
Expansion of the Pallet and Timber Recycling Industry in the Barwon Region



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1. Introduction – Terms of Reference

Laysell Consulting was engaged by the Barwon Region Waste Management Group (BRWMG) to prepare a Feasibility Study and Business Plan for the development of a pallet and timber recycling business in the Barwon Region. As a result of a meeting with the Executive Officer of BRWMG on June 15 incorporating a review of the Desired Outcomes of the consultancy the following Terms of Reference were agreed:

- Prepare a feasibility study and business plan for the development of a pallet and timber recycling business in the Barwon Region:
 - Emphasis to be given to pallet recycling.
 - Emphasis to be placed upon the establishment of the supply of used pallets in the Barwon Region.
 - Consultant to work with the preferred company in the preparation of the feasibility study and business plan.
 - Development of the Business Plan to incorporate:
 - Site options, suitability, availability and cost.
 - Concept layout plan of the site operation.
 - Flow chart of the process.
 - Opportunities for project expansion.
 - Resource assessment.
 - Management structure including potential joint venture opportunities.
 - Timeframe to establish the business.
 - Marketing Plan indicating market price for product, identifying opportunities for by-products and potential suppliers of material to the facility.
 - Funding opportunities.
 - Five (5) year financial plan focused on the viability of years 1 to 3.

2. Findings

The base research into the business of collecting and processing waste timber pallets indicates that at this time the business is not viable as a stand alone business. It is unlikely that the business even if conducted as a component of an existing and complimentary business would be viable. The economic viability of the business is adversely effected by four (4) basic factors:

- Low margins.
- The cost of collecting waste pallets.
- Cost of disposing of residual waste timber.
- Labour intensive nature of the business.

The research reveals a business with a constrained supply base and characterised by low selling prices (\$7 per pallet) and low margins (\$5.15 per “Good” pallet and \$1.51 per “Repaired” pallet, an average margin of \$3.16). Options 1 - 4 (**Section 8**) examine a number of pricing and sales quantity options for the business.

On the basis of this research, combined with an estimated start up cost of \$26,500 (equipment purchases) and a possible capital grant of \$30,000 from EcoRecycle Victoria, the business could not operate at a profit in its first three (3) years of operation if it is required to operate on a stand alone basis. This would include the payment of rent and outgoings. It is unlikely that the business, given its current parameters, could meet its variable costs let alone its fixed costs within five (5) years of establishment.

The business is labour intensive and as such it will find it difficult to obtain any benefit from economies of scale. **Section 8** of this report shows that the business is crippled by having to pay premises rent, hire, rent and lease of equipment, and pay for the disposal of waste. Combined, these requirements will cost the business an estimated \$35,072 in Year 1, \$37,656 in Year 2 and \$39,981 in Year 3.

The question of the disposal cost of waste has lead to the elimination of crates from the future business considerations of this project.

If the business was to be conducted as a component of an existing business, the existing business could receive a benefit from the increased utilisation of its existing buildings and equipment. These costs could thus be assumed away, the result being to change the outcome of Option 1 and the estimated results in its first three years of operation to:

- Year 1 (\$2,725)
- Year 2 (\$34,287)
- Year 3 (\$37,849)

If the revenue of the business was to increase with an increase in the selling price of pallets from \$7 per pallet to \$8 per pallet, and, an increase in the volume of specific work (from Option 2):

- Year 1 10,000 pallets;
- Year 2 20,000 pallets; and,
- Year 3 30,000 pallets;

the revenue base of the business would increase and would result in a lower level of loss in Years 2 and 3 than is anticipated in Option 1:

- Year 1 \$70,458 to \$73,302 Profit \$119
- Year 2 \$60,687 to \$73,453 Loss \$31,328
- Year 3 \$83,893 to \$108,339 Loss \$34,182

It should be noted that the only year that a profit is budgeted is Year 1 and that is as a result of having factored into the estimate a grant of \$30,000 from EcoRecycle, the granting of which would have to be considered unlikely.

The business would not be sustainable either in the short or long-term with this given revenue and cost structure.

The assumptions contained in the Financial Plan (**Section 8**) are based upon the information provided by the participants. Some of the estimates have been altered to take account of start up expenses, training and some assumed productivity gains as workforce experience improves.

3. The Market – Research Report

The findings of the Consultation and Research activities conducted by Laysell in regard to the nature of the timber pallet industry in general, and in particular the availability of waste timber and crates, are documented in the Interim Report incorporated in this document as **Attachment A**.

4. Process Model – The Concept

The process associated with the activities of the proposed business is detailed in the following Process Models:

- Sourcing, Collection and Storage Figure 1
- Processing, Marketing and Distribution
 - Timber Pallets Sourced from the Barwon Region Figure 2
 - Timber Crates Sourced from the Barwon Region Figure 3
 - Specific Pallets for Disassembly Figure 4

Figure 1

Figure 2

Figure 3

Figure 4

5. Process Plan

5.1 Sourcing, Collection and Storage

5.1.1 Market Identification Process – Supply Sources

It is envisaged that the proposed business operation will incorporate three (3) elements of inward supply. They are:

1. Waste timber pallets sourced from within the Barwon Region.
2. Waste timber crates sourced from within the Barwon Region.
3. Specific timber pallets for disassembly sourced by CM Timber Processing from GE Capital Returnable Packaging Systems.

The market research process implemented by Laysell and reported in **Attachment A** estimated the **availability of waste timber pallets within the Barwon Region** on the following basis:

<u>Source</u>	<u>Available on a regular monthly basis</u> <u>No. of Pallets</u>
Geelong Based Manufacturing Industry	468
<ul style="list-style-type: none"> ▪ 41 companies identified as potential suppliers of product. 	
Transport Industry	370
<ul style="list-style-type: none"> ▪ 4 companies identified as potential suppliers of product. 	
Other Selected Geelong, Surf Coast and Colac Companies	240
<ul style="list-style-type: none"> ▪ 14 companies identified as potential suppliers of product. 	
Total Supply Available	1078

In estimating the availability of timber crates to the proposed business the survey identified four (4) companies that reported the **availability of timber crates for disposal** on the following basis:

<u>Timber Crates</u>	<u>Available on a regular monthly basis</u>
	<u>No. of Crates</u>
▪ Complete Crates	12
▪ Lid Removed	7
▪ Demolished Crates	103m ³ demolished timber

These estimates of the supply that **may** be available to the proposed business operation have been used as the basis for examining the feasibility of the operation.

Utilisation of these estimates represents a conservative approach to assessing feasibility by basing the assessment on **known data** derived from the survey process. This data is based on a selected sample of companies in the Barwon Region and can be projected to establish an **expected supply of waste timber pallets** on the following basis:

- Geelong Based Manufacturing Industry

The 41 companies surveyed in this group employ 8,412 staff.

The total manufacturing industry in Geelong employs some 14,100 people:

The 468 pallets indicated as available from the survey group could be reasonably projected to an **expected supply from the total manufacturing industry group of 785 pallets**.

- Transport Companies

Four of the thirteen transport companies surveyed in the Barwon Region indicated they were currently holding, and regularly acquire, waste timber pallets. As the survey group represents only a proportion of the overall transport industry in the Barwon Region the indicated available supply of 370 timber pallets could reasonably be expected to be at a significantly higher level.

- Other Companies

As this group of survey respondents included a small sample of non-manufacturing Geelong based companies and a variety of Surf Coast and Colac based companies there is no basis on which to project the derived statistics. However the available supply indicated by the survey can be regarded as a minimum that may be available to the proposed business operation. It is not unreasonable to assume that the available supply could be as high as 400 per month.

The availability of waste timber pallets and crates as indicated by the survey process is based on the information provided by survey participants in response to a structured questionnaire relating to their waste disposal arrangements.

Securing this identified available supply as a definite supply for the proposed business operation will be an initial challenge that will need to be recognised as part of the business establishment process.

It is proposed that as an initial phase in establishing the business a Market Identification Process be implemented. A key focus of this process will be:

- Securing the identified available supply of waste timber pallets and crates as a guaranteed source of supply for the business operation.

This process would also incorporate the tasks of:

- Identifying and securing an expanded market for the sale of timber pallets derived as a product of the business operation.
- Identifying and securing opportunities for the sale and distribution of "waste" timber derived as a product of the business operation.

In addition to following up with specific companies identified as potential suppliers of waste timber pallets and crates, it is proposed that the Market Identification Process focus on liaising with the transport industry to establish a partnership approach to facilitate the acquisition of, and identification of sources of supply of, waste pallets, and the marketing of "recycled" pallets that will be a product of the business operation.

- Two (2) of the transport companies surveyed reported that they provide timber pallets to clients for transporting products.

A similar approach is recommended in regard to waste disposal companies. Whilst only one of these companies – "Cleanaway" - identified the availability of waste timber pallets in the waste disposal system, they expressed particular interest in participating in a pallet recycling venture of the type proposed. The waste disposal industry should be included in the market identification process.

The Landfill Site survey implemented as part of the overall survey process indicated little, if any, waste timber pallets emanating from this source. However it is proposed that these facilities also be incorporated in the Market Identification Process to ensure any future supply is diverted to the new enterprise.

It is envisaged that this initial Market Identification Process will require the full-time dedication of one staff member for an estimated period of at least eight weeks. Whilst the three tasks identified will be ongoing requirements for the continued operation of the business the securing of supply in the first instance will be integral to the successful establishment of the business.

The Consultants are advised that the **supply of specific timber pallets** for disassembly will approximate 10,000 pallets per annum, delivered to the processing operation primarily over the period January - September. This conservative supply estimate provided by CM Timber Processing has been used as a basis for calculating operational costs and revenue, in keeping with the conservative supply estimates applied to other aspects of the operation. It is possible that the supply of specific timber pallets could be as high as 20,000-30,000 pallets per year.

In summary the supply of inward products to the proposed business operation is estimated as:

	<u>Per Month</u>	<u>Per Annum</u>
1. Waste timber pallets sourced from the Barwon Region	1,078	12,936
2. Waste timber crates sourced from the Barwon Region	19	228
3. Specific timber pallets for disassembly	833	10,000

5.1.2 Collection

The identified supply of waste timber pallets and crates from within the Barwon Region will need to be "collected" for storage and processing. There are two (2) options for "collection". They are:

1. Provision of a "Drop-Off" facility.
2. Provision of a "Pick-Up" service.

The "Company Supplier" survey identified that fifteen (15) companies considered it would be of value to be able to "drop-off" waste timber pallets and crates at a specified location. Five (5) of these companies qualified their interest in this option according to suitability of location and cost.

Seven (7) of the surveyed companies indicated they may be prepared to pay for the collection of waste timber pallets/crates. The cost effectiveness of this arrangement was an issue for all companies, i.e., cost to be minimal, or less than or equal to dumping costs.

It is proposed that the business operation provide a combination of collection methods on the following basis:

▪ **Provision of "Pick-Up" Service**

- This facility to be offered to suppliers with a minimum of thirty (30) pallets for disposal. Material to be collected on a "free-of-charge" basis.
- Data gathered by the Company Supplier Survey indicated ten (10) companies reporting the availability of timber pallets in excess of thirty (30) pallets per month. The total number of pallets available for collection from these companies is estimated at 900 per month.
- It is proposed that initial sorting of the material collected by "pick-up" would be undertaken by the pick-up driver. Training and skills development in this task would be provided by CM Timber Processing.

▪ **Provision of "Drop-Off" Facility**

- This facility to be available to suppliers of waste timber pallets/crates on a "free-of-charge" basis, i.e. no fee for depositing material.
- Provision of a "Drop-Off" facility would facilitate the exchange of material with the "mulching" activity currently operating at Point Henry.

It is proposed that as part of the business establishment process discussions with the operators of the Point Henry facility be undertaken with the objective of facilitating the free exchange of waste timber pallets delivered into the Point Henry facility with waste timber deposited at the proposed business operation.

- Operating hours of the "drop-off" facility may need to be regulated to facilitate the management of deliveries and storage considerations.
- The Survey data indicates that, after allowing for the "pick-up" of pallets from companies meeting minimum pick-up requirements, approximately 170 pallets per month sourced from within the Barwon Region would be "dropped off" at the storage facility.

- Sorting of deposited materials would be undertaken by GDP staff. CM Timber Processing to provide training and skills development in regard to the sorting and grading of material received.
- The "Drop-Off" facility would also receive the incoming supply of specific pallets for disassembly.

5.1.3 Storage

Storage facilities will be required for both incoming materials and finished products.

The Facility and Resource Plan (**Section 7**) provides an estimate of the area required for storage facilities.

5.2 Processing

The Process Models incorporated in **Section 4** indicate the processing activities associated with each of the incoming material streams.

5.2.1 Waste Timber Pallets Sourced from the Barwon Region

The supply of waste timber pallets available to the proposed business operation in the first year is estimated as 1,078 per month.

It is proposed that timber pallets received into the storage facility be sorted into three (3) processing categories, i.e.,

- **"Good" Pallets** - i.e., no further processing required.
- **"Repairable" Pallets.**
- **"Recyclable" Pallets** - i.e., for disassembly.

GDP staff would implement the sorting process. CM Timber Processing would provide training and skills development in this task.

Primary to the analysis of pallet processing activities and the associated costs will be the number of pallets available for processing in each of the above categories. Estimation of these quantities is a difficult task however a review of the data available from the survey process in regard to the "type" of pallets that may be available suggests the following distribution of available pallets into the three (3) processing categories:

	<u>No. of Pallets Available</u>		
	<u>% of Available Supply</u>	<u>Per Month</u>	<u>Per Annum</u>
1. "Good" Pallets	10%	108	1,296
2. "Repairable" Pallets	12%	129	1,548
3. "Recyclable" Pallets	78%	841	10,092

5.2.1.1 "Good Pallets"

The only activity proposed for those pallets identified as "Good" in the initial sorting process will be further sorting and grading into specific size and type categories to facilitate marketing and distribution. This process would be implemented by GDP staff. Training and skills development in this task would be provided by CM Timber Processing.

5.2.1.2 "Repairable" Pallets

Pallets received into the facility classified as "repairable" would be processed by GDP Staff who currently have the expertise and skills required to implement the repair process.

The repair process will require a supply of replacement timber and repair materials, i.e., nails, paint. It is proposed that replacement timber be provided by timber pallets that are disassembled for recycling.

5.2.1.3 "Recyclable Pallets"

A "disassembly" machine to be provided by CM Timber Processing would be utilised to process pallets identified as "recyclable". The machine will be transported from its current Colac location to the new Geelong based facility.

The Consultants are advised that CM Timber Processing would cover the cost (estimated \$400) of transporting the machine to Geelong.

Timber derived from the disassembly process will be sorted into:

- **"Recovered"** pallet timber – to be fed into the repair process.
- **"Recovered low grade"** timber – suitable for on selling.
- Timber for disposal as **"waste"**.

5.2.2 Waste Timber Crates Sourced from the Barwon Region

It is proposed that waste timber crates delivered to the facility via both the "drop-off" and "pick-up" collection sources will be sorted into three (3) categories:

1. **"Good"** – i.e., those in good condition that are identifiable and suitable for resale to the supplier.
2. **"Recoverable"** – i.e., those suitable for disassembly with the objective of "recovering" low grade timber for on selling.
3. **Recyclable"** – i.e., those suitable for crushing and disposal as waste timber.

5.2.3 Specific Pallets for Disassembly

It is proposed that CM Timber Processing would direct its existing activities relating to the disassembly of "specific" branded pallets to the new business operation.

On delivery to the facility these pallets would be directed for disassembly by GDP staff.

Timber derived from the specific pallets would be sorted into the following categories for marketing and distribution by CM Timber Processing:

- **"Recovered"** timber suitable for pallet production.
- **"Recovered"** low grade timber.
- **"Waste"** timber for disposal.

6. Marketing and Distribution Plan

- It is proposed that "**Good**" timber pallets, including those emanating from the repair process as "Good" pallets, will be marketed directly to client companies by CM Timber Processing.

The survey process indicated that the anticipated price of these pallets may vary between \$2 and \$15. The figure of \$7 per pallet (including delivery) has been used as a base in determining expected revenue from these products.

Whilst CM Timber Processing has an existing established market for these pallets new markets will need to be identified both within, and external to, the Barwon Region. As indicated in **Section 5** it is proposed that identification of these markets be a focus of the Market Identification Process, and an ongoing task.

- "**Recovered**" timber derived from the disassembly process that is deemed suitable will be fed into the repair process as replacement boards for repairable pallets.
 - It is estimated that each timber pallet disassembled may provide approximately 0.034m³ of timber into this process.
 - Based on the estimated supply of 841 pallets for disassembly per month an estimated 28.594m³ of recovered timber per month may be available for input to the repair process.
- "**Recovered**" timber derived from the disassembly of pallets and crates that is identified as "low-grade" and not suitable for the repair process can be sold into markets seeking such material. CM Timber Processing has an existing market for such timber, however alternative, and ideally more lucrative, sources may be sought for this product. Revenue projections are based on sale to the existing identified market.
 - It is estimated that each timber pallet disassembled might provide 0.014m³ of "low-grade" timber.
 - Based on the estimated supply of 841 pallets for disassembly per month an estimated 11.77m³ per month (142m³ per annum) of "low-grade" timber suitable for on-selling may be recovered.
 - The identified existing market price for "low-grade" timber is \$25 per 1m³ pack. Transport costs are estimated at \$2.50 per pack.
- The disposal of timber identified as "**Waste**" will be a challenging consideration for the business venture on the basis of:
 - Minimising disposal costs.

- Pursuing any opportunities to earn revenue on this product.

For the purpose of feasibility assessment it is assumed that all waste timber generated by processing activities will be directed to the Point Henry facility for mulching.

- The quantity of waste timber available for disposal is estimated as 100 cubic metres per annum.
 - ☐ Waste timber derived from 841 timber pallets (per month) yielding 0.01m³ per pallet.
- The cost of disposal to the Point Henry facility is \$120 per 30 cubic metres plus \$80 per 30 cubic metres transport cost.

Other opportunities for disposing of waste timber include:

- Blue Circle Southern Cement (Boral Ltd.) are currently examining the possibility of using "demolition" or waste timber as a fuel source. Large quantities of timber are required for this purpose.

The BRWMG is currently examining this proposal and **it is proposed that this disposal option be further investigated.**

- Pinegro are proposing to establish a timber-recycling site at Deer Park. The proposal is based on the demolition of timber pallets to provide timber that will be fed into the particleboard, and other, markets.

Pinegro are interested in receiving clean pallets, or pallet timber (i.e., no paint, preferably no nails, no cardboard, no plastic) on a "free-deposit" basis. They are primarily interested in:

- Green pine.
- Dried pine.
- Dried hardwood.

Pinegro have expressed interest in establishing long-term supply arrangements with suppliers focussing on minimising freight costs.

It is proposed that this disposal option be further examined with a view to establishing a reciprocal arrangement with Pinegro for the exchange of "good" pallets, received as part of their inwards supply, for waste timber.

7. Facility and Resource Plan

7.1 Facility Requirements

The facility site will need to provide sufficient area to accommodate both storage and processing activities.

Storage requirements have been estimated on the following basis:

- Estimated Incoming Supply of Waste Timber Pallets:
 - 1,911 per month.
- Storage area required:
 - 200m²
- Additional area for truck and fork lift access:
 - 200m²
- Estimated area required for storage of finished products:
 - 100m²
- Total Storage Area Required:
 - 500m²

The area required for processing is estimated as 300 square metres.

The facility site will need to provide:

- An adequate power supply.
- Suitable truck access.

Two (2) site options have been reviewed by the Consultants. They are:

1. The existing facility currently operated by GDP Industries.

Establishment of the proposed operation at this site would facilitate the part-time deployment of existing GDP staff and provide an established infrastructure to support the operation.

However, the Consultants are advised that due to current operating requirements only 250 square metres of external storage space could be made available to the proposed business operation. As this area would be insufficient to accommodate the proposed activities the GDP site is deemed unsuitable for consideration as a site option.

2. Site available for lease 93 Douro Street, North Geelong.

This site, proposed for consideration by the client group, offers 7,700 square metres of total land area incorporating a showroom/warehouse complex of 2,100 square metres.

The site is currently available for lease on the basis of a three (3) year term with a further three (3) year option.

Commencement rental is quoted at \$60,000 per annum.

As this site offers an extensive area significantly in excess of the requirements of the proposed business operation, and the leasing rate is in excess of the capacity to pay, it is not recommended as a suitable site option for further consideration.

7.2 Machinery and Equipment

Machinery and equipment required to implement processing activities will contribute to business establishment costs. The following items of capital equipment will be required:

	<u>Estimated Cost</u>
▪ Pallet Sorting Table	\$15,000
▪ Pallet Repair Table	
▪ Nail Guns (2)	\$ 1,600
▪ Decking Saw	\$ 1,500
▪ Band Saw	\$ 3,000
▪ Compressor	\$ 2,500
▪ Painting Equipment	\$ 1,000
▪ Angle Grinder	\$ 400
▪ Electrical connections : disassembly machine	\$ 1,500

7.3 Labour Requirements

The monthly requirement for labour indicated by the processing levels detailed in the Process Plan are:

▪ Pick-up, sorting and unloading of Barwon sourced pallets	16 hours
▪ Receipt and sorting of pallets received at "drop-off" facility:	
➤ Barwon sourced	48 hours
➤ Specific pallets	16 hours
▪ Grading of pallets	12 hours
▪ Pallet repairs	22 hours
▪ Disassembly of pallets (Barwon and Specific)	112 hours
	<hr/>
	226 hours
	<hr/>

This level of labour requirement suggests that the proposed business is "at best" a "part-time" proposition.

8. Financial Plan

A review of the Projected Revenue and Costs for the proposed business operation has been undertaken across a three (3) year period on the basis of a series of product volume and pricing options.

Crates have not been included in the financial analysis on the basis that:

- It is estimated that only twelve (12) "Good" crates per annum would be available for on-selling.
- The cost of disposing of waste timber derived from "recoverable" and "demolished" crates is prohibitive.

Option 1

Incorporates the following assumptions:

Year 1:

- A Government Grant of \$30,000 is made available to the business.
- Supply of waste timber pallets sourced from within the Barwon Region will be distributed across the following categories:
 - Good pallets 1,296 per annum.
 - Repairable pallets 1,548 per annum.
 - Recyclable pallets 10,000 per annum.
- Supply of specific pallets for disassembly will be 10,000 per annum.
- "Good" and "Repaired" pallets will be sold at the price of \$7 per pallet.
- Processing of specific pallets will be charged out at the rate of \$1.70 per pallet.
- Labour will be provided at the level outlined in Section 7.3 plus provision for startup costs and variations in productivity levels, i.e., 3,500 hours per annum.
- A Market Identification Process will be implemented at the cost of \$8,000.
- The hourly labour rate will be \$15.00 per hour.
- 142m³ of low-grade timber will be produced per annum for on-selling yielding \$25 per cubic metre. The cost of delivery to recipients will be \$2.50 per cubic metre.

- Superannuation will be charged at 8% per annum.
- WorkCover will be charged at 3% per annum.
- Machinery and equipment will be leased over a three (3) year period incurring an interest rate of 12.5% per annum.
- The business operation will require 800 square metres of operating area. Rental cost will be \$8.44 per square metre per annum.
- Outgoings (rates) will be charged at the rate of .60 per square metre per annum.
- Equipment hire of \$11,000 has been provided to cover the cost of:
 - Hire of truck and driver to provide pick-up service.
- Utilities will be available to the business at an estimated cost of \$5,200 per annum.
- The business will generate 8.4 cubic metres of waste timber for disposal per month (100m³ per annum). The cost of disposal (including transport) will be \$6.67 per cubic metre on the basis of disposal to the Point Henry facility.
- A machinery rental charge of 0.45¢ per pallet will be incurred for pallets sourced from within the Barwon Region that will be processed by the disassembly machine.

Year 2:

As for Year 1 with the following variations:

- 50% increase in the volume of supply.
- Associated variations in labour and processing costs.

Year 3:

As for Year 2 with the following variations:

- A further 30% increase in the volume of supply.
- Increase in revenue from the sale of "good" and "repaired" pallets from \$7 per pallet to \$7.50 per pallet.
- Increase in revenue from low-grade timber from \$25 per cubic metre to \$26 per cubic metre.
- Increase in the charge-out rate for processing of specific pallets from \$1.70 per pallet to \$1.80 per pallet.

Assumptions

Option 1A

Year 1:

As for Option 1 with the following variations:

- Increase in supply of specific pallets to 15,000 pallets per annum.
- Associated increase in labour costs.

Year 2:

As for Option 1 with the following variations:

- Increase in supply of specific pallets to 25,000 pallets per month.
- Associated increase in labour costs.

Year 3:

As for Option 1 with the following variations:

- Increase in supply of specific pallets to 30,000 pallets per month.
- Associated increase in labour costs.

Assumptions

Option 1B

Year 1:

As for Option 1 with the following variations:

- Increase in the supply of specific pallets from 10,000 per annum to 20,000 per annum.
- Associated increases in labour costs.

Year 2:

- Increase in the supply of specific pallets from 15,000 per annum to 30,000 per annum.
- Associated increases in labour costs.

Year 3:

- Increase in the supply of specific pallets from 19,500 per annum to 30,000 per annum.
- Associated increases in labour costs.

Assumptions

Option 1C

Years 1, 2 and 3:

As for Option 1 with the following variations:

- Increase in the supply of specific pallets to 30,000 per annum for each year.
- Associated increases in labour costs.

Assumptions

Option 2

Years 1 and 2:

As for Option 1 with the following variations:

- Increase in the revenue received from good and repaired pallets from \$7 per pallet to \$8 per pallet.
- Increase in the supply of specific pallets to 20,000 per annum in Year 2.
- Associated increases in labour costs.

Year 3:

As for Option 1 with the following variation:

- Increase in the selling price of good and repaired pallets to \$8.50 per pallet.
- Increase in the supply of specific pallets to 30,000 per annum.
- Associated increases in labour costs.

Assumptions

Option 3

Years 1 and 2:

As for Option 1 with the following variations:

- Increase in the selling price of good and repaired pallets from \$7 per pallet to \$10 per pallet.
- Increase in the number of specific pallets processed from 10,000 per annum to 20,000 for Year 1 and 30,000 for Year 2.
- Associated increase in labour costs.

Year 3:

As for Option 1 with the following variations:

- Increase in the revenue received from the sale of good and repaired pallets to \$10.50 per pallet.
- Increase in the supply of specific pallets to 30,000 per annum.
- Associated increase in labour costs.

Assumptions

Option 4

Year 1:

As for Option 1 with the following variations:

- Increase in the volume of good and repaired pallets for sale from 2,844 pallets per annum to 5,700 pallets per annum.
- Increase in selling price of pallets from \$7 to \$8.
- Increase in the volume of low-grade timber for sale from 142 cubic metres to 280 cubic metres.
- Increase in the supply of specific pallets from 10,000 pallets per annum to 20,000 pallets per annum.
- Associated increases in labour, processing, waste disposal, transport and delivery costs.

Year 2:

As for Year 1 with the following variations:

- A further 50% increase in the volume of:
 - Good and repaired pallets for sale.
 - Low-grade timber for on-sale.
 - Specific pallets for disassembly.
- Associated increases in labour, processing, waste disposal, transport and delivery costs.

Year 3:

As for Year 2 with the following variations:

- A further 30% increase in the volume of:
 - Good and repaired pallets for sale.
 - Low-grade timber for on-sale.
- Associated increases in labour, processing, waste disposal, transport and delivery costs.
- Increase in the selling price of good and repaired pallets to \$8.50 per pallet.

Assumptions

9. Funding Opportunities

EcoRecycle Victoria have advised that Grant Funding may be available to the proposed business via its Infrastructure Funding Scheme.

Selection criteria for the granting of funds via this scheme has not been finalised, however EcoRecycle advises funding is usually directed to:

- "Infrastructure for sorting/processing equipment for diverting recyclable/reusable materials from landfill"; and that,
- "The project should be of significance for the region".

The Consultants are further advised that:

- Private companies are funded up to 30% of the project cost.
- Funding is dependent on the total cost of the project.
- Grants can vary from \$50,000 to \$200,000.

It is possible that further funding may be available from Business Victoria to assist with the Market Identification Process. Business Victoria advises that it does consider providing assistance to prospective businesses seeking to validate research and determine feasibility via its Strategic Research Study Scheme. Grants of up to \$10,000 are available for projects that are accepted for funding.