

NORTH EAST WASTE FORUM

NEW WAYS WITH LESS WASTE

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Early Childhood Waste Wise Education Project Evaluation Report June 2008

Overview of the project

The NEWF Early Childhood (EC) Waste Wise Education project has been designed to assist and support Childcare Centres and Preschools in NEWF Council areas to reduce waste through the provision of training and support and implementation of simple waste reduction measures in their Services i.e. reduce paper waste, reduce organic waste, increase recycling and resource recovery. This project builds on existing resources already available in other regions – e.g. Lady Gowrie program, Rous Water Early Childhood Water Wise Project, and on NEWF projects such as the Business Waste Reduction Program and Eco-friendly Youth Project. The amount of waste that an early childhood service generates is dependant on a number of factors. Long Day Care (LDC) Centres can have up to 90 children per day and may provide morning tea, lunch and afternoon tea. This means that a lot of organic waste is produced onsite daily due to the catering of meals for a large amount of children. LDC Services often have up to 30 babies per day which means that disposable nappies make up a great deal of waste generated. It is much more complicated for Long Day Care Centres, due to numbers of staff and children, to successfully implement waste wise strategies. Preschools in comparison rely on children bringing packed lunches and children are usually between three and five years of age. Preschools may have between 5 to 20 children per day. Packed lunches are very useful to show children what types of “rubbish” can be recycled, composted or avoided. Routines can be implemented for the children to separate the waste themselves and low waste lunches can be promoted to educate parents in waste avoidance.

Early Childhood Waste Wise Project

Coordinator, Georgie Piper, talking to children and staff at Sandhills Early Childhood Centre's final waste audit about what was in the rubbish bins, and what more could be recycled or composted. Sandhills have potentially diverted more than 2000 kg annually through implementing waste reduction measures in their Centre (Left). Building a worm farm earlier in the project with the children from Sandhills (Below).



The specific objectives of the project are:

- a) increase** awareness of waste reduction practices in Early Childhood Services;
- b) build** the capacity of staff to implement sustainable waste practices through provision of a staff training program (with the assistance of environmental training already in place – e.g. Lady Gowrie and Rous Water Education Program), waste assessment, waste management plan and in-house support.
- c) support** the implementation of simple waste reduction measures in Early Childhood Services;
- d) integrate** sustainable waste practices into the children’s educational activities provided at the Services – i.e. Worm-farm, compost activities, songs, books and waste separating routines for children.

The project was designed with the Early Childhood knowledge of the project contractor (contracted for 6.5 days per month over the past 12 months), and drawing on the successful models of the NEWF Eco-friendly Youth Project and the Business Waste Reduction Program. An overview of the steps undertaken by Services to become “Waste Wise” are provided in Appendix 1.

Eleven EC Services have taken part in the project over the past 12 months. Nine additional EC Services attended Our Children & Our Environment: Take action, take care! Workshop and received training in waste wise strategies. A further eight EC Services have expressed interest in participating in the project for 08-09. See **Appendix 2** for more detailed information on this.

The table below summarises the steps undertaken with each of the services participating in the project.

Visits to EC Services					
Service	Initial Waste Audit	Staff Meeting & development of Waste Reduction Action Plan WRAP	Children’s Group time	Compost/ Worm farm delivery/demo	Second Waste Audit
Wollongbar Preschool	Yes	Yes	Two	Yes	Yes
Rainbow LDC	Yes	No	Two	Yes	Yes
East Ballina LDC ABC	Yes	WRAP developed	Two + parent night	No	No
Grafton ABC LDC	Yes	WRAP developed	Two	Action Plan underway	
Jack & Jill Preschool	Yes	Yes	One	Yes	Yes
Lawrence Preschool	Yes	Yes	One	Yes	Yes
Evans Head Preschool	Yes	Yes	One	Yes	Yes
Jumbanna Early Int.	Yes	Staff meeting to be booked			
Federal LDC	Yes	Yes	One	Yes	No
Sandhills LDC	Yes	Yes	Two	Yes	Yes
Mullumbimby Preschool	Yes	Offered a worm farm but Service already very “Waste Wise”.			

Evaluation Summary

This evaluation has been undertaken twelve months since the commencement of the Early Childhood (EC) Waste Wise Education Project.

The evaluation of the project was achieved through:

- on-site visits to Services by the EC project coordinator to audit waste generation. Two waste audits were completed at each Service, one initial audit and the second audit for evaluation/review purposes.
- assessment of Services Waste Reduction Action Plans (WRAP)
- staff survey
- interview with Directors of services
- evaluation of the Ballina Our Children & Our Environment: Take action, take care! Workshop which was run in conjunction with Rous Water.

Six EC Services have completed the Evaluation Process. Three Long Day Care Services are still working through Waste Reduction Action Plans (WRAPS) and one service with two satellite Preschools has only just commenced the process. All of these Services will undergo an evaluation process at a later date.

The following outcomes have been achieved overall in the project (please refer back to the aim and objectives of the project).

☐ Reduced waste generation at Early Childhood Services

Of the eleven early childhood services participating in the project, six were evaluated to assess waste reduction outcomes. In total, a potential 2827.80 kg annually of waste have been diverted from landfill through implementing recycling systems, introducing composting, and initiating other waste avoidance measures (for example, reducing the amount of disposable nappies used at the Service). It should be noted that due to time constraints, lack of communication and the large workload of the Director, one Service reported an increase in the waste in the general waste bins. The Service has now committed to new measures to reverse this result. *

(*Please note, this result highlights the difficulties faced by LDC Directors. While staff at this Service are committed to Environmental Education, this particular Director is responsible for all families, staff management, an early intervention and an after school care program. This workload has reflected in difficulty in implementing a Centre Waste Wise Focus.)

☐ Increased awareness of waste reduction practices in Early Childhood Services

Staff survey results (see **Appendix 3**) reflect an increase in awareness from Average before the Project to Very Good after involvement in the Project. The interview with Directors of Services further supports this. Additionally, through the Project's promotional strategy, the awareness of what is happening in Services has been actively promoted throughout the NEWF region and indeed nationally.

☐ Increased skills of staff to implement sustainable waste practices through provision of a staff training program (with the assistance of environmental training already in place – e.g. Lady Gowrie and Rous Water Education Program), waste assessment, waste management plan and in-house education programs, the skills and knowledge of staff to sustain waste wise practices have increased. Staff survey results (**Appendix 3**) indicate a majority increase in skill level through participation in the project. The interview with the Directors of Services identified that these skills developed through staff meetings, audits, demonstrations and education programs are being translated into direct actions to reduce waste.

☐ Implementation of simple waste reduction measures in Early Childhood Services

The Directors of Services feedback indicated a number of measures which have been introduced specifically at their services as a result of the project, including:

- Five out of Six Services increased the accuracy of separation of materials to a high level, increased separation of recyclables, composting and/or worm-farming, low-waste lunches, purchasing items with recyclable content and avoiding chemicals.
- All of the preschools undertook promotion of low waste lunches at their Services. All Services reported an increase in the numbers of low waste lunches being brought in by children. Three services have up to 80 percent low waste lunches each day following promotion of the concept.
- All services were purchasing or considering the use of items with recycled content after taking part in the project.

☐ Integrating sustainable waste practices into the activities provided at the Centres

All staff responding indicated that they strongly agreed that the project enabled them to integrate a waste wise focus into the children's routines, activities and incorporate the focus into everyday interactions with the children. This had been achieved through worm farm and compost activities (actively involving the children in composting), language times and through the NEWF Coordinator organizing composting demonstrations and children's group times. Parents have also been encouraged to participate in the processes undertaken.

Waste Audit Results

The results of the waste audits undertaken are summarised below.

Sandhills Long Day Care Byron Bay	Initial Waste Audit kg/day	Final Waste Audit Kg/day	Difference kg/day
Paper/cardboard in general waste	2.01	0.2	1.81
Compost in general waste	1.22	0.36	0.86
Co-mingled Recyclables in general waste	0.74	0.13	0.61
Disposable Nappies in general waste	9.95	6.07	3.88
Paper towel in general waste	0.36	0.42	+0.06
Home made playdoh in general waste	1.12	0.86	0.26
Non-retrievables in general waste	1.47	0.82	0.65
Reduction of waste in one day			8.01kg
Possible reduction per year (5 days a week x 50 weeks)			2002.50kg

Evans Head Community Preschool	Initial Waste Audit kg/day	Final Waste Audit Kg/day	Difference kg/day
Paper/cardboard in general waste	0.17	0.09	0.08
Compost in general waste	1.94	0.00	1.94
Co-mingled Recyclables in general waste	0.05	0.20	+0.15
Disposable Nappies in general waste			
Paper towel in general waste	0.33	0.00	0.33
Home made playdoh in general waste			
Non-retrievables in general waste	0.50	1.20	+0.7
Reduction of waste in one day			1.5
Possible reduction per year 5 days per week x 42 weeks			315kg

Wollongbar Community Preschool	Initial Waste Audit kg/day	Final Waste Audit Kg/day	Difference kg/day
Paper/cardboard in general waste			
Compost in general waste	0.33		0.33
Co-mingled Recyclables in general waste	0.83		0.83
Disposable Nappies in general waste		0.35	+0.35
Paper towel in general waste	0.18		0.18
Home made playdoh in general waste			
Non-retrievables in general waste	0.44	0.38	0.06
Reduction of waste in one day			1.05
Possible reduction per year 5 days per week x 42 weeks			220.50 kg

Jack & Jill Preschool Grafton	Initial Waste Audit kg/day	Final Waste Audit Kg/day	Difference kg/day
Paper/cardboard in general waste	0.12		0.12
Compost in general waste	0.60	0.18	0.42
Co-mingled Recyclables in general waste	0.01		0.01
Disposable Nappies in general waste			
Paper towel in general waste			
Home made playdoh in general waste			
Non-retrievables in general waste	0.72	0.18	0.54
Reduction of waste in one day			1.09
Possible reduction per year 5 days per week x 42 weeks			228.90

Lawrence Community Preschool	Initial Waste Audit kg/day	Final Waste Audit Kg/day	Difference kg/day
Paper/cardboard in general waste	0.17	0.02	0.15
Compost in general waste	0.10	0.06	0.04
Co-mingled Recyclables in general waste	0.08		0.08
Disposable Nappies in general waste			
Paper towel in general waste			
Home made playdoh in general waste			
Non-retrievables in general waste	0.03	0.01	0.02
Reduction of waste in one day			0.29
Possible reduction per year 5 days per week x 42 weeks			60.90

Rainbow Children's Centre, Ballina	Initial Waste Audit kg/day	Final Waste Audit Kg/day	Difference kg/day
Paper/cardboard in general waste	0.77	4.11	+3.34#
Compost in general waste	3.13	2.29	0.84
Co-mingled Recyclables in general waste	0.19	1.32	+1.13
Disposable Nappies in general waste	4.44	3.29	1.15
Paper towel in general waste	1.25	2.22	+0.97
Home made playdoh in general waste	0.82	1.03	+0.21
Non-retrievables in general waste *Please note: materials not able to be separated due to consistency. Specifically, sand, leaves, wet paper towel, tissues, sticky food, cake, small pieces of plastic, playdoh, plastic wrap, broken down and in a combined state. Separation at time of discarding is the answer.	1.52	6.04	+4.52
Extra Waste in second audit, increase in Waste			8.18 increase
Increase identified as result of separation routines not working and lack of staff communication. . Director very time poor. This Service initially chose to not take up offer of staff meeting with EC Waste Wise Coordinator. # Cleaner not adhering to Service routines (paper/cardboard separated but put in general waste bin). Director of Service indicated that they would like to continue with the project to reverse outcome. Coordinator agreed to this proposal. Staff meeting now planned as further education, implementation of routines and bin signage may assist.			

Promotional opportunities

Through creating and participating in the following promotional opportunities, the Project and the NEWF have further promoted the importance of waste avoidance and resource recovery issues in Early Childhood settings and how the NEWF is actively involved in achieving this.

Local and regional media

Local community newspapers have been used to promote the Early Childhood Waste Wise Project. Articles with photos have been sent to all local and regional newspapers to promote Services involved in the Project. The Workshop Our Environment & Our Children: Take action, take care! was also promoted in the local print media.

National Childcare Magazine

The project featured in a two page spread in a national childcare magazine "childcare australasia" which is distributed throughout Australia and New Zealand.

NSW Early Childhood Environmental Education Network (ECEEN)

The combined NEWF/ROUS EC newsletter has been distributed to ECEEN members throughout NSW.

Conferences

- joint presentation with Rous Water at North Coast Early Childhood Association Conference in March 2007 (Education Coordinator)
- Joint presentation at a National Early Childhood Environmental Education Conference in Sydney on the 1st of November 2007.
- display at the Early Childhood Association (ECA), conference at Salt, NSW on the 3rd of April 2008 was used to promote the Waste Wise project.

NEWF Website

The NEWF website contains the Early Childhood Waste Wise Education Project Kit which supports Services to become Waste Wise. This can be accessed by all Services, including those not in the NEWF region. The website is updated and contains the newsletters produced by Rous Water and the NEWF, as well as links to other Early Childhood Environmental Education sites

Through the above promotion of the project there have been many expressions of interest from EC Services wishing to take part. Please see **Appendix 2** for details.



Promotion of Low Waste Lunches at Jack & Jill Preschool, Grafton. Jack Ford and Izzy Brennan. Teachers are Robyn Nixon (centre left) and Kath Lentfer (centre right).



Partnerships and networks

A partnership between Rous Water's Water Aware Centre and the NEWF EC project was created through developing and delivering a joint workshop, Our Children & Our Environment: Take action, take care! (see **Appendix 4**). NEWF/ROUS partnership also produces a joint newsletter focusing on waste and water issues which has been distributed to 70 services in the region. This will be continued throughout 08-09.

Other outcomes

Staff meetings

One of the key aspects of the project was to for the EC Waste Wise Coordinator to attend a staff meeting where possible. At the staff meeting the coordinator aimed:

- To inspire individuals to think about the difference they could make to the amount of waste they discarded each day and asked individuals to consider ways of avoiding waste
- To generate commitment from the staff as a group to work together and implement strategies and routines to avoid and separate waste in their EC Service
- To make all staff aware that they had great potential to educate children and parents to reduce waste in the community and the importance of all aspects of Environmental Education in the Early Childhood Sector.

- To promote autonomy and creativity in Services around “Waste Wise” issues.

Rainbow Childcare centre is an example of a Service which opted not to have a staff meeting. All staff as individuals are highly motivated to reduce waste and educate children accordingly. After completing a second waste audit it was found that the amount of waste thrown out by the service had increased. All the paper separated by office staff for recycling had been placed in the general waste bins by cleaner.

After the second waste audit was complete, the EC project coordinator asked all staff to come out a view separated waste. All staff then saw, how the current systems of separating materials were not working as they were able to see clearly that recyclables and compost were still being thrown in general waste. The outcome to this is that project coordinator will attend a staff meeting in July 2008 and assist staff to set up routines that will work in a large LDC Service.

Feedback from Parents

Feedback from parents has been positive with Services reporting a lot of parental interest and support. One Service reported that a Mum had been asked by her child not to buy poppers anymore as she only wanted to use a drink bottle for lunches. This is one of many such reports. Coordinator has also had positive feedback from parents on Preschool committees.

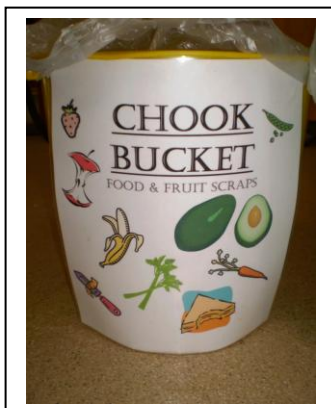
Some interesting happenings

The project has generated many varied and different responses/activities to waste reduction. Some of these include:

- Visits by one Preschool to their local landfill site
- Visit to Preschool by Council Environmental Education Officer for a composting demonstration
- Promotion in Parent newsletters
- Low Waste lunch displays at Preschools
- Parent committees involved in discussions and decision making
- Displays for parents of photos and education material put up by staff
- Children keen to talk to their parents and families about recycling and composting
- Purchasing of products with recycled content
- Children encouraged to draw/write/talk and begin to think about “rubbish” and our environment.

Recommendation for 08- 09 Project Plan

1. Continue to support those services involved in the project through telephone, email;
2. Assist Rainbow Childcare LDC Centre through staff meeting, signage and other measures
3. Approach those centers expressing interest (begin working with the Tweed Centres);
4. Continue the methodology designed, in particular the staff meetings
5. Undertake two waste training workshops, possibly with Rous Water – one in lower Tweed region and one in upper Clarence (* locations will be dependant on the number of Services in the region who can access the workshop)
6. Utilise new resources developed and new Parent display
7. Use the experience and contacts developed over the previous twelve months to ensure that as many EC services as possible in the NEWF area consider incorporating a waste wise focus into their everyday activities and routines.

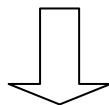


Bin signage used and developed by staff at Wollongbar Preschool. These are used by the children to separate their waste at mealtimes. The children know that the “Chook Scraps” can also be used in a worm farm or composted

Appendix 1: Project methodology diagram

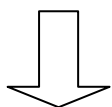
Waste Audit at Early Childhood Service to determine

- What portion of waste can be avoided
- What portion of waste can be composted
- What portion of waste can be recycled? Share information with staff.



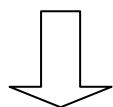
Staff Awareness – It takes a lot of coal, water, energy, oil and trees to make “Rubbish”

Avenues for actions and solutions to reduce waste are:



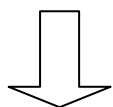
**Routines for
Staff/
Management**

Avoiding Waste.
Purchasing eco friendly
products and those with
recycled content.
Composting.
Recycling.
Avoid Chemicals.
Being water wise.
Environmental plan and
policy.



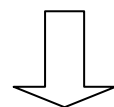
**Routines
with
Children**

Avoid Waste e.g.
careful use of paper
towel.
Composting.
Recycling.
Re-use of materials.
Being water wise.
Enjoying the garden.



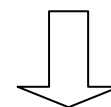
**Curriculum
and Learning
Environment**

Foster Awareness.
Foster appreciation.
Explore:
-Rubbish
-Compost
-Recycling
-Being water wise
-Waste free lunches
-Our environment when
you grow up.



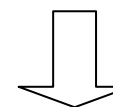
**Outdoor
Environment**

Care and Respect.
Foster relationships with
the natural world and
people.
Vegie Garden.
Herb Garden.
Compost Heap.
Worm Farm.



Families

Share info with families.
Invite participation in
projects.
Promote waste free
lunches.
Fundraise using eco
friendly products.
Promote environmental
awareness.



Community

Be involved in eco
friendly community
events.
Share info with families.
Invite participation from
council environmental
officers or other groups
promoting
environmental
sustainability.

Outcome – Early Childhood Services promoting and working towards sustainable futures for our children

Appendix 2. Early Childhood Services involvement in Project and Expressions of Interest

Early Childhood Service		Status of Service with Project
Byron Shire Council	Mullumbimby Community Preschool	No actions undertaken after initial visit. Preschool already very "Waste Wise".
	Federal Long Day Care Centre (LDC)	Two visits by coordinator, no evaluation available.
	Sandhills Long Day Care Centre	Evaluation complete
Ballina Shire Council	Wollongbar Community Preschool	Evaluation complete
	Rainbow Long Day Care	Second Waste audit completed, marks half way point
	ABC Ballina Long Day Care	Three visits by coordinator, No evaluation available
	River Street Children's Centre	Attended workshop, expression of interest
	Lennox Head Preschool	Attended workshop, expression of interest
	Wollongbar Little Angels (LDC)	Attended workshop
	Baptist Community Preschool	Attended workshop, expression of interest
Richmond Valley Council	Evans Head Community Preschool	Evaluation Complete
	Jumbunna Early Intervention + two satellite Preschools	Initial Waste Audit Undertaken
	We R Kids Casino	Expression of Interest
	Saint Mary's Tots, Casino. Preschool	Expression of Interest
Clarence Valley Council	Lawrence Community Preschool	Evaluation complete
	Jack & Jill Community Preschool	Evaluation complete
	ABC Grafton Duke St	Action Plan underway
	Glenreagh Community Preschool	Initial visit booked in, July 2008
Tweed Council	Save the Children	Expression of Interest, Conference Salt
	Tweed Early Intervention	Expression of Interest, Conference, Salt
	Gumnuts Community Preschool Burringbar	Expression of Interest, Attended Workshop

Lismore City Council	Lismore Preschool Kindergarten	Expression of Interest, not in NEWF area
	Dunnooon Community Preschool	Expression of Interest, not in NEWF area
	Clunes Community Preschool	Expression of Interest, not in NEWF area
	East Lismore Preschool	Expression of Interest, not in NEWF area
	Richmond Hill Preschool	Expression of Interest, not in NEWF area

Appendix 3:

Results of the Staff Evaluation Sheet

Two staff from each Service were asked to fill out an evaluation sheet for the project.

Participants were asked:

My understanding of how to reduce waste at work BEFORE participating in the waste wise Project was (please circle):

Very Good

Good

Average

Poor

My understanding of how to reduce waste at work AFTER participating in the waste wise project is (please circle):

Very Good

Good

Average

Poor

Ten responses indicated a greater understanding of waste reduction through participation. Most participants circled “Average” then “Very Good”.

Participants were asked:

My skills in reducing waste at work (e.g. Recycling correctly, composting, reusing etc) BEFORE participating in the EC waste wise project were:

Very Good

Good

Average

Poor

My skills in reducing waste at work (e.g. Recycling correctly, composting, reusing etc) AFTER participating in the EC waste wise project are:

Very Good

Good

Average

Poor

Nine out of Ten responses indicated an increase in skill level to reduce waste through participation in the project. The tenth response indicated the same skill level before and after, “Good”.

Participants were asked:

The Early Childhood Waste Wise project has enabled us to integrate a waste wise focus into the children’s routines, activities and incorporate it into our everyday interactions with the children.

Strongly Agree

Agree

Same

Disagree

Strongly Disagree

All ten responses circled “Strongly Agree” to this question.

What have been the most useful aspects of the project?

Learning how we can efficiently sort waste

Understanding how recycling and composting works

Georgie's visits giving me facts and figures on how to improve

Getting us moving on issues that we were aware of but needed a push to get started i.e. composting etc

Having the skills to teach the children.

Georgie coming to talk to staff and children and providing flyers to parents and display for parents.

Georgie coming to visit and teach us ways to recycle.

Participation of children and families in project, education sessions with Georgie. Excellent Feedback.

That the children have been involved and now participate.

Are there any ways you believe the project could be improved?

Na.

It's pretty good as it is and very helpful for a childcare centre.

Letting us know about children's entertainers we could access on these issues maybe. Just a suggestion because the project has been great.

No....it was great! Hope to see Georgie again

No. Think it really interesting

No. Keep up the great work.

Keep giving the project plenty of publicity

More visits as many children may miss out if not attending preschool on day of visit. More in-services and opportunities for centres to network. Extend scope of project to allow more audits and visits.

More visits. Only some children were able to participate in audit/discussion and groups. Also more visits keep us all vigilant.

Appendix 4:**Evaluation from Environmental Education Workshop ROUS/NEWF Our Children & Our Environment: Take action, take care! Workshop feedback****1. Which section/aspect of this workshop was most valuable to you?**

Hearing practical ideas from other centres

Hearing from other centres what they were achieving and putting into practice

All valuable

Reduce/recycle

What other centres are doing in regard to recycling and water usage. Visit to eco-options

The presentation by Rosemary about the practices they implemented after a waste audit was useful – extensions on existing ideas

As it all interrelated all is valuable. Hearing other centres aims and achievements.

I found it all very interesting. We were recycling and saving water but coming to something like this just gives you more ideas

2. Which message/idea will you be able to take back to your Services

To educate families by telling them what we do

Try and get the parents (families) involved at home

We are on the right track and need to continue to make changes

Sorting waste

We can do more with our recycling and water usage

Draw the threads of the ideas already developed and implemented and new ideas gained today, into a complete policy for the pre-school

Worm farm/composting: Encompassing NEWF into our daily program

Yoghurt containers plus educating the parents about pre-packaged foods and different food wraps

3. Any further suggestions for the presenters?

No it was great, very relaxed not T.M.I

Well presented – good range of resources to look a - Sharing tree was a great idea

Great work

More workshops to keep up to date

A lot covered in a fairly short time – perhaps a little depth sacrificed for the clock

No it was fine