

Closing the loop on C&D waste

By Tayyab Maqsood

CONSTRUCTION and demolition (C&D) waste accounts for around 40% of the total waste generated in Australia. Given our national economic growth, this waste stream increased from 14.9Mt in 2006-07 to 19.6Mt in 2014-15 (see figure 1).

Waste management and recycling for C&D waste continues to be a relatively under-researched and under-funded area. Some research that has been conducted endeavours to study C&D waste management issues from a technical perspective, providing strategies to recycle and reuse C&D waste, with less emphasis on studying and identifying economic factors and financial incentives that may have an effect on C&D waste management.

The Sustainable Built Environment National Research Centre (SBEncr), a key research broker between industry, government and research organisations servicing the built environment industry, aims to change this. This year, the Centre's Governing Board approved five new research themes with 18-month-long projects commencing in October 2018. Amongst these themes is waste management and recycling for C&D waste.

Consistency and harmonisation

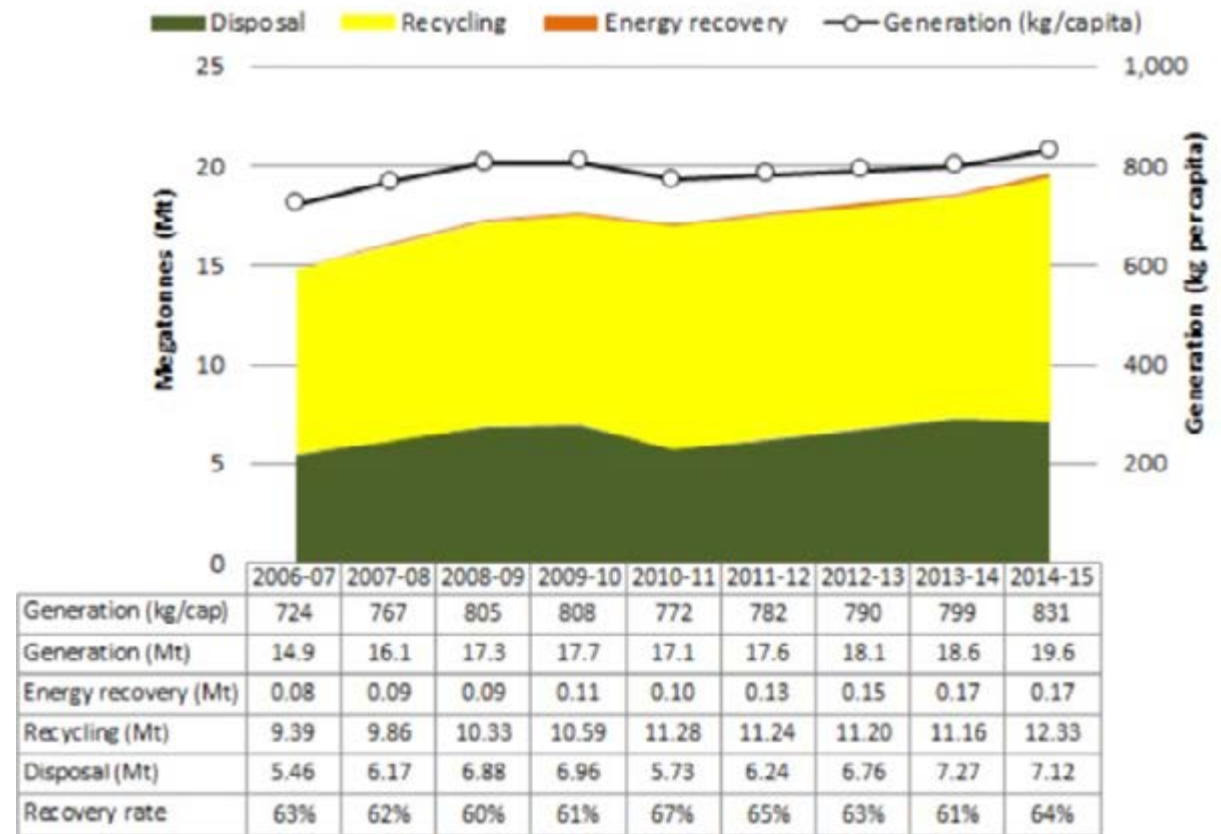
One of the ways state governments discourage landfilling and encourage reuse and recycling of C&D waste is by charging a landfill levy. However, this levy is inconsistent across different states (see table 1) and higher levies in certain states are deterring organisations from using the landfills in their states. Instead, they are transporting waste interstate to areas that charge low or no levy; for example, New South Wales to Queensland, although this will change in the near future as Queensland reintroduces a levy next year.

Ultimately, the inconsistency in levy simply shifts the problem to a different place and does not resolve the critical national industry issue.

SBEncr and its industry, government and research partners, believe that a holistic national approach to C&D waste management is required. This would require a move towards national harmonisation of definitions, regulations and market drivers to develop market-driven processes to minimise fresh extraction and encourage recycling and reuse.

A distinction between waste and

FIGURE 1: C&D WASTE IN AUSTRALIA 2006-07-2014-15



Source: Australian National Waste Report 2016, Department of the Environment and Energy.

TABLE 1: C&D LANDFILL LEVIES ACROSS AUSTRALIA

State	Levy/tonne (2018-19)
ACT	\$211.55
NSW	Metro - \$141.20 Regional - \$81.30
NT	None
QLD	Proposed \$70/t to commence 2019.
SA	Metro - \$100 Regional - \$50
TAS	Voluntary levy - \$0 - \$5 (2016)
VIC	Metro/Regional - \$64.30 and Rural \$56.36
WA	\$70.00

resource is also important. As soon as waste is recycled or reused it becomes a resource. Waste on one project in any industry may be a resource for another project in the same industry or in a different industry. A common marketplace that would connect organisations across industries and in different states could drive further reuse and recycling of C&D waste and reduce virgin material extraction. This marketplace is an area that the team will be exploring in its research.

SBEncr has also conducted multiple workshops with a range of stakeholders from various sectors and industries across Australia. The consensus is that the gap in knowledge related to reuse and recycling of C&D waste needs to be addressed.

Additionally, broken supply chains are often cited as a reason contributing to C&D waste. Thus, integration of the supply chain will result in better design and manufacturing coordination, resulting in less waste.

SBEncr is shaping up the projects that will commence in October and has developed a set of objectives that will govern its work. One of the objectives of the project is to review the regulations in different states and territories governing C&D waste management identifying discrepancies and making recommendations for reforms to develop a consistent approach to define and measure C&D waste across Australia. The project will also seek to identify economic factors and drivers that govern the

disposal and reuse/recycling of C&D waste. A feasibility study will also be conducted for creating a marketplace to connect organisations and industries for trading waste. Last but not least, the project aims to identify opportunities to integrate supply chains, espousing cradle to cradle approach.

Industry players are key to the success of this project, which will ultimately put forward a national solution to current C&D waste management solutions. Thus, we welcome any input you might have on our objectives and projects.

Dr Keith Hampson CEO of SBEncr said: "I welcome the strong national public and private partnerships around this pressing industry issue. I am looking forward to SBEncr contributing to a national solution to stockpiling C&D waste while recycling opportunities are being bypassed. We do need to do better as an industry. It's these sorts of industry-driven nationally collaborative projects that our Centre has established our long reputation on."

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