

Shoalhaven Starches

Community Update

A New Opportunity for Shoalhaven Starches

The Manildra Group is responding to an increasing demand for ethanol. To meet the demand Shoalhaven Starches is planning to upgrade its plant. Before the planned upgrade takes place Manildra Group is making a big investment in odour management and wastewater treatment. This community update provides an overview of where these projects are up to and how the local community can participate in the consultation process.

Background

The NSW Government has recently mandated the blending of 2% of ethanol into the total volume of petrol sold in NSW as a first step towards a 10% ethanol content by 2011.

The use of ethanol as a fuel or fuel additive has many benefits: it is a renewable fuel and lessens reliance on fossil fuels; it reduces greenhouse gas emissions and other air pollutants such as carbon monoxide and particulates; it reduces imports of oil and stimulates regional and local economies if produced locally.

Shoalhaven Starches is planning to increase its ethanol production capacity to meet the expected increase in demand for ethanol by upgrading the existing ethanol plant at its Bomaderry factory. Production will increase from 126 million to 300 million litres of ethanol per year.

There are three distinct parts to the ethanol production capacity upgrade project:

1. a major odour reduction project
2. a wastewater treatment project
3. an upgrade and expansion of ethanol production and handling capacity at the factory.

Timeframe

The approval process for the upgrade project is underway. Shoalhaven Starches hopes to have final approval for construction in the second half of 2008, with construction to commence shortly after. Construction should take approximately 12 months.



Shoalhaven Starches is proposing to increase the volume of ethanol produced at their Shoalhaven factory

Putting an end to odours

The impact of odour on the local community is an important issue. On behalf of Shoalhaven Starches, GHD Pty Ltd. recently completed a comprehensive Environmental Audit of operations identifying and quantifying all odours generated, and providing recommendations for their improved management.

Shoalhaven Starches has agreed to a plan and timetable to implement the recommendations of the Environmental Audit.

Shoalhaven Starches has started implementing those recommendations that do not require planning approval. A number of the works that do require planning approval are included as part of the ethanol expansion project. Broadly speaking, odour reduction works will involve:

1. Improvements to the dried distillers grains syrup (DDGS) plant. The DDGS Plant removes odour-producing solids from the treated wastewater generated from the ethanol production process. These are then dried and converted into high protein stock feed. To remove odours from this process the following measures are proposed
 - Capturing air and vapour within the plant and burning out odorous particles.
 - Installing biological filtration to remove odorous particles.
2. Constructing a new wastewater treatment plant which uses biofiltration and biological digestion to remove odorous material from the wastewater before it is sprayed on the farm.

The end result of these activities is that both the factory and the environmental farm will produce far less odour.

Treatment and re-use of water

When operating at full capacity the Shoalhaven plant will produce 8.1 million litres of wastewater per day. The proposed improvements will allow more than half of that amount to be reused by the factory on a daily basis. The remainder of the processed water will be used to irrigate the environmental farm. The main elements of the wastewater treatment project are:

1. Adapting a wet weather wastewater storage pond on the farm, for which there is construction approval, to contain the “anaerobic digestion” process. In this covered and sealed pond micro-organisms will consume the odorous compounds in the wastewater stream. The byproduct of this digestion is methane gas that will be captured and piped back to the factory as boiler fuel.
2. After leaving the first digester pond the water will undergo further purification by micro-organisms and micro-filtration in the next pond to remove the last traces of odorous compounds.
3. 4.5 million litres per day will go through a high-technology reverse osmosis (RO) treatment system on the farm. This process will purify the water to drinkable

standard - at least as clean as that which comes out of the tap – after which it will be piped back to the factory to be reused in the production process.

Increasing ethanol production capacity

Increasing the factory’s ethanol production capacity requires plant upgrades including:

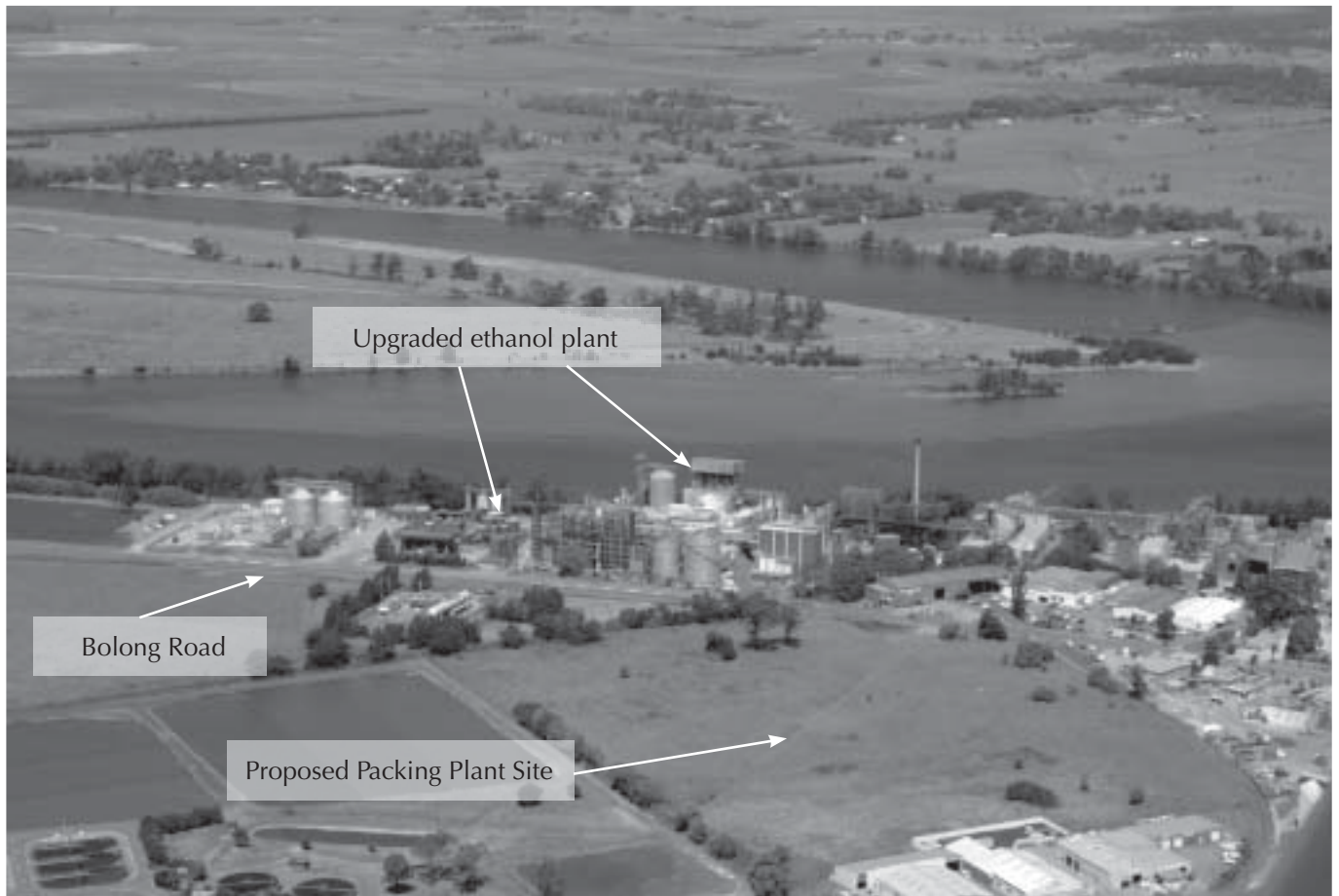
- Additional dryer for the starch/gluten plant
- Additional storage vessels, fermenters and cooling towers for the ethanol plant
- Upgrades to the Stillage Recovery Plant including additional dryers and evaporators.
- Establishing a new packing plant and container loading facility on land the Company owns to the north of Bolong Road. The packing plant will incorporate a new rail spur to allow trains to be loaded and unloaded on the north side of the road.

With the exception of the new packing plant all of these works will take place within the existing factory site. The proposed new equipment is essentially the same as the equipment already on site, and the overall look of the factory will not change very much.

Traffic and Transport

The project has a number of implications for traffic and transport:

- The operations at the plant will continue to utilize rail as the primary mode of transport, eliminating an additional demand for approximately 400 heavy vehicle trips per week. Though there will be more train movements overall the new packing plant on the north side of Bolong Road will reduce by approximately half the number of trains crossing the road and disrupting traffic, compared with today.
- Those materials and products that are unable to be transported by rail will continue to be transported by truck, with half the movements going along Bolong Road to the Highway, and half travelling to the highway via Cambewarra Road. The proposal is estimated to add eight heavy vehicle movements during the morning and evening local peak hour. Studies indicate that, when considered together with the reduction in heavy vehicle movements from the Australian Paper



Aerial view of the site of proposed ethanol plant upgrade and new packing plant

mill and the dairy Co-op, the proposal will not make a significant impact on local transport routes.

The approval process

The project constitutes a “Major Project” under Part 3A of the Environmental Planning & Assessment Act. The NSW Minister for Planning is the consent authority.

In accordance with the Act Shoalhaven Starches submitted a Preliminary Environmental Assessment (PEA) to the Department of Planning in November 2007. The purpose of the PEA was to describe the proposal and identify key project issues.

The Department of Planning has reviewed the Preliminary Environmental Assessment and issued requirements (otherwise known as the Director-General’s Requirements or DGRs). Shoalhaven Starches has recently submitted a draft Environmental Assessment Report (EAR) that responds to the DGRs. Key issues identified in the DGRs and addressed in the draft EAR, include:

- Odour
- Wastewater
- Water and soils

- Noise
- Transport and access
- Hazards and risk
- Greenhouse gas emissions
- Air quality
- Riverbank stability, riparian management and flooding
- Waste management
- Visual impacts
- Flora and fauna
- Heritage (including Aboriginal heritage)

The Department will send the draft EAR out to agencies for comment. A final response will come back to Shoalhaven Starches who will then produce and submit a Final EAR to the Department. The Department will then place the EAR on formal public exhibition, as well as seek the views of relevant government agencies. Once this process has been followed matters raised by the community and government agencies will need to be further addressed, before the Minister finally determines the application.



The proposed project will see odours significantly reduced and up to 4.5 million litres of water reused every day

Community Consultation

The Director General's Requirements stipulate that Shoalhaven Starches should undertake consultation with key stakeholder groups, affected landowners and community groups.

Twyford Consulting has been engaged to design and manage a community consultation process to support the development of the EAR. Planned community consultation activities include:

1. On-going meetings of the Community Consultation Group (CCG). The CCG was originally established following the Minister's approval of the company's pollution reduction program in 2003 and has operated since that time. Members of the CCG have been kept up to date with the project and have had opportunities to discuss issues and concerns. They have also provided advice on the consultation plan, who should be involved in the consultation, and the issues and concerns held by the broader community. The CCG consists of local residents from Bomaderry, Nowra, Terara, Backforest Road and Meroo Meadow.
2. Briefings of key community groups

3. Distribution of a community bulletin and fact sheets.
4. Ads in the media
5. A project website
6. A 1800 freecall number

The aims of the consultation process are to:

- ensure the local community understands what is being proposed
- provide an opportunity for people to ask questions and raise concerns and issues.

Fact Sheets

To provide more detailed information a number of fact sheets have been produced. Each provides further information on a specific element of the project. Fact sheets include:

- Odour management
- Wastewater treatment
- Increased ethanol production facility

Fact sheets are available from the website, or by contacting Stuart Waters at Twyford Consulting as shown below:

Project Contact

If you have questions, comments or concerns about any aspect of the information in this newsletter you can:

- Call Stuart Waters at Twyford Consulting on Freecall number 1800 11 00 55
- Email Stuart on stuart@twyford.com.au or twyford@twyford.com.au
- Write to Stuart addressing your letter to:
- Stuart Waters, Twyford Consulting, PO Box 6004, Wollongong NSW 2500.
- Check out the project website: www.manildra.com.au/ for more information or to download copies of the Fact Sheets described above.

