

Waste Education Facilities Evaluation: LAWMAC Kerby Project



“Kerby is a Champion?”

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Waste Education Facilities Evaluation: LAWMAC Kerby Project ***“Kerby is a Champion?”***

Evaluation Headlines

Evaluating Kerby has been a challenge. There is so much good about the program and yet it has not even gone part of the way to reaching its potential. It is as though there has been so much energy expended on obtaining and managing the infrastructure that effective implementation of an education program has been somewhat overlooked.

There are no teaching learning materials for school use, no curriculum linkages, no evaluation procedures, limited reporting mechanisms, limited community materials, and limited guidance for staff about how to use Kerby best locally.

There is a fantastic educational presence in the bus itself. It has become an icon in the north. It has generated an extensive array of free media that is conservatively estimated to be worth in the order of \$1.0 mil in free press since the time of its launch. When compared against the up front cost of purchase and the ongoing maintenance of the vehicle, this is significant. A less iconic approach would not have achieved this result. But it should be noted that there is little information about whether all this media and its public presence are resulting in less waste. And surely that is the key test.

While Kerby has been used extensively there are LAWMAC council areas where it has not visited and this is of some concern from an equity perspective. The problem appears to be the lack of human resources to manage a Kerby visit in these locations.

There is substantial school use of Kerby. But the visitor's book provides the only information about affect and this is not enough. Schools need to be strongly encouraged to see Kerby as part of an ongoing program and to collect and collate evaluation results and provide reports to council about them.

In our society adults create the waste and yet the adult part of the Kerby program is not well structured or never evaluated. Apart from some hard data from the Johnstone, Nemo and Sarina Shires there is little data available to support the effectiveness of Kerby with adults. Again it seems sufficient to have Kerby present at the local show and hope people learn.

Kerby would not have got this far without the work of a whole lot of people, often on a voluntary basis. This is acknowledged but is it time for the next step.

The reality is that there is substantial amount to do to turn Kerby from an icon to an education program. The recommendations and associated appendices point the way forward.

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“Kerby is a Champion?”

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“Kerby is a champion?”: The title for this report came from a quote from a student in one of the evaluation forms completed as part of the snapshot evaluation questionnaire. The question mark in the title is added by the evaluator.

Acknowledgement of input into this evaluation

The contributions of the following people are acknowledged. Without their willingness to provide data and/or be interviewed in depth, the evaluation would not have been possible.

Cr Dave Egan. Cr Egan is particularly acknowledged for his role in instigating and carrying forward Kerby to the people of Nth Queensland.

Cr Wendy Western

Ms Mary Field, Mr Doug Green, Mr Grant Steen

A significant number of Councillors and staff at many LAWMAC Councils

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Introduction

The delivery of education to reduce waste and to promote resource recovery is a priority activity for councils in the north and west of Queensland. These councils have organised themselves into the Local Authority Waste Management Advisory Committee [LAWMAC]. The member councils and functions of this committee are described more fully in appendix 1.

Officially launched at the LAWMAC meeting in Townsville, September 13, 2002, the LAWMAC bus is a mobile waste education unit designed to service all member councils. The bus called Kerby is the priority means of carrying education messages about waste reduction, recycling and reuse into schools and the community.

The bus features static and interactive displays that are designed to assist young people understand the importance of recycling. The bus is divided into several settings which are used to demonstrate different recycling options, including a kitchen, a backyard and a park environment. Inside the bus, room is also made for the specific local authority that is hosting the bus to display their own information.

Major sponsor of the \$120,000 project is the National Packaging Covenant which is a partnership between Queensland State government, and industry. This grant has funded fit out and running costs. The Brisbane City Council originally offered a used bus to LAWMAC at an attractive rate and initial purchase of the vehicle was funded by the Beverage Industry Environment Council. Additional funding from commercial sources complemented that supplied by the private sector through the Industry Transitional Fund.

Kerby is totally owned and operated by LAWMAC and a second bus is currently being fitted out. Funds are being sought to enable the completion of the fit-out. It is intended that this bus will carry a broader sustainability message than is the case with Kerby. There will still be waste reduction content and knowledge about waste issues will be promoted, but this will be placed within a wider range of messages about what people can do at home, work and in the community to behave more sustainably.

The Regional Education Strategy (NQ RWMS pp 91 - 95) recommends "a series of travelling educational street display promotions, and that "special events should also be targetted to provide good exposure to large number of people". This is the purpose to which Kerby has been directed. It should be noted that the RWMS was part funded by the Queensland Environmental Protection Authority [EPA] and matched by contributions of HESROC-NQ member Councils

<p>The Waste Education Facilities Evaluation Project contains a blending of two elements; a broad cross Queensland study and a more focused and detailed evaluation of four local waste education facilities based projects, LAWMAC, Gold Coast, Maroochy and Toowoomba/EDROC [this project]. The Queensland wide evaluation collects data from councils and waste contractors and includes the development of ten case studies of good practice in education. The report contains findings, conclusions and recommendations drawn from a range of data sources. Some of the learning from the four local projects will be incorporated into the broader Queensland evaluation report</p>

Note 1. This report provides evidence in the form of quantitative and qualitative data. Quotes, in italics are used to illustrate qualitative findings. These are drawn from program records, annual and those evaluation reports that are available. They are also drawn from the focus discussion held by the evaluator. Because of the absence of evaluation data collected over time, quantitative data is drawn from the snapshot survey conducted in March 2005 [see below].

Objectives of the Kerby Program

The stated objectives of Kerby are:

1. To educate the public on ways to minimise contamination in the kerbside recycling process
2. To increase the profile and communicate the importance of kerbside recycling within the community
3. To raise awareness of recycled and recyclable products
4. To raise awareness of problems associated with littering
5. To raise awareness of public place recycling strategies
6. To enable local shires to distribute educational material

This evaluation is measuring the efficiency and effectiveness of Kerby against these objectives; these are placed within the context of a broader range of desirable outcomes, see below.

Brief Description of the LAWMAC Kerby Program

Kerby is an integral component of LAWMAC's strategic approach to waste management in Nth Queensland. Strategy 3.1 of the LAWMAC Strategic Plan 2002 to 2005 outlines activity related to Kerby. *Develop and implement education packages for industry, community, and schools that can be used across North Queensland.* Strategy 6.1 *Initiate an extensive, comprehensive media campaign,* is also relevant.

Kerby is well fitted out bus owned by LAWMAC [the Local Authority Waste Management Advisory Council]. LAWMAC comprises 29 North Queensland Councils and its objectives are to foster open discussion and promote active participation by members and their communities in an effort to deal with common waste management issues on a regional basis.

Kerby is available for use throughout the member councils, it is booked through the EHO in the Cardwell Shire and must be collected from its previous location and managed while in a council area by individual council staff. An appropriate drivers licence is required [HR Heavy Rigid]. A small package of user notes is provided with the bus. These contain a checklist of maintenance tasks, booking information and some very limited notes on how to use Kerby for presentations for school groups.

Kerby is fitted out with audio visual education materials and workstations for interactive education covering the following:

- What can I recycle at home
- What do I recycle [wheelie bins]
- What is the recycling process [at the MRF]
- Littering and public place recycling.

Once Kerby is booked by a council responsibility for use of the bus, liaison with schools, presentations etc lies with the council officers. Managing Kerby is a major commitment for council staff.

Components of the study

Data for this evaluation was drawn from a number of sources. The hierarchy in Appendix 2 describes each source as it provided data for each outcome. In summary sources for Kerby included the following. Visit to LAWMAC meetings [2] and to see Kerby [in Brisbane] to gain appreciation of the facility and its use. Unfortunately it was not possible to view Kerby in operation during the period of the evaluation. Kerby was off the road in late November/December 2004 and January/February and early March 2005.

- In-depth interview with the project manager and relevant staff where possible to determine use and impact information.
- Collection of data held by council about use, knowledge, behaviour and recycling rates within the target communities [jurisdictions].
- Review of existing relevant waste disposal, recycling and contamination [including waste audits] data, where available and applicable.
- Review of other existing use and impact data [community surveys etc] held by individual councils where this data could be provided.
- Three snapshot surveys; students, community and teacher surveys. This was administered in the Whitsunday Shire and the Douglas Shire in mid March 2005. It was intended that these surveys would be conducted through February and March and broader data would be available. This was negotiated and clearly communicated in writing with the coordinator of the Kerby project. However a decision was made to keep Kerby off the road until early March 2005. This limited the amount of data collected and the breadth of this data across member councils. The data reported on below is drawn from the Whitsunday and Douglas Shires only and it should be noted that the number of adult surveys received makes these results almost not worth reporting. A significant objective of Kerby is adult education; however this evaluation can provide little hard data on which to base judgments about the possible impacts of education efforts, through Kerby, with adults.

Shire	Number of Students	Number of Adults	Number of teachers
Douglas Shire/ and Whitsunday Shire	190	5	14

- Other stakeholder data was collected through focus group discussions and questionnaire and individual discussion with council and other staff. This focused on guided discussion collecting information on what their thoughts and feelings about Kerby and what works and what does not and why? These were conducted at the LAWMAC meeting in February 2005 and on the telephone

Findings

In order that the findings might be interpreted within context, it is important that this general introduction to the findings is fully considered by the reader of this evaluation report.

Kerby is a hugely ambitious project and the LAWMAC group of councils is to be congratulated for tackling waste reduction in such an innovative manner. In order to undertake a complete summative evaluation of the efficiency and effectiveness of Kerby what would be required is a mini evaluation of activity and affect of Kerby in each LAWMAC Council that it visited. In some ways what would be most helpful is an evaluation of Kerby in each council during each visit, given that each experience is unique. A detailed review at this level is totally beyond the scope of this evaluation project as it would require more than twenty separate evaluations. It is of note though that if the recommendations below are fully implemented, such an evaluation could be undertaken in the future.

In establishing this context, reviewing the impact of Kerby is simple in some jurisdictions. This is because Kerby has not visited some LAWMAC councils and so it has had no affect on waste or recycling behaviours and the project would be deemed to have failed in those councils. For example North Western Queensland councils have not engaged in the use of LAWMAC at the same level as those on the coast. Distance and the availability of resources at the council level are telling factors here. The bus needs to be collected from far a field and to be staffed for the duration of its visit. This is a resource intensive exercise for every council, whether coastal or inland. Despite these real difficulties, it is a major finding of this evaluation that the Kerby project has had limited impact in the west of the state.

The situation is much more complicated in coastal councils where multiple visits have occurred. It is clear that Kerby has had a major impact and yet local evaluative data is piecemeal, or does not go far beyond the “did people come” and the “did they like it level” [outcomes 1 and 2 on the hierarchy in Appendix 2 and discussed above]. To truly evaluate the effectiveness and efficiency of Kerby, much more information is needed about its impact in each location and unfortunately no more is available. The evaluator pushed very hard to identify local data about specific visits, but this was extremely limited.

Up to date Kerby has been characterized generally by the lack of an evaluation data and a very limited evaluation culture and this is discussed in detail below. In addition, it is difficult to even obtain a comprehensive report on where Kerby went, what schools and community events it visited. In this context there is almost no data on its reach into the community or its impact [see below].

Even if data at a sufficient level was available, the task of building a comprehensive summative picture of impact in all of the nineteen councils where Kerby has been extensively used is beyond the scope of this study. To deal with this, the findings below are comprehensive in that where possible they review big picture impact across the whole of the North Queensland. Some specific individual council data is provided to illustrate each finding, but as indicated above this is limited and should be seen as examples only.

It should be noted that many letters supporting Kerby have been written and tabled as part of this evaluation. These have come from Mayors and/or senior council officers and all laud Kerby and its place in waste education. While this is encouraging and shows that community leaders value Kerby, it is not evaluation of the effectiveness and/or efficiency of the education intervention. They provide a commentary but not hard information about

what knowledge changed, whether skills were improved, what happened to attitudes and what behaviours moved.

The specific findings of this evaluation are detailed below.

To what extent has Kerby serviced the whole LAWMAC [Far North Queensland] in the period September 2002 to December 2004?

The brief answer to this outcome question is “No, Kerby has not serviced the whole LAWMAC region.” As indicated above there are a number of councils in the north west of Queensland that have not been visited by the bus. But Kerby is used by councils who are able to staff it and move it around and so the response to the question is more complicated than a simple one word negative answer.

Since it was launched in September 2002 Kerby has visited every coastal shire in Nth Queensland and many on more than one occasion. Kerby has been used at every Annual Show in each East Coast Shire and has reached substantial visitor numbers through community and schools programs.

The visitor book, kept in Kerby indicates that over 500 schools and 50,000 visitors have accessed the bus since the launch of the program. Unfortunately visitor book data is not collated and relies on people filling in the book in the first place. This seems to have worked for many schools, where teachers have completed the book, but there is little evidence of community comment and no information about visitor numbers. It is also unknown whether all schools visited have completed comments in the book and how many classes actually attended Kerby at the time comments were made. Some data is available but it is not collated, nor is it linked to Council reporting data, where this is available. Generally data is not comprehensive and is of limited value for this evaluation [beyond anecdotal feedback]. The lack of a comprehensive reporting process is a significant failing on the part of those who manage Kerby.

What is known is that Kerby has visited at least nineteen shires/cities in the period Sept 2002 to November 2004. Throughout that period it has provided services in Cook Shire in the North of the state to Nebo Shire in the South of the LAWMAC jurisdiction. It has visited some shires on a number of occasions. During that time data has been provided it was open for visits in schools or community events for 262 days out of approximately 600 working days [estimate only, omitting Sundays. Often community events are held on weekends]. This represents at the minimum 44% of the total days it might have been used to educate people. When factoring in travel and set up time, this would appear to be quite a good result. But it should be noted that the data is somewhat rubbery here and it is not possible to be more accurate. Also, as stated above Kerby was recently off the road for maintenance in the period December 2004 to March 2005. This is a significant time for a facility to be unavailable notwithstanding the fact that December January is a period where school bookings cannot occur.

During early 2005 Kerby it was planned that Kerby would visit nine Shires in Nth Western Queensland. Letters were sent by LAWMAC to all shires but only three responded, so this visit has been postponed. It was replaced at the last minute by visits to two coastal councils, indicative of their support for Kerby. But as indicated above Kerby has had no impact in Western Queensland councils. It is a telling evaluation finding that Kerby has generally not been used beyond the coastal strip

At the practical level booking of Kerby occurs through the Environmental Health Officer in Cardwell Shire. Councils who book Kerby are responsible for pick up and return and a check list of maintenance tasks is provided for all users. This checklist is generally focused on maintenance and booking issues. A one page handout only is provided about how to use Kerby in a presentation to schools.

To what extent did people in local communities access Kerby (across the LAWMAC region)?

It is clear that Kerby has been accessed by local communities and schools in the locations it has visited. It would be highly useful if this evaluation was able to re-produce a table of showing the level of access in each location, drawn from an annual report of Kerby’s use. Although assured on a number of occasions that an annual report had been produced, no copy of it could be found and provided to the evaluator. Thus any use data reported on below is available from two sources and neither is guaranteed to be comprehensive. Unfortunately the available data is a little like Swiss cheese; there are many holes in it.

The available data is sourced as follows

1. Some use data is available in the visitor’s book, but as indicated above it is not comprehensive or complete as not every user has completed the book. Also it has not been collated.
2. Some use data has been provided by individual councils as part of their engagement with this evaluation process. By way of illustration that Kerby has been accessed by schools and communities some of this data has been summarised below. It should be noted though that not all councils have provided data so that aggregation is not possible. Besides, drafting a Kerby [annual] report is not the purpose of this evaluation.

Some examples of access data drawn from individual Councils are provided in the table below to illustrate that this outcome has been met.

Where and When	Students	Adults	Relevant comments
Townsville June 03	2 schools [no student numbers provided]	Eco-Fiesta 594 people Townsville Show 3651 people	<i>“Kerby was extremely well received....It</i> <ul style="list-style-type: none"> <i>• Corrected misperceptions over what could be recycled</i> <i>• Identified what could be recycled</i> <i>• Showed people how easy it is to recycle</i> <i>• Showed what happened to recycled products</i> <i>• Showed environmental benefits of recycling.”</i>
Douglas Shire 2003		Tully Show 392 people	<i>“The feedback was positive”</i>
Townsville Show 2004		Over 3500 people visited	<i>Many people were interested in the end process after recycling as to what end products were made from recycled plastics and aluminium</i>
Bowen Shire October 2004	9 schools/pre-schools and		<i>...an outstanding success ...visit assessments completed by schools</i>

	over 600 students		<i>indicated that Kerby was well received... and concepts were well understood and implemented by students</i> <i>The LAWMAC Mobile Facility is an important part of the Council's Recycling and Waste Management program and it is envisaged that this facility will visit school groups and the local show for many years to come</i>
Johnstone Shire November 2003	5 schools 503 students		<i>Excellent! It was good to see so much for the children to do</i>
Johnstone Shire July 2003		Innisfail Show 200 visitors [50 completed survey 0.4% of shire residents]	Summary of survey results <ul style="list-style-type: none"> • 94% separate wet and dry waste at home • 64% recycle at home • 82% compost food scraps and garden waste • 58% purchase recyclable products • Some specific council data re possible involvement in a proposed kerbside recycling scheme • Kerby feedback 72% indicated that their overall opinion of Kerby was very good
Cardwell Shire November 2003	All schools [8] and most classes [49] in the Shire. 895 students and 49 teachers		No evaluation. Lots of photos and a press clippings
Hinchinbrook Shire February 2004	7 schools, 570 students and 29 teachers		<i>"Wonderful no cost opportunity for schools to utilize for their environmental subject</i> <i>The response from all schools visited was one of enthusiasm... the students were excited... quick to learn."</i>
Cook Shire April 2004	Cooktown School [pre-school to 12	Cook Shire markets 500 visitors	Need more educational material about how to use the bus with younger students Need more information about how to work the audiovisual equipment <i>"What a good idea for an old school bus. Recycling at its best."</i>
Cairns Water Tour March 2004	17 primary schools. Approximately 5000 students		Staffed by Cairns Water staff. A specific kit was developed and left with schools about waste and recycling in Cairns and Douglas
Mackay City Council August 2004	210 students across a number of schools	Mackay Botanic Gardens. Mackay home and Gardening Expo 300 community	<i>"The message was well received by students and teachers provide positive feedback."</i> No evaluative data available

		members	
Burdekin Shire. May/June 2004	14 schools and approximately 4000 students		<i>"Throughout Budekin all 17 primary schools have shown an interest in incorporating waste education into their schools curriculum Council ahs provided a copy of Envirocom's " Providing the Links" Teachers Resource Kit for each school."</i>
Sarina Shire	1300 students	400 adults at community events	See below for more details

There is some evidence of a link between school and community uses where both are occurring at the same time. A number of Council officers report that there is solid evidence that young people who had seen the bus at school were bring their parents to the bus when it was on display at the local Show or other community event.

What evidence is there that Kerby was engaging and informative?

Kerby has achieved a significant presence in local media wherever it has visited. Countless press articles have been tabled as part of this evaluation from many shires and cities. Some of these are significant [e.g. Front page of the Cairns Post]. In addition, regional radio and television has often featured Kerby. This amount of media coverage is significant. Not only does it serve to promote Kerby's visit and thus increase visitor numbers at community events and raise the general level of interest, it also promotes broader waste messages into the community. Following a review of the extensive array of media it is conservatively estimated that Kerby has generated up to \$1.0 mil in free press since the time of its launch. When compared against the up front cost of purchase and the ongoing maintenance of the vehicle, this is significant. A less visible educational approach would not have achieved this result.

While the free media benefits of Kerby cannot be understated, it is unclear what messages people are getting when they read about Kerby in the newspaper. Are they just receiving the message that Kerby is coming to town or are they part of a group of people who are receiving broad waste reduction and recycling messages? If they are do these have any real impact? This information would be of value but it is beyond the scope of this evaluation to collect any data which informs about the answers to these questions.

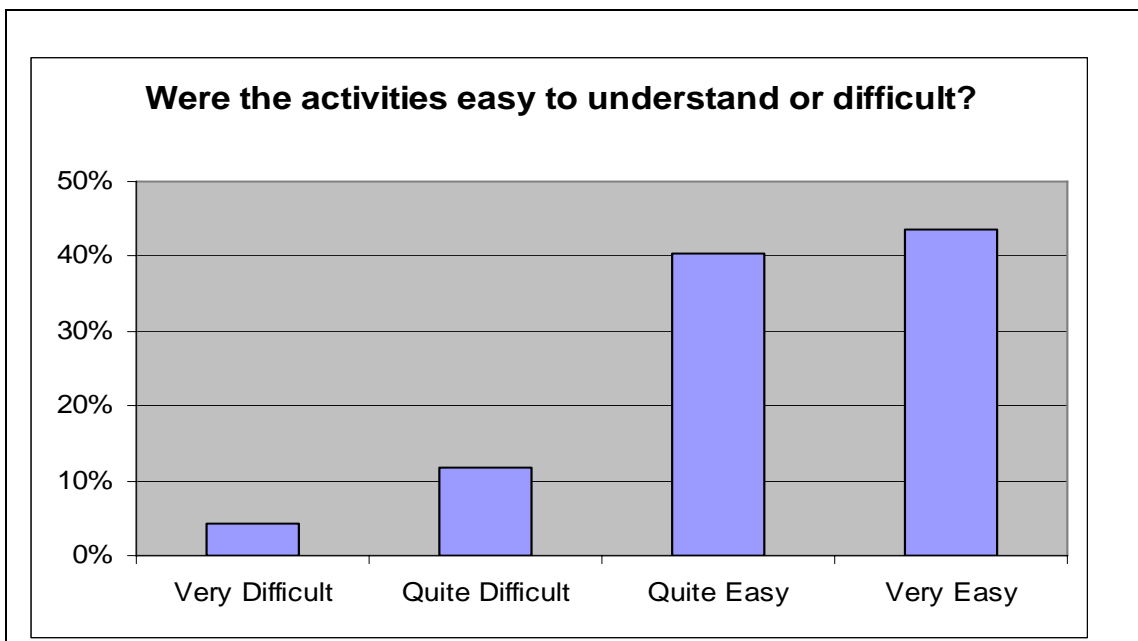
Comments from teachers in the visitor's book on the bus clearly show that they view Kerby as an engaging and informative program. For example:

- *"Interactive displays suit all age groups...very good response from students [Andergrove State School, 2003]*
- *Very informative and interesting...children loved the hands-on experience [Cardwell State School 2003]*
- *Presented an in-your-face reminder about recycling of every day items [Mission Beach State School 2003]*
- *Wow! It's great to see something like this in Nth Queensland. Love to se it again... Maybe a weblink to something similar [Sth Johnstone State School 2003]*

- *Wonderful!... enjoyed by all grades. What a good idea. Versatile and informative. Reinforces what has already been presented in class [East Palmerston State School, 2004]*
- *Great concept, very visual and had a great impact on students [White Rock State School 2004].*
- *A terrific idea and well presented. Very professional unit, set up to cater well for all ages. We all learnt something. Thanks [Aloomba State School 2004]*
- *Children loved it. They were excited about participating and have been eager to discuss it ever since [OLHOC Earlville 2004].”*

In almost all locations there is evidence that school students and teachers want Kerby to pay a return visit. The interactive nature of the program is very popular and the visit of the bus is a highlight for schools. Undoubtedly the program works because it is something different, fun and interactive for young people and their teachers.

The snapshot survey showed that students found Kerby interesting [41%] or very interesting [52%]. It seemed that the education experience was pitched at the appropriate level in that the activities were easy to understand. It might be argued in fact that they were too simple for many students.



It should be noted that there is no evidence to show that Kerby is engaging and informative for adults. Numbers of visitors at shows and events are high and that does mean that people are attracted to the bus. Anecdotal evidence exists that children are very keen to bring their parents to the bus when it is at the local show but apart from some hard data from the Johnstone Shire [see table above] there is little data available to support the effectiveness of Kerby with adults. In this regard the failure of those who manage Kerby to have it on the road in the February March 2005 period so that the snapshot survey could be administered was of concern. No data is included in this report

from the snapshot surveys as 5 adult respondents are too few on which to base any real findings.

What evidence is there that Kerby was responsible for increasing community knowledge about waste management and recycling?

a. Existing Data from Councils

“Kerby strengthened Nth Queensland’s resolve to become involved in recycling”
[comment from council stakeholder].

In a number of councils where kerbside recycling has not been provided, Kerby’s visit resulted in numerous community requests for a kerbside recycling service to be provided. For example one shire reported that local school P&C Associations had approached Council to place recycling bins in the school even though Council does not have a recycling program. Some shires reviewed policy about kerbside programs [e.g. Cook Shire] and implemented kerbside or other recycling as a result on community pressure after a Kerby visit. A number of others [eg Johnstone Shire] implemented revised recycling policy and provided increased drop off and/or public place recycling programs and diverted significant tones of waste from landfill.

Councils have reported the following actions as a response to the Kerby visit

- Increased inquiries re public place recycling
- Significant improvements in community knowledge about what can be recycled.
- Increase interest in waste issues and positive feedback from the public about Kerby.
- Year 5/6 students of Cardwell Primary School wrote and publicly performed a “recycling song” in late 2003. All schools 8 and 49 classes were taught, during this visit [55 teachers, 895 students].
- Hinchinbrook Shire Council have recently awarded a new waste collection contract that has advanced the collection system within the district from the current single 240ltr east west split MGB to a best practice two bin waste and recycling collection system (2 x 240ltrs). This new system is scheduled to start on the 1st July 2005.
- The decision to upgrade the bin system was not one that Council took lightly. Council tendered a multi option tender document, which included the option of removing recycling altogether. This was looked at very closely. However, after community feedback, Council approved the recycling service upgrade. Kerby the recycling bus played a part in the Council deciding to go with an improved recycling system. This is because Council received overwhelming positive support from teachers, students and parents when using Kerby as an education tool to promote recycling in the schools.
- At the October visit of Kerby to Bowen Shire a teacher evaluation was conducted. Although the response rate was low, it was clear that teachers believed that the visit of the bus was a positive educational experience which impacted on student’s knowledge and behaviour.
- Nebo Shire has a *C’mon Nebo Shire Let’s Recycle* brochure. This give the community a pat on the back fro their recycling efforts. It is a template in that through the use of hand written fill in data sections it can be updated regularly at no cost be staff time to complete the template and printing. Specific information is provided, for example *....kg of paper and cardboard. Saving up to...trees*. This is smart way of increasing community knowledge and engagement in recycling and

along with the use of Kerby [see below] it has had significant impact on waste and recycling.

Sarina Shire Council has implemented the Kerby program in an exemplary manner and the following brief case study outlines their approach and results.

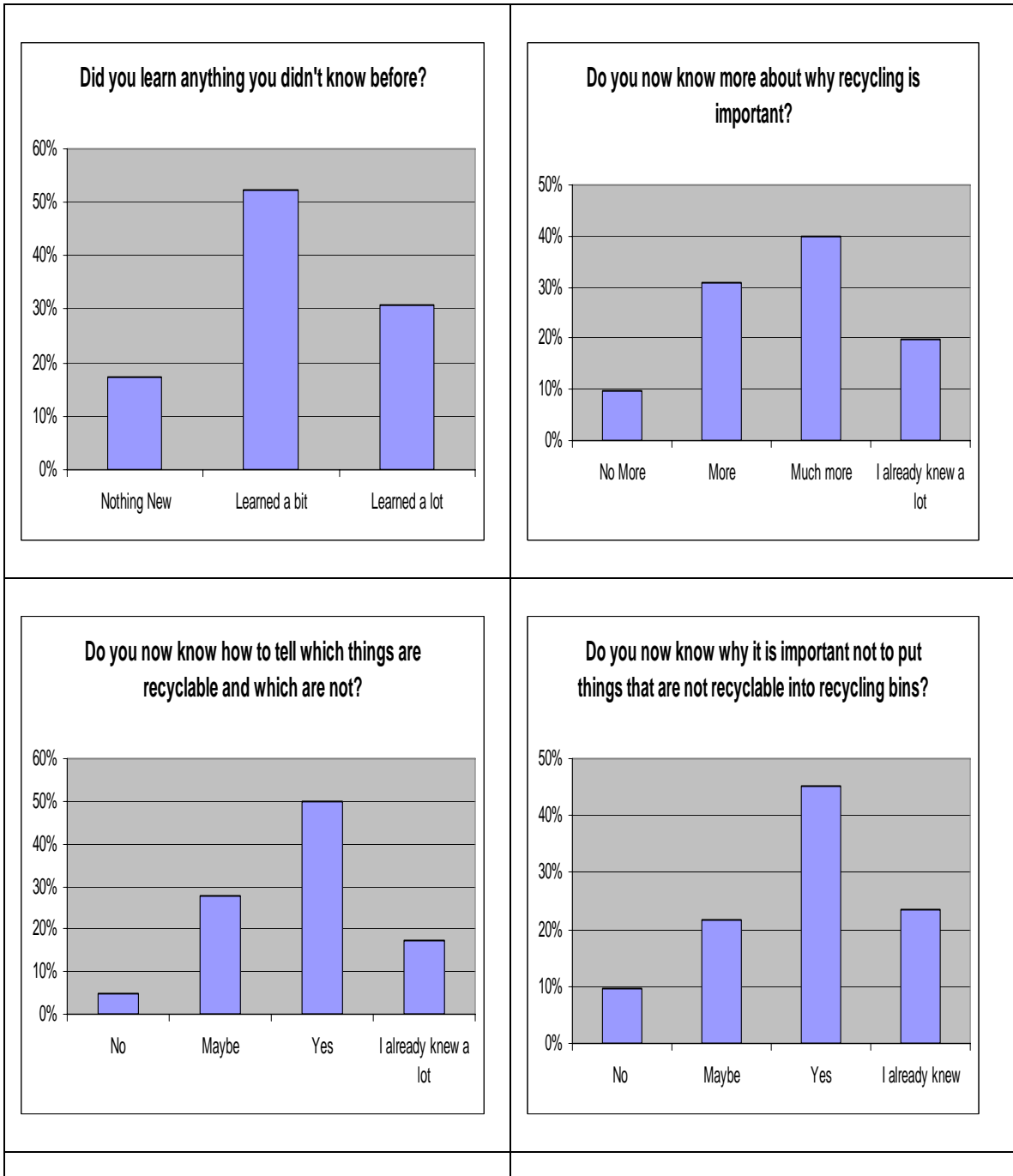
- Kerby has made a number of visits to Sarina in 2003 and 2004. Each has been well planned and maximum use has been made of the opportunity
- In 2003 all Sarina schools were targeted, 1300 students were educated through the bus, 384 completed a written survey and the results were:
 - 85% of students knew something about recycling prior to the Kerby visit
 - Only 47% of students indicated that their family's recycled
 - 86% indicated that they enjoyed the displays in the bus and that the information was easily understood
 - 87% indicated that they now understood how to separate material in the wheelie bin.
- In August 2004 Kerby was booked for the Sarina Show. Over 400 people visited the bus and their feedback was as follows
 - Evidence of significant understanding of recycling
 - Positive feedback about the bus and its appropriateness for adult and student use
 - Supportive of the need for a second bus
 - Specific information sheets handed out about recycling, composting and worm-farming.

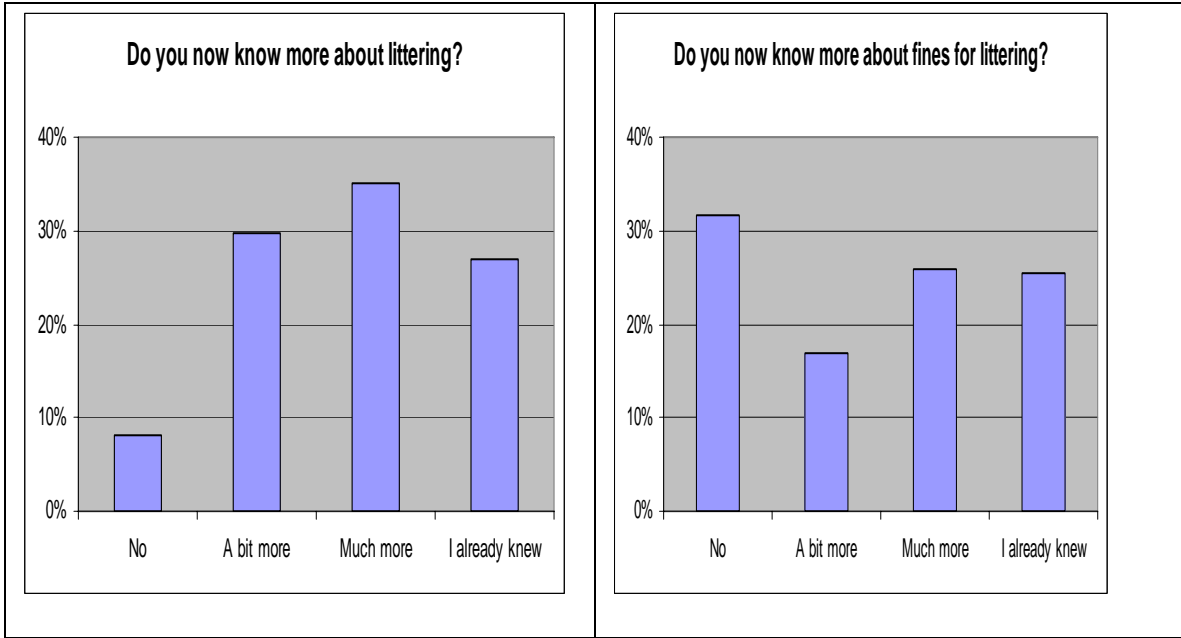
b. Data from the Snapshot Survey Feb/March 2005

The table below contains graphs that indicate that students have a significant self reported growth in knowledge as a result of the Kerby program. Students know more about recycling and littering and have an increased understanding of how to reduce waste. 71% know more about why recycling is important; although littering is not a major feature of the program almost 50% indicated that they knew more about it.

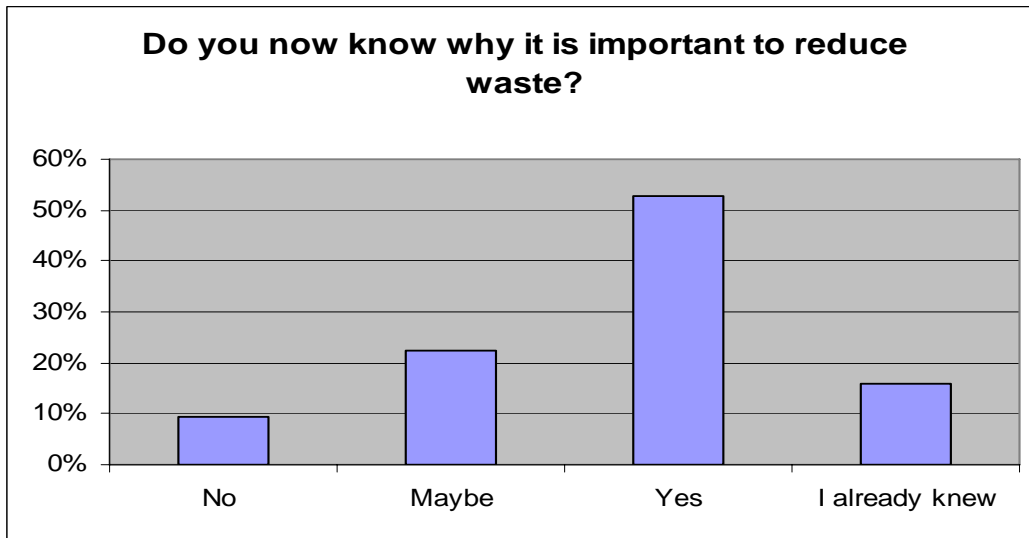
While self reported changes in knowledge are not as strong a finding as pre and post measures of knowledge change, the nature of this evaluation did not allow for data to be collected prior to the program.

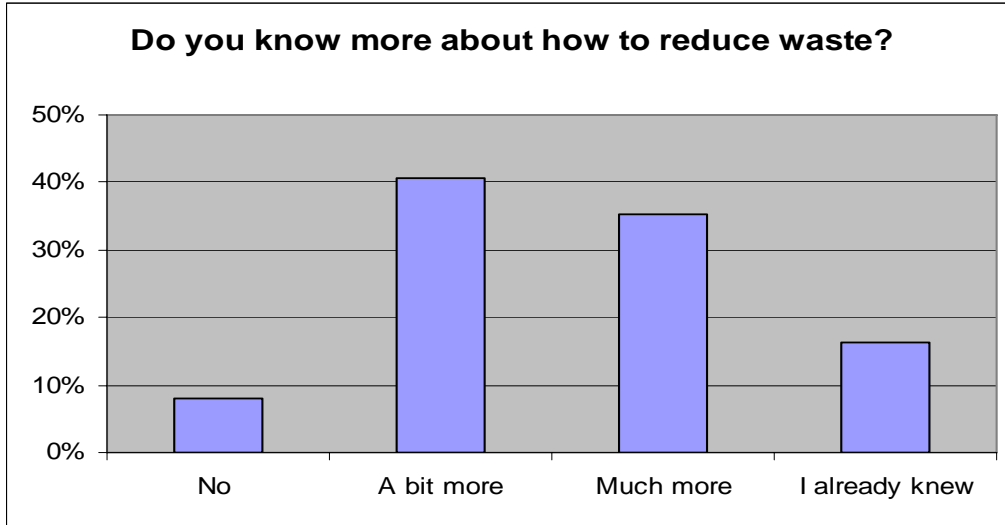
The tables below demonstrate knowledge shifts for students



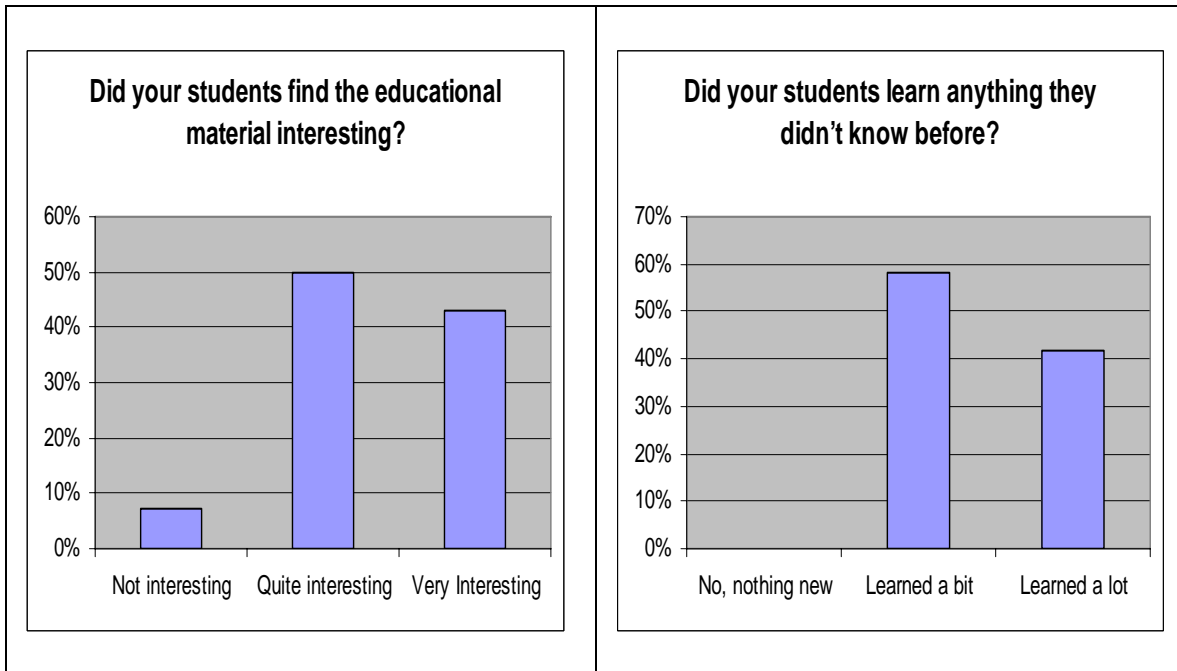


Importantly students also report significant improvements in knowledge about why it is important to reduce waste and how to reduce waste [40% more knowledge and 35% much more knowledge.

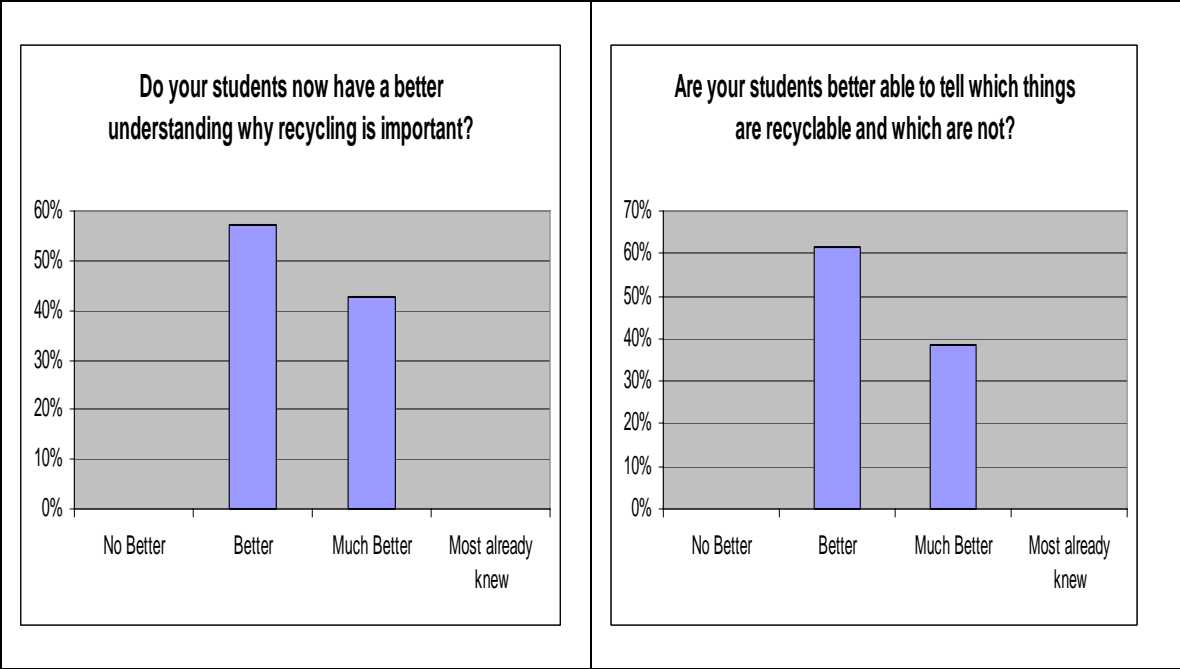




The teacher findings from the snapshot survey are summarised below. Teachers felt that students found the material interesting [92% in total] and that 1005 of students learnt a bit/a lot from the program. The fact that over 40% of teachers thought that their students learnt a lot from Kerby is a significant finding, given that many teachers are of the view that visiting show and tell is often over-rated.

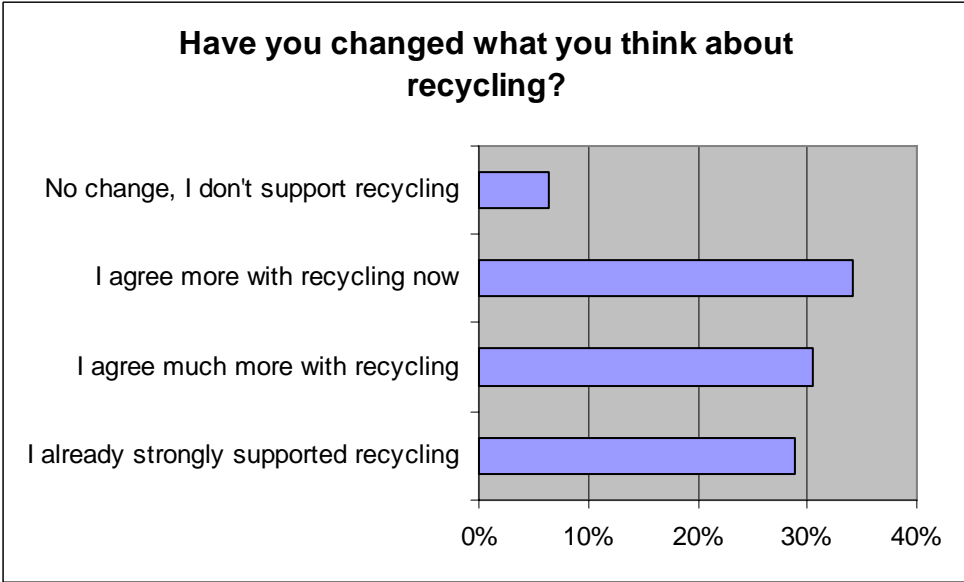


Teachers were also of the view that students had gained a significant amount of knowledge about recycling. 100% indicated that their students had a better or much better understanding of why recycling is important and over 60% indicated that they believed that students were better able to tell which things are recyclable; the remainder had a much better knowledge.



To what extent has Education provided through Kerby impacted upon attitudes?

There is little data on attitude change. The one response that is telling from the student's snapshot survey is summarised in the graph below. This shows significant changes in attitudes about recycling whereby almost 70% of students indicate that they agree more or much more with recycling as a result of the program.



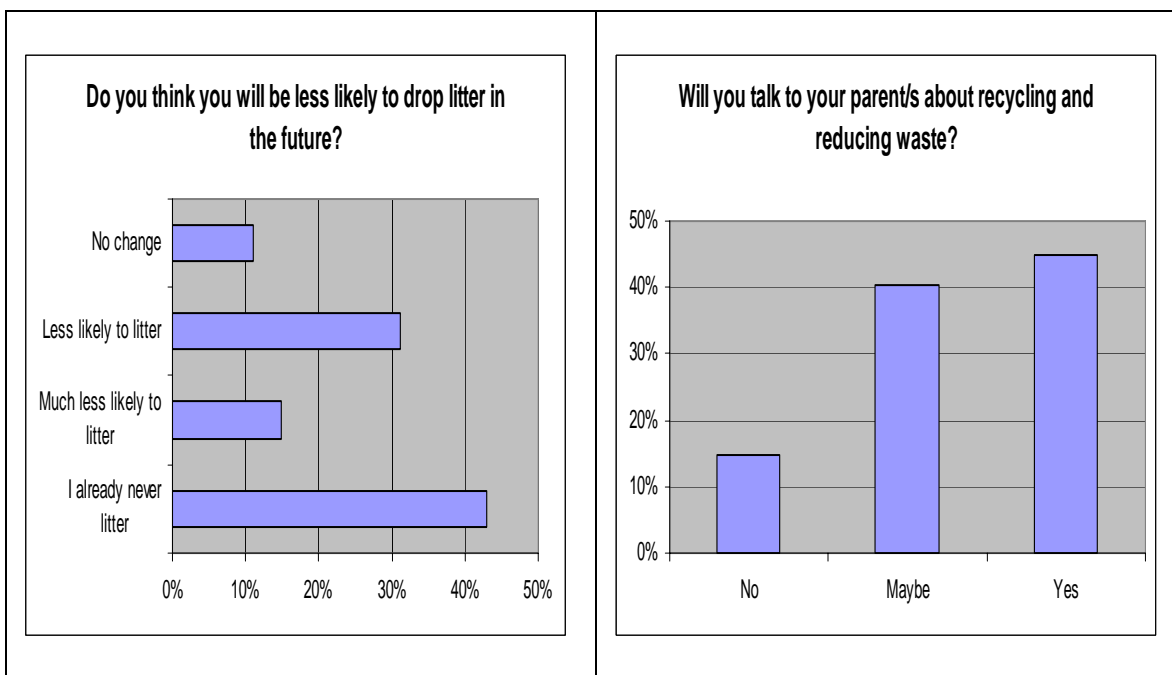
What evidence is there that Kerby impacted on community behaviour [self reported behavioural intentions]?

A large number of shires reported that Kerby’s visit significantly impacted upon the behaviour of residents. While there is limited hard data to support this finding, there is substantial observational data. For example:

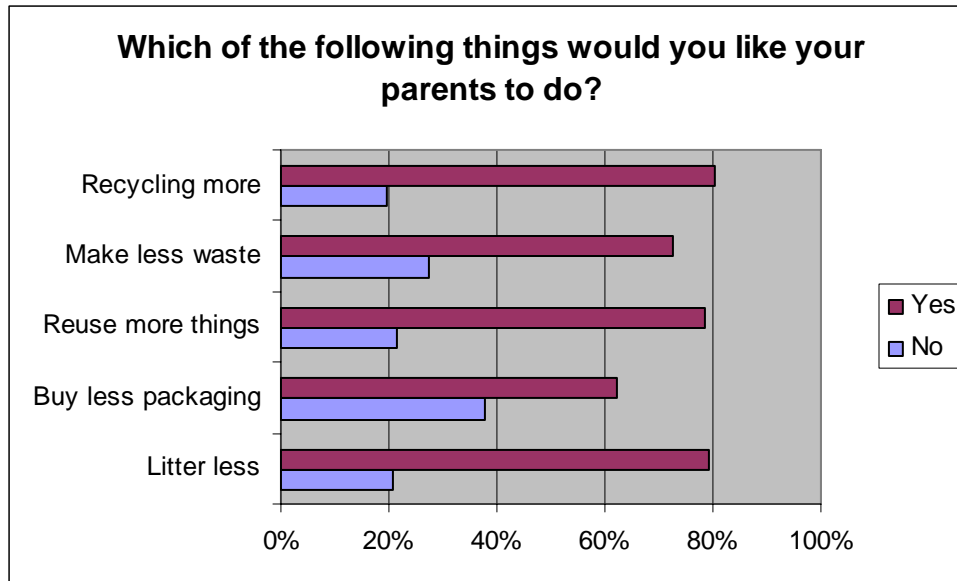
“Kerby’s visit highlighted the waste related behaviour in rural areas, where dumping is a right. Kerby’s visit to our rural schools changed this practice and differentiated recyclables from waste.”

Some teachers did indicate in their feedback that behaviour change was intended or had occurred as a result of the program. For example *we are now going to start recycling our rubbish at our school. The children are also going to teach their parents about how to recycle at home [Hambleton State School 2004]*. Parents often told teachers about the changes in their children’s behaviours.

The snapshot survey indicated that students were intending to change their behaviours. Almost 50% are less likely to litter as a result of the program. This is a good result given that 43% indicate that they do not litter anyway. 45% indicate that they will talk with their parents about waste and recycling and a further 40% indicate that they might talk with their parents about these issues.



Students indicated that they wanted their parents to change a significant number of behaviours. 80% of them wanted their parent to recycle more; 76% wanted them to make less waste and 78% wanted them to reuse more. Interestingly 80% of students wanted their parents to litter less. If most students communicate these issues to their parents waste-related behaviours will change substantially.



What evidence is there that waste was reduced and/or recycling increased as a result of Kerby?

As with the remainder of this report no comprehensive, cross North Queensland findings could be identified for Kerby. The following local data does indicate waste stream impact in some locations. This is encouraging in that it can be postulated that similar impacts are happening in all councils where Kerby is used, however data collection mechanisms lack the precision to collect these.

Nebo Shire reported a 100% increase in recycling following Kerby's first visit in 2003 [the recycling rate rose to 47,000 tonnes p/a]. There was decay however, in that this dropped to 34,196 tonnes by June 04 then rose again to 42,360 tonnes [projected annual data] following second visit of the bus in October 2004.

Thuringowa City Council reports an increase in recycling rate [22%] and a decrease in waste to landfill [18%] since Jan 2003. They argue that *"some increase in recycling is due to the growth in the city [3% growth rate in the period] however the reduction in waste and the increase in recycling can be attributed to public education programs instituted in the city" [including Kerby].*

This illustrates two important findings: the impact of Kerby on recycling is significant; and that people need constant education to maintain their positive behaviour. Just a single exposure to Kerby and its messages is not sufficient.

A number of site specific examples exist of the impact of Kerby on recycling and waste:

- In Townsville, Kerby was used as a venue for training of hospital staff about recycling. As a result hospital recycling rate rose by 100% [from 20 bins per week to 40 bins per week]

- In Douglas Shire a local school pushed to start recycling after the Kerby visit. With council a drop off recycling centre was set up and 3 tonnes of recyclables are collected every 3 weeks [with low contamination rate].
- Also in Douglas there has been an increase in the recycling rate. In the period since July 03/04. Kerby's visit in April 2004 seemed to have an impact
- Atherton Council reports a decrease in the amount of waste per head of population. This cannot be specifically linked to a Kerby visit but some interesting timing relationships are noted.
- In Bowen Shire, since the Kerby visit in October 2004 Council has installed two additional containers for paper and cardboard recycling at the Collinsville Transfer Station, indicating an immediate increase in recycling rates. In addition, the use of the public place recycling bins has increased beyond expectations. Contamination has also decreased significantly. Note that Council keeps comprehensive data on the amount of recyclables collected and the contamination rate at each site. When aggregated contamination appears to have decreased from approximately 50% to between 10 and 20% as a result of Kerby's visit. Because this is recent data no evidence of decay is able to be discerned as yet.

Other Relevant Findings

a. *Strengths and Limitations Findings:* The following findings were drawn from the stakeholder reference group meeting on 17/2/05. They identify the stakeholder views of what requires improvement do that Kerby can provide a more extensive service

Strengths	Limitations
Compact Mobile Single message Hands on operation Uniqueness High value education tool Interactive Attractive and enticing for children Complete recycling education program in one package Visual and visible Kids love it Good image builder for Council, LAWMAC	Not enough Kerby to service the whole of LAWMAC often enough Not all aspects of content applicable to all shires Need an internal power source [fitted Feb 05] Distance Time of visits Level of coordination so that all schools in the district benefit Limited space Lack of funding support to visit remote areas Break downs, sometimes exhibits are not all working Lacks broader education focus Not having education staff permanently with Kerby Limits on how face-to-face education can happen with students and adults No Manuals Lacks flexibility Council must meet the costs to staff, advertise, and promote the visit. Most Councils are happy to contribute though as the benefits outweigh the costs

b. Strategic Approaches

Increasingly there Councils in the LAWMAC Region are developing strategic approaches to the use of education to reduce waste. The best example of this would seem to be in the Townsville/Thuringowa City Councils where a comprehensive education strategy has been developed which integrates the use of Kerby into broader education activity. The following quote is taken from the introduction of the strategy.

Both the City of Thuringowa and Townsville City Council have demonstrate a long-standing and ongoing commitment to waste minimisation and litter reduction education through a variety of programs and activities. This is documented in a number of both Councils documents including Thuringowa Litter Prevention Program, Thuringowa City Council Corporate Plan and Beach Management Plans, Townsville City Council Waste Management Plan, An integrated litter management strategy, Strand hot spot analysis, Townsville City Council Corporate and Operational Plans, Lakes Management Plan, HESROC – NQ regional waste management plan and the Townsville City Council State of the Environment report..... Education is a fundamental component of any Council and regional strategy to minimise waste and litter. The long term goal of the council programs and activities is to foster a wastewise ethic within the community and to reduce the following:

- Amount of waste going to landfill*
- Amount of litter*
- Cost of waste and litter management to the Council and the community*
- Used packaging*
- Wasteful use of resources by landfilling*

It is worthy of note that a detailed Community Attitude Survey was also undertaken by these two councils in July 2003, which provided significant information to inform the strategy development. Only 1% of respondents indicated that Kerby was the source of information, compared to stickers on recycling bins [67%], brochures [57%] council publications [42%] and television [23%].

A number of other councils [e.g. Mackay City Council and Johnstone Shire] have also seen that while it might be a central feature in the program, Kerby alone cannot carry forward all of the Council's education efforts. They too have developed more strategic and comprehensive education approaches.

Kerby has also had a major impact on council policy and the nature of recycling programs offered. For example: Cook Shire reports that Kerby has driven the demand for recycling. The community *did not want to know about recycling until Kerby visited. Now recycling rates are high and increasing.*

C. Envirocom Review

In May 2003 Envirocom undertook a review of the Kerby program. The table below is quoted from the report and indicates each recommendation and relevant costing. It is worth considering how similar these recommendations are to some of those detailed below in this report. Those recommendations specifically related to the delivery of education have not been implemented by LAWMAC. As indicated below, there is a real need for an education package and an education coordinator. Training for council staff

responsible for education is also required in order for Kerby to reach its potential as a vehicle for education.

RECOMMENDATION	DETAILS	COST TO LAWMAC
Education package	Development of a generic education package that can be readily adapted and delivered throughout LAWMAC member communities. Package is being developed by EPA with NPC funding.	NIL
Education Coordinator	Employment of a full time Waste Education Coordinator	\$45,000 salary and associated costs
Generic Marketing Package	Development of marketing materials and provision to LAWMAC in electronic format	\$4900
Providing the Links Kits	Cost based on one copy per school in Council area	\$35 per copy
LAWMAC Website	Design and writing of LAWMAC website	\$6200 Hosting costs are dependent on where the site is located
Training	Design, development and delivery of one day waste education training course including provision of materials.	\$3200 for one day only \$4800 if held in two locations plus airfares and accommodation

Major Conclusions

Evaluating Kerby has been a challenge. There is so much good about the program and yet it has not even gone part of the way to reaching its full potential. It is as though there has been so much energy expended on obtaining and managing the infrastructure that effective implementation has been somewhat overlooked. The conclusions below, point largely to the shortcoming of the project and that is fair, given the absence of program material and data about impact. But Kerby is so visible and well loved that it cannot be damned on the strength of some shortcomings. The reality is that there is substantial amount to do to turn Kerby from an icon to an education program. It is in this context that the conclusions and recommendations are framed.

Kerby is an effective education mechanism with students and their teachers: Sufficient evidence exists to demonstrate that Kerby works in schools. It would appear that this is primarily because of the interactive nature of the displays in the bus. These capture the learner and promote a learning experience. The lack of lesson materials is a failing. So much more could be done to promote effective learning in schools and to link the program into the curriculum.

Kerby has been a highly visible vehicle for waste reduction and recycling. Kerby has generated a great deal of media coverage about waste issues. This has both promoted the location of the bus so that people visit and notice it and has delivered broad waste reduction messages into the community. A significant advantage of Kerby as an education medium is its visibility.

Kerby has had a significant impact on council practices about recycling. There is quite a lot of evidence that Kerby has impacted on some council's policies about waste reduction and recycling. The visibility of Kerby has meant that people in the community have considered the range of local services provided and asked questions about how these might be extended

There is some evidence that Kerby has had an impact on waste generation and recycling rates. It is always difficult to link education efforts specifically to waste reduction or increased recycling. Interestingly with Kerby, there is some evidence of waste stream impact.

There is little hard evidence that Kerby is an effective education mechanism with adults: It is an objective of Kerby that it will influence adult knowledge and behaviour. Apart from some hard data from the Johnstone Shire [see table above] there is little data available to support the effectiveness of Kerby with adults. This is not to say that it does not work effectively. Rather that because adult data was not collected during the snapshot period [February and March 2005, 5 surveys only] and apart from Johnstone Shire, councils seem not to have evaluated adult programs in the period from 2002 to 2005, no information is available. This conclusion is of some concern given that adults are the waste generators and are primarily responsible for waste management processes [recycling] at home.

Kerby lacks a formal reporting and evaluation process: There is no reporting or evaluation process in place for Kerby. The following quote from an EHO demonstrates this problem "....these groups were given a guided tour and I recall some quick feedback was sought from students to gauge their interest in bringing Kerby back to the region [note not to determine what knowledge they had gained or behaviour they might change]. While I am unable to remember specific quotes I do remember enthusiastic groups full of praise for both the unit and the concept of

recycling.” This is interesting but clearly not good enough. Kerby deserves more than this by way of evaluation and reporting.

What reporting does occur focuses on maintenance of the bus: A number of councils have written reports for LAWMAC about the use of the bus and these were tabled as part of the evaluation. The problem is that they are not evaluative. In the main they provide data about where the bus visited and how many people it accessed. They provide no other evaluation and spend a significant percentage of the time indicating the problems that existed with the bus, aspects of the displays that were not working, mechanical problems, access problems, cleanliness issues at handover and accident reports. This is all essential information for the ongoing use of the bus but of little evaluative substance.

Kerby lacks an annual reporting process: While some councils provide reports to LAWMAC about their use of Kerby, this appears not to be done on all occasions of use and the information is not collated in any way. This makes it difficult for LAWMAC to provide comprehensive information to stakeholders about their program, its use and affect. It is a significant failing and should be rectified as soon as possible. Linking reporting to the booking system also would be of significant value.

There is a lack of educational material related to using Kerby. Apart from a one-page handout in the Kerby Checklist Document there is no LAWMAC material for council staff or teachers about how to use Kerby as an educational experience. There are no lesson outlines, no curriculum links, no advice to EHOs about use in community events. There is no encouragement or support for teachers to link Kerby within their ongoing curriculum. Some councils [see Cairns Water above] have developed their own local material and left it with schools. This does not seem to have been shared cross the region. It is essential that if Kerby is to be used as a focus for educational efforts that some assistance is provided in how to deliver education in formal settings and in the community. The organizers of Kerby would be well advised to look at the teaching learning material [18 lessons] developed for use in the Gold Coast City Council’s Wipe Out Waste Program and to develop something similar. It is noted that in their 2003 report Envirocom pointed out that the lack of material for teachers was of concern. Their kit *Providing the Links* would be of value for use with Kerby in the short term, but seems to have been largely ignored.

There is a general lack of educational competence: Despite the best of intentions and an amazing level of energetic users, LAWMAC lacks sufficient understanding of and competence in the delivery and evaluation of education. The bus is great infrastructure but its potential as an educational mechanism is not close to being reached. Placing Kerby in a venue and letting people play with it for twenty minutes [each class, see Kerby Checklist], is not education directed at growing knowledge, exploring attitudes or changing behaviour. In order to gain full value from Kerby some continuing education expertise needs to be available and brought to bear with council staff. In addition, training for council staff on the use of education is also required

There is a lack of a strategic approach to education [and the use of Kerby in an integrated manner] in many councils: Those councils that have developed a strategic approach to waste management [education] use Kerby much more effectively than those who have no apparent strategy. It is essential that all LAWMAC councils develop waste management strategies which include education as a significant tool.

There is limited linkage of education efforts [including Kerby] to waste data. It is also important to note that in general there is no linkage of education to waste data. No monitoring of waste to landfill or recycling rates occurs in order to measure the

impact of any program [Kerby or other]. It is as though the intervention occurs at a level removed from the issue.

Recommendations

Kerby is an excellent educational tool, but its effectiveness is severely limited by the lack of understanding of the educational process, a failure to evaluate its effectiveness and proper educational materials and systems. The following recommendations are designed to address these limitations and to ensure that full benefit is gained from an effective tool

K1. It is essential that if Kerby is to be used in schools that it must provide better links to the curriculum and the ongoing education process about waste and environment issues within the classroom before and after the visit. In this regard lesson plans are required that introduce Kerby and promote follow-up work after the bus has left the school [introduction to waste lessons]. These should be provided prior to the use of Kerby in all schools that Kerby visits see also recommendation K11].

K2. It is recommended that LAWMAC employ an education officer for a period of six months to develop a curriculum linked schools package of lesson materials for use with Kerby. In the main these should be focused on pre-school to primary aged children, with some lesson material for secondary students in a limited number of key learning areas only. In addition, this officer should develop a list of hints for using Kerby at local community events.

K3. Further to recommendations K1. and K2. above it is recommended that LAWMAC seek funding and appoint a full time education officer. The role of this officer would be to support councils in the delivery of education generally, to assist in maximizing the use of Kerby [and the proposed second LAWMAC bus as educational mechanisms and to develop appropriate educational materials which optimise the educational experiences and programs provided in each facility.

K4. Schools appear to be the major focus of the Kerby program. This is despite the fact that adults generate most of the waste and usually manage the recycling system at home. It is recommended that LAWMAC extend the use of Kerby as an adult education tool. This might occur by strongly promoting the use of Kerby at all major community events, at school fetes and fairs, in shopping centres and tourist centres. During the time that Kerby is in town, maximum adult exposure is very important. As indicated in recommendation K2. above councils need support on how to gain the maximum use from Kerby as an adult education mechanism.

K5. It is recommended that training in how to plan, deliver and evaluate education for council staff in the LAWMAC region is urgently needed. This should focus in part on how to incorporate the use of Kerby into a strategic approach to education with the community and with school students. Such training should be mandatory for all LAWMAC member councils. It might incorporate case studies from LAWMAC councils about how Kerby has been used strategically as part of an ongoing community education process.

K6. It is recommended that a data base is established so that booking of Kerby and reporting can be carried out on line. Appendix 4 contains information about what this data base might contain. LAWMAC should

develop this as soon as possible and makes its use mandatory for every Kerby user.

K7. It is recommended that LAWMAC develop a system for collating all of the information in the database [see recommendation ... above] into a Kerby annual report and that this should be provided to all stakeholders.

K8. It is recommended that LAWMAC developed an evaluation protocol for Kerby and that evaluation occurs at each occasion of use. Appendix 5 is provided to assist LAWMAC in this regard. In addition it is recommended that LAWMAC use the Teacher's Evaluation Form [see appendix 3] to collect information from teachers on each occasion that the bus visits a school.

K9. It is recommended that LAWMAC ensures that Kerby is used equitably across the entire region and by all member councils. It is of concern that some councils have not yet accessed Kerby and while distance and population issues are acknowledged, there is an urgent need to extend the reach of the program.

K10. It is recommended that LAWMAC identifies how Kerby might be used more effectively during the summer period. Perhaps a summer promotion at a major tourist centre/centres might be worth investigating and possibly trialing in the future.

K11. Currently schools that are provided with a Kerby visit get the whole thing for free and are not expected to provide anything in return for receiving an exciting, interesting educational experience for their students. This is not appropriate. It is recommended that LAWMAC places conditions on all schools that are visited by the bus. These include the following

- That schools who are to be visited by Kerby deliver the introduction the Waste lessons as recommended in 1 above
- That the evaluation activities for students, teachers and parents are undertaken in-school in line with Appendix 5. Schools that use Kerby have a responsibility to administer and collate the evaluation and provide a brief report to Council about its effectiveness.

Appendix 1. LAWMAC Member Councils

The Local Authority Waste Management Advisory Committee [LAWMAC] is a group representing councils in north and western Queensland. It comprises elected officials and staff from all member councils and meets four times per year. The Committee is chaired by Cr Dave Egan [Douglas Shire] and the deputy is Cr Wendy Western [Nebo Shire]

LAWMAC comprises 20 member councils and 8 corresponding councils.

The member councils are:

Atherton Shire
Bowen Shire
Burdekin Shire
Cairns City
Cardwell Shire
Charters Towers Shire
Cook Shire
Douglas Shire
Herberton Shire
Hinchinbrook Shire
Johnstone Shire
Mackay City
Mareeba Shire
Marani Shire
Mt Isa Shire
Nebo Shire
Sarina Shire
Thuringowa Shire
Townsville City
Whitsunday's Shire

The corresponding councils are:

Burke Shire
Carpentaria Shire
Cloncurry Shire
Croydon Shire
Dalrimple Shire
Eacham Shire
Etheridge Shire
McKinlay Shire

LAWMAC has affiliations with [and representations from]:

- The Local Government Association of Queensland
- The Queensland Environmental Protection Agency
- The Tropical Public Health Unit
- The Beveridge Industry Environment Council
- The Waste Management Association
- Envirocom
- Visy Recycling
- Drummuster
- Metalcorp

Appendix 2. Waste Education Facilities Evaluation Project: Outcomes Hierarchy: LAWMAC Project: Kerby Outcomes Hierarchy

Outcome	Objective	Evaluation Question	Data Source
7. Waste has reduced and/or recycling increased as a result of Kerby's impact.	What evidence is there that waste was reduced and/or recycling increased as a result of Kerby?	<ul style="list-style-type: none"> Any relevant council data from participating councils [snapshot only and form some of the 31 councils involved]
6. People who accessed Kerby reported that they intended to behave differently [or have behaved differently] as a result of the education received.	What evidence is there that Kerby impacted on community behaviour [self reported behavioural intentions]?	<ul style="list-style-type: none"> Data from council reports [snapshot only] Data from February participant survey
5. Improved attitudes towards waste management and recycling	Objectives 3, 4, 5	To what extent has Education provided through Kerby impacted upon attitudes of participants?	<ul style="list-style-type: none"> Data from February participant survey Council report data [snapshot] Stakeholder interviews
4. Demonstrated increases in people's knowledge occurred as a result of Kerby.	Objective 3, 4, 5	What evidence is there that Kerby was responsible for increasing community knowledge about waste management and recycling?	<ul style="list-style-type: none"> Data from February participant survey Council report data
3. People in local communities across the LAWMAC region saw Kerby as engaging and informative.	Objectives 1 and 2	What evidence is there that Kerby was engaging and informative?	<ul style="list-style-type: none"> Data from February participant survey Stakeholder interviews
2. People in local communities across the LAWMAC region accessed Kerby for education and information.	Objectives 1 and 2	To what extent did people in local communities access Kerby (across the LAWMAC region)?	<ul style="list-style-type: none"> Data from a variety of council reports to date Stakeholder interviews
1. Kerby has provided education about waste management and recycling across the entire LAWMAC region	Objectives 1 and 2	To what extent has Kerby serviced the whole LAWMAC [Far North Queensland region in the period... to December 2004?	<ul style="list-style-type: none"> Data from a variety of council reports to date Stakeholder interviews

Project Objectives:

7. To educate the public on ways to minimise contamination in the kerbside recycling process
8. To increase the profile and communicate the importance of kerbside recycling within the community
9. To raise awareness of recycled and recyclable products
10. To raise awareness of problems associated with littering
11. To raise awareness of public place recycling strategies
12. To enable local shires to distribute educational material

Appendix 3: Copies of Snapshot Questionnaires

What Did You Learn? What Will You Do? Kerby [LAWMAC] Visit: Adult Community Questionnaire

Thank you for filling out this form. It will take you about five minutes. Your feedback will help us to improve our education services. Please circle the best answers for you and add your comments in the spaces provided.

DO NOT WRITE YOUR NAME ON THIS FORM.

Please give the completed form to the staff member on site

1	Were the educational materials/activities in Kerby interesting? 1 Not interesting 2 Quite interesting 3 Very interesting
2	Were they easy to understand or difficult? 1 Very difficult 2 Quite difficult 3 Quite easy 4 Very easy
3	Did you agree with what they were saying? 1 No, I disagreed with most 2 Yes, I agreed with most 3 I agreed with all of it
4	Did you learn anything you didn't know before? 1 No, nothing new 2 I learned a bit 3 I learned a lot What were the main things you learned? _____
5	Do you now know more about why recycling is important? 1 No more 2 More 3 Much more 4 I already knew a lot
6	Do you now know more about how recycling is done? 1 No more 2 More 3 Much more 4 I already knew a lot
7	Do you now know how to tell which things are recyclable and which are not? 1 No 2 Maybe 3 Yes 4 I already knew
8	Do you now know why it is important not to put things that are not recyclable into recycling bins? 1 No 2 Maybe 3 Yes 4 I already knew
9	Do you now know why it is important to reduce waste? 1 No 2 Maybe 3 Yes 4 I already knew
10	Do you now know more about how to reduce waste? 1 No 2 A bit more 3 Much more 4 I already knew
11	Do you now know more about why littering is a problem? 1 No 2 A bit more 3 Much more 4 I already knew
12	Do you now know more about penalties for littering? 1 No 2 A bit more 3 Much more 4 I already knew
13	Have you changed what you think about recycling? 1 No change, I don't support recycling 2 I'm more in favour of recycling now

	3 I'm much more in favour of recycling	4 I already strongly supported recycling
14	Do you think you will do anything differently in future? 1 No 2 Maybe 3 Yes If yes, what will you do differently? <hr/>	
15	Which of the following things might you now do? 1. Recycle more 1 No 2 Yes 2. Make less waste 1 No 2 Yes 3. Reuse more things 1 No 2 Yes 4. Buy less packaging 1 No 2 Yes 5. Litter less 1 No 2 Yes 6. Talk with people about reducing waste 1 No 2 Yes	

Thank you very much for your help

What Did You Learn? What Will You Do?
Kerby [LAWMAC] Visit: School Students Survey

Thank you for filling out this form. Your answers will help us to improve our lessons. Please circle the best answer for you and add your comments in the spaces provided. **DO NOT WRITE YOUR NAME ON THIS FORM.**

Please give the form back to your teacher

1	Was Kerby interesting? 1 Not interesting 2 Quite interesting 3 Very interesting
2	Were the activities easy to understand or difficult? 1 Very difficult 2 Quite difficult 3 Quite easy 4 Very easy
3	Did you agree with what they were saying? 1 No, I disagreed with most 2 Yes, I agreed with most 3 I agreed with all of it
4	Did you learn anything you didn't know before? 1 No, nothing new 2 I learned a bit 3 I learned a lot What were the main things you learned? _____
5	Do you now know more about why recycling is important? 1 No more 2 More 3 Much more 4 I already knew a lot
6	Do you now know how to tell which things are recyclable and which are not? 1 No 2 Maybe 3 Yes 4 I already knew
7	Do you now know why it is important not to put things that are not recyclable into recycling bins? 1 No 2 Maybe 3 Yes 4 I already knew
8	Do you now know why it is important to reduce waste? 1 No 2 Maybe 3 Yes 4 I already knew
9	Do you now know more about how to reduce waste? 1 No 2 A bit more 3 Much more 4 I already knew
10	Do you now know more about littering? 1 No 2 A bit more 3 Much more 4 I already knew
11	Do you now know more about the fines for littering? 1 No 2 A bit more 3 Much more 4 I already knew
12	Have you changed what you think about recycling? 1 No change, I don't support recycling 2 I'm agree more with recycling now 3 I agree much more with recycling 4 I already strongly supported recycling
13	Do you think you will be less likely to drop litter in future? 1 No change 2 Less likely to litter 3. much less likely to litter 3 I already never litter
14	Will you talk to your parent/s about recycling and reducing waste? 1 No 2 Maybe 3 Yes
15	Which of the following things would you like your parents to do? a. Recycle more 1 No 2 Yes b. Make less waste 1 No 2 Yes

	c. Reuse more things	1 No	2 Yes
	d. Buy less packaging	1 No	2 Yes
	e. Litter less	1 No	2 Yes

Thank you very much for your help

What Did You Learn? What Will You Do?
Kerby [LAWMAC] Visit: Teacher Feedback Questionnaire

Thank you for filling out this form. It will take you less than ten minutes to complete. Your feedback will help us to improve our educational services. Please circle the best answers for you and add your comments in the spaces provided. **DO NOT WRITE YOUR NAME ON THIS FORM.**

Please give the completed form to the staff member on-site.

1	<p>Did your students find the educational materials in Kerby interesting? 1 Not interesting 2 Quite interesting 3 Very interesting</p> <p>If interesting, what made it interesting?</p> <p>_____</p> <p>_____</p> <p>If <u>not</u> interesting, how could it have been more interesting?</p> <p>_____</p> <p>_____</p>
2	<p>Did they find these materials/activities easy to understand or difficult? 1 Very difficult 2 Quite difficult 3 Quite easy Very easy</p> <p>If difficult, what made it difficult? What could have made it easier?</p> <p>_____</p> <p>_____</p> <p>If easy, what made it easy?</p> <p>_____</p>
3	<p>Did your students learn anything they didn't know before? 1 No, nothing new 2 They learned a bit 3 They learned a lot</p> <p>What were the main things they learned?</p> <p>_____</p> <p>_____</p>
4	<p>Do they now have a better understanding of why recycling is important? 1 No better 2 Better 3 Much better 4 Most already knew</p>
5	<p>Do you they now have a better understanding of how recycling is done? 1 No better 2 Better 3 Much better 4 Most already knew</p>
6	<p>Are they now better able to tell which things are recyclable and which are not? 1 No better 2 Better 3 Much better 4 Most already knew</p>
7	<p>Do they now have a better understanding why it is important to keep non-recyclable items out of recycling bins?</p>

	1 No better 2 Better 3 Much better 4 Most already knew
8	Do they now have a better understanding why it is important to reduce waste? 1 No better 2 Better 3 Much better 4 Most already knew
9	Do they now know more about how to reduce waste? 1 No 2 A bit more 3 Much more 4 Most already knew
10	Do they now know more about the cost of littering? 1 No 2 A bit more 3 Much more 4 Most already knew
11	Do they now know more about penalties for littering? 1 No 2 A bit more 3 Much more 4 Most already knew
12	Did you find the messages in these materials appropriate? 1 No, I disagreed with most 2 Yes, I agreed with most 3 Yes, I agreed with all Which messages did you disagree with or find problematic, if any? _____ _____ _____
13	If you noticed any gaps in the information provided, what were they? _____ _____ _____
14	Please outline how this session fits in with other lessons or school activities. _____ _____ _____ _____ _____
15	Can you suggest any ways to improve waste education for school children or the community in general? _____ _____ _____ _____ _____

16	Are there any other comments you would like to make? <hr/> <hr/> <hr/> <hr/>
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Thank you very much for your help

Appendix 4. Proposed Data Base for Kerby Use

Recommendation K6 above proposes that a data base is established to ensure that information obtained from every use of Kerby is collected, collated and made available

The following suggestions are provided for the fields that the data base should contain. Once the data base is established the relevant officer in each council must complete it after each block booking and insert the information into the appropriate section of the LAWMAC website

1. Name of Council.....
2. Officer name and contact information.....[who completed this data]
3. Date of Kerby visit.....arrival.....departure
4. Schools access data:
 - Number of schools.....
 - Number of students.....
 - Number of classes.....
 - What lessons.....
5. Community access data
 - Number of community members accessed.....
 - Location of access.....
6. Other access data where relevant.....
7. Media generated by Kerby visit
 - Newspaper.....
 - Radio....
 - Television....
 - Other....
8. Major impacts of the visit....
9. Evaluation data about knowledge attitudes and behaviour. What is included in this section depends on the level of evaluation activity that is undertaken... See recommendation K8 and appendix 5. However the following broad data categories are proposed

Evaluation Aspect	Growth in knowledge	Change in attitudes	Change in behaviour intent
Students			
Teachers			
Community Members			
Others			

10. Any impact that can be determined on the waste stream
 - Waste to landfill rate...
 - Recycling rate...
 - Contamination rate...
 - Other....

Appendix 5: Proposed Generic Kerby Evaluation Framework

Recommendation K8 proposes that LAWMAC develops an appropriate evaluation process for the future. The attached framework including sample questions is designed for use by all councils who are using Kerby to promote increased understanding of waste. Its use should be mandated by LAWMAC and data provided through the data base, outlined in Appendix 4 above.

Recommendation K11 outlines the roles that schools should play in this regard.

Evaluation Framework. Information should be collected about the impact that Kerby has had on knowledge attitudes and behaviours of a range of people on each occasion of Kerby’s visit to a council area. The following table outlines who information should be collected from and what data should be collected. It is the responsibility of the council booking Kerby to collect, collate and report upon the data.

Who to get data from?	What to get data about? [Note: at the minimum data is required about the following	How to get data?
School students	<ul style="list-style-type: none"> • Knowledge of waste management • Knowledge of recycling • What they are doing to improve recycling/waste management 	<p>Simple survey best administered to 20% of students [cross grade] pre and post visit</p> <p>Pre visit: In school administered by teachers.</p> <p>Post visit: administered by “Kerby staff” prior to children finishing the session [20% from each school only]</p>
Teachers	<p>Their views about the relevance of the visit/program</p> <p>Their views on what knowledge shift and behaviour intent changes resulted</p>	<p>Use the Teacher survey form in Appendix 3.</p> <p>All teachers in each school could be asked to complete</p> <p>The school could be asked to collate into one school report [in return for the visit].</p>
Parents	<p>To what extent did the Kerby visit spark discussion at home about the program/waste issues and recycling</p>	<p>Parent survey form developed and sent to 5% of parents whose students were in the Kerby program.</p> <p>School collates data and provides report</p>
Community	<ul style="list-style-type: none"> • Knowledge of waste management • Knowledge of recycling • What they are doing to improve recycling/waste management 	<p>A simple survey form to be complete by all community visitors to the bus at local events. Adapt the Adult questionnaire in Appendix 3 above. It needs to be shorter</p>
Stakeholders/Media	<ul style="list-style-type: none"> • Opinions about knowledge of 	<p>Collection of information</p>

etc	waste management and recycling <ul style="list-style-type: none"> Views on how the community is progressing to reduce waste 	and views expressed anecdotally and in the media. No formal process of data collection proposed
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Note the collation of and analysis of data appears on the surface to be an onerous responsibility for schools. If it was undertaken however, as a Maths project by a senior class, it could be easily completed and mean little work for the staff

Evaluation Questionnaires

The following questionnaires are proposed. These might need to be adapted as a part of the implementation of Recommendation 1.

School Students/Community Survey

The following questions are provided for use in the students/ community questionnaire. They will need to be adapted as appropriate

<p>Why is waste a problem in Queensland <i>[Circle the most correct answer]</i></p> <ul style="list-style-type: none"> There is not enough landfill sites available We are wasting important resources It just gets littered Nothing gets reused Other reasons... please state
<p>How important is reducing waste to you? <i>Circle the correct response</i></p> <p>1. Very important 2. Important 3. Not at all important</p>
<p>Were the activities in Kerby easy to understand or difficult?</p> <p>1 Very difficult 2 Quite difficult 3 Quite easy 4 Very easy</p>
<p>Did you agree with what they were saying?</p> <p>1 No, I disagreed with most 2 Yes, I agreed with most 3 I agreed with all of it</p>
<p>Did you learn anything from Kerby that you didn't know before?</p> <p>1 No, nothing new 2 I learned a bit 3 I learned a lot</p> <p>What were the main things you learned?</p> <p>_____</p>
<p>Are the following products recyclable? <i>Circle as many of the following that you know to be recyclable</i></p> <ul style="list-style-type: none"> Wood Glass Aluminum

1. Recycle more
2. Talk with you more about waste issues
3. Litter less
4. Buy products with less packaging
5. Reuse things more
6. Get more involved in household waste activities [e.g. composting etc]

Have there been changes in the way that you manage waste at home since the Kerby visit. Do you: *Circle as many correct answers as you like*

1. Recycle more often
2. Recycle more products
3. Put the right things in the recycling more
4. Reuse more
5. Compost of worm farm more
6. Purchase less packaging
7. Only buy what you need
8. Other actions.... What are they