

Info

From: Nathan Everett <Nathan.Everett@fire.nsw.gov.au>
Sent: Tuesday, 16 March 2021 12:11 PM
To: Stephen Richardson
Cc: Brian Hanley (InTouch); john.studdert@manildra.com.au; John Hawes; Fire Safety
Subject: RE: Request for Requirements for Preparation of Statements of Environmental Effects - Proposed Mods 21, 22 and 23, Shoalhaven Starches Expansion Project (MP06_0228)

Good afternoon Stephen,

Thank you for your email regarding the proposed modifications to the Shoalhaven Starches site.

Fire and Rescue NSW (FRNSW) have no specific requirements to be addressed within the forthcoming Statement of Environmental Effects that are being prepared in support of the Modification Applications (the Applications).

FRNSW will review the Applications once exhibited by the Department of Planning, Industry and Environment (the Department), and may provide comment at this time if deemed necessary.

Should the Department approve the Applications, FRNSW may request that a Condition be included in the relevant Instruments of Consent that would require the existing Fire Safety Study for the site to be updated and approved prior to the issuing of the relevant Construction Certificates. FRNSW considers that this may be required in order to address any potential increase in risk posed by the proposed modifications.

I trust that this satisfies your requirements at this time, please do not hesitate to contact me should you have any further queries.

Regards,
Nathan



SENIOR FIREFIGHTER NATHAN EVERETT
Fire Safety Officer
Fire Safety Infrastructure Liaison | Fire and Rescue NSW
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PREPARED FOR ANYTHING.

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From: Stephen Richardson <steve@cowmanstoddart.com.au>
Sent: Friday, 12 March 2021 9:09 AM
To: Nathan Everett <Nathan.Everett@fire.nsw.gov.au>
Cc: Brian Hanley (InTouch) <brian.hanley@manildra.com.au>; john.studdert@manildra.com.au
Subject: FW: Request for Requirements for Preparation of Statements of Environmental Effects - Proposed Mods 21, 22 and 23, Shoalhaven Starches Expansion Project (MP06_0228)

CAUTION: This email originated from outside of Fire and Rescue NSW. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Dear Nathan,

I refer to previous consultation that we have undertaken with you in relation to the Shoalhaven Starches site at Bomaderry.

Shoalhaven Starches have submitted requests to the Department of Planning, Industry and Environment (DPIE) seeking their requirements for the preparation of Statements of Environmental Effects in relation to three (3) separate Modification Proposals relating to the Shoalhaven Starches Expansion Project (MP06_0228). In addition to seeking DPIE's requirements for the preparation of these Modification Application documents, we also seek to consult with Fire & Rescue NSW to ascertain any issues that Fire & Rescue NSW considers should be considered as part of the preparation of these Modification Applications. The purpose of this email is to formally consult and seek any issues that Fire & Rescue NSW considers should be considered as part of the preparation of these separate Modification Applications.

In summary the modification proposals are as follows:

Mod 21 – Modification to Approved Gas Fired Co-generation Plant

Project Approval MP06_0228 for the Shoalhaven Starches Expansion Project made provision for a gas fired co-generation that would comprise two gas turbine generators that would deliver an anticipated net power output of 40 MW of power for the site.

Subsequently under Mod 16 the Independent Planning Commission approved an additional coal fired co-generation plant. This coal fired co-generation plant would generate a total of 15 MW of power for the site.

Neither the approved gas nor coal fired co-generation plants have been constructed to date.

Following the original Project Approval Shoalhaven Starches have obtained approval and / or are seeking approval for a range of modifications to the original Project comprising a range of additional developments that were not envisaged as part of the original Project Approval. Shoalhaven Starches are forecasting that the electrical power load demand created by these and other additional works, subsequent to the original Project Approved development, will exceed the power supply capacity of the approved gas fired and coal fired co-generation plants.

Shoalhaven Starches now propose to construct a new gas-fired co-generation plant which will consist of two natural gas turbines that will generate an anticipated power output each of 30 MW, providing a total power to the site of 60 MW, that will replace the approved gas fired and coal fired co-generators and it is anticipated will meet the power requirements for the additional works approved following the original Project Approval.

Following Initial consultation DPIE have indicated that this modification application could be considered as a Modification Application to the original Project Approval pursuant to the provisions of Section 4.55(2) of the Environmental Planning & Assessment Act.

Mod 22 – Modification to Packing Plant and other works

Under Project Approval MP 06_0228 Shoalhaven Starches also obtained approval to establish a new Packing Plant, container loading area and a rail spur line on the northern side of Bolong Road. These works also required the provision of an overhead bridge structure to allow product to be transferred and safe pedestrian movement across Bolong Road.

In 2019 the then 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 will 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 have now identified that as a result of the increase in range of different specialised products that will now be able to be produced as a result of Mod 16; amendments will be required to the approved Packing Plant on the northern side of Bolong Road to accommodate this increased range of specialised products.

Following Initial consultation DPIE have indicated that this modification application could be considered as a Modification Application to the original Project Approval pursuant to the provisions of Section 4.55(1A) of the Environmental Planning & Assessment Act.

Mod 23 – Proposed Beverage Grade Ethanol Plant Stage 3

Shoalhaven Starches also seek to expand their ethanol production on the site to increase overall ethanol production from the current approved production of 300 ML/year to 450 ML/year. In order to facilitate this increase in production of ethanol, it is proposed that there will be an increase in flour that will be transported to the site from the present 4,000 tonnes per week up to 8,600 tonnes per week. Including flour that is produced on the site in the three Flour Mills situated on the site, the use of flour on the site will increase from the present approved 25,400 tonnes per week up to 30,000 tonnes per week, or an increase of about 18% in flour processed on the site.

Following Initial consultation DPIE have indicated that this modification application could be considered as a Modification Application to the original Project Approval pursuant to the provisions of Section 4.55(2) of the Environmental Planning & Assessment Act.

Attached to this email are copies of the Scoping Meeting Request submissions that have been submitted to DPIE for each of these modification projects and which provide background information in relation to each project.

The purpose of this email is to seek any issues that Fire & Rescue NSW considers should be addressed as part of each of these separate Modification Applications. I would appreciate it if Fire & Rescue NSW could supply any issues it considers should be addressed in relation to these matters as soon as possible so as to assist in the preparation of the relevant Modification Applications.

If you require any further information in relation to these matters please do not hesitate to contact me.

Regards

Stephen Richardson RPIA
Cowman Stoddart Pty Ltd



COWMAN STODDART PTY LTD			
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	Wollongong: Level 3, 166 Keira Street, Wollongong	(02) 4208 0025	
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Town Planning, Agricultural & Environmental Consultants			

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From: [Jane Curran](#)
To: [Stephen Richardson](#)
Cc: [brian.hanley@manildra.com.au](#); [john.studdert@manildra.com.au](#); [David Zerafa](#)
Subject: NRAR input - MP06_0228 proposed mods 21,22 and 23 (our ref. V15/3876-4#8)
Date: Tuesday, 9 March 2021 12:24:14 PM
Attachments: [image001.jpg](#)

Hi Stephen,

Thanks for getting in contact with NRAR in relation to the request for requirements for the Preparation of Statements of Environmental Effects for Proposed Mods 21, 22 and 23, Shoalhaven Starches Expansion Project (MP06_0228). NRAR do not have any comments on the proposal at this stage other than the following general requirements we request proponents to consider in their major project submissions (where relevant):

- Identification and impact assessment of all works/activities that may intercept, extract, use, divert or receive water.
- The identification of all water take for the project. Include details of water sources that water will be taken from where water entitlements need to be acquired to account for the water take.
- Details of Water Access Licences (WALs) held to account for any take of water, or demonstration that WALs can be obtained prior to take of water occurring.
- Assessment of the project's compliance with any exemptions or exclusions to requiring approvals or licenses under the *Water Management Act 2000*.
- Identification and impact assessment of all works located on waterfront land including consideration of the NRAR Guidelines for Controlled Activities on Waterfront Land (2018).
- A detailed and consolidated site water balance.
- Assessment of project against relevant policy and guidelines, e.g. Water Sharing Plans, Floodplain Management Plans, NSW Aquifer Interference Policy, NSW Floodplain Harvesting Policy, Guidelines for Controlled Activities on Waterfront Land (2018).

NRAR will review the modification reports to be prepared following referral from the Department of Planning, Industry and Environment (DPIE) Planning & Assessments team.

Kind regards,

Jane Curran

Water Regulation Officer – Licensing & Approval (East)

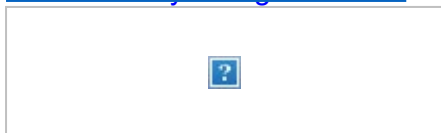
Natural Resources Access Regulator | Department of Planning, Industry and Environment

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Level 0, 84 Crown Street, Wollongong NSW 2500

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To contact the NRAR Hotline and make a report call: 1800 633 362

[Read the NRAR Progress Report 2019-20](#)

The Department of Planning, Industry and Environment acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

From: [Development](#)
To: [Stephen Richardson](#)
Subject: Shoalhaven Starches Modification 20-23 - COMMENTS FROM SHOALHAVEN CITY COUNCIL
Date: Tuesday, 27 April 2021 12:38:49 PM
Attachments: [image001.jpg](#)
[image002.png](#)
Importance: High

Dear Steve,

Please find below comments from Council in response to your email requests dated 23 February 2021 and 3 March 2021 for advice in relation to the preparation of modification applications to the Shoalhaven Starches Expansion Project.

Modification 20

- *Installation of two (2) 150 kL capacity Liquid CO2 storage vessels. Each vessel is 17,200 mm high x 3,800 mm diameter each.*
- *Installation of the above Liquid CO2 storage vessels will require the relocation of a set of existing ambient vaporisers.*
- *Installation of an additional NOx removal bed to accommodate the expected longer running period of the plant. Vessel dimensions are 2,400 mm high x 920 mm diameter.*
- *Interconnecting pipework from the process to the new equipment.*
- *Concrete bases for the above equipment items. This will include piling due to the substandard grade of the existing soil.*

Comments:

Floodplain Engineering Comments/Requirements:

1. No serious concern in relation to flood. It is noted from the submitted letter (Reference No. 17/49) that according to the WMA report the proposed works do not significantly increase the 1% AEP or PMF flood level on other properties. Flood related development controls (Chapter G9, Shoalhaven Development Control Plan 2014) need to be assessed appropriately.

Modification 21

- *Construct a new gas-fired co-generation plant which will consist of two natural gas turbines that will generate an anticipated power output each of 30 MW, providing a total power to the site of 60 MW, that will replace the approved gas fired and coal fired co-generators and it is anticipated will meet the power requirements for the additional works approved following the original Project Approval.*

Comments:

Development Engineering Comments/Requirements:

1. No actual works in the road reserve are anticipated. Underbore of Bolong Road to connect natural gas pipeline.

Floodplain Engineering Comments/Requirements:

2. A hydraulic impact assessment is required to ensure that the propose development will not adversely increase flood hazard and damage to other properties or adversely affect flood behaviour for a 5% AEP up to the PMF scenario. Besides, flood related development controls (Chapter G9, Shoalhaven Development Control Plan 2014) need to be assessed appropriately.

Modification 22

- *The approved Packing Plant made provision for 5 silos to store product awaiting packaging. To accommodate the different types of gluten and starch products that will now be able to be produced from the Specialty Product Building following Mod 16 greater flexibility will be required for the storage of the increased range of gluten and starch products on the Packing Plant site. It is therefore proposed to construct sixteen (16) smaller silos instead of the original 5 approved silos. The proposed 16 silos will each have a square footprint with dimensions of 5 metres by 5 metres, height of 30 metres and volume of 300 tonnes each.*
- *Additional packer feed bins will also need to be installed within the Packing Plant building to accommodate the need for improved flexibility to enable a greater range of gluten and starch products to be packed.*
- *Additional product transfer lines and services will also need to extend from the Specialty Product Buildings approved under Mod 16 and extend across Bolong Road to the Packing Plant via the approved underground services crossing. It is also proposed to slightly relocate the transfer lines and gantry to accommodate the amended product silos.*
- *To accommodate the change in equipment used within the Packing Plant, such as the additional packer feed bins, the overall footprint of the Packing plant building will need to be slightly reconfigured from that which was originally approved.*
- *The change in the footprint of the Packing Plant building will also necessitate a change in the layout of the approved car parking spaces associated with the Packing Plant building.*

In addition to the above modifications it is also proposed to carry out the following modifications to the approved Packing Plant site:

- *To enable storage of additional rail wagons and enable wagons to be taken off line for maintenance purposes a third rail siding is proposed.*
- *It is also proposed to increase the height of the gantry containing the product transfer lines to the product silos to provide additional clearance above the container reach stacker. The current approved gantry has a height above ground level of 14.5 metres AHD. It is proposed to lift the gantry to a minimum height*

above ground level of 19.6 metres AHD, with the top of the gantry to 22.7 metres AHD.

- *It is also proposed to provide a train tunnel where the noise mitigation walls surrounding the container storage area terminate at the rail line, to provide additional noise attenuation.*
- *It is also proposed to provide a loader maintenance and cleaning area within the container storage area.*

In addition to the modifications associated with the approved Packing Plant, it is also proposed to undertake the following modifications to the Approved Project.

- *It is proposed to install an additional raw waste water tank within proximity of the existing raw waste water tank adjacent to the oxidisation pond within the Environmental Farm and located to the north of Bolong Road (and opposite the former Paper Mill site). It is proposed that this tank will provide additional storage and act as a buffer in the case that the existing tank is required to be taken off line. This tank will have an effective volume of 3000 KL with dimensions of approximately 20 metres diameter and 12 metres height above ground level.*
- *It is also proposed to install a Nitrogen Generator and Storage Tanks that will supply Nitrogen to the existing and proposed ethanol storage tanks to eliminate in-tank fire risk. This facility will be located between the existing ethanol loading bay and the Bolong Road frontage of the site. This facility will comprise a Nitrogen Generator housed within a container type building. Four storage vessels comprising compressed air and mixing tanks will be sited between the Nitrogen Generator and Bolong Road. The Nitrogen that is produced will be stored in six vessels with a height above ground level of 10 metres adjacent and to the west of the Nitrogen Generator.*
- *In order to produce ethanol, starch is essentially heated to convert it (with enzymes) into sugars which are then fermented to produce ethanol. This starch heating process is undertaken in an Indirect Cooking Facility. Shoalhaven Starches have identified that there is inadequate capacity in their current Indirect Cooking process to accommodate both the existing ethanol production as well as that associated with the movement from lower to higher grade ethanol production under Mods 18 and 19. To provide increase indirect cooking capacity it is proposed to establish an additional Indirect Cooking Facility to be located adjacent to the existing Glucose Plant, to the north of the internal railway and to the south of the Ethanol Distillery.*

The additional Indirect Cooking Facility will comprise series of vessels housed within a structure that will have a footprint of 184.5 m² (20.5 m x 9 m) and height of 16.6 metres above ground level. The structure will include a range of processing vessels situated over three floors; and a single product feed tank.

Comments:

Development Engineering Comments/Requirements:

1. Changes to the carpark are proposed and the revised plans are considered suitable. The following condition of consent is recommended.

Car Parking Design Standards

Prior to the issue of a Construction Certificate, certified engineering design plans and specifications must be prepared by a professional engineer, (as defined in the National Construction Code) or surveyor and approved by the Certifier.

All car parking and access design for the must comply with the following:

- a) Constructed in accordance with the following:
 - i) AS 2890
 - ii) with a flexible pavement, surfaced with 30mm of AC10 asphaltic concrete or two coat bitumen seal using 14mm and 7mm aggregate, or,
 - iii) with a concrete pavement designed and constructed for a minimum traffic loading of 1×10^6 ESA, or,
 - iv) with an asphaltic concrete (AC) flexible pavement designed and constructed for a minimum traffic loading of 1×10^6 ESA. Where asphaltic concrete surfaced pavements are likely to be subject to bogie-axle vehicles turning tightly, the asphaltic concrete is to include a rubber base to improve durability and manufacturer's product details.
- b) Bordered in accordance with Council's Standard Drawings by:
 - i) concrete kerbing, except where surface runoff is concentrated, in which case concrete integral kerb and gutter must be constructed.

Floodplain Engineering Comments/Requirements:

2. A hydraulic impact assessment is required to ensure that the propose development will not adversely increase flood hazard and damage to other properties or adversely affect flood behaviour for a 5% AEP up to the PMF scenario. Besides, flood related development controls (Chapter G9, Shoalhaven Development Control Plan 2014) need to be assessed appropriately.

Modification 23

- - *The installation of new distillation columns and associated processing equipment to the east of the factory site and extending onto land that was part of the former Dairy Farmers factory site. This plant and equipment will be of similar design, size and operation to the existing beverage grade ethanol plant modification approved under Mod 12 and proposed under Mod 19. These structures will have a maximum height above ground level of 59.4 metres.*

The distillery essentially separates ethanol from 'beer' then purifies the ethanol by passing it through rectification columns.

This proposal however will not involve the provision of any new additional Ethanol Storage Tanks. It is envisaged that ethanol produced as part of the Stage 3 proposal will be transported directly to Manildra's Ethanol Storage Depot located at Port Kembla for storage.

- *The proposal will include the erection of three Fermentation Tanks (and associated scrubber). These tanks will be of similar dimensions to the existing Fermentation Tanks located further to the west. These tanks will have a height above ground level of 32.5 metres and a diameter of 17.5 metres. These additional Fermentation Tanks would be sited immediately to the west of the proposed new Ethanol Distillery.*
- *The proposal will also include the construction of an additional Water Balance Recovery Evaporator to be sited adjacent to the existing evaporators which are located immediately to the east of the existing Fermenters. The Water Balance Recovery Evaporator will be identical to the existing evaporators with a height above ground level of 29.7 metres.*

The role of the Water Balance Recovery Evaporators is to increase solids in the feed to the Ethanol Plant thus reducing the amount of liquid that is required to be heated to evaporate the ethanol in the distillery. This not only has the advantage of improving energy efficiency for the Ethanol Plant operations; but also reduces the amount of waste water that is produced and which needs to be treated in the Waste Water Treatment Plant located on the Shoalhaven Starches Environmental Farm located on the north side of Bolong Road.

Under the current Project Approval, Shoalhaven Starches are limited to a maximum of 70 ML of waste waters that can be treated in the Water Treatment Plant per week. Under the current operations, the Waste Water Treatment Plant is presently treating in the order of only 52.5 ML of waste water per week. It is understood with the provision of an additional Water Balance Recovery Evaporator as part of this project, the amount of waste water that is likely to be generated by the overall site would still sit within the approved limit for the Waste Water Treatment Plant.

- *It is anticipated that this project will enable the Shoalhaven Starches' operations to increase beverage grade ethanol production by 110 ML per annum; and with the process improvements attributed to the additional Water Balance Recovery Evaporator will enable the existing industrial grade ethanol plant to increase production by up to 40 ML per annum. As a result, overall ethanol production is anticipated to increase by up to 150 ML above the current limit set by the existing Project Approval of 300 ML per annum.*

Comments:

Development Engineering Comments/Requirements:

1. The proposed fire water service is to cross Bolong Road. The following section 138 works in road reserve conditions of consent are recommended.

Works within the Road Reserve

Prior to undertaking any works within an existing road reserve, the developer must obtain the consent of Council under *section 138 of the Roads Act, 1993*.

The following details must be submitted to Council as part of the application:

- a) Any civil works design required by this consent.
- b) Evidence of the contractor's Public Liability Insurance to an amount of \$20 million.
- c) Name and contact information of the person responsible for all relevant works.
- d) A Traffic Control Plan prepared, signed and certified by a person holding the appropriate Transport for NSW (TfNSW) accreditation.
- e) Where the Traffic Control Plan requires a reduction of the speed limit, a 'Application for Speed Zone Authorisation' must be obtained from the relevant road authority.

Footpath Design Standards

Prior to commencing works in the road reserve, certified engineering design plans must be prepared by a professional engineer, (as defined in the National Construction Code) or surveyor and approved by Council. The footpath design must comply with the following:

- a) Councils Engineering Design Specifications Section D8 – Cycleway and Footpath Design.
- b) A 1.2 metre-wide concrete footpath generally in accordance with the plan prepared by Manildra Group, Stage 3 Beverage Grade Ethanol Site Plan dated 22/02/2021 with:
 - i) cross section design provided from road centreline to the boundary.
 - ii) 3% cross fall from the boundary to top of kerb or future kerb height.
 - iii) match existing footpath levels of adjoining property frontages and be a uniform grade over the length of the development site frontage, or where this cannot be achieved, a longitudinal section must be designed.
 - iv) kerb ramps at intersections in accordance with Council's Engineering Design Specifications.

Works as Executed Plans – Works in the Road Reserve

Prior to the issue of an Occupation Certificate, Works as Executed Plans must be prepared by a registered surveyor / professional engineer, (as defined in the National Construction Code) and approved by Council demonstrating compliance with the approved design plans.

The Works as Executed dimensions and levels must be shown in red on a copy of the approved plans and comply with the following requirements:

- a) Council's Development Engineering Construction Specification.
- b) Show compliance with the approved design plans of all road and drainage works.
- c) Show any retaining walls including footings and agricultural drainage lines.
- d) Show the location of all underground service conduits.
- e) Include all deviations from the approved Civil Engineering Plans.

Floodplain Engineering Comments/Requirements:

2. A hydraulic impact assessment is required to ensure that the propose development will not adversely increase flood hazard and damage to other properties or adversely affect flood behaviour for a 5% AEP up to the PMF scenario. Besides, flood related development controls (Chapter G9, Shoalhaven Development Control Plan 2014)

need to be assessed appropriately.

Environmental Health Comments/Requirements:

3. The NSW Environment Protection Authority as the appropriate regulatory authority for the activities should give consideration to the location of the tanks and risks associated with proximity to Abernethy's Creek and subsequently to the Shoalhaven River.

It is recommended you discuss the matter of water and sewer servicing directly with Shoalhaven Water.

Should you have any questions in relation to the above please give me a call.

Regards,

Andre Vernez

Senior Development Planner

Shoalhaven City Council

02 4429 3111

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