

Green Washing: The Washbox Solution

Guest Speaker **ANDREW CRIMSTON**

Nik Gowing

Welcome to "Talking about Thinking the Unthinkable", our latest leadership conversation and podcast. Hello, I'm Nik Gowing, Founder and Director of the Thinking the Unthinkable Project since 2014.

Leadership in this disruptive world is about realising the scale of radical change that's needed. Here at Thinking the Unthinkable, we always want to inspire change by sharing examples, sharing stories of how visionaries have overcome often entrenched resistance and skepticism to achieve that radical change.

Well, the building and construction industry produces huge amounts of waste, especially liquid nasties. It's widely assumed that however poisonous they are, they can just be washed away into a sewer and forgotten about. Miraculously, they'll then be treated and sorted out by someone else. But that's not reality. Dirty stuff remains dirty and usually poisonous. It creates huge damage to nature almost indefinitely.

That's why we're joined from Sydney, Australia by Andrew Crimston. He developed the multi-award-winning Washbox. Here it is, it does what it says: it washes in a box. In this contained casing, a closed loop, it removes 100% of nasties from building site equipment in a cleaning process. It's so obvious, so simple, but getting accepted on sites has been a Herculean challenge, with great pushback from outdated practices.

First, the challenge to change mindsets. Secondly, additional cost. Andrew, a warm welcome. Firstly, probably I've been a bit simplistic for the non-techies watching. What does Washbox do? Why should they take notice?

Andrew Crimston

Firstly, Nik, thanks for inviting me to the podcast and thanks for recognising the issue.

So, Washbox is a closed-loop wash station on construction projects. There are lots of finishing trades that need to wash their tools in water. They need to do this to keep their tools clean so that they can deliver a high-quality finish. And so, we're talking about painters, plasterers, tilers, renders, brick and block layers. And the sites typically direct trades to wash their tools in drinking water. And that drinking water is typically discharged onto the environment, often via the sewer.

So, Washbox acts as a closed-loop wash station that all those trades can use to wash their tools and recycles the water supply and automatically removes the solids so that they can be disposed of as a solid, not a liquid, on the project.

Nik Gowing

Well, we are talking about staggering amounts of waste here.

Andrew Crimston

We sure are. So it's interesting because it's viewed as a bit of a niche type waste problem. And the construction sector focuses intensely on solid waste separating timber from metal and paper. In fact, some waste separation systems, particularly in the UK, and Europe can be separating waste, solid waste into into 14 or more separate sub sectors so that they can be disposed of appropriately in their relevant waste classifications.

Yet liquid waste is often just completely ignored to the point that no solution is often provided at all. And the volumes when you compare it to solid waste are quite enormous. We've got a project going on in Sydney at the moment, which is three residential towers coming out of the ground, quite significant towers at 29 and I think two towers in their 70s. But the water and waste consumption or the water consumption of the waste generator on that project, by the time it's completed is going to be close to 1 million litres.

Nik Gowing

You're in the business of convincing people. But why is it taken so long in the construction industry? Is it indifference? Is it ignorance? Is it denial? Is it blindness not an awareness of where all this nasty stuff is going and what it's doing out there?

Andrew Crimston

It's a little bit of everything, I guess, to be fair to the industry. Solutions have been thin on the ground. So this particular problem, unlike solid waste, which goes into an indoor metal bin and then gets removed from site, the separation impacts aside, liquid waste does actually need a solution. And so wash box is one of those solutions.

And so, in deploying wash box to the market, what we're trying to do is educate and build awareness in the industry. That the traditional ways of handling liquid waste are now really outdated. The idea that you'd erect one, two, or 344-gallon drums or wheelie bins, plumb them together, and discharge it to the sewer and put a tap above it, where drinking water comes from, is a really outdated concept. Particularly in the, you know, the green building market that we operate in. You know, in the current time, it's, it's not their fault, necessarily, in terms of the historical kind of strategies that they've used. But certainly, they've been slow to adopt, there's no question about it.

Nik Gowing

We're talking about leadership here, whether it be the site foreman, or the contractors, or the people right at the top levels, people you deal with a lot. Why are they resistant to it? Because it's not that expensive, is it?

Andrew Crimston

It's not expensive at all. We deploy our technology in the US as an example for \$550 a week as a high-service hardware as a service solution. And consider that, we're often deployed on projects that have built values in excess of \$500 million, maybe a billion dollars. It doesn't seem like a lot. And so the resistance comes from, I guess, the structure of the construction industry in terms of their overall process.

So you have a building that is designed by an architect, and then builders tender to build that building. In most instances as a fixed price, different jurisdictions in the world have different types of contracts, cost plus and various other forms. But essentially, you have a number of companies in a competitive bid to build the building. And the global construction industry operates on very low margins, often 4% or less.

And so we're building a \$100 million building as an example to make the math easy. So these guys can make maybe \$4 million. And so there's not a lot of margin to play with. So the construction industry needs to plan all of the expenditure that's going to be involved in building a building. And what we find is that traditional cost planning methodologies involve systems for budgeting for handling solid waste, timber, and metal and paper and cardboard and these types of things. But there's no mechanism for budgeting of liquid waste because historically, it's been discharged to the sewer.

Nik Gowing

You're dealing with a massive construction sector, then, Andrew, that understands promotion of sustainability. Are they indifferent to sustainability? Do they want to be stewards of their own environmental impact?

Andrew Crimston

I think they certainly talk that way. And I think we need to look at construction broken down into two separate sectors. Firstly, we've got the as-built and green building LEED, BREEAM, GreenStar. Certifications around green building are heavily weighted towards the as-built environment. So if we can think of...

Nik Gowing

Just explain what you mean by that certification.

Andrew Crimston

So certification would be the lead and bream ratings of a building. I think we're up to LEED v five. And so buildings will be designed to meet a certain environmental standard. And then depending on the jurisdiction, in the US, that will typically be a LEED standard. And then when the building's built, the group in the organisation called lead will then sign off that that building meets that environmental standard and will therefore be an efficient building in its operation.

Nik Gowing

Now, eliminating waste. You've been pushing for this for a long time. But what are the reasons that you've got resistance? Did those you're dealing with in the construction industry, the people who have to make the money and make sure everything is cost-conscious and so on, didn't they really want to eliminate all this poisonous waste? And the volumes, which you've shared with me, are extraordinary. I mean, it's contamination, it's affecting everybody, including them and their houses and their families and the environment they live in. Are they not conscious of that? Or are they just tied down by that imperative of cost restriction?

Andrew Crimston

That seems to be the latter argument that you make, the cost restriction seems to really outweigh just about everything else. They're building a building to a standard as designed, and so they'll use timber instead of concrete that's been designed to ensure a low carbon footprint of the building, but it's the construction phase itself. So the methodologies used by the construction team to build the building that's been designed that are really the impactful events on the environment.

So I would certainly say that the top tier of the industry is out there to build buildings in the most sustainable way they can. But there's not a lot of focus on the detail of the environmental impact during construction. And we've really struggled to get their attention in terms of liquid waste.

Nik Gowing

Let's rerun that animation again, just to remind people what a box looks like. You're saying that the dirt, the nasty stuff, the paint, and so on, goes in there and actually comes out completely clean? What do you do with the waste that you've taken away, and you can see the scrubbing that's going on in this animation?

What do you do with the waste, because in the end, there's still waste, even if it's not actually being handled in the way it was, or not being handled previously?

Andrew Crimston

Yeah, so one of the important points is that we're not connected to a sewer point for discharge, and we're not connected to a water supply. So in removing the solid waste, so the paint, the plaster, the sand, and cement that gets washed in as a solid, then that allows the water to be cleaned and reused. And that solid that's removed ends up in some filters, where it de-waters and dries out and then the site can handle that responsibly, and often it gets recycled as a masonry solid.

Nik Gowing

So it actually does get disposed of somehow.

Andrew Crimston

Correct. So we leave that up to the site's discretion at the moment in terms of how they do that. But we are working with a couple of stakeholders in the industry to close the loop on that waste, we're a little bit down the track. And so until we do close the loop on that waste, if there's a masonry recycling facility on the construction project, then that waste can go into that.

And it can be recycled with concrete and bricks, and other masonry items. Or alternatively, it's safe to dispose of into general solid waste.

Nik Gowing

Now we're talking about sustainability and trying to encourage leaders to think differently about what they're doing, examine everything that they're doing, and we're choosing you in the construction industry. And so let's have a quick reality check, Andrew. You're dealing with a lot of chemicals and products that are designed now to last decades. And the EU says that paint is now the highest contributor to micro plastic leakage. Do you think most people realise that?

Andrew Crimston

I think most people have no idea, Nik. I think if most construction professionals walked past a sewer discharge drum on their construction site, they'd have no idea that it's contributed a micro plastic pollution of the ocean. And in terms of the products that we're washing from tools on construction sites, you're absolutely right. Some of the largest suppliers in the world make these construction materials, coatings, and various applied finishes that are designed to last for very, very long periods of time out in the weather, to be resistant to ultraviolet light, to hot and cold, and to expansion and contraction, and all types of weather that Mother Nature throws at these coatings.

And just by nature of the fact that they're designed to last a long time in the environment, that's a problem when we wash them over sewer-connected devices that discharge them to the environment where they just don't belong.

Nik Gowing

Now, as we move towards the end, let's look at the positive side. You've had a real struggle for the last decade to get people to understand what you've been doing and the cost-effectiveness of it. And also, essentially the environmental non-impact, or the environmental impact, which is zero emissions, zero emissions at a time of net zero.

How do you think you're going to get to a critical mass and be able to scale this up to convince every building site, every contractor large or small? This is something they have to do? Does it require only regulation, you can't do it as someone who has to sell what you produced?

Andrew Crimston

We certainly need regulatory support. But it's interesting to note that the sewer discharge of these types of pollutants is actually not compliant in most jurisdictions of the world where it takes place. We just find that there's not a lot of compliance activity or enforcement activity by the regulators. And they tell us that's for budgetary reasons; they just don't have the resources to enforce these types of discharges from construction projects.

So there's certainly a place for regulation to be enhanced. There's a role for increased compliance. But I think what's really going to change the game for the construction industry is to bring this conversation out in the open. The leaders of the industry, I think, could take on board the opportunity to talk about liquid waste management together as a group. This is a simple problem to fix; technology like Washbox exists already commercially in the world. And this problem could go away essentially overnight for very little cost to the industry.

In fact, on the largest projects in the world where Washbox is deployed, the industry saves a lot of actual real money. So there are so many benefits to fixing this problem to the industry that exist beyond the water savings and the pollution elimination. We employ.

Nik Gowing

Am I wrong to conclude that this is a no-brainer? You say it costs to service it \$500 a week in the US, 300 pounds a week in the UK? That surely is a small marginal cost? What's it going to take to convince those who need to be convinced that this is something they can't be without? For the sake of preserving the environment and reducing the chances of increasing the enormity of pollution that's going on out there? Particularly from construction sites, often in major cities?

Andrew Crimston

Yeah, look, I think it's a growing awareness. And I'm pleased to see that the conversation around Net Zero is expanding now to include nature positive and biodiversity outcomes.

Nik Gowing

It's a no-brainer isn't it?

Andrew Crimston

It's an absolute no-brainer, Nik. We just need the right people in the industry to step up, essentially, and to have some conversations with their teams, and put some processes in place to build better, to enable their sites to be stewards of their own environmental impact. Give them the budgets and the flexibility to embrace technological solutions that will solve their productivity limitations and allow them to be more environmentally responsible in the way they construct.

Nik Gowing

And who do you have to target? Is it the members of the board of major corporates? Is it the C-suite, the chief executive, the chief financial officer, the chief operating officer, or is it down to the foreman on the site and the managers at a much lower level?

Andrew Crimston

It's really at the site level. Even in the very large construction companies in the world, there's very little direction given from the C-suite or head office level down to sites. Many of the sites operate in silos as their own entities essentially. And they're tasked with determining how to create the structures they create all by themselves.

So from a business perspective, we are certainly engaging with corporate officers to tell the story. But our real activity in terms of changing behavior needs to happen at the site level as well.

Nik Gowing

So how does it change from heavy lifting, you know, picking one company off after another? How has it changed from heavy lifting to actually a culture of accepting the enormity of the value of what the Washbox does?

Andrew Crimston

Thankfully, for us, the construction industry is one of those industries where people move around a lot in between projects from company to company. And that's been a massive driver of our organic growth globally.

And so what we're building globally is advocates at all levels in organisations. And I could name a number of people at various levels, from site level, all the way up to very senior management, that are advocates of what we're doing and are really pushing internally in their organisations for change.

And so that gives us a lot of faith, that we're on the right path, that the industry is aware of the problem, and that the awareness is growing in those areas where it needs to. And that, you know, through the advocates that understand the issues and understand the benefits of providing a solution, that we are moving towards the right outcomes.

Nik Gowing

So in conclusion, can you say there's now a realisation of the need for scale and urgency?

Andrew Crimston

I think it's coming, yeah. There's certainly a growing awareness of the problem. And we're looking forward to increasing the awareness through these types of conversations.

Nik Gowing

Well, Andrew, thanks so much for joining us. It's only 18 minutes, but you've given us a really tight understanding of the enormity of the Washbox. It's not several hundred. It's not several thousand pounds a week. It's literally \$500 a week or 300 pounds a week.

Thank you so much for joining us. And you can reference every detail that Andrew gave us in a transcript of the podcast posted in parallel on our website, along with contact details for Andrew and for us at Thinking the Unthinkable.

So do please join us when we have our next conversation about thinking the unthinkable. From Nik Gowing, until next time, keep thinking unthinkables. More than ever, it's possible, it's also necessary. From me and from Andrew, bye-bye.