



Welcome to the Monthly

Construction Advisor is pleased to welcome you to our monthly newsletter – Industry Insights. Bringing you all of the latest industry news, project announcements and data to help you to plan and build your business.

COVID19 Status:

- Despite all of our collective wishes, the pandemic is far from over. Soaring infections in South America, Africa and the Middle East continue to be a major cause of concern and block to re-opening borders.
- The New-Zealand 'bubble' is now live and free travel is allowed (subject to some conditions).
- Renewed growth in infections in Singapore have now made a travel bubble with that location unlikely.
- Surging cases in India remain a major concern with limited repatriation flights now available.
- The Federal budget has stated that they do not expect open international borders before mid-2022.



The Waste Issue.

Turning trash into treasure? The waste industry has been doing that for decades. With the renewed focus on recycling and emissions reduction, those rivers of gold (trash) are only getting bigger. Waste management has come-of-age, it is no longer “throw it in a hole and cover it”, now recovery is the by-word of waste processing.

Some rogues still exist – as seen in recent industrial fires and EPA actions against these actors based on illegal dump sites however the industry has certainly ‘cleaned-up’ its act.

Society too, has changed its relationship with waste. Long gone is the notion that once the bin has been collected, it is no longer your responsibility. Multiple rubbish bins domestically have also flowed onto industrial sites seeking to make recycling more efficient and cost-effective.

Whilst jurisdictions both domestically and internationally have had vastly different approaches, ‘best practice’ remains elusive from an industry perspective. Victoria has (at last) joined the container recovery model (cash for cans/bottles) but industrial waste remains stuck-in-the-mud in terms of evolution. Skip-bins and containers continue to be filled daily with materials that are rather easily recycled and reused – copper pipe, pvc, timber and plaster. Having said that, recovery centers are vastly improved in being able to sort and extract these materials before entering landfill.

The industry has also received renewed focus in 2021 with the proposed buyout of Bingo Industries for \$2.3Bn by Macquarie (subject to approval). From 4 skip trucks in 2005, the company has expanded to 330 trucks operating across Melbourne and Sydney with further expansion on the cards.

After growing concerns about solar panel recycling being a future major issue (see our Renewables Monthly), work is now underway to address the problem in a number of locations. May saw the announcement of a new PV recycling plant getting underway in north Melbourne. The Lotus Energy plant claims to reclaim 100% of materials using a non-chemical process. Also in the mix is Reclaim PV Recycling based in Lonsdale, South Australia.

And finally, there are plans for an additional facility to be constructed in Eastern Victoria. With more than 21% of homes in Australia having rooftop solar and a number of the early solar farms approaching end-of-life, these facilities are a welcome pro-active step in heading off what could have been a major issue in the future.

If there is one waste issue that has dominated infrastructure discussions in Victoria in over the past two years, it has been PFAS.

With many governments and large organisations pledging goals to achieve net-zero carbon emissions in coming years, how realistic is it for construction to do the same?

Firstly, let’s clarify that net-zero emissions doesn’t mean that the organization doesn’t emit any emissions or create waste, it is just that those waste products are offset by other activities.

The construction industry faces very different challenges to other industries in minimizing and managing waste and emissions. Having said that, there are a number of initiatives that can, and already are making a big difference.

Off-cuts are a reality of building, even the best plans will always be a mm, cm, or meter off. What happens to those excess materials is the big question. For most major projects, those materials will end up in a mixed content skip. For the sole trader, these materials present far more value – many a plumber will tell you that their annual ‘bonus’ is when they take their year’s copper off-cuts to the scrap metal merchant.

Whilst there have been some forays into batteries and hybrids, the majority of construction machinery still requires diesel, and that means exhaust. Experimentations with bio-fuels have been largely unsuccessful as bio-fuel lacks the ignition point and torque required to provide the power that these machines require to perform their tasks.

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Before PFAS, the biggest waste issue facing construction was asbestos. Asbestos was a popular building material for decades given its properties that made it fire resistant, non-corrosive and non-conductive (to electricity). However, similar to the issues now recognized in silica products, when disturbed into a dust form, both silica and asbestos can cause workers to develop significant and debilitating diseases including cancers.

The construction industry has been dealing with the remnants of asbestos use for many years now with specialists now commonplace in all major markets. The remaining issue though, is that once the material has been identified and sequestered, it still needs to be disposed of in a manner that does not lead to further contamination.

Other familiar waste issues facing the industry include lead, petroleum and petroleum by-products as well as non-recyclables such as polystyrene and soft plastics.

So, after discussing many of the waste issues we face in our industry, what are some of the activities and behaviors we can encourage to mitigate these?

In an ideal world, we would be able to avoid these waste products entirely but the reality is that in many cases, these exist in the environments that we are being asked to operate. The first line of defence is to understand what environment we are working in. Comprehensive environmental surveys, test samples and environmental planning should not be regarded as painful 'red-tape' or bureaucracy, but instead as risk mitigation. Had the contractors on the Melbourne Westgate Tunnel or Metro projects had better understanding of/more comprehensive soil samples, major litigation and cost blow-outs may have been avoided.

When planning/building a site facility (particularly green-field), powering the site is a major consideration. A good friend always said, "the generator doesn't cost you money, the diesel to run it does". This is good advice both for procurement and also a cautionary note on the cost of power. Solar isn't an option for every site and facility, but bringing substantial amounts of fuels (diesel or not) onto a site introduces a new waste/contamination risk that must be managed. Beyond simple bunding, flammable materials and their end-uses (machinery), will ultimately produce emissions. Going back to our earlier note – how can you off-set those emissions?

As noted, the industry has come forward in leaps and bounds over the past decade. There are many practical steps that can be taken at a site level that can be both environment and economically beneficial:

- Material-specific waste containers/skips: metals, plastics (hard vs soft), organic, general waste.
- Alternative energy machinery/sources: solar is obvious, but also identifying battery-powered utilities, choosing four-stroke over two-stroke power units.
- Using materials that are certified as fit-for-purpose... if the cladding issue has taught us anything it is that 'cheaper' doesn't always 'cost less'.
- Human waste is just as important – try giving all of your employees vita-wheat biscuits... and banning prune-juice from sites.
- Bunding is important around hazardous materials – ensure that contaminated liquids cannot leach/leak into domestic water sources.
- The chain-of-responsibility is real... if your supplier charges an environmental-levy, don't be afraid to ask 'why', and how is that levy spent.
- Do not 'bury' the problem – history has shown that those who seek short-cuts or 'cheap' options will be found-out in time and history is not kind.

Waste remains a major issue for construction, the challenge is to challenge ourselves to rethink waste as an opportunity instead of an impost or cost.



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The Sunshine Coast Sucks... in a good way.

Maroochydore City Centre has installed a revolutionary waste management system. In an Australian first, waste from residential apartments, commercial buildings and public places will be ported through an underground vacuum system to a central collection point.

The 6.5km pipe system transfers waste at up to 70kmh from collection points to a central processing plant. Named AWCS (automatic waste collection system), the plan theoretically eliminates the need for garbage trucks on the street and the need for residents to present rubbish bins on the curb.

In its early days, the system sounds fantastic, time will tell on the practical application and real economic benefit. At the same time, let's be realistic – the implementation of a system like this can only really be considered in a new master-planned community, we're not going to be digging up suburban streets to lay garbage pipes en-masse.

Some simple rules apply for users – waste must be in bags no larger than 30cm in diameter whilst recycled items can be entered loose. The system cannot handle organic waste or bulky items given its pipe design.

According to the project website, the design is fully sealed to “minimize odours normally associated with waste management and will also reduce litter, vermin and street cleaning costs”.

Whilst an Australian first, the technology has been employed internationally in Stockholm, Seoul, Barcelona, London, Singapore and Beijing, mostly based on the design by Swedish firm Envac waste collection system.

At an estimated cost of \$21m, the system is expected to be overall cost-positive for the council in the life of the system.

Fast Facts:

- SunCentral Maroochydore Pty Ltd was established by the Sunshine Coast Council in March 2015 to oversee design and delivery of the new city centre.
- The 53-hectare site was declared a Priority Development Area by the State Government in July 2013.
- The new Maroochydore City Centre will be Australia's first truly smart city and will provide the facilities and services to meet the demands of one of Australia's fastest growing regions.
- Creating 5,000 jobs by 2020, 15,000 jobs by 2025 and more than 30,000 jobs by 2040.
- Will provide an estimated \$4.4 billion boost to the Sunshine Coast economy over the life of the project.
- Project expected to provide an estimated \$5.9 billion boost to the Queensland economy.
- More than 40 per cent of the site will be parks and waterways.
- A rail corridor into Maroochydore is already designated by the State Government.

*Statistics and figures according to Sunshine Coast Government Website.

CAUTION ASBESTOS

Asbestos problem buried but not dead: calls for government to help remediate asbestos tainted soil on public land

The spectre of asbestos and the damage it causes was first brought to life in the 1980s and was most poignantly brought home with the death of Bernie Banton in 2007 after a protracted fight for justice for asbestos victims.

But our asbestos problem has not gone away, it's gone underground with millions of tonnes of tainted soil estimated to be blighting public land in Victoria.

It's a problem that has led to a call by environmental groups to remediate asbestos-tainted soil on public land so it can safely be used again by the community.

The good news is there are technological solutions to help people and governments when they find Asbestos at their workplaces or homes that allows it to be restored to safe levels.

From black to green, it sounds counter-intuitive how the process to remove a poisonous and deadly substance could possibly be going green.

It's already happening in Western Victoria. Special soil remediation techniques are being used to filter out the Asbestos present.

Dale Smith the Managing Director of SCAADA environmental consulting and project management company says this type of work has a huge environmental impact, if you start with 8,000 cubic metres of asbestos-tainted soil at the end you can bring that figure down to 10 cubic metres of soil with Asbestos present that needs to be disposed of.

'Asbestos is a broad ranging term that covers a wide range of silicates. When we talk about soil remediation, we are talking about abating, which means removing as much bonded manufactured Asbestos containing material debris as we can from the soil, Asbestos occurs naturally in the ground as a fibrous mineral, so we are not removing this naturally-occurring product but rather the manufactured material leaving the soil safe to use with a significantly controlled risk,' says Dale Smith, Managing Director Scaada Group Services.

'We use a process called screening which involves shaking and displacing the soil using vibrations from the mechanical screening machine as the soil is fed into it. We recently partnered with Ground Maintenance Australia to use their screening machine to clear Asbestos that had been buried in school grounds'.

'We processed around 8,000 cubic metres of soil with GMA, we ended up with 7,500 cubic metres of safe material having removed Asbestos and things like brick and glass. To put it simply at the end you have a quantity of near perfect fine topsoil for things like Garden beds. The mid-size bi-products can be used in roads or for mixed rubble. This all gets checked visually by workers on site also' added Mr Smith.



Steve Marett - the Managing Director of Grounds Maintenance Australia (GMA), which specialises in asbestos removal - does this every day for a living.

'By working with SCADA we are repurposing huge quantities of material that would otherwise end up in a hole. Environmentally two lots of soil that can be used on site are recovered and financially it's more cost effective as you have drastically reduced the amount of contaminate soil which needs to be disposed of as Asbestos waste', added Mr Marett.

"Soil remediation as part of Asbestos abatement is now a big part of our day to work, people are often surprised that you can remediate soil. It's a good story that no one wants to talk about, we help schools and hospitals deal with these problems in an environmental and economic way. At the end they are very happy but never want to talk about the fact it was there in the first place, even though it was not their fault".

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Almost all kinds of relationships, become strained when either or both parties are subject to the challenges we now face under Covid-19, and current statistics bear this out (1 out of 2 breakdown).

Access to information which helps us understand, diagnose and improve relationship behaviours is critical if we are to create a positive environment, both in the workplace and at home.

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Asbestos Busters - the Bacchus Marsh Family Business seeking to make the western suburbs and regional Victoria asbestos free

The west of Melbourne has long had a reputation for being home to many toxic industries and chemicals, from petroleum refining, to heavy metals, to diesel fumes, but one business is determined to do its part to clean up the western suburbs.

Not many people are qualified to track down Asbestos in Australia and remove it, but Steve Marett - the Managing Director of Grounds Maintenance Australia (GMA), which specialises in asbestos removal - does that every day for a living.

Asbestos when disturbed is deadly, but the degree of its prevalence is little known. There are 4,000 asbestos-related deaths a year in Australia, roughly three times the number of people killed on our roads.

It's present in millions of Australian homes and buildings and if they were built or renovated before 1990, there is a high chance of Asbestos being there.

Over the last year GMA has removed between 10-15 tonnes of asbestos on average from domestic properties each month.

Growing up in Bacchus Marsh in the western suburbs, Steve is well aware of the reputation the western suburbs has long held as the site of noxious industries, a reputation first developed in the 19th century as the western suburbs became the fulcrum of industrial production in Melbourne.

While the western suburbs won't be transformed overnight, Steve says he wants to play his part by removing asbestos from houses and industry.

When he started out working in quarries, blowing rocks and earth up in his 20s, he never thought he would end up removing explosive chemicals from the soil.

'I am passionate about the western suburbs and regional Victoria and really love doing my part in helping to clear up the communities I work and live in, but it's going to take a while,' said Mr Marett.

'If asbestos is present in homes we can be removing a tonne of material. But because it can't be done by just anyone - you need to have a Class A asbestos removal

licence - means it can be a time-consuming process'.

I'm lucky to be working with people who have been doing this for 35 years. There are hidden dangers for the average DIY guy, especially during COVID. People with time on their hands, can do significant harm to themselves, family or neighbours. That's where we step in. Lots of people have children and loved ones they live with and you don't want to see them exposed to this stuff', said Mr Marret.



GMA works with several property developers and renovators to make sure any Asbestos risks are clearly identified and managed.

'The guys at GMA help me with renovations and new build projects. Sometimes I come across contaminated soil that needs to be dealt with or Asbestos in part of some of the older homes I am working on. Their work is vital in keeping my team safe and the people who live in these homes,' says Aleksandar Nikolovski, owner of Urban Landmark Homes,

'We really want to help the people and businesses in our area. We want to see this work done correctly and safely, we are qualified to do that job, we have Class A credentials and are looking to partner with councils, construction agencies no matter what the size, whether it's one house or a whole estate, we can help them do their job safely', said Mr Marett.

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