



Protocols for recycling redundant utility poles and bridge timbers in New South Wales



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& Heritage



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Contents

1 Introduction

1.1 Acknowledgements.....	2
1.2 Purpose of the protocol	2
1.3 How to use this document.....	2
1.4 Definitions	2

2 Protocol

2.1 Removal and assessment	3
2.2 Storage before pickup.....	3
2.3 Pickup and transport to recycler.....	3
2.4 Delivery and storage onsite	4
2.5 Processing by the recycler	4
2.6 Clearance of processing residue.....	5
2.7 Sale of recycled timber products.....	6
2.8 Reports and record keeping	6

Appendix A

Definitions	7
-------------------	---

Appendix B

Legislation	8
-------------------	---

Appendix C

Identifying naturally durable and preservative treated timbers.....	9
---	---

Appendix D

Safe handling, processing and disposal of timber	13
--	----

Appendix E

Site Environment Management Plan	14
--	----

Appendix F

Other potential substances	15
----------------------------------	----

Appendix G

Sale of recycled timber.....	16
------------------------------	----

Appendix H

Waste disposal classification and resource recovery exemptions.....	18
---	----

Appendix I

References	20
------------------	----

1 Introduction

Recycling of timber taken from demolished bridges and redundant power poles is now more viable due to alternatives in recycling other than disposal at landfill or as fuel. The practice of reusing timber is assuming greater importance as hardwood timber supplies become more difficult to obtain, and the potential for recycling is realised.

This protocol is intended to provide guidance for infrastructure managers, engineers, waste management contractors and timber recyclers to responsibly conduct the process of recovery of timber from the demolition of timber bridges and renewal of power distribution infrastructure in New South Wales (NSW).

1.1 Purpose of the protocol

The protocol has five main purposes:

- Encourage maximum reuse and recycling of timbers by describing best practice for the handling, processing and use of recovered timber by recyclers.
- Provide infrastructure managers with guidance to release the timber generated by their operations to timber recyclers and assist in clarification of the status of the timber in respect to regulatory classifications.
- Assist in clarifying if the timber should be regarded as waste and subject to waste regulations.
- Underpin confidence in the quality of timber products produced from redundant poles and bridge timbers.
- Identify appropriate recycling and disposal options and improve awareness of potential regulatory requirements.

1.2 How to use this document

The protocol is comprised of three sections:

- Introduction.
- The second section is a step by step process for the management of utility poles and timber bridge replacement programs by timber recyclers. The protocol covers timber removal, transport, storage, processing and sale of the reclaimed and remanufactured timber.
- Section three is a series of appendices, providing a range of supporting information used to develop section two, as well as supplementary information that may assist in clarifying some aspects of the protocol.

1.3 Definitions

In this protocol, the words and phrases have the meanings as defined in Appendix A.

2 Protocol

2.1 Removal and assessment

1. Timber to be removed should be assessed by the infrastructure manager for the presence of preservatives and problematic substances. A minimum of one, but preferably two or more of the following methods should be used:
 - visual assessment if practical (see Appendix C)
 - examination of original purchase specifications and past maintenance records
 - assessment of historic in-service preservative treatments and practices
 - targeted sampling and analysis.
2. The infrastructure manager shall remove components that are either confirmed as contaminated with unacceptable levels of problematic substances, or likely to be so, and shall classify and dispose of them in an appropriate landfill.
3. The infrastructure manager shall stockpile components identified as potentially suitable for recycling. Any timber containing/coated with problematic substances not identifiable by visual assessment should be clearly identified as such, and separated from the recycling stockpile. Testing on these poles would need to be conducted to determine the nature of the substances sighted.

Note:

Due to the high cost of analysis of individual pieces, some infrastructure managers may assume that all pole butts and piles in place before 1995 (when organochlorines were banned from use in Australia – except the Northern Territory) have unacceptable levels of organochlorine residues because organochlorines may have been applied to prevent or manage rot and/or termite infestation and hence, require disposal only.

2.2 Storage and handling of timber to be recycled prior to collection

1. Timber suitable for reuse by the infrastructure manager or by a recycler should be clearly identified and stored separately from unsuitable timber.
2. Gloves should be worn at all times when handling timbers bearing preservative treatments and problematic substances (refer to appropriate Materials Safety Data Sheet (MSDS) – see Appendix D).

2.3 Pickup and transport to recycler

1. The recycler shall ensure the transport vehicle and lifting equipment is fit for the purpose, appropriate for the size, weight and condition of the timber being transported and complies with all legislative requirements.
2. Recycler personnel picking up the timber shall be appropriately dressed, have personal protection equipment (PPE) appropriate for the site and have undertaken a site Hazard and Risk Assessment prior to pickup on the site.
3. Recycler personnel shall follow all directions given by the infrastructure manager or their representative in regards to pick-up site safety and environmental risks.
4. Unless otherwise agreed, title and risk in the timber passes to the recycler upon pick-up.
5. Timber treated with preservative or problematic substances shall only be transported to a recycler with a current Site Environment Management Plan (SEMP) for reprocessing (see Appendix E for SEMP requirements).

6. There is a general requirement for loads of waste or recyclable timber to be covered during transport on NSW roads.
7. The transporter must ensure that the timber is transported to a facility that can lawfully receive treated timber waste.

2.4 Delivery and storage onsite

1. Upon delivery to the recycler, the timber shall be sorted by size, preservative treatment and (where practical) species and then stockpiled.
2. Timber shall be stacked clear of the ground to avoid an increase in moisture content as a result of contact and to lessen any possibility of leaching of substances to the ground.
3. To minimise staff contact with preservative treatments and problematic substances, workers should wear gloves during handling activities (refer to appropriate MSDS– see Appendix D).
4. There are *Protection of the Environment Operations Act* (1997) Environment Protection licensing requirements for waste storage, which are likely to apply when more than 2,500 tonnes (or 2,500 cubic metres) of unprocessed or processed timber or sawdust is present on-site at any one time, or more than 30,000 tonnes of unprocessed or processed timber or sawdust is received per year from off-site. Other Environment Protection licensing requirements may apply.

2.5 Processing by the recycler

1. To ensure the safety of workers and to prevent damage to equipment, all timbers shall be inspected for nails, bolts and any other form of attachments, which must be removed prior to processing.
2. Timber shall be processed in batches sorted by preservative treatment or other problematic substance types.
3. Timber shall be resized to remove any parts unsuitable for reprocessing.¹
4. To provide for improved handling of round timber, a slab should be removed to create a stable, flat surface. Where the timber has preservative treatment or coating, the slab removed should be to the depth of the preservative treated sapwood or other problematic substances.
5. Preservative treated sapwood and problematic surface substances shall be removed during further processing to produce sections of timber free of preservative or other problematic substances.
6. Sawdust and offcuts produced during the processing of timber that has been preservative treated or has had problematic substances applied to it shall be collected and cleared separately from sawdust and offcuts produced from non-preserved timbers prior to reuse or disposal.
7. Processed timber should be moved into a covered mill area where it can be processed into final products.
8. Sawdust extraction systems shall operate over all sawing and sanding work areas. Dust masks and eye protection must be worn by staff engaged in sawing and sanding.
9. Environment Protection licensing requirements may apply if more than 30,000 tonnes (or 30,000 cubic metres) of unprocessed timber is processed annually.

¹ Some infrastructure managers may require that any part of a piece of timber that was embedded in the ground pre-1995 be removed for separate disposal. The part removed usually includes that which was below ground and that which was within a set distance above the ground.

10. Environment Protection licensing requirements for waste processing may apply if more than 2,500 tonnes (or 2,500 cubic metres) of unprocessed or processed timber or sawdust is present on-site at any one time, or where more than 120 tonnes per day, or 30,000 tonnes per year is processed. Other Environment Protection licensing requirements may apply.

2.6 Clearance of processing residue

1. Processing residue designated as suitable for reuse by another party (for example, larger off cuts) may be sold or given away provided that, if it is preservative treated and sold in NSW, it meets the requirements of the *NSW Timber Marketing Act 1977*.
2. Processing residues treated with the wood preservative Copper Chrome Arsenate (CCA) or pentachlorophenol shall not be burnt in the open or in facilities without the appropriate licenses.² Creosote treated residue may be burnt in the open onsite if specifically approved by the appropriate regulatory authority (Council and/or Office of Environment and Heritage (OEH) approval).
3. Processing residues to be applied to land or used as fuel in NSW must comply with a Resource Recovery Exemption from OEH.³
4. Processing residue designated for disposal shall be assessed and classified by the Recycler as being one of the following types⁴:
 - hazardous waste
 - restricted solid waste
 - general solid waste (putrescible)
 - general solid waste (non-putrescible).

Note:

Solid processing residues of timber treated with creosote and /or CCA preservative which has been in service (in construction or municipal applications) have been granted an immobilisation approval and are usually classified as general solid waste (non-putrescible). Lead based paint residue is pre-classified as hazardous waste.

Wastes classified for disposal under hazardous or 'restricted solid' waste may need to be assessed under the Dangerous Goods Code and as a 'trackable' waste.

5. Waste residue must be handled and transported as per its waste classification and disposed of to a facility that can lawfully receive that particular waste. For CCA and/or creosote preservative treated offcuts, the disposal facility is a lined landfill with an appropriate leachate management system that has license conditions to receive waste subject to immobilisation approvals.
6. Check directly with the landfill operator whether the landfill can 'lawfully receive' the processing residue (waste).

² NSW Protection of the Environment Operations (Control of Burning) Regulation 2002

³ To allow these materials to be applied to land or thermally treated where they are assessed as being fit for purpose and posing minimal risk of harm to the environment and human health. Refer OEH <http://www.environment.nsw.gov.au/waste/RRRecoveryExemptions.htm>

⁴ DECCW (2008) *Waste Classification Guidelines Part 1: Classifying Waste*. Available at www.environment.nsw.gov.au/resources/waste/08202classifyingwaste.pdf

2.7 Sale of recycled timber products

Claims regarding stress grade, species and state of seasoning (moisture levels) should be able to be verified.

1. Sale of certain timber products in New South Wales – whether they are derived from recycled timber or from new timber – are subject to applicable product legislation and regulations, particularly the *Timber Marketing Act 1977*.
2. The infrastructure manager and recycler shall abide by the voluntary timber industry policy that any timber treated with CCA preservative should not be sold for:
 - children’s play equipment
 - garden furniture
 - picnic tables
 - external seating
 - domestic decking boards
 - handrails.

2.8 Reports and record keeping

The infrastructure manager may require an annual report to be provided by the recycler showing total quantities of timber collected, percentage of timber recycled and of timber disposed to landfill.

Appendix A

Definitions	
APVMA	The Australian Pesticides and Veterinary Medicines Authority.
Batch	A quantity of similar timber. For example, a batch of timber treated with preservative CCA.
CCA	The wood preservative copper chrome arsenate.
DECC	Department of Environment and Climate Change NSW
DECCW	Department of Environment, Climate Change and Water NSW
OEH	Office of Environment and Heritage NSW (OEH), Department of Environment and Heritage
EPA	The Environment Protection Authority.
Infrastructure manager	An organisation with responsibility for renewal of timber utility poles and/or bridge timbers, or their nominated representative.
MSDS	Materials Safety Data Sheet.
Problematic substances	Elements and compounds that the infrastructure manager has assessed using legislation, regulations and/or company policy and procedures presenting particular management requirements for the timber. For example, red lead coatings, organochlorines, polycyclic aromatic hydrocarbons.
Recycler	A company salvaging and processing timber that has had a previous use in value added products.
Recycling	The process of converting timber from one previous use to another. For example, processing used power poles by cutting and planing into floorboards.
Reuse	The use of timber without further processing or with minimal processing. For example, the reuse of a power pole 'as is' for fencing.
Slab	The piece of timber cut lengthways off the side of a round pole or pile cut. A slab has one flat face and a curved 'back'.
Substance	A chemical compound, compounds or element.
User	An individual or company that obtains recycled timber from a recycler with the intention of using that timber.

Appendix B

Legislation

The following principle acts and their companion regulations may regulate some of the operations of parties engaged in the recycling of timber, the selling of recycled timber and in particular the reprocessing operations with respect to environmental matters:

- *Contaminated Land Management Act 1997*
- *Environmental Planning and Assessment Act 1979*
- *Environmentally Hazardous Chemicals Act 1985*
- *Occupational Health and Safety Act 2000*
- *Protection of the Environment Operations Act 1997*
- *Soil Conservation Act 1938*
- *Timber Marketing Act 1977*
- *Trade Practices Act 1974*
- *Waste Avoidance and Resource Recovery Act 2001.*

Appendix C

Identifying naturally durable and preservative treated timbers

Most timber poles and bridge timbers are of naturally durable timber. Some will have had the sapwood removed; others will have had the sapwood left on and either it will have been treated with preservative or it will have decayed during service (see Figure 1).



Decaying sapwood in a bridge girder, indicating that the sapwood has not been preservative treated

Figure 1: Sapwood which had not been preservative treated, decaying after a few years in service

Preservative treated sapwood on timber poles and bridge timbers usually has a green or black colour. Poles that have been desapped by machining may have an 8 and/or a 16 sided shape (see Figure 2). Pressure impregnation of hardwoods with preservative cannot penetrate the heartwood. Only the sapwood of hardwoods can be penetrated.



Desapped upper section (16 sided)

Desapped lower section (8 sided)

Figure 2: Desapped power pole – Sydney

The presence of timber preservatives and other chemicals can be deduced through visual identification, maintenance records, by smell (for evidence of creosote), identification sprays or chemical sampling and analysis. Preservatives can be identified visually by looking at the surface of the timber. Poles pressure treated with a preservative have a natural round shape and are a green (CCA) or a black (creosote) colour. When the timber is cut, it is readily apparent if the sapwood of the timber has been pressure treated with preservative (see Figure 3).

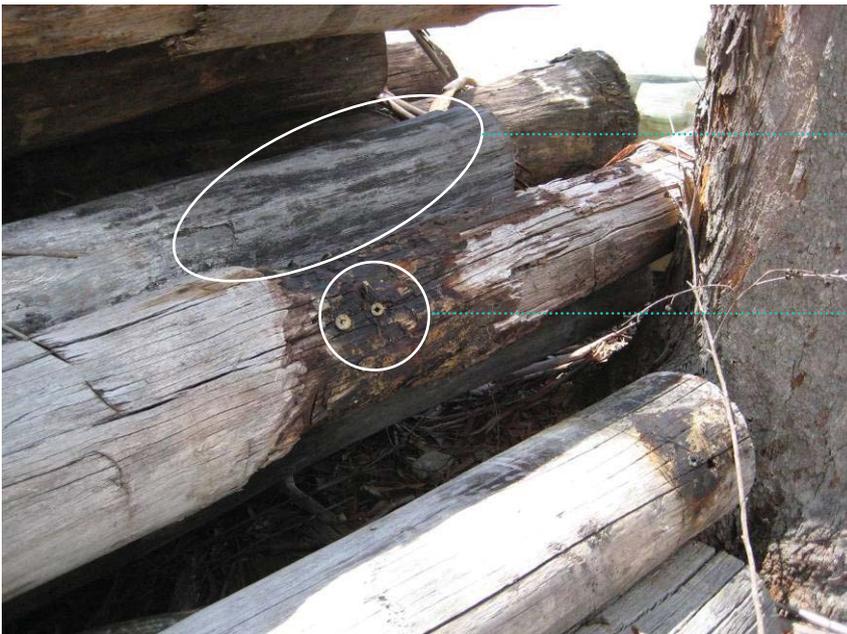
Other visual identifiers are a very dark colour, particularly around the base of piles and poles, and the presence of injection devises for diffusion preservatives (see Figure 4).



Preservative penetration of the sapwood of hardwood utility poles

Heartwood is free of preservative

Figure 3: Preservative treated sapwood - apparent in cross-section



Darker timber is creosote

Injection of boron based diffusion preservatives in pole butt

Figure 4: Evidence of creosote preservative and boron diffusion preservatives – power poles

Identification discs have been required to be stamped into utility poles for many years. Poles without a disc are over 20 years old. The discs include a code number for the preservative treatment plant, the type of preservative used and the hazard level of the preservative treatment.⁵ A full list of the preservative codes and hazard levels is available in AS1604, however, 01 – Copper Chrome Arsenate (CCA oxide) is currently the most commonly used while 32 – Copper Chrome Arsenate (CCA salt) has been used in the past (see Figures 5 and 6). Each preservative treatment plant is supplied with a code number; the numbers of plants in NSW are available from Forests NSW.

Some power pole infrastructure managers require other information on the discs, such as the year of felling, year of treatment, pole length and even species but this is not consistent from utility to utility.



Preservative code
01 – CCA Oxide

Figure 5: Power pole ID disc 1



Preservative code
32 – Tanalith C (CCA salt)

Figure 6: Power pole ID disc 2

⁵ Energy Australia advises that there are a small number of poles (approximately 59 poles with a 2003 year disc – which were only installed in a southern district area) that have been desapped by machining to an 8 or 16 sided shape but have been through the CCA treatment process. These poles must be treated as non CCA impregnated desapped durable poles because without the sapwood to retain the chemical there can be no effective protection for the pole.

Evidence of lead based paint primers may appear to be fairly obvious (see Figure 7). Confirmation of the presence of lead can be made with a simple and inexpensive swab test. These tests may be confirmed at an analytical lab.

Residual termite treatment chemicals do not travel far from the application site. Residual chemicals may be present in and around the immediate surrounds of recent termite inspection and chemical application holes, particularly if the application was recent (see Figure 8).



Figure 7: Bridge timbers with residual red lead primer

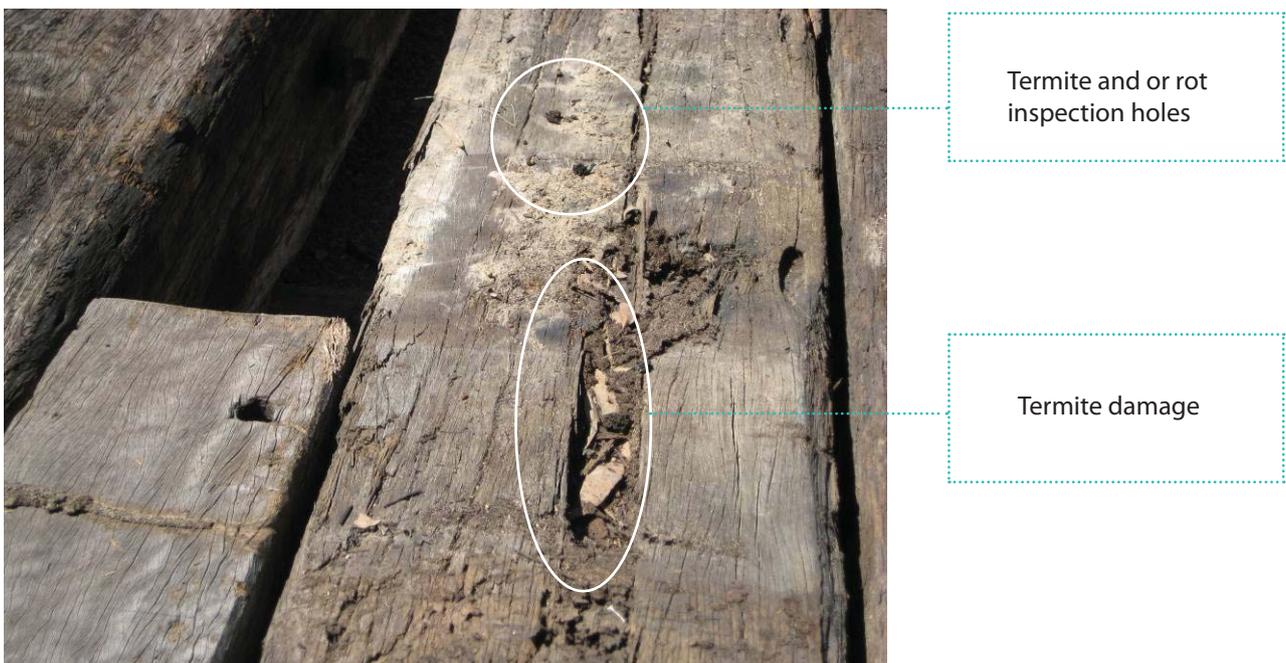


Figure 8: Bridge timber with evidence of inspection holes and termite damage where residual chemicals may be found if applied recently

Appendix D

Safe handling, processing and disposal of timber

Regardless of whether timber has or has not been preservative treated, handling and processing of all timber, particularly where there can be an exposure to wood dust, requires attention to occupational health and safety. Wood dust may irritate the nose, respiratory system, eyes and skin. It is also flammable and it can be an explosion hazard. All wood dust is classified by the World Health Organization as being able to cause cancer in humans.

Wood dust from some wood species may cause dermatitis and allergic respiratory effects, for example asthma, because of naturally occurring chemicals in them.

Health problems can be avoided by taking a few simple precautions when exposed to airborne wood dust, particularly when using power tools.

Preservative treated timber

Major producers of power poles and bridge timbers treated with CCA and creosote preservatives in NSW are Koppers Wood Products and Coffs Harbour Hardwoods. More detailed occupational information is available from a Materials Safety Data Sheet (MSDS) which can be provided by product suppliers.⁶

General consumer and safety information

Preservative treated wood products made in Australia are protected against decay and termites by impregnation with Australian Pesticides and Veterinary Medicines Authority approved wood preservatives. Treated wood is safe to use providing that common sense precautions and handling guidelines are followed. This information is provided in the interest of consumer safety and for appropriate use of the product.

- Only use treated wood that is clean, dry and free of surface residues.
- Avoid inhaling wood dust and wear a filter mask while power sawing, machining, sanding or any operation where wood dust is generated.
- Protect the eyes while using power tools or undertaking any work where small particles may be ejected.
- Wear gloves when handling the material and wash hands after work and before contact with mouth or eyes.
- Brush or wash sawdust off skin or clothes.
- Keep the work area clean. Do not allow wood dust to accumulate. Wherever possible, recover sawdust, shavings and off-cuts for proper disposal.
- Wash work clothing and safety equipment contaminated with wood dust before reuse.

Safe Use and Disposal

AS 5605–2007: Guide to the safe use of preservative treated timber contains a wealth of information on all preservative types. For example, AS 5605-2007 states that, "CCA-treated timber offcuts and waste shall not be burned in open fires, stoves, fireplaces or any confined spaces. They may be burned in plants specifically approved for that purpose".

⁶ The MSDS for Koppers preservative treated products are available on request from <http://www.koppers.com.au/KW-Material-Safety-Data-Sheets2/default.aspx> while Coffs Harbour Hardwoods can be contacted on 02 6649 2006.

Appendix E

Site Environment Management Plan

A Site Environmental Management Plan (SEMP) for recyclers should cover the following:

- legislative requirements
- identification and ranking of key environmental risks
- procedures for managing and mitigating risks
- identification of roles and responsibilities
- monitoring, audit and reporting requirements
- contingency plan for dealing with emergency events
- procedures for handling complaints
- environmental commitments (summarised).

The environmental issues below are considered most relevant to the SEM and will need to be addressed.

Air	Public nuisance and occupational health impacts from treated timber off-cuts, sawdust and treated timber dust from unsealed work areas.
Waste	Disposal of treated timber off-cuts and sawdust.
Noise	Annoying and intrusive noise including that from loading and unloading of timber on site.
Water	Leaching of problematic substances from the timber processing operations.
Other issues	Fire risk from storage of timber.

Other elements of a SEM

Other elements of a SEM include:

- treated timber operation area cleaning procedures
- treated timber batch process records
- process and staff training auditing program
- soil and stormwater monitoring program.

Appendix F

Other potential substances

Lead

'Red lead' , is a red paint primer with up to 60 percent of lead content⁷. It was used alone or mixed with white lead and other components to form the 'pink primer' common on timber work in domestic construction⁸. Red lead was widely used in certain industrial applications such as steel road and rail bridges in New South Wales through the 1980s⁹ however was also sometimes applied to exposed timber.

Organochlorines

Organochlorine pesticides such as dieldrin, aldrin, chlordane and pentachlorophenol were used to protect or preserve timber. They were applied to prevent fungus attacking timber and/or prevent or manage termite infestation.

In 1995, the use of organochlorine pesticides such as dieldrin, aldrin and chlordane were no longer permitted. Pentachlorophenol was not used in any great quantity to preserve power poles or bridge timber in NSW. It is no longer used in any application in Australia and there are no longer any pesticides utilising pentachlorophenol registered for use by the Australian Pesticides and Veterinary Medicines Authority (APVMA)¹⁰.

7 LEAD (1993) Lead Action News, Lead Education and Abatement Group, volume 1, number 1. Available at <http://www.lead.org.au/lanv1n1/lanv1n1.pdf> [accessed 26 July 2010].

8 DEWHA (2009) The Six Step Guide to Painting Your Home, Department of Environment, Water, Heritage and the Arts. Available at <http://www.environment.gov.au/atmosphere/airquality/publications/pubs/leadpaint.pdf> [accessed 26 July 2010].

9 Railcorp (undated) Response to Bridge Technical Reports, Railcorp. Available at http://www.railcorp.info/publications/ric_technical_reports/technical_reports/response_to_bridge_technical_reports [accessed 26 July 2010].

10 APVMA (2006) Removal of Chemicals from the Priority Candidate Review List. APVMA Gazette 7 February 2006 page 26. Available at <http://www.apvma.gov.au/gazette/gazette0602p26.shtml>

Appendix G

Sale of recycled timber

The sale of certain timber in NSW is subject to the *Timber Marketing Act 1977*. A few relevant excerpts from the act are included below.

Section 5 (of the ACT)

No Sale of lyctid susceptible sapwood

A person shall not sell any milled timber, laminated wood, veneer or plywood having lyctid susceptible sapwood.

Describing timber as dried or seasoned

A person shall not sell any timber:

Section 12 (of the ACT)

- (a) described by the person, the person's servants or agents as being kiln dried, air dried, dry or seasoned, or*
- (b) described by the person, the person's servants or agents in such manner as to convey or be likely to convey to any person the impression that that timber is kiln dried, air dried, dry or seasoned,*

unless:

- (c) where the moisture content of that timber is clearly shown on the invoice or docket of sale the moisture content of that timber, when determined in the prescribed manner, complies, as at the date of sale, with the moisture content so shown, or*
- (d) where no moisture content as referred to in paragraph (c) is so shown:*
 - (i) where a standard has been prescribed which specifies the moisture content for that timber or for a class or description of timber to which class or description that timber belongs and the manner of determining that moisture content, the moisture content of that timber when determined in that manner complies, as at the date of sale, with that standard, or*
 - (ii) where no such standard has been prescribed, the moisture content of any piece of that timber when determined in the prescribed manner is not, as at the date of sale, less than 10 per cent or more than 15 per cent by mass.*

Sale as preservative treated timber

Section 16 (1) A person shall not sell any timber:

- (a) described by the person or the person's servants or agents as being preservative treated, or*
- (b) described or presented by the person or the person's servants or agents in such manner as to convey or be likely to convey to any person the impression that that timber is preservative treated,*

Unless that timber is treated by means of an approved preservative treatment and is branded with the registered brand in accordance with the conditions of the approval.

Restrictions on sale of CCA preservative treated timber for some uses

Under an agreement the timber industry has with the Australian Pesticides and Veterinary Chemical Authority (APVMA), timber treated with CCA before 7 June 2006 can continue to be sold for all applications. The APVMA requires that after June 2006, timber may not be treated with CCA preservative if it is to be used for the uses cited.

The infrastructure manager or the recycler may choose to restrict the sale of all recycled timber treated with CCA in line with the current voluntary restrictions for timber treated with CCA after 7 June 2006.

Under the restrictions, timber treated with CCA can no longer be used for:

- children's play equipment
- garden furniture
- picnic tables
- external seating
- domestic decking boards
- handrails.

In addition to these restrictions, CCA treated products must be individually and legibly marked with the words "Treated with copper chrome arsenate" to first point of use. Small CCA treated products don't have to be individually marked however the pack must be legibly marked with the words "Treated with copper chrome arsenate" to first point of use. Small CCA products are defined as:

- fence palings, battens and droppers
- veneers
- timber with a cross section of 1500mm² and less (except light decking)
- timber less than 15mm thick (except light decking)
- timber less than 500mm long.

Appendix H

Waste disposal classification and resource recovery exemptions

Under the *Protection of the Environment Operations Amendment (Scheduled Activities and Waste) Regulation 2007*, 'wood waste' and 'building and demolition waste' are pre-classified as general solid waste (non-putrescible) as per the definitions from the act included below.

Wood waste means sawdust, timber offcuts, wooden crates, wooden packaging, wooden pallets, wood shavings and similar materials, and includes any mixture of those materials, but does not include wood treated with chemicals such as copper chrome arsenate (CCA), high temperature creosote (HTC), pigmented emulsified creosote (PEC) and light organic solvent preservative (LOSP).

Building and demolition waste means unsegregated material (other than material containing asbestos waste) that results from:

- (a) the demolition, erection, construction, refurbishment or alteration of buildings other than:
 - (i) chemical works, or*
 - (ii) mineral processing works, or*
 - (iii) container reconditioning works, or*
 - (iv) waste treatment facilities, or**
- (b) the construction, repair or alteration of infrastructure development such as roads, tunnels, sewage, water, electricity, telecommunications and airports, and includes materials such as:*
- (c) bricks, concrete, paper, plastics, glass, metal, and*
- (d) timber, including unsegregated timber, that may contain timber treated with chemicals such as copper chrome arsenate (CCA), high temperature creosote (HTC), pigmented emulsified creosote (PEC) and light organic solvent preservative (LOSP), but does not include excavated soil (for example, soil excavated to level off a site prior to construction or to enable foundations to be laid or infrastructure to be constructed).*

Other wood wastes will have to be classified according to the OEH *Waste Classification Guidelines Part 1: Classifying Wastes* which are available at www.environment.nsw.gov.au/resources/waste/08202classifyingwaste.pdf

CCA, creosote and Tanalith E treated timber

OEH has gazetted *General Approvals of Immobilisation* confirming the solid waste classification for waste timber treated with the preservatives CCA, creosote and 'Tanalith E' (a copper azole-based preservative).

Additionally, some wastes may be scheduled wastes as they contain greater than 2mg/kg of organochlorines. These wastes are listed within Schedule A of the Scheduled Chemical Wastes Chemical Control Order 2004, under the *Environmentally Hazardous Chemicals Act 1985* schedule lists and are considered to be scheduled chemical wastes.

Scheduled chemical wastes are wastes containing chemicals defined by the schedule attached to the order. The schedule lists 24 chemicals including a number of organochlorine pesticides which are no longer registered for use (such as aldrin, dieldrin, chlordane and pentachlorophenol).

OEH has a Chemical Control Order which establishes requirements for the management and control of the wastes that contain scheduled chemicals. It covers certain activities such as generating, processing, storing, distributing, conveying and disposing of scheduled chemical wastes.

Processing of scheduled chemical waste may require a technology assessment and approval by OEH¹¹.

Resource recovery exemptions

OEH is now able to exempt waste or waste-derived materials, to allow these materials to be applied to land or thermally treated where they are assessed as being fit for purpose and posing minimal risk of harm to the environment and human health. This mechanism will provide certainty for those who market or use waste-derived materials.

Exemptions may be either 'general' or 'specific'.

General exemptions apply to common materials used in land or thermal applications. Individual companies do not need to apply to OEH for a general exemption provided they meet the conditions of the exemption for that material.

General exemptions are published on the following web page as they become available: www.environment.nsw.gov.au/waste/RRecoveryExemptions.htm

¹¹ Environment Protection Authority NSW (2004) *Chemical Control Order In Relation To Scheduled Chemical Wastes*

Appendix I

References

The references below have either been referred to or been utilised to develop this protocol.

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