Submission to: Productivity Commission
Waste Generation
and Resource Efficiency
Public Inquiry

From: Harry Copeland
Chair
South East Queensland Construction and
Demolition Waste Working Group

Subject: Issues surrounding the recovery of Construction and Demolition Waste in South East Queensland.

On behalf of the members of the above-mentioned interest group, I submit the following brief comments for consideration, specifically relating to the issues surrounding construction and demolition wastes/resources sector, which we note is specifically included within the scope of the Inquiry.

Due to the diverse membership of our group, and the 6-weekly intervals between meetings, these comments are of a general nature, but it is understood a that at least one of our group will be submitting comments specifically relating to his business sector – timber recovery.

The comments are provided within the context of the terms of reference for the Inquiry, and also in response to some of the specific questions posed within the Issues Paper.

We sincerely regret that we could not provide a more detailed submission at this time, but look forward to the opportunity for further involvement and comment at the public hearings and upon the release of the Commission's draft report.

Yours faithfully

Harry Copeland

1. Background to the SEQ Construction and Demolition Waste Working Group:

The councils of South East Queensland, as members of the SEQ-Councils of Mayors (formerly the SEQ Regional Organisation of Councils) have initiated the establishment of an industry advisory group regarding the issue of minimising construction and demolition waste going to landfill. This resulted from a resolution passed by the SEQROC Waste and Recycling Working Group (comprising south east Queensland councils' waste managers and interested councillors) to work together to minimise the amount of construction and demolition waste being disposed to landfill.

The Construction and Demolition Waste Working Group (the C&D group) was formed after the very successful Sustainable Construction and Demolition Forum and workshop held at Beenleigh in February 2005, at which the (then) South East Qld Regional Organisation of Councils, through the Waste and Recycling Working Group, offered to host and support an industry-based group to progress the issues and ideas raised at the forum.

It is envisaged that the Construction and Demolition Waste Working Group will be most effective if driven by the people in the sector, with specific strategic assistance where possible from state and local government agencies that are also represented in the membership.

i) Aims of the SEQ C&D Group:

The common goal of the group members is

- to minimise construction and demolition waste going to landfill,
- to maximise opportunities for recovery, re-use and value adding/remanufacturing of the resources, and
- to develop stronger end markets for those materials.

ii) Group membership and philosophy:

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When forming the advisory group an important consideration was to achieve and maintain a group whose membership was mainly industry-based. The private sector people on the Working Group are managers, owners or employees of existing business operating in the construction or demolition sector and/or in ancillary service providers. Although people on the group may be direct competitors in the marketplace, it is recognized that an improved business environment resulting from positive initiatives from this group, are to the benefit of all in the c&d sector.

Through discussions around the table with other industry partners and government reps, ideas are exchanged and issues raised where collaborative efforts by industry and governments can make an impact for positive change. These may include identifying sites available for material sorting and storage, identifying opportunities for data gathering and research, and even opportunities for doing business with each other where synergies exist, to providing advice on obtaining necessary licenses and permits, providing opportunities for value adding and remanufacture and of course assisting in the development of end markets for the recovered and/or remanufactured materials. For state and local government agencies, this of course should include the incorporation of support for use of recovered materials in their own purchasing decisions and construction activities.

iii) C&D Group membership base:

At this early stage, the eventual composition of the working group is not clear, and a preferred membership structure certainly is not predetermined, other than to say that it is envisaged that the group is predominately industry-based. We welcome people actively engaged in the design, construction and demolition sectors, and the various service providers supporting them, including product manufacturers, waste transporters, disposal and recycling service providers and those with a capability to re-use, and/or value-add and/or remanufacture those recovered materials.

Our current membership is enthusiastic and quite diverse, and efforts are continuing to engage more members whose activities comprise parts of the construction and demolition resource supply chain.

iv) Recognition and support for the collaborative approach:

The C&D Waste Working Group has acknowledgement and representation from the Dept State Development, Trade and Innovation (DSDTI), and the Department of Primary Industries and Fisheries, and of course the Environment Protection Agency. In the recently approved Recycled Timber Industry Development Plan, DSDTI has recognised that the Construction and Demolition Waste Working Group with its multi-stakeholder, industry-based membership represents the most likely avenue currently available to coordinate the realisation of some of the Industry Plan recommendations. Of course, the group's ability to deliver on such high hopes will be dependent upon appropriate resourcing and support, and decisions by the group itself about its structure, function, future and need for capacity building.

v) Current research into the c&d resources sector:

The group's aims and activities are also supported by a research project being undertaken by the Faculty of Engineering & Built Environment of University of Newcastle, with the major partners being Brisbane City Council (BCC) and Qld Department of Main Roads. This research project is aimed at assisting two specific sectors: the Construction and Demolition Waste Sector and the Pre Cast Concrete industry. The study will investigate and seek ways to diversify the market to:

* improve economic, social and environmental sustainability,
* increase the recycled materials content of BCC and other local government construction projects, and
* improve expansion in Construction and Demolition Waste sector.

Further information on the research project can be obtained from Harry Copeland, Brisbane City Council.

Harry Copeland is also overseeing another important research initiative involving other C&D group members, which is aimed at obtaining qualitative and quantitative data regarding processes, issues and actual amounts and value of materials resulting from the controlled “de-construction” of a range of building types across Brisbane, which were otherwise earmarked for the traditional “crunch and dump” method of demolition. The project is ongoing, but data gathered so far is indicative that the extra time and supervision required for a deconstruction is well outweighed in terms of dollar value, by the amount and quality of materials which can actually be salvaged for resale, value adding and/or re-use.

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2. Specific Comments on the Waste Generation and Resource Recovery Public Inquiry

i) Lack of data

The lack of quality data on the amounts, composition, origin and destination of construction and demolition wastes in south east Queensland is widely acknowledged, and even legendary. This was further confirmed by a report commissioned by the Brisbane City Council in 2004, whose aim was to commence a “resource mapping project” to identify the major sources and destinations of c&d wastes in South East Queensland.

The initial aim of the project was:

- Develop material maps and resource inventories for target materials being landfilled

However, the eventual aim became:

- Provide a background discussion paper to SEQROC efforts to develop/enhance a regional recovery focus for C&I and C&D Wastes

The project outcome was indeed a discussion paper, rather than a usable data set, primarily due to limitations in the data which which were:

- Poor quality
- Inconsistent
- Incompatible (i.e. differing methodologies)
- Invalid (often unable to be validated/confirmed)

This issue of poor data existed across all sectors:

- Local govt
- State govt, and
- Industry

ii) Issues surrounding lack of quality data:

A key issue is the way in which people "measure" materials, including wastes. Sometimes it is measured by volume, and sometimes by weight, if a weighbridge is used (not mandatory at all licensed landfills or transfer stations premises). The problems associated with obtaining quality data when this fundamental issue of methodology exists are self evident. Furthermore, there is no requirement upon licensees to determine the source of the wastes being delivered, or the relative mix of its components.

There are very limited or no requirements upon (EPA-) licence holders of waste disposal/transfer sites or transporters regarding the actual amounts of wastes being handled, and virtually no requirements regarding any ongoing analysis of the composition of those wastes. The only information which could be found for South East Queensland was aggregated information, based upon total amounts allowed by license, which was shown through anecdotal information obtained during the project from those in the transport, disposal and recovery sectors to be an underestimate of the amounts of material being handled by a factor of at least 2 times. In the case of amounts of concrete being recycled, the difference in estimates was by a factor of more than 4 times. i.e. it was estimated that approx 40 000 tonnes/annum were being recovered in the Brisbane metropolitan area and recycled as opposed to EPA estimates of 90 000 tonnes.

Some of the findings of the Resource Mapping Project are outlined in Attachment 1, which comprises copies of selected slides presented at last year's Construction and Demolition Forum hosted by SEQROC and the Waste Management Association of Australia (Qld Division). For further information regarding the slides or the forum, please see the contacts given at the end of the submission.

iii) "Resource Efficiency" issues

The discussion regarding the term "resource efficiency" in your Issues Paper is noted with interest. Whilst the use of the term in relation to maximizing the use and re-use of a product and minimising the amount of waste associated with its use is supported, the broader interpretation of resource efficiency as it relates to the management of primary resources is particularly appropriate when construction and demolition wastes are considered.

Even the layman and average householder can comprehend the origins of the major components of c&d waste. Timber, concrete, steel, aluminum, plasterboard, bricks etc. are obviously obtained from the extraction and use of natural resources, and in most cases those natural resources were extracted within Australia. Thus the general concept of resource efficiency, and the need to manage these natural resources in a sustainable way by minimising wastage of these products are arguably more evident to the general public in the case of these "wastes" , than may be apparent from the waste generated through the use of other consumables.

Also of particular note in regard to the composition of the construction and demolition waste stream, as raised by several members of our C&D Working Group whose business involves the handling and recovery of c&d wastes, is the issue of soil. Soil can be a major component (up to 30% by weight) of waste loads from construction or demolition activities. There may be a very high organic content due to site clearing practices, soils may be contaminated due to the historical uses of a construction or demolition site, and the soil characteristics dictate its capacity for re-use or incorporation into other products and uses. There are significant costs and complexities associated with the handling and re-use of this component of c&d wastes.

iv) Arguments for government intervention.

One of the most encouraging things about the February 2005 seminar and workshop which generated the formation of the SEQ Construction and Demolition Waste Working Group was that there was no request for direct financial subsidies from governments by the industry representatives in attendance. It was generally agreed that if a business has to be heavily subsidised, then it is most probably not a viable business proposition in the current political–socio-economic climate, no matter how environmentally desirable it may be. There are, however, a range of strategies and forms of assistance which governments could provide.

The assistance which this sector is seeking is the identification of existing institutional and other barriers to:

- improving their businesses;
- diverting these materials from landfill;
- improving the recovery of materials and;
- improving market opportunities for recovered resources; and
- the production of quality products which meet market expectations.

…And then, the development of strategies to collaboratively overcome those barriers, so that the sector can flourish and the entire community benefits from the ensuing economic, social and environmental outcomes.

v) Existing barriers to improving the c&d resource recovery sector.

Discussions with industry members during the resource mapping project raised the following issues as problems they were facing:

- Difficulty gaining council approval for site establishment.
- High capital & establishment costs
- Encroachment by conflicting land uses
- Long lead times required to establish market presence
- Access to financial & technical knowledge re new sorting or processing technology
- Uncertainty re demand for products & services

Other issues raised at the abovementioned 2005 seminar by industry attendees are shown in Attachment 2: Sustainable Construction and Demolition Seminar Summary of Outcomes. They included;

- Very low landfill prices in SEQ (and no landfill levy)
- Local government bureaucracy and political interference
- Prevalence of illegal dumping
- Lack of specifications for re-use of recovered materials (especially concrete sector)
- Lack of capital investment
- Regulatory issues and costs

Within the SEQ C&D Working Group, the following issues are frequently raised:

- Resource nomenclature and classification (resource descriptors, not waste types)
- Standards and specifications for the use of recovered/remanufactured materials (particularly timber and concrete), and
- Improving market awareness and opportunities
- Implementing incentives for developers to consider and implement a deconstruction assessment rather than traditional "crunch and dump' demolition, so that maximum recovery of materials of value can occur
- Incentives for the generators of c&d wastes to consider recovery service providers rather than traditional "transport to dump" providers.

vi) Economic instruments:

Whilst the issue of a landfill levy is often raised in SE Queensland as a panacea for adjusting the price differential impacting on resource recovery efforts, landfill gate fees in South East Queensland are currently so low, that a very large levy indeed would have to be applied to "level the playing field". This application of this type of economic instrument is not a likely option in the current or foreseeable political climate in Queensland.

Traditionally the Queensland local government sector has been strongly opposed to the application of a landfill levy, primarily due to the well-founded fear that the monies collected would be absorbed into the state's consolidated revenue (as occurs in New South Wales), rather than be a fully hypothecated fund used for the implementation of waste minimsation strategies, fostering the resource recovery sector, and improving the management of existing waste management systems.

vii) Targets for waste reduction:

The views of the C&D seminar attendees were sought regarding the desire for legislative intervention to support the c&d resource recovery sector. The comments are shown in Attachment 2, Sustainable Construction and Demolition Forum Feedback Summary.

Interestingly, despite 86 percent of respondents supporting the use of broad legislative targets for waste reduction, and the often made comments about landfill levies, when specifically asked about what would be most likely to actually cause a reduction in the amount of c&d waste being sent to landfill, 75 percent of respondents said

- industry incentives,
- education,
- market development and
- improved planning controls

were the most important. Only 18 percent of respondents said that state legislation would reduce c&d waste sent to landfill.

viii) Other forms of government intervention

With regard to how **local government** in particular could support the c&d resource recovery sector, some ideas provided by operators during the Resource Mapping Project consultations are shown in the slides in Attachment 1. The Construction and Demolition Waste Working Group initiated by the councils of South East Queensland represents part of the collaborative approach being undertaken by the private and government sectors to work towards the stated common goals.

The members of the SEQ C&D Group are **very supportive of an incentives- based approach** to encouraging changes in behaviours and systems.

Two possibilities amongst many other initiatives being investigated currently are related to the use of council planning instruments to encourage more deconstruction and waste minimisation. These include:

- development of a Code of Practice for Demolishers, to include the requirement to assess a building's suitability for deconstruction and resource recovery. There is potential for compliance with the Code of Practice to be a condition of a development approval
- The use of a refundable bond system, where the bond is lodged on development approval, and refunded upon demonstration of the minimisation of wastes, and maximization of resource recovery throughout demolition and/or construction.

The C&D Group has been instrumental in assisting the demolition contractors to establish their own industry organization in Queensland, with a view to improving the professionalism and practices within the sector, and also to improve the potential for resource recovery of valuable resources.

With regard to how **state and federal governments** could assist in minimising wastage of c&d resources, and maximizing their recovery and remanufacturing and re-use, some suggestions include:

- Demonstrate support for the resource recovery sector through the adoption and implementation of sustainable procurement policies throughout government departments and agencies to harness the enormous market power of the government sector in the purchase of goods and services

- National acknowledgement and acceptance of uniform standards and specifications based on proven research and testing, for the use of recovered concrete and timber and other components in construction and engineering applications.

- Adopting a more flexible "net benefits" approach to proposals for managing these materials/wastes when considering applications for approvals and licensing by regulatory authorities

- Reviewing existing legislative barriers to improved resource recovery as identified by those in the c&d resource recovery sector

- Acknowledge that the c&d recovery sector is involved with resource recovery, manufacturing and sales of product, and this has enormous scope for growth, as opposed to being members of the" old waste management sector"

- Acknowledge that these materials are resources, not wastes, and work collaboratively with the marketplace to achieve a national classification and nomenclature system for the valuable materials being sought (i.e. facilitate resource mapping)

- Facilitate the establishment of a nationally consistent, web-based information clearing house where suppliers, manufacturers, sellers, and the design and construction sectors can search for information on products and service providers. E.g. as per EcoSpecify, Buy Recycled etc.

- Work collaboratively to develop a realistically achievable, nationally consistent methodology for gaining more quality data on the amount and composition of wastes being generated across the nation (i.e. a nationally endorsed standard methodology for waste stream analysis), and an agreed and achievable standard requirement for the gathering of information, at least from the major population centres around the nation.

- Establish a system of recognition or awards for outstanding achievement in the c&d supply chain (those in design through to those in deconstruction and re-use) similar to the previous WasteWise program for construction Industry that was initiated by the (then) Environment Australia.

- Encourage and provide financial support to aid research aimed at assisting the development of the resource recovery sectors.

I trust that the above comments have been useful and of interest, and thank you for the opportunity to provide input into this very topical and timely inquiry.

Primary contacts for the
SEQ Construction and Demolition Waste Working Group:

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Attachment 1

SEQROC
Resource Mapping Report Summary

Michelle Jeppesen
Coordinator- Regional Waste Projects SEQROC

Based on Report prepared by C4ES, 2004

C&D, Demolition and Concrete Waste/Resources Industry Estimates for C&D, Demolition and Concrete Waste/Resources

- Significantly greater C&D recovery than has been recorded
- Approx 1.5m t C&D generated (EPA 700 000t)
- >600 000 t C&D landfilled (EPA 365 000)
- >400 000 t concrete recycled (EPA 90 000)

Information gained suggests..

- Already a wide range and greater number of C&D materials recovery activities than previously thought
- Significant concrete recovery industry with emerging markets
- Regional momentum in concrete recovery already well advanced

Reasons for poor quality (landfill) data

- Tonnes per annum on landfill licence ≠ actual amt disposed
- Amt disposed = C&D + other wastes
- Unlicensed sites accepting C&D waste (storage, sorting, fill, illegal dumping)
- Varied ownership of disposal sites
- Transporters not required to ID waste source
- Market needs valid data on materials & products - not invalid data re waste

Limitations to increasing C&D Recovery - Industry issues

- Gaining council approval for site estab.
- High capital & establishment costs
- Encroachment by conflicting land uses
- Long lead times to estab market presence
- Access to financial & tech knowledge re new sorting or processing technology
- Uncertainty re demand for products & services

Other Limitations to increasing C&D Recovery

- Co-mingled materials (site issue, collection & transport practices)
- Poor regional cooperation
- Lack of infrastructure (esp. SME's)
- Landfill pricing
- Green power generation
- Lack of leadership & direction

What can Local Government do?

- Commit to regional focus on recovery of materials
- ID & support site availability
- Consider "recovery parks"
- Use DA process, and WMP's
- Specify recovered materials in procurement policies/tender doc's
- Engage industry- forums, workshops
- Differential gate fees at landfills
- Host a clearinghouse for info sharing

Conclusions

- Many successful businesses "doing their own thing"
- Significant amount of recovery is already occurring
- Need to support local operators: developing & assisting & promoting initiatives in region
- Need leadership & momentum
- SEQROC offer to initiate reference group

Attachment 2

Sustainable Construction and Demolition Forum

Beenleigh
2nd February 2005

Summary of Feedback from attendees

A one-day forum was organised to discuss ways in which South East Queensland can reduce the waste produced on building and demolition sites. The Sustainable Construction and Demolition Seminar was held on Wednesday, 2nd February at the Beenleigh Community Centre. The seminar was hosted by Waste Management Association of Australia (WMAA) Queensland branch in association with South East Queensland Regional Organisation of Councils (SEQROC). The seminar was sponsored by Gold Coast City Council (GCCC) and Queensland Environmental Protection Agency (EPA). Many people from construction and demolition industry such as engineers, designers, waste transporters, recyclers, builders etc attended the forum.

Below is a summary of the responses received from the feedback sheet distributed at the end of the day.

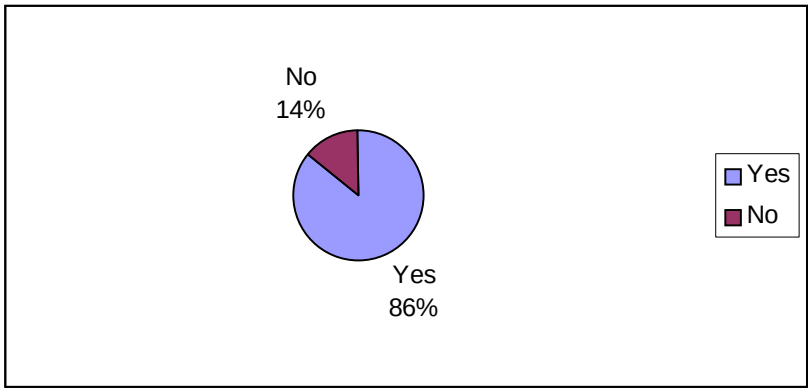
1) **What are the key issues blocking you/your organisation from reducing C&D waste going to landfill?**

- Local government bureaucracy and political interference
- Lack of EPA levy, illegal dumping, lack of specifications, low tip fees, need for a recycling deposit.
- Cheap landfill fees on Gold Coast.
- Lack of capital investment
- Regulatory
- Licensing and landfill price
- Market, transport costs, lack of local contractors interest.
- Relatively small volume, low landfill cost, illegal dumping
- Number of expensive licensing requirements and no guarantee of success
- Prior failed attempt, cost implication, lack of identified markets
- Convincing management and funding
- Sorting cost
- Extensive capital resource and infrastructure
- Lack of new technologies and education

2) **Do you support the use of broad legislative targets for industry to achieve waste minimisation? Eg "50 % of C & D waste entering a facility must be recycled" or "Developers must prove that 50 % of waste has been recycled from a construction site"**

The majority (86 %) (See Figure-1) of the people who attended the forum agreed to support the use of broad legislative targets for industry to achieve waste minimisation.

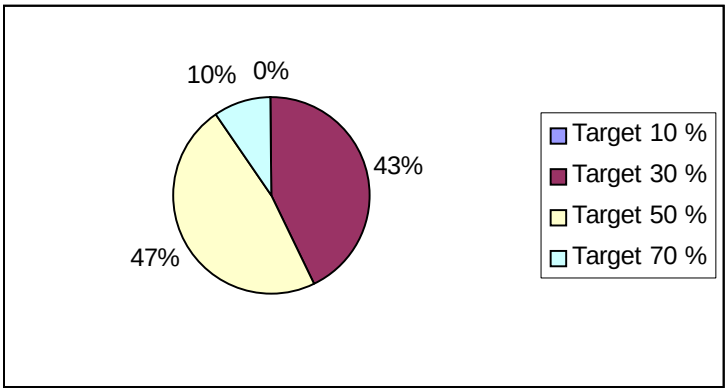
Figure-1



3) **If targets were introduced, what would be a good start?**

Around 47 % of the people who attended the forum indicated 50 % target must be introduced. 43 % of the respondent indicated that the target should be 30 % and only 10 % of them indicated that the target should be 70 %(See Figure-2).

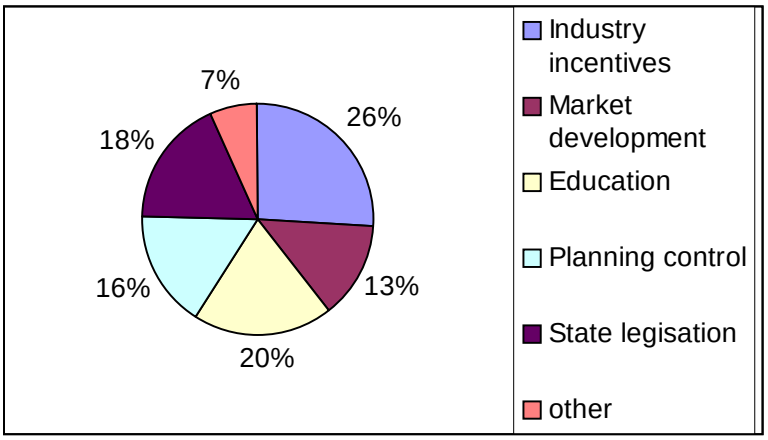
Figure-2



4) In your opinion, what is most likely to reduce C & D waste?

Majority of the people believed that industry incentives (26%) and education (20%) is most likely to reduce C & D waste. Followed by state legislation (18%), planning control (16%), market development (13%) and other initiative (7%) (See Figure-3).

Figure-3



5) Are you aware of any innovation that has not been discussed?

- Council liaison officer for industry about Waste Management
- Recycling depots placed around local council
- Green purchasing policy
- Producer's responsibility
- On ground sorting techniques/ equipments

6) Request re any comments from the participants.

- The seminar was a good initiative.
- Until local and state governments require recycled product to be used where possible (notwithstanding quality and economical considerations) industry cannot afford to spend the capital required to create quality products and conduct R & D.
- There are numerous case studies in Australia and overseas. Learn from others successes and failures.
- More forums should be conducted in the future.
- Very valuable forum and follow up the questionnaire.