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15th October 2009

Cairns Regional Council
Waste Services
Cairns Regional Council
PO Box 359 QLD 4870

Dear Sir/ Madam,

Please find attached our completed questionnaire as a response to the Cairns Regional Council Draft Waste Strategy Documents. Our response is focussed on Construction and Demolition (C&D) waste. Our Network would like to participate in Council activities that support the Networks charter.

The Network's charter is to identify, develop and action projects that will have a measurable impact on the uptake of sustainable building practices in Far North Queensland. To achieve this, builders, construction service professionals, building material manufacturers, retailers, government representatives, industry and community associations and other interested stakeholders work together.

The draft Waste Strategy sets out objectives and programmes to achieve a reduction in waste generation and an increase in the diversion from landfill. Diversion rates are currently 64% with a target of at least 70% by 2014. C&D waste recycling must be placed as a priority given that the total amount of transfer station waste diverted from landfill in 2008/2009 is over 90% with only C&D waste directly delivered to landfill. C&D waste generally makes 30% to 40% of landfill and the targets could be achieved if this important part of waste is diverted.

A combined effort is required and the Cairns Regional Council should lead a working taskforce with industry representation to increase the areas of recovery opportunity. In the questionnaire response below, we have listed eleven C&D material types in question 10 where there is opportunity to divert C&D waste from landfill.

We also provide information from Overseas (Seattle and Vancouver) waste management systems where detailed waste management plans for C&D are in action. The information includes a Contractors Guide to Preventing Waste and Recycling; Construction Recycling Directory and Building De-construction Practices and Standards; and a Recycled Content Building Materials Product List. The literature provides us with working examples that can be used to formulate and implement our own best practice for recovering C&D waste.

We look forward to working closely with the Cairns Regional Council on the issue of C&D Waste.

Yours sincerely
Emma Thirkell
Facilitator.

Waste Strategy

Questionnaire

Please cut me out, fill me in and send me back by Friday 16 October 2009

Tell us what you think

Your views are important

1. The draft Waste Strategy suggests six waste management priorities for the future. Please read about each priority and indicate by marking, how strongly you agree or disagree with each:

Reduction of waste generation rates	**Strongly agree**
Improved awareness of waste as a resource and influencing behaviour	**Strongly agree**
Improved r e s o u r c e recovery	**Strongly agree**
Improved recycling and composting	**Strongly agree**
Improved residual waste treatment and recovery	**Strongly agree**
Minimisation of waste sent to landfill	**Strongly agree**

2. Do you have any additional comments about the six priorities?

All of the above priorities relate to C&D Waste.

3. The draft Waste Strategy sets out eight main program areas. Please read about each program area and indicate how strongly you agree or disagree that each area should be included in the strategy:

Waste Reduction	**Strongly agree**
Education	**Strongly agree**
Recycling	**Strongly agree**
Residual Waste Treatment	**Strongly agree**
Market Development	**Strongly agree**
Waste Assets	**Strongly agree**
Strategic Partnerships	**Strongly agree**
Best Value Services	**Strongly agree**

4. Do you have any additional comments about the program areas?

In terms of C&D a key area that is missing is regulation. Development Approval regulation controlling de-construction as part of the demolition process should ensure that it is not penalised and it is supported enabling profitable activity. Building Codes regulation and the adoption of new building codes should support the use of recycled building materials where impediments are reduced including the certification requirements for non-structural elements and structural elements. Regulation can also control the ability of 'on site' sales at construction sites and other sites and this type of activity should be permitted.

In terms of C&D the most important program is Market Development and an organisation such as SITA is positioned to have knowledge of existing and developing market places in Australia and overseas.

Education and Strategic partnerships with the construction industry is closely aligned. The local chapters of the UDIA (Urban Development Industry Association), MBA (Master Builders Association) and the HIA (Housing Industry Association) have an important role to play. All organisations can develop education programs that work towards creating a steady supply of building materials that can be re-cycled. The UDIA has developed a EnviroDevelopment Waste certification that can be achieved by developments that have implemented comprehensive waste management and minimisation procedures. These organisations can be included in a working taskforce along with the Tropical Green Building Network.

Strategic partnerships with businesses that operate the skips and construction site waste removal are key to the success of a system that diverts C&D waste from landfill. Increased value of materials placed in the skips may be a product of increased disposal costs and increased market demand creating viable recycling activities. Involving the skip industry in a taskforce lead by CRC will include a working knowledge of the trigger costs and re-sale values so that the skip industry activities can be used to benefit waste diversion and recycling. Demolition companies looking for opportunities to augment existing services that requires investment into new plant and machinery technology (eg concrete crushing machinery) require certainty of supply and support.

Waste Assets include land and facilities that can be a central storage and sorting facility. Consideration may also be given to providing contracts to existing demolition yards to expand and supply storage, sorting and selling services. Construction waste is generally disposed of by private skip operators that could take the skips from construction sites to a central sorting and storage facilities aligned with demolition yards and dump shops.

5. The draft Waste Strategy sets several targets to be achieved by 2014. Please read the targets below and indicate your opinion for each:

2% growth in waste generation per year (currently 3.9%)	**Too Low**
At least 60% recycling rate of product sorted at MRF and sent for re-processing (currently 46%)	**Too Low**
At least 70% overall diversion rate from landfill (currently 64%)	**Too Low**

6. Do you have any additional comments about this target and ideas on how it can be achieved?

To achieve a reduction in waste generation and an increase in the diversion from landfill, C&D waste recycling must be placed as a priority given that the total amount of transfer station waste diverted from landfill in 2008/2009 is over 90% with only C&D waste directly delivered to landfill. C&D waste generally makes 30% to 40% of landfill and the targets may be achieved and exceeded if this important part of waste is diverted from landfill.

7. In addition to the targets above, the draft Waste Strategy also suggests a preferred approach. Please read the statements below and indicate your opinion for each:

A flexible approach to future residual waste treatment technology options and recovery	**Neither agree or disagree**
More efficient recycling services with increased focus on local markets and demand for recycled resources	**Strongly agree**
Council to show leadership and coordination in regional waste management, and provide best value services	**Strongly agree**

8. Do you have any additional comments about this approach?

Increased costs of disposal coupled with increased market demands will trigger recycling activity in the C&D area.

Council may show leadership by convening a working taskforce with strategic partners in the construction industry to address C&D waste. Council may work to provide regulation of C&D waste with industry stakeholders. Companies such as SITA may develop market place demand and procure local C&D waste to supply demand outside of this region. Council may involve local stakeholders including the existing demolition yards to identify and recycle waste for local markets.

9. Should Council take further action to encourage appropriate waste management at transfer stations for the following waste types?

Commercial waste	**Strongly agree**
Concrete	**Strongly agree**
Treated timber	**Strongly agree**
Televisions	**Strongly agree**
Computers	**Strongly agree**
Fluorescent lamps	**Strongly agree**
Batteries	**Strongly agree**
Mobile phones	**Strongly agree**

10. Do you have any additional comments about waste types?

Most materials from building and construction sites can be recycled. The following list demonstrates some reuse options and potential markets that may be developed locally.

STEEL: Electric arc furnaces produce reinforcing bar, mesh and sections from 100% steel scrap. Stainless steel sheeting can be re-used.

ALUMINIUM: is 100% recyclable.

GYPSUM PLASTERBOARD: CSR recycles plasterboard. If disposed to landfill, it produces poisonous hydrogen sulphide and has a foul odour.

TIMBER: can be reprocessed into horticultural mulch. The Laminex Group also have a manufacturing plant in Gympie, Queensland that takes wood cuts and recycles it back into MDF board. They are currently collecting from the South East of Queensland and are looking to increase their recycled content.

CONCRETE: unset concrete can be 'washed' out at the plant to remove cement. Sand and stone can be reused. Set concrete can be crushed and recycled as aggregate for new concrete or road base and fill.

BRICKS, PAVING & TILES: can be reused where appropriate or crushed onsite for backfill, aggregate and gravel with portable crushing plants.

PLASTICS: many plastics can be granulated and reused to make new plastic products for use within the building industry. In Brisbane, PPI Corporation PL is recycling HDPE pipe collected from rural and agricultural applications.

MOST GLASS: can be recycled. Construction glass must be separated from other glass such as drink bottles. Glass may be cut and reused or recycled as aggregate for concrete.

CARPET: in good condition can be sold and reused. It can also be recycled into secondary carpets. Some carpet can be recycled as weed barriers or a covering and food for worm farms.

ELECTRICAL FITTINGS: in good condition can be sold and reused.

PLUMBING FITTINGS: in good condition can be sold and reused.

11. Do you consider the current kerbside waste and recycling service as adequate?

1 x 240ltr general waste bin collected weekly	**Agree**
1 x 240ltr recycling bin collected fortnightly	**Agree**

12. If you consider the current kerbside waste and recycling service as inadequate, please provide additional comments on how it can be improved:

Recycling Bins should be provided to construction sites and this process should form part of the building approval conditions and processes along with a standard regulated waste management plan for C&D resource recovery.

SITA Environmental Solutions provide Builders Bins in Victoria. SITA received a $200,000 grant from EcoRecycle toward a sorting facility and was also a finalist in the Victorian Premiers 2004 Business Sustainability Awards for this activity. SITA is looking for opportunities to expand their operations and the Cairns Regional Council can support and progress this activity with SITA to make it a viable service in this region.

Please use this section to expand upon your answers or make any further comments about the draft Strategy:

The draft Waste Strategy sets out objectives and programmes to achieve a reduction in waste generation and an increase in the diversion from landfill. Diversion rates are currently 64% with a target of at least 70% by 2014. C&D waste recycling must be placed as a priority given that the total amount of transfer station waste diverted from landfill in 2008/2009 is over 90% with only C&D waste directly delivered to landfill. C&D waste generally makes 30% to 40% of landfill and the targets could be achieved if this important part of waste is diverted.

In terms of C&D waste the draft strategy baseline review – current situation document includes the following facts:

- Construction & Demolition (C&D) waste is only accepted at Portsmith, Killaloe and Newell. This is due to the proximity of Council landfills at each of these sites for disposal. No recycling facility currently exists for this waste type.

- Portsmith & Killaloe are the main facilities in the area and provides a disposal point for DIY and small building jobs in an attempt to reduce illegal disposal.

- Paints, chemicals and solvents make up the most common HHW types but are accepted at only six out of eight transfer stations. The transfer stations that don't accept these hazardous waste types are all in the rural Far North. Due to the sparse population only Killaloe Transfer Station in the Far North accepts this type of waste. HHW is transferred to a Hazardous Waste facility in Townsville

- Killaloe Landfill & Newell Landfill in the Far North are both situated on the same site as the respective transfer stations. Both of these landfills only accept inert waste including C&D (mostly concrete) waste.

- The impending release of the Queensland Waste Strategy will also increase the focus of effective pricing for waste disposal. Full cost recovery and user pays ensures that those who generate the waste pay an appropriate price for managing and disposing of it.

- With this in mind, careful considerations also needs to be given to any free collection & disposal initiatives to ensure the cost of such initiatives are able to fully recover operating costs.

- The total amount of transfer station waste diverted from landfill in 2008/2009 is over 90% with only C&D waste directly delivered to landfill.

The current situation evokes questions pertaining to the uncertainty of certain types of disposal. For instance, where is paint going in the Port Douglas, Mossman and Daintree area? If Portsmith and Killaloe are the main facilities that provide a disposal point for DIY and small building jobs, what controls are in place for large building jobs

at the private landfill operations and how can this be regulated to produce landfill diversion practices for C&D waste?

In terms of solutions the review document includes the following concerning C&D waste identified in the Market Development Programme:

- Research, analyse and identify opportunities to increase resource recovery in key areas of the waste stream, including construction and demolition waste (concrete), commercial and industrial waste and emerging hazardous waste types (e.g. e-waste).

We provide information from Overseas (Seattle and Vancouver) waste management systems where detailed waste management plans for C&D are in action. The information includes a Contractors Guide to Preventing Waste and Recycling; Construction Recycling Directory and Building De-construction Practices and Standards; and a Recycled Content Building Materials Product List. The literature provides us with working examples that can be used to formulate and implement our own best practice for recovering C&D waste in both private and public facilites.

An extract from a paper that is attached 'PROVINCIAL DEMOLITION MATERIAL DIVERSION STRATEGY DISCUSSION PAPER (VANCOUVER)' relates to our own experience in this region. The paper discusses and highlights a lack of cultivated market/rural infrastructure driven by a lack of markets for low-value items. While good markets exist for high-value items such as scrap metal and first growth timbers and hard wood, finding markets for low-value, but abundant items like, plumbing fixtures, lighting fixtures, and single-pane windows is difficult. There is also poor public perception of 'used' materials. We live in a wasteful society that values 'newness' over reused materials. Salvaged materials have a negative public image as lower quality goods.

The paper notes that like our region international markets and specific niche markets are untapped. Many materials that currently do not have local or regional markets may find markets internationally. The international markets are inadequately identified, poorly tapped and transportation is a major barrier. Specialized markets or non-traditional uses are also inadequately developed.

There is also inconsistent supply and quality. Markets rely on steady supply and consistent quality control. Supply and quality of salvaged material fluctuate with deconstruction. Also, there is a lack of market research. There are incomplete or no coordinated research efforts to identify markets for used building materials on a local, regional, interstate or overseas basis.

Limited storage space is a physical barrier. Many demolition/deconstruction sites have limited capacity for the storage of the salvaged materials. Salvage at many sites requires increased handling of materials and possibly higher trucking costs.
All additional handling of materials adds substantially to the price of the product.
There is a lack of facilities in rural regions for C&D waste recovery and the long distance and high cost of trucking impedes access to markets for deconstruction firms.

Even if there is adequate space on a given site, liability issues or regulations often prevent site sales.

The paper continues to provide solutions that are also applicable in our region.

On-site sales should be encouraged. There must be research into the issues surrounding liability by industry and local government allowances for conducting an on-site sale.

Collective marketing may be investigated and the feasibility of central storage facilities to be used by several companies may be available on Council owned land with some administration role. This would allow for large quantities to be collected and made accessible to end users. For example, used products (fencing, paving stones, fixtures, etc.) could be sold wholesale or on a consignment basis to existing demolition yards and retailers.

Separated C&D waste may have a different dumping charge from non-separated C&D waste to allow a higher charge for having to separate the waste at the site. Where separation occurs at building sites, collection may be carried out by individual operators including demolition yards and manufacturers taking back re-cyclable items to save on double handling and transport.

There may be potential for rural market development through small or cottage industry 'do-it your-selfers'.

The public and industry must be educated about the value of reused materials, to encourage reassessment of the belief that 'new is better'. This could be done through case studies and demonstration projects at home shows. Market demand is closely linked to public awareness.

Coordinated research on the supply and demand for 'green' building materials and salvaged materials is necessary. Ensuring supply and quality control may have an impact on stabilizing market fluctuations and fixing the costs of salvaged materials. Salvaged materials cannot be more expensive than new.

The paper also discusses Real Time Material Exchanges. Real Time Materials Exchanges are operating successfully in many parts of the world. A central and easily accessible materials exchange program could aid in the marketing of C&D waste in this region. This is already available on the internet through a local website called www.recyclebuild.com.au and sister website www.greenbuild.com.au operated locally by Exner Investments PL. The websites were launched early in 2009. For a small advertising fee ($5 a month for a basic item or type of building material), there is unlimited access to up-to-date information on type, location, quantity, and cost of materials. Buyers can search by material type. As well as an on-line catalogue of available and wanted materials, the website may provide deconstruction case studies, notices of site sales and links to other web pages. The use of the website by transfer stations and the 'Dump Shop' may increase the market place awareness of product that is available. The recyclebuild website was inspired by http://new.salvoweb.com in the UK and a similar website operates in Sydney called Construction Connect http://www.arrnetwork.com.au/. The website was devised to primarily streamline a market place for landfill where cost and supply pressures brought about increased value of this resource. This is a passage from that website:

"One of the biggest problems on a construction site is the odd leftover materials that you need to get off site to free up room or tidy up the site. If you move it, where do you take it? Home so it can sit at your house for 6 months until you finally use it? Dump it and pay tip fees? Either way it costs you. Why not 'advertise it' on our website. Someone will need it, and they could be 5 minutes away.

For example, you have finished the brickwork and there is a pallet and a half of bricks left. Place the ad with what you want for it (maybe just a case of beer). Another

builder or tradesman who has fallen short of his brick needs would happily come over and grab them. The list of materials you could move is long. Sand and cement, bricks and roof tiles, demolition materials, timber, doors and windows, lintels, old kitchens, tiles, plants etc etc.

And remember, happy home renovators are EVERYWHERE!....they too can purchase direct from yourself - your contact details are hidden from the public but they can still contact you via our automated SMS or email system when replying to your advertisement.

So help save our environment - do your bit by not throwing good re-usable building materials away - trade them!"

The use of the www,recyclebuild.com.au website by the CRC Dump Shop and Transfer Stations (where it is too costly to transfer C&D items to the Dump Shop) brings about greater content for the websites in turn enabling broader marketing of this real time exchange. The website use enables C&D materials to reach a market place without transport cost with this activity occurring once a buyer/ user is found. The website can also be used to measure volume of material types enabling market supply research to be undertaken and user markets sourced for larger volumes. The websites are also able to be used by the Home Renovator, wholesalers, retailers, demolition yards, skip operators, builders and other construction service professionals for material that is wanted or available for sale of give away. The success of the website is based on awareness and the marketing costs involved in making the websites a household name in the North Queensland region may become a worthwhile exercise if they are supported by local government activities.

Recycled C&D waste can be offered at a discount to new building materials where costs to bring it to a market place is minimised. Recycled C&D waste should be supported by building codes and other regulation. Waste management plans and credits for de-construction methods should be a mandatory part of building practice in Far North Queensland.

The waste strategy calls for action plans. The area of C&D waste requires further base line exploration to identify existing resources in this area. Further action requires the industry stakeholders to work together to plan more detailed strategy with Council leading this taskforce.