T R A N S C R I P T

LEGISLATIVE COUNCIL ENVIRONMENT AND PLANNING COMMITTEE

Inquiry into Climate Resilience

Melbourne – Wednesday 6 November 2024

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WITNESSES

Dylan Broomfield, Principal Adviser, and

Dave Jones, Technical Adviser, Polar Enviro.

The CHAIR: Welcome back to the Legislative Council Environment and Planning Committee's Inquiry into Climate Resilience in Victoria. We are joined by representatives from Polar Enviro today.

Before we begin I will remind you that all evidence that we take is protected by parliamentary privilege as provided by the *Constitution Act 1975* and the provisions of the Legislative Council standing orders. Therefore the information you provide during the hearing is protected by law. You are protected against any action for what you say during the hearing, but if you go elsewhere and repeat the same things, those comments may not be protected by this privilege. Any deliberately false evidence or misleading of the committee may be considered a contempt of the Parliament.

All evidence is being recorded, and you will be provided with a proof version of the transcript following the hearing. Transcripts will ultimately be made public and posted on the committee's website.

My name is Ryan Batchelor. I am the Chair of the Environment and Planning Committee and a Member for the Southern Metropolitan Region, and I will ask the committee to introduce themselves.

David ETTERSHANK: David Ettershank, Deputy Chair and Member for Western Metro Region.

Sarah MANSFIELD: Sarah Mansfield, Member for Western Victoria.

Gaelle BROAD: Hi. I am Gaelle Broad, Member for Northern Victoria Region.

The CHAIR: And online we have –

John BERGER: Hi. John Berger, Southern Metro.

Jacinta ERMACORA: And Jacinta Ermacora, Western Victoria Region.

The CHAIR: If you could both state your name and organisation for the Hansard record, then I will invite you to make an opening statement.

Dylan BROOMFIELD: Lovely. Thank you. I am Dylan Broomfield. I am a Principal Adviser at Polar Enviro, and for full transparency, I also have Polar Enviro on the lobbying register.

Dave JONES: Dave Jones, Technical Adviser for Polar Enviro.

The CHAIR: I will invite you now to make a short opening statement and then we will go to questions.

Dylan BROOMFIELD: Lovely. Thank you, Chair. Polar Enviro is a 100 per cent Australian-owned, Victorian-based family company that supports local jobs and manufacturing. Our modus operandi is very simple. We are focused on safety and sustainability. That is what drives us. As a consequence of that a principal focus as well is decarbonising the built environment, growing the circular economy and helping people get home safely from work, rest or play every single day. There are three companies that fall under the Polar Enviro group. One is Smarterlite, which is focused on environmental photoluminescents to decrease the number of batteries that are currently in circulation. The next is Omnigrip Direct, which focuses on surfacing treatments, pothole solutions and other road safety mechanisms, and Vivacity brands, which is largely focused on improving the usage of light and the sustainability of that so that more people are able to get home safely every single day. Those companies have all been running for more than 20 years.

You will notice that the title of the paper is 'Allowing the dog to wag the tail'. The principal reason for that is that we just wanted to draw attention to the need in the sustainability space for a greater focus on being proactive as opposed to reactive. I think what we have found, encouragingly, is that today a lot of the policy actually already exists within Victoria. Indeed Victoria was the first state to legislate net zero anywhere in the world, in 2017.

Unfortunately, what occurs is that the outcomes do not necessarily align with policy, and I think it is important to point out that with the current frameworks that exist government could be doing more without having to pass any legislation, change any rules or anything like that. Part of the reason why we find ourselves in a position where perhaps there is this policy misalignment is due to a risk-averse nature in the public service, and this inhibits better outcomes for government and the community. There needs to be a shift to product life cycle. We think that is fundamental and important in all areas of the built environment, because when that starts to occur you end up with greater outcomes, you end up with greater sustainable outcomes and you end up with better outcomes for the local economy as well.

What we would suggest is that the current environment stifles innovation and commercialisation in the built environment, which is quite concerning given this is an area that we really need to focus on to help alleviate climate change and also to ensure that infrastructure is fit for purpose and able to withstand impacts from climate change. Importantly, this also inhibits sovereign manufacturing in Victoria, and that is part of the reason why you will see that in the submission we talk to the local content and sustainability supply register.

We think there are several enduring legacies that could come as a result of this inquiry: better alignment of climate change policy with procurement across state and local government; a stronger circular economy; a legislative framework and delivery ecosystem; and clear and strong incentives and teeth to enforce the uptake of preferred local and recycled content. Leading the country in addressing imminent risks to recycling and landfill helps grow sovereign manufacturing in Victoria and improve the return on investment and bottom line of state and local governments.

Just one thing that I will leave you with to really contextualise things: one of the products that Smarterlite does is photoluminescent exit signs. These are environmental exit signs that do not have any batteries in them. They only consume 0.74 watts of power and they last for 16 years, so you can see it is a significant life cycle there. This is compared to – are there exit signs? Of course there are none in the room when you want to point to them –

Gaelle BROAD: Which way is out?

Dylan BROOMFIELD: so we are stuck. But what I can tell you about the old-tech exit signs is that they consume 5.8 watts on average of power. They last on average four years. Now, if you consider that, conservatively, there are probably 100 million of these exit signs in Australia. That means at this point in time, as we speak, 500 megawatts of power is currently being drawn out of the system just to power exit signs, which is the equivalent of half of Loy Yang B. Another way that we could look at it is that is 4 million tonnes of carbon per year. So if you were to replace old-tech exit signs with our Smarterlite environmental exit signs, it is the equivalent of taking 1.6 million cars off the road every year in carbon saved. And when you think about the targets that we have got with EVs and other things like that, you can see how real it is, something that is definitely low-hanging fruit. I mean, it is almost at the point where the fruit is rotting on the ground, it has fallen that low when you think about how simple it is to remove exit signs and replace them with new technology. But I will leave the opening statement there and hand back to you, Chair. Thank you.

The CHAIR: Sure. Thank you. One of the things the committee is trying to focus on is what recommendations we can make to government to improve the resilience of the built environment to climate change – the better understanding of climate risks in our physical and built infrastructure. One of the mechanisms obviously of government – obviously there are things that it can do on the regulatory side, which your submission goes into a little bit, but the government is also a big procurer of services. We buy a lot of stuff and can effect change through that mechanism. What would you submit to us that the government could do more of, on the procurement side, to help ensure that the built environment that we are creating is more resilient to a changing climate?

Dylan BROOMFIELD: I might answer that in two parts. The first part is that, perversely, the government invests in failure with its current procurement model in many respects. The way in which I would argue that is that you see there will be a capital expenditure part, right, to, say, invest in exit signs. But then we know from our clients that a lot of them experience about 25 per cent of those exit signs that should last four years failing in the first year. You then have an opex expenditure that comes through. This also occurs in other areas around the utilisation of paint in buildings and other parts of the whole process. You can look at things like road surfacing treatments, pothole solutions and so on and so forth, and there needs to be this adjusted focus within

that context so that there is a greater understanding of exactly what the life cycle implications are, so that that way that investment in failure becomes less of an issue and instead the focus can be on how you get those tangible long-term solutions which give greater value for government over the life cycle.

One of the examples that I draw out with that is, just to draw on the exit signs, our price is the same price as competitors; it is just that we are new and people find it hard to adopt new technologies for some time. Similarly, when we talk about some of the surfacing treatments that we provide which increase the longevity of road utilisation, especially in flood areas and so on and so forth but more pertinently on roads that we see here, from a safety perspective, we are $120 per square metre and paint is $60 per square metre. We will guarantee ours for five years. Paint – let us be kind to it – is replaced every 18 months, but it is actually more frequent than that. So you are looking at $180 versus $120 per square metre over the life cycle, right, straightaway there. That is before you then factor in the issues around paint having a large level of carbon associated with it as well as chemicals and so on and so forth, whereas our colour surfacing treatments use post-industrial and commercial glass, so you are actually getting a benefit to the circular economy in that space. That would be one illustrative point that I would start with.

One of the things that we have focused on as well in discussions with other businesses – and we are up to about 40 of them or so – is that we find that a lot of them find themselves value-managed out of the back end of a lot of projects because that local content of 80 per cent might be met through steel and concrete and so on and so forth, but they are low-end products, right? It is the high-end products that come on towards the back end, where you are going to get significant impact in terms of helping grow the economy. That is where we find that there is a bit of a disconnect between government's stated policy outcomes and what is actually occurring. That is why we developed the local content and sustainability supply register, which we have outlined in the paper. We have got further detail that we have developed since we submitted this back in April, which we would happily submit on our way out to you as well.

One of the focuses that we found there is that if you were to adopt something similar to a Heart Foundation tick, which I know might be a touch maligned these days, you would have levels within it, so that if you do a local content percentage, you get put into there, and if you are helping prevent issues in the built environment through deterioration and so on and so forth, then you would fill that part out. You would be helping local jobs, you would be helping drive the economy, you would be helping with sustainability and you would have more than 55 per cent of your product developed and manufactured locally. There are myriad ways that you could build it up so you could get a full tick, but more importantly, you would also enable a lot of small, medium and family-sized businesses, which account for over 80 per cent of economic output in this state and over 80 per cent of employment in this state as well. You would give them a great crack at having greater involvement in a lot of the government projects that are currently being undertaken.

The CHAIR: Mr Ettershank.

David ETTERSHANK: Thank you, Chair. Thank you for your presentation – much appreciated. I just want to go back to some comments you made before. I did not necessarily follow you. You were talking about how the current regulatory framework is okay and does not necessarily need change but is not getting the outcomes. Can you elaborate on that, please?

Dylan BROOMFIELD: Yes, certainly. What we have is that there are substantive policies that have been made, and we list several of them in our submission. But what occurs is when it gets to the procurement stage and finds itself delineated down through the bureaucracy, it ends up being that that is not what the outcomes are. Part of the reason for that is that you have these established actors within this space who essentially prevent innovation and commercialisation taking place. Another issue which is really problematic –

David ETTERSHANK: Before you go on to the next one – we will come to that one – this is privileged, so can you give us an example of that first point?

The CHAIR: Fair.

David ETTERSHANK: Fair? Good, I do not want to get kicked out or bounced by the Chair.

Dylan BROOMFIELD: I will frame it in a different way. There is currently the construction supplier register, which the government established. We will just keep going with the exit signs, because it is a really

simple, straightforward thing that people see and understand. For us to get those specified into projects, before the project comes into being we have to go and see about 5000 different people who are registered on the construction supplier register, who help design and build the project. What happens is when we go and talk to government agencies, they throw up the procurement model: 'Oh no, you have to go to the construction supplier register.' But then we find ourselves saying, 'Okay, well, how do we go and talk to 5000 different individuals around this?' What happens is that rightly or wrongly some of those individuals just copy and paste the specifications from the already established existing operators in that space, so we have to go back and have discussions with them, take them through and educate them. That is fine – we accept that that is part of it – but even then it is sometimes put in the too-hard basket and so on and so forth. It is actually really hard to try and get in at the first instance, to be able to get the product to take off. That is where it is really problematic from the start. That is why we think there is this policy gap where you have got the construction supplier register. Why not have a product supplier register? You also have Local Jobs First, which is also useful. But there is this missing piece in the middle where we think there needs to be a focus on the local content and sustainability suppliers register, because at the moment what we find in the exit sign space is there are two established large operators who are effectively able to crowd out smaller companies.

David ETTERSHANK: Do you think this has application more broadly than your own particular area?

Dylan BROOMFIELD: Definitely. We have had several conversations with numerous businesses who have similar issues. A lot of them are those products that go on towards the end of a building, which actually end up having higher value. When you think about the contribution to economic development and economic growth, then cement, raw materials – aggregates – steel and so on and so forth end up giving a large proportion of that 80 per cent local content, if that is the level that they have got required for a building. 'You've got to have 80 per cent.' 'We've reached it. All we did was pour some concrete and put in some steel.' Okay, but what about the products that are actually more useful in terms of really growing sovereign manufacturing and helping innovation and commercialisation drive Victoria?

Dave JONES: I can elaborate further in the context of Recycled First, which is the transport portfolio's policy of using recycled materials first. It sounds quite simple, and there are some terrific people in government who are doing a lot of work trying to raise awareness in project teams about the possibilities of recycled materials. But from my perspective in its implementation it is almost like the project team or the contractors who are bidding for that work choose an element of a project or they might get quotes across different elements to use recycled materials, then they choose one that meets whatever targets are in the contract and that gets used and everything else goes back to the cheapest, because the contractor needs to make margins to be profitable and meet their own targets. Recycled First becomes choosy, if you like. On one project it might be recycled plastic sound walls, on another it might be recycled bike lanes, which is one of our technologies, and on another project it might be recycled curbing made out of rubber or something like that.

If we were truly thinking recycled first for all of our projects, it should be that recycled is the first choice and it has to be justified why it is not recycled, and then we would be looking at getting more economic value out of our circular economy and our recycled materials. The ecologiQ team has organised some wonderful conferences where all the exhibitors can only be approved recycled product providers. We talk to the other providers there, and it is almost a discussion around which of us was chosen on which project. All the rest of us are losers, because one or two elements of any project get all the publicity and everything else is the norm. They are the unrecycled products, non-circular economy products, if you like. So I think the policy is fine, but it is the execution that matters so much, and what helps build a new circular economy for Victoria gets lost.

David ETTERSHANK: Thank you.

The CHAIR: Ms Broad.

Gaelle BROAD: Thank you very much for appearing today and for your comprehensive submission. I am just interested because you talk about the need to look at the risk of batteries and the risk that poses to landfill. I was actually reading an article recently, and I just brought it up, which said:

> … Fire and Rescue NSW recorded 217 lithium-ion battery incidents from January to July 2024. The report also recorded two fatalities and 16 injuries.

It goes on to say that the batteries:

… were the cause of one in 40 fire and explosion incidents attended for this period …

So there seem to be a lot of hazards, but what do you see in the industry? There is a push towards using more batteries. Do we need to be aware of some of the risks?

Dylan BROOMFIELD: I will say one thing, and then I will hand to Dave. If I just go back to the opening statement: 100 million exit signs across Australia, each with a battery, each replaced every four years. There you go. That is 100 million batteries every four years over the same period that our powered photoluminescent exit sign lasts, which is 16 years. You are looking at the equivalent of 400 million batteries that would otherwise be directed to – or technically they are meant to go through a process and not go to landfill, but we understand that only about 5 per cent of them do not end up in landfill, so it is quite problematic. Again, some of the old-tech guard will tell you it is not a problem, but as you rightly point out there are instances of this occurring time and time again, and it needs to have a greater focus. There is a place for batteries, we agree. We have got some of our products in Vivacity that do use batteries, but we are going through a process at the moment of when we do put those products in we want to go and take the batteries out when they come to the end of their life cycle and see that we can dispose of them properly.

Dave JONES: The problem is the batteries, but it is also bigger than the batteries in some ways. The Australian Council of Recycling and other groups did produce a study, which was released a few months back, which tried to quantify through the recycling industry the scale of the fires because most of the fires are not reported. They are put out by the people that run the professional waste facilities and recycling facilities, so they never make it to the fire brigade. They did a data collection exercise and found – I cannot recall the number; it may have been similar to what was quoted – an extraordinary number of small fires that they have to deal with, and there are so many embedded batteries in toys and household appliances and exit signs. If you think about an electrician who is paid to replace an exit sign as cheaply as possible, because no-one wants to pay to replace exit signs, they get thrown in the skip either behind the client's building or in the sparkies' skip and get taken away. No-one is going to drive across town to a designated recycling facility for exit signs when you might only be getting paid $50 or $100 to replace that sign. Why would you spend an hour driving?

There is a technology in the National Construction Code for photoluminescent exit signs, and we are one of those companies that do not require batteries, so there is actually quite an easy solution to eliminating the batteries and the battery risk. On the order of recycling and disposing of items, preventing or reducing is a much higher order – it is important to do – rather than trying to deal with something when it is already a problem and recycling or disposing of it. We are providing that technology. You can eliminate all those batteries and the battery and fire risk that come from them or the need to have government-funded or industry-funded recycling schemes by just switching to another NCC-approved technology that is out there that meets all the compliance requirements.

Going back to the procurement, herein lies our problem. The technology we have has been in the NCC for 10 years, but all the Australian standards are written around the problems of dealing with electric battery exit signs, and with government procurement, whether it is the school building authority or government agencies, when they specify an exit sign is to be put in or replaced in a building, they always say what is called an AS 2293 exit sign – Australian Standard 2293 – which relates to electric battery exit signs, so they assume every exit sign is going to be battery powered. Of course ours is then not compliant with that specification because we do not have batteries, so the better technology cannot be put in. Whereas if all the government agencies simply said, 'Put in an NCC-compliant exit sign; the NCC says an exit sign can be photoluminescent in accordance with what they call specification 25 of the NCC or AS 2293,' then the person putting it in would have a choice on the technology, and we hope they would go with the environmental technology, the better technology, or someone replacing it down the track could potentially replace it with a compliant NCC technology as well. But no, everyone has had it drilled into them by the electrical industry that it must be an AS 2293 exit sign, which makes it much more difficult for us to offer our technology and the client to choose a different technology. That is an impediment to any innovation in the sector, because as long as they keep specifying their own technology through their own standards that the industry has helped write, new entrants that do not use that same technology are automatically locked out.

Dylan BROOMFIELD: I think, to summarise, what we end up with is this self-perpetuating circle, which really creates problems. I know we have used exit signs as one example, because it is quite illustrative, right – everyone gets it – but this applies across a whole vast area within the built environment. With a bit more of a forensic look at it, it would quickly become apparent just how much this occurs in different products as well.

The CHAIR: Dr Mansfield.

Sarah MANSFIELD: Thank you. I will just continue on that same subject. I am just trying to understand why the National Construction Code does not trump those other standards. What is the interaction between those two? Just from that overall regulatory perspective, why is it that those other ones are referred to, particularly in a case like this where it sounds like they are in conflict with each other, potentially?

Dylan BROOMFIELD: I will start, and then I will throw to Dave. Federation – COVID showed us how distinct states can be, and so it is with this some of this stuff as well. At the moment, even though Victoria has adopted everything in the National Construction Code, there are still current regulatory burdens that apply within the VBA that we come up against. The most straightforward way would be to go, 'All right, if it's in the NCC, then we automatically adopt it here.' You would have to do some legislative change in the *Building Act*, obviously, but that would be the first step. I think that would be the simplest way to do it. Then of course across some of those other areas, perhaps, to go further with your point, even outside of the National Construction Code you could also create something similar, especially with the accounting standards changing around the scope 1, 2 and 3 requirements, shifting forward and focusing then on sustainability, shifting to life cycle being factored into a similar process as well so that that is then captured across all different government departments, agencies and so on and so forth when it comes time to approaching procurement processes or encouraging that innovation and commercialisation.

Dave JONES: As Dylan said, plus more. The Australian standards cannot contradict the National Construction Code. They can reinforce it; they can expand upon it. They are also overseen in their development by industry bodies that basically sell the technology, so the people that develop and sell the technology get to basically write and steer the Australian standards. As Dylan said before, it is self-reinforcing, and it locks out any competition, and any impact on that standard, such as a new technology coming in, is one representative, if they even get onto the committee, against all the other players who are making money out of developing and selling the technology. So there is a pretty low chance of success in getting any changes to the standards to encompass a new technology unless it comes from the people that are already in the business themselves.

In the case of, for example, our exit signs, the NCC does say exit signs can be conformed to specification 25, which is photoluminescent-specific in the NCC, or AS 2293, the Australian standard for electric battery exit signs. Then it has other clauses which refer to specific parts of AS 2293. So the NCC and AS 2293 are quite intertwined, unfortunately. It is certainly possible, and we have some clients who have negotiated that and found a path through, large corporates, but it is not as easy as it should be. As Dylan said, there is no reason why the state of Victoria could not say – I presume it would be a ministerial direction or something like that; I am not sure what the terminology would be – that any reference to AS 2293 should also include specification 25 or be interpreted to include specification 25 of the NCC. So basically it would say 'Any electric battery exit sign reference should also include a photoluminescent exit sign.'

Dylan BROOMFIELD: Just to come back on that as well, I know we keep using exit signs, but if you just broadly put that across NCC, if it is good enough to be adopted federally and everyone goes and has a meeting and agrees on it, it is a bit confusing as to why we find ourselves in these situations. We have it used against us by the Lighting Council Australia, whose chair happens to be the CEO of the largest exit sign seller in Australia – old-tech exit signs – and they do put out information against our product, which is misleading in large part. So there are those problems that do occur, right? If you think about this issue in isolation but then you expand it out across the built environment more broadly, it starts to allow the imagination to wonder just what else is being missed out in this space and then what the consequence or outcome of that is, which means we are having greater utilisation of resources and energy as we speak but, more importantly, as you shift down the trajectory, you actually find that things that should have lasted for a period of time have not and so you are having even greater issues of wastage and so on and so forth.

Sarah MANSFIELD: Thank you.

The CHAIR: Ms Ermacora.

Jacinta ERMACORA: I think most of you have asked the question, but I am really interested in that regulation thing, so I will just ask – this one goes to the dark arts of designing regulation. Of course I do not think any of us in the room are experts in that particular space, but it sounds to me from what you are saying

that some of the regulations are too prescriptive and perhaps it might be better to have higher level requirements that are less prescriptive to allow for innovation but still achieve the same aspiration. Would that sum up what you were saying?

Dylan BROOMFIELD: I think it is part of that. I think primarily, though, we understand that safety is paramount, so you do need some regulatory elements. But what happens – and this is why we talk about tail wagging the dog in a way – is that you get the NCC that is adopted by everyone, but then you come to state by state, and the regulations at a state level do not reflect that. And so you have got these older, more prescriptive regulations that are still in place, where what needs to happen is you need to have that broader piece. I think the other thing too is that unfortunately – and it is unique to Australia, in a way – we are quite risk averse in trialling new technologies, and a lot of what we deal with, because we are principally a technology company, are new technologies in all different areas. So we accept that there has to be an education and advocacy piece associated with that. But to pick up on the point that you just raised, how do you actually fold in or have legislation that can be fit for purpose so it can be adjusted so that it can capture this and then help foster and drive that commercialisation and innovation in the economy, which is something that we desperately need.

Jacinta ERMACORA: Thank you.

The CHAIR: Thanks, Ms Ermacora. That concludes the questions we have for you today. I really appreciate the time you have taken to come in and give us an overview, a particularly deep dive. I am sure more of us know more about exit signs now than we ever thought was possible, but they were interesting and well-made points.

You will receive a copy of the transcript following today's hearing for review before it is published on the website.

With that today's hearings are closed.

Committee adjourned.