This presentation

- Drivers for survey
- Survey
- Barriers
- Opportunities
- Disposal and Recycling issues
- Recommendations
Survey drivers

- Anecdotal evidence that problems with disposal and/or recycling are barrier to uptake of H2F pine in certain F&T markets.
- Some evidence that state and local government regulators confuse the toxicity of preservatives used in blue-pine with CCA.
- Contributes to disposal and reduced recycling options in some regions.

Disposal advice - e.g.

Disposal
Domestic and trade users should dispose of cut-outs and redundant pieces through normal waste collection services as residential or construction and demolition waste. Do not use for composting, mulching or animal bedding. Do not burn as a means of disposal.

AKD Softwoods
Survey - methodology

- Project Steering Group
  - Kersten Gentle - FTMA
  - Jeff Gibson – Hyne
  - Tim Rossiter – MiTek Australia
- Online survey
- Sent to 331 frame & truss manufacturers (FTMs) throughout Australia
- 64 responses - 19% response rate

Response rate

<table>
<thead>
<tr>
<th>State or Territory</th>
<th>ACT</th>
<th>NSW</th>
<th>NT</th>
<th>QLD</th>
<th>SA</th>
<th>TAS</th>
<th>VIC</th>
<th>WA</th>
<th>not stated</th>
<th>Totals</th>
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</thead>
<tbody>
<tr>
<td>No. of FTMs in FTMA database</td>
<td>4</td>
<td>101</td>
<td>4</td>
<td>74</td>
<td>24</td>
<td>9</td>
<td>96</td>
<td>19</td>
<td>-</td>
<td>331</td>
</tr>
<tr>
<td>No. of responses</td>
<td>2</td>
<td>21</td>
<td>0</td>
<td>13</td>
<td>5</td>
<td>2</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>64</td>
</tr>
<tr>
<td>Response rate</td>
<td>50%</td>
<td>21%</td>
<td>0%</td>
<td>18%</td>
<td>21%</td>
<td>22%</td>
<td>15%</td>
<td>26%</td>
<td>na</td>
<td>19%</td>
</tr>
</tbody>
</table>
Volumes of softwood used

Q3. Please estimate the quantity of softwood timber used by your facility each year.

FTM - Waste generation rates

- Volume of waste / Volume of softwood

<table>
<thead>
<tr>
<th>Waste generation rate</th>
<th>No. of FTM who provided an estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offcuts only</td>
<td>7%</td>
</tr>
<tr>
<td>Sawdust only</td>
<td>1%</td>
</tr>
<tr>
<td>Offcuts and sawdust</td>
<td>7%</td>
</tr>
</tbody>
</table>
% of H2F treated

Q4. What percentage of your timber supply is H2F treated (“bluepine”)?

Is there a problem?

Do you have any problems with disposal of H2F treated “bluepine” offcuts or sawdust waste?
State of those with problem

The problems
Volumes softwood used

Estimate of quantity of softwood used by facility each year

<table>
<thead>
<tr>
<th>No. of Respondents</th>
<th>Up to 2,000m³</th>
<th>2,001m³ - 5,000m³</th>
<th>5,001m³ - 10,000m³</th>
<th>10,001m³ - 15,000m³</th>
<th>Over 15,000m³</th>
<th>not stated</th>
</tr>
</thead>
<tbody>
<tr>
<td>No problem</td>
<td>12</td>
<td>12</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Problem</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Some elaboration

Closest recycler won’t recycle treated timber as mulch and therefore charges us the more expensive builder’s waste rate.

All treated material must go to landfill and cannot be disposed of otherwise. Therefore only use this material if forced to. Prefer to ban its use from my plant.

Cannot put treated waste with untreated. It has to go in general waste bins which are at much higher disposal rate.

All treated timber offcuts go to landfill at a substantial cost

Have to pay to send all waste to landfill.

Although H2 timber is supposedly recycled through waste provider, disposal is charged for.

Treated timber must go to landfill.

Goes into dumpster which needs to be emptied every 3 days.
Problems increasing?

Q11. Are the issues/problems increasing or decreasing

- Neither increasing nor decreasing: 50%
- Increasing: 50%

Influence use of H2F?

Q12. Have these problems influenced your decision to use H2F "bluepine" in the past?
- Yes: 42%
- No: 58%

Q13. Will these problems influence your decision to use H2F "bluepine" in the future?
- Yes: 42%
- No: 58%
Do they separate?

Q14. Do you separate the off-cuts of untreated timber from H2F treated timber?

- No, 32, 59%
- Yes, 14, 26%
- Not stated, 8, 15%

Mixed offcuts
Disposal of mixed offcuts

Q15. How do you dispose of the mixed waste off-cuts?

- Disposal to landfill: 20.49%
- Domestic fuel (BBQs, domestic firewood etc): 8, 20%
- Burnt onsite: 2, 5%
- Mulch: 3, 7%
- Woodchip off-site, manufacture: 1, 2%
- Industrial fuel (industrial heating, powers station etc): 4, 10%
- Particleboard manufacture: 3, 7%

Disposal of mixed sawdust

Q17. How do you dispose of the mixed sawdust?

- Disposal to landfill: 18.50%
- Domestic fuel (BBQs, domestic firewood etc): 5, 14%
- Burnt onsite: 3, 8%
- Mulch: 3, 8%
- Particleboard manufacture: 2, 6%
- Woodchip off-site: 1, 3%
- Industrial fuel (industrial heating, powers station etc): 4, 11%
Separated offcuts

Disposal of separated - untreated

Q18. How do you dispose of the separated waste off-cuts of untreated timber?

- Domestic fuel (BBQs, domestic firewood etc), 54%
- Burnt onsite, 1, 4%
- Chicken bedding, 3, 14%
- Mulch, 3, 14%
- Disposal to landfill, 3, 14%
Disposal of separated - H2F

Q20. How do you dispose of separated waste off-cuts of H2F treated timber?

- Mulch, 19, 50%
- Disposal to landfill, 13, 34%
- Burnt onsite, 3, 8%
- Domestic fuel (BBQs, domestic)
- Particleboard manufacture, 1, 3%

Transport & finance - mixed

Mixed untreated and H2F treated (Q24. What transport and financial arrangements are set up for disposal of waste offcuts?)

- We pay them to take it away, 30, 73%
- We deliver and pay, 2, 5%
- We deliver and they pay us, 1, 3%
- They take it away for free, 3, 7%
- Not applicable, 2, 5%
- We pay freight only, 1, 2%
- Used onsite, 2, 5%
Transport & finance - separated

Separated untreated (Q24. What transport and financial arrangements are set up for disposal of waste offcuts?)

- Not applicable: 9%
- We pay them to take it away: 45%
- They take it away for free: 46%

Mulch & horticultural products

- Not explicitly illegal to mulch and “apply to land”.
- May be captured under general state laws against land pollution.
- May be no problem until there’s a problem.
- Effects?
Animal Bedding

• Things get interesting.
• This use not part of original APVMA approval.
• Actives are used on crops feed to cattle, poultry etc i.e. Grains
• Low risk if they get in but not recommended to be used.
• Effects?

Industrial Fuel

• Not a problem in most states
• NSW regulations very unclear but very tough.
• New Energy from Waste policy just about to be released.
• Clarify rules toughest in world.
• One research paper showing slight increase in dioxin formation
Domestic / open burning

- Illegal to open burn CCA treated timber in most states.
- Explicitly illegal in South Australia to open burn any type of treated timber.
- Effects?

Particleboard

- Up to each manufacturer whether to accept.
- Laminex OK with it in WA.
- Position of D&R Henderson (VIC), Laminex QLD and CHH (NSW, QLD) unclear.
- May be issues with oil-based carrier.
Landfill

- 4 respondents cited a problem:
  - 2 in Sydney metro
  - 1 in mid-north coast NSW
  - 1 in rural WA

- Sydney:
  - Plenty of landfills will take
  - Recyclers wont

- Local landfill issues in other two locations
Comments 1

Would like to recycle all waste rather than landfill.

We also manufacture using full H2 LOSP treatment for selected customers. This increases the difficulty of separating waste streams between untreated, blue and H2 LOSP.

With the help of JJ Richards we separate all wood and cardboard waste in to a skip which is delivered to the power station. Plastic (including strapping) is separated and compacted and sold for recycling. Our general waste is minimal and our waste cost has more than halved.

Our suppliers tell us H2 is safe for landfill however our waste removalists will not OR the landfill people will not accept it as landfill. Landfill people need to be educated H2 OK to use as landfill.

We prefer the water based to white spirit based carrier.

Considered onsite shredding but shredders are expensive. Unsure of what to do with it either.

Comments 2

We have investigated various options for our wood waste including for power generation, use in soil conditioning etc. At this time, it is not financially viable for us to do so as it still costs significantly less to dispose to landfill.

Assurances were given by [supplier] that H2 waste was suitable for mulch once the chipping process was complete. This info was passed onto our waste contractor, and we have had no issues with disposal over the past few years.

It would be good if the timber industry could supply bins so that the offcuts could be recycled into particleboard etc like the steel recycling industry.
Suggestions 1

An industry solution along the lines of gathering all waste industry wide and reusing all the waste.

Allow treated H2 timber as landfill.

All timber of cuts should be reused into chip board products, H2 off cuts into H2 sheet floor and many other products.

Other issues

Q28. What problems have you experienced due to use of H2F treated ‘bluepine’ timber?

- No problems, 15, 38%
- Costs, 1, 2%
- Staining, 2, 5%
- Quality, 1, 3%
- Storage, 4, 10%
- Waste, 9, 22%
- Handling, 4, 10%
- Health, 4, 10%
Should all be H2F?

Stocking untreated and treated is costly and time consuming changing from one to the other when making jobs plus issues with separating waste. Why don’t we just get all H2 as the main supply from mills and cut out the untreated.

It would help the industry’s image if we used blue treated pine to counter the perceived issues with timber (i.e. termites, rot etc). It would also help individual plants profitability with less stock etc. But unless the entire industry moves in a unified way, then market pressures for the lowest cost will always result in untreated pine being offered.

Perhaps the sawmillers / importers should unify their supply to blue only to address this industry issue?
Conclusions 1

- Costs of disposal is the biggest issue.
- For the moment issues appear isolated to NSW, VIC and WA.
- Issues are shared equally between large, medium and small FTMs in metro, urban and rural areas.
- However, with steeply increasing waste disposal costs and regulations it could be expected that these will affect FTMs in other states in time.
- Costs of disposal are definitely an issue. Increased disposal costs mean that FTMs using H2F may be competitively disadvantaged in the market place compared to FTMs using untreated timber.

Conclusions 2

- Variability in waste generation is large. It is unclear if this is related to supply and timber quality or other issues and may be worth further investigation.
- Separating untreated from treated waste is driven by problems with disposal of mixed waste such as non-acceptance by landfill or recyclers.
- Cost savings are realised by separation but additional costs are incurred by the separating processes. FTM only reluctantly go into separating their waste.
Conclusions 3

- Most don’t bother with sawdust so H2F sawdust is being used against recommendation in mulch and animal bedding products.
- Additional research into safety of mulching / animal bedding / burning needs to be done to support practices and/or further investigation of local regulations to ensure FTM are not breaching the law.

Draft recommendations 1

- Work with local regulators in NSW and WA to clarify their understanding of toxicity of H2F and barriers to disposal at landfill.
- Research to help reduce disposal costs:
  - effects of open burning, bedding and land application of H2F treated timber.
  - encourage separation.
Draft recommendations 2

- Timber suppliers investigate offcuts take-back schemes and recycling/energy recovery opportunities to underpin sales of new H2F product.

Final report

Available through FWPA soon

Thank you

Questions?

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