

May 2012



This is the seventh in a series of newsletters, published to provide interested community members with information about the Bell Bay Pulp Mill Project. We will continue to provide this newsletter regularly and encourage interested people to make contact with Gunns if they would like more information about the project.

## This issue

Bulk Earthworks Site Rehabilitation **P1**    Bleaching Chemistry 101 **P2 & 3**    Justin Cashion **P2**  
 Jim Wilson **P3**    Biodiversity Fund Success **P4**

## Bulk Earthworks Site Rehabilitation

Following the completion of the Stage 1 Bulk Earthworks, Gunns has been overseeing the rehabilitation of the exposed mill platform batters (banks) and other disturbed areas within the overall construction footprint.

Priority for the rehabilitation work was to protect the topsoil that had been spread over the platform fill batters at the completion of the earthworks. This was achieved with the assistance of a local contracting firm using an innovative, two staged methodology not commonly used in Tasmania.

Firstly, a combination of fast growing grass seeds, fertiliser and water was sprayed over the exposed batters using a process called hydro-seeding. This was quickly followed by spray application of a specially formulated coating of a bonded fibre matrix (BFM) over the treated areas. The BFM ensured the seed and fertiliser remained in immediate contact with the topsoil, protected from the risk of soil erosion, weather and wildlife. Areas close to the retained native vegetation

**Plate 1& 3 - Hydro-seeded and BFM treated batter**



surrounding the pulp mill site, have then been sown with native grasses and shrubs (known to grow in the area), that are less palatable and more resistant to browsing damage from native animals.

**Plate 2 – Scarification treatment of disturbed areas in progress**



Although revegetation of disturbed areas using native seed mixes can be slow, the above treatments have been timed to coordinate with the onset of mild, autumn weather and we are very confident the rehabilitation works will be a success.



## INTRODUCING Justin Cashion



Justin commenced employment with the company in June 2000 as a Forester, responsible for planning and supervision of harvesting operations in the North West of Tasmania. From there Justin accepted the role Silvicultural Forester in the North East, responsible for the regeneration of harvested native forests and fire management over the estate.

After the Company's transition to a plantation only resource base, Justin completed all native forest regeneration and now moves into the Environmental Compliance and Certification Team, assisting the implementation of Gunns' Forest Stewardship Council (FSC) certification project, focusing on native vegetation and fire management.



## Bleaching Chemistry 101

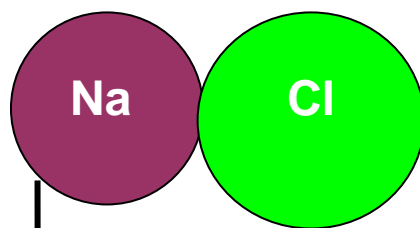
The Bell Bay Project's production processes are in many ways quite complex and for those of us who are not well versed in scientific matters, this issue can be quite daunting. A recurring theme through the many information sessions Gunns' have been running over recent months is a lack of, or a complete misunderstanding of the plant processes and its environmental significance.

In order to help rectify the situation, Gunns' Pulp Mill Project Environmental Specialist, Lawson Harding, has put together a simplified explanation (below) of just one component of the operation to help fill in some of these gaps and then place this simplified description into an environmental context. As indicated, this is a summary, so should any reader have further questions or would like to understand the issue in greater detail, please feel free to contact Gunns directly.

### Bleaching Chemistry 101 or 'Would you like salt on your chips?'

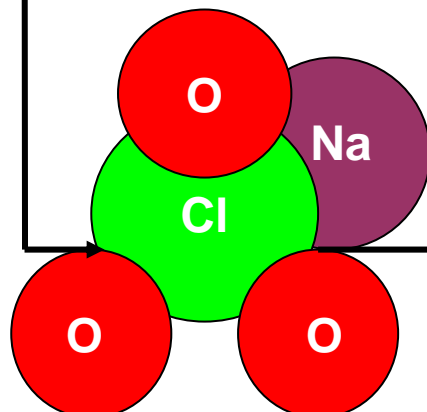
The main chemical imported in bulk ships for the chemical plant will be sodium chloride (NaCl). We commonly recognise this chemical as the relatively benign 'table salt.'

#### Sodium Chloride (NaCl) – Step 1

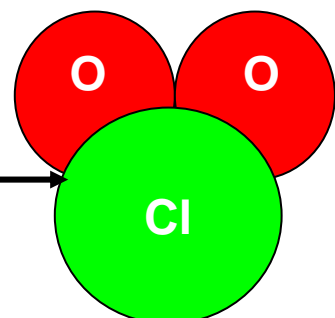


This 'salt' will be processed on site to change it from sodium chloride to chlorine dioxide (ClO<sub>2</sub>) via a 'halfway' step of sodium chlorate (NaClO<sub>3</sub>). Each step involves adding more 'energy', so the chemicals can do the colour removing work required of them in the pulp bleaching process.

#### (Sodium) Chlorate (NaClO<sub>3</sub>) – Step 2



#### Chlorine Dioxide (ClO<sub>2</sub>) – Step 3



## INTRODUCING Jim Wilson



Jim commenced employment with Gunns Limited in 2003. His current role is Plantation Operations and Services Manager for Tasmania which effectively captures the production cycle from tree breeding through to the point of harvest. Jim enjoys the challenge of working in a production environment amongst all our business partners including contractors, landowners, customers and community stakeholders.

Jim sees plantations as a uniquely renewable resource that can enhance a rural economy like Tasmania.

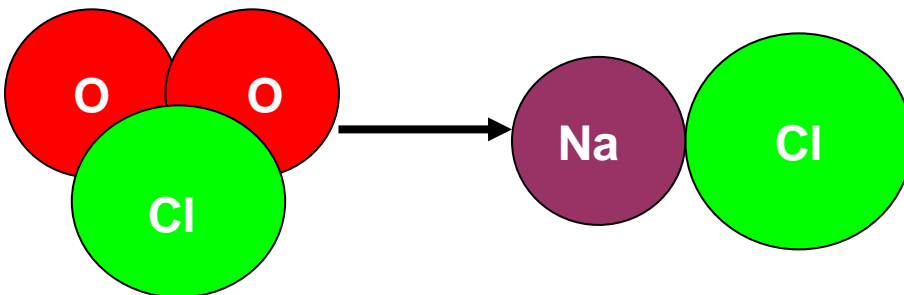
Jim graduated with a Bachelor of Science (Forestry) from the Australian National University. He lives on a farm in North East Tasmania with his wife and three daughters.

## Bleaching Chemistry 101 continued...

The chemical manufacturing processes has been carefully designed to avoid the formation of molecular chlorine ( $\text{Cl}_2$ ) either accidentally or as a contaminant. In doing so, this then avoids the potential formation of undesirable by-products (like 'dioxins' and 'furans') which were associated with the old  $\text{Cl}_2$  mills. It is well established that chlorine dioxide ( $\text{ClO}_2$ ) does not form these undesirable compounds and this is why  $\text{ClO}_2$  bleaching is safe for the environment under all relevant international guidelines.

After  $\text{ClO}_2$  is applied with caustic ( $\text{NaOH}$ ) to the woody fibres in the bleach plant, the chemical energy that was added initially is released (removing colour from the fibre), resulting in the reformation of the (sodium) chloride, or 'salt' again. This is why the waste water from the mill will be mildly 'salty' and lightly coloured similar to a weak tea.

*Chlorine Dioxide ( $\text{ClO}_2$ ) and finally back to Sodium Chloride ( $\text{NaCl}$ )*



No doubt this is also why the Chief Scientist of Australia, after formally reviewing the Bell Bay Pulp Mill Project, described it as being 'environmentally neutral'. Salt in seawater will have no environmental significance and the light colouring of the waste water will dissipate quickly underwater at the point of release several kilometers off shore in Bass Strait.

## Did you know. . .

Gunns recognises the importance of engaging as many Tasmanians and Tasmanian organisations as possible, in the construction and operations of the pulp mill. Gunns has in place, a Local Procurement Policy which prioritises, on a like for like basis, Tasmanian goods and services. The proposed pulp mill construction and operations will require skilled workers. If you are interested in gaining or updating your skills for this proposed project, please speak to your preferred Registered Training Organisation.

**You can find the Local Procurement Policy at:**

<http://www.gunns.com.au/about-us/corporate-responsibility/company-policy-documents/>

## FURTHER INFORMATION

For general enquiries on this publication please use our 'blog' site at [gunnsblog.com](http://gunnsblog.com)

For further information on the Bell Bay Pulp Mill Project, please visit [www.gunnspulpmill.com.au](http://www.gunnspulpmill.com.au)

For general enquiries or more urgent concerns associated with construction activities, please contact us on the following:

Ph 03 6335 5459 or  
[bettina.goodwin@gunns.com.au](mailto:bettina.goodwin@gunns.com.au)

Ph 1800 265 297 or  
0458 001 785 from mobile  
phones (after business hours)

Email – [pulpmill@gunns.com.au](mailto:pulpmill@gunns.com.au)

## COMMUNITY LIAISON COMMITTEE

Website at:  
<http://bellbaypulpmillclc.org>

Postal address:  
PO Box 437  
George Town TAS 7253

**Next proposed CLC meeting  
date:**

**14 June 2012**

## Biodiversity Fund Success

Gunns is proud of its' recent successful application in Round one 2011-12 of the Biodiversity Fund. The Biodiversity Fund is administered by the Australian Government and will invest around \$946m over the next six years to help land managers store carbon, enhance biodiversity and build greater environmental resilience across the Australian landscape.

Gunns' project is to enhance biodiversity, carbon storage and social outcomes in plantation forestry on the Seaview property in north east Tasmania. The Biodiversity fund will provide \$409,000 over 6 years for implementation of this project.

Gunns Limited acquired the Seaview property in 2007. Seaview is approximately 2,100 hectares and contains some 1,290 hectares of established *Eucalyptus nitens* plantation, with the balance predominately native vegetation. Seaview has a long agricultural history, with plantation areas established around 1996.

The plantation areas were established on both pasture/agricultural land and as a result of conversion of native vegetation by the previous landowner. As a consequence of this long agricultural history, many of the riparian (stream-side) zones and potential connecting corridors of vegetation are degraded or nonexistent.

In addition to biodiversity issues associated with a lack of native riparian vegetation, Seaview is located within the catchment of the George River, which is the water supply for the coastal town of St Helens. Local stakeholders have identified potential concerns regarding water quality, particularly given the land use history of this property and the lack of native riparian vegetation as filtering or buffering zones.

This project aims to address these biodiversity and social issues, by delivering the following outcomes:

- Enhance biodiversity outcomes by restoring native vegetation in sensitive areas and linking adjacent isolated native ecosystems;
- Enhance water quality outcomes by increasing native vegetation adjacent to streams and water courses and as a consequence improving management of water quality risks;
- Enhance long term storage of carbon estimated to be in excess of 3,600 tonnes;
- Contain, and where possible eradicate, weeds that impact on the biodiversity, and broader environmental values, of the property;
- Trial, with a view to broader applicability, alternative industrial plantation treatments to traditional chemical fertilisers and pesticides; and
- Permanently protect consolidated areas of intact natural vegetation in perpetuity.

Gunns is looking forward to undertaking this project as a component of our strong ongoing commitment to environmental sustainability and engagement with community members.