

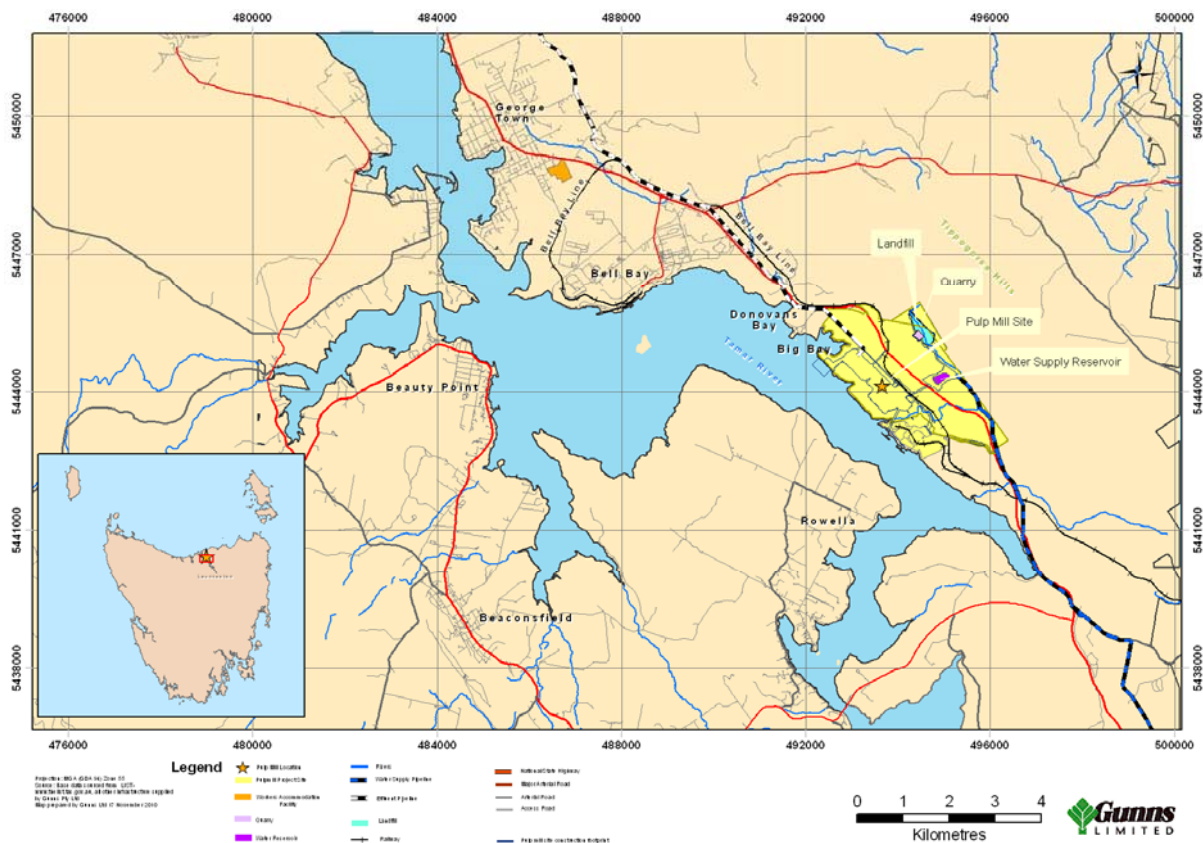
# Fact Sheets – Bell Bay Pulp Mill

## Summary of the project

- A world-scale, bleached hardwood Kraft pulp mill, located on the southern edge of the Bell Bay industrial zone in the Tamar Valley, northern Tasmania.
- Pulp, the processed wood fibre from the mill, is used for making paper and other products such as tissue.
- Production capacity of 1.3 million air dried tonnes (ADt) Capital cost of \$2.3 billion. It will contribute an estimated \$9.9 billion to the Gross State Product and \$3.7 billion to the Gross Regional Product of Tasmania's Northern Region from 2011-2030.
- The project will create approximately 3,100 new full-time jobs and maintain them in Tasmania over each year of the mill's operations, which is 12 times the direct employment in the mill.
- 100% hardwood plantation fibre source, mainly from Tasmania, with some supply from mainland Australia. No native forest timber will be used.
- The mill is located adjacent to an existing wood chip mill and has existing rail and high voltage power infrastructure and access to natural gas supply.
- A new purpose-built wharf will be located adjacent to the pulp mill from which processed pulp will be loaded to ships for export. This will also serve as a receiving point for construction equipment.
- The mill will use Elemental Chlorine Free Light (ECF light) bleaching technology, which is the most advanced pulp bleaching technology available.
- The plantations that will supply the mill are currently undergoing certification of responsible management through the Forest Stewardship Council. Plantations already certified under the Program for the Endorsement of Forest Certification Schemes (PEFC) and the Australian Forestry Standard.
- The pulp product will serve world markets, particularly in the Asia-Pacific region.
- 180 MW power generation from mill "black liquor" (wood residues), plantation bark and chip screening residues, which will provide a surplus of over 100 MW of "green power" for sale to the national grid. This is greater than the combined industrial and domestic power usage in the greater Launceston area.
- Rigorous environmental monitoring regime under Australian and Tasmanian Government environmental regulations is in place.
- Independent monitoring and public reporting of environmental and social performance through a multi-stakeholder Project Oversight Committee.
- The pulp mill will be built on a 663 ha greenfield industrial site between the eastern bank of the Tamar River, across from the settlement of Rowella, and the East Tamar Highway.

# Fact Sheets – Bell Bay Pulp Mill

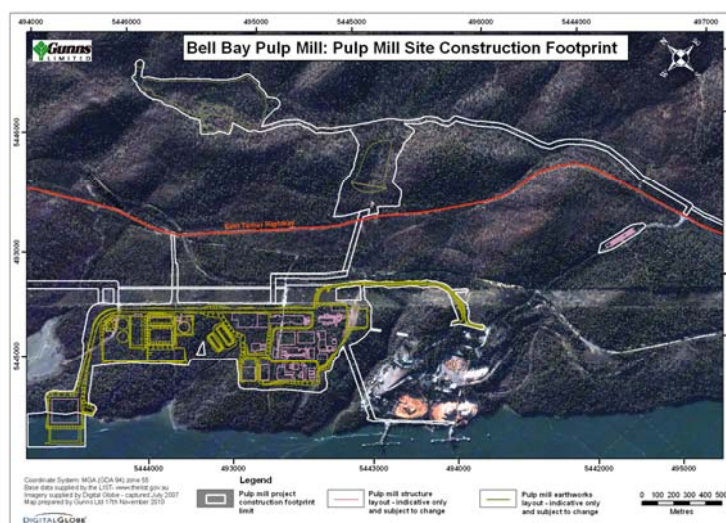
- It is located near the southern end of the Bell Bay Industrial zone, approximately 10 km south of the township of George Town. The site was zoned for industrial use in 1990 and was formerly owned by Rio Tinto Aluminium (Bell Bay) Ltd.
- Adjacent infrastructure within the Bell Bay Industrial Zone includes the TasPorts Bell Bay Port, TEMCO metallurgical plant, Ecka Granules aluminium powder plant, Tamar Valley Power Station and the Rio Tinto Aluminium-Alcan smelter.
- Other industries in the Tamar Valley region include wine grapes, grazing, orchards and tourism.
- The Bell Bay site was chosen over the alternative site at Hampshire as it was identified as superior on economic, planning and social considerations, and equal to Hampshire environmentally.



# Fact Sheets – Bell Bay Pulp Mill

## Project infrastructure

- A bleached hardwood<sup>1</sup> Kraft pulp mill with annual production capacity of at least 1.3 million air dried tonnes of pulp.
- A new wharf with maximum water depth of 12 metres for delivery of chemicals and materials and the export of pulp by ship. The wharf has been designed to minimise potential impact on the river and marine life during construction.
- Wood yard and chip handling facilities. The infrastructure allows the use of rail, with a decision to be made on this during the logistical design of the project prior to commencement of operations.
- Chemical plant for producing and storing bleaching chemicals. The ownership and operation of this plant would be outsourced to an organisation with the appropriate experience and expertise in operating such facilities.
- 180 MW power station fueled by “black liquor” (wood residues) from the pulp process and chip fines, plantation bark and chip screening residues.
- Water supply pipeline from the Trevallyn Dam, near Launceston, incorporating a water pumping station near Trevallyn.
- Water supply purchased at commercial rates from part of the existing Hydro Tasmania allocation currently directed through the Trevallyn Power Station
- Quarry, landfill and water reservoir adjacent to the pulp mill site.
- Effluent treatment plant using an activated sludge/biological treatment process (equivalent treatment technology to that used in Hobart’s Macquarie Point Wastewater Treatment Plant).
- Effluent pipeline from the pulp mill site to Four Mile Beach on the north coast of Tasmania, incorporating a 2.7 km marine outfall and diffuser, which is adjacent to the Tasmanian Natural Gas pipeline and the Basslink electricity cable.



<sup>1</sup> Processing minor quantities of softwood is also permitted.

# Fact Sheets – Bell Bay Pulp Mill

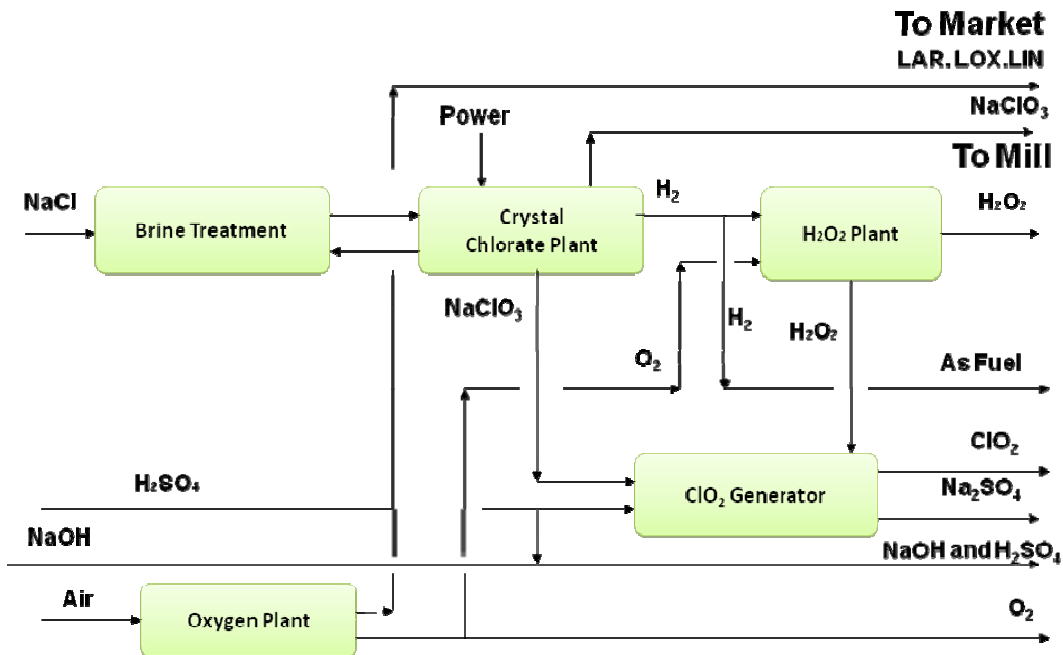
## Process overview

- The Kraft process used in the mill is a very efficient pulp production process, as wood residues removed chemically from the wood fibres (mainly lignins) are combusted in a recovery boiler to generate power, while process chemicals are recycled in the same process. The pulp production process, in simple terms, is as follows:
  1. Woodchips: plantation-sourced wood is debarked, chipped and screened – the fine waste is fed into a power boiler and the chips into the digester for cooking.
  2. Cooking: chips are mixed with caustic soda (white liquor) to dissolve the lignin (the natural gluing agent in wood) and free it from the cellulose fibres.
  3. Washing: cellulose fibre is separated from the lignin or black liquor (which then goes to step 7) and cooking chemicals by repetitively washing the pulp. Filtrate is removed from the pulp after each wash to remove as much lignin as possible.
  4. Oxygen delignification: as much as possible of any remaining lignin is removed from the fibre through the use of oxygen and caustic soda.
  5. Bleaching: common bleaching agents including hydrogen peroxide and chlorine dioxide, which is increasingly being used to treat drinking water, are used to eliminate residual lignin and colour, leaving white pulp.
  6. Drying: the pulp is dried, baled, packaged and stored ready for sale.
  7. Evaporation: water is removed from the black liquor by evaporation so that it can be used as fuel in the recovery boiler.
  8. Recovery boiler: black liquor is burnt in the recovery boiler, generating steam, which drives the turbine as well as being used in other pulp processes. Inorganic chemicals used in the cooking process are recovered at the same time.
  9. Re-causticising: recovered inorganic chemicals are reacted with burnt lime to regenerate (for recycling to step 2) white liquor for the digester and lime mud.
  10. Lime kiln: the lime mud is fed into the lime kiln before being recycled for re-causticising. Lime is essential for making caustic soda for the cooking process.
  11. Power boiler: plantation bark, fines from woodchips, dewatered sludge from effluent treatment and plantation waste are burnt in the power boiler to generate steam and electrical energy.
  12. Oxygen plant: oxygen is extracted from the air to be used in delignification and hydrogen peroxide production.

# Fact Sheets – Bell Bay Pulp Mill

13. Bleaching chemical preparation: inorganic salt (sodium chloride) is used to produce bleaching agents in a chemical plant. Hydrogen (by-product) is used together with oxygen for hydrogen peroxide production.

## Chemical Plant Concept



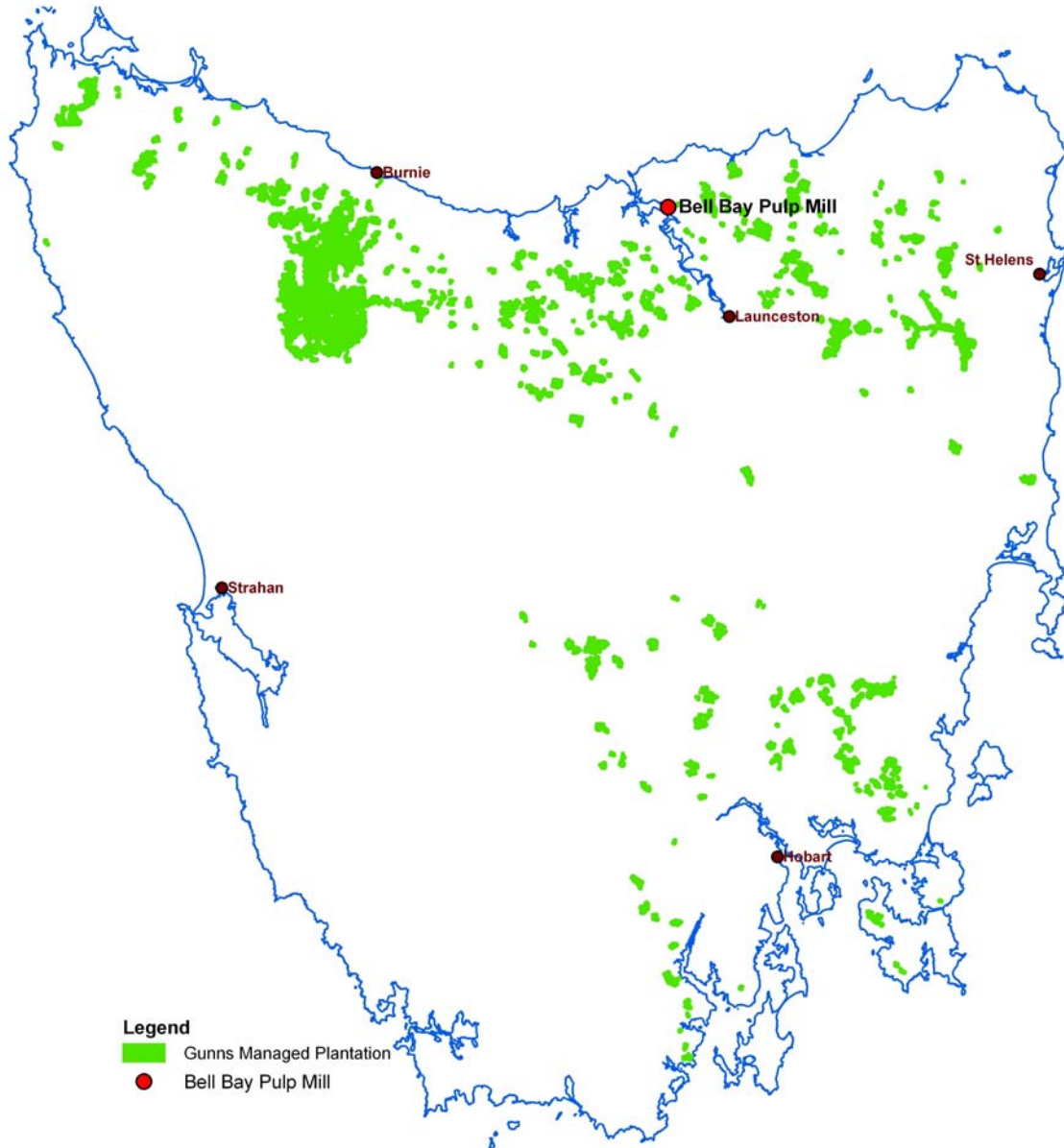
# Fact Sheets – Bell Bay Pulp Mill

## 100 per cent plantation feedstock

- The pulp mill will use between 3.8 million to 4.5 million tonnes of plantation woodchips each year.
- The pulp mill will be supplied with 100 per cent eucalypt plantation fibre from Gunns' existing eucalypt plantations. Approximately 80% of the fibre will be sourced from Tasmanian plantations, with additional resource from Gunns' plantations on mainland Australia.
- Absolutely no wood from native forests will be used in the mill.
- Plantation fibre offers many benefits, in particular the ability to use the ECF-light bleaching technology and provide greater stability of the manufacturing process.
- The plantation estate is currently seeking certification for responsible management through Forest Stewardship Council (FSC) process as FSC certified products are requested by many of Gunns' customers.
- The FSC certification process, which will take at least 18 months, involves rigorous independent audits and a fully transparent stakeholder engagement process.
- The plantation estate is already certified under the Program for the Endorsement of Forest Certification Schemes (PEFC) and the Australian Forestry Standard.
- Existing eucalypt plantations are located predominately in northern Tasmania with the balance in the SE of the state. Mainland plantations are located within the Green Triangle region of Victoria/South Australia and in SW Western Australia.

# Fact Sheets – Bell Bay Pulp Mill

## Gunns Tasmanian Plantation Estate



# Fact Sheets – Bell Bay Pulp Mill

## Economic impact

- The total value of the project to Tasmania's Gross State Product to 2030 is calculated at \$9.9 billion in today's dollars, which is more than four times the initial investment.
- At \$2.3 billion, the pulp mill will be the largest private sector project ever undertaken in Tasmania, and the largest ever investment in the pulp and paper sector in Australia.
- Woodchip processing through the pulp mill would allow 80 per cent of the value of the plantation resource to be captured in Tasmania. Presently, only 40 per cent of the value is captured in Tasmania.
- In every year of the mill's operation, Tasmania's Gross State Product will be four per cent higher than it would have been without the pulp mill.
- The pulp mill will play a very considerable role in offsetting the negative impact of Australia's 'two-speed' economy on Tasmania.
- The value to the Northern Tasmanian region will be \$3.7 billion, which is a boost to Gross Regional Product of around six per cent each year.
- The project will create approximately 3,100 extra full-time jobs in Tasmania over each year of the mill's operations.
- The number of jobs to be created is more than 12 times the direct employment in the mill. These extra jobs will arise from the positive flow-on effects from the supply of goods and services to the mill. These jobs are in addition to the existing employment in the industry.
- In Northern Tasmania, an estimated 2,600 extra full-time jobs will be created every year during the operation of the mill. This equates to an increase in employment of over 11 per cent each year.
- The positive economic impact of the project would be much greater in Tasmania than in Australia as a whole, reflecting that the supply of services and materials will largely be from within Tasmania.
- Total value to the Australian economy is estimated to be \$2.4 billion (NPV of Gross Domestic Product).

### Notes:

Gross State Product (GSP) is a measure of the state's economic performance and represents the market value of all goods and services produced within the state at a particular time.

This economic information is based on an economic analysis of the project undertaken in March 2011 by Insight Economics and Monash University using the Monash Multi-Regional Forecasting Model (MMRF).



# Fact Sheets – Bell Bay Pulp Mill

## Summary of economic impacts

Measure	Impact
NPV of Gross Domestic (State) Product impacts	
Australia	\$2.4 billion
Tasmania	\$9.9 billion
NPV of investment impacts	
Australia	\$1.3 billion
Tasmania	\$4.5 billion
NPV of consumption impacts	
Australia	\$2.8 billion
Tasmania	\$3.7 billion
NPV of increased taxation revenues	
Australian Government	\$391 million
Tasmanian State Government	\$597 million
Average annual number of additional jobs in the operational phase	
Australia	600 persons
Tasmania	3,100 persons
NPV of Gross Regional Product impacts in Tasmanian regions	
Northern Region	\$3.7 billion
Mersey Lyell	\$2.1 billion
Southern	\$0.9 billion
Greater Hobart	\$2.6 billion

Note a: The net present values in this report are estimated over the period 2011 to 2030 using a real social discount rate of five per cent.

Note b: The Gross Regional Product figures sum to less than Gross State Product because they are estimated at factor cost and exclude taxes and subsidies.

Source: CoPS Modelling

The full economic report is available for download from

<http://www.gunns.com.au/news/latest-news/latest-news-article/Bell-Bay-Pulp-Mill-to-deliver-10-billion-to-Tasmanian-Economy-Report/371/>

# Fact Sheets – Bell Bay Pulp Mill

## Social performance

- The pulp mill will create approximately 3,100 new jobs in Tasmania in each year of its operation, with around 2,600 of these estimated to be located in northern Tasmania.
- The project is located close to the township of George Town (population approx. 4,200) and within 30 minutes commute from the regional city of Launceston (population approx. 100,000). These localities will be important suppliers of labour, goods and services for the project.
- A local purchasing and supply policy, and training partnerships with local government and business, will help ensure the project's value to the local community is maximized.
- A Local Economic Development Plan will put in place clear strategies to maximize the social and economic benefits of the mill, and minimize potential negative impacts such as reduced availability of tourist accommodation during construction.
- A Community Engagement Plan will guide transparent communication and engagement over the mill construction.
- A Community Liaison Committee was set up prior to the commencement of the first stage of earthworks. The CLC includes members from local community, local government and service organisations.
- An independent Project Oversight Committee will oversee the social, environmental and economic performance of the project and regularly report progress to the broader community.

# Fact Sheets – Bell Bay Pulp Mill

## Environmental monitoring

- The pulp mill project operates under both Commonwealth and Tasmanian regulatory regimes, and each has its own detailed monitoring requirements.
- The comprehensive monitoring regime, which encompasses data gathering and reporting across many hundreds of parameters.
- The Commonwealth Baseline and Operational Monitoring Program (C-BOMP) predominately addresses issues of Commonwealth concern in accordance with the Environment Protection and Biodiversity Conservation Act, 1997, namely:
  - Listed threatened species and communities
  - Listed migratory species, and
  - Commonwealth marine areas.
- The State Baseline and Operational Monitoring Program (S-BOMP) responds to the Tasmanian Government's requirements for environmental monitoring in accordance with the Pulp Mill Assessment Act, 2007 and the normal Tasmanian environmental regulatory regime. Environmental factors to be monitored under the S-BOMP include:
  - Chemical and particulate air quality
  - Odour
  - Noise
  - Ground and surface water
  - Marine water quality
  - Marine sediment, and
  - Marine ecological communities
- The S-BOMP also includes an extensive "sentinel program" involving testing for chemical compounds in living organisms and/or human-consumed products including mussels, Little Penguins, fish (flathead & leatherjacket), and cows' milk.
- Any proposed changes to the C-BOMP or S-BOMP will require Commonwealth and/or State Government approval following technical review.
- The monitoring program will be conducted by specialist consultants as well as appropriately trained Gunns employees. Laboratory analyses will be undertaken by laboratories certified by the National Association of Testing Authorities (NATA) or their equivalent.
- Reporting requirements for the monitoring program are extensive. Monitoring reports and source data will be made available to the public through the project website and community engagement forums.

# Fact Sheets – Bell Bay Pulp Mill

## Summary of monitoring requirements

Atmospheric	Effluent & Marine
Five <b>Air Quality Monitoring Stations</b> (AQMS) located near the mill site within the Tamar Valley will continuously monitor weather conditions, odorous chemicals and airborne particles. Other air pollutants will be continuously monitored at one AQMS.	<b>Mill Effluent</b> will be continuously monitored for volume and a number of key pollutants using on-line instruments at the wastewater treatment plant outlet.
<b>Continuous Emission Monitors</b> (CEMS) will measure pollutant emissions as they exit the mill stacks, including using web-cams to maintain visual surveillance of emission points.	<b>Mill Effluent</b> will be monitored via discrete periodic sampling at the wastewater treatment plant outlet for a range of pollutants via laboratory analysis. Sampling will occur every day, week or month depending on the pollutant to be measured. Chemical analysis will be undertaken by NATA-certified laboratories (or equivalent).
A <b>Real Time Dispersion Model</b> will continuously track and model emissions, predicting the location of emission plumes within the atmosphere. The model will use data obtained from the AQMS network and the CEMS, allowing the mill to be managed to minimise dispersion of emissions. This will also allow rapid investigation of any complaints.	<b>Marine Ecological Effects Monitoring</b> will take place in Bass Strait in the area surrounding the outfall and beyond, to identify any effect (change) on the diversity or abundance of local marine flora and fauna. Focus areas will include benthic infauna (animals that live in the sand) and benthic epiflora and epifauna (animals and plants that attach to reefs). Specialist marine ecologists will undertake this component in accordance with a highly detailed assessment and analytical protocol developed specifically by the Commonwealth for pulp mill marine outfall monitoring.
A series of <b>Odorous Compound Monitoring Programs</b> will be in place to identify and or manage any odours. These programs include community-based odour surveys and an odour panel consisting of nearby residents. Chemical sampling methods will also be used to identify any fugitive emission points or the presence of odorous chemicals.	Baseline monitoring of <b>marine water quality</b> has been completed. After operations commence, frequent sampling will occur initially and then reduce to lower intensity. Chemical, physical and optical properties of the water will be examined and reported. Monitoring will be in accordance with Australian Guidelines for Marine Water Quality Monitoring.

# Fact Sheets – Bell Bay Pulp Mill

A series of **discrete sampling programs** will be undertaken to demonstrate 'before and after' comparisons of a number of pollutants that are of concern to various stakeholder groups. These programs include measuring 'dioxins' in Cows milk and air as well as the concentration and chemical composition of PM2.5 particulates. Most sub-programs will be undertaken on a monthly or quarterly sampling regime.

**Marine Sediment** sampling will occur at high frequency in Bass Strait in order to identify any changes in chemical and physical composition of sediments at several sites near and distant to the outfall. Two annual surveys will characterise baseline conditions before operations commence. Several sample runs per year at the same sites will examine post-operational trends. Purpose built sampling equipment will be used to focus analysis on the top 20mm of sediment. Chemical analysis will include persistent organic pollutants, such as 'dioxins' and resin acids and many other parameters

A network of **Noise Monitoring Stations** will continuously log noise data on the mill site and in the nearby Rowella area. Seasonal attended surveys will also be carried out at a number of noise sensitive and representative locations in the Rowella area.

The **Marine Sentinels Program** involves examining tissue concentrations of a range of pollutants in shellfish, fish and penguin eggs. Additional analysis will examine many of the same animals for possible 'effects' such as their general condition, growth rates and reproductive ability. Several surveys will be undertaken before operations commence and will be repeated after commencement.

## Estuarine

Surveillance of **construction impacts** due to installation of mill infrastructure (wharf and pipeline) within the River Tamar including underwater noise to protect sensitive species.

## Terrestrial

**Mill site** soils, groundwater and surface waters will be monitored, providing surveillance of the management and security of mill process materials. A monthly sampling regime will be undertaken initially.

An **infrastructure program** provides surveillance of threatened or sensitive species that may be a component of local habitats adjacent to mill infrastructure such as the pipeline route.

## Reporting

Substantial public reporting of all monitoring must be presented annually to State and Commonwealth regulators and published for all stakeholders to review. Independent environmental auditing will be undertaken for the Commonwealth in addition to routine oversight of the project (including monitoring activities) by the Independent Site Supervisor and Independent Expert Group.

# Fact Sheets – Bell Bay Pulp Mill

## Best available technology – ECF Light process

- The bleached Kraft pulp production process that will be used for the Bell Bay Pulp Mill converts wood chips into wood pulp through a complex digestion and bleaching process.
- The mill will use an Elemental Chlorine Free (ECF) process, which provides a high level of environmental performance as well as meeting the market demand for bright, white paper.
- Bleached Kraft pulp mills using ECF technology have evolved over recent years, with each one being technologically and environmentally better than the last. Nearly all modern pulp mills use ECF technology because of its good environmental performance and ability to meet market demand. As well as a whiter pulp, the ECF Light process produces paper with stronger fibers, which can be recycled several times.
- Through the use of the best available technology in the pulp production process, the mill will use 40 per cent less chlorine dioxide per tonne of pulp than the traditional ECF process. This is called an ECF “light” process.

# Fact Sheets – Bell Bay Pulp Mill

## Marine environment protection

- The pulp mill will release waste water into the sea 23 km north east of the mill site near Five Mile Bluff. This aspect of the project required Commonwealth Government approval in order to ensure the environmental impacts of the mill were acceptable, the Minister required Gunns to complete a research project on the interactions between the pulp mill effluent and the marine environment. This \$5 million study took two years to complete.
- The Government was advised by an Independent Expert Group, which reviewed the marine modelling work and scientific studies commissioned by Gunns under the project's environmental impact management plan.
- The project has been stringently assessed by the Commonwealth Government under the Environment Protection and Biodiversity Conservation Act, 1999. In March 2011, the Minister issued final approvals covering all aspects of the project subject to the Act.
- The Commonwealth approvals set strict limits on the allowable levels of discharge that can be released by the mill. They also require Gunns to implement strategies to monitor the impacts of the mill discharge on the marine environment, as well as putting in place strict response measures that may be triggered in response to the ongoing findings of the monitoring program.
- The hydrodynamic research project found that the key marine toxicant of concern, chlorate, will readily meet its dilution targets and poses a very low ecological risk to Commonwealth marine areas and elsewhere.
- The project's environmental monitoring regime includes numerous measures to ensure the marine environment is protected, including:
  - Continuous monitoring of mill effluent for volume and a number of key pollutants
  - Sampling and laboratory analysis of mill effluent
  - Monitoring of any changes of abundance or diversity of marine flora and fauna that inhabit soft sediments and rocky reefs
  - Baseline and ongoing monitoring of marine water quality
  - Sampling and analysis of marine sediments at sites near to and distant from the outfall
  - A marine sentinel program involving examining tissue concentrations of a range of pollutants in shellfish, fish and penguin eggs, and
  - Surveillance of general water quality and underwater noise in the Tamar River estuary during mill construction.

# Fact Sheets – Bell Bay Pulp Mill

## Air emissions and odour

- Some people are concerned that the pulp mill will smell, which is understandable, as older pulp mills did smell a lot at times.
- Some people are also concerned that the pulp mill will worsen the air quality of the Tamar Valley, which has improved markedly in recent years because of efforts to reduce emissions from wood heaters.
- The Bell Bay Pulp Mill will use the most up-to-date technology to prevent the escape of odours from the plant. It will be the first pulp mill in the world to have a three-tier odour protection system, which burns the odourous gases before they can be released. All three systems would have to break down at the same time for odours to be released.
- The elimination of odourous emissions from the mill is achieved by the following primary factors:
  - Smooth and consistent operation of all production processes. (Minimising any unnecessary cause to stop/start the mill process e.g. through equipment breakdown)
  - Good training of operational personnel
  - Good preventative maintenance
- In this way, the optimal performance of the mill from a financial perspective also results in elimination of odour and minimisation of all other key air and liquid emissions, giving a win/win to all concerned.
- One of Australia's leading experts in meteorology, odour management and air quality, Mr Robin Omerod of (then) Pacific Air & Environment<sup>2</sup> – conducted a comprehensive review of the research and modelling on air emissions from the mill. He also performed additional modelling. His key findings were:
  - Residents in the local area of the pulp mill should not notice any odour from the mill
  - Emissions of particulate matter (PM10) are expected to have an insignificant impact on Launceston. Any exceeding of PM10 guidelines in Launceston will be due to local sources rather than any influence of the mill
  - Emission of nitrogen and sulphur oxides will not exceed State Government guidelines at any of the modelled points in the Tamar Valley, and
  - The impact of carbon monoxide will be negligible.
- Gunns has already monitored continuously and publicly reported on the air quality in the Bell Bay and Rowella areas for three successive years to get a good understanding of the air quality before mill is built. This, in addition to EPA monitoring means there is a high quality baseline data set from which to

---

<sup>2</sup> Now PAE Holmes.



## Fact Sheets – Bell Bay Pulp Mill

measure future changes in any key pollutants caused by the mill and/or other sources.

- Odour and other emissions to air are regulated through the State Permit. The permit conditions require (amongst other measures):
  - Best possible design standards of the mill to minimize odourous emissions.
  - Extensive on-line surveillance<sup>3</sup> and measurements of actual emission rates and the key mill operating parameters that influence these emission rates.
  - Continual real-time measurement of meteorology, including the actual occurrence and location of "inversions"<sup>4</sup> at the mill site and computerised predictions of the distribution of emissions throughout the local area using this real-time measured meteorology.
  - Extensive monitoring programs to investigate and resolve any odour-related issues that may occur, and thoroughly report on a vast range of air quality measures both before the mill operates and ongoing, after the mill commences operating.

---

<sup>3</sup> Including on-line access to live information for regulators.

<sup>4</sup> An inversion is an atmospheric phenomenon that tends to exacerbate general air quality, particularly in Launceston.

# Fact Sheets – Bell Bay Pulp Mill

## Regulation and approvals

- Commonwealth regulation of the environmental aspects of the pulp mill occurs through the Environment Protection and Biodiversity Conservation Act, 1999.
- The mill has in place all Commonwealth Government approvals necessary for construction to begin and operations to commence.
- Conditions imposed through Commonwealth permitting process include a legal requirement that only plantation fibre may be used and that the only variations to the Commonwealth permit that will be considered in the future, must involve equivalent or improved environmental performance.
- State approval for the pulp mill was obtained through the Pulp Mill Assessment Act, 2007 and conditions of the approval described in the Pulp Mill Permit in accordance with S6(8) of the Act.
- Section 11 of the Pulp Mill Assessment Act, 2007 has proved controversial and subject to contradictory claims about its intent and outcomes. Section 11 only deals with the assessment or approvals process for the mill, and limits avenues of appeal or challenges against the state permitting process.
- Section 11 does not relate in any way to the operations of the pulp mill. It does not prevent Gunns being prosecuted if it is found to be in breach of any permits, licences or laws governing operation of the pulp mill.
- Section 11 does not prevent any person from taking action against Gunns if they have a valid claim for damages as a result of Gunns' construction or operation of the pulp mill. That is, Section 11 has no impact on common law rights to sue for damages.
- State and Commonwealth permits relating to construction and operation of the pulp mill are readily available online.

# Fact Sheets – Bell Bay Pulp Mill

## Power generation and water use

- The Bell Bay Pulp Mill will use up to 26 gigalitres (GL) of water annually – this represents approximately one per cent of the flows into Lake Trevallyn.
- The water usage will have no impact on the environmental water flows through the Cataract Gorge.
- The pulp mill is designed to minimize water use and will use up to 35% less water per tonne of pulp than comparable existing mills.
- Excess water, treated through a biological treatment process, will be released through the outfall
- The pulp mill off-take water will be taken from water that would have otherwise flowed through the Trevallyn Power Station (which is a hydro power station that generates power from the water flow). The volumes that will continue to flow through the power station are sufficient to supply the water needs of a city twice the size of Melbourne.
- The water required to operate the pulp mill would have generated 0.86 Megawatts (MW) of electrical power at the Trevallyn Power Station. In contrast, the Pulp Mill, when built, will generate 180 MW - with over 100 MW to be supplied into the Tasmanian electricity grid.
- To put the surplus power generation into perspective:
  - The Trevallyn Power Station generates 80 MW in total.
  - All industry and domestic power usage in the greater Launceston area (defined by the 7248, 7249 and 7250 post codes) averages 76 MW.
- Waste water from the pulp mill will be released into the sea approximately 23 km to the northeast of the mill site near Five Mile Bluff through an undersea pipeline extending 2.7 kilometres offshore along the sea bed.

# Fact Sheets – Bell Bay Pulp Mill

## Dioxins and Furans

- Pulp mills using old technology based on elemental chlorine bleaching have historically produced and released into the environment a group of chlorinated organic compounds, including some that are commonly termed “dioxins and furans”.
- A number of the group of dioxins and furan chemicals are recognized as persistent environmental pollutants, and are regulated internationally by the Stockholm Convention on Persistent Organic Pollutants.
- Some dioxins and furans, are very highly toxic while others are much less so, with varying toxicities to different organisms, such as fish, birds and mammals. Most human exposure is through food, primarily meat, dairy, fish and shellfish. Dioxins and furans can be formed by natural and man-made processes, such as forest fires or pesticide manufacture respectively, and furans tend to accumulate in aquatic sediments or terrestrial soils leading into the food chain and often in the fatty tissue of higher animals.
- The Bell Bay Pulp Mill is based on Elemental Chlorine Free technology, and uses an improved technology known as ECF ‘light’. The result of this is that the tendency for dioxin and furan formation in the bleaching process and subsequent release to the environment has been virtually eliminated when compared to older technology.
- The hydrodynamic research studies conducted for the Commonwealth environmental assessment demonstrated that levels of toxic dioxins and furans in the pulp mill effluent were below the threshold for detection. This means that concentrations of these substances were shown to be below both Commonwealth and Tasmanian regulatory limits or possibly absent altogether.
- Sediment transport modelling undertaken for the Commonwealth and the State reported that, in a worst-case scenario, the levels of dioxins and furans that might accumulate in marine sediments after 10 years of mill operation would be up to approximately 1% of the level allowed under the Commonwealth permit.