Timber Preservation 2006

Extended Producer Responsibility &
Product Stewardship

Opportunities and Risks for the Timber Industry

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Introduction

Policy approaches such as Extended Producer Responsibility (EPR) and product stewardship are being promoted by governments and industry internationally and throughout Australia & New Zealand. A major objective of these policies is to address environmental problems, such as solid and hazardous waste reduction, associated with particular products and materials, including treated timber and timber. EPR and product stewardship present a number of opportunities as well as risks for the timber industry.

Background

What is Extended Producer Responsibility?

Extended Producer Responsibility (EPR) is defined by the OECD as ‘an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of the product's life cycle.’

EPR provides a means to encourage producers to examine the lifecycle of their products and to identify initiatives that will reduce resource use, reduce wastes at all points in a product’s whole lifecycle, reduce the environmental impacts of products and enhance post-consumer resource recovery. Hence, EPR places the responsibility primarily (but not exclusively) on the producers of the products of concern.

“The producer of a product includes a supplier of the product in this State or person having a proprietary interest in the name under which the product is supplied in this State” (NSW Parliamentary Council’s Office 2001) this therefore includes importers of products.

What is Product Stewardship?

Product Stewardship is an approach that recognises that manufacturers, importers, governments and consumers have a shared responsibility for the environmental impacts of a product through its full life cycle, including end-of-life management, and seeks to reduce adverse impacts and internalize unavoidable costs within the product price, through action at the point(s) in the supply chain where this can be most effectively and efficiently achieved.¹ Product stewardship is sometimes referred to as extended product responsibility. The term ‘product stewardship’ is increasingly being used by Australian producers and generally, though not always, refers to programs that have a strong voluntary component.

Current Situation

A number of Australian state governments have initiated product stewardship and EPR schemes to address environmental problems. Most of these problems are associated with waste disposal and recycling issues mainly, but not exclusively, in urban areas. In Australia, national EPR and product stewardship programs are in place for products such as: mobile phones, lubricant oils, agricultural chemical containers and consumer packaging. Some are supported by specific national legislation (for example, the Product Stewardship (Oil) Act 2000) while others use voluntary agreements backed up by state based legislation (for example, the National Packaging Covenant).

Local governments are a keen supporter of product stewardship and EPR as it sees that this takes the burden off the resident for disposal costs of some particular products that are present in large volumes in municipal waste (eg. newspapers, packaging).

Environmental NGOs are also keen supporters of EPR and product stewardship as it perceives that industry is in a better position to take more responsibility for products it produces or distributes than consumers (eg. mobile phones, plastic bags, electronics). Alliances of ENGOs (such as the Boomerang Alliance\(^2\)) as well as the individual ENGOs and lobbyists actively campaign for mandatory EPR and product stewardship schemes.\(^3\)

The environmental departments of a number of State Governments, depending on the amount of resources needed to enforce them and the specific environmental problem, generally support EPR and product stewardship (see Appendix A).

The current Australian Government prefers voluntary approaches to product stewardship (eg. drumMuster, chemClear) but it has also legislated when necessary for specific materials (eg. waste oil).

**EPR / Product Stewardship and Timber**

There has been some discussion as to what exactly the issue is regarding EPR and product stewardship for waste treated timber. Through discussions with the NSW DEC it has been established that their main issue is the contamination of the timber waste stream by treated timber. DEC NSW wants the recovery of timber waste to increase and they see that timber treated with CCA, creosote and other preservatives is causing a reduced recovery rate of timber from landfill. Timber waste is presently obtaining value as recycled timber, from mulch and wood chip for energy.

Other issues raised by DEC NSW include inappropriate disposal of treated timber as well as the lack of alternatives to landfill for the treated timber.

In addition to making treated timber a priority product, the Victorian Government is focusing on waste timber as a priority material in its own right. This is because of the volume presenting at landfills. They also argue that waste timber is causing increased methane emissions from landfills (Note – they need to be made aware of the CRC for Greenhouse Accounting’s research showing that this is vastly over estimated). South Australia and New Zealand are also focusing on waste timber and treated timber (see Appendix A)

**The Economic Argument**

EPR will probably translate to an economic cost that industry will have to bear if it does nothing. Examples of an industry being affected are the motor oil industry as well as the motor tyre industry where a levy is applied to product at point of sale.

What could be the cost of doing nothing? If a tax is applied on the sale of treated timber products it would be applied nationally. Potential costs are not really known but, as an example, the following table gives an indication of what a tax at point of sale would cost the industry each year:

\(^2\) [http://www.boomerangalliance.org/300.php](http://www.boomerangalliance.org/300.php)

Table 1 Potential cost of levy on treated timber per annum

<table>
<thead>
<tr>
<th>Quantity of treated timber (m$^3$)</th>
<th>Total value of treated timber (based on $1,000/m^3$) ($million)</th>
<th>Size of tax (%)</th>
<th>Total cost of tax ($million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500,000</td>
<td>500</td>
<td>1</td>
<td>5</td>
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<tr>
<td>500,000</td>
<td>500</td>
<td>2.5</td>
<td>12.5</td>
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<tr>
<td>500,000</td>
<td>500</td>
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<td>25</td>
</tr>
<tr>
<td>500,000</td>
<td>500</td>
<td>10</td>
<td>50</td>
</tr>
</tbody>
</table>

**Discussion**

Timber is a renewable resource that is already being recycled, both directly (eg. reclaimed second-hand timber) as well as indirectly (eg. chipped and used as mulch, fuel and in the production of new particle board) in significant quantities.

It has great potential for increased direct and indirect recycling, thus offering a truly sustainable cycle, where timber can move through the economy and be useful at the various stages of its life cycle for a number of different applications. For example timber that has served a structural purpose can be reclaimed, used again in a structural application, then processed to another timber product, then sent for heat/energy recovery or mulched.

The fact that waste timber and treated timber are earmarked by various governments as either a ‘waste of concern’ or priority materials under their EPR and product stewardship policies leads us to believe that there are barriers to increased recycling as well as significant community concern. The timber industry is well placed to help resolve some of these barriers and concerns.

For example, treated timber is currently viewed as contaminating this cycle. Methods to identify and separate treated timber waste from untreated waste timber will remove this barrier and close the loop. Industry also needs to find and develop markets for recycling treated timber, or explore methods of disposal that will satisfy stakeholders.

If the industry is proactive and seeks collaborative efforts to address the issues there can be positive outcomes to develop timber markets. If the industry lies idle then the issues could end up being costly, in terms of dollars and reputation. This would give our competitors, such as the steel and concrete industry, the upper hand as they have mature recycling industries.

A number of other industries see potential opportunities in embracing a product stewardship approach as they see that community expectations are changing regarding corporate responsibility. (eg. paint industry, minerals, plastics and chemicals industry).  

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“Many of the more “traditional” programmes or practices tended to focus on regulatory issues. Product stewardship strengthens and broadens the focus to include such concepts as customer interaction and dialogue on how to foster proper use, handling, recycling and disposing of products. It is a comprehensive integration of SH&E considerations into each aspect of an industry’s operations, from design and initial manufacture to distribution, sale and ultimate disposal.”

Australian Paint Manufacturers Federation

Opportunities for the Timber Industry

Despite the regulatory drivers for addressing end-of-life timber there are numerous opportunities for the industry to adopt a pro-active EPR / product stewardship approach.

- **Supports Full LCA Approach**
  EPR / product stewardship compliments our stance of a full LCA approach to regulatory material assessment.

- **Biomass Energy**
  EPR / product stewardship may be an opportunity to gain acceptance of timber waste as an appropriate fuel for biomass energy production.

- **Maintenance and Growth of Market Share**
  The market for sustainable building products is growing as a result of both new environmentally based regulations and more informed market choice. Opportunities exist for the timber industry to capitalise further on timber’s strong environmental credentials and the potential for further reusing or recycling of product. For example, Laminex now recycle offcuts from their customers into new particle board (Laminex are members of the Green Building Council and have seen a commercial opportunity in changing their practices).

- **Attract Investment**
  Mainstream investment is now moving into a field long occupied by ethical investors. Analysts are considering environmental issues when recommending investments to clients.

- **Reduced Costs**
  EPR / product stewardship may offer for some sectors opportunities to reduce input costs. For example, Carter Holt Harvey is accepting particle-board offcuts for use as fuel at their Tumut facility at zero-cost. The offcuts are back loaded from a large customer.

  D & R Henderson process waste timber packaging at a site in North Melbourne for incorporation into particleboard at their manufacturing facility in Benalla. The waste packaging is accepted at zero-cost and sent on back-loads to Benalla.

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Zero Waste

Zero waste across the life cycle of timber may be an obtainable goal as timber is already a long way down this road with promising potential for the remainder. For example, it’s already acknowledged that nearly all softwood mills are operating on zero waste.7

“Nearly all softwood mills are now operating on zero waste, with all slabs and edgings being chipped for paper pulp or panel board feedstock and the sawdust and shavings being used for boiler fuel to provide energy for kiln drying. In some cases, some of this material is sold for composting, but this is unlikely to continue if the cogeneration of electricity becomes more financially attractive.”

Studies by CRC for Greenhouse Accounting8 show that waste timber in landfills breaks down much more slowly than commonly assumed. This has yet to be turned to the timber industry’s advantage in any coordinated way. For example, this finding potentially increases the value of waste timber in landfills because it demonstrates that waste timber ‘sequesters carbon’ rather than quickly breaking down and causing emissions. It has highly important implications for the unrecoverable portions of waste timber. (i.e., waste timber too mixed or contaminated with other wastes to be economically recovered eg. lounges, residual demolition waste, end-of-life preserved timber, lead-painted timber). Rather than being seen as a problem in landfills, it may have a sequestration benefit and potentially gain greenhouse credits/rebates and be given a monetary value.

Keep up with the Competition

Timber product competitors such as the steel, cement and plastics industry are quite active in promoting a product stewardship approach.

Better Regulation

EPR / product stewardship is meant to be a more co-operative approach than government regulation. If resolution of the problem does require regulation, co-operation with industry will mean that regulations will be better designed and the industry will be in a better position to argue for regulation that most effectively deals with the problem.

Commercial Opportunities

Work on EPR / product stewardship may identify new commercial opportunities such as fee for service waste management, better opportunities for generation of electricity, sequestration rebates, import substitution etc.

Improved Product Design

Better information and communication can assist in better product design so that negative issues with waste disposal don’t arise.

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Closes the Loop
EPR and product stewardship is an opportunity for the timber industry to close the loop and supply a renewable material to an economy where timber has value from entry to exit.

Risks for the Timber Industry

• **Imposed Regulation**
  Inaction will lead to government regulation, most probably a mandatory take back scheme or tax on treated timber.

• **Increased Cost**
  Imposed regulation will result in increased expense making timber less competitive and cause a drop in market share.

• **Freekick to our Competitors**
  Inaction will allow opportunities to be taken up by our competitors. At the moment the cement and coal-based electricity industries gain all the kudos for utilising waste timber as biofuel and reducing greenhouse gas emissions.

• **Oversell**
  There is a risk that the industry will just talk about EPR/product stewardship. EPR / product stewardship has to have an impact at ground level to match the talk.

• **Mixed Message with Forest Stewardship**
  There is a risk that EPR / product stewardship is mixed up with forest stewardship with some of our stakeholders. This risk can be minimised by being clear about boundaries as well as being inclusive and transparent in our EPR/product stewardship activities.

• **May Require Substantial Investment**
  Resolution of some problems may require substantial investment in R&D and infrastructure. However, it is better that investment decisions be taken cooperatively rather than be imposed by regulation or public pressure.

The Way Forward
There are a large number of other actions that need to be considered for addressing EPR / product stewardship. These can be undertaken within the framework of product stewardship (see figure 2).

These include:

• Work closely with state EPAs and waste timber processors on addressing barriers to increased recovery i.e. identify contaminants (treatments)

• R&D into improving quality of waste timber

• Work with the housing industry to assist in formulating an effective approach to product reuse and recycling (some states are further advanced than others on this issue). This will require some dramatic changes to current building industry practices, particularly in the area of demolition.

• Expand treated product marking – eco-labelling
Timber Preservation 2006

- Develop treated product technical datasheets which provide clear and concise information on exactly how products need to be treated at end of life (can they be burnt, disposed in landfill, etc?)
- Discuss the issues with regulators and standards
- Investigate innovative deposit/refund reward schemes
- Education & awareness (with designers, specifiers, councils, demolishers, waste industry, state and national government etc)
- Cleaner production in the supply chain
- Cogeneration and biomass feedstock feasibility studies
- Development of policy on EPR / product stewardship by individual companies and the various state and national timber industry associations to publicly declare intentions and underpin a strategic industry approach.
- Establishment of a national co-ordination group (with representatives where necessary from each state) whose role is to meet formally at least quarterly to plan and cost specific targeted projects.

![Diagram of Timber Product Stewardship]

**Conclusion**

Extended producer responsibility and product stewardship policies present challenges to the timber industry as well as a host of opportunities.

Timber, as the only truly renewable major building material, has great potential for increased direct recycling, indirect recycling as well as ultimate sequestration.

The industry should jump at this opportunity to close the last part of this sustainable cycle – under the framework of product stewardship.
Appendix A

EPR / Product Stewardship Summary

Australian National & State Governments and New Zealand

National

A National Environment Protection Measure (NEPM) for Product Stewardship is currently under development by a working party of State and Federal Government representatives of the Environment Protection and Heritage Council (EPHC). The NEPM is intended to provide a co-regulatory framework to improve product stewardship for materials that present difficulties for waste management. The initial targets of the NEPM are tyres, computers and televisions and the NEPM may provide for the recovery and recycling of these materials through the participation of the manufacturers (eg take-back schemes). It is expected that a draft of the NEPM will be available by mid-2006.

The Productivity Commission is current conducting a public inquiry into waste generation and resource efficiency⁹. The inquiry received a number of submissions from the timber industry as well as groups and individuals commenting on treated timber. The draft report has quite a bit to say about product stewardship. The NSW Treated Timber Product Stewardship Group (see discussion below) is currently preparing a submission on this draft report.

Key Government Contact

Naomi Wolfe, Department of Environment and Heritage, (02) 6274-1683

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**News South Wales**

The NSW *Waste Avoidance and Resource Recovery Act*\(^{10}\) 2001 requires the Department of Environment and Conservation (DEC) to prepare an annual statement identifying the EPR schemes is proposes to recommend to the Minister.

In the 2004 Priority Statement\(^{11}\), treated timber was identified as a ‘waste of concern’. In the 2005-2006 Priority Statement\(^{12}\) the Minister requested that the treated timber industry present, “…reports on specific proposals or current actions by 31\(^{st}\) March 2006, and further reports on implementation by October 2006 relating to:

- Development of processes to identify and separate treated timber from mixed timber wastes
- Programmes to educate consumers on proper disposal of treated timber
- Assessment of options for the use of more benign alternatives to treat and preserve timber
- Action to develop end-market uses for recovered treated timber”

In response to this, a Treated Timber Product Stewardship Group was formed in early 2006. Membership of the TTPSG is:

- Forest growers - Forests NSW
- Softwood - A3P
- Hardwood - NSW FPA
- Timber treaters - TPAA
- Chemical - Koppers, Osmose
- Merchants - TABMA
- Importers – NSW Timber Importers Assoc

The group consults closely with the NSW Government via DEC. Representatives of DEC attend meetings and participate in decision-making. TDA NSW provides secretariat services to this group. All correspondence with NSW Government about treated timber EPR is through the TTPSG.

**Key Government Contact**

Alex Young, Department of Environment and Conservation (02) 8837 6000

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Victoria

The Victorian Government released a *Towards Zero Waste Strategy* in September 2005 with a focus on solid waste arising from municipal and business activities. One of the strategic tools is product stewardship. One of the key targets of the Strategy is that all construction and demolition waste must be processed before landfilling to recover any resources.

The Victorian *Environment Protection Act* 1970 defines the principle of product stewardship as: “Producers and users of goods and services have a shared responsibility with Government to manage the environmental impacts throughout the life cycle of the goods and services, including the ultimate disposal of any wastes.”

Shared responsibility by manufacturers, brand owners and retailers includes the collection, resource recovery and reuse of products, at the end of their useful life. It also entails designing out significant environmental, toxic and waste impacts, and developing and marketing products which reduce environmental impacts throughout the life of the products. This can be achieved by:

- Making products which keep consumption and input of materials to a minimum
- Making products which last longer
- Designing products so materials can be continuously cycled through industrial or natural systems – for example, reuse, recycling, remanufacture, biodegradable
- Developing and participating in product take back and recycling initiatives.

Shared responsibility approaches across the product life cycle may be supported by formal agreements between industry and government, such as sustainability covenants and by voluntary industry agreements underpinning regulatory legislation.

Treated timber is uniquely mentioned as a ‘priority product’ in all three of the waste streams (municipal, commercial & industrial and construction & demolition). Timber is uniquely mentioned as being a priority material in all three waste streams.

**Key Government Contact**
Jan Van der Graf, Sustainability Victoria (03) 9639 3322

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Queensland

- There is no specific legislation outlining EPR or product stewardship, Queensland developed a Waste Management Strategy\(^{15}\) in 1996 which is still current
- It is estimated that there are 270,000m\(^3\) of waste timber currently disposed of in landfills in Queensland
- Timber Queensland is taking a proactive approach and is running a recycled timber grading project.
- The recycled timber industry contributes approximately 2% to the total sawn timber consumption in Queensland. It is estimated that the recycled timber industry currently salvages less than one third of the demolition and waste timber suitable for recycling in Queensland.

South Australia

- South Australia has a “zero waste” strategy with specific waste reduction targets (similar to NSW and Victoria) for the Municipal, C&I and C&D waste streams. Wood/timber is mentioned as “key waste” in the C&I and C&D waste streams.
- Within the strategy, the SA Government commits the SA EPA to “work nationally to find solutions to waste and recycling issues for problematic hazardous waste materials and products containing hazardous substances (e.g. nickel cadmium batteries, preservative treated timber).”\(^{16}\)
- SA cement manufacturer Adelaide Brighton utilises approximately 80,000 tonnes per annum of C&D waste which is predominantly waste timber.
- SA vineyards are stockpiling CCA treated vineyard poles as there is no appropriate landfill in SA that can accept them for disposal. A group of stakeholders including TDA SA, SA EPA and Wine Growers Australia is currently grappling with the problem.

Key Government Contact
Ian Harvey, Zero Waste SA, (08) 8204 1954, email: ianr.harvey@state.sa.gov.au

Western Australia

- The WA government has a commitment to the implementation of Extended Producer Responsibility, both nationally and at a State level. WA is represented on the project team developing the Product Stewardship NEPM on behalf of the EPHC.
- They have an EPR Policy\(^{17}\) which makes a commitment to negotiate voluntary schemes with industry WA believes that there is a need for governments to have the option for implementing mandatory EPR schemes where voluntary schemes are inappropriate or fail.


WA is currently preparing a list of priority products for EPR. Hyder Consulting is preparing a background report for the Department on 46 ‘wastes of concern’ including treated timber. Neither timber nor treated timber is likely to be on the Department’s final list as they intend to keep their work in this area very small and focused. John Davies did say that treated timber may be of interest to them in years to come, particularly if the other states include it in their EPR / product stewardship priorities.

Key Government Contact
John Davies, Department of Environment (08) 6364 7068

Tasmania
Tasmania does not have a state-wide waste management strategy or an EPR / product stewardship scheme. There is a Southern Waste Strategy Authority comprising of 12 local councils in the south of the state. Waste timber or treated timber is not a priority material.

ACT
The ACT does not have an EPR / product stewardship scheme. There is a No Waste by 2010 Strategy - a Waste Management Strategy for Canberra. Waste timber or treated timber is not a priority material. Interestingly the ACT Government has been involved in the establishment of technology to produce a clean-burning briquette, as a replacement for firewood, from woody green waste.

Northern Territory
Not aware of any issues in the Northern Territory.

New Zealand
- The New Zealand Government have released a Discussion Paper on product stewardship. Neither waste timber nor waste treated timber is considered a waste “with particular management and disposal problems”.
- An industry steering group is working on the problem of C&D waste in response to the NZ Waste Strategy which is seeking to cut waste going to landfill by 50%. The problem of treated wood waste is about to become higher profile. The Ministry for Environment is already looking at the issue internally and they are about to start engaging with industry.

Key Contact
Dr Brad Ridoutt, Senior Commercial and Market Advisor, Scion, 64 7 343 5899