Recycling in Jamestown: What's the Problem?
Symonds, J. 1998

Abstract

Jamestown, in the Mid-North of the state, has recently changed its methods of waste disposal. The Jamestown Dump, located nearby, has come under new ownership and has become the Jamestown Recycling Centre. To take their recyclables there, the community must pay a fee. Due to this fee, people are reluctant to recycle. This report will look into the various methods of waste disposal in the town and how fees affect people’s recycling habits.

Key words: Recycling, Waste Disposal, Landfill, Jamestown

The Story So Far…

Jamestown, ‘the Centre of the Mid North,’ is a country town located approximately 200 kilometres north of Adelaide, as shown by figure 1. The town has a population of around 1400 people, but counting surrounding areas, this figure is approximately 2300 (Roberts 1998, pers. comm., 14 Sept). Jamestown is reliant on agriculture, its main industries being wheat and wool.

Figure 1: South Australia’s Mid North
The Jamestown Dump has recently come under new ownership and is now known as the Jamestown Recycling Centre. The Jamestown District Council previously administered the Dump (Glistak, 1989), located approximately five kilometres west of the town (Fig 1), and all rubbish was taken there for free. Now owned by Gregory’s Transport and Recycling, of Kadina, the Centre takes recyclables from Jamestown and surrounding areas. To do this people are charged a fee – a smaller cost if recyclables are sorted. Unfortunately, this cost deters people from recycling and sorting their rubbish, and the present system of rubbish collection set up by the recently amalgamated Northern Areas District Council collects household rubbish with no attached fee. People therefore have no incentive to recycle.

Aims

The original aim of this report was to study the effects of the Recycling Centre’s fees on Jamestown’s rubbish disposal. It is now based on the management of waste in Jamestown, recycling in particular, but the above aim will still be an important issue. The report will outline the current methods of recycling and waste disposal in the town, and aims to determine whether or not recycling plays an important role in the community. Is recycling operating efficiently in Jamestown? Why, or why not? The report will look at the problems associated with recycling in Jamestown and also suggest some options for a better recycling system in the town.


Waste Disposal

Rubbish

Australia produces ten million tonnes of domestic waste per year (Charles, 1991). Household waste makes up more than one third of landfill in Australia (Healey, 1996). Our waste has in the past been, and still is, disposed of by dumping. Rubbish tips have been set aside and developed to cope with it, but now are filling up quite rapidly. Hence, waste management has needed to be implemented. Councils must look at reducing the waste that goes into landfill, as space for rubbish tips is fast running out and people are often opposed to new sites.

Recycling

Aplin (1998) refers to recycling as a ‘way of reducing resource use and reducing the volume of wastes’ we produce, and the idea of rubbish tips as a resource is strongly encouraged. Recycling not only makes environmental sense, it is economically sensible, saves resources and is energy efficient; for example, it takes 95 percent less energy to recycle an aluminium can than it does to make a new one (Charles, 1991).

Recycling is fast becoming an important part of our lifestyle. Thirty-five percent each of glass and waste paper is recycled nationally, and over 90 percent of Australian municipalities offer some kind of recycling collection (Healey, 1996). There is obvious room for improvement, however. Recycling systems in major cities seem to be more advanced than in rural areas. This is perhaps due to the greater population, the lack of landfill space from such a large amount of rubbish and the pressure to reduce waste from the general public. Urban areas also have the infrastructure, the money and greater initiative to set up such schemes. In country areas, the number of people is substantially less and there is available land for waste disposal, so landfill is the easiest way to do this.

Options For Waste Disposal In Jamestown

Figure 2: Representational diagram showing waste disposal options for Jamestown
Introduction

Figure 2 is a basic flow chart outlining the possible methods of waste disposal in Jamestown. There is firstly the choice of whether to recycle or not recycle the rubbish. All the options regarding non-recycling are cost free, and there is minimal effort in waste disposal. Three of the four possible outcomes requiring recycling waste incur no fees, yet impose the initial time and effort of sorting. All require the transportation of waste to the various outlets. The Collection Depot gives a deposit on certain recyclable materials, yet to take the waste to the Recycling Centre imposes a cost. It all comes down to a matter of personal choice. Each option will be further discussed in the following section.

Northern Areas District Council – kerbside collection

The following information was derived from interviews with Mr. Frank Roberts, the Waste Management Officer for the Council (14 Sept, 1998), and with both Mr. Roberts and Mr. Alan Thomson, Environmental Health Officer (23 Sept, 1998). Mr. Roberts has been the instigator of one of the largest projects the Council has ever undertaken - to set up a better kerbside rubbish collection in Jamestown and surrounding areas. The total investment for the project was around $5,000 (Roberts 1998, pers. comm., 14 Sept). Previously, the residents of Jamestown put their rubbish into garbage bags and it was privately collected fortnightly in a trailer. The rubbish was then taken to the Jamestown Dump. This proved to be an outdated and inefficient method of waste collection which had many problems, such as easy access for animals to rip open the bags.

In June of this year, a new system was established in the town through the use of green wheelie bins (plate 1). Together with neighbouring towns Peterborough and Orroroo (Fig 1), combined to form Northern Waste Management, 3000 bins were purchased and sold to ratepayers (1200 in Jamestown), at a price of $45 (Roberts 1998, pers. comm., 14 Sept). With the use of a compactus truck, the rubbish is now collected weekly, compacted, and taken to the Spalding Dump, located approximately
five kilometres east of the town (Fig 1). Rubbish is dumped into pits approximately ten feet deep, levelled, compacted, covered with a layer of dirt and compacted again.

The system also operates in surrounding towns, such as Laura and Gladstone (Fig 1), on different days of the week (Roberts 1998, pers. comm., 14 Sept). Previously, each town had its own privately operated tip, but now all the rubbish goes to the Spalding Dump. Each tip does still operate for community use, with some contractors operating small recycling systems (Roberts & Thomson 1998, pers. comm., 23 Sept). The amalgamation of the Jamestown, Rocky River and Spalding District Councils in May 1997 (Roberts & Thomson 1998, pers. comm., 23 Sept), forming the Northern Areas District Council, has meant that such projects can be carried out and the area is much stronger as a whole. It has also meant that smaller towns such as Georgetown, Gulnare and Yacka (Fig 1) now have their own rubbish tips and are serviced by this pickup.

Plate 1: Kerbside rubbish collection

The kerbside collection system has become very successful, with good community acceptance and noticeable improvement and development. It will be reviewed every six months. The Council also provides other waste disposal options (Roberts & Thomson 1998, pers. comm., 23 Sept) such as a chemical drum disposal site at the Jamestown Recycling Centre, with an annual contract to collect them. Once a year, a free pickup of anything that can’t be put in the wheelie bins is organised.

Jamestown Recycling Centre - Gregory’s Transport and Recycling
Gregory’s took over the Jamestown Dump in May 1997 (Prout, J. 1998, pers. comm., 14 Sept), and converted it to a Recycling Centre. The company, based in Kadina, services surrounding towns, as far north as Jamestown and as far south as Warooka. Residents are charged a fee to take their recyclables to the Recycling Centre. Sorted recyclables are charged less than unsorted (these are then sorted in situ); the larger the load, the more expensive the cost to deposit them. A list of recyclable materials that the Centre takes, and the prices charged, is distributed to the Jamestown community (Fig 3). Although the fees may deter people from ‘doing the right thing,’ they are necessary for the company’s operation, according to Mr. Prout (1998, pers. comm., 14 Sept) who reported that costs, such as transporting, wages for the driver and wages for the workers at the Centre, were covered by these fees. The Centre operates independently from the Council, so it is up to the residents to take their recyclables to the Centre.
Jamestown Recycling Centre
managed by
Gregory's
TRANSPORT and RECYCLING
KADINA S.A. 5554  Depot: (08) 8821 4188
Situated on the northern side of Calliope Road, 6.5 km west of Jamestown

~ Recyclable Materials ~

Scrap Steel
Includes...
# CAR BODIES
# WHITE GOODS (refrigerators, etc)
# TIN CANS (washed, flattened and kept separate from other items)
# SCRAP IRON (or anything a magnet will stick too!)
# STEEL WIRE (must be rolled into bundles or flattened, and kept separate from other steel items)

Paper, Cardboard & Magazines
# PAPER (tied into bundles or placed into boxes)
# CARDBOARD (must be flattened)
# MAGAZINES (bundled or placed into boxes)

Milk Cartons
# MILK and FRUIT JUICE cartons (to be washed and flattened)
# Plastic MILK BOTTLES (to be washed and flattened). Lids to be removed

Glass
# All GLASS (except Plate Glass and Ceramics). Preferred not crushed.

No contaminated glass!

Deposit Items
# ALUMINIUM CANS
# BEER BOTTLES
# COOL DRINK BOTTLES

NO PAYMENT ON THESE ITEMS

Deposit items can be crushed in at JAMESTOWN CONTAINER COLLECTION DEPOT:
TM AND VM Box - Boundary Road, Jamestown
Monday 9-12 noon; Thursday 9-12 noon, 1-5 p.m.;
Saturday 9 a.m. - 1 p.m. Closed Public Holidays

Chemical Drums
# PLASTIC and STEEL DRUMS will be recycled as long as they are punctured, triple rinsed and flattened. If not, they will be refused or an additional charge added.

Jamestown Recycling Centre
Recyclable Materials

Tyre Fees
- Passenger, M/Cycle, Mower - $2.00
- L/Truck, Bobcat, Forklift - $3.50
- Truck, 825x16 and above - $8.00
- Super Single - $15.00
- Small Tractor - $40.00
- Large Truck - $50.00

Rims must be removed from all tyres.

Timber
- All timber items (e.g. pallets, off-cuts, etc.) are to be kept separate, and placed in provided bays.

Garden Waste
- All GREEN WASTE to be placed in provided bay.
- NO OTHER REFUSE TO BE MIXED WITH GARDEN WASTE.

Oil
- 205 litre drums will be provided at the centre for waste oil. Small quantities can be placed into provided drums. A surcharge of 15 cents per litre.

Others
- Any re-sellable, unwanted items can be dropped off at the centre (these items may be sold on-site).

Items Not Accepted
- ASBESTOS
- DEAD ANIMALS and OFFAL
- CHEMICALS
- GAS BOTTLES

Recycle and Rubbish Fees

<table>
<thead>
<tr>
<th>Description</th>
<th>Sorted</th>
<th>Unsorted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car/Boot Load</td>
<td>$2.00</td>
<td>$4.00</td>
</tr>
<tr>
<td>6’x4’ Trailer/Ute/Panel Van Load</td>
<td>$3.00</td>
<td>$6.00</td>
</tr>
<tr>
<td>6’x4’ Trailer with Hurdle/Tandem Trailer</td>
<td>$5.00</td>
<td>$10.00</td>
</tr>
<tr>
<td>Truck 3T - 8T</td>
<td>$10.00</td>
<td>$20.00</td>
</tr>
<tr>
<td>Truck 8T and over</td>
<td>$20.00</td>
<td>$40.00</td>
</tr>
<tr>
<td>Car Bodies</td>
<td>$10.00</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Ticket Receipts will be issued to all customers. Please ensure you receive one!

Trading Hours
- Saturday 7-11 a.m.
- Sunday 9 a.m. - 4 p.m.
- Monday 9 a.m. - Noon
- Thursday 8 a.m. - Noon

Closed on days on total fire-ban, or due to special circumstances (i.e. weather)
Recycling Processes

The following information is an outline of the volume of recyclables received each year, how they are sorted at the Recycling Centre, and how and where they are recycled. It will hopefully give a general portrayal of the Centre’s operations.

- Paper, Cardboard, Magazines - approx. 350-400 bales received per year;
  - Taken to Gregory’s Transport and Recycling in Kadina; wool bales are compressed in a HydraPac Baling Machine, forming blocks. Three to four bales make one block;
  - The blocks were sent via road transport to Melbourne for recycling by Australian Paper, at the Moorwell mill, approx. 150 kilometres east of the city, until just recently. They are now sent to Australian Paper in Adelaide. Gregory’s receive less money, but save pressing time and manpower, as well as transporting costs;

- Cartons - 20-30 bales each of plastic and HDPE (milk & fruit juice) cartons received each year;
  - Cartons are also taken back to Kadina and pressed to form blocks;
  - The blocks are transported to Statewide Recycling in Adelaide;

- Scrap Steel - approx. 44 tons of scrap steel is taken out of the Centre each year;
  - Mainly consists of light steel such as whitegoods, iron, wire, drums etc;
  - Steel is taken to Adelaide for recycling at Simsmetal;

- Organic Waste
  - This becomes landfill at the Centre;

- Makes up a large percentage of the waste going to the Centre, as shown by Table 1:

<table>
<thead>
<tr>
<th>Table 1: Organic and Other Waste – Number of Loads to the Jamestown Recycling Centre, July 1997-98</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Car/Boot</strong></td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td><strong>Organic Waste</strong></td>
</tr>
<tr>
<td>July 1997</td>
</tr>
</tbody>
</table>
Any unrecyclable rubbish is dumped at the Centre (Prout, J. 1998, pers. comm., 14 Sept). Gregory’s also have an agreement with Mr. T. Box, who runs a collection depot for all deposit items in Jamestown. No payment is given on these items if they are taken to the Centre.

**Jamestown Container and Collection Depot - TM & VM Box**

Mr. Box runs the Depot, located on Boundary Road, for the community to dispose of their deposit items such as aluminium cans and drink bottles. The deposit is given and the items are then taken to Adelaide. The proprietor was however unable to be contacted for further information regarding the operations of the Depot.

**Country Fire Service – Brian Thomas**

The Jamestown CFS collects glass, which can be deposited at the actual Fire Station or at Brian Thomas’ property on South Terrace. An interview was carried out with Mr. Thomas, the operator of the glass recycling scheme (22 September, 1998). He takes glass of all colours, which is separately stored in forty-four gallon drums. When one is full, it is loaded onto a forklift and tipped into a glass crusher, a device that Mr. Thomas made himself (see below).
Plate 2: Mr. Brian Thomas’ glass crusher

The crushed glass falls into a large metal container, which holds about twelve drums; the process takes around 15 seconds. Approximately twenty tonnes of crushed glass is received each year. It is transported to ACI Glass Recyclers in Adelaide, and is worth $85 per tonne. In addition, the CFS does a free town glass pickup 3-4 times per year (Thomas, 1998, pers. comm., 22 Sept). Car and truck batteries are also stored on Mr. Thomas’ property, and are sold to the buyer with the best price.

Community Response

Waste Disposal Survey

To determine the recycling and waste disposal habits of the Jamestown Community, a survey was carried out (Appendix 1). The original aim of the survey was to find out what effects the new Recycling Centre has on people’s rubbish disposal. One hundred copies of the survey were distributed, along with 130 to families through the Jamestown High School newsletter. Sixty-five were returned (around 28 per cent) and the following results were determined (some of the questions could have had more than one answer):

- 52 per cent of households put all their rubbish out in wheelie bins for the kerbside pickup;
- 6 per cent take all their rubbish to the Recycling Centre;
- 15 per cent dispose of their rubbish both in the kerbside pickup and to the Recycling Centre;
- 11 per cent dispose of theirs both to the Recycling Centre and by other means;
- 65 per cent of households sort their rubbish;
• Plastic bottles are the most highly sorted overall (47.7 per cent), followed by organic waste (46.2 per cent), newspaper (41.5 per cent), and tin cans (38.5 per cent);
• 35 per cent don’t sort their rubbish – of those, 34.8 per cent answered it is too time consuming, 21.4 per cent don’t sort it because the kerbside pickup doesn’t cater for recyclables, and 17.4 per cent don’t want to pay the Centre’s fees;
• 5 answered that they dump their rubbish on their own land (backyard or paddock);
• 63 per cent responded that the Centre’s dumping fees influence their rubbish disposal;
• Of those, 56 per cent responded to the fees by putting all of their rubbish out for kerbside collection; 17 per cent take only their recyclables to the Centre; 9.8 per cent each take their rubbish to other, free recycling centres or go less frequently; and 22 per cent take their rubbish to the Centre reluctantly!
• An overwhelming 74 per cent answered that they would take their recyclables to the Centre if the fees were withdrawn;
• 95 per cent believe recycling is important.

A number of issues also emerged from the last question, where people were free to write whether they believed recycling was important. The major issue was that of the cost to ‘do the right thing.’ People believed it was unfair that they should be penalised for sorting their rubbish. The kerbside collection system seems to discourage recycling, as it is much easier to put all the rubbish into the bin – and it doesn’t cost anything. Some believed that there is no incentive to recycle. If a separate pickup of recyclables was implemented, or recyclables were collected with the kerbside collection (e.g. using split bins), they would be more likely to sort their rubbish. Some answered that it was inconvenient to take their recyclables to the Centre, especially if they lived some distance away. Many farming families used to take their recyclables to the Caltowie (Fig 1) Primary School, which had a very efficient recycling system through community participation, but the school has recently been closed down and the system is now out of operation.

The Verdict…?

With the implementation of the new kerbside collection scheme, Jamestown now has a good waste disposal system. Although it has the facilities to also have an excellent recycling scheme, this is not the case. Firstly, the wheelie bins discourage people from recycling, as it is so much easier to just put all their rubbish in the one bin. Unfortunately, the Jamestown Recycling Centre provides no incentive for people to recycle and has only a limited effect on people’s waste disposal habits. People are penalised for sorting their rubbish and taking it to be recycled. Therefore they just won’t do it. Although the fees may be necessary for the Centre’s operation, they hinder its cause. The fact that people must travel to get to the Centre also deters them (although this cannot be helped and the location has been used for dumping for years).

The CFS and Collection Depot are good ways to dispose of recyclables, in particular deposit items; people will want to recycle, as doing so rewards them. These services
are also cost free. Such services should be more greatly publicised, implemented and used.

When planning the kerbside scheme, perhaps the Council could have looked further into the future, when recycling will be the major process in waste disposal. The implementation of split bins, instead of wheelee bins, would have been an excellent alternative. People would be encouraged to recycle - it is just as easy as putting recyclables in one side and non-recyclables in the other – and it is free. The option now is viewed as "not cost effective" (Roberts 1998, pers.comm., 14 Sept), but could easily have been paid for previously, if installed instead of the current system. In the future, residents may have to purchase split bins, or another type of disposal system - that incorporates recycling - may have to be implemented, an event that would incur an unnecessary cost.

In implementing this however, the Council would have to reach an agreement with Gregory’s, as the company relies on the money people pay to deposit their recyclables. The two could work together, the Council giving recyclables to the Centre after each kerbside collection. The financial issue from Gregory’s point of view would present a problem, however. Perhaps a system could be set up where recyclables are collected separately from the rest of the waste, placed in boxes or special bags for collection.

Householders can certainly contribute more to recycling and the scheme presently operating in Jamestown. People can reduce their waste at home, by reusing some items and composting their garden waste. Table 1 shows that it is a major component of waste that goes to the Recycling Centre; Charles (1991) reports that almost 34 per cent of our garbage is garden waste. If that is composted at home, it need not cost money to dispose of. The actual acceptance of a recycling or waste disposal cost could also make a difference.

Jamestown has its problems concerning waste disposal and recycling, just like anywhere else. But it is encouraging to see initiative in these areas, through the various schemes and processes that operate in the town that have been previously mentioned. People are beginning to realise that recycling and waste management are very important issues, issues that will come to the fore in the very near future.

References


Glistak, J.P. 1989, Welcome to Jamestown – Centre of the Northern Highlands, Jamestown High School.
Appendix 1

Community Survey: the Jamestown Recycling Centre

My name is Jacqui Symonds and as part of my Environmental Management course at Flinders University, I am required to complete a report on an environmental issue. I have chosen to research the effects that the Recycling Centre has on Jamestown and its environment, and would appreciate it if you could answer the following questions.

1. What do you do with your rubbish?
   - Put it out for weekly pickup
   - Take it to the Recycling Centre
   - Dump it somewhere other than the Recycling Centre (go to 5)
   - Burn it (go to 6)
   - Other

   .......................................................................................................................................................

2. Do you sort your rubbish?
   - Yes
   - No (go to 4)

3. Which of the following do you sort?
   - Plastic bottles, containers etc
   - Milk and Juice Cartons
   - Paper
   - Newspaper
   - Tin Cans
   - Organic Waste
4. Why not?

- Too time consuming
- Can’t be bothered
- Waste of time
- Not important
- Don’t believe it can be recycled
- Other

Go to 6.

5. Where do you dump your rubbish?

- Paddock
- gully/creek bed
- old blast site/mine
- ruin
- other
- Backyard
- Roadside
- Other

Go to 6.

6. Do the Recycling Centre’s dumping fees influence your rubbish disposal?

- Yes
- No (go to 8)

7. How do these fees influence this disposal?

- I don’t sort it and it goes in the weekly rubbish pickup
- Dispose by own means
- Take to another dump
- Take to other, cost-free recycling centres
- Only take recyclables there
- Do so reluctantly
- Budget accordingly
- Other
8. If the fees were withdrawn, would you take your recyclables to the Centre?
   ❑ Yes ❑ No

9. Do you believe recycling is important?
   ❑ Yes ❑ No

10. Why/Why not?

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Thank you for taking the time to complete this survey.

Please return to: Margie Symonds (PO Box 94) or to Jamestown High School, by the 16th of September.