

Headline	Experts: Concrete, bricks can be reused		
MediaTitle	The Star		
Date	08 Jul 2020	Color	Full Color
Section	Metro	Circulation	175,986
Page No	1T03	Readership	527,958
Language	English	ArticleSize	1930 cm²
Journalist	SHEILA SRI PRIYA	AdValue	RM 97,130
Frequency	Daily	PR Value	RM 291,390



TheStar Exclusive

Building on waste

Globally, construction and demolition debris largely becomes wasted wealth, ending up in landfills and illegal dumpsites. However, local and European experts are of the view that with proper research, development and legislation, these valuable scraps can contribute greatly to a circular economy and Petaling Jaya City Council hopes to capitalise on them. >2&3

Headline	Experts: Concrete, bricks can be reused		
MediaTitle	The Star		
Date	08 Jul 2020	Color	Full Color
Section	Metro	Circulation	175,986
Page No	1TO3	Readership	527,958
Language	English	ArticleSize	1930 cm ²
Journalist	SHEILA SRI PRIYA	AdValue	RM 97,130
Frequency	Daily	PR Value	RM 291,390



Construction waste which is often discarded is an untapped resource. — Filepic

By SHEILA SRI PRIYA
sheilsripriya@thestar.com.my

WHILE everyone is familiar with the regular recyclable materials and innumerable people are practising upcycling, little is known about recycling construction waste.

Not only is it an untapped resource by sending it to the landfill, some of the waste end up in illegal dumpsites.

Petaling Jaya City Council (MBPJ) sees the potential of construction debris to be recycled and thereby contributing to a circular economy.

Circular economy is touted by experts as the current way forward, whereby all innovations or objects created have a life cycle in taking into account the environment.

And MBPJ is taking the lead with its efforts to turn Petaling Jaya into a circular city by promoting green living among its stakeholders.

The city council has identified five areas in its jurisdiction for changes, including recycling of construction waste.

To get the ball rolling, MBPJ held a webinar session with Iskandar Regional Authority and experts from several European establishments, such as Sapienza University of Rome, Amsterdam Smart City, the Circular Economy Club, Cities at Circular Economy and the IUC Asia team, where the need for a circular economy for construction waste was comprehensively addressed.

StarMetro looks at how this is tackled in the country and by some European bodies.

Experts: Concrete, bricks can be reused

MBPJ gets ideas from Europe's experience to recycle debris from demolished buildings

“ Ten million tonnes of construction waste are produced each year in the country.

Lee Lih Shyan



Building waste in Malaysia

It is estimated that 10 million tonnes of construction waste is produced each year in the country, according to MBPJ Solid Waste Management and Public Cleansing Department director Lee Lih Shyan.

“There are three main concerns pertaining to construction waste. “The first is that such scraps are heavy and incur high handling costs.

“Secondly, illegal dumping of this

waste type happens rampantly because there is no proper system in place. There are fewer than five inert landfills in the country.

“Thirdly, recycling or reusing construction waste in the country is low due to market constraints and viability.

“There is a lack of supporting schemes for the usage of the recycled materials,” he added.

Lee said that local authorities in the country faced many challenges when it came to illegal dumping.

MBPJ, he said, implemented its share of rules and regulations by making it mandatory for building owners to engage with city council contractors to dispose of construction waste.

The city council required Green Building accreditation for planning approval, he said, adding that integrated building systems was a condition for construction.

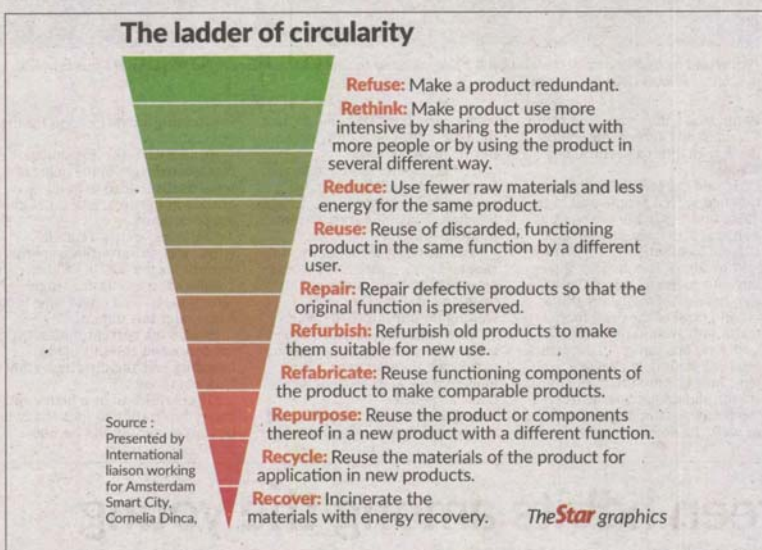
It was also mandatory for at least 60% of the construction materials to be locally sourced, said Lee.

Scenario in Europe

One-third of global waste consists of construction and demolition debris, according to Patrick Maurelli from Sapienza University in Rome during the webinar.

“The buildings are responsible for global greenhouse gas emissions with much of their life cycle impacts coming from material sources and supply chains.

Headline	Experts: Concrete, bricks can be reused		
MediaTitle	The Star		
Date	08 Jul 2020	Color	Full Color
Section	Metro	Circulation	175,986
Page No	1TO3	Readership	527,958
Language	English	ArticleSize	1930 cm ²
Journalist	SHEILA SRI PRIYA	AdValue	RM 97,130
Frequency	Daily	PR Value	RM 291,390



"In Europe, construction demolition waste (CDW) was 374 million tonnes in the EU in 2016, excluding excavated soil.

"The EU countries are, however, on track to meet the 70% recovery target by 2030, with most countries exceeding the target," said Maurelli.

Based on research, about 70% of CDW was reused and recycled in the EU.

The CDW occurs during the building and demolition phases.

To bring the buildings into the circular economy, the local councils can do their share by focusing on prevention through research and development projects.

The experts said that preparation for reuse of materials by having on-site reuse solutions and policies was also key.

"The materials should be recycled through the secondary raw materials market and other innovative recycling technologies and plants.

"Ultimately the focus should be on avoiding or minimising disposal of construction materials," said Maurelli.

International liaison of Amsterdam Smart City, Cornelia Dinca suggested that transition towards circular economy be done through joint ventures.

"Starting 2022, all new urban and public space designs in Amsterdam will be based on circular criteria.

"This will include the use of sustainable materials and possibility.

"The built environment must also meet the ever-changing needs of the public," she said.

Success stories

Maurelli cited cases of demolition of towers whereby 95% of the waste was recovered for recycling.

He said after the UAP Tower in Lyon, France was demolished, it was replaced with a taller and more

modern structure, while two towers in Glasgow, Scotland were dismantled without the use of explosive.

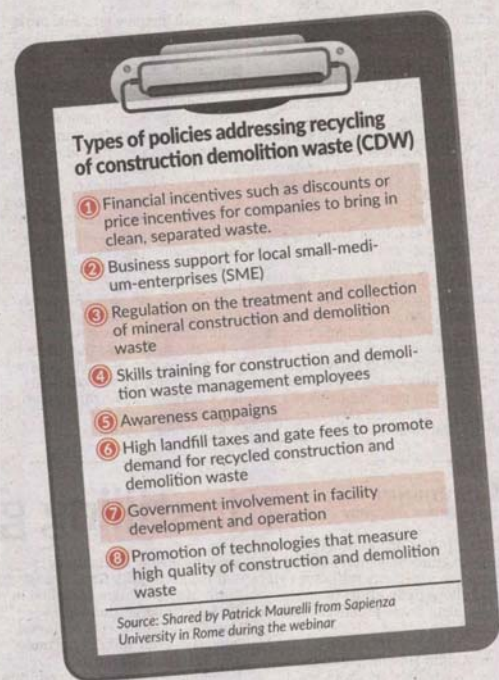
Green public procurement (GPP), where public use their purchasing power to buy environmentally-friendly goods, he highlighted, was a driver in incorporation of recycled materials and other circular values among the public.

"This could impact positively the demand and foster efficient management of construction and demolition waste."

Maurelli emphasised that research and innovation was the answer to solve critical issues pertaining to CDW.

As many of the materials from the demolition and renovation works were not suitable for reuse or high-grade recycling, there was a need for innovative design and selective demolition, he noted.

"The hazardous components in construction have to be avoided."



He said there was a need for investment and incentives provided to the material recycling plants and technologies.

"There is a need to increase users' trust in the quality of materials from the CDW."

"Sometimes the CDW volume reduction is hindered by trends in the construction sector," he said. Dinca said timber could reduce carbon dioxide (Co2) emission from the built environment.

"Wood is considered a sustainable building material because it retained Co2.

"The production and processing

do not cause as much pollution as concrete."

Amsterdam city in the coming years will replace the hundreds of kilometres of canal banks in Rechtboormsloot with new circular concrete and maintained using emission-free vehicles and equipment," she added.

By 2025, said Dinca, 50% of all renovations and building maintenance in Amsterdam would follow the process of circular construction.

"Among the buildings will be the social and private housing stock, public real estates and schools," she said.