council provided recommended conditions for roadworks, car parking and a dilapidation report. Council also recommended conditions for protection of sewer and water infrastructure.

Council advised the flooding assessment in the EA did not adequately address Chapter G9 of the *Shoalhaven Development Control Plan 2014*, which relates to development on flood prone land. Council requested a flood impact assessment be prepared prior to issuing a construction certificate. Council requested the assessment consider the full range of flood events to evaluate whether the proposed filling and floor levels of the packing plant and the bag packer do not increase the risks of flooding.

Council provided specific conditions for the use of non-reflective building materials and landscape treatments to screen the packing plant and railway line from Bolong Road.

Council also raised concerns about the Proponent's compliance with existing conditions relating to roadworks. The matters do not relate directly to the proposed modification, however the Department's compliance unit is continuing to liaise with Council and the Proponent to resolve the outstanding concerns.

### **Roads and Maritime Services (RMS)**

RMS advised that Bolong Road is a regional classified road and Council is best placed to comment on any safety or capacity issues on Bolong Road with regard to the modification and the amended modification. RMS advised that it would issue its concurrence under Section 138 of the *Roads Act 1993*, if Council is satisfied with any proposed access arrangements or works to Bolong Road to support the modification. RMS stated that ancillary road works must also be subject to an environmental assessment as part of the request.

### **Office of the National Rail Safety Regulator (ONRSR)**

The ONRSR raised no issues and advised that any rail safety work and associated activities by the Proponent or its contractors would need to be carried out in accordance the relevant provisions of the Rail Safety National legislation.

### **Department of Primary Industries (DPI)**

The DPI reviewed the proposal and advised it had no comments on the request.

**Department of Defence (DoD)** advised the modification would not infringe on the operating space of the HMAS Albatross and requested the Proponent provide as-constructed details to AirServices Australia for tall structures included in the modification.

**Transport for NSW** raised no issues with the modification.

### **Proponent's Response to Submissions (RTS)**

In July 2016, the Proponent provided a response to the issues raised in submissions (see **Appendix D**). The RTS provided further information on pedestrian movements across Bolong Road and confirmed the size and height of all silos proposed at the packing plant. The RTS did not address the issues raised by Council, as Council's submission was not received until late July. The Department understands the Proponent met with Council in early August to resolve the outstanding issues raised in Council's submission. The Department also sought further clarifications from the Proponent and had discussions with Council to evaluate the issues raised. The Department provided Council with the opportunity to comment on the draft conditions and Council's comments were taken into account when

finalising the conditions. The Department's consideration of the issues raised and the Proponent's response is provided in **Section 6**.

## **6. CONSIDERATION**

The Department has assessed the merits of the proposed modification and has reviewed the following as part of its assessment:

- EA and Director-General's assessment report for the ethanol expansion project;
- existing conditions of approval (as modified);
- the EA and revised noise assessment for the modification (**Appendix B**);
- submissions from government authorities (**Appendix C**);
- the Proponent's response to issues raised in submissions (**Appendix D**);
- relevant environmental planning instruments, policies and guidelines; and
- requirements of the EP&A Act, including the objects of that Act.

The Department considers the key issues associated with the modification include noise, odour, waste management and traffic. The Department's assessment of other issues, including hazards, flooding, riparian management, visual amenity and contamination is provided in **Table 2**.

### **6.1 Noise**

The modified packing plant has the potential to increase noise from the overall facility through increased packaging operations, container loading and shunting of trains on the dual rail spur lines. The amended modification proposed rail movements on the spur lines during the night-time period as well as loading, unloading and container stacking activities.

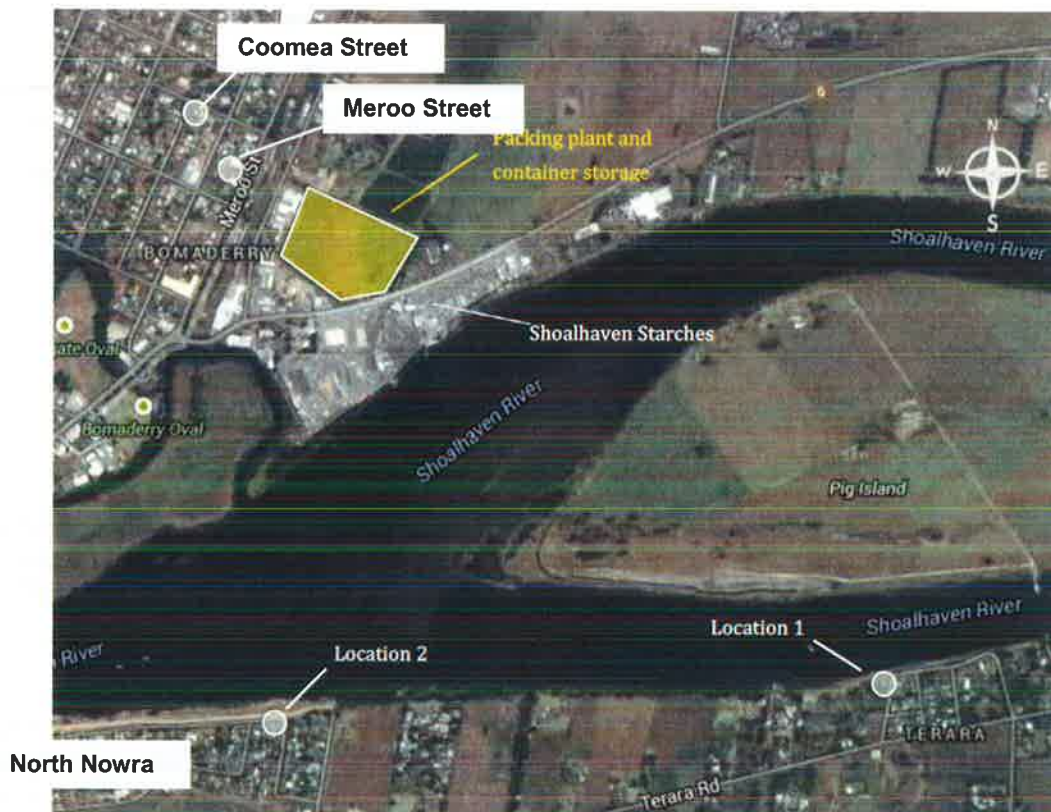
The EA included a noise impact assessment (NIA) prepared by Day Design in accordance with relevant assessment guidelines. The NIA also reviewed the modification against the existing noise limits in the Environment Protection Licence (EPL) for the premises, the project approval and the Proponent's approved Noise Management Plan. The NIA identified the key noise sources as:

- automated packing equipment, including robot stackers/palletisers, blowers, heat sealers and vacuum cleaner, located inside the building;
- external motors on the storage silos;
- forklifts loading containers onto trains and moving containers around the storage area;
- truck movements; and
- locomotive shunting.

These activities were included in the noise assessment for the ethanol expansion project, however the modification would increase the volume of packaging and export operations.

The Proponent provided a revised noise impact assessment (RNIA) for the amended modification prepared by Harwood Acoustics. The RNIA considered noise from loading and unloading trains, metal on metal noise from container stacking using forklifts and train wagon 'clunking' noise. The RNIA used noise data from measurements of similar activities at the factory, recorded in October 2016 for comparison with relevant sleep disturbance criteria as requested by the EPA.

The nearest receivers to the packing plant include the residences on Meroo and Coomea Streets Bomaderry, located 310 m and 420 m to the west, respectively. Other receivers include the residences in Terara on the southern side of the Shoalhaven River, 1.7 km from the site and in North Nowra, 1.1 km to the south. These locations are shown on **Figure 7** and are consistent with the receivers listed in the project approval and the EPL.



**Figure 7 – Residential Receiver Locations**

### Operational Noise

The NIA predicted noise from operation of the packing plant, container storage area and locomotive shunting would meet the noise criteria at all four receiver locations during the day-time period, provided specific noise controls are implemented, including noise walls 10 m high on the north and western boundaries and 7.8 m high on the south-western boundary. The highest predicted noise level during the day-time is 32 dB(A) at Meroo Street, which has a noise criterion of 32 dB(A) in the EPL and project approval.

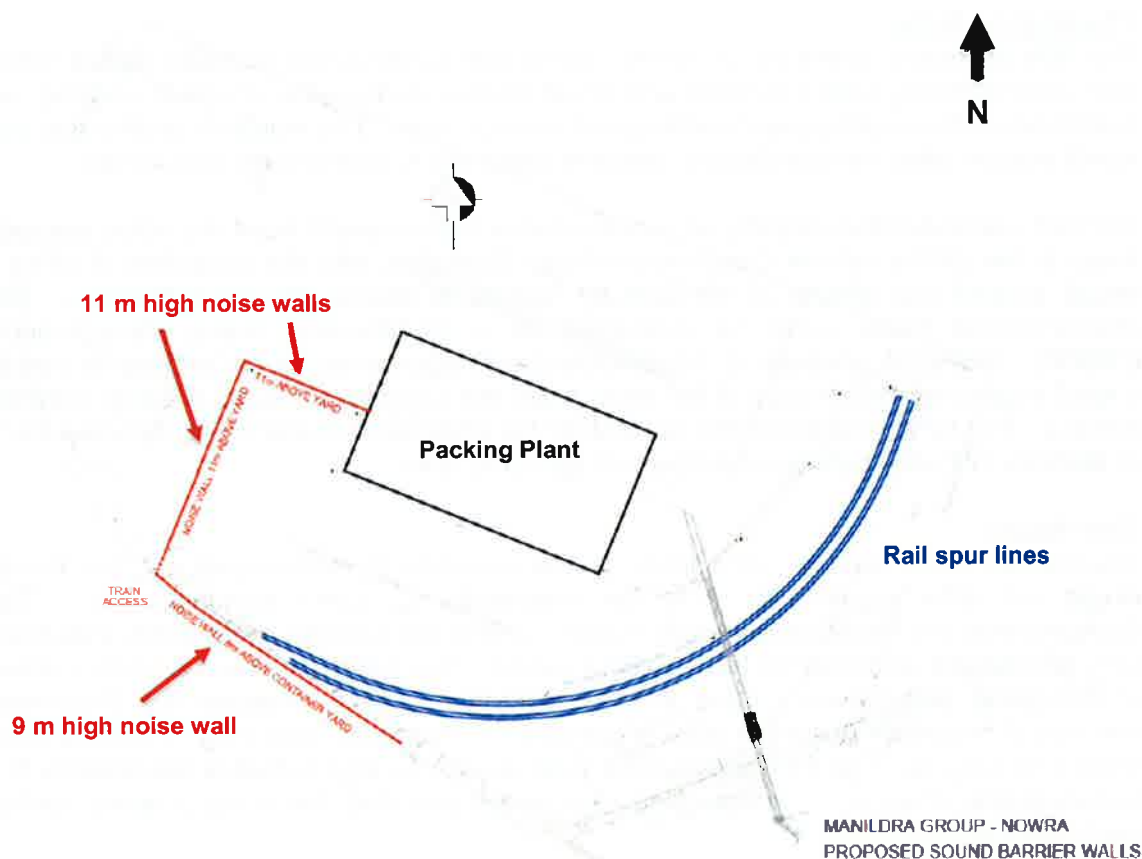
The RNIA predicted worst-case noise levels from container loading, unloading and stacking would slightly exceed the sleep disturbance criteria of 45 dB(A) (set in the *NSW Road Noise Policy, 2011*) by 1 – 2 dB(A) at residences in Meroo and Coomea Streets during the night-time period. The RNIA recommended the proposed noise wall heights be increased to 11 m on the north and western boundaries and 9 m on the south-western boundary with this wall relocated to the south-western side of the rail spur lines. The assessment concluded the increased noise wall heights would reduce noise levels to comply with the sleep disturbance criteria.

The Proponent has committed to implementing these controls as well as specific management practices to minimise noise. Both the EPA and the Department recommend the controls be included in the modified conditions. The controls include:

### Building and Design Controls

- specific insulation requirements for the packing plant walls, ceiling and external doors;
- restriction on the size of building openings without acoustic treatments;
- permanent sound barriers, minimum of 11 m high, along the north-western boundary of the container storage area, connecting to the packing plant along the north-eastern boundary (see **Figure 8**);
- permanent sound barriers, minimum of 9 m high, along the south-western side of the rail spur lines (see **Figure 8**); and

- maximum sound power levels for external motors, with further acoustic treatment if sound power limits are exceeded.



**Figure 8 – Noise Wall Locations**

**Management Practices**

- roller door openings on the south-western facade to remain closed when containers are not being loaded in this location;
- locomotive shunting shall not be undertaken whilst trains are being un/loaded; and
- stacking of containers shall be limited to a maximum of three containers high.

The EPA reviewed the NIA and RNIA and concluded operational noise should comply with the noise criteria in the EPL provided the above noise controls are implemented. The EPA recommended permanent noise walls be constructed, rather than using shipping containers as noise barriers and recommended a noise validation be undertaken within the first 12 months of operation of the modified packing plant.

In the RTS, the Proponent noted the packing plant may be constructed over a period of up to three years. The Proponent proposed the use of a temporary noise wall on the north-western side to bridge the gap between the building and the permanent noise wall to the west. The EPA did not support this approach, noting the significant noise levels generated by the container storage and loading area and the need to provide certainty that noise would be appropriately mitigated for the duration of operation. The Proponent subsequently agreed to the provision of permanent noise walls as recommended in the NIA.

The Department also notes the 2016 independent environmental audit of the factory identified one non-compliance for an exceedance of the noise limits at Terara in August 2015. The auditor noted the Proponent had ordered a replacement silencer for the gluten

dryer to address the non-compliance and the Proponent subsequently confirmed the silencer was scheduled for installation in early February 2017.

### Construction Noise

The NIA assessed construction noise, noting that construction activities would take place over approximately twelve months and would involve earthworks, concrete pouring, erection and fit-out of the packing plant building and storage silos. The noisiest construction activities would involve piling for foundations, which is expected to take around two weeks.

The NIA concluded the majority of construction activities would meet the noise management levels in the EPA's *Interim Construction Noise Guideline*, with the exception of piling, which would exceed the criteria of 48dB(A) by 4dB(A) at Meroo Street residences. The NIA recommended these works be managed via a Construction Noise Management Plan (CNMP). The EPA considered the predicted exceedance would be unlikely to result in an overall impact on the amenity of the area, given the short-term nature of piling activities (two weeks). The EPA recommended the CNMP be implemented and piling activities be limited to Monday to Friday between the hours of 9am and 5pm.

### **Conclusion**

The Department's assessment concludes the operational noise impacts of the modification would not differ significantly from the previously approved packing plant. The NIA demonstrates the modification would operate within the existing noise limits included in the EPL and project approval for the day-time period. The RNIA predicted a minor exceedance of the sleep disturbance criteria for the night-time period, however the Proponent has committed to further noise controls to prevent exceedances occurring, including increased noise wall heights. The EPA advised the proposed night-time activities are unlikely to cause unacceptable impacts on surrounding residences provided the revised noise controls are implemented.

The Department considers the Proponent's management practices for train shunting, container loading and stacking are an important component for ensuring noise levels remain below the criteria, particularly during the night-time period. Given the noise limits are reflective of the rural-residential character of the surrounding area [between 38 – 42 dB(A)], the Department considers the operational practices of the Proponent are very important for maintaining compliance with the noise limits.

The Department has adopted the EPA's recommendation for a noise verification study within 12 months of operation of the packing plant. The noise verification study would demonstrate the effectiveness of the noise controls in maintaining noise levels below the limits in the project approval and the relevant sleep disturbance criteria. The existing conditions of approval also require the Proponent to implement additional noise mitigation measures to achieve compliance, if the noise verification study indicates actual noise levels are higher than predicted in the EA. Other conditions, such as the requirement for annual reports and three-yearly independent environmental audits, provide additional means for identifying and requiring further noise controls if non-compliances are occurring.

With these conditions in place, the Department concludes noise from the overall operation would comply with existing noise limits.

## **6.2 Odour and Air Quality**

The Shoalhaven Starches factory had a history of generating offensive odour, primarily originating from the irrigation of its wastewater on the environmental farm. Since 2011, following implementation of the mandatory odour controls approved as part of the ethanol expansion project, which included installation of a wastewater treatment plant, odour emissions from the site have significantly reduced. This has been demonstrated through quarterly odour monitoring, independent annual odour audits and a substantial reduction in



the number of complaints received. Due to this history of odour impacts, any modification to factory processes requires careful analysis of the potential for increases in odour emissions. Odour sources from the packing plant were assessed as part of the ethanol expansion project, however as the modification seeks to increase packaging operations, further assessment of odour impacts was undertaken.

Stephenson Environmental Management Australia (SEMA) prepared an air quality impact assessment (AQIA) to predict the potential odour and dust emissions [total suspended particulates (TSP)] from the modified packing plant.

The modified packing plant includes five storage silos and automated packaging equipment for the transfer of starch and gluten from the silos into bags. Bags would be packed mechanically, rather than product blown into the bags, minimising the potential for dust and particulate emissions. The Proponent also advised that the steel work for the building would be constructed on the outside of the wall panels to avoid ledges for product to settle on, which would reduce the potential for dust emissions.

The nearest residential receivers (see **Figure 5**) include properties located within the townships of Bomaderry, Terara, Nowra and North Nowra, consistent with the receivers modelled in the odour assessment for the ethanol expansion project and for the annual odour audits undertaken as a condition of the project approval.

SEMA predicted worst case cumulative ground level concentrations from the modified packing plant at the nearest receiver, using odour emissions monitoring data from the interim packing plant as inputs for the odour model. The predicted concentrations are:

- odour 0.4 odour units (ou); and
- TSP 0.16 micrograms per cubic metre ( $\mu\text{g}/\text{m}^3$ ).

These are well below the EPA criteria of 2.0 ou and 90  $\mu\text{g}/\text{m}^3$ , respectively.

The EPA was satisfied the modification would not result in additional cumulative odour impacts to those previously assessed as part of the ethanol expansion approval. The EPA also noted packaging activities are not a significant contributor to odour generation. The EPA advised the additional bag packer and storage shed at the DDG pellet plant would likely improve dust management as there is less potential for loose product to become windblown.

A detailed assessment of dust impacts for the construction phase was not included in the AQIA as the construction period would be limited with earthworks completed in a couple of months. The Proponent has committed to preparing a dust control plan detailing standard dust control measures to be implemented. These include watering exposed surfaces, covering stockpiles and truck loads. The Department concludes these measures would be adequate for managing the dust impacts of construction, given the short timeframe and distance to residential receivers (closest residence over 300 m away).

### **Conclusion**

The Department agrees with the conclusions of the AQIA for the modification, and concludes the modified packing plant would not significantly increase odour or particulate emissions from the overall factory. The Department considers the existing conditions of approval, requiring annual odour audits and dust minimisation are adequate for ensuring the air quality impacts of the modified project are measured and managed effectively.

### **6.3 Waste Management**

The Proponent proposes to import approximately 34,000  $\text{m}^3$  of fill material to raise the finished ground level of the packing plant, container storage area, rail spur lines and access roads to maintain adequate flood protection. The Proponent proposes to use material covered by a Resource Recovery Order and Exemption issued under the *Protection of the*

*Environment Operations (Waste) Regulation 2014*. The Proponent has not prescribed what type of waste material would be used as fill on the site and noted it would apply for a specific resource recovery order and exemption if it proposes to use material not covered by a current exemption.

The EPA advised it encourages the beneficial reuse of waste material where it can be demonstrated the material meets all the conditions of the relevant Resource Recovery Order and Exemption. The EPA recommended the modified conditions include a requirement for the reuse of waste material to meet the conditions of a relevant Resource Recovery Order and Exemption.

The Department notes the Proponent has previously reused waste material as a base for the construction of a temporary car park and the existing conditions include the requirement to comply with the relevant Resource Recovery Order and Exemption. Given the considerable volume of waste material that would be used, the Department considers it imperative the Proponent demonstrates on-going compliance with the requirements of the EPA and the *Protection of the Environment Operations (Waste) Regulation 2014*.

### **Conclusion**

The Department considers the reuse of waste material as fill on the site would be appropriate provided the Proponent meets all the requirements of the EPA. The Department has recommended a modified condition requiring the Proponent to meet all requirements of relevant Resource Recovery Orders and Exemptions. The Department has also recommended a condition requiring the Proponent to advise the EPA and the Secretary in writing of the source, type and quantity of the material to be used, once it is selected and prior to the commencement of its use as fill on the site. The existing conditions also require implementation of erosion and sediment controls in accordance with current guidelines. With these conditions in place, the Department concludes the waste material would be adequately managed for use as fill material on the site.

### **6.4 Traffic**

The approved packing plant includes two new access points, one on the northern side of Bolong Road and one on Railway Street (see **Figure 3**). The modification would slightly alter traffic flows primarily through redistribution of vehicle trips from the interim packing plant to the new packing plant. The modification would also alter rail movements as a second rail spur line would be constructed at the packing plant site.

The EA included a traffic impact assessment (TIA) prepared by ARC Traffic and Transport. The TIA compared road and rail traffic movements from the approved and modified packing plant and considered the potential impacts during periods of overlapping construction of the packing plant and No. 5 starch dryer (MOD 7).

#### Access

The approved access points for the packing plant include:

- PP1 from Bolong Road, designed as left-in only, accommodating entering heavy vehicles; and
- PP2 from Railway Street, for ingress and egress of light vehicles and exiting heavy vehicles.

The modification would not alter the approved access points. However, during the Department's assessment of MOD 6 (temporary car park for construction of the starch dryer), the Department approved construction of the PP1 access on an altered alignment, on a temporary basis. The altered alignment was approved for light vehicle access only and the conditions of approval require removal of the temporary car park following construction of the starch dryer. The Proponent committed to re-constructing the PP1 access on the alignment

approved for the packing plant, as this alignment would provide sufficient space for heavy vehicles entering from Bolong Road.

The TIA noted there may be an overlap of two to three months for construction of the starch dryer and the packing plant. The Proponent subsequently advised the construction of the starch dryer was completed at the end of 2016 and the packing plant construction would not commence until 2017. This re-scheduling has alleviated the potential strain on the Railway Street access during construction, as it can now be restricted to exiting heavy vehicles, as entering heavy vehicles would use Bolong Road as originally approved. The Department has included a condition limiting the use of the Railway Street access during construction, to light vehicles and for exiting heavy vehicles.

Council raised concerns about the potential impacts of the modification on Railway Street, in particular the unsealed road verge on the western side. Council indicated that the unsealed verge would likely fail as a result of truck movements and would present an on-going maintenance cost for Council. Council recommended the western side be upgraded to accommodate the turning movements of B-double trucks accessing the site. Following detailed consideration of the issue, including discussions with both the Proponent and Council, the Department agrees that some upgrade works are required to the western side of Railway Street to accommodate the turning paths of the largest vehicles accessing the site. The Department understands the potential impacts relate primarily to operation, as construction vehicles would be limited to exiting semi-trailers and would unlikely involve the larger B-doubles. However, during operation, the primary vehicles would be B-doubles and these vehicles would exit Railway Street and travel south, as the route to the north is not a designated B-double route. Therefore, the Department considers the Proponent should upgrade the western side of Railway Street to the south of the site access, to accommodate the turning paths of the largest vehicles. The Department recommends these works be completed in accordance with the requirements of Council and prior to operation of the packing plant.

The Proponent confirmed the construction work for under-boring of pipes under Bolong Road would be undertaken entirely within the Proponent's land and would not require any closure or disruption to traffic along Bolong Road.

#### Road Traffic

The TIA assessed traffic flows from the approved and modified packing plant and noted there would be minimal change in traffic volumes due to the modification. As the packing plant would replace the interim packing plant on the factory site, the result is a re-distribution of traffic flows around the site. The modified packing plant would generate a total of 15 heavy vehicles per day, consistent with the approved packing plant. The re-distribution of site-related traffic would result in a reduction in heavy vehicles using the western site access to the interim packing plant, as these would be replaced by the transfer of product via pipes to the new packing plant.

The TIA included an analysis of intersection performance for each of the site access points and the intersection of Bolong Road and Railway Street, for both construction and operation. The assessment concluded that all intersections would continue to operate satisfactorily with no significant changes in average delay, reductions in capacity, or increases in queue lengths.

#### Rail Traffic

The Shoalhaven Starches factory utilises rail transport to deliver grain and flour to the factory for processing and to transport dried and packaged product to export markets. Train movements to the site currently total 14 per week, comprising 10 grain and flour trains and four container trains for export. Currently, all trains cross both Railway Street and Bolong Road at level crossings. As there is limited line length on the factory site, trains are split and

moved separately onto the rail sidings at the Bomaderry Station railway yards and at the factory. These shunting operations involve multiple movements of trains and generate up to 50 crossings of Bolong Road per week. Shunting movements across Railway Street are considerably less, given the available siding capacity at the Bomaderry railway yards. The Proponent is an accredited railway operator and maintains safety procedures for shunting operations in accordance with the requirements of the Rail Safety National legislation. The Proponent is also party to a Safety Interface Agreement with Council which sets out the responsibilities of each party for maintenance and management of risks associated with the level crossings.

The modification involves constructing a second rail spur line on the packing plant site and realigning the layout to create a larger radius, see **Figure 3**. These works would enable longer container trains to access the site. The TIA stated the modification would still generate a total of 14 trains per week, comprising nine grain and flour trains and five container trains for export. Most trains accessing the site would be longer, thereby improving the efficiency of product transport to and from the site and reducing congestion at the factory on the southern side of Bolong Road. The TIA estimated the duplication of the rail spur line and increased line lengths at the packing plant would reduce shunting movements on Bolong Road from 50 to 20 per week. Train movements across Railway Street would be largely unchanged due to the modification. Given the overall reduction in level crossings, the TIA concluded no upgrade of the existing crossing infrastructure would be required at either Bolong Road or Railway Street.

The ONRSR advised it had no issues with the modification and require all works to be carried out in accordance with the Proponent's accreditation and relevant provisions of the Rail Safety National legislation.

Council recommended the Proponent implement rail safety improvement works at the level crossing on Railway Street and advised the improvement works were discussed with the Proponent as far back as 2010. Council provided copies of designs that were prepared by the Proponent in 2012 showing line marking, rail crossing signage and delineation improvements. Council recommends these works be completed given potential increases in traffic on Railway Street as a result of the modification. The Department has reviewed the information provided by Council and agrees the Proponent should undertake the improvement works to maintain the safety of the rail level crossing on Railway Street. The Department has recommended modified conditions requiring the upgrade works to be completed prior to operation of the packing plant and in accordance with the requirements of Council and relevant Australian Standards for railway crossings.

The Department notes the Proponent previously upgraded the Bolong Road level crossing in accordance with conditions of the existing approval to provide signaling and boom gates.

The Proponent has committed to undertake the rail spur line works in accordance with the requirements of the ONRSR, which include provision of design, construction and commissioning documentation and a rail safety risk assessment. With these measures, the Department concludes the safety of the Railway Street and Bolong Road level crossings would be maintained.

#### Parking and Pedestrians

The modification would alter the location of the approved staff carpark to accommodate the modified layout of the packing plant, see **Figure 3**. A total of 30 car parking spaces would be provided, consistent with the original approved number of spaces.

The modification proposes to remove the pedestrian and pipe over-bridge over Bolong Road, with pipes now proposed to be constructed under Bolong Road. The Proponent advised the movement of pedestrians between the packing plant and the factory would be very limited (2-

3 individuals per day), hence there is no need to provide a pedestrian over-bridge on its own. Staff car parking would be provided at the packing plant and there would be limited need for staff to walk to the factory. Also, given the distance between the packing plant and the factory and the intervening rail spur lines, staff movements would more likely be via car, instead of on foot. The Proponent constructed a pedestrian refuge on Bolong Road as part of road upgrade works in 2010. The pedestrian refuge provides an area for staff to cross the road in two stages. The Department concludes the very low pedestrian numbers do not warrant construction of a pedestrian over-bridge between the factory and the packing plant.

RMS advised it had no issues with the modification and would issue its concurrence under Section 138 of the *Roads Act 1993*, if Council is satisfied with any proposed access arrangements or works to Bolong Road.

Council did not raise any concerns regarding pedestrian movements. Council recommended all parking areas comply with relevant Australian Standards.

### Conclusion

The Department's assessment concludes the modifications to the packing plant would not result in significant changes in traffic volumes and movements on Bolong Road, Railway Street or at the site access points. There would be a reduction in movements between the factory and the interim packing plant and some re-distribution of traffic movements to the new packing plant. The modification would result in a reduction in rail level crossings of Bolong Road which would minimise delays for traffic waiting for trains to cross.

The Department concludes the traffic impacts of the modification can be managed through modifications to the existing conditions, requiring some upgrading of Railway Street and improvements to the rail level crossing.

### 6.5 Other Issues

The Department's assessment of other issues is provided in **Table 2**.

**Table 2: Assessment of other issues**

Issue	Assessment	Recommendation
Hazards and risks	<ul style="list-style-type: none"> <li>• Pinnacle Risk Management undertook a Preliminary Hazard Analysis (PHA) to assess the risks associated with packaging operations and the transfer of starch via blowlines from the factory to the storage silos.</li> <li>• The primary hazard identified for these activities was dust explosion.</li> <li>• The PHA considered the risk of dust explosions with proposed safeguards in place, including dust explosion vents on the storage silos and spark arrestors and earthing practices on the transfer blowlines.</li> <li>• The PHA concluded:               <ul style="list-style-type: none"> <li>○ worst-case overpressure from dust explosions is unlikely to result in off-site impacts;</li> <li>○ risks of propagation to neighbouring equipment is unlikely given the generous separation distances;</li> <li>○ societal, environmental and transport risks are considered to be broadly acceptable;</li> <li>○ the modification would introduce negligible cumulative risks; and</li> <li>○ all risk criteria detailed in the Department of Planning's <i>Hazardous Industry Planning and Advisory Paper No. 4</i> (HIPAP 4) would be satisfied for the modification.</li> </ul> </li> <li>• The Department's hazards specialist reviewed the PHA and agreed with the conclusions.</li> <li>• The Department's assessment concludes the hazards and risks of the modification would not result in off-site impacts and recommends the safeguards and mitigation measures included in the PHA are implemented. The Department requires standard</li> </ul>	<p>Require the Proponent to:</p> <ul style="list-style-type: none"> <li>• update the existing hazards studies for the facility to include the modification, including the Fire Safety Study, Emergency Plan, Safety Management System and Final Hazard Analysis;</li> <li>• submit for the Secretary's approval, a Hazard and Operability Study prior to commissioning the modified packing plant; and</li> <li>• include the modified packing plant in the hazard audit to be carried out in October 2016 and every three years</li> </ul>



Issue	Assessment	Recommendation
Flooding	<p>hazard related studies to be submitted prior to the construction and commissioning phases of the modification.</p> <ul style="list-style-type: none"> <li>• The packing plant would be located on the floodplain of the lower Shoalhaven River. The area would be filled to raise the packing plant above the flood planning level. Intensification of development on the floodplain has the potential to cause flooding impacts on and off-site.</li> <li>• WMA Water (WMA) prepared a flood impact assessment (FIA) updating the hydraulic modelling from the <i>Shoalhaven River Flood Study, March 2013</i> to assess the flooding impacts of the modified packing plant. The FIA addressed the requirements of OEH which included consideration of flood emergency management procedures and climate change.</li> <li>• The FIA found the modification may increase the 1% Annual Exceedance Probability (AEP) flood by up to 0.05 m on Bolong Road (between the railway crossing and Abernathy's creek) and at the northern and eastern boundaries of 21 Bolong Road (a neighbouring commercial building).</li> <li>• The existing level of above floor inundation at 21 Bolong Road (a two-storey premises) during the 1% AEP would be 0.7 m. As the impact of the modification would extend only to the site boundary, the modification may or may not increase above floor inundation by 0.05 m at this property.</li> <li>• The FIA concluded the location and size of the packing plant and associated infrastructure is consistent with Council's <i>Development Control Plan 2014, Chapter G9: Development on Flood Prone Land</i> (DCP).</li> <li>• The modification would not significantly increase the number of workers on the site, and would not introduce any additional safety concerns in relation to flooding and evacuation. The Proponent has committed to updating its Flood Management Plan to include the modification.</li> <li>• Council advised the FIA did not adequately address the increased risk of flooding and the requirements of the DCP. Council requested an FIA be prepared and approved by Council prior to issue of a construction certificate.</li> <li>• The Department notes the FIA was prepared by one of the pre-eminent experts in flood impact assessment in NSW and was prepared in consultation with OEH. The FIA specifically addresses Council's DCP and concludes that flooding impacts would be negligible.</li> <li>• The Department's assessment concludes the modification would have negligible flooding impacts and the existing conditions are sufficient for the management of flood risk. The existing conditions require any new buildings and structures, to be built to withstand flooding and require the flood management plan to be updated to include the modification. These conditions are consistent with the recommendations provided by Council, with the exception of requiring a further FIA.</li> </ul>	<p>thereafter.</p> <ul style="list-style-type: none"> <li>• Manage via existing conditions including the requirement for new buildings and structures to be constructed to withstand flooding and in accordance with Council's DCP and to maintain an up to date flood management plan.</li> </ul>
Riparian management	<ul style="list-style-type: none"> <li>• Coffey Geotechnics (Coffey) assessed the stability of the Abernathy's creek bank, considering the proximity of the proposed rail lines and access road. Coffey also considered the potential impacts of the under-boring of pipes under Bolong Road which require a large construction pit located 25 m from Abernathy's Creek.</li> <li>• The assessment was prepared to address the requirements of DPI – Water. These included a requirement to demonstrate the modification would not have an adverse impact on the stability of the creek bank and to provide adequate riparian revegetation.</li> <li>• The geotechnical assessment concluded the area to be filled for the access road and rail lines should be setback at least 18 m from the creek bank to avoid risk of creek bank failure.</li> <li>• The Proponent has adopted this recommendation.</li> <li>• In line with DPI Water's recommendation, the Proponent would revegetate an 18 m wide section of the western bank of Abernathy's creek from Bolong Road to the northern boundary of the packing plant site. The revegetated section would be a</li> </ul>	<p>Require the Proponent to:</p> <ul style="list-style-type: none"> <li>• ensure the filled area for the access road and rail lines is setback a minimum of 18 m from Abernathy's creek; and</li> <li>• prior to the commencement of operation of the packing plant, revegetate a minimum 18 m wide section of the western bank of Abernathy's creek</li> </ul>

Issue	Assessment	Recommendation
	<p>minimum of 18 m, extending to 22 m in some sections and would be planted with native species, consistent with those proposed in the original project approval.</p> <ul style="list-style-type: none"> <li>• The pipes to be constructed under Bolong Road would be realigned compared to the original approval and would no longer cross Abernathy's Creek. Construction pits would be located 25 m from Abernathy's Creek, extending to a depth of 4.8 m.</li> <li>• Coffey recommended the use of temporary sheet piles extending to a depth of 7-8 m in the sides of the construction pits to ensure no impacts on the stability of Abernathy's Creek. The Proponent has committed to implementing these measures.</li> <li>• Council and the EPA did not comment on creek bank stability.</li> <li>• The Department's assessment concludes the Proponent has adequately evaluated the risks of creek bank instability and have designed the modification to minimise these risks. The Proponent would revegetate the creek bank to improve the riparian environment and maintain water quality in Abernathy's creek.</li> </ul>	<p>from Bolong Road to the northern boundary of the packing plant site.</p>
Surface and groundwater	<ul style="list-style-type: none"> <li>• The Proponent proposes to replace a sediment dam in the south-western part of the factory site with a Humeceptor concrete stormwater tank.</li> <li>• The EPA supports the installation of the stormwater tank and advised that it would improve the removal of sediments and hydrocarbons from stormwater runoff. The works are the subject of a current pollution reduction program under the Environment Protection Licence.</li> <li>• The Department's assessment concludes the proposed works would improve stormwater management at the factory and does not recommend any additional conditions.</li> <li>• The Proponent consulted DPI Water in relation to the under-boring of pipes. DPI Water recommended the Proponent implement measures to manage groundwater intercepted in the construction pits.</li> <li>• The Proponent has committed to implementing a dewatering system with adequate pump capacity to manage inflows.</li> <li>• The Department is satisfied with the measures proposed by the Proponent to manage groundwater.</li> </ul>	<p>Require the Proponent to:</p> <ul style="list-style-type: none"> <li>• Implement a procedure for testing, dewatering, storage, treatment and disposal of contaminated groundwater intercepted during excavation works for MOD 9.</li> </ul>
Visual amenity and building height	<p><u>Visual Amenity</u></p> <ul style="list-style-type: none"> <li>• The modification involves an increase in the height of the packing plant from 10 m to 13 m. Silos heights would increase from 30 m to 34.3 m.</li> <li>• The EA included a visual impact assessment which considered the visibility of the modified packing plant from key vantage points including Bolong Road, Bomaderry, North Nowra, Terara and Nowra.</li> <li>• The packing plant would be most visually prominent for passing motorists on Bolong Road and from higher vantage points in Bomaderry. Given the distance from Nowra, North Nowra and Terara and intervening vegetation, the packing plant would barely be visible from these locations.</li> <li>• The assessment concluded the visual aesthetic would not vary significantly from the approved packing plant as the heights are only marginally increased and are consistent with the height of other structures at the factory, including the interim packing plant and the flour mill at 34 m each. Boring the pipes under Bolong Road, instead of constructing an over bridge would minimise visual impacts for passing motorists.</li> <li>• Council did not raise any concerns regarding visual amenity. Council recommended the use of non-reflective building materials and provided detailed requirements for landscaping along the northern side of Bolong Road to screen the packing plant and rail spur lines from view.</li> <li>• The Department notes the building would be constructed with colourbond cladding in the same colour as other structures at the factory. The Proponent would also landscape the northern frontage of Bolong Road.</li> <li>• The Department's assessment concludes the visual impacts of</li> </ul>	<p>Manage via existing conditions requiring the Proponent to:</p> <ul style="list-style-type: none"> <li>• control lighting and use non-reflective building materials;</li> <li>• provide as-constructed details to Airservices Australia following completion of construction of the modified packing plant; and</li> <li>• prior to commencement of operation of the packing plant, implement landscape planting on the northern side of Bolong Road.</li> </ul>

Issue	Assessment	Recommendation
	<p>the modification would be minimal given the structures would be of a similar appearance, height and bulk to existing structures at the factory. The modification would not require any specific conditions beyond the control of lighting, use of non-reflective materials and landscaping as required by the existing approval.</p> <p><u>Tall Structures</u></p> <ul style="list-style-type: none"> <li>• HMAS Albatross (airbase) is located 10 km south-west of the factory.</li> <li>• The Proponent provided information to the Department of Defence regarding the height of the modified packing plant and silos (34.3 m).</li> <li>• The Department of Defence considered the potential impacts to the safety of aircraft operations from HMAS Albatross and advised that it had no concerns with the modification and that the modification would not infringe the Outer Horizontal Surface of the Obstruction Limitation Surface of HMAS Albatross.</li> <li>• The Department of Defence requested that the Proponent provide as-constructed details to Airservices Australia following completion of construction of the modified packing plant.</li> <li>• The Department has incorporated this recommendation into the modified conditions.</li> </ul>	
Contamination	<ul style="list-style-type: none"> <li>• A contamination assessment for the original packing plant indicated the presence of hydrocarbons and asbestos containing materials in borehole 28 (located on the edge of the container storage area in the north-western part of the site).</li> <li>• The location of the container storage area has not changed due to the modification.</li> <li>• The Department notes the contamination assessment for the original packing plant identified the need to remove or contain the asbestos before works commence to minimise risks to workers.</li> <li>• In the modification request, the Proponent committed to obtaining a site audit statement from an accredited site auditor before any works commence on site, consistent with the existing conditions of approval.</li> <li>• The Department has also included specific conditions requiring removal of the asbestos containing material before any construction work commences on the container storage area. These conditions are required to ensure the safety of construction workers.</li> <li>• The contamination assessment for the original packing plant also identified elevated zinc levels in groundwater near the packing plant and recommended the Proponent have procedures in place to test and dispose of any intercepted groundwater appropriately.</li> <li>• The Department has incorporated this recommendation into the modified conditions and has updated the existing conditions for the management of unexpected finds, to cover the modification.</li> <li>• The EPA and Council did not comment on contamination.</li> <li>• The Department's assessment concludes identified contamination is isolated and can be appropriately managed via the recommended conditions.</li> </ul>	<p>Require the Proponent to:</p> <ul style="list-style-type: none"> <li>• remove asbestos containing material prior to the commencement of construction work on the container storage area;</li> <li>• implement procedures to test, treat and dispose of intercepted contaminated groundwater; and</li> <li>• implement a protocol for managing unexpected finds.</li> </ul>
Protection of services	<ul style="list-style-type: none"> <li>• The proposed under-boring of pipes under Bolong Road has the potential to impact on other underground services.</li> <li>• The Proponent consulted Council, Telstra, Jemena, Actew AGL and NBN Network. Telstra and Jemena confirmed the presence of assets within the area of the proposed pipes and provided details of the process to follow prior to completing design and commencing construction. The service providers also noted the need to reinstate ground and footpaths upon completion.</li> <li>• Council raised no objection to the proposed works and recommended that all excavations are backfilled and compacted.</li> <li>• The Department has recommended conditions for ensuring adequate consultation and protection of private infrastructure.</li> </ul>	<p>Require the Proponent to:</p> <ul style="list-style-type: none"> <li>• consult with Telstra and Jemena during detailed design and provide notice of construction works;</li> <li>• conduct boring works in accordance with the requirements of Telstra and Jemena; and</li> <li>• restore the ground surface and footpath.</li> </ul>

Issue	Assessment	Recommendation
Updating existing conditions of approval	<ul style="list-style-type: none"> <li>• Since the ethanol expansion project approval was issued in 2009, the Department has reviewed the wording of conditions to ensure they remain measurable and workable.</li> <li>• To ensure the Shoalhaven Starches project approval remains consistent with current practice, the Department has recommended a number of minor amendments to the existing conditions.</li> <li>• Many of the amendments remove the wording 'to the satisfaction of the Secretary', particularly where this relates to on-going operational practices. An approval role for the Secretary is retained for specific management plans, however implementation of the management plans is the responsibility of the Proponent.</li> <li>• Similarly, the Department recommends removing many of the references 'to the satisfaction of Council', as Council is not the approval authority for this development. In most instances, the Department recommends replacing this wording with 'in consultation with Council', to ensure that Council requirements are taken into consideration, without the final approval role.</li> <li>• The Department concludes the amendments to the conditions ensure the project approval remains consistent with current practice, ensures the conditions are legally enforceable and provides definitive conditions for measuring compliance.</li> </ul>	<ul style="list-style-type: none"> <li>• Amend conditions to remove the wording 'to the satisfaction of the Secretary' and 'to the satisfaction of Council', where the conditions are not enforceable or appropriate.</li> </ul>

## 7. CONCLUSION

The Department has assessed the proposed modification and concludes the modification would:

- result in minimal environmental impacts beyond the approved facility;
- enable the Proponent to alter production to reflect changing markets with a reduced emphasis on ethanol production and an increased focus on starch and gluten production;
- ensure that the key amenity impacts of odour and noise are maintained below existing limits;
- maintain the hazards and risks of the facility below relevant limits;
- improve traffic management through reduced rail level crossings of Bolong Road and requiring improvements to the rail level crossing at Railway Street;
- upgrade a section of Railway Street to accommodate heavy vehicle traffic; and
- ensure the integrity of the Abernathy's creek bank through a revegetated riparian zone.

Consequently, the Department considers on this basis the modification is approvable, subject to the recommended conditions.

## 8. RECOMMENDATION

It is recommended that the Planning Assessment Commission (the Commission), as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report, noting that the Department considers that the modification is approvable, subject to conditions;
- **determines** that the Proponent's request is a modification under section 75W of the EP&A Act; and
- if the Commission determines to modify the approval, **signs** the attached instrument of modification.

Deana Burn  
Specialist Planner, Industry Assessments

  
Chris Ritchie  
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14/2/17.

  
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