

Feasibility of Reuse Shops at Council Transfer Stations

Alpine Shire Council

Final Report

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This report has been prepared for the sole use of the client stated above, the Alpine Shire Council, the only intended beneficiaries of this following report and work. No other party should rely on the information contained herein without the prior written consent of Equilibrium OMG Pty Ltd (Equilibrium).

The results and findings are based upon Equilibrium's professional judgment, experience and expertise, based upon the reliance of information used to prepare this report.

Equilibrium has limited its assessment to the scope agreed upon with Alpine Shire Council.

Equilibrium believes that its findings are reasonably supported and that they have been developed according to the professional standard of care for the environmental and sustainability consulting profession in this area at this time.

Executive Summary

The Alpine Shire Council (Council) is a regional council in northeast Victoria and is considered a residential and tourist district. The Council has been successful in obtaining a grant from Sustainability Victoria to investigate the viability of implementing a reuse shop at existing transfer sites.

One or more reuse shops would allow residents, visitors and tourists to donate and dispose of usable items to a local transfer station, and to purchase second-hand items from the same. This activity is intended and expected to achieve environmental, social and economic benefits for the region.

The objective of this assessment and study was to investigate the feasibility of establishing a suitable reuse shop model at the three Alpine Shire transfer stations. This report provides high level recommendations for Council which inform the next steps of implementing one or more successful reuse shops.

The feasibility study was informed by research into similar reuse shop models, conducting stakeholder engagement with local businesses and social enterprises, analysing Council supplied data and modelling potential activities and associated financial and environmental impacts and outcomes.

It is noted that the modelling and subsequent feasibility that is reported here is based on those above-mentioned inputs and associated assumptions. The inputs and assumptions are documented in this report and in the spreadsheet model itself. Separate to what is reported here, the model can be used with changes to the inputs and assumptions to undertake the analysis as needed and with different and more up to date data.

The financial modelling in the feasibility assessed and estimated whether one or more reuse shops would provide a return on investment within a three-year period.

The environmental aspect of the feasibility assessment considered factors including but not limited to the volume of materials received annually at all transfer stations, volume of waste that could be diverted from landfill and the amount of material that could be repurposed.

Social aspects of the assessment considered employment opportunities, improved community awareness and reduced waste for the local region.

The following stand-alone models were presented to Council:

Model	Description
1. All products at all sites	All products approach - site infrastructure is established in the first year and all products are targeted for recovery and reuse or resale from first operational year
2. All products at Porepunkah	
3. All products at Myrtleford	
4. All products at Mount Beauty	
5. Phased approach and products at all sites	Phased approach – site infrastructure is established over a three-year period and the range of products

6. Phased approach and products at Porepunkah	targeted for recovery and reuse or resale is staged over three years
7. Phased approach and products at Myrtleford	
8. Phased approach and products at Mount Beauty	

The assessment found that the establishment of reuse shops within Council boundaries will result in positive environmental and social outcomes for the community, including:

- the potential avoidance of more than three hundred tonnes of material from landfill
- up to 480 tonnes of carbon emissions avoided¹
- increased local employment opportunities

Financial modelling also indicated that an upfront investment and capital expenditure is needed for establishment purposes and therefore likely to be required from Council, and while a short-term return on investment in three years or less is unlikely, it is possible in the longer-term of four to five years.

It is considered feasible to implement reuse shops at one or multiple sites, with an all-product approach (that is, accepting and selling a full range of goods and usable items) likely to achieve the greatest environmental and social benefits.

The results indicate that the All Products approach (models 1-4) will have a faster pay back than the phased approach.

Under the All Products models, the All Sites model pays back between 4-5 years whereas the Porepunkah site only is anticipated to return net cumulative profit by the second year of operation and pays back between 3-4 years. This is attributed to the highest volume of waste that is received at the Porepunkah site compared to other sites. The Mount Beauty site model pays back between 4-5 years and the Myrtleford site model pays back after more than 6 years.

The Phased approach (models 5-8) provides Council with the option to evenly distribute site establishment costs over the three-year period and reduce initial capital costs. However, in comparison to the All Products approach, it offers a slightly slower and reduced return on investment in the short-term, though the pay back periods are still between 4-5 years (All sites and Mount Beauty site) and 3-4 years (Porepunkah site only). The Myrtleford site model pays back after more than 6 years. The All Sites, Porepunkah and Mount Beauty sites pay back by year three of operation, whilst the Myrtleford site pays back by year four of operation.

¹ Table 14, Australian National Greenhouse Accounts Factors, Department of Climate Change, Energy, the Environment and Water

An outsourced model - where an external organisation or social enterprise runs a reuse shop on behalf of Council - was also explored. It was determined that a model such as this would have similar or same set up and implementation costs, when compared with the phased and all product approaches. An outsourced model has the potential to maximise environmental benefits and financial returns for Council in the nearer term, due to the likelihood that specialist expertise and knowledge these groups already have and can apply immediately with regards to running reuse shops.

Further deliberation was given to a potential model where reuse shops run unstaffed, however this was deemed low feasibility, since an unstaffed reuse shop would be unlikely to have significant benefits for avoided landfill and may pose a variety of regulatory and safety issues for Council and the broader community.

Based on the findings from the feasibility study and financial modelling, a range of recommendations to inform the next stages of implementation for Council were identified.

The outcomes and recommendations include:

- Establishing reuse shops at one or all Council transfer stations is feasible and appropriate. Upfront establishment of infrastructure within the first year and sale of all products in the first year yields the highest positive cash flows by the second year; whilst a phased approach on sales and site establishment achieves net positive cash flows by the third year or later. The highest net positive cash flows occur at Porepukah site where the volume of goods received is the highest out of all existing Council's transfer stations. Both the phased and all product approaches provide opportunities for social, environmental and economic returns for the local context.
- Improve the tracking of materials and items received at transfer sites to enhance the reporting of recovered materials and activities. This will help to inform the types of products that Council receives at transfer stations and therefore the range of materials which may be suitable for resale.
- If possible, Council should align the development of one or more reuse shops with existing Council infrastructure to reduce the initial capital costs identified within the financial modelling.
- Given the minimal financial difference between an outsourced and Council run model, it is recommended that Council considers a partner model with an appropriately qualified external organisation who could run reuse facilities to help maximise environmental outcomes and financial return.
- Investigate co-funding models, including but not limited to government funding schemes and external contributions.
- Investigate whether the sale of electrical goods, including time required by appropriately qualified personnel for testing and tagging, should be included (as was modelled), or rather avoided if the reuse shop operated on a 'goods sold as is' basis or excluded electrical items for sale altogether.
- Explore and consider implementing suitable retail techniques within reuse shops, to help increase quality donations, reuse, and overall shop revenue.
- Invest in education and communication strategies to raise community awareness and equip residents to engage with reuse behaviours and improve donation quality.

1 Scope and Approach

The objective of this project is to establish whether there is a suitable reuse shop model (either upcycling or reuse and resale of products) at any, or all, of Council's three existing transfer stations located at and Mount Beauty, Myrtleford and Porepunkah. The study considers a range of options such as a transfer station recycle shop run by Council or a local social enterprise, or possibly even an unstaffed facility. The objective of the reuse shops is ultimately to reduce waste to landfill and maximise resource recovery.

The Council has engaged Equilibrium to undertake a feasibility assessment and deliver a research and recommendations report.

The research component included a workshop with Council transfer station staff, an investigation of proven successful options for reuse shops, investigation of the local market, assessment of the suitability of Council's transfer stations for a reuse shop and engagement of potential community partners.

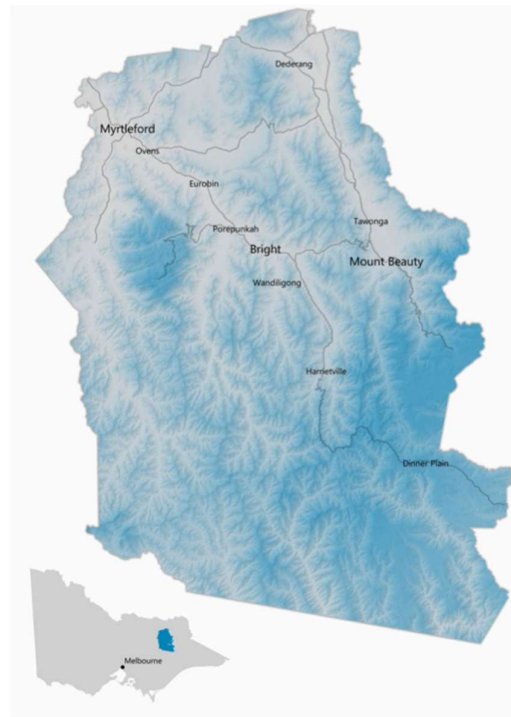
2 Alpine Shire Council

The Alpine Shire Council covers 4,790 square kilometres and is home to approximately 13,000 residents. The Shire is located three hundred kilometres north-east of Melbourne and includes several towns, the largest of which are Bright, Myrtleford, Mount Beauty, Falls Creek, Harrietville, Dinner Plain and Mount Hotham (Figure 1).

Over 90% of the land within the region is considered public land, including parts of the Alpine National Park and all of Mount Buffalo National Park. The Alpine Shire is a popular tourist destination and is well known for its seasonal attractions (e.g., skiing, mountain biking and hiking) and food and wine attractions.

Myrtleford and Bright are significantly more populated than the other towns within the region and are both residential and tourist hubs. During 2021, the Shire received 516,00 overnight visitors, with the majority of tourists travelling from the Melbourne region².

Council has been successful in obtaining a grant from Sustainability Victoria's Recycling Victoria Councils Fund for a research project into the feasibility of establishing a 'reuse shop' (upcycle or reuse) at any, or all, of the three existing transfer stations located at and Mount Beauty, Myrtleford and Porepunkah.



² https://www.alpineshire.vic.gov.au/sites/default/files/YE_Dec21_Alpine_Shire_travel_snapshot.pdf

3 Research and Background

Desktop research was completed to understand the current context of the region and provide insights into the feasibility study indicators. A high-level overview of the research conducted is provided below and detailed findings can be found in Appendix 1.

Background information investigated:

- Research of existing reuse models with similar contexts
 - o Neighbouring and regional councils
 - o List of councils that also received SV funding for similar projects
 - o Identification of price of reusable goods being sold at similar facilities
- Existing Council strategies which may inform outcomes
 - o Waste, circular economy, sustainability
 - o Local economy, employment, social strategy
- Seasonal activities and locations within the Council
 - o What items are locals and tourists likely to be shopping for (e.g., skiing activities, tents for camping)
 - o Where are accommodations providers located (e.g., are tourists likely to be concentrated in one region of the Shire?)
 - o Where are town hubs and what are their proximity from transfer stations
 - o Where are other popular op shops located in the Alpine Shire region?
- Community groups
 - o What community groups are likely to be involved in the development of a re-use shops
 - o Any existing activities that can be leveraged?
 - o What is the population distribution within the Alpine Shire?

Operational and material flow indicators identified:

- Amount and volume of material received at transfer stations
- Amount and volume of reusable products received at transfer stations
- Amount and volume of products/materials going to landfill
- Costs of landfilling items
- Running costs of transfer station
- Most common product types received

4 Stakeholder Engagement

A range of stakeholders were identified within the region, consisting of community partners, social enterprises and local sustainability groups. As part of the study to investigate whether a reuse model could be possible within the local context, the following were engaged.

4.1 Transfer Station Staff

A workshop was held with transfer station staff to understand the types and volumes of materials received at the three transfer stations sites within the region.

The workshop and discussion provided extensive insights into current activities with respect to the recovery and recycling of materials. It also highlighted and canvassed the opportunities and barriers that exist in regard to recovering, recycling and selling more materials and products.

Key issues that were discussed and are pertinent to the feasibility assessment includes:

- Materials handling
- Labour requirements
- Quality of materials and products
- Safety checking of materials and products
- Storage capacity
- Customer / user behaviour and expectations

The workshop provided insights that there is a good level of resource recovery for some materials especially metals, e-waste and cardboard and paper, but that there is latent capacity to recover more.

Insights were provided that there are some groups of products and materials that are currently sought after by some people visiting the sites with notable items being building materials, furniture and some electronic and electrical products.

Anecdotal evidence is that there is some level of scavenging of materials from all current sites, but there is no quantification of the amount or detail on the specific materials or products.

Operators provided advice that while there is latent capacity for greater recovery, upgrades or changes to processes, systems, hardware and resources will be required – especially if it is for recovery and potential sale of products, rather than material recovery and recycling.

4.2 Community Engagement

Phone interviews were conducted with prominent op shops within close proximity to the transfer stations to understand general sentiments towards a Council run reuse model. (Note that an opportunity shop, or op shop for short, according to the Cambridge Dictionary, is “a shop in which a charity sells all types of used goods that are given by the public, or in which they sell new goods, to make money for the work of the charity”).

Op Shops engaged with included:

- Mount Beauty Hospital Op Shop
- Bright Hospital Opportunity Shop
- Mount Beauty Community Centre (incorporates an op shop)
- Myrtleford Hospital and Community Op Shop
- Upper Kiewa Valley Uniting Church Op Shop
- Vintage Salvage and Co

Interview questions (Appendix 2 in Section 10) were tailored around the following:

- Types and volumes of items received
- Unsellable items and how they are managed or disposed of

- Potential relationship with a council run reuse shop and benefits to business model and/or community
- Any other thoughts

A high-level summary of the findings is detailed below:

- Overall positive sentiment towards a reuse shop and the sustainability goals of Council
- The majority of op shops in the region have storage constraints due to site sizing and are unable to accept large and/or bulky items.
- All sites indicated that they are unable to accept electrical items, either due to storage constraints or a lack of appropriate technical requirements.
- Many participants stated that residents are likely to dump items that are unable to be accepted by the op shop, and as a result, op shops are fronting landfill charges at their local transfer stations. The overall sentiment was that a reuse shop could reduce these costs for op shops going forward.
- Some interest in a collaborative model between local op shops and a Council run reuse shop.
- One respondent had concerns about a Council run reuse shop reducing the profits of local op shops.
- Respondents from op shops run by charitable organisations indicated that volunteers within the region have no additional capacity, and that a reuse shop would need to be council run.

Additional interview questionnaires were formulated for local community members and tourists/visitors which Council could consider utilising in future (Sections 10.2 and 10.3).

4.3 Social Enterprises

Phone discussions were held with social enterprises with regards to testing and tagging second-hand electrical items and external organisations running Council reuse shops. The outcomes were as follows:

- Discussions with St Vincent De Paul Society Victoria indicated that there are a range of regulatory and safety requirements when handling and managing second-hand electrical items. This type of activity requires volunteers or staff members to have appropriate qualifications and infrastructure, including testing and tagging machinery. This can be costly in some cases if staff members are required to be trained and paid at a higher hourly rate due to their qualifications. For general staff - some costs can be reduced if staff work on a voluntary basis.
- Stakeholder engagement held with a social enterprise that specialises in reuse shops indicated that there are opportunities for Council to maximise environmental benefits when partnering with an appropriately qualified external organisation. There are a range of social enterprises within Australia which have specific expertise identifying useable items from landfilled waste, educating consumers about donation and reuse and running retail stores with a profitable model.

5 Existing Infrastructure and Sites

Council provides resource recovery, recycling and waste management services throughout the Alpine Shire. Current services include:

- Kerbside waste and recycle bin services
- Transfer Stations and Resource Recovery Facilities
- Public Place waste and recycling bins
- Free collection points for household batteries, printer cartridges and mobile phones

Three transfer stations exist within the region and accept many household items which can be reused or recycled, to reduce landfill and avoid greenhouse gas emissions.

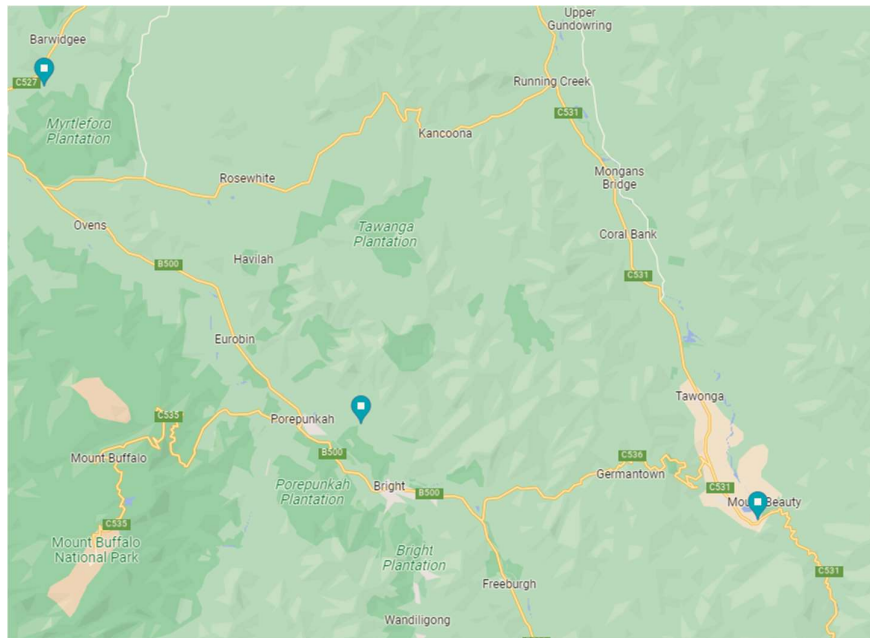


Figure 1. Distribution of Alpine Shire Transfer Stations

The three transfer stations are located within the towns of Myrtleford, Porepunkah and Mount Beauty, and service all surrounding residents and towns (Figure 2). A variety of items are accepted at a range of different price points, based on the m3 and units of material disposed of. Some materials, such as oil and e-waste are accepted for free, as they are covered by independent schemes, such as Mobile Muster and drumMUSTER.

There is no active landfill within the Shire's municipal boundary. All landfill is currently transported to an external site and consequently incurs an increased transport cost.

Victoria's waste projection model indicates that in 2021, 200,000 tonnes of waste was generated, and 38,000 tonnes landfilled within the Northeast region³. Reuse shops and centres can help to promote the reuse of materials and products, and therefore contribute to reduced landfill rates.

6 Feasibility

The purpose of the feasibility study is to identify whether it is possible for Council to establish one or more transfer station reuse shops within the local context. The following environmental, economic and regulatory factors made up the key considerations of the study:

- Volume of materials received annually at all transfer stations (number of units by category or by m3 total)
- Categories of material and products that could be reused or diverted from landfill
- Volume of waste that could be diverted from landfill
- Amount of income generated from avoiding landfill costs
- Potential sale prices of items that could be resold at a reuse shop
- Amount of income generated from a reuse shop
- Establishment and site infrastructure costs for constructing a reuse shop
- Associated ongoing operational and staffing costs for running a reuse shop

6.1 Operations

As per discussions with Council, the following operations will be relevant to a reuse shop model:

- Residents and visitors will not be required to pay landfill rates, when donating items to the reuse shop(s) as long as items are in usable/resealable condition
- Scavenging for usable materials and items will not be offered as a Council chargeable service, as it poses regulatory and safety issues

In line with a reuse model, it will be important that existing Council staff create and implement a process for accepting and checking items for reuse. Considerations for this process should include the following:

1. Customer enters reuse shop and provides staff with product(s)/material(s). Materials are required to be sorted prior to arrival.
2. Staff inspect the item(s) and evaluate suitability for reuse by following a pre-determined process.
3. If suitable, item/material is stored to be later priced and displayed in line with shop procedures. If not suitable, the item/material should be disposed of, with the cost of disposal charged to the customer consistent with transfer station procedures.
4. Item/material donation date should be recorded to ensure that stock within the shop is appropriately maintained.

³ <https://www.sustainability.vic.gov.au/research-data-and-insights/waste-data/interactive-waste-data/victorias-waste-projection-model>

In models 1-4 at each site an assumed FTE of 0.3 is allocated to sorting (including general functional/quality check) and an FTE of 0.3 is allocated to sales and store management; and an additional one hour per week is allocated to equipment testing and tagging. In the phased approach (models 5-8), the total effort is phased in by one-third over each year 1 to 3 in line with the expected product recovery.

6.2 Models

The following stand-alone models were assessed:

Model	Description
1. All products at all sites	All products approach – site infrastructure is established in the first year and all products listed in Table 1 are targeted for recovery and reuse or resale from first operational year
2. All products at Porepunkah	
3. All products at Myrtleford	
4. All products at Mount Beauty	
5. Phased approach and products at all sites	Phased approach – site infrastructure is established over a three-year period and the resale of the range of products listed in Table 1 is ramped up over three years (i.e. 33% of all products in Table 1 in Year 1, 66% of all products in Year 2, 100% of all products in Year 3).
6. Phased approach and products at Porepunkah	
7. Phased approach and products at Myrtleford	
8. Phased approach and products at Mount Beauty	

6.3 Detailed feasibility assessment

The models presented to Council consider the three transfer station sites, as well as establishment, labour and operational costs over a three-year period (see attached financial model for description and breakdown).

Revenue modelling for all scenarios included estimated shop income and landfill avoidance costs. Shop income was calculated based on an estimate of 25 items sold per week. This is an assumption used for modelling and has been based on sales at other such facilities in other Council areas but remains an assumption, nonetheless. Landfill avoidance costs is also an assumption for modelling and is considered to be the volume of waste that could potentially be avoided with a reuse shop, and the corresponding savings based on current landfill charges applicable to Council.

The following model sensitivities were also considered:

- Waste to landfill volumes
- Waste volume changes
- Cost of waste to landfill
- Products sold
- Price of products
- Labour costs
- Recycling revenue

6.3.1 Materials

Using Council supplied data from the transfer stations for the 2021-2022 financial year period, the following products were identified as potential products which could be reused and sold within a reuse shop.

It should be noted that the Council-supplied data had some limitations with regards to detail and completeness. Discussions with transfer station staff indicated that specific items are received at transfer station sites, including bicycles, building materials and a range of textiles. However, the above items identified through stakeholder engagement were not reflected within the Vend data supplied by Council. It may be valuable for Council to investigate improved tracking of received materials, to ensure the accuracy of categories and products which could potentially be sold at a Council reuse shop.

Table 1. Categories and Products for reuse and avoided landfill

Category	Product
Electrical Items	Microwave
	Fans
	Electronic/electrical items
	Whitegoods
Furniture	Furniture
Seasonal Gear	Skis/snowboards
Building Materials	Steel
	Timber

Miscellaneous Waste	Cement Sheets
	Plasterboard
	Waste to landfill

Potential sale items were identified from Council supplied Vend data which detailed items dropped off to transfer stations. Indication of pricing for usable items is detailed below. Sale prices were estimated from other similar reuse shop models and anecdotal evidence received from reuse shop providers (Appendix I Section 9.2).

It should be noted that other products may be included within a reuse shop model, and the below list is an indication of how pricing may be structured based only on initial data and findings from a similar report developed by Strathbogie Shire Council and desktop research conducted into similar op shops within the region⁴, results of which are outlined in Appendix I Section 9.5.1.

Table 2. Item pricing examples and options

Sale Item	Sale Price	Average Sale Price
Fans (each)	\$10.00	\$10.00
Microwave (each)	\$10.00	\$10.00
General Electrical Items (each)	\$5 to \$50	\$25.00
Processed Timber m3	\$5.00	\$5.00
Raw Organic Timber m3	\$5.00	\$5.00
Sandbag (each)	\$5.00	\$5.00
Single Seater Couch (each)	\$30.00	\$30.00
Skis or Snowboard (pair or each)	\$70.00	\$70.00
Steel m3	\$5 to \$50	\$25.00
Timber m3	\$5.00	\$5.00
Cement Sheets m3	\$5.00	\$5.00

⁴ Resale Shop Feasibility Study, JustWaste Consulting

Plasterboard m3	\$5.00	\$5.00
Two-Seater Couch (each)	\$50.00	\$50.00
Whitegoods (each)	\$10 to \$100	\$50.00
Average		\$21.43

6.3.2 Avoided Landfill

Council is anticipated to have improved environmental and financial outcomes when items are sold through a reuse shop and diverted from landfill. Council data was used to estimate the current volume of waste being collected at the three transfer stations. A summary by product type is shown below.

Table 3. Tonnes of material received at Alpine Shire Council transfer station during 2021-2020 financial year period

Product	Porepunkah (Tonnes)	Myrtleford (Tonnes)	Mount Beauty (Tonnes)	All Sites (Tonnes)
Microwave	0.2	0.1	0.1	0.4
Fans	0.4	0.2	0.1	0.6
Electronic/electrical items	263	161.6	212.8	637.4
Whitegoods	36.9	20.1	15.7	72.6
Furniture	59.3	30.0	47.2	136.6
Skis/snowboards	0.1	0.0	0.4	0.6
Steel	644.4	328.6	540.5	1513.4
Timber	19.8	10.0	62.0	91.8
Cement Sheets	0.0	0.4	0.1	0.5
Plasterboard	2.5	0.4	0.0	2.9
Waste to landfill	271.3	187.2	146.6	605.1
Total Tonnes	1,297.73	738.7	1025.4	3,061.89

Council is charged a fee of \$190 by the Environment Protection Authority per tonne of material that is landfilled, including transport fees to landfill sites outside of the Shire. Based on the above estimates of waste received within the region and taking into consideration the relevant landfill fee, the following landfill avoidance costs were calculated.]

Potential landfill avoided was based on a conservative estimate that an additional 10% of the total tonnage from items listed in Table 3 could be diverted in Year 1, 20% in Year 2, and a maximum of 30% in Year 3 and onwards.

Table 4. Estimated landfill avoidance revenue at all transfer sites

Potential Landfill Avoided (Annually)	Porepunkah	Myrtleford	Mount Beauty	All Sites
10%	\$24,667	\$14,041	\$19,491	\$58,199
20%	\$49,333	\$28,082	\$38,982	\$116,398
30%	\$74,000	\$42,124	\$58,474	\$174,597
50%	\$123,333	\$70,206	\$97,456	\$290,995
100%	\$246,665	\$140,412	\$194,912	\$581,989

In one year, if 10% of the materials collected at the transfer stations could be avoided, the Council could reduce their landfill rate by 300 tonnes and costs by \$60,000.

It should be noted that Council also receives revenue for the recovery and/or salvage of some material, for example, steel and cardboard. The avoided landfill revenue included within the feasibility assessment and discussed within the findings does not consider additional revenue received from recovery activities that Council may be currently undertaking.

6.3.3 Model Findings

Table 1 and Figure 3 provides an overview of the estimated financial returns associated with the two proposed reuse models and provides a breakdown per site.

A total capital investment of \$210,000 is required to establish the site (\$150,000 for shed earthworks and concreting plus \$60,000 for fit-out). In the All Products models (models 1-4) this capital investment is completed upfront in Year 1. The Phased Approach models (models 5-8) this cost is borne over the first three years and slightly front-end loaded to account for initial establishment and pop-up structures (\$84,000, \$74,000 and \$56,000 in Years 1-3). Operational costs are incurred continually across the operational life and offset earnings from the sale of items at the reuse store.

Table 5. Transfer station reuse shop cost models –cumulative net cash flow (including capital, labour, operational costs) for Years 1-5. Costs incurred as positive values. Model pay back occurs when cumulative earnings offset costs in prior years and cumulative net cash flow drops to zero.

Model	Year 1	Year 2	Year 3	Year 4	Year 5
All Products					
1. All Sites – All Products	\$264,463	\$228,228	\$133,793	\$39,359	- \$55,076
2. Porepunkah – All Products	\$82,888	\$60,275	\$12,996	- \$34,282	- \$81,561
3. Myrtleford – All Products	\$93,513	\$92,151	\$76,748	\$61,345	\$45,942
4. Mount Beauty – All Products	\$88,063	\$75,801	\$44,048	\$12,296	- \$19,457
Phased Approach					
5. All Sites – Phased	\$138,821	\$192,164	\$153,730	\$59,295	- \$35,139
6. Porepunkah – Phased	\$44,518	\$55,277	\$26,664	- \$20,614	- \$67,893
7. Myrtleford – Phased	\$48,060	\$72,985	\$76,249	\$60,846	\$45,443
8. Mount Beauty – Phased	\$46,243	\$63,902	\$50,816	\$19,063	- \$12,690

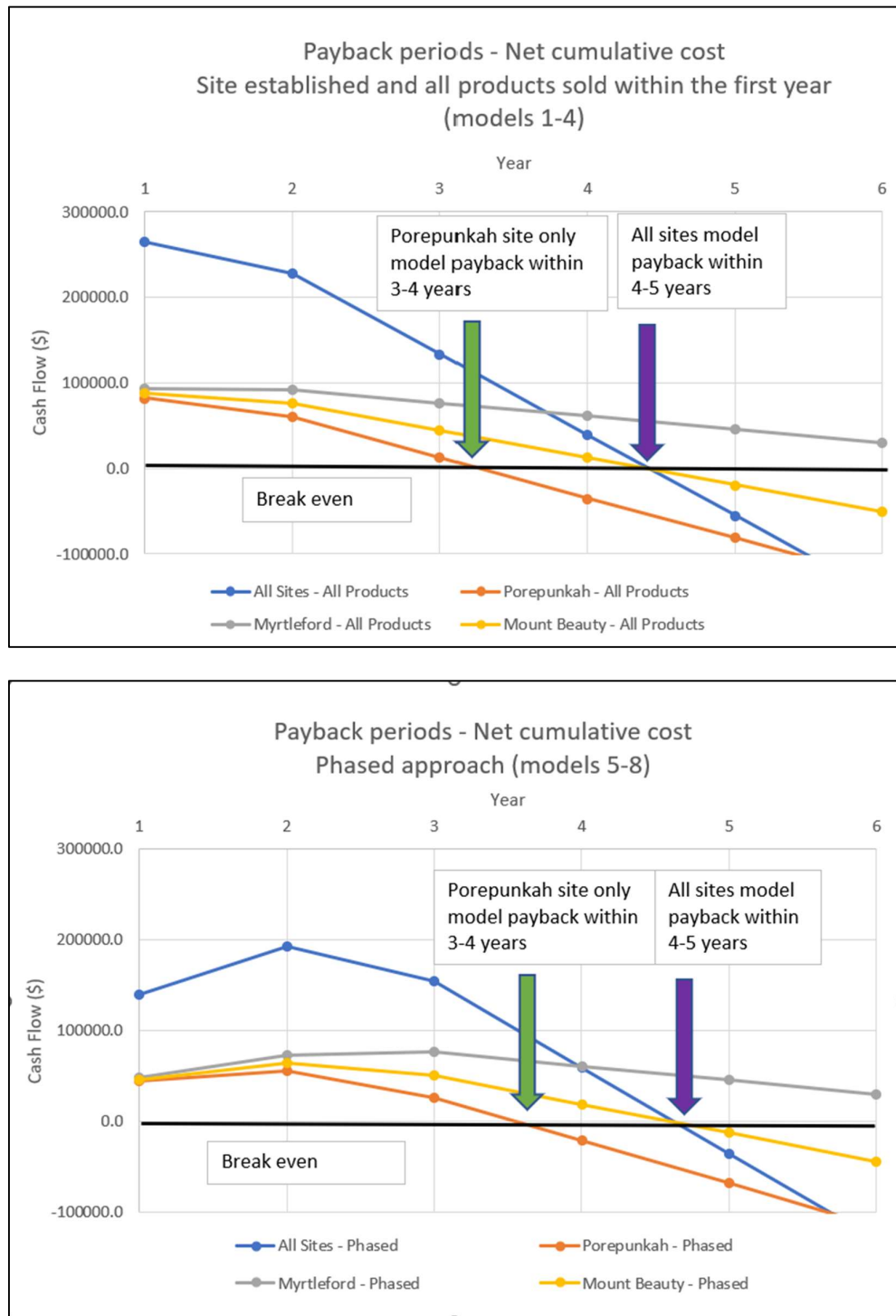


Figure 2. Modelled cumulative costs and payback periods over 6 years, labour, establishment and operational costs included.

The results indicate that the All Products approach (models 1-4) will have a faster pay back than the phased approach.

Under the All Products models, the All Sites model pays back between 4-5 years whereas the Porepunkah site only is anticipated to return net cumulative profit by the second year of operation and pays back between 3-4 years. This is attributed to the highest volume of waste that is received at the Porepunkah site compared to other sites. The Mount Beauty site model pays back between 4-5 years and the Myrtleford site model pays back after more than 6 years.

The Phased approach (models 5-8) provides Council with the option to evenly distribute site establishment costs over the three-year period and reduce initial capital costs. However, in comparison to the All Products approach, it offers a slightly slower and reduced return on investment in the short-term, though the pay back periods are still between 4-5 years (All sites and Mount Beauty site) and 3-4 years (Porepunkah site only). The Myrtleford site model pays back after more than 6 years. The All Sites, Porepunkah and Mount Beauty sites pay back by year three of operation, whilst the Myrtleford site pays back by year four of operation.

6.3.4 Outsourced Model

An outsourced model, which may involve partnering with a social enterprise or an organisation that is adequately qualified to run a reuse shop at a Council transfer station, may have potential additional benefits to Council. Benefits include specialist knowledge and expertise handling and managing landfilled items which may be suitable for reuse. This may have significant benefits for avoided landfill and improve the potential profit that could be returned as part of a reuse shop model.

Based on the expertise of some social enterprises, it is possible that an outsourced model could maximise the volume of material that could be avoided from landfill, carbon emissions avoided and store revenue for Council.

However, this model was not determined to have significantly different set up and implementation costs to models above and therefore was not presented as a standalone model. Costs involved in site establishment would be similar and operational costs would be expected to be similar to the costs involved in Council's labour hire at existing sites.

6.3.5 Unstaffed Model

An unstaffed model was also explored but determined to be of low feasibility. Whilst an unstaffed model could reduce costs for Council by up to \$80,000 per year at all transfer station sites and up to \$27,000 at individual transfer station sites (based on staffing estimates presented in models 1-6), an unstaffed model was deemed to be of low feasibility because:

- potential regulatory and safety issues for the community, as there would be no available staff to test and determine the useability of second-hand items or enforce payment for the donation or purchasing of goods.
- illegal scavenging could occur, without staff members being present, supervising, and enforcing safe and best practice transfer station procedures. This could result in Council being liable for any safety issues or injuries which could occur from unsafe items/materials or dangerous conditions at transfer station sites.
- items are unlikely to be checked for useability, which could result in a reduction of sales.

- the potential for recovery of a significant number of items and therefore benefits from landfill diversion is likely to be much lower than staffed alternatives.

7 Findings and Outcomes

The financial modelling suggests that accepting all appropriate products from the first year of operation and establishing a reuse shop within the first year of operations will have the best financial outcomes for Council.

Porepunkah appears to be the most viable site for a reuse shop as it manages and receives the most waste. It is also possible for Council to establish reuse shops at all three transfer stations, with the opportunity to distribute product between sites.

Although financial outcomes are an important aspect of the feasibility study, Council is investigating the feasibility of reuse shops as part of broader sustainability goals. As such, environmental, social, and regulatory outcomes must be considered by Council when assessing the viability of establishing reuse shops within the local region.

7.1 Environmental Outcomes

Analysis of the Council data suggests that if 10% of waste can be diverted from Alpine Shire Council's transfer stations and repurposed or reused, more than three hundred tonnes of waste could be diverted from landfill and up to 480 tonnes of carbon emissions avoided. If a reuse model could be implemented, it is anticipated that waste diversion would increase and strengthen over time.

In addition, reuse shops play a vital role in educating consumers about reusing and repurposing items, as well as how to appropriately sort and stack their waste for drop off at transfer stations.

The implementation of one or more reuse shops within the Alpine Shire will enhance resource recovery, divert waste from landfill, improve local knowledge of reuse and help Council achieve broader sustainability and circular economy goals.

7.2 Regulatory Considerations

As outlined within the financial model, implementing reuse shops within Council run transfer stations will require additional staff and upskilling of existing staff where relevant.

Specifically, appropriately trained staff may be required to test and tag electrical items that are deemed suitable for reuse. This is a requirement under legal regulations, and failure to follow the specified regulations is deemed a criminal offence. This is an important regulatory aspect for Council to consider and compliance measures should be investigated further.

As per the general council and building requirements in Australia, the establishment of one or more reuse shops will require Council to make updates to existing site documentation and ensure that procedures, such as safety, traffic flows and parking plans incorporate the anticipated activities of a reuse model. This will require investigation of the appropriate planning procedures and consultation with the relevant building and planning entity. There would also need to be consideration that the reuse shops fall within existing Environment Protection Authority Victoria requirements for the transfer stations. For example, whether retail activity creates additional compliance requirements under the General Environmental Duty; and whether handling and storage of materials alters any response under the EPA storage guidelines.

An unstaffed model is likely to pose regulatory and safety risks and is deemed low feasibility.

7.3 Other Considerations

Stakeholder engagement with similar reuse models and social enterprises indicated that successful reuse shops implement specific retail models and awareness strategies in order to maximise shop revenue and profit. Considerations for Council include developing refund policies, storing and recycling of stock and incorporating additional products, such as plants, to increase sales and interest.

There are significant examples of social enterprises and waste management organisations running reuse shops on behalf of councils (see Appendix I Section 9.1). These models appear to be successful, due to the retail knowledge of external organisations and the specific expertise they have with regards to storing practices, identifying reusable items, and educating community members about best practice donation habits. However, it should be considered that external organisations generally implement their own staff when running a reuse shop, and if external organisations were outsourced to run Council's existing sites, this may result in staffing changes.

Some further and ongoing support from Council staff may be required and is not currently accounted for in the cost models, this includes but is not limited to IT support, communication and marketing and accreditations. These costs may vary depending on whether Council considers an externally or Council run model. It is suggested that the financial estimates are re-evaluated once a suitable model is determined by Council.

8 Conclusions and Recommendations

It is likely that the establishment of one or more reuse shops at Council's transfer stations will result in positive environmental and social outcomes for the community, such as avoided waste from landfill, reduction in carbon emissions, increased employment opportunities, reduced cost of living, and improved community awareness of reuse. Although a reuse shop may require some upfront investment for establishment, it is also anticipated that in the long-term a reuse model will provide financial return for Council and reduce overall costs for consumers with regards to disposal charges for reusable items.

When run effectively, the benefits of a reuse shop at a transfer station facility may include:

- Avoided landfill costs for Council
- Additional revenue stream for Council
- Reduced volumes of material going to landfill
- Increased local employment opportunities
- Improved consumer knowledge of reuse and circular economy practices
- Improved consumer access to household and miscellaneous goods
- Achievement of broader Council determined sustainability and waste goals

Based on the findings from initial research, stakeholder engagement and financial analysis, it is recommended that Council explores the following to enhance the implementation of reuse shops at one or more transfer stations:

- Improve the tracking of materials and items received at transfer sites to enhance the reporting of recovered materials and activities. This will help to inform the types of products that Council receives at transfer stations and therefore the range of materials which may be suitable for resale.
- If possible, Council should align the development of one or more reuse shops with existing Council infrastructure to reduce the initial capital costs identified within the financial modelling.
- Given the minimal financial difference between an outsourced and Council run model, it is recommended that Council considers a partner model with an appropriately qualified external organisation who could run reuse facilities to help maximise environmental outcomes and financial return.
- Investigate co-funding models, including but not limited to government funding schemes and external contributions.
- Investigate whether the sale of electrical goods, including time required by appropriately qualified personnel for testing and tagging, should be included (as was modelled), or rather avoided if the reuse shop operated on a 'goods sold as is' basis or excluded electrical items for sale altogether.
- Explore and consider implementing suitable retail techniques within reuse shops, to help increase quality donations, reuse, and overall shop revenue.
- Invest in education and communication strategies to raise community awareness and equip residents to engage with reuse behaviours and improve donation quality.

9 Appendix 1 - Desktop Research

Staff at Councils three transfer stations regularly report visitors sighting items that they would like to take away; however, there is currently no provision within Council to facilitate such a transaction. A unique opportunity in the Alpine Shire context is the inclusion of the opportunity for tourists to donate and acquire items for short term use while on holidays. Currently significant amounts of furniture, skis, snowboards, boots, e-waste, and renovation waste are taken to Councils three transfer stations.

Other regional Victorian councils have tip shops or have recently undergone similar feasibility studies, including through round one of the Recycling Victoria Councils Fund. To avoid duplication, this research project will involve a desktop analysis of existing models with similar contexts to allow evidence-based decisions on the most appropriate model. Combining this analysis with on the ground consultation and investigations at Councils three transfer stations will inform the most effective solutions to implement.

9.1 Research of existing re-use models with similar contexts

9.1.1 Neighbouring and regional councils

Council	Activities
Mansfield Shire	- Mt Buller and Mt Stirling Resort Management is a member of North East Waste and Resource Recovery Group - Encourage the donation of damaged, old and unwanted snow sports equipment such as skis, ski poles, snowboards, plastic toboggans, snow sport boots, visors, and helmets at a dedicated collection bin located at the village bus depot Game On Recycling is a pilot program that aims to create a national recycling scheme for sports equipment. - Snow sports equipment can also be taken to the Boggy Corner Waste Transfer Station
City of Wodonga	- The re-use shop is open at the Resource Recovery Centre and is run by Aware Programs - Aware's team includes local people with disabilities, some long-term job seekers and people who are retraining for new careers. The shop gives new life to many items which are dropped off at the recycling centre.
City of Melton	- The Resale Shop is located at the Melton Recycling Facility (MRF) and features a dedicated drop-off zone, a large area indoors to accommodate furniture, and a sheltered outdoor section for materials such as timber, doors, metal, plumbing supplies, bricks and tiles. - Items include; Indoor and outdoor furniture, electrical/electronic goods including working flat-screen digital TVs and working computers, bicycles and foot scooters, building products such as de-nailed timber, doors, metal, bricks, tiles and plumbing fixtures, toys, prams and cots, books, vinyl records, CD music, commercial VHS and DVD movies, clothing, shoes, handbags, kitchenware; crockery and appliances, gardening goods including tools and working

	lawnmowers, pet carriers and kennels, leisure goods such as golf clubs, other resaleable household items, craft materials etc
Thredbo Waste Management Procedure	- Damaged skis, snowboards, boots, and poles are all included under hard waste. These can be generated by the Retail department or individuals. - Pick-up by Environmental Services. Steel ski poles can be included in ferrous metal recycling. At present skis and snowboards are unable to be recycled. - These items are transferred to Jindabyne Regional Waste Management Facility.

9.1.2 Councils that received Sustainability Victoria funding

See list of councils that also received SV funding for similar projects

Name	Funding	Details
Bayside City Council	\$20,000	Undertaking research into the feasibility of establishing a repair and re-use centre.
City of Greater Geelong	\$80,000	Creating a business case for a regional waste, resource recovery and reuse hub in the Geelong region.
Corangamite Shire Council	\$20,000	Delivering a cost-benefit and location analysis in establishing a reuse-and-repair centre.
Strathbogie Shire Council	\$10,000	Establishing a business case for a regional resale shop.
Yarra City Council	\$20,000	Delivering a business case for a potential 'Yarra's Circular Centre' where hard rubbish can be reused, repaired and repurposed.
Alpine Shire Council	\$20,000	Investigating the feasibility of establishing a reuse shop (upcycle or reuse) at any or all of the three existing transfer stations.
City of Whittlesea	\$20,000	Assessing the most suitable location for a resale shop(s), the operating options, costs and associated risks.
Moorabool Shire Council	\$20,00	Evaluating the sites, management scenarios, markets for sourcing and selling material, as well as the cost and benefits of introducing a resale shop.

9.2 Price of reusable goods being sold at similar facilities

'Resale Shops are facilities that intercept and divert reusable and saleable materials that are otherwise destined for landfill' (Sustainability Victoria).

Item	Sale Price
Timber off cuts	\$5.00 per lineal metre
Television (flat screen, various sizes)	\$25.00
CD's and DVD's	\$1.00

Glassware	\$0.50 each
Pots and pans	\$2.00 to \$5.00
Metal bath	\$10.00 to \$50.00
Lawn mower (has compression)	\$15.00
Metal tin sheets	\$8.00 per sheet
Push bike (mountain)	\$15.00 to \$30.00
Scrap steel (various sizes and lengths)	\$5.00 to \$50.00
Garden tools	\$5.00
Toaster (working)	\$5.00

Table 1 from Strathbogie Shire Feasibility Study showing examples of pricing

9.3 Existing Alpine Shire Council strategies

- Waste, circular economy, sustainability
- Local economy, employment, social strategy

A re-use facility will help to fulfil broader sustainability and local economy goals as detailed in their strategic planning.



9.4 Seasonal activities and locations within the Council

Activity	Season(s)	Item(s)
Skiing/snowboarding	Winter	Ski gear, tyre/snow chains, snowboards, helmets, boots
Tobogganing	Winter	Toboggans, ski gear
General and Mountain Biking	Spring, Summer, Autumn	Bikes, mountain bikes, biking gear

Hiking	Spring, Summer, Autumn	Backpacks, boots, tents, portable stoves, sleeping bags, miscellaneous clothing items
Paragliding	Spring, Summer, Autumn	Paragliders, helmets, harnesses
Canoeing	Spring, Summer, Autumn	Canoes

Figure 1 - All Resorts Winter and Summer Visitation (Past 10 years)

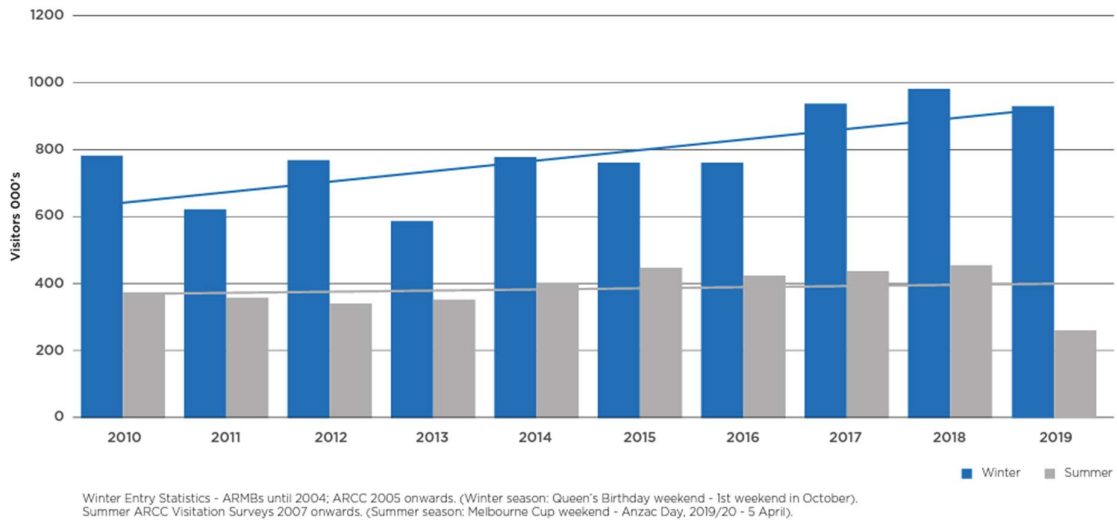


Figure 1. Alpine Shire seasonal visitor data (Source: Alpine Shire Council)

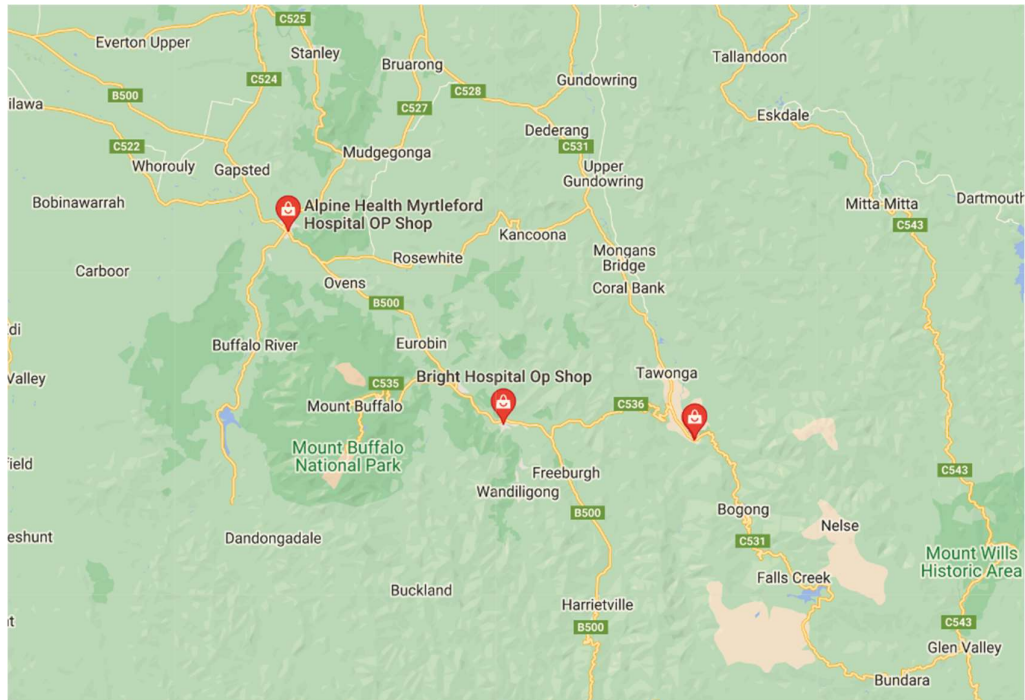


Figure 2. Popular Op Shop Locations within Alpine Shire Council

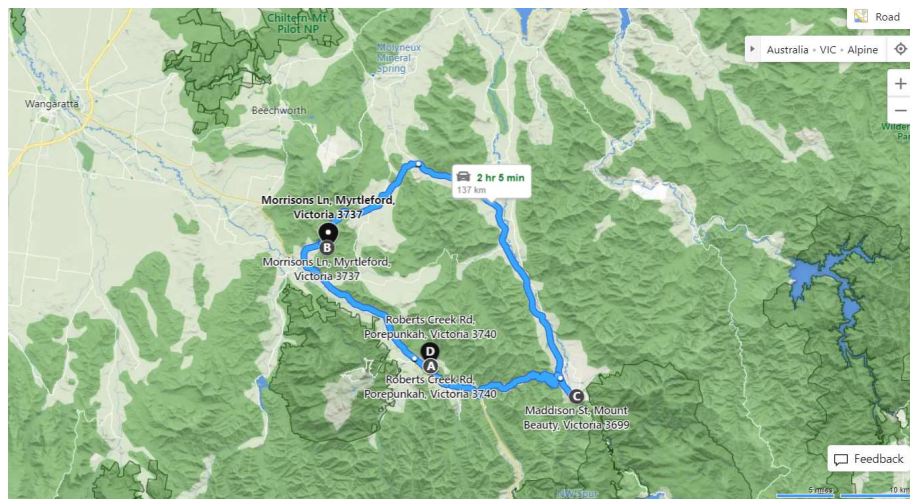


Figure 3. Location of Transfer Stations and Proximity to Towns within Alpine Shire Council

9.5 Market research

9.5.1 Strathbogie Council: Resale shop Feasibility Study

- 90.91% of respondents within the Strathbogie Shire expressed either 'very likely' or 'extremely likely' to support the council opening a Resale Shop at Transfer Station.
- The feasibility study has evaluated the potential sites, management scenarios and markets for sourcing and selling material, as well as the costs and benefits of introducing a Resale Shop
- This feasibility study sought to identify the current local social, economic and environmental conditions, focussing on operational indicators such as;
 - Amount of material sold (number of items per category or mass in volume or weight)
 - Amount of waste diverted from landfill (volume or weight)
 - Number of persons purchasing material / number of sales from the resale shop(s)
 - Amount of income generated
 - Associated running costs at our RRC's when running a Resale Shop
 - Site management models

Potential management models

1. Run by an independent not-for-profit organisation on behalf of Council
2. Council-run and operated
3. Leased to a private enterprise

Drop 'n' Shop Reuse Centre

- The Drop'n'Shop is located at the entrance to the Armadale Landfill and Recycling Facility, 145 Hopkinson Road, Hilbert
- Furniture, Kitchenware, Garden items, Bric-a-brac, Building materials, Equipment, Tools, Bikes, Toys, Books, Clothing

Monash Reuse Centre

- A large variety of second hand office furniture is available for sale at the Reuse Centre. Can drop products at the Waste Transfer Station for resale at the ReUse Market

Mount Gambier ReUse Market

- The Mount Gambier ReUse Market, located at 3 Eucalypt Drive, aims to reduce landfill by reusing and upcycling useful items and is a place where you can get anything and everything second hand - building materials, bikes, sports gear, garden equipment, spare parts, bric-a-brac, furniture etc.
- The Waste Transfer Station is an important link to our community's total waste management system.

9.6 Further examples of resale shops

Anglesea Transfer Station (community managed)

Bairnsdale Tip Shop (community managed)

Creswick Recycle Shop (not-for-profit managed)

Darebin Resource Recovery Centre's (RRC)

Outlook Market (privately managed)
Daylesford tip shop (council managed)
Drysedale RRC (council managed)
Eaglehawk Recycle Shop (community managed)
Geelong Recycling Shop (privately managed)
Goornong RRC (council managed)
Hamilton Recycle Shop (not-for-profit managed)
Horsham Transfer Station (council managed)
Knox Transfer Station Recycled Goods Shop (privately managed)
Lakes Entrance Landfill (council managed)
Mildura Landfill (not-for-profit managed)
Mount Scobie Transfer Station (council managed)
Mornington Outlook Environmental Recycled Goods Shop (privately managed)
Shepparton RRC (council managed), Stawell (council managed)
Strathfieldsaye RRC (council managed)
Sunbury Tip Shop (council managed)
Swan Hill – The Big Green Shed (council managed)
Trentham (council managed)
Wallan Landfill (council managed)
Wangaratta (privately managed)
Wodonga (not-for-profit managed)
Brinkley ReUse Centre

9.7 Alpine Shire Population distribution and demographics

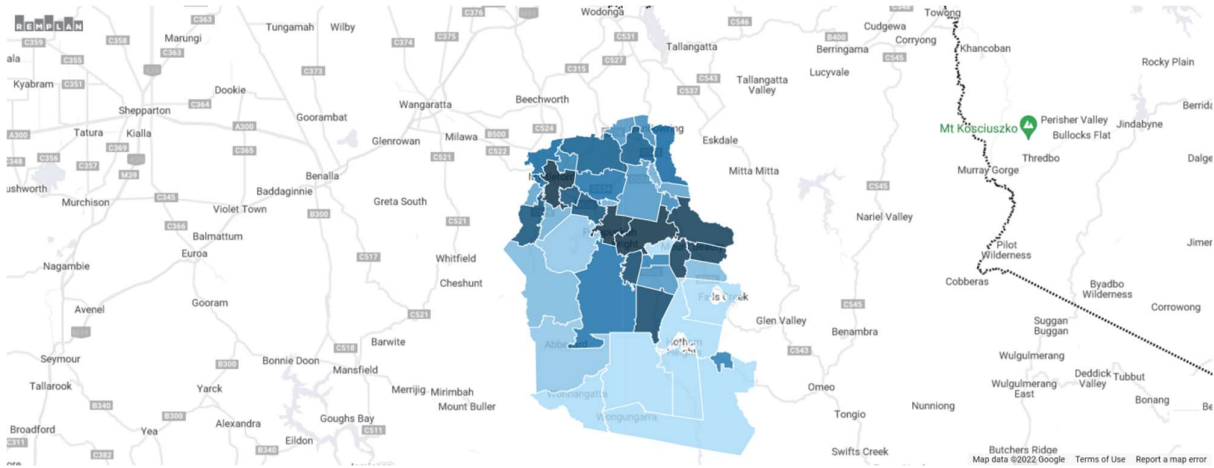


Figure 4. Distribution of population within Alpine Shire Council (source: ABS Census Data 2022)

Alpine

Age



Benchmarks: None

Figure 5. Population and community demographic data (source: ABS Census Data 2022)

9.8 Stakeholder engagement

Key contacts

Council staff

- Knowledge of products, processes, and customer base

- Attitudes towards facilitating re-use
- Additional information about community
- Workshop will be used to engage with group – to be facilitated by Equilibrium

Business partners and chambers of commerce

- Interest in partnership, supporting and existing activities occurring
- Whether it is anticipated that a re-use facility will cause disruption to services provided to residents and tourists/visitors
- Maintain open communication with partners, and provide opportunities to give feedback

Social enterprises, charities and environment/sustainability groups

- Interest and ability to participate in re-use activities
- Existing activities which may be able to be leveraged
- Identify items that are in high demand, or items that residents may be interested in purchasing second hand
- This group should be targeted with a survey or targeted engagement

Repair cafes

- Understand activities and opportunities for coordination
- No specific stakeholder engagement required as there is only one repair café to service the region. Facilitate opportunity to receive feedback, time for a general call/chat

Community partners

- Community attitudes towards re-use shop
- Potential stakeholder conflict with existing op shops
- Identify whether there is interest in council, community-run or hybrid model
- This group should be targeted with a survey or targeted engagement. Some high level questions could include:
 - What items would you prefer to purchase from a resale shop?
 - What items would you consider purchasing from a resale shop?
 - What items would you not consider purchasing from a resale shop?
 - Where would you like to see the profits go?
 - Desktop review of posts on 'Buy/Swap/Sell/Recycle' Facebook pages

Government agencies

- Potentially a key stakeholder for further funding
- Group does not need to be engaged at this stage

Tourists and holiday accommodation providers

- May help to identify products that specific groups would be willing or would consider purchasing
- The relevance of seasonal variations and whether specific products are in greater demand in Winter versus Summer (snowsports equipment versus watersports gear)
- Not a priority stakeholder group at this stage
- Some high-level questions could include:

- What items would you consider purchasing from a resale shop?
- What items would you not consider purchasing from a resale shop?
- Would you consider hiring items for the duration of your stay? If so, which items would you consider hiring.
- Would you consider travelling to a reuse shop prior to your checking into your accommodation / during your trip?

10 Appendix 2 – Questionnaires

10.1 Community partners

Question	Answer / Supporting Evidence
What items do you currently receive?	
Do you ever receive too many items?	
Do you receive useable items that you are unable to sell? If so, please specify which items	
Would it benefit your store or organisation if Council also received donations from residents? If so, please specify which items	
Do you have any other thoughts about Council run reuse shops within the local area?	

10.2 Local community members

Question	Answer / Supporting Evidence
Would you be willing to travel to your local transfer station to purchase secondhand goods? (Including but not limited to furniture, building materials, bricks etc.)	
If yes – which transfer site would you visit? (a) Porenpunkah (b) Mount Beauty (c) Myrtleford (d) All of the above	
What items would you consider purchasing from a resale shop?	
What items would you prefer to purchase from a resale shop?	

What items would you not consider purchasing from a resale shop?	
What items would you consider donating to a Council run reuse shop?	
Are there any items that you wouldn't consider donating to a Council run reuse shop?	
Where would you like to see the profits of a reuse shop(s) go?	
What do you think are the benefits of having a reuse shop within the community?	
Do you think there are any barriers to implementing a reuse shop within the community?	

10.3 Visitors/tourists

Question	Answer / Supporting Evidence
Would you consider hiring items for the duration of your stay? If so, which items would you consider hiring	
Would you consider travelling to a reuse shop prior to your checking into your accommodation or during your trip?	
If yes – which transfer site would you visit? (a) Porenpunkah (b) Mount Beauty (c) Myrtleford All of the above	
What items would you consider purchasing from a resale shop?	

What items would you prefer to purchase from a resale shop?	
What items would you not consider purchasing from a resale shop?	