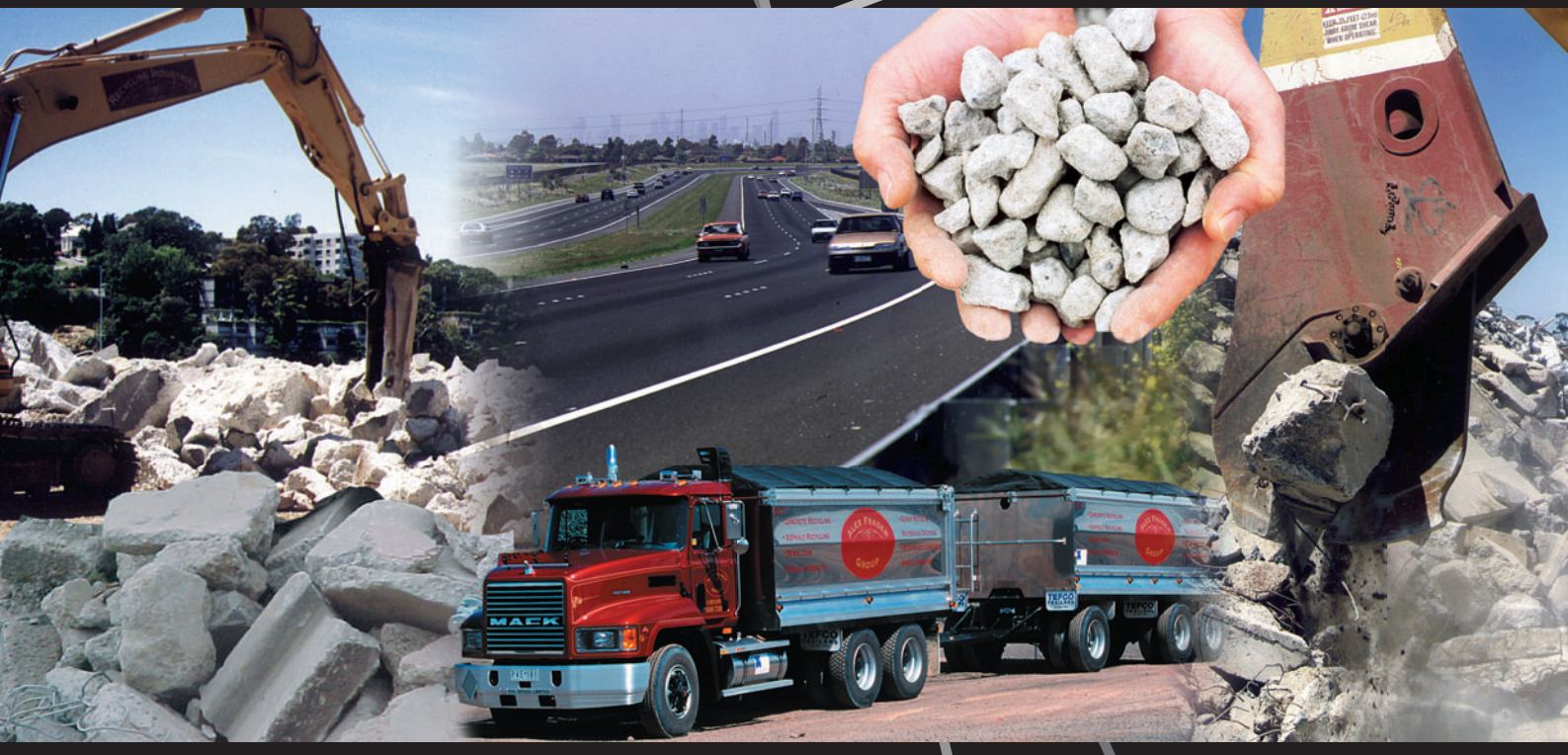
Submission to the Productivity Commission

by

The Alex Fraser Group

"Waste generation and Resource Efficiency"



Alex Fraser Est 1879 Group

Background Information

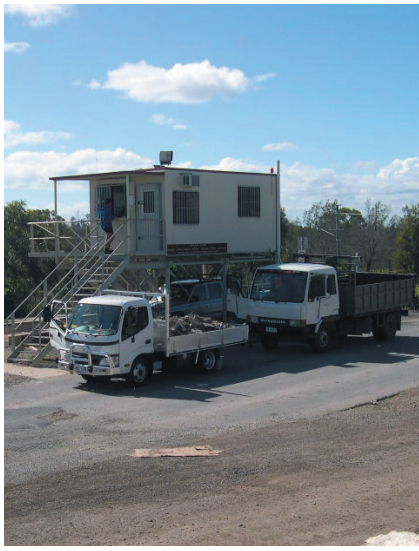
Waste Generation and Resource Efficiency
Productivity Commission
Locked Bag 2
Collins Street East, Melbourne, Vic, 8003

8th February 2006

Dear Commissioner Weickhardt,

We have pleasure in submitting this document to the Productivity Commission Waste Generation & Resource Efficiency Inquiry.

Introduction.

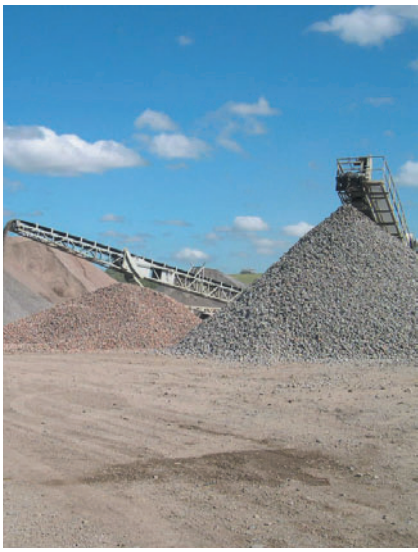


The Alex Fraser Group, as Australia's leading authority in the construction and demolition materials recycling industry, is able to very competantly make comments and recommendations to the Commission on related matters to its enquiry. Today, there are still hurdles and impediments holding back the further growth of this business despite its success and proven benefits. C&D recycling is one of the most important environmental advancements of the current day in terms of its impact on preserving natural resources, savings in landfill resources and its economic sustainablity. It is a socially responsible industry that requires the full support of government and other authorities to continue its important advancement.

Alex Fraser has successfully recycled and sold more than 12 million tonnes of recycled products in Australia. The company's expertise is also recognised worldwide and its technologies are utilised in places like Asia where C&D materials are abundant and landfill space is rare. As a result of Alex Fraser's pioneering work, C&D recycling has proven to be sustainable and economically viable.

We would welcome the opportunity to present our views to the Commission and to assist in addressing issues as they relate to our business and the industry generally.

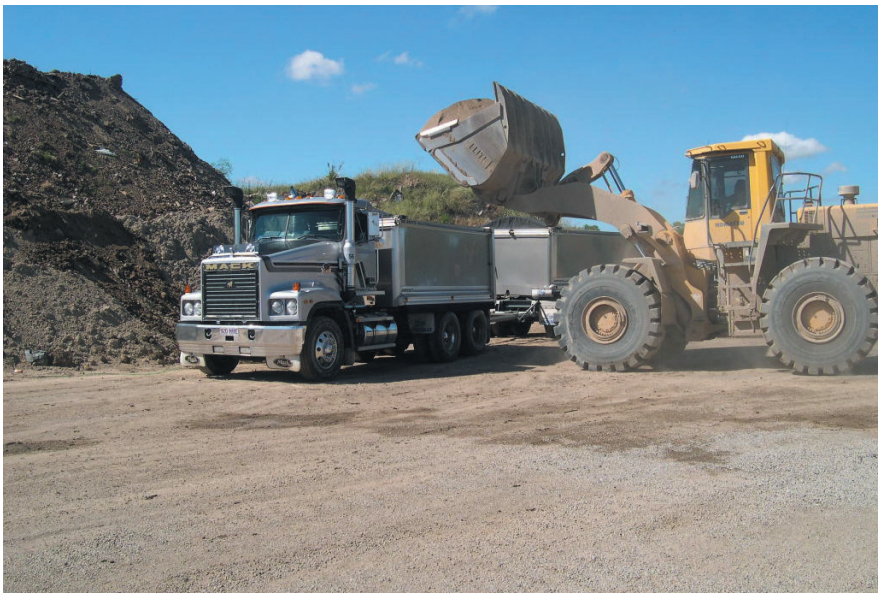
Scope of the Inquiry and our responses to these:



The Commission is to examine and report on current and potential resource efficiency in Australia, having particular regard to:

1. The economic, environmental and social benefits and costs of optimal approaches for resource recovery and efficiency and waste management, taking into account different waste streams and waste related activities;
2. Institutional, regulatory and other factors which impede optimal resource efficiency and recovery, and optimal approaches to waste management, including barriers to the development of markets for recovered resources;
3. The adequacy of current data on material flows, and relevant economic activity, and how data might be more efficiently collected and used to progress optimal approaches for waste management and resource efficiency and recovery;
4. The impact of international trade and trade agreements on the level and disposal of waste in Australia; and
5. Strategies that could be adopted by government and industry to encourage optimal resource efficiency and recovery.

our response to these points is as follows;



1.0 The economic, environmental and social benefits and costs of optimal approaches for resource recovery and efficiency and waste management, taking into account different waste streams and waste related activities.

Strategically located and purpose built recycling and resource recovery facilities throughout metropolitan areas that are designed to reclaim inert construction and demolition wastes materials have a direct economic, environmental and social positive impact. These facilities are able to reprocess various waste streams and create high value recycled products that perform equal too if not better than finite virgin resources such as rock and sand.

With the exception of the materials recovered as an alternative fuel supply there is no limit to the number of times that secondary resource materials can be regenerated and remanufactured into numerous alternative produce ranges.

Recovery for recycling and reprocessing of C&D materials directly reduces the environmental impacts that exist such as:

- Significant reduction of waste to landfill;
- Preservation of natural recourses & production of alternative products;
- Reduced disposal costs;
- Utilization of existing infrastructure;
- Transport ;
- Sustained employment within local communities; and
- Meeting community expectations and social values.

1.1 Reduction of waste to landfill

The most precious resource of any landfill is the void space available in it and thus the greater compaction that is achieved the longer the facility remains in operation. Extending the life of any landfill by diverting secondary resource materials from it, directly impacts in a positive way to the economic benefits of its operation.

One cubic metre of concrete or demolition and excavation materials accounts for about one and a quarter tonnes by mass which has little or no compaction capacity in a landfill; unlike municipal solid waste that can be reduced in volume by up to 3 times when compacted in landfill.

The reduction in consumption of landfill space, through the diversion of secondary resource material products to recycling and resource recovery facilities, significantly increases the life span of the landfill as well as utilising the materials that were previously buried.

In addition significant savings are made by way of not having to prematurely develop new sites for landfilling which, if developed early, would have a negative environmental and social impact on the effected communities.

1.2 Production of high grade commercial products

The reprocessing of the secondary recyclable resources into high-grade products delivers materials that are required within existing markets. As a company we have demonstrated that through our product development and quality standards, we can now ensure that recycled materials actually perform equal to, if not better than virgin materials.

This directly supports sound economic, social as well as environmental outcomes from the reuse of the secondary resource materials recovered from the construction and demolition activities throughout all major cities within Australia.

1.3 Reduction of disposal costs contribute to the economic viability of projects also preservation of limited landfill areas

Secondary reprocessing and crushing operations usually offer significantly lower disposal rates than at a registered landfill and do not attract any additional state government landfill taxes.

The economic viability of C&D operations is dependent on volumes to achieve the necessary economies of scale, in order to achieve production costs that are competitive with the quarry industry. Volume is critical to justify the capital investment required and to maintain a disposal fee that provides economic benefit to wider industry.

In states where governments have applied a landfill tax on the disposal of waste, the developers choosing to adopt a recycling mentality receive a financial benefit through a reduced disposal cost, which can significantly alter the economic balance of a project.

Developers disposing of C&D materials to landfill incur significantly higher project cost where these taxes apply. Not all of these developers have the option of disposing of the material at a recycling centre and therefore are burdened with the additional costs. It is imperative to the financial outcome of these large developments that alternate disposal locations are provided in strategic locations, close to both the source of raw materials and the end market for the finished products.

1.4 Greater utilisation of existing road, power and water infrastructure

It is widely acknowledged that one of the greatest challenges that all governments' face is the pressure to maintain, replace and invest in the infrastructure required to sustain our rapidly expanding communities throughout Australia.

Recycling and resource recovery facilities need to be able to operate within the existing urban growth boundry and located in areas where the raw feedstock is being generated and close to the end markets, therefore significantly improving transport efficiency and reducing traffic congestion.

This places recycling and resource recovery operations as a significant economic contributor to the communities as they utilise all existing local infrastructure, road, power water and other services without the requirement for the public sector to invest in new infrastructure.

1.5 Transport

Economic and social benefits are gained through reducing the quantity of heavy vehicles on our local community roadways. By minimising the distances required to haul materials, either for disposal at decentralised landfills or virgin materials from quarries benefits all members of the community.

Materials being transported either too or from these facilities are carted in large capacity truck combinations such as B-Doubles, Semi Tippers and Truck and Trailers placing added pressure on the already overloaded road networks. In these situations the transport usually travels empty on one leg of the journey.

The opportunity also exists to maximise the utilisation of transport by disposing at a recycling and resource recovery facility as well as back loading recycled products to the specific worksite. This obviously lessens the broader economic, environmental and social impact of remote operations and reduces significantly the transport requirements.

1.6 Additional employment and enhanced local economic value

Secondary reprocessing operations create jobs of value in a community in so far as they directly employ both skilled and unskilled labour within their community. The creation of jobs has a significant flow on effect to the wider community by contributing to its broader economic outcomes.

The indirect flow on effect is to equipment suppliers, maintenance sub-contractors is directly linked to the establishment of this industry by increasing the opportunity for their diversification by providing equipment and services currently imported into the country.

With more operations coming on line the opportunity is provided directly to the manufacture and consultancy industry with an ability to build and source specialised equipment and IP within the recycling industry which is then able to be exported.

1.7 Meeting community expectations and social values

Meeting a community's expectations with respect to minimising environmental, as well as social impacts through a company's operations, is critical to the long term health and success of any business. Community expectations today require responsible corporate governance and adherence to uphold environment and social values.

With innovation and recycling of secondary resource materials being enhanced by way of providing local employment, reducing impacts of landfilling wastes, reducing our reliance on finite virgin resources as well as developing unique solutions for disposing of wastes, underpins the core community expectations.

Communities and the general public demand that companies reduce their operating impacts and reliance on finite resources and reprocessing of construction and demolition wastes not only achieves this it also reinforces this belief.

2.0 Institutional, regulatory and other factors which impede optimal resource efficiency and recovery, and optimal approaches to waste management, including barriers to the development of markets for recovered resources.

Inconsistencies within various act regulations, local laws and ordinances significantly hamper growth in the recycling and resource recovery market. Each regulation appears to be written without consideration to existing legislation, nor does it provide consistency within the industry itself. Areas of greatest concern to our organisation include the following issues:

- Developing standard reference terms,
- Equality of licensing and appropriate conditions,
- Review of government procurement specifications,
- Separation regulations for waste and recycling,
- Removing barriers to market development; and
- Development of long-term local planning.

2.1 Standardisation nationally of the terms 'waste', 'recycling' and 'resource recovery'.

The terms '**waste**', '**recycling**' and '**resource recovery**' are possibly three of the most widely used and confused terms.

The terms are used to describe product impacts, value in materials streams and for the purpose of the waste management debate to describe refuse, recyclables and the inherent value of the commodity or perceived value in a stream.

All Federal, State and Local legislation has different interpretations for the terms relating to waste, recycling and resource recovery

The recycling industry operates within a national framework. However it must attempt to work with these individual interpretations and regulations. To remove the ambiguity, confusion and lack of consistency of the terms it is essential that the Federal Government provide the framework and clarity for state legislation and local bylaws to be developed.

Examples of the inconsistencies are:

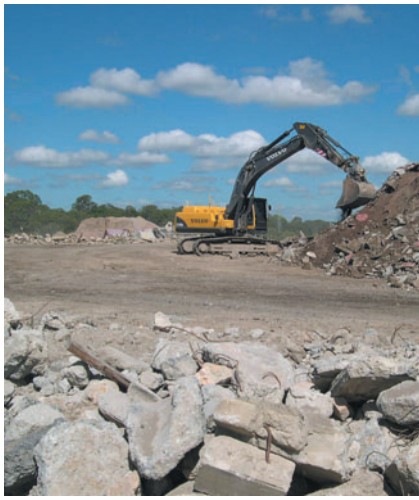
- In New South Wales the terms are covered in the NSW Waste Minimisation and Management Act of 1995 and describes Waste as Any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment or, any discarded, rejected, unwanted, surplus or abandoned substance, or any otherwise discarded, rejected, unwanted, surplus or substance intended for recycling, reprocessing, recovery or purification by separate operation from which produced the substance or: any substance prescribed by the regulations to be waste for the purpose of the act;

  NSW defines 'recycling' or 'recyclable' in its legislation as having two different meanings. In the Protection of the Environment Act 'Recycling' of waste means the processing of waste into a similar non-waste product whereas in the Resource NSW Waste Avoidance and Resource Recovery strategy of 2003 document the term recyclable - is documented as able to be processed and used as a raw material, for the manufacture through a commercial process of either the same product or another product.

- In Victoria's EcoRecycle's Towards Zero Waste Strategy the interpretation to the term 'Recyclable' is taken as: strictly applying to all materials which may be recycled, but in the case of the strategy document, EcoRecycle references the term specifically to recyclable containers as well as the paper and cardboard components of kerbside waste and excludes garden organics.

- In Queensland, the terminology is different to that of NSW, in that it is described within the State's Environment Protection Act of 1995, Section 13, Interim Waste Regulations, as being either; Domestic, Commercial, Construction and Demolition, but remains unspecific to the actual terminology or specific items that make up the material streams.

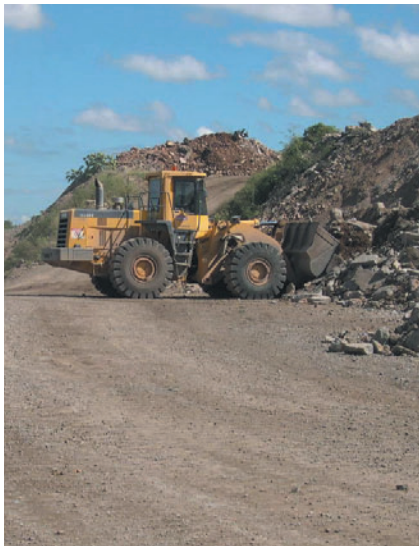
  In Queensland in the Interim Waste Regulations of 1996 (2006 and still interim) recyclables are referenced to meaning clean and inoffensive waste that is declared recyclable waste under an application for an approval granted under section 369 of the act. However if one goes to section 369 no reference is made to reflect clarity in the term, except to state that Local Authorities are to license waste collectors.



Construction and demolition wastes contain real resource value, materials streams capable of enhancing the environment, yet every single piece of Australian legislation refers to the stream as a waste. In doing so, this immediately decreases the value of a real resource and places an unnecessary burden on the industry.

Standardisation and clarity to the terms must be a mandatory outcome from the enquiry. Not all waste should be viewed as a resource or that contains recyclables capable of recovery. Streams such as construction and demolition generated wastes that have inherent value, should be profiled as such and given the legislative and regulatory support to fundamentally enhance the real opportunity for recovery.

2.2 Equality of licensing and operating standards for all waste transfer and recycling facilities nationally.



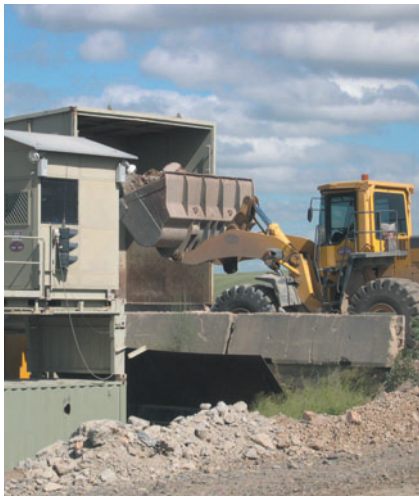
Standards across Australia for the licensing of Construction and Demolition waste facilities vary. In Victoria, a specific licence to operate is not required but development and other planning models apply to siting of the facility. In South Australia all waste or similar facilities must be licensed and all operators are required to operate under the same guidelines. In Western Australia any facility reprocessing more than 1000 tonnes of product, must be licensed to operate.

In New South Wales facilities processing more than 30,000 tonnes per annum or 150 tonnes a day are required to be licensed where as in Queensland a different set of standards apply and the processing quantity is 20,000 tonnes per annum.

An example of the variation and inequity in the rules, is that in New South Wales and Queensland where, operators handling or processing quantities less than 20,000 tonnes (QLD) or 30,000 tonnes (NSW) of waste product per annum, do not require any permit or licence to operate. Provided these organisations meet local town planning laws, for the use of the land their site is located on, there are no other governing factors for which they must operate within.

Operators reprocessing more than these quantities are required to obtain a licence and must submit the following prior to operating;

- Environment Impact Statement,
- Town Planning application,
- Major Development Plans,
- Compliance with Local and state regulations,
- Community consultation and action plan,
- Develop and maintain EMP,
- Report to relevant authorities on all operational aspects,
- Mandatory inspections by regulating authorities eg EPA.



As an organisation and industry leader we support self-regulation and compliance to the above requirements, as they mitigate the risk of environmental harm and impacts of the operation within the community.

Consistency in standards to licencing needs to be enforced across the entire waste, recycling and resource recovery industry regardless of the volume processed to enhance and uphold these economic, social and environmental values.

A national company such as the Alex Fraser Group, which works with all the regulatory bodies throughout Australia, struggles with developing standardised operational procedures due to the different protocols in existence within each state, resulting in a negative effect on the advancement of the industry throughout Australia.

The C&D recycling industry is no longer a fledgling industry. In order to meet Community expectations, a facility requires an enormous amount of capital and infrastructure. Government policy needs to reflect a certain benchmark that has to be achieved. There needs to be a level playing field, not different sets of rules for different operators as is currently the case.

2.3 Lack of consistency in procurement specifications by government

Product specifications established and maintained by Local, State and Federal governments provide the greatest single barrier for the industry to overcome. Most specifications governing this industry are based on virgin material and not on performance.

As an example, specifications for road-base materials in Queensland, do not allow the use of recycled materials. In Victoria the same products have been used in major projects such as the Western Ring Road Freeway, the Princes Highway and the Formula One Grand Prix Track at Albert Park, to mention a few examples, for well over a decade. .

Also required is a change in tender evaluation practices by local government, to allow meeting specifications on the basis of performance, as opposed to being a 'virgin' material. Being prescriptive on performance is naturally the consumer's right. However an equal opportunity for secondary resources to compete on performance should exist. This is especially the case where recycled content can outperform competing domestic and imported resources, but is not chosen because of 'waste' connotations. All materials should be selected on their ability to conform to a performance specification.

Consistency in standards of adopting the highest performance quality specifications is required across all levels of government.

Appendix 1 of this document provides a point source for state based product specifications relating to roads. These links are provided to assist the Commission with its information sources related to this important issue.

2.4 Separation of regulation

Construction and demolition materials should not be regarded as a waste as they have a sustainable and real secondary value. Legislation treats this material stream as a waste and as such, places significant legislative and financial pressure on the industry.

As an example, in Queensland any company wishing to operate across a number of local authority areas, must be licensed with every individual authority and submit to each, annual records identifying the amount of waste transported across council boundaries and the destinations of same.

The same vehicle carting green waste and described as mulch or carting virgin aggregate out of a quarry, requires no licence, no reporting to Council and no material logs to be kept. Regulation of this type misrepresents the real issue, unfairly burdens business and is out of touch with real world outcomes. It polarises secondary resource recovery and unfairly treats a totally benign and inert product as a burden to society. This type of regulation reduces real opportunity to recover and commercially operate efficiently and as such, significantly reduces the opportunity to divert significant tonnages from landfill.

Secondary resource recovery should have its own section in stand-alone legislation federally driven and must not be confused as a waste.

2.5 Removal of barriers to the development of markets to the recovery of resources

Recovered resources are often discriminated against on the basis of being 'recycled', rather than being assessed on their performance. This is a significant barrier to local market growth. The development of national standards to assure secondary resource performance and allow comparison with other commodity choices is needed to overcome this barrier.

Additionally there are many subsidies available to primary resource production including diesel excise exemption, low cost electricity, tax breaks, accelerated depreciation and permission to dispose of materials on-site with no penalty, amongst others, to an estimated $5.7 billion per year as reported by Nolan ITU in 2001. These subsidies put secondary resources at a competitive disadvantage and should be removed or extended to apply to resource recovery.

2.6 Need for long term planning and siting for recycling operations

The future of C&D recycling is dependent on the ability to locate facilities within close proximity of the feedstock and market area. It is absolutely critical to the future direction of reprocessing and recycling operations that they be located in mainstream well planned out precincts and not isolated at the farthest boundaries of a metropolis.

It is important that local planners and governments take responsibility for allowing these facilities to be sited correctly. They must understand and be cognisant that in any future urban and city development as a population increases, so does the waste.

The siting of these facilities should be recognises as an "issue of State significance", as indeed are quarries and landfills. There is absolutely no point in locating them "out in the bush", or located where they will incur higher transport costs, or will be unable to attract sufficient volumes of raw materials, because landfills are more convenient to get to. If they are to be commercially viable, they must be located close to both the raw materials and the end market.

More open consultative processes are required by both state and local governments to ensure the most effective and community acceptable locations are made available for the future siting of facilities, set aside for processing of secondary materials.

The community expects industry to maintain operating standards and compliance with environmental and social values, but all of this commitment is rapidly overturned and a new social acronym 'BANANA' takes place. In short this references a mindset in many communities referencing to 'build absolutely nothing anywhere near anything'.

Radical interference by minority groups seriously affects a business planning process and undermines economic growth. Communities must be educated as to the values of the economic, environmental and social values of recycling and remove the myths by enlightening them as to why we do it, their level of responsibility and role that they play.

3.0 The adequacy of current data on material flows, and relevant economic activity, and how data might be more efficiently collected and used to progress optimal approaches for waste management and resource efficiency and recovery

3.1 Greater accuracy and reporting of data

As only a minor segment of the industry is required to provide any data due to their licence conditions the current data that is available is not reflective of the industry volumes. The inaccuracy of this data makes it impossible for government and regulators to strategically plan or utilise this data as indicators for future development.

Standardisation of audit protocols, the ability for comparisons to be made state by state and region by region is essential. Currently all levels of government enforce reporting systems and capture significant quantities of information, but because of its non-standardisation, much of it is unusable. Licensing of all operators within the recycling and resource recovery industry will enable the capture of accurate data.

4.0 The impact of international trade and trade agreements on the level and disposal of waste in Australia;

Agreements of this nature have little or no effect on the construction and demolition sector except in relation to matters where any such agreement, effects the importation of process equipment.

5.0 Recommendations for Change

As previously outlined in our submission we consider the following recommendations should be considered and implemented. These will deliver greater optimisation and enhanced resource recovery efforts, as well as mitigating the impact waste disposal practices have on social, economic and environmental values in Australia for the future.

5.1 Develop National terms for 'waste', 'recycling' and 'resource recovery' to provide standardisation across all states, thereby providing clarity as well as a point of reference for these terms within all other regulations.

5.2 Develop regulations that identify secondary resources independent from existing waste categories. Once the opportunity has been identified and developed to recover a specific material from the waste stream as a secondary resource, then this material needs to be separated from the waste category.

5.3 Identify and review regulations and/or product specifications that inhibit the use of recycled materials such as the Queensland Main Roads MRS11.05 specification for unbound materials. Recycled materials are able to perform satisfactory in this market. However the specifications require a "Quarry Certification" to be obtained, therefore negating the use of recycled materials.

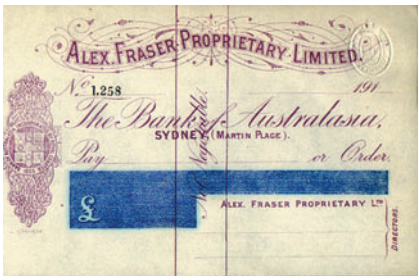
Recovered resources are often discriminated against as legislations outdate technology and the development of national standards for secondary resource materials will assist in removing these barriers.

5.4 Establish local planning protocols that assist the recycling and resource recovery industry by separating it from the waste industry (which is classed as obnoxious) to recycling, thereby allowing it to operate within suitable areas. Identifying, planning and lodging applications for the establishment of new sites is a costly and time consuming process and under the existing regulations, there are no established guidelines that if met, ensure a positive outcome. To the recycling and resource recovery industry, location is imperative and hence, local planning zones must be established to accommodate this industry, if it is to survive. It makes sense to allow the C&D recycling industry to operate under the same zoning requirements as both the Quarry and Landfill industries. They both compete in the same markets for the same materials. It seems strange that in this day and age, the recycling industry finds itself actively discriminated against, when the majority of Government policy is focused on promoting "sustainability" and resource recovery.

5.5 Establish a national licence for the operation of recycling and resource recovery operations. As an industry we operate under different legislation, perform different tasks and produce a range of products to various standards. Regardless of each operator's specific focus within the industry, each business needs to be licensed to undertake any task, regardless of the volumes they process.

In closing -

The Alex Fraser Group has been in business in Australia for 127 years. The company commenced business as a metals dealer and since the Second World War, focused on the demolition, reuse and recycling business. As one of Australia's leading industrial demolition companies, Alex Fraser has been recycling demolition materials for nearly 50 years and in the 1980's the company took a bold and definitive strategic decision to develop a fully integrated, economically and environmentally sustainable, construction and demolition materials recycling business.



C&D 'waste' materials (typically concrete, brick and rubble) were at that time, one the largest contributors to our landfills around the nation. As the pioneer of recycling this material in Australia, Alex Fraser identified that C&D material could be recycled into a range of high quality construction products. The savings in natural resources in the form of quarried virgin materials, landfill space and transportation was enormous.

20 years of major capital investment has followed to develop a range of high quality, accredited products and getting government instrumentalities, municipal and civil works organisations to change their way of doing things and to use recycled products. The Alex Fraser Group are world leaders in the production of recycled C&D materials. However, in many markets, there is still a long way to go with these materials being accepted as equivalent to the virgin products.

Since the 1980's, the company has implemented a strategic growth plan and now directly employs 150 staff at 7 major facilities in Victoria and Queensland. The current plant inventory has the capacity to process 2 million tonnes of C&D material annually. For the past twenty years, Alex Fraser has directed any profits to furthering the growth of this business and maintaining an ongoing research and development program into the expansion and development of other recyclable products.

Alex Fraser has a number of innovations to its credit, including:

- The development of Class 2 and 3 recycled concrete products approved by VicRoads for upper sub-base and base course applications. (Primarily used in freeway construction, general roadworks and civil construction projects.)
- The development and manufacture of ready-mixed concrete products from recycled concrete aggregates,
- The development and manufacture of recycled asphalt products,
- The development and installation of technology to increase the recovery of recyclable materials from mixed construction and demolition waste.

The company has dedicated considerable human and capital resources to its ongoing research and development program. Alex Fraser has maintained its own laboratories and has also formed a number of strategic alliances over the years with leading research organisations and statutory bodies to assist in ensuring the long term viability and quality of recycled products.

These alliances include: programs with the C.S.I.R.O., the Australian Road Research Board (ARRB), ACI Glass (to develop reuse of glass as a recycleable aggregate product), CSR/Emoleum (to develop the recycling of asphalt and concrete aggregates in road asphalt products) and EcoRecycle Victoria (for two major projects in particular – the designing and commissioning of a dedicated mixed waste recovery facility and the design and commissioning of a dedicated recycled apshalt crushing and processing plant).

The original focus by the company was directed at the reprocessing and value adding of secondary concrete materials, that were being generated by building and demolition sites. This has been expanded to include a variety of inert waste materials, including glass fines, brick, masonry and mixed materials containing plaster, timber and plastics.

Today, Alex Fraser Group recycled products are utilised in an enormous variety of construction projects. A number of keystone projects like the Western Ring Road and the Princes Freeways and the technically precise Albert Park Grand Prix Track all utilised substantial quantities of recycled material in their construction.

Alex Fraser has been well recognised and strongly supported for its pioneering and benchmarking achievements in the sustainable recycling field. This recognition has assisted enormously in increasing awareness about recycling and industry acceptance of new services and products throughout Australia. These achievements have included:

- The 1995 Banksia Award for Waste Minimisation and the Gold Banksia Award – Australia's foremost environmental award,
- The 1997/8 Telstra/Victorian Government Small Business of the Year Award,
- The 1997/8 State and National AusIndustry Manufacturers Awards,
- The 2000 Prime Minister's Award for Environmental Leadership.

Appendix: 1

Web based links for road base and other product specifications

Queensland Link

http://www.mainroads.qld.gov.au/MRWEB/Prod/Content.nsf/b495dab138a6b17a4a256a42001c8f4f/c7a3b23ec95d96834a256e8500083a2a!OpenDocument

Western Australia Link

http://www.mainroads.wa.gov.au

Victoria Link

Vicroads Bookshop "Standard specifications for Roadworks and Bridgeworks Section 820 & 821"

New South Wales Link

http://www.rta.nsw.gov.au/doingbusinesswithus/specification/spec_links/9245591.pdf